

**China in the Worldwide Eradication of Smallpox,
1900-1985: Recovering and Democratizing Histories
of International Health**

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Abstract

The thesis examines the legal, epidemiological, and institutional challenges in the complex process of the global smallpox eradication programme (SEP) in the case of China, which was not a member of the World Health Organization (WHO) when the programme was delivered. The thesis is unfolded in three levels. On the global level, it investigates the impact of Cold War politics on the policy of the WHO, as well as the engagement between the WHO Headquarters, WHO Western Pacific Regional Office (WPRO), and various member states regarding China's membership in the organization and its impact on the SEP. On the international level, it examines the knowledge exchange between China and various groups of experts shifted from time in the 20th century (including the Yugoslav experts, the Rockefeller Foundation, and the League of Nations Health Organization before the war, the technical assistance from the United Nations, the United States (US) and the United Kingdom (UK) during the war, as well as the Soviet experts after the war), and how these different visions of medicine and public health were adapted or resisted in the local contexts of China. On the national level, it studies how the changing political landscape shaped the international health collaboration activities and public health policies in the communist China from 1949 to 1980, and under which background smallpox eradication was conceived, planned, delivered, achieved in the country and eventually certified by the WHO. This research has contributed to adding new timelines to the history of global smallpox eradication, which challenges the institutional history that only highlights contribution of a few participants from the global north. The thesis has also discussed questions closely connected to current concerns from historical perspective, such as the legal representation of China and Taiwan in the WHO, and the quality and trustworthiness of public health data from China. It provides new perspectives to evaluate China's role in international and global health activities through the case of smallpox control and eradication.

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Author's Declaration

I declare that this thesis is a presentation of original work, and I am the sole author. This work has not previously been presented for an award at this, or any other university. All sources are acknowledged as references.

This thesis draws on material from dissertations from my MA History Degree at the University of York (particularly for sections of Chapter 4).

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List of Abbreviations

AAPSO	Afro-Asian Peoples' Solidarity Organization
ABMAC	American Bureau for Medical Aid to China
AFRO	World Health Organization Regional Office of Africa
APC	Asia-Pacific Peace Conference
CAS	Chinese Academy of Sciences
CBPH	Chongqing Bureau of Public Health
CCA	Commission of Cultural Affairs
CCP	Chinese Communist Party
CDC	The United States Centers for Disease Control and Prevention
CFHS	Central Field Health Station
CMB	China Medical Board
CMC	Central Military Commission
CNRRRA	China National Relief and Rehabilitation Administration
CPPCC	Committee of the Chinese People's Political Consultative Conference
CST	Commission for Science and Technology
CSR	Chinese Soviet Republic
DG	Director-General
EASCO	East Asia Science Cooperation Office
EB	Executive Board
EBF	Extra-Budgetary Fund
EMRO	World Health Organization Regional Office for the Eastern Mediterranean
EURO	World Health Organization Regional Office for Europe
FDMI	Federation of Democratic Medical Institutions
GMD	Guomindang (Nationalist Party)
GNP	Gross National Product
IAEA	International Atomic Energy Agency
IC	Interim Commission
IHD	International Health Division (Rockefeller Foundation)
ILO	International Labour Organisation
IMCO	International Maritime Organization
KPA	Korean People's Army
LNHO	League of Nations Health Organization
MEM	Mass Education Movements
NAM	Non-Aligned Movement
NATO	North Atlantic Treaty Organization
NBPL	the National Biochemistry and Pharmaceutical Laboratory
NEPB	National Epidemic Prevention Bureau
NHA	National Health Administration
NICBPB	National Institute for the Control of Pharmaceutical and Biological Products
NJAO	Northern Jiangsu Administrative Office

NLM	New Life Movement
NMAC	National Medical Association of China
NWEPB	North-west Epidemic Prevention Bureau
OIHP	Office International D'hygiène Publique
PAHO/AMRO	Pan American Health Organization/World Health Organization Regional Office for the Americas
PASB	Pan American Sanitary Bureau
PLA	People's Liberation Army
POW	Prisoners of Wars
PRC	People's Republic of China
PUMC	Peking Union Medical College
PVA	People's Volunteer Army
RBF	regular budgetary fund
RC	Regional Committee
RCT	Randomized Clinical Trial
RF	Rockefeller Foundation
RO	Regional Office
ROC	Republic of China
SBSCO	Sino-British Science Cooperation Office
SEARO	World Health Organization Regional Office for South-East Asia
SIDA	Swedish International Development Cooperation Agency
SJAO	Southern Jiangsu Administrative Office
SSFA	Sino-Soviet Friendship Association
TCM	Traditional Chinese Medicine
TPC	Technical Preparatory Committee
WHA	World Health Assembly
WHO	World Health Organization
WHO HQ	Headquarters of the World Health Organization
WIC	World Influenza Centre
WPC	World Peace Council
WPRO	World Health Organization Western Pacific Regional Office
UN	The United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	The United Nations Development Programme
UNESCO	The United Nations Educational, Scientific and Cultural Organization
UNICEF	The United Nations Children's Fund
UNRRA	The United Nations Relief and Rehabilitation Administration
UK	The United Kingdom
US	The United States of America
USSR	The Union of Soviet Socialist Republics

Introduction

The pandemic of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) emerged from the late 2019 has overwhelmed health systems, caused a dramatic loss of human life worldwide, and resulted in devastating social and economic disruptions. As the leading global health agency, the World Health Organization (WHO) has played an essential role in collecting and communicating epidemiological data, developing scientific and technical guidelines, and coordinating efforts to fight the disease. However, the organization has also been subjected to serious criticism, much of which questioned the organization's responding to the disease, especially in relation to the organization's interactions with China regarding the early stage of the outbreak in Wuhan.¹ These criticisms have raised questions about the WHO's relations with member states during global health emergencies, and revealed the institutional, legal, and political complexities of the organization's technical collaborative activities. In addition, the pandemic has also exposed the staggering inequality and inequity between countries, and among different social and ethnic groups within countries. In recent years, there are increasing calls for decolonising global health. It is well known that global health has evolved from colonial legacies, including but not limited to colonial medicine, missionary medicine, tropical medicine, and international health.² To decolonise global health, it is also important to democratise the narratives of its past. However, in the historical analysis of global health, the roles played by the global south in international and global health have often been assessed through a foreign gaze promoting a US- and Western Europe-centric superiority.³ The development, delivery, expansion, and evaluation of complex national and international health campaigns, such as smallpox eradication, involved a variety of factions of officials and politicians, all of whom had diverse memberships and views, and it is important to study, report, and analyse these wide-ranging perspectives as dispassionately as possible without consciously seeking to privilege one set of arguments over others.

To contribute to more democratic histories of multi-faceted health programmes which recognize and celebrate variation in ideas and actions, this thesis examines the legal,

¹ In the thesis, the translation of Chinese names and places will adopt pinyin system, except for some well-known names such as "Chiang Kai-shek", or the way of referring the person in English or Wade-Giles style is provided in original document and the pinyin name cannot be found. All online references were accessible on 23 September 2021 unless specified.

² Mishal Khan, et al., "Decolonising Global Health in 2021: A Roadmap to Move from Rhetoric to Reform," *BMJ Global Health* 6, no. 3 (2021): e005604.

³ Sèyè Abimbólá, "The Foreign Gaze: Authorship in Academic Global Health," *BMJ Global Health* 4, no. 5 (2019): e002068.

epidemiological, and institutional challenges in the complex process of the global smallpox eradication programme (SEP) in the case of China, which was not a member of the World Health Organization when the programme was delivered. The thesis is unfolded in three levels. On the global level, it investigates the impact of Cold War politics on the policy of the WHO, as well as the engagement between the WHO Headquarters (WHO HQ), the WHO Western Pacific Regional Office (WPRO), and various member states regarding China's membership in the organization and its impact on the SEP. On the international level, it examines the knowledge exchange between China and various groups of experts shifted from time in the 20th century (including the Yugoslav experts, the Rockefeller Foundation, and the League of Nations Health Organization before the war, the technical assistance from the United Nations, the United States (US) and the United Kingdom (UK) during the war, as well as the Soviet experts after the war), and how these different visions of medicine and public health were adapted or resisted in the local contexts of China. On the national level, it studies how the changing political landscape shaped the international health collaboration activities and public health policies in the communist China from 1949 to 1980, and how smallpox eradication was conceived, planned, delivered, achieved in the country, and eventually certified by the WHO.

Background

The eradication of smallpox has been considered as one of the greatest successes in the history of global health. Smallpox is an acute infectious disease caused by variola virus, which exists in two forms, variola major and variola minor. Variola major causes more severe symptoms with a higher mortality rate around 20% without vaccination, and it caused most smallpox outbreaks in Asia and Africa in the first half of the 20th century. Variola minor, which mainly caused smallpox outbreaks in Europe and the American continent, both North America and South America, is less lethal with mortality rate estimated at less than 1%.⁴ By the 1950s, smallpox had been eliminated from most developed countries in North America, Europe and Oceania because of its biologic features and the availability of effective vaccine. However, without sufficient supply of vaccines and efficient organizing, smallpox was still widely epidemic in low- and middle- income countries which were mostly located in Africa, South and Southeast Asia in the 1960s.⁵

⁴ Frank Fenner, "Global Eradication of Smallpox (with Discussion)," *Reviews of Infectious Diseases* 4, no. 5 (1982): 916.

⁵ *Ibid*, 917.

Smallpox eradication had been discussed at the World Health Assembly (WHA) in the early 1950s, but it was not officially endorsed by the World Health Organization until 1958, when Viktor Zhdanov, the Deputy Minister of Health of the Union of Soviet Socialist Republics (USSR), proposed to the Eleventh WHA to undertake a mass vaccination programme of the WHO to eradicate smallpox. However, the funding, equipment, vaccines, and personnel required for a global eradication programme remained insufficient. After debates over the feasibility and cost-benefit of the smallpox eradication by the Executive Board (EB) and the WHA from 1958 to 1966, and a promise of increasing of financial support from the United States in 1966, the smallpox eradication programme was greatly intensified from 1967. Working closely with the WHO regional and country level offices, as well as public health departments, local administrators and health workers in epidemic countries, the smallpox eradication unit at the WHO HQ successfully carried out the intensified programme in areas still suffering from smallpox epidemic including Latin America, Western Africa, the South Asian sub-continent, and Eastern Africa. In 1980, the Thirty-third WHA officially announced the global eradication of smallpox after all the countries were certified by the Global Commission for the Certification of Smallpox Eradication (the Global Commission).

However, the People's Republic of China (the PRC, China) was an exceptional case in global smallpox eradication, because it was not a member of the World Health Organization before 1972. The World Health Organization came into being after WWII as a specialized agency of the United Nations (UN) to bring international health a broader mandate and coverage. The Republic of China (the ROC, Taiwan) was a founding member of the WHO. Dr Shi Siming (Simon Szeming Sze 施思明), a young health professional from the Republic of China was one of the members who proposed the establishment of the World Health Organization. In 1945, Dr Shi, Dr Karl Evang from Norway and Dr Geraldo de Paula Souza from Brazil proposed to the United Nations Conference on International Organization in San Francisco to establish an international health organization under the auspices of the UN. Their proposal was approved by the Economic and Social Council in February 1946. However, when the WHO was inaugurated, a civil war broke out in China between the country's then ruling party Nationalist Party and the Chinese Communist Party (CCP) from 1946 to 1949. The Nationalist government was defeated and fled to Taiwan in 1949. Both regimes at the Chinese mainland and Taiwan claimed to be the only legal representative of China at the UN and its specialized agencies including the WHO. The WHO was inclined to

retain the status quo of Taipei's membership, and welcome Beijing's participation in the organization, but the communist government requested to replace Taiwan's position completely. However, with support from the US and its allies, Taiwan continued to claim the legal representation of China at the UN and its specialist agencies.

In protest the UN's embargo of the PRC during the Korean War and the ROC's presence in the international arena, the communist government refused to join in the United Nations and its specialist agencies, including the WHO in the 1950s and 1960s. The country declined any direct or in-direct technical collaboration with the organization and kept the health information and data at a high-level confidentiality from the international community. Therefore, the PRC, a country with a quarter of the world's population at that time, was not directly involved in the global smallpox eradication programme led by the WHO. From the late 1960s, both China and the US had been interested in changing relations between the two nations, which resulted in Henry Kissinger and Ricard Nixon's visits to China in 1971 and 1972. As a result, the US recognised Beijing as the only legal government of China and backed the communist regime to replace Taiwan for the seat in the UN. In 1972, the PRC became a member of the WHO after voting by the member states on the World Health Assembly, following the resolution passed on the UN General Assembly in October 1971 recognizing the Beijing government as the only lawful representative of China to the United Nations. However, involving China as a member of the WHO did not immediately improve the collaboration between the two parties. Due to China's long term hostile attitudes towards the United Nations and the political turmoil of the Cultural Revolution from 1966 to 1976, the organization was still facing challenges in accessing public health information from China and enhancing cooperation in terms of the certification of smallpox eradication in the country. The situation had not much improved until 1978, when the country started to adopt the "reform and opening up" policy which encouraged more international collaboration.

In this context, the communist government worked to its own timetables gauging the value of international political alliances, and independently eradicated smallpox through vaccination and other appropriate disease containment interventions in the early 1960s in mainland China, which was even before the intensified global smallpox eradication programme started. However, unlike the vertical programme that only targeted one or a few diseases in the countries involved in the global smallpox eradication programme, mass smallpox vaccination in China was integrated into the country's early efforts in improving public health, which focused on preventive medicine such as vaccination, environmental

sanitation, and personal hygiene.⁶ In addition, empowered by the capacity to manufacture its own vaccines, China had shed dependence on foreign intellectual property and external suppliers of vaccines, and, as a result, was able to implement the rollouts of its own vaccination plans, and protect its populations not only from smallpox, but also from other communicable diseases, which included but not limited to cholera, typhoid, tuberculosis, and pertussis. The country's capacity of mobilising public participation in mass vaccination programmes, its prevention-focused and community-based public health policy, and its capability of developing and manufacturing various vaccines independently had been built through the first half of the twentieth century. Therefore, rather than only focusing on the smallpox control and eradication in the period after 1949, the thesis will also study how China built capacities to eradicate smallpox independently with slow economic development and limited resources before the communist era.

International and global health initiatives are at their most effective when policies are adapted to the political, social, economic, and cultural diversities within nations where individual programmes are introduced. Therefore, carefully, and critically researched historical assessments of the recent past can provide such important background material, which can help representatives of international agencies negotiate work at all levels of governance. To contribute to the understanding of this complexity, this thesis studies China's engagement in the global smallpox eradication from both perspective of the WHO and from the perspective of its member states. On the one hand, it challenges the over simplistic analysis of the history of smallpox eradication that unquestioningly accepted participants' retrospective accounts, especially those officials worked in or affiliated to the World Health Organization and the Centers for Disease Control and Prevention of the United States, which often described the programme as top-down unified actions applied to the countries in need. On the other hand, through a close examination of the how China, a developing country with limited resources and medical professionals, managed to eradicate smallpox without oversight of other public health issues and external help from the WHO even before the intensified global eradication programme began, it provides a new perspective to evaluate China's role in international and global health activities through the case of smallpox control and eradication. In addition, the thesis has also discussed questions closely connected to current concerns from historical perspective, such as the legal representation of China and

⁶ David Hipgrave, "Communicable Disease Control in China: From Mao to Now," *Journal of Global Health* 1, no. 2 (2011): 225.

Taiwan in the WHO, and the quality and trustworthiness of public health data from China. The thesis provides a new perspective to evaluate the interaction between the WHO and its member states in terms of global smallpox eradication which recognises the social, political, and economic complexities at global, regional, international, national, and local levels.

Literature Review

History of the World Health Organization

Over the past two decades, the term “international health” has given way to “global health”, which provides new approaches and perspectives to scrutinize the history of health, disease, and medicine. As historians argued, the beginnings of international health lie in colonial medicine, and that the shift from “international” to “global” health may be traced through the shifting power combinations that facilitated transnational integration over the twentieth century.⁷ The Office International d’Hygiène Publique (OIHP) established in 1907 spawned the institutionalisation of international health in Europe. On the other side of the Atlantic, the Pan American Sanitary Bureau (PASB) founded in 1902 was one of the world’s earliest international health agencies, which provided a platform for regional public health concerns. The following two decades witnessed an increasing emergence of international agencies aimed at transnational health cooperation, including the League of Red Cross Societies (1919), Save the Children (1920), and the Rockefeller Foundation (1913). As the precursor of the World Health Organization, the League of Nations Health Organization (LNHO) played an important role in international health during inter-war years. In pursuing an ambitious agenda that not only focusing on disease surveillance, information exchange, scientific research, but also concerning social aspects of health, the organization’s work covered a broader array that went far beyond disease control.⁸

Came into being after World War II, the WHO brought international health the broadest mandates including monitoring and addressing health trends, shaping research agendas, establishing and enforcing international norms and standards, and providing technical support and leadership where joint actions were needed. The WHO has won more legitimacy and promoted a higher level of professionalisation and bureaucratisation of international health,

⁷ Theodore M. Brown, Marcos Cueto, and Elizabeth Fee, “The World Health Organization and the Transition from ‘International’ to ‘Global’ Public Health,” *American Journal of Public Health* 96, no. 1 (2006): 62-72.

⁸ Iris Borowy and W. Gruner ed., *Facing Illness in Troubled Times: Health in Europe in the Interwar Years, 1918-1939* (Frankfurt/Main: Peter Lang, 2005), 85-128.

although facing political challenges that came with the escalation of the cold war.⁹ The new international political realities forced the organization to move closer to the US interests in “vertical approach”¹⁰ as a preferred operational strategy and launched malaria and smallpox eradication programmes in the 1950s and 1960s.¹¹ In the next decade, the thriving of decolonization and socialist movements in Asia and Africa, as well as increasing criticism regarding the disease eradication model forced the WHO starting to reconsider its approach towards the ideals of international health. From 1970 onwards, the organization turned to Primary Health Care which addressed broader social-economic determinants of health and advocated for “inter-sectoral” coordination and community participation.¹² In the 1980s, the WHO experienced a series of financial, authority, and legitimacy crises due to the pressure of neoliberal economic reforms promoted by Reagan-Thatcher political agenda. The financial and private sector started to be heavily involved in international health, and the organization began to embrace economic reasoning and market driven solutions, which prioritise cost-effectiveness in evaluating programmes over a broader assessment of health and wellbeing.¹³ Following the deepening of globalisation and increasing concerns of “global health” in the 1990s, the WHO embraced the “global turn” and repositioned itself as an important leader in the changing field of global health.¹⁴

In the history of health, disease, and medicine, Mark Harrison argues that globalisation has spawned a “global turn” in historiography. He suggests that the global history, sharing similarities with transnational history, offers historians a broader perspective to trace the networks connected people and places, which broke the limitation of a nation-states and time. However, he notes that much scholarship in the history of health, disease, and medicine has failed to adopt a global perspective that reveals the connections and continuities, and few of the works could claim to be global history. In addition, many works are framed by

⁹ Anne-Emanuelle Birn, “The Stages of International (Global) Health: Histories of Success or Successes of History?” *Global Public Health* 4, no. 1 (2009): 50-68.

¹⁰ Sandy Cairncross, Hervé Periès, and Felicity Cutts, “Vertical health programmes,” *Lancet* 349, special issue (1997), S20-21.

¹¹ Elizabeth Fee, Marcos Cueto, and Theodore M. Brown, “At the Roots of the World Health Organization's Challenges: Politics and Regionalization,” *American Journal of Public Health* 106, no. 11 (2016): 1912-17.

¹² Brown et al., “The World Health Organization and the Transition from ‘International’ to ‘Global’ Public Health,” 66-67.

¹³ Nitsan Chorev, “Restructuring Neoliberalism at the World Health Organization,” *Review of International Political Economy* 20, no. 4 (2013): 629.

¹⁴ Brown et al., “The World Health Organization and the Transition from ‘International’ to ‘Global’ Public Health,” 69.

geopolitical entities and the constructs of the concept of western medical traditions.¹⁵ The international and global health organizations tackle broader agenda of health and well-being beyond geographical boundaries provided an entry point to study the global history of health, disease, and medicine. For example, Marcos Cueto's research on the Pan American Sanitary Bureau shows the link between commerce, trade, and public health.¹⁶ Iris Borowy's work has addressed the LNHO's role in international health during the inter-war years.¹⁷ Playing a significant role in post-war international and global health, the World Health Organization and its activities were one of the most well-documented subjects in the history accounts of international and global health. The earliest accounts of the organization's history came from a series of institutional histories covering the organization's headquarters and its regional offices.¹⁸ However, many of these histories are rooted in the institutions' celebratory tone or their tendency to gloss over conflict. Some independent scholars have provided more critical accounts addressing political and institutional complexities of the WHO. Javed Siddiqi's book examines the ineffectiveness and the "politicization" of the WHO, which weakened the organization's role and disrupted the process of international cooperation.¹⁹ Kelley Lee analyses the changing structures, key programmes and important individuals of the WHO and the challenges the organization has navigated in an increasingly complex global context.²⁰ Several works by Anne-Emanuelle Birn,²¹ Socrates Litsios,²² Theodore Brown, Marcos Cueto, Elizabeth Fee, have critically analysed the roles played by the WHO in the changing landscape of international and global health.²³

¹⁵ Fee et al., "At the Roots of the World Health Organization's Challenges," 1912-17; Mark Harrison, "A Global Perspective: Reframing the History of Health, Medicine, and Disease," *Bulletin of the History of Medicine* 89, no. 4 (2015): 639-640.

¹⁶ Marcos Cueto, *The Value of Health: A History of the Pan American Health Organization* (Rochester: University of Rochester Press, 2007).

¹⁷ Iris Borowy, *Coming to Terms with World Health: The League of Nations Health Organisation, 1921-1946* (Frankfurt am Main, New York: Peter Lang, 2009).

¹⁸ World Health Organization, *The First Ten Years of the World Health Organisation, 1948-1957* (Geneva: World Health Organization, 1958), <https://apps.who.int/iris/handle/10665/37089>; World Health Organization, *The Second ten years of the World Health Organization, 1958-1967* (Geneva: World Health Organization, 1968), <https://apps.who.int/iris/handle/10665/39254>; Norman Howard-Jones and World Health Organization, *The Pan American Health Organization: Origins and Evolution* (Geneva: World Health Organization, 1981) <https://apps.who.int/iris/handle/10665/39250>.

¹⁹ Javed Siddiqi, *World Health and World Politics: The World Health Organization and the UN System* (Columbus, SC: University of South Carolina Press, 1995).

²⁰ Kelley Lee, *The World Health Organization (WHO)* (London: Routledge, 2009).

²¹ Birn, "The Stages of International (Global) Health," 50-68; Anne-Emanuelle Birn and Nikolai Kremontsov, "'Socialising' Primary Care? The Soviet Union, WHO and the 1978 Alma-Ata Conference," *BMJ Global Health* 3, no. Suppl 3 (2018): e000992.

²² Socrates Litsios, "Malaria Control, the Cold War, and the Postwar Reorganization of International Assistance," *Medical Anthropology* 17, no. 3 (1997): 255-278.

²³ Marcos Cueto, Theodore M. Brown, and Elizabeth Fee, *The World Health Organization: A History* (Cambridge: Cambridge University Press, 2019); Fee et al., "At the Roots of the World Health Organization's

However, the unquestioning use of archives from international health organizations such as the Rockefeller Foundation, the LNHO, and the WHO, countries from the global north who had major influence on those organizations, or further interviews with individuals mentioned and advertised through these resources, has generally resulted in slavish reproductions of campaigns participants' US- and Euro-centric narratives and biases. Some scholarships tend to attribute what was a major international collaboration built upon consistently high-levels national investment to individual achievements of a few officials from the global north. This is an analytical frame clearly visible in John Farley's biography of Brock Chisholm, which entangled the early political and institutional history of the organization with the personal and intellectual history of its first Director-General.²⁴ Some narratives presented the complex negotiations in multiple levels of large, international health initiatives on the basis of the participation of US aid agencies in less developed world as a branch of a US foreign policy, which could be found in Randall Packard's and Nancy Stepan's work.²⁵ In addition, in the US- and Euro-centric discourse, countries from global south are often described as help-recipients and being placed at the periphery of the narrative, while the relationship between international organizations and the socialist world remains a subordinate topic in most studies examining the post-war global health agenda.

There are a growing number of studies departing from the US- and western Europe-centric narrative and addressing a wide range of in-depth historical studies of global health outside of English-speaking world by an inexplicable engagement with rich, multi-lingual archival resources. Dóra Vargha's work on polio in Hungary contributed significantly to the understanding of the history of medicine and public health in Socialist Eastern Europe.²⁶ The book edited by Anne-Emanuelle Birn and Raúl Necochea López,²⁷ as well as Marcos Cueto's monograph on Malaria Eradication in Mexico²⁸ are important works to learn the complexity of international health in cold war Latin America. In addition, by examining a global network

Challenges: Politics and Regionalization," 1912-1917. Marcos Cueto, "The Origins of Primary Health Care and Selective Primary Health Care," *American Journal of Public Health* 94, no. 11 (2004): 1864-1874.

²⁴ John Farley, *Brock Chisholm, the World Health Organization, and the Cold War* (Vancouver: University of British Columbia Press, 2008).

²⁵ Randall M. Packard, *A History of Global Health: Interventions into the Lives of Other Peoples* (Baltimore: Johns Hopkins University Press, 2016); Nancy Leys Stepan, *Eradication: Ridding the World of Diseases Forever?* (Ithaca: Cornell University Press, 2011).

²⁶ Dóra Vargha, *Polio across the Iron Curtain: Hungary's Cold War with an Epidemic* (Global Health Histories. Cambridge: Cambridge University Press, 2018).

²⁷ Anne-Emanuelle Birn and Raúl Necochea López ed., *Peripheral Nerve: Health and Medicine in Cold War Latin America* (Durham: Duke University Press, 2020).

²⁸ Marcos Cueto, *Cold War, Deadly Fevers: Malaria Eradication in Mexico, 1955–1975* (Baltimore: Johns Hopkins University Press, 2007).

of experts involved in creating knowledge in social psychiatry, Harry Yi-Jui Wu has provided a critical analysis of the WHO's efforts in making mental health part of global health.²⁹

History of Smallpox Eradication

Within the history of the international and global health, especially the history of the World Health Organization, great attention has been paid to the management, control, and eradication of specific diseases. The eradication of smallpox, which has been the only human disease eradicated in history, has provided valuable experience from recent past and attracted scholars to study its history. The institutional accounts have hailed the campaign as the greatest public health success in history led by the World Health Organization, “that involved thousands of health workers around the world to administer half a billion vaccinations to stamp out smallpox.”³⁰ For example, the official history of smallpox and its eradication³¹ written by the in-service and retired officials of the WHO, as well as external experts directly involved, or closely associated with the programme (Frank Fenner³², D. A. Henderson³³, Isao Arita³⁴, Zdeněk Ježek³⁵, and Ivan Danilovich Ladnyi³⁶), has pictured the global eradication programme as a unified operation that a small number of officials and public health workers from Europe and the US controlled the implementation of the programme in multiple localities with different social, political and economic conditions.³⁷ Such heroic accounts trumpeting individual and institutional contributions in the global eradication of smallpox can also be found in published memoirs of WHO officials or external experts who were involved in the campaign. For example, *The Death of a Disease: The inside Story of Eradicating a*

²⁹ Harry Yi-Jui Wu, *Mad by the Millions: Mental Disorders and the Early Years of the World Health Organization* (Cambridge, MA; and London, England: The MIT Press, 2021).

³⁰ WHO Commemorating 40 Years Smallpox Eradication, <https://www.who.int/news/item/08-05-2020-commemorating-smallpox-eradication-a-legacy-of-hope-for-covid-19-and-other-diseases>.

³¹ Frank Fenner, Donald A. Henderson, Isao Arita, Zdenek Jezek, Ivan Danilovich Ladnyi, and World Health Organization, *Smallpox and Its Eradication* (Geneva: World Health Organization, 1988).

³² Frank Fenner was an Australian scientist in virology. He served as the he chairman of the Global Commission for the Certification of Smallpox Eradication in 1978-1978.

³³ D. A. Henderson was an American epidemiologist. He served as the director of the global Smallpox Eradication Programme from 1967 to 1977, when he was appointed as the Dean of the Johns Hopkins School of Public Health.

³⁴ Isao Arita was a Japanese physician, virologist, and vaccination specialist. He served as the head of the WHO Smallpox Eradication Unit in 1977–1984.

³⁵ Zdeněk Ježek was a Czech epidemiologist and infectious scientist. He participated in the Smallpox Eradication Programme since 1972, and served as the leading epidemiologist of smallpox eradication in Somalia.

³⁶ Ivan Danilovich Ladnyi served as a WHO Inter-country Adviser on smallpox eradication in Africa from 1965 to 1971, and the Assistant Director-General of the WHO in 1976-1983.

³⁷ Sanjoy Bhattacharya, “The World Health Organization and Global Smallpox Eradication,” *Journal of Epidemiology and Community Health* 62, no. 10 (2008): 909.

Worldwide Killer, written by D.A. Henderson, covers his involvement of the smallpox eradication in much of Africa and South Asia and claims that the worldwide campaign struggled until US intervention.³⁸ This type of narrative privileges the campaign carried out in the intensified stage between 1967 and 1977 and geographic regions where the WHO and the US Centres for Disease Control (CDC) were deeply involved. Here, Western Africa, the South Asian sub-continent and the endgame in Eastern Africa get a look in within the historiography of smallpox eradication as these regions saw the involvement of some American officials, who were seconded to the WHO (India, Nepal, and Bhutan) or worked as representatives of the US CDC (Western Africa, Pakistan, Bangladesh, and Eastern Africa).

In addition, some strands of institutional history propose a distinctive historical narrative that only highlights the excellence and impact of the selected small group of actors from the US. An example in this regard is The Global Health Chronicles project, supported by Emory University and the US CDC,³⁹ which highlights individual contributions of several public health and medical personnel worked for or associated to the WHO and the US CDC. The organization of these archives supports the creation of very specific and narrow explanatory strands, which continue to have a deep impact on historical research and writing within academic contexts. Such narratives can also be found in Horace G. Ogden's book on CDC and Smallpox, and William Foege's account of smallpox eradication based on his involvement with different phases of the campaign.⁴⁰ The unquestioning use of online archives, and published memoirs or interviews with individuals mentioned and advertised through these resources, has generally resulted in slavish reproductions of campaigns participants' US- and Euro-centric narratives and biases, in which, the socialist world and the third world countries were placed on the periphery. Although some scholarships have examined the USSR's role in the smallpox eradication from the US perspectives,⁴¹ little attention was given to the networks of health cooperation between the Soviet Union and its allies, especially in the case of China, where projects were delivered successfully, through bespoke international agreements, alliances, and aid flows, and, generally speaking, with minimal assistance from the WHO and/or the US. At the very least, there is a direct

³⁸ Donald A. Henderson, *Smallpox: The Death of a Disease: The inside Story of Eradicating a Worldwide Killer* (New York: Prometheus Books, 2009).

³⁹ Global Health Chronicles, <http://globalhealthchronicles.org/collections/show/1>.

⁴⁰ Horace G. Ogden, *CDC and The Smallpox Crusade* (Washington DC: US Department of Health and Human Services, Centers for Disease Control, 1987); William Foege, *House on Fire: The Fight to Eradicate Smallpox* (California: University of California Press, 2012).

⁴¹ Erez Manela, "A Pox on Your Narrative: Writing Disease Control into Cold War History," *Diplomatic History* 34, no. 2 (2010): 299-323.

correlation between such online repositories and the downplaying of voices from countries where comprehensive smallpox control and eradication campaigns were created and run independently or as part of an inter-connected international project. All too frequently, these scholarly trends have led to a reduction of what was a major international collaboration built upon consistent national investment to a cold war battlefield of the US, which is clearly visible in Bob H. Reinhardt's⁴² work.

There are also scholarships shifting away from the heroic account and providing more critical analysis examining a wider range of actors in the global smallpox eradication. Anne-Emanuelle Birn has provided a more critical analysis by challenging the narratives picturing the smallpox as Cold War victory of cooperation and questioning the choice of technical approach over social-political aspects of health.⁴³ Paul Greenough has pointed out the challenges the CDC officials encountered in the smallpox eradication in East Pakistan.⁴⁴ His work critically analysed the complexities when applying global health measures to the local level by examining the intimidation and coercion approach adopted by American physician-epidemiologists in the final stage of smallpox eradication in South Asia.⁴⁵ Vivek Neelakantan provides a careful assessment of the smallpox eradication in Indonesia, which recognised the complex social and political structures of this multi-island nation.⁴⁶ Sanjoy Bhattacharya's deeply-researched work on India, Himalayan South Asia and Bangladesh has revealed the specificities of their campaigns, as well as the intricate negotiations and pragmatic accommodations made by international and national actors within them.⁴⁷ However, works reflected such analytical complexity remain rare.

History of medicine in China and History of Global Health in Chinese Perspective

The earliest scholarship in the history of medicine in China emerged in the early 20th Century. Chen Yuan (1880–1971)'s research on the introduction of Jennerian vaccination to

⁴² Bob H. Reinhardt, *The End of a Global Pox: America and the Eradication of Smallpox in the Cold War Era* (Chapel Hill: University of North Carolina Press, 2015).

⁴³ Anne-Emanuelle Birn, "Small(Pox) Success?" *Cien Saude Colet* 16, no. 2 (2011): 591-597.

⁴⁴ Paul Greenough, 'A Wild and Wondrous Ride: CDC Field Epidemiologists in the East Pakistan Smallpox and Cholera Epidemics of 1958', *Ciencia e Saude Coletiva* 16, no. 2 (2011), 491–500.

⁴⁵ Paul Greenough, 'Intimidation, Coercion and Resistance in the Final Stages of the South Asian Smallpox Eradication Campaign, 1973–75', *Social Science and Medicine* 41, no. 5 (1995), 633–645.

⁴⁶ Vivek Neelakantan, 'Eradicating Smallpox in Indonesia: The Archipelagic Challenge', *Health History* 12, no. 1(2010), 61–87.

⁴⁷ Sanjoy Bhattacharya, *Expunging Variola: The Control and Eradication of Smallpox in India, 1947–77* (New Delhi: Orient Longman, 2006); Sanjoy Bhattacharya, "International Health and the Limits of its Global Influence: Bhutan and the Worldwide Smallpox Eradication Programme," *Medical History* 57, no. 4 (2013), 461–486.

China in 1908 was among the earliest works on the history of Chinese medicine.⁴⁸ Some scholars such as Chen Bangxian⁴⁹ and Wu Lien-teh⁵⁰ reviewed the Chinese medical history from ancient China to the 1920s. Many of the historians studying the history of pre-modern China have both natural sciences and social sciences background. They usually adopt an interdisciplinary method to increase understanding of the application of medical practice and teaching in pre-modern China by closely studying of the ancient medical literature, medical material objects and the manuscripts.⁵¹ Studying the “internal history” of medicine⁵² was a major theme in the research of medical history of China. Such examples can be found in Cook’s research on birth⁵³ and death⁵⁴ in Ancient China, Elisabeth Hsu’s research on pulse diagnosis in early Chinese medicine,⁵⁵ and Keekok Lee’s research on the philosophical foundations of Chinese medicine.⁵⁶

Another major subject of history of medicine of China is social and cultural history of medicine. Influenced by American and European methodologies, historians in Taiwan started to break through the “internal research” or technological narratives and turned to multiple approaches to interpret diseases and treatment in a broader social, economic, cultural, and political background from the 1980s.⁵⁷ Topics such as the history of leprosy, smallpox, and health organizations in China attracted attention. For example, in two articles, Dr Angela Ki Che Leung studied the prevention of smallpox in China in Ming and Qing Dynasty (about

⁴⁸ 陈垣, “牛痘入中国考略.” 医学卫生报, no. 6-7 (1908), 载陈智超编, *陈垣早年文集* (台北: 中央研究院文史研究所, 1992), 217-244 [Yuan Chen, “Study of the Introduction of Cowpox Vaccination to China.” *Newspaper of Medicine and Health*, no. 6-7 (1908), in *Collected Works of Chen Yuan in Early Years*, edited by Zhichao Chen (Taipei: Academia Sinica Institute of Chinese Literature and Philosophy, 1992), 217-224].

⁴⁹ 陈邦贤, *中国医学史* (上海: 上海医书局, 1920) [Bangxian Chen, *History of Medicine of China* (Shanghai: Shanghai Medical Publishing House, 1920)].

⁵⁰ K Chi-min Wang and Wu Lien-teh, *History of Chinese Medicine: Being a Chronicle of Medical Happenings in China from Ancient Times to the Present Period* (Tianjin: Tientsin Press, 1936).

⁵¹ Vivienne Lo, “But is it [History of] Medicine? Twenty Years in the History of the Healing Arts of China,” *Social History of Medicine* 22, no. 2 (2009): 288.

⁵² Medical history is divided into internal history and external history. Internal history focuses on the development of medical technology, while the external history studies the interactions between medicine and society in a broader view.

⁵³ Constance A. Cook, *Birth in Ancient China: A Study of Metaphor and Cultural Identity in Pre-Imperial China* (Albany: State University of New York Press, 2017).

⁵⁴ Constance A. Cook, *Death in Ancient China: The Tale of One Man’s Journey* (Leiden: Brill, 2011).

⁵⁵ Elisabeth Hsu, *Pulse Diagnosis in Early Chinese Medicine: The Telling Touch* (Cambridge: Cambridge University Press, 2010).

⁵⁶ Keekok Lee, *the Philosophical Foundations of Chinese Medicine: Philosophy, Methodology, Science* (Lanham, MD: Lexington Books, 2017).

⁵⁷ Yi Hu, *Rural Health Care Delivery: Modern China from the Perspective of Disease Politics* (Heidelberg: Springer, 2013): 19.

14th Century-18th Century), and its social impact.⁵⁸ She has also studied the vaccinators and vaccine organization of Jennerian vaccination in Guangzhou in the 19th Century and the social characteristics of late imperial period China welcoming the introduction of a new medical technology.⁵⁹ Inspired by French Annales School, many articles and books of medical history have been published by researchers including but not limited to Tu Cheng-sheng⁶⁰, Hsiung Ping-chen⁶¹, Angela Ki Che Leung⁶², and Li Shang-jen⁶³. Their research with appropriate linguistic analysis, and insightful perspectives have provided alternative interpretation of medicine and health in pre-modern period China, colonial medicine, gender, and sexuality.⁶⁴

Influenced by Taiwanese scholars, many historians in mainland China have adopted similar research methods and focused on disease and society in the pre-modern, as well as the early twentieth century in China. For example, Cao Shuji has studied plague epidemics and the transformation of society in northern China in 1580-1644.⁶⁵ He also examined the influence of plague epidemic on the population in Yunnan in Xianfeng and Tongzhi period (about 1850-1875)⁶⁶, as well as the 1894 plague epidemic in Guangzhou, Hong Kong and Shanghai⁶⁷. He has also analysed national and local public health by the case of the plague

⁵⁸ 梁其姿, *面对疾病——传统中国社会的医疗观念与组织* (北京: 中国人民大学出版社, 2012), 48 [Angela Ki Che Leung, *In the Face of Disease: Concepts and Institutions of Medicine in Traditional Chinese Society* (Beijing: Renmin University Press, 2012), 48].

⁵⁹ Angela Ki Che Leung, "The Business of Vaccination in Nineteenth-Century Canton," *Late Imperial China* 29, no. 1 Supplement (2008): 7-39.

⁶⁰ 杜正勝, "做爲社會史的醫療史: 並介紹'疾病、醫療與文化'研究小組的成果," *新史學*, no. 6 (1995): 113-151 [Cheng-sheng Tu, "A Note on Medical History as Social History: Introducing the Achievements of the 'Disease, Healing and Culture' Research Group," *New History*, no. 6 (1995): 113-151]; 杜正勝, "醫療、社會與文化: 另類醫療史的思考," *新史學*, no. 8 (1997): 143-172 [Cheng-sheng Tu, "Medicine, Society and Culture: an Alternative Perspective on Medical History," *New History*, no. 8 (1997): 143-172].

⁶¹ 熊秉真, *幼幼: 傳統中國的襁褓之道* (臺北: 聯經出版公司, 1995) [Ping-chen Hsiung, *Childcare in Traditional China* (Taipei: Lianjing Publishing, 1995)].

⁶² Angela Ki Che Leung, *Medicine for Women in Imperial China* (Leiden: Brill, 2006); Angela Ki-che Leung, *Leprosy in China: A History* (New York: Columbia University Press, 2009).

⁶³ Li Shang-jen, "The Nurse of Parasites: Gender Concepts in Patrick Manson's Parasitological Research," *Journal of the History of Biology* 37, no. 1 (2004): 103-130.

⁶⁴ Lo, "But is it [History of] Medicine?" 290-291.

⁶⁵ 曹樹基, "鼠疫流行与华北社会的变迁, 1580-1644," *历史研究*, no.1. (1997): 17-32 [Shuji Cao, "Plague and the Transformation of Society in North China, 1580-1644," *Historical Research*, no.1 (1997): 17-32].

⁶⁶ 李玉尚, 曹樹基, "咸同年间的鼠疫流行对云南人口的影响," *清史研究*, no. 2 (2001): 19-32 [Yushang Li and Shuji Cao, "The Impact of the Plague Epidemic in the Xiantong Year on the Population of Yunnan," *Studies of Qing Dynasty*, no. 2 (2001): 19-32].

⁶⁷ 曹樹基, "鼠疫大流行中的广州、香港与上海——以申报为中心," *上海交通大学学报*, no. 4 (2005): 72-81 [Shuji Cao, "Guangzhou, Hong Kong and Shanghai during the Plague Pandemic: Based on Shun Pao," *Journal of Shanghai Jiaotong University*, no. 4 (2005): 72-81].

epidemic in Shanxi in 1918⁶⁸. Similarly, Yu Xinzong has explored the plagues of the southern Yangtze River and the evolving concept of disease response during the late Qing Dynasty⁶⁹. In addition, borrowing ideas from Foucault's *The Archaeology of Knowledge*, Yang Nianqun has studied traditional Chinese medicine and western medicine in the nineteenth and twentieth century in the colonial context and proposed "space politics" of medicine to explain the conflicts between institutionalized medicine and the dispersed folk medicine.⁷⁰

When it comes to the research of the history of medicine in the republic period of China, two research frameworks, "colonial studies" and "the imperial history", are often used to interpret the development of medicine and public health.⁷¹ One of the earliest and most cited works on twentieth century history of medicine of China was Ralph Croizier's book *Traditional Medicine in Modern China: Science, Nationalism, and the Tensions of Cultural Change*. In the book, Croizier argues that the conflict between science modernity and traditional medicine was influenced by "the interaction of two of the dominant themes in modern Chinese thinking, the drive for national strength through modern science, and the concern that modernization does not imply betrayal of national identity".⁷² Another influential work is Ruth Rogaski's book *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China*⁷³. By studying how "weisheng" (which can be translated into "hygiene," "sanitary," "health," or "public health" in English) emerged in the treaty-port Tianjin, Rogaski analyses how hygiene, a western medical concept of health and disease became an important element in the formulation of Chinese modernity in the nineteenth and twentieth centuries. Using the framework of "national reconstruction". Recent studies by

⁶⁸ 曹树基, "国家与地方的公共卫生——以1918年山西肺鼠疫流行为中心," *中国社会科学*, no. 1 (2006): 178-190 [Shuji Cao, "National and Local Public Health: the Pneumonic Plague Epidemic in Shanxi in 1918," *Chinese Social Sciences*, no. 1 (2006): 178-190].

⁶⁹ 余新忠, *清代江南的瘟疫与社会: 一项医疗社会史的研究* (北京: 中国人民大学出版社, 2003) [Xinzong Yu, *The Plague and Society in Jiangnan in Qing Dynasty: A Study on the Social History of Medicine* (Beijing: Renmin University of China Press, 2003)].

⁷⁰ 杨念群, *再造"病人"——中西医冲突下的空间政治, 1832-1985* (北京: 中国人民大学出版社, 2006) [Nianqun Yang, *To Recreate the "Patient": Space Politics in the Context of the Conflicts between the Western and the Chinese Traditional Medicine, 1832-1985* (Beijing: Renmin University of China Press, 2006)]

⁷¹ Hu, *Rural Health Care Delivery*, 21.

⁷² Ralph C. Croizier, *Traditional Medicine in Modern China Science, Nationalism, and the Tensions of Cultural Change* (Cambridge: Harvard University Press, 1968).

⁷³ Ruth Rogaski, *Hygienic Modernity: Meanings of Health and Disease in Treaty-Port China* (Berkeley: University of California Press, 2004).

Bridie Andrews⁷⁴ and Sean Hsiang-lin Lei⁷⁵ have also focused on the modern transformations of Chinese medicine from the 1850s to the 1950s. Both of them have studied the uneven development of western medicine in different health care domains in China in the Republican period (1912–49). Andrews focuses more on Japanese influence on medical reforms in China while Lei pays more attention to the role of the state in the transformation of public health and medicine in China. Moreover, some scholarship has extended to twentieth-century transitions of Western medicine in China. Through case studies, essays in *Historical Epistemology and the Making of Modern Chinese Medicine*⁷⁶ have analysed how political and intellectual accounts contributed to the transformation of authoritative knowledge in Chinese medicine. Another book written by Andrews and Bullock examines important aspects of providing effective health care for its people in the 20th Century in China. Taking a gender and emotional perspective, Nicole Barnes presented sophisticated analysis of female medical professionals' role in shaping wartime health care in China.⁷⁷

The history of medicine and health in communist China (after 1949) was first studied by scholars from the United States. Influenced by its foreign policy, the United States organized a number of scholars to do “American China Studies” to investigate the history, politics, economics, and culture of Communist China. Inspired by Ralph Croizier’s book published in 1968, and Joshua Horn’s book⁷⁸ published the next year, many North American and European scholars were enthralled by the affordable primary health in communist China and started to study public health and medicine in communist China. Having opportunity to travel widely in China, Victor W. & Ruth Sidel’s book *Serve the People: Medical Care in the People’s Republic of China* covers a wide range of topics of medicine and public health in China, which includes the historical development of public health in China and the relationship between health and politics, the qualitative and quantitative analysis of health in urban and rural China, as well as the struggling interaction between community and the state on medicine and health. In addition, David M. Lampton represents a lively account of the political analysis of public health in the communist China. In numerous publications,

⁷⁴ Bridie Andrews, *The Making of Modern Chinese Medicine, 1850–1960* (Vancouver: University of British Columbia Press, 2014).

⁷⁵ Sean Hsiang-lin Lei, *Neither Donkey nor Horse: Medicine in the Struggle over China’s Modernity* (Chicago: University of Chicago Press, 2014).

⁷⁶ Howard Chiang ed., *Historical Epistemology and the Making of Chinese Medicine* (Manchester, England: Manchester University Press, 2015).

⁷⁷ Nicole Elizabeth Barnes, *Intimate Communities: Wartime Healthcare and the Birth of Modern China, 1937–1945* (Oakland: University of California Press, 2018).

⁷⁸ Joshua S. Horn, *Away with All Pests: English Surgeon in People’s China, 1954-69* (New York: Monthly Review Press, 1969).

including “Public Health and Politics in China’s Past Two Decades,”⁷⁹ “Health Care in the People’s Republic of China,” “Health, Conflict, and the Chinese Political System”, and “Health Policy During the Great Leap Forward,” Lampton provides an original analysis of the roles of the central government agencies, health departments, and grass root medical unit in the public health policy-making process in different periods of communist China.

Recently, with more resources available, and more scholars being able to closely study the original archives in China, more critical study of the public health movements in Mao’s era have emerged. For example, Miriam Gross studied the efforts on eliminating schistosomiasis of the Chinese government to carry out its mandates at the grassroots level. In her book, she proposed a new mechanism of state power, “scientific consolidation”, to describe the role of grassroots science which helped the CCP controlling rural areas without bureaucracy or force.⁸⁰ Fang Xiaoping provides a nuanced analysis on the rise and fall of the “barefoot doctors” in China and argues that the barefoot doctor program introduced modern Western medicine to rural China, rather than traditional Chinese medicine, which provided a carefully contextualized critique towards the previous views on the role of barefoot doctors.⁸¹ In addition, Zhou Xun’s recently published book examines the construction of ‘people’s health’ in the PRC , which she argues is largely shaped by the contentious interactions between healthcare workers, patients and the state.⁸²

However, the historiography of medicine and public health in China has often been limited by geographic boundaries. As discussed earlier, although historians have called attention to shift from “international” to “global” health by tracing a broader perspective to break the limitation of a nation-states and time, many of the narratives are still based on US- and Euro-centric biases without “encompassing other places and people”.⁸³ On the other hand, China’s richly complex medical past was difficult to engage with the global history of public health. Some scholarship has broken the limitation of a nation-state by investigating international organizations’ activities in China. For example, Socrates Litsios has examined Selskar Gunn and Rockefeller Foundation’s program for rural development in China, which

⁷⁹ David Lampton, “Public Health and Politics in China’s Past Two Decades,” *Health Services Reports* 87, no. 10 (1972): 895-904.

⁸⁰ Miriam Gross, *Farewell to the God of Plague: Chairman Mao’s Campaign to Deworm China* (University of California Press, 2016).

⁸¹ Xiaoping Fang, *Barefoot Doctors and Western Medicine in China* (New York: University of Rochester Press, 2012).

⁸² Xun Zhou, *The People’s Health: Health Intervention and Delivery in Mao’s China, 1949–1983* (Montreal: McGill-Queen’s University Press, 2020).

⁸³ Lo, “But is it [History of] Medicine?” 288.

aimed to raise the educational, social, and economic standards of rural China.⁸⁴ Iris Borowy has studied the LNHO's engagement with China in terms of improving rural health, which she argues, was a significant project for testing the ideological goals of the LNHO.⁸⁵ However, without consulting a wider range of primary sources, such analysis has not derived from the US- and Euro-centric discourse that attributes a major development of international health to a few institutions and individuals from the West.

More nuanced investigations of primary sources in different languages and different origins, instead of unquestioning use of the single resources of data and information, as well as a broader consideration about the temporality and geography of health, would provide more valuable historical assessments of the complexity of international public health. There are increasing publications in the history of medicine and public health in China adopting a more international perspective and placing the country into a global health history. For example, Mary Brazelton's recent book has investigated the history of mass immunization in twentieth century China. By embedding Chinese medical history within international context, she illuminates China's crucial role in humanity's global fight against disease by focusing on the century-long creation of a Chinese body politic of vaccination.⁸⁶

Reviewing the existing literature on the history of global health and smallpox eradication, as well as those of the history of medicine and smallpox eradication in China, led to the identification of several complementary gaps and areas for further exploration in the existing scholarship. Therefore, an investigation of smallpox eradication in China, which was not directly involved in the WHO's global eradication programme, provides a special case to assess the political, legal, and institutional complexities in the development, expansion, and evaluation of national and international health campaigns. Through the case of smallpox eradication, the thesis contributes to a more comprehensive understanding of important role of China in international and global health, as well as the intricacies of an important episode of internationalism in health that remains absent in the historiography.

Sources, Research Questions and Chapter Overview

The most democratic histories of multi-faceted health programmes are those that recognize and celebrate variation in ideas and actions. Learning from both historiographies of

⁸⁴ Socrates Litsios, "Selskar Gunn and China: The Rockefeller Foundation's 'Other' Approach to Public Health," *Bulletin of the History of Medicine* 79, no. 2 (2005): 295-318.

⁸⁵ Borowy, *Coming to Terms with World Health*.

⁸⁶ Mary Augusta Brazelton, *Mass Vaccination: Citizens' Bodies and State Power in Modern China* (Ithaca: Cornell University Press, 2019).

global smallpox eradication and the history of medicine of China, this thesis aims to analyse China's role in the worldwide eradication of smallpox in wide-ranging perspectives as dispassionately as possible, without consciously seeking to privilege one set of arguments over others. In order to recover a picture of the actors involved in shaping policy and their roles in the global smallpox eradication in China as full as possible, the thesis has adopted an all-encompassing historical analysis, which is respectful of the views and actions of actors from different nationalities and social strata and looks carefully at linkages between different groups of people. It has consulted as broad a range of sources and archives as it was feasible, which included the World Health Organization Records and Archives in Geneva, The National Archives of the United Kingdom in Kew, multiple archives in China from national to local level, such as the Archive of the Ministry of Foreign Affairs and Beijing Municipal Archive in Beijing, The Second Historical Archives of China and Jiangsu Provincial Archive in Nanjing, Yunnan Provincial Archive in Kunming, and the Shanghai Municipal Archive.

However, the covid-19 pandemic has posed huge challenges to field research in the past two years, which made it impossible to travel to other parts of the world. A part of my archival research plan in the WHO Regional Office of the Western Pacific in Manila, and a further trip to Geneva and China had to be cancelled due to the pandemic, even though sufficient funding is available. Therefore, this thesis also consulted available online records, such as the WHO Institutional Repository for Information Sharing (IRIS), both collections of the global and the WHO Regional Office for the Western Pacific. In addition to the pandemic, the strict control over accessing archives in China has also posed challenges to the research. The National Archive of the PRC and records kept by the National Health Commission (equal to the Ministry of Health) are not open to the public. In the Archive of the Ministry of Foreign Affairs, only a few files are accessible, mostly related to the miscellaneous work of the ministry. In addition, historical record regarding public health in the communist period is highly confidential in provincial archives. Apart from censorship of the notes I have made in the archives on many occasions, I was not able to access the archives after 1949 in Yunnan Provincial Archive due to lack of official endorsement from government bodies, despite Yunnan province was an important case study of smallpox eradication, which was claimed to be where the last smallpox case was reported in the country by Chinese official report. Therefore, the thesis has also consulted newspapers, speeches made by political leaders, as well as retrospective investigations to fill the gaps.

The chapters in this thesis follow a logical chronological order. To answer the question of how China managed to eradicate smallpox in the world's most populous country without

much international assistance, the first chapter goes back to the early twentieth century. It analyses the development of the public health system and pharmaceutical industry in China, and the important roles played by Chinese intellectuals, as well as international health experts who worked with the Rockefeller Foundation, the League of Nations Health Organization, or other channels before the war, as well as the technical assistance from the United Nations, the United States, and the United Kingdom during the war. It investigates how smallpox vaccination, among other prevention medicine, was established as one important part of the nation's public health intervention, and how the scale of smallpox vaccination was expanded across the nation in the first half of the twentieth century. Chapter 2 traces how cold war politics influenced the priority setting and decision making of the WHO, as well as the departure of the Eastern Bloc countries and the disputes regarding the representation of China in the organization. Through the case of Southern Jiangsu Province, this chapter also examines how the communist government gauged the value of international political alliances and worked out its own approaches to improving public health, which brought mass smallpox vaccination to an unprecedented scale. Based on original archival materials from the Archives of the WHO in Geneva, Archives of Beijing and Shanghai in China, as well as articles published by Chinese state media, Chapter 3 studies the last phase of smallpox eradication in the mid-1960s and the smallpox control efforts in the Western Pacific region before the intensified programme started. It also investigates the engagement between the WHO Headquarters, the WPRO, and various member states regarding the exclusion and inclusion of China in the World Health Organization and its impact on the certification of smallpox eradication. The last chapter of the thesis analyses the epidemiological, legal, and political complexities in the certification of smallpox eradication in the case of China. The chapter starts with the investigation of political contest between China and the United Nations including its specialized agencies during 1950-1971 and the inclusion of China as member of the WHO in 1972. It analyses the challenges in the negotiation between the WHO HQ, the WPRO and China regarding certification of smallpox eradication during 1971-1979.

Despite challenges in the process of collecting primary sources, this thesis has managed to recover as wide-ranging perspectives as dispassionately as possible in the smallpox eradication in China, and the inclusion of the Chinese campaign in the global efforts against the disease led by the WHO. By engaging archival materials from global, regional, national to local level, in both English and Chinese, this thesis responds to a wide range of questions posed by complex national and international health campaigns. They include: how China was able to not only develop, manufacture, and distribute smallpox vaccines but also organise

nationwide mass vaccination campaigns? How was smallpox eradication planned, expanded, and finally achieved in China in a wider social and political context? What other interventions were adopted in the smallpox control apart from vaccination and what are the relationships between smallpox eradication and the country's public health policies? How diverse was the local political and social response to smallpox eradication campaigns? What international actors were involved in shaping the approach to improving public health which the smallpox eradication in the country relied upon? How did the cold war generate the issue of the representation of China in the United Nations and its specialised agencies including the WHO? How did the membership issue influence the technical collaboration between China and the WHO in terms of smallpox eradication among others? How did the member states react to the absence of the most populous country in the WHO? How did China re-engage in the international health after re-joining in the organization and how did it influence the progress of the certification of the global smallpox eradication? Through addressing these questions this thesis contributes to the decolonising of the global health by democratizing the narratives of its past. It presents a more inclusive history that does not privilege institutional interests or serve US- and Euro-centric narrative. By engaging perspectives from both the WHO and its member states, it aims to recover wide-ranging disparities that exist in global, regional, international, national, and local level in negotiating global health.

Chapter 1 Building Capacity: Smallpox Vaccination and Vaccine Manufacturing in China before 1949

The success of the control of various infectious diseases in China in the 1950s and 1960s, including the eradication of smallpox, contributed crucial evidence for the success of Chinese public health more broadly. However, the capacity to eradicate the disease in the country, such as the ability to develop and manufacture smallpox vaccines independently, a public health system focused on prevention, as well as the capability of organizing mass vaccination programmes, had been built through the first half of the 20th Century. Therefore, this chapter analyses the empowerment of the Chinese public health system and pharmaceutical industry in relation to smallpox control before the communist government took power. It studies how the knowledge exchange between Chinese experts and various groups of experts shifted from time in the 20th century, including those who worked with the Rockefeller Foundation, the League of Nations Health Organization, or other channels before the war, as well as the technical assistance from the United Nations, the United States, and the United Kingdom during the war. It examines how Chinese scientists learned the science and technologies of the development and mass manufacturing of smallpox vaccines through these knowledge exchanges. How these different visions of medicine and public health were adapted in the local contexts of China, and how smallpox vaccination has been integrated into the country's public health policy.

I. Smallpox vaccination: from philanthropy to public health

Historical records suggest that smallpox-like disease has existed in China for thousands of years. The first description of smallpox was believed to be appeared in the “Prescriptions for Emergencies” (281 – 361 A.D.) which called the disease “tian hang (天行)” periodic disease.¹ The ancient Chinese implemented a method of variolation to provide immunity to susceptible population against smallpox by blowing powdered material from smallpox lesions up the nostrils. The earliest documented use of this prevention effort against smallpox dates to the 10th century, and the practice of inoculation was believed to be popularised in several regions in China in the 16th century.² This method was also introduced to the world outside

¹ Leung, *In the Face of Disease: Concepts and Institutions of Medicine in Traditional Chinese Society*, 50.

² *Ibid*, 48.

of China such as Turkey, Persia, and Africa throughout the latter half of the 17th century, and it started to be employed in western Europe in the 18th century.³

In the late 18th Century, a safer and more effective method of using cowpox instead of smallpox for inoculation was considered, tested, and promulgated by Dr Edward Jenner, which provided a powerful tool against the disease.⁴ The “Jennerian” vaccine, also known as “heterologous vaccine”⁵, was introduced to China in the beginning of the 19th Century by Alexander Pearson, who worked at British India Company in Guangzhou (Canton) as a surgeon.⁶ The missionary doctors were among the earliest providers of Jennerian vaccination in China. For nearly a century, scientific medicine in China had been represented by missionary medicine. From the 1830s, when the first Western-style hospital in China was founded by missionary and physician Peter Parker in Guangzhou, to the early 20th Century, more than 360 missionary hospitals were built in China.⁷ The missionary doctors provided cowpox vaccine to abandoned infants to prevent smallpox in local nursing homes. However, although such activities aimed at disease prevention were organized by missionary physicians, their practice mainly focused on providing surgical procedure and medication.⁸ Apart from missionary doctors, the Jennerian vaccination was also adopted by a group of local practitioners in Guangzhou soon after it was introduced to China. With the expansion of missionary medicine in port cities like Guangzhou and Shanghai, more local vaccinators were trained by missionary physicians. From the 1860s, Cowpox Bureaus started to be established in those cities as a form of philanthropy activity.⁹ Funded by local associations of respectable local individuals, charity dispensaries and clinics including the Cowpox Bureaus were part of “liturgical governance”. As Susan Mann has discussed, those medical charity services usually

³ Edward A. Belongia, and Allison L. Naleway, “Smallpox Vaccine: The Good, the Bad, and the Ugly,” *Clinical Medicine & Research* 1, no. 2 (2003): 88.

⁴ Fenner, et al., *Smallpox and Its Eradication*, 264.

⁵ A type of live vaccine where one pathogen is introduced in order to provide protection against a different one. The vaccines are pathogens of other animals that either do not cause disease or cause mild disease in the organism being treated.

⁶ There are different arguments regarding the accurate date of the introduction of smallpox vaccination to China. Wu Lien-teh wrote in the Chinese Recorder, August 1936, 474, that “Alexander Pearson imported the new virus from Bombay for use in Canton in 1802 against smallpox.”; Other researches show that the vaccination was introduced in 1805, see William Lockhart, *The Medical Missionary in China* (London: Hurst and Blackett Publishers, 1861), 120; Harold Balme, *China and Modern Medicine* (London: United Council for Missionary Education Edinburgh House, 1921), 36-41; 彭泽益, “西洋种痘法初传中国考,” *科学* 32, no. 12 (1950): 203-208 [Zeyi Peng, “Introduction of Western Smallpox Vaccination to China,” *Science* 32, no. 12 (1950): 203-208]; and Leung, “The Business of Vaccination in Nineteenth-Century Canton,” 7-39

⁷ C. C. Chen, *Medicine in Rural China: A personal Account* (Berkeley, Los Angeles, London: University of California Press, 1989), 18.

⁸ Andrews, *The Making of Modern Chinese Medicine*, 63; Peng, “Introducing of Western Smallpox Vaccination to China,” 203-208.

aimed to “assume collective liability for the welfare of members, in exchange for and in affirmation of their privileged monopoly on wealth and power,”¹⁰ which ran counter to the idea of public health as one of the major functions of the state.¹¹ Regardless, such charitable medical welfare provided by local notables compensated for the general absence of government-funded health care service in late Imperial China.¹²

At the same time, increasing demand for the establishment of a sanitary administration of Qing court came from the political pressure of colonial powers. More understanding of the causes of disease promoted growing advocacy for actions on public health in treaty ports such as Shanghai and Tianjin. Foreign residents from Europe and North America who were living in China demanded the establishment of government organs to serve public health functions to provide basic disease prevention measures and hygiene standards comparable to their home countries. Ruth Rogaski’s research has shown that the “hygienic modernity” in China was first established in treaty ports on the eastern and southern coasts in late nineteenth-century and early twentieth-century China.¹³ For example, the Shanghai Municipal Council undertook extensive programs to provide clean water supply, drains and sewerage systems.¹⁴ However, those public health services had not been expanded to the areas outside international residents lived. Even for the urban residents, these facilities were privileges only enjoyed by a few people who had advantage in social and economic strata. The majority of the population, who lived in rural areas, had no awareness or experience of scientific medicine and hygiene facilities.¹⁵

In addition, support for state involvement in public health activities also came from political reformers’ pursuit of national strength and racial survival. To counter Western imperialist expansion after the first Opium War (1839-1842), Chinese intellectuals called for political and social reformation to build a modernised country since the second half of the 19th century. Western science and technology, including industry, weaponry, railways, and communication, were considered to be the key solution during the Self-Strengthening Movement (zhiqiang yundong 自强运动, 1861–95), while medical related studies were not

¹⁰ Susan Mann, *Local Merchants and the Chinese Bureaucracy, 1750-1850* (Stanford: Stanford University Press, 1987), 17-18.

¹¹ Andrews, *The Making of Modern Chinese Medicine*, 91-92; Angela Ki Che Leung, “Organized Medicine in Ming-Qing China: State and Private Medical Institutions in the Lower Yangzi Region,” *Late Imperial China* 8, no. 1 (1987): 134-166.

¹² Mann, *Local Merchants and the Chinese Bureaucracy*, 17-18.

¹³ Rogaski, *Hygienic Modernity*.

¹⁴ Isabella Jackson, *Shaping Modern Shanghai: Colonialism in China’s Global City* (Cambridge: Cambridge University Press, 2017), 164-202.

¹⁵ Chen, *Medicine in Rural China*, 17.

attributed equal importance.¹⁶ The picture had changed after the emergence of the germ theory in the late 19th century, which stimulated the development of new sciences of bacteriology and immunology in Europe. In addition, scientific medicine became a field in flux across the globe with the expansion of colonising activities. The dominant force in disseminating medical knowledge shifted from missionaries to the international organization, national and local government, as well as individual scientists and intellectuals.

In the 19th and early 20th Century, China was often referred to as “the sick man of Asia” to describe the collapsing late Qing dynasty for its deteriorating politics and economy. It was argued that China was perceived as the “sick man of Asia” because of the unhealthy people filled on the street, and an effective way to change the image of the weak nation was to improve the physical fitness of its nationals.¹⁷ This idea was reinforced after Japan won the Russo-Japanese War in 1905 and claimed the first Asian victory over Western powers.¹⁸ As a result, a great number of medical publications placed emphasis on germ theory, physiology, and hygiene were translated from Japanese, which introduced Chinese intellectuals to the principles of scientific medicine. Moreover, increasing number of Chinese students started to study medical related subjects in Japan.¹⁹ The microbiology and medical science education centres in Europe and North America, including Paris, Berlin, Cambridge, London and Edinburgh, had also attracted many Chinese students. In 1908, the US Congress passed a bill to return more than 17 million dollars excess of indemnities for the Boxer Rebellion (1900) to China. A part of the fund was used as a scholarship program for Chinese students to receive education in the United States. Although most of the scholarships were granted to students majoring in agriculture, engineering, and mining, an increasing number of students choose to study biology and medicine.²⁰ In 1922, the UK joined the US to return the Boxer Indemnities and started to provide scholarships for Chinese students to study in the UK.²¹ Apart from students studying overseas, a rising number of medical schools were also established in China, by both Chinese and international sectors. Before the end of the Qing Empire (1911),

¹⁶ Lei, *Neither Donkey nor Horse*, 48.

¹⁷ Andrews, *The Making of Modern Chinese Medicine*, 95-96. John R. Watt, *Saving Lives in Wartime China: How Medical Reformers Built Modern Healthcare Systems Amid War and Epidemics, 1928-1945* (Leiden and Boston: Brill, 2014), 2.

¹⁸ Barnes, *Intimate Communities*, 14.

¹⁹ Xi Gao, “Foreign Models of Medicine in Twentieth-Century China,” in *Medical Transitions in Twentieth Century China*, ed. Bridie Andrews and Mary Brown Bullock (Bloomington: Indiana University Press, 2014), 173-211.

²⁰ Michael H. Hunt, “The American Remission of the Boxer Indemnity: A Reappraisal,” *The Journal of Asian Studies* 31, no. 3 (1972): 539-559.

²¹ Frank H. H. King, “The Boxer Indemnity: Nothing but Bad,” *Modern Asian Studies* 40, no. 3 (2006), 663-689.

there were thirty-one medical schools in China. Among them, twenty-two were built by Christian communities which followed European and US educational tradition, while five of them taught in Japanese-style. However, among the Japanese-style medical schools, only one in five was built by Japanese, while other four were supported by Chinese public or private sectors.²² The Chinese intellectuals studying medical related natural and social sciences home or overseas constituted the earliest health experts in China. After finishing their studies, they usually returned to their home country and devoted themselves to medical research or public health reform. Some of them continued to play important roles in improving public health and eliminating smallpox after 1949.

Lu Xun (鲁迅, 1881-1936), a famous and influential litterateur, was one of the most famous students pursuing scientific medicine overseas. He turned to critical writing instead of becoming a physician after realising improving physical health could not save Chinese people. In *Call to Arms (Nahan 呐喊)*, one of his most famous collections of short stories, Lu Xun recalled his enthusiasm for Western medicine in his early age:²³

Recalling the talk and prescriptions of physicians I had known and comparing them with what I now knew, I came to the conclusion that those [Chinese] physicians must be either unwitting or deliberate charlatans ... From translated histories I also learned that the Japanese Reformation had originated, to a great extent, with the introduction of Western medical science to Japan. These inklings took me to a provincial medical college in Japan. I dreamed a beautiful dream that on my return to China I would cure patients like my father, who had been wrongly treated, while if war broke out I would serve as an army doctor, at the same time strengthening my countrymen's faith in reformation.²⁴

Sharing the same dream, the “father of the nation” Sun Yat-sen (Sun Wen/Sun Zhongshan 孙文/孙中山, 1866-1925) studied medicine at Boji Hospital (博济医院) in Guangzhou with the Christian missionary John G. Kerr,²⁵ while later he devoted himself to political revolution. He played an instrumental role in the overthrow of the Qing dynasty during the Xinhai Revolution (xinhai geming 辛亥革命) in 1911, which marked not only as a shift point of Chinese history, but also a benchmark that “establish[ed] the importance of public health as a national responsibility.”²⁶ In the year before the momentous political revolution in 1911, a devastating plague epidemic broke out in Manchuria. This outbreak was

²² Gao, “Foreign Models of Medicine in Twentieth-Century China,” 177.

²³ Andrews, *The Making of Modern Chinese Medicine*, 69.

²⁴ Hsun Lu, *Selected Works of Lu Hsun* (Beijing: Foreign Languages Press, 1956), 6.

²⁵ Marie-Claire Bergère, and Janet Lloyd, *Sun Yat-sen* (Stanford: Stanford University Press, 1998), 24.

²⁶ Lei, *Neither Donkey nor Horse*, 21.

recognised as the world's first identified epidemic of *pneumonic* plague, which shared a pathology distinct from bubonic plague. A British Malaya born physician, Dr Wu Lien-teh (Wu Liande 伍连德 1879–1960),²⁷ who was trained in Cambridge, successfully lead the containing efforts of the pneumonic plague.²⁸ The Manchuria plague not only introduced to the Qing government a new category of disease – “infectious disease” (chuanranbing 传染病), which did not exist in traditional Chinese medicine, but also accelerated China's acceptance of modern medicine and government intervention in prevention and control of epidemic diseases.²⁹ At the International Plague Conference in April 1911,³⁰ Mongolian viceroy of Manchuria, Hsi-liang (Xiliang 锡良) declared that:

We feel that the progress of medical science must go hand in hand with the advancement of learning. If railways, telegraphs, electric lights and other modern inventions are indispensable to the material welfare of this country, we should also make use of the wonderful resource of Western medicine for the benefit of our people.³¹

His words showed that the authorities started to recognise the crucial role that scientific medicine and government intervention of health played in defending the sovereignty of a state.³² In addition, by sharing of the successful experience in containing the pneumonic plague at the International Plague Conference in April 1911, China was recognised as a country performing cutting-edge medical scientific research for the first time by the international community, and won geopolitical respect.³³ The conference also decided to establish the North Manchuria Plague Prevention Service, which was the first state public health agency in China.³⁴

Soon after the International Plague Conference in October 1911, the two thousand years of monarchy in China was overthrown by republican revolutionaries after the victory of the

²⁷ More about Dr Wu Lien-the, see Andrews, *The Making of Modern Chinese Medicine*, 1.

²⁸ Details of the Manchuria plague and how Dr Wu Lien-the controlled the epidemic, see Andrews, *The Making of Modern Chinese Medicine*, 96-105; Lei, *Neither Donkey nor Horse*, 23-39; William. C. Summers, *The Great Manchurian Plague, 1910-1911: Geopolitics of an Epidemic Disease* (New Heaven: Yale University Press, 2012).

²⁹ The word “chuanranbing” was translated from Japanese, and the development of the concept of chuanranbing see Angela Ki Che Leung, “The Evolution of the Idea of Chuanran Contagion in Imperial China”, in *Health and Hygiene in Chinese East Asia: Policies and Publics in the Long Twentieth Century*, ed by Angela Ki Che Leung, and Charlotte Furth (Durham and London: Duke University Press, 2010), 25-50.

³⁰ Details of the conference refer to Summers, *The Great Manchurian Plague*.

³¹ Lien-the Wu, *Plague Fighter: Autobiography of a Chinese Physician* (Cambridge: W. Heffer & Sons, 1959), 49.

³² Lei, *Neither Donkey nor Horse*, 49-50.

³³ *Ibid*, 74.

³⁴ Andrews, *The Making of Modern Chinese Medicine*, 104-105.

Wuchang Uprising (Wuchang qiyi 武昌起义) in October. Many provinces declared independence from the Qing government and a republic government was established in Nanjing. Sun Yat-sen was elected as the first provisional president. However, the republicans failed to build an effective government. Although the emperor lost his control over the country, old Qing bureaucrats stayed in power.³⁵ Nevertheless, the first Chinese Republic turned into the hands of Yuan Shikai (袁世凯) on 10 March 1912 and moved the capital to Beijing, called the Beiyang Government (北洋政府). After Yuan's death in 1916, the country disintegrated into parts controlled by different cliques of warlords until 1928. During this decade, endless wars continued among rival groups struggling for power, and the warlords from Zhili Clique (Zhixi junfa 直系军阀) occupied the presidential seat for the most of the period.

Figure 1.1 Warlords in China, 1920



Source: Peter Zarrow, *China in War and Revolution* (London and New York: Routledge, 2005), 88.

During the two decades, public health gradually became government responsibility. Although policies hardly implemented nationwide due to continuous political fragmentation,

³⁵ Peter Zarrow, *China in War and Revolution* (London and New York: Routledge, 2005), 30.

each political power provided public health services in areas under its control to a greater or lesser extent. After taking power, Yuan Shikai introduced far-ranging modernizations in law and social areas after becoming the president. In terms of health, Yuan held the opinion that health care is the foundation for the health of citizens and the power of the nation. Therefore, he promoted research and education in medicine and public health. In November 1912, the Ministry of Education promulgated regulations for professional schools in medicine to develop medical education and medical research. The Beiyang government under Zhili Clique control further regulated the prevention of infectious disease. In 1916, the first Regulation Concerning the Prevention of Infectious Diseases was promulgated. The regulation listed “eight main infectious diseases” (bada chuanranbing 八大传染病), which included: cholera (huleila 虎列刺), dysentery (chili 赤痢), typhoid fever (changzhi fusi 肠室扶斯), smallpox (tianran dou 天然痘), typhus exanthemata (fazhen zhifusi 发疹室扶斯), scarlet fever (xinghongre 猩红热), diphtheria (shifu dili 实扶的里), and plague (baisituo 百斯脱). Although some widely transmitted diseases such as tuberculosis, leprosy and syphilis were not among the list, it provided a legal basis for the government authorities to be informed of the incidence of listed diseases, which allowed the authorities to monitor the disease, and to provide early warning of possible outbreaks. Therefore, the eight infectious diseases were called “notifiable infectious diseases.”³⁶

At the same time, an increasing number of Chinese intellectuals returned from studying medicine overseas. Their knowledge and experience learned overseas helped China striving to build its own research capacity in the fields of biology, medical science, and public health. With the expansion of medical related studies, Chinese scholars started to build their professional group. Proposed by Dr Wu Lien-teh, the earliest medical organization of Chinese medical professional, National Medical Association (NMAC, Zhonghua yixue hui 中华医学会) was established in Shanghai in 1915. Defining its mission as “serving the nationalist effort to modernize and strengthen China by advocating modern medical science and arousing public interest in public health and preventive medicine”, the members of the organizations not only started their own medical journal—the *National Medical Journal of China*, but also translated and published articles in both Chinese and English, which served different groups of readers with various educational background.³⁷

³⁶ Lei, *Neither Donkey nor Horse*, 169-170.

³⁷ Watt, *Saving Lives in Wartime China*, 18.

Moreover, empowered by knowledge of microbiology and pharmaceuticals, Chinese public and private sectors increasingly invested in the development and manufacturing of smallpox vaccines and other “biological products” (shengwu zhipin 生物制品), instead of relying on the supply from overseas. The Chinese scientists independently developed the Tiantan/ Temple of Heaven smallpox vaccine from a local strain of vaccinia viruses, which was used heavily during the eradication era. After the Regulation of Prevention of Infectious Diseases was promulgated in 1916, a disease control and prevention division was established in 1917. Responding to a pneumonic plague outbreak in north China in 1917–1918, the National Epidemic Prevention Bureau (NEPB, zhongyang fangyichu 中央防疫处) was established in Beijing in 1919, which was the first national disease prevention and vaccine research institute in China.³⁸ In the following year after its establishment, the NEPB obtained vaccinia virus seedlings from Japan, and started to produce smallpox vaccines following the Japanese method.³⁹ In 1926, the Temple of Heaven strain⁴⁰ was developed by Doctor Qi Changqing (齐长庆), who worked in the National Epidemic Prevention Bureau. This vaccinia strain was originally derived from a smallpox patient named Liu Guangsheng (刘广胜), who served in the Northwest Army. After passaging three times in monkeys, five times in rabbits’ skin and testicles, and three times in calf skin, the strain was harvested to produce smallpox vaccine. The Temple of Heaven vaccine induced antibody responses similar to the Japanese strain. To protect the strain against loss of potency, it was soaked in 60% glycerol and stored in the refrigerator. Before using for manufacturing vaccine each year, a certain amount of saline would be added into the pus of the vaccinia. The mixer would passage three to four times in rabbits’ skin and another time in calf skin, then the pus harvested would be used to produce smallpox vaccines.⁴¹

In addition, Chinese scientists had also started to test on dried smallpox vaccines from the mid-1920s. In 1925, a team from the Epidemic Prevention Bureau was sent to Manila to learn the technology of producing dried vaccines. Some research articles published in

³⁸ Ibid, 22.

³⁹ 赵铠, 章以浩, *中国生物制品发展史略* (北京: 北京生物制品研究所, 2003), 77 [Kai Zhao and Yihao Zhang, *A Brief History of the Development of Chinese Biological Products* (Beijing: National Vaccine and Serum Institute in Beijing, 2003), 77].

⁴⁰ The Temple of Heaven vaccinia vaccine strain was later used in the mass vaccination and smallpox eradication in China in 1950s, which among the four strains used the most all over the world for smallpox eradication, including EM-63, Lister, and New York City Board of Health. see Fenner et al., *Smallpox and its Eradication*, 582.

⁴¹ Zhao and Zhang, *A Brief History of the Development of Chinese Biological Products*, 76-77.

Japanese medical journals had also been translated into Chinese⁴² and aroused discussions among Chinese scientists.⁴³ Based on the knowledge learned from international experts, Dr Qi and his team conducted an experiment on dried smallpox vaccines and published the result on the *Chinese Medical Journal*. Following the decision made at the conference for smallpox and smallpox vaccines organized by the League of Nations, related clinical trials were conducted on rabbits or dolphins. Learning from Otten's experiment in 1927, Dr Qi and his team developed a dried vaccine that could maintain potency for about 2 months in 37 °C. In comparison, the potency of liquid smallpox vaccines decreased after one month under the same temperature, but the duration of potency of these two types of vaccines had no significant difference in room temperature.⁴⁴

Similarly, smallpox vaccine manufacture had also been organised by public sectors in Guangzhou, in where the Nationalist party (GMD, Guomindang 国民党) based under the leadership of Sun Yat-sen.⁴⁵ Soon after the Xinhai Revolution, a smallpox epidemic broke out in Guangzhou in 1912. Infection among military members raised concerns of authority.⁴⁶ A notice to encourage people to be vaccinated against smallpox was issued by the Military Government of Guangzhou. Vaccinators were sent to each police district to deliver free vaccination. However, the smallpox vaccines were mostly imported from the United Kingdom and Japan. Because of the shortage of supplies, the Military Government of Guangzhou decided to establish a laboratory to develop and produce its own smallpox vaccines. After the Second Revolution (Erci geming 二次革命) broke out in 1913, the laboratory's work on producing smallpox vaccines was forced to cease due to the shortage of public funds.⁴⁷ Later in 1922, the development and manufacture of smallpox vaccine was recovered in Guangzhou. The laboratory was led by a Chinese scientist Peng Lihua (彭利华),

⁴² 渡边义荣, 庞织文, “干燥牛痘苗之研究,” *中华医学杂志(上海)* 12, no. 5 (1926): 515-527 [Dubian Yirong and Zhiwen Pang, “Research on Dried Smallpox Vaccine,” *Chinese Medical Journal (Shanghai)* 12, no. 5 (1926): 515-527].

⁴³ 庞敦敏, 庞织文, “对于菊池渡边两君之干燥牛痘苗之研究第一报告之讨论,” *中华医学杂志(上海)* 12, no. 5 (1926): 527-532 [Dunmin Pang, and Zhiwen Pang, “Discussion about JuChi and Dubian's Research Report on Dried Smallpox Vaccine,” *Chinese Medical Journal (Shanghai)* 12, no. 5 (1926): 527-532].

⁴⁴ 齐长庆, 余瀛. “干燥痘苗之研究(第一报告).” *中华医学杂志(上海)* 16, no. 2/3 (1930): 130-139 [Changqing Qi and He Yu, “Research of Dried Smallpox Vaccine (Report One),” *Chinese Medical Journal (Shanghai)* 16, no. 2/3 (1930): 130-139].

⁴⁵ Zarrow, *China in War and Revolution*, 88-89.

⁴⁶ 雷休, “痘症,” *中华医报*, no. 1 (1912): 14-20 [Xiu Lei, “Smallpox,” *China Newspaper of Medicine*, no. 1 (1912): 14-20].

⁴⁷ 李计筹, “民国时期广州的种痘事业,” *南京中医药大学学报(社会科学版)* 15, no. 2 (2014): 89 [Jichou Li, “Smallpox Vaccination in Guangzhou during Republic Period,” *Journal of Nanjing University of TCM (Social Science)* 15, no. 2 (2014): 89].

who was trained in University of California, Berkeley.⁴⁸ Two physicians, Henry Chow Szeto and Frank Oldt, who were living in Guangzhou, described the manufacture process in the laboratory: the pus from the patient passed in calf skin and rabbits. The animals used for vaccine production were fed in the city hospital. Cows were the most used as vaccinifer, but female buffaloes were also used to avoid bacterial contamination, because they were less likely to be contaminated with tuberculosis. The vaccine production was subjected to strict sterilization protocols. All the animals were washed and shaved extensively in the area to be scarified. Some were washed by soap and water for two hours and then rinsed with sterile towels.⁴⁹ The smallpox vaccines produced by the lab were widely used in smallpox vaccination in Guangdong Province.

However, although both national and local authorities invested in researching and producing biological products, the smallpox vaccine supply could not meet the demand and had also relied on manufactures established or funded by private sectors, both Chinese and overseas. One of the examples was the smallpox vaccine company established in 1923 by Li Qikang (黎启康), a physician of the laboratory of the Guangzhou Municipal Health Bureau, who studied at the Imperial Medical University of Tokyo. The Smallpox vaccines produced by his company and many other Chinese manufacturers gained popularity among practitioners because of their competitive price and the trend of purchasing domestic products to support the national economy.⁵⁰ Apart from Chinese manufacturers, some international sectors had also produced and supplied smallpox vaccines in China. For example, the Pasteur Institute established branches in Shanghai, Tianjin, and Chengdu, where they produced and sold various vaccines to local practitioners, especially smallpox vaccines.⁵¹

With increasing recognition of the state responsibility in infectious disease control, local and regional authorities began to provide smallpox vaccination to the public. Learning experience from western countries, several metropolises in China started to promulgate smallpox vaccination regulations and provide government organised vaccination services. One of the earliest examples was Shanghai. In 1913, the Department of Civil Affairs of the municipal government announced the regulation of smallpox vaccination. It regulated that each child had to be vaccinated twice, within 18 months after birth, and when they were

⁴⁸ Zhao and Zhang, *A Brief History of the Development of Chinese Biological Products*, 76-77.

⁴⁹ Henry Chow Szeto, and Frank Oldt, "Smallpox Vaccination in Canton," *Health* 4, no. 1 (1927): 33-40.

⁵⁰ Li, "Smallpox Vaccination in Guangzhou during Republic Period," 89.

⁵¹ Chien-Ling Liu, "Relocating Pastorian Medicine: Accommodation and Acclimatization of Pastorian Practices against Smallpox at the Pasteur Institute of Chengdu, China, 1908–1927," *Science in Context* 30, no. 1 (2017) 33-59.

around 10 years old. The vaccination could be postponed one year if the child had any other infection. Parents or legal guardians were responsible for the vaccination of juveniles under their custody. Local governments were responsible for mobilizing cowpox bureau and medical practitioners with smallpox vaccination experience to provide free vaccination service. Apart from public service, private practitioners could also provide paid smallpox vaccination within a maximum price fixed by the government. After vaccination, a certificate should be issued, recording vaccination date and reaction for future inspection.⁵²

In Guangzhou, smallpox vaccination was also regulated and provided by the local authorities. Recognising the importance of government involvement in public health after the republican government was established in Guangzhou, a public health bureau was built to take charge of public health related issues. Li Shufen (Li Shu-fan 李树芬), a physician trained in Edinburgh, became the first director of the public health bureau and a medical advisor to the president, Sun Yat-sen.⁵³ The department of health included three major divisions, the administrative division (Zongwuke 总务课), medical division (Yiwuke 医务课), and hygiene division (Jiejingke 洁净课). Promoting smallpox vaccination became an official intervention delivered by the anti-epidemic unit under medical division⁵⁴, while the vaccination service was often delivered by the police office instead of department of health.⁵⁵ In addition, the public health bureau had also regulated the operating methods and precautions of smallpox vaccination, especially in terms of the hygiene standard in the vaccination process.⁵⁶ Later in 1926, a compulsory smallpox vaccination programme was trialled in Guangzhou. All school students including 15,000 students from public schools, 5,000 students who were studying in church schools, as well as students in private schools were required to be vaccinated against smallpox. Two years later, the Guangzhou Municipal Health Bureau announced a regulation for smallpox vaccination, which ruled that all children were required to be vaccinated against smallpox twice, at three to twelve months after birth, and at six to seven years old. Mass smallpox vaccinations were usually organised from March to May and from September to November each year, but regular vaccinations were provided any time through the year. Parents or legal guardians would be fined if any children were not vaccinated on time unless

⁵² 上海市政府, “种痘条例,” *申报*, 1913年2月21日 [Shanghai Municipal Government, “Regulation of Smallpox Vaccination, *Shun Pao*, 21 February 1913].

⁵³ No author specified, “Obituary Notice – Li Shu-fan,” *British Medical Journal* 2, no. 5529 (1966): 1600.

⁵⁴ 李树芬, “卫生与广东卫生之行政,” *中华医报*, no. 2 (1912): 10-14 [Shufen Li, “Health and Health Ministry in Guangdong,” *Chinese Newspaper of Medicine*, no. 2 (1912): 10-14].

⁵⁵ “布告派员赠种牛痘文,” *广东公报*, 1913年2月6日 [“Notice of Smallpox Vaccination,” *Guangdong Public Newspaper*, 6 February 1913].

⁵⁶ Li, “Smallpox Vaccination in Guangzhou during Republic Period,” 89.

they were experiencing other medical issues. After vaccination, a certificate would be issued by the vaccinator, but schools were not allowed to deny the entrance of students based on their vaccination status.⁵⁷

However, although attempts had been made by local authorities in different parts of the country to control smallpox transmission, and smallpox vaccination was no longer considered foreign for some urban residents in metropolis, the population vaccinated against smallpox was still rare across the country.⁵⁸ In small cities and towns, government organized smallpox vaccination services were not provided. Residents were usually vaccinated at temporary vaccination bureaus or by private practitioners.⁵⁹ In rural areas, the traditional variolation, which used attenuated smallpox virus to obtain immunity, was still the predominant method of prevention. Apart from the limited medical resources and personnel, the low coverage of smallpox vaccination was also caused by weak government control and lack of mobilization. The state led by the urban elites failed to build control over local society while increasingly extracting revenue from the rural folks, who were charged higher taxes but provided limited services, which were delivered (if at all) by strangers who cared much less about the communities rather than a known local community member.⁶⁰

Observed by one of the most influential Chinese sociologists Fei Xiaotong, the majority of Chinese rural societies for centuries were actually controlled by village elders, whose positions were sanctified by traditional institutions with which central government authority had limited interference. The rural residents were preoccupied with traditional morality which was characterized by male chauvinism, patriarchal control systems and male oriented political institutions. He suggested that the rural society was dominated by emotional social linkages while less emotional attachment with traditional value was bond in urban society which made city residents relate to each other in a more objective, practical and pragmatic way.⁶¹ The local communities were increasingly sceptical about the state power and resisted

⁵⁷ Ibid, 89-90.

⁵⁸ Chen, *Medicine in Rural China*, 89.

⁵⁹ 鲁迅, “我的种痘,” *文学* 1, no.2 (1933): 246- 250 [Xun Lu, “My Smallpox Vaccination Experience,” *Literature* 1, no.2 (1933): 246- 250].

⁶⁰ Prasenjit Duara, *Culture, Power, and the State: Rural North China, 1900–1942* (Stanford, CA: Stanford University Press, 1988), 73–74.

⁶¹ Gary G. Hamilton and Wang Zheng, *From the Soil: The Foundations of Chinese Society: A Translation of Fei Xiaotong's Xiangtu Zhongguo* (Berkeley, Los Angeles, and London: University of California Press, 1992). Also see Ronald R. Robel, “Xiaotong Fei, From the Soil: The Foundations of Chinese Society”, *Comparative Civilizations Review* 35, no. 35 (1997): 109-110. In a broader view, the characteristics Fei had identified as a “uniqueness” in Chinese culture was compared to what considered normal in United States and Western Europe. But some characteristics of rural society that Fei suggests are unique to China might be rather standard in other cultures of non-western societies, such as India or Latin America, in terms of “the relationships between a

urban elites' endeavour of building a theoretical nation-state, since the state representatives at local level constantly abused their powers to increase the extraction from people. Without understanding the factors driving the resistance, urban elites in that period endlessly express their disappointment with their less privileged compatriots for their ignorance. Rural reconstruction activists and intellectuals retained a sense of moral superiority. They accused their rural compatriots were irrational, superstitious, backward, and urgently needed to be educated.⁶² Benedict Anderson interpreted the nation as "an imagined community-and imagined as both inherently limited and sovereign"⁶³. He argued that nationalism is better defined as a form of kinship or religion rather than ideology.⁶⁴ Barbara Rosenwein introduced the concept of "emotional communities" to describe the national community was built on emotional bonds between people. Rosenwein defines emotional communities as "precisely the same as social communities," determined by what the individuals therein "define and assess as valuable or harmful to them; the evaluations that they make about others' emotions; the nature of the affective bonds between people that they recognize; and the modes of emotional expression that they expect, encourage, tolerate and deplore."⁶⁵ The urban elites' provision for uplifting rural communities through empowerment of individuals often ignored how the majority of Chinese people (who were illiterate and lived in rural areas) imagined themselves as members of national communities, but excluded their rural compatriots from their "emotional communities", which undermined the impact of social movements. The communist government, in comparison, was able to effectively use such kind of collective emotions to mobilise mass participation in public health movement and successfully expanded the coverage of smallpox vaccination nationwide (which will be discussed in chapter 2).

II. From urban to rural: smallpox vaccination and Dingxian public health experiment

Apart from the independent ability to produce biological products against infectious diseases and increasing government efforts in improving public health, the international knowledge exchange had also empowered the Chinese intellectuals to identify the country's

central government and local communities in terms of control and supervision". Therefore, Ronald R. Robel argues that "Fei's *Xiangtu Zhongguo* realistically mirrors rural conditions in most other non-Western societies."

⁶² Barnes, *Intimate Communities*, 5.

⁶³ Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, 2nd ed. (London: Verso Press, 1991), 5-6.

⁶⁴ *Ibid*, 5.

⁶⁵ Barbara H. Rosenwein, "Worrying about Emotions in History," *American Historical Review* 107, no. 3 (June 2002): 842. See also Barbara H. Rosenwein, *Emotional Communities in the Early Middle Ages* (Ithaca, NY: Cornell University Press, 2006).

needs and goals, and to find solutions for its fundamental health problems. The huge economic development and health gaps between urban and rural population drew national attention in the 1920s. Educated elites and social reformers started to address the limitation of the urban-based economic reforms from the late 1910s. In 1919, Li Dazhao (李大钊), one of the co-founders of the Chinese Communist Party, argued the importance of rural population in China's revolution and advocated for young Chinese to go to the countryside.⁶⁶ Yan Yangchu (also called James Yen, short for Y. C. James Yen 晏阳初), who was educated in Yale and Princeton Universities also pointed out that “saving the nation must start from saving the countryside and saving the countryside must start from saving the people.” In 1920, Yan returned to China and initiated the Chinese National Association of Mass Education Movements (MEM) in 1923. Activities of the association firstly focused on large scale mass education campaigns including establishment of “people’s schools” for reducing illiteracy among adults and developing educational materials. In 1927, he initiated the MEM in Dingxian (Ting Hsien 定县), a county about 170 miles south of Beijing, in where he organised education and cultural programs to tackle the problem of ignorance of rural population.⁶⁷

Figure 1.2 Location of Dingxian (Ting Hsien) in China



Source: No author specified, “A Rural Health Experiment in China: Milbank Memorial Fund Aids the Development of the Public Health Program in Ting Hsien,” *The Milbank Memorial Fund Quarterly Bulletin* 8, no. 4 (1930): 100.

⁶⁶ Kate Merkel-Hess, *The Rural Modern: Reconstructing the Self and State in Republican China* (Chicago and London: The University of Chicago Press, 2016), 2.

⁶⁷ Kate Merkel-Hess, “Reading the Rural Modern: Literacy and Morality in Republican China,” *History Compass* 7, no.1 (2009): 45; about rural reconstruction movement, also see Kate Merkel-Hess, “Acting out Reform: Theatre and Village in the Republican Rural Reconstruction Movement,” *Twentieth-Century China* 37, no. 2 (2012): 161-180; and Merkel-Hess, *The Rural Modern*.

However, Yan recognised improving literacy rates was not sufficient to solve rural problems. He concluded with four weaknesses of China including poverty, ignorance, weakness (health), and selfishness.⁶⁸ Therefore, the association decided to extend its activities to public health, agricultural extension, industrial education, social surveys, and education methodology. Because the financial support received from Chinese funders was insufficient to carry out the extensions of the programme, Yan went to the US to raise funds for their movement. With the financial aid from the Milbank Memorial Fund, public health work started in Dingxian in 1929. Dr Yao Xunyuan (H. Y. Yao or Hsun-yuan Yao 姚寻源), a graduate of the Peking Union Medical College (PUMC), was selected to be the first leader of the public health programme in Dingxian. The public health work was advised by various international and Chinese health experts, including Edgar Sydenstricker, director of the division of research of the Milbank Memorial Fund; Roger S. Greene, Director of the China Medical Board, vice-president of the Rockefeller Foundation (RF) in the Far East and the acting director of the Peking Union Medical College; and John B. Grant, Professor of public health at the PUMC.⁶⁹

Figure 1.3 The Initial Health Staff in Ting Hsien, 1930



Photo Description: From right to left; H. Y. Yao, M.D., health officer; Miss S. L. Kao, supervising public health nurse; C. A. Ma, clinical aide.

Source: No author specified, "A Rural Health Experiment in China: Milbank Memorial Fund Aids the Development of the Public Health Program in Ting Hsien," *The Milbank Memorial Fund Quarterly Bulletin* 8, no. 4 (1930): 105.

⁶⁸ Hsun-yuan Yao, "The First Year of the Rural Health Experiment in Ting Hsien, China," *The Milbank Memorial Fund Quarterly Bulletin* 9, no. 3 (1931): 61; Charles W. Hayford, *To the People: James Yen and Village China* (New York: Columbia University Press, 1990): ix.

⁶⁹ No author specified, "A Rural Health Experiment in China: Milbank Memorial Fund Aids the Development of the Public Health Program in Ting Hsien," *The Milbank Memorial Fund Quarterly Bulletin* 8, no. 4 (1930): 97-103.

The strategies adopted in public health experiment in Dingxian had been strongly influenced by John B. Grant's preference on the whole spectrum of social medicine, instead of the technically-oriented disease-eradication model advocated by many of his peers in the RF.⁷⁰ Founded in 1913 by the US oil magnate John D. Rockefeller, the International Health Division (IHD) had involved in international health to improve low productivity caused by infectious diseases, increase investment prospects, and to gain popular support and maintain stability overseas. In achieving its goal of preparing "backward" regions, including Asia, Africa, Latin America, for participating in capitalist activities, the RF concentrated on vertical approaches against infectious diseases by effective technical solutions.⁷¹ Collaborating with local governments, the RF delivered disease elimination and eradication campaigns across 100 countries and colonies against infectious diseases including hookworm, yellow fever, malaria, tuberculosis, yaws, influenza, rabies, and schistosomiasis.⁷²

Figure 1.4 Dedication Ceremony at the Peking Union Medical College, 1921



Source: Rockefeller Foundation. China Medical Board, "Dedication ceremony at the Peking Union Medical College," 100 Years: The Rockefeller Foundation, 1921-09, Rockefeller Archive Centre, China Medical Board, Inc. records, box 27, folder 307. https://rockfound.rockarch.org/digital-library-listing/-/asset_publisher/yYxpQfeI4W8N/content/dedication-ceremony-at-the-peking-union-medical-college.

⁷⁰ Chen, *Medicine in Rural China*, 24.

⁷¹ See John Farley, *To Cast out Disease: A History of the International Health Division of the Rockefeller Foundation (1913–1951)* (New York and Oxford: Oxford University Press, 2004).

⁷² Anne-Emanuelle Birn, "Backstage: The Relationship between the Rockefeller Foundation and the World Health Organization, Part I: 1940s-1960s," *Public Health* 128, no. 2 (2014):129-130.

However, the RF opted for advanced medical education in China rather than the technical oriented disease eradication strategies they adopted in other regions in the world. In 1914, the China Medical Board (CMB), and a China Medical Commission were sent to China to investigate the health situation of the country.⁷³ Based on their investigation, the CMB recommended against the RF taking direct public health intervention in China, because of the absence of consistent national public health interventions and the unstable political condition in this country, as well as the resistance from local residents due to the limited acceptance of scientific medicine. Instead, the CMB recommended taking advanced medical education as the priority of the RF's work in China.⁷⁴ Following the recommendations, the CMB bought the Union Medical College from the London Missionary Society in 1915. After recruiting fifty professors and upgrading the facilities, the PUMC opened in 1919 under the directorship of Roger S. Greene⁷⁵. The CMB aimed to build the PUMC into a leading medical education institution matching the standard in Johns Hopkins.⁷⁶

Figure 1.5 China Medical Board of the Rockefeller Foundation, 1922



Source: Rockefeller Foundation. China Medical Board, "Dedication ceremony at the Peking Union Medical College," 100 Years: The Rockefeller Foundation, 1921-09, Rockefeller Archive Centre, China Medical Board, Inc. records, box 27, folder 307. https://rockfound.rockarch.org/digital-library-listing/-/asset_publisher/yYxpQfeI4W8N/content/dedication-ceremony-at-the-peking-union-medical-college.

⁷³ The Rockefeller Foundation, "Medicine in China," The Rockefeller Foundation: A Digital History. <https://rockfound.rockarch.org/china-medical-board>.

⁷⁴ Lei, *Neither Donkey nor Horse*, 56.

⁷⁵ More about Roger Green's work in China and the PUMC, see Mary Brown Bullock, *An American Transplant: The Rockefeller Foundation and Peking Union* (Berkeley: University of California Press, 1980).

⁷⁶ The Rockefeller Foundation, Medicine in China, The Rockefeller Foundation: A Digital History. <https://rockfound.rockarch.org/china-medical-board> (accessed 12 August 2019). About Rockefeller Foundation's and the Peking Union Medical College in China, see Bullock, *An American Transplant*.

Despite the PUMC focused on elite education in medical science and technology, a Hygiene (public health) Department was established in 1923 by John B. Grant, who was born in China as a son of missionaries. Grant called for nationalized medicine encompassing both preventive and curative measures in a balanced way, which was adaptable to China's particular needs.⁷⁷ Unlike many of his peers in the RF, Grant, who was called a "medical Bolshevik,"⁷⁸ paid more attention to the whole spectrum of social medicine and emphasised "community health care" rather than using vertical approaches against diseases. Grant defined the community care as "the provision of preventive and curative services, using modern epidemiological techniques in assessing the health needs of population groups, the setting of priorities, and the assessment of results achieved."⁷⁹ His idea on community health care was based on his observation of Chinese society and his belief on the responsibility of medicine should be well-being. He also pointed out that sustainable solution for China's health problems should be the responsibility of its own people, and work would need to be carried out with the resources available within the country.⁸⁰

The leading Chinese experts in medicine sharing close ties with Grant also proposed a similar plan on building public health in China. In 1926, Dr Liu Ruiheng (also called Jui Heng Liu, J. Heng Liu刘瑞恒)⁸¹ prepared a report to the British Boxer Indemnity Commission addressing the need of a public health organisation in China. Educated in Harvard medical school, Dr Liu served as the President of the NMAC (1926-1928) and the Medical Superintendent (1926-1934) then the director (1929-1938) of the PUMC. The proposal focused on public health endeavours at the local level. Recognising the social structure of China, in the proposal, Dr Liu pointed out that although political instability was existing at national and provincial levels, cities and lower-level administrative levels such as counties and villages maintained a stable situation.⁸² He suggested a bottom-up rather than

⁷⁷ Chen, *Medicine in Rural China*, 37-38.

⁷⁸ Bullock, *An American Transplant*, 134-161.

⁷⁹ Chen, *Medicine in Rural China*, 38.

⁸⁰ *Ibid*, 39.

⁸¹ Dr Liu Ruiheng was the Acting Medical Superintendent of the PUMC from 1924 to 1926, and the Medical Superintendent from 1926 to 1934. During this time, he also served as the President of the National Medical Association of China (1926-1928). While serving as the Director of the PUMC from 1929 to 1938, he was also the Chairman of the National Opium Suppression Commission (1930-1935), Chairman of the Military Medical Supervisory Commission of Military Council, (1932-?), the Vice Minister of Health (1928-1929), the Acting Minister of Health (1929-1930), and the Director of the National Health Administration (1930-1938). In 1944, he became the Member of Supply Mission to Washington D.C. In 1946, he was the Medical Director of the American Bureau for Medical Aid to China. For more about Dr Liu Ruiheng, see "Summary of Collection on J. Heng Liu, 1922-1946," Columbia Rare Book & Manuscript Library, https://findingaids.library.columbia.edu/ead/nnc-rb/ldpd_13527771

⁸² About relationship between central government and local communities of China, see Hamilton and Zheng trans., *From the Soil*.

top-down approach towards improving public health. He argued that public health had already become one essential part of functions at national and provincial level. The problem was generally lack of health workers at local level. Therefore, the most important task for building public health systems in China was training ground level health personnel and establishing community health centres. Moreover, the proposal has also promoted preventive medicine and downplayed the role of curative medicine.⁸³

In addition, undertaking Grant's ideology in social medicine, his student Dr C. C. Chen (Chen Zhiqian 陈志潜) drew a conclusion that "rather than rely on a borrowed medical school model in our efforts to bring modern medicine to the people, China must create a new model, based on its own conditions and its own resources."⁸⁴ He became the leader of the rural health experiment at Dingxian later in 1932. Like most of the villages in China, residents in Dingxian represented lower-ranking socio-economic groups who lived with lower income and nutritional levels, who were suffering more from disease and lower life expectancy because of limited access to sanitary facilities and medical resources. As Dr Yao Xunyu described the public health condition in Dingxian in the 1920s:

Over 90 percent of the people were illiterate. Most of them are poor, ignorant, and superstitious. They live in mud huts, blackened with soot and smoke, swamped with flies, mosquitos, bedbugs, fleas, and rats. Even the so-called middle class keep their domestic animals in the quarters where they sleep, cook, and eat. Their lives are haunted with frequent sickness and disease. The health knowledge of the people is low and the available facilities are nil. Modern medicine is a curiosity and public health is unheard of. In the whole county (Dingxian) of 400,000 people there is not a single qualified modern trained physician. The annual death rate in China is probably about 30 per 1,000 population. The chief cases of controllable excess mortality are considered to be smallpox, gastro-intestinal diseases and tetanus neonatorum, and tuberculosis.... The prevalence of gastro-intestinal diseases including dysentery, typhoid, and cholera, in all probability causing 400 deaths per 100,000, is due to the negligence of personal hygiene, and lack of pure water, and absence of proper means of disposal of human excreta. Tetanus neonatorum results from lack of proper midwifery.... Maternal mortality is in all probability over 15 per 1,000 births. The cause is ascribed to winds by the common people. Smallpox is another important cause of mortality due to the fact that in China vaccination is only done once in one's life and often too late. The practice of vaccinating a baby with the material from a successful take of another child is very common.⁸⁵

The health problems and socioeconomic conditions in Dingxian reflected the reality of lacking modern medical care and knowledge about infectious diseases. The medical care available to the residents of Dingxian was no more than unprofessional treatment delivered

⁸³ The Association for the Advancement of Public Health in China, *On the Need of a Public Health Organization in China* (Beijing: Association for the Advancement of Public Health in China, 1926).

⁸⁴ Chen, *Medicine in Rural China*, 24.

⁸⁵ Yao, "The First Year of the Rural Health Experiment in Ting Hsien, China," 63-64.

by traditional practitioners who had no systematic medical training, and some of whom were even illiterate.⁸⁶After carefully learning about the social economic background and public health conditions in Dingxian, and discussion with representatives from the MEM, the PUMC and other institutions involved in the programme, Mr. Edgar Sydenstricker, director of the Division of Research of the Milbank Memorial Fund, made a statement of the principles of the Dingxian public health experiment:

(1) The health program should not be considered as an isolated effort, but should always be interwoven with the other activities of the Movement in Ting Hsien because the success of the health work has much to do with concurrent progress of other activities.

(2) Since the principal aim of the health work is to discover a model rural health program, the experimental character of the work should be kept in mind all the time and in all phases of the health activities, without prejudice for or against any existing system elsewhere.

(3) While it is thoroughly realized that the cost of the experiment as such will be far beyond the ability of the local population to bear, the result which the experiment should strive to attain is a practicable program capable of duplication elsewhere in rural China under Chinese leadership without foreign financial aid.

(4) In view of the absolute lack of physicians, hospitals and clinics of the modern type, relief and curative facilities must be developed along with preventive measures.

(5) While the supervisory personnel must be drawn from other sources, the subordinate type of personnel should be recruited and trained locally for the purpose of ascertaining (a) what types of local health personnel can be developed locally and (b) how far they may be trained at local centres. This should be viewed from the standpoint of actual conditions in China without slavish adherence to the professional standards of the West.

(6) Proper provision should be made for measuring results of the experiment, especially in terms of decreased mortality from the incidence of diseases and conditions against which public health activities are specifically directed.

(7) Adequate provision should be made from the outset for determining the relative importance of the various health problems in various parts of China in order that the contributions which it is hoped will be made by the Ting Hsien experiment may be of national significance.

(8) It is deemed advisable to attack at first only a few problems in a small area and gradually take up other problems and extend the activities in a larger area.⁸⁷

These principles shared similar vision with John B. Grant and C. C. Chen's idea on community health care that was grounded in the village, the fundamental administrative unit in the local community. Based on the principles, Dr Chen and his colleagues designed a model, which adopted scientific medicine methods that were suitable and affordable for the rural Chinese. Based on the model, primary health care was managed and delivered by the people from the local community, which was possible to be adopted by any other rural administrative areas. The insufficient financial support was one of the primary challenges of rural areas like Dingxian to build a system with fully trained medical professionals to provide

⁸⁶ Chen, *Medicine in Rural China*, 76.

⁸⁷ Yao, "The First Year of the Rural Health Experiment in Ting Hsien, China," 64, 66.

services for residents. Therefore, he believed it was crucial to build a system within the financial availability of the village instead of relying on external assistance because the system would collapse once the external support withdrew.⁸⁸ He suggested to hire local residents who were able to stay in the villages as community health workers (baojianyuan 保健员) to provide basic health services to their fellow rural residents. In his opinion, medical professionals accepted advanced training from outside, especially the urban areas, would be reluctant to stay in the poor environment in rural areas for a long period, but the community health workers from local areas were bound to their communities by kinship or other emotional connections, and they were more likely to be responsible for their work and easier to be trusted by their fellow villagers.⁸⁹ He believed that the villagers who were trained to undertake some preventive measures would encourage and motivate other members of the community to pursue similar sanitary environment which would reduce the chance of infection of communicable diseases. With more experience and training, the community health workers would also be able to provide basic medical care and emergency relief in mild medical conditions.⁹⁰ Dr Chen's innovation with community health workers strongly influenced the public health policies adopted by the communist government in the 1950s and encouraged the emergence of barefoot doctors in the late 1960s.⁹¹

In order to build a cost-effective health-care system that met the specific needs of the villagers, Dr Chen and his colleagues designed a three-tier health system based on three administrative levels: district, sub-district, and village. At the county (xian 县) level, district health centre (Baojianyuan 保健院) was established to take charge of the hospital and laboratory, epidemic control, administration, health education and training. Moreover, sub-district health station (baojiansuo 保健所) was set up at district (qu 区) level to provide services included daily clinic for preventive vaccinations, supervision of health workers and popular health education. At the bottom level was village (cun 村), "baojianyuan" 保健员 served the role of community health worker to deliver smallpox vaccinations, report births and deaths, and provide first aid support. Dr Chen had also noticed that the three-tier healthcare pyramid could not function effectively without professional supervision and training. Therefore, medical professionals were separated into different groups based on their ability to receive short-term or mid-term training to provide services at different levels. In

⁸⁸ Chen, *Medicine in Rural China*, 76-77.

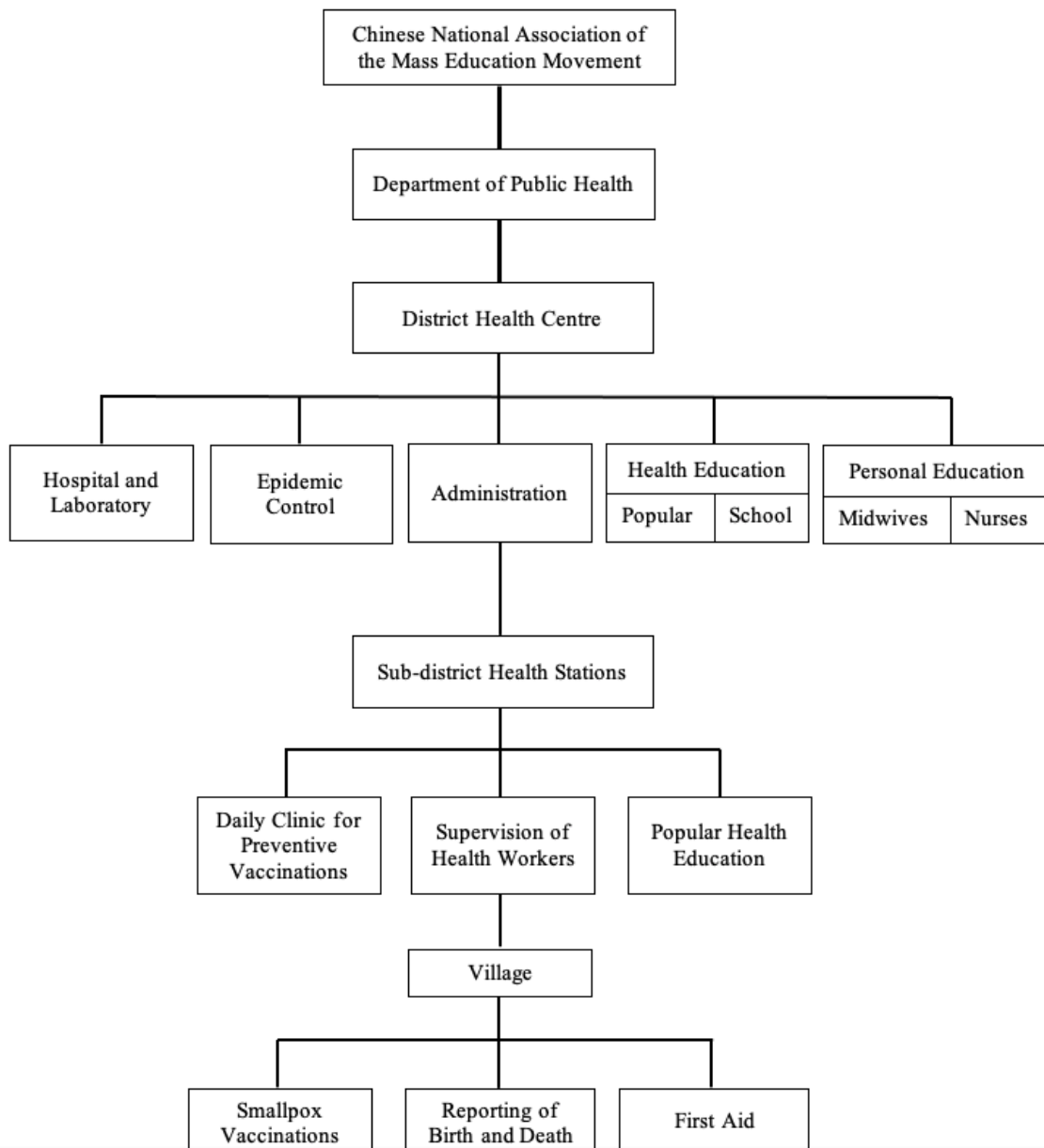
⁸⁹ *Ibid*, 78.

⁹⁰ *Ibid*, 77.

⁹¹ Lei, *Neither Donkey nor Horse*, 235-236.

addition, health care units at each level were supervised and supported by their superiors, and community health workers were not allowed to take care of the cases over their ability and responsibility, in order to guarantee the quality of the health care services.⁹² Most importantly, the cost of the health care system was affordable for most villages and communities with low economic growth. In 1934, the per capita cost of the healthcare system in Dingxian was only 9.08 cents.⁹³

Figure 1.6 Organization of the Health System, Dingxian, 1933



Source: C. C. Chen, *Medicine in Rural China: A personal Account* (Berkeley: University of California Press, 1989), 82.

⁹² Chen, *Medicine in Rural China*, 77.

⁹³ Lei, *Neither Donkey nor Horse*, 237.

Communicable diseases including smallpox were considered to be major threats to public health at the Dingxian. Based on John B. Grant and Dr C. C. Chen's theory on social medicine, control of communicable diseases was integrated into the community health work, and smallpox was one of the priorities because of the availability of effective vaccine. As Dr Chen argued, "Every health officer should start with smallpox in preventive immunization work and make it a good demonstration of organization thoroughness before proceeding to other types of preventive inoculation."⁹⁴ In March 1930, a smallpox vaccination campaign was launched in Dingxian.⁹⁵ Due to the lack of trained medical professionals, training vaccinators was also one important part of the campaign. Students from training schools of the MEM, people's schools built during the MEM and Men's Normal Schools were recruited as vaccinators. After receiving training for the smallpox vaccination method, the students would practice with each other, and on other students studied in those schools. After training and practicing, student vaccinators would be organized into teams to vaccinate residents in the villages assigned to them. Student vaccinators were equipped with vaccination outfits, sewing needles for practicing the vaccination, cotton balls soaked in alcohol or Chinese wine in a tightly closed can for disinfection, vaccine tubes, clean towels, pencils, and vaccination record forms. With support from other departments of the MEM and local health committee, the campaign reached a great success in the first year. 21,605 people had been vaccinated in 9 months. Nearly half of them, 9,984 people were vaccinated directly by members of the experiment programme. About 20% of the people vaccinated by student vaccinators received the smallpox vaccination for the first time, and most of them were new born infants within 12 months of birth, while 74% of them received variolation or vaccination once, many of whom had little or no immunity against smallpox, which was observed from their immune reactions.⁹⁶ After Dr C. C. Chen was in charge of the rural health experiment, the smallpox vaccination programme was continued to be delivered in Dingxian. From 1932-1934, a total of 31,785 vaccinations had been delivered. As a consequence of the vaccination programme, Dingxian was free from smallpox epidemic while the surrounding counties suffered from smallpox outbreaks.⁹⁷

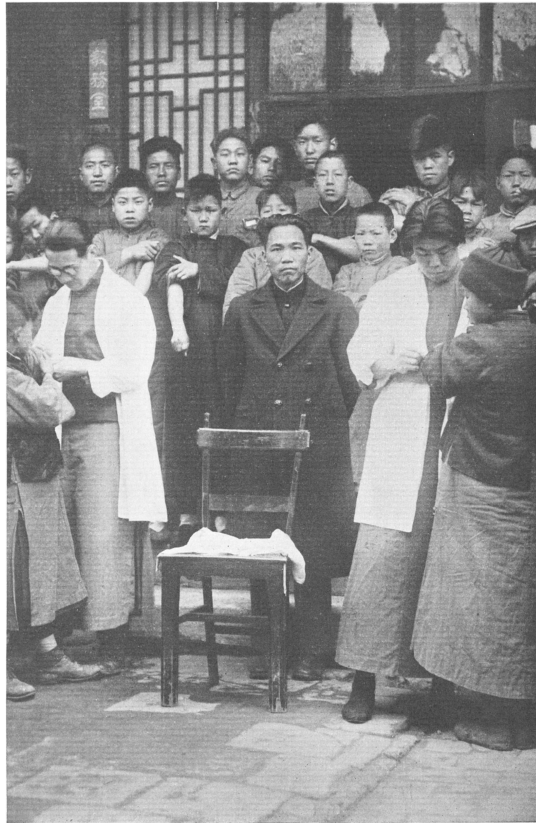
⁹⁴ C. C. Chen, H. W. Yu, and F. J. Li, "Seven Years of Jennerian Vaccination in Tingsien," *Chinese Medical Journal* 51, (1937): 961.

⁹⁵ Yao, "The First Year of the Rural Health Experiment in Ting Hsien, China," 70.

⁹⁶ *Ibid*, 70-73.

⁹⁷ Chen, *Medicine in Rural China*, 89.

Figure 1.7 Vaccination in Dingxian, Dr Yao on the left, 1931



Source: Hsun-yuan Yao, “The First Year of the Rural Health Experiment in Ting Hsien, China,” *The Milbank Memorial Fund Quarterly Bulletin* 9, no. 3 (1931): 72.

Dr C. C. Chen suggested that the control of communicable diseases in general should be carried out step by step, instead of pursuing efficiency by impressing people with the effectiveness of scientific medicine in the use of bedside treatment. The control of epidemics, he suggested, must be affordable for the local financial availability. For example, one dose of smallpox vaccine only cost 2.5 cents, which was affordable even for the rural residents in Dingxian. In addition, the prevention method must be easy to learn and practiced by community workers. Based on the experience in the smallpox vaccination programme, Dr Chen and his team started to extend the communicable control programmes to diphtheria and gastro-intestinal diseases. However, as Dr Chen had recognised, the control of gastro-intestinal diseases could not be achieved only by effective vaccines, but also required the improvement of environmental health, which relied on the improvement of economic development. Therefore, he concluded that “eradication of important causes of mortality in rural China must take time and patience, and it is ridiculous to attempt to control many diseases at one time under present socio-economic conditions.”⁹⁸

⁹⁸ *Ibid*, 73-74.

John B. Grant's son, James P. Grant, pointed out in the foreword he wrote for Dr C. C. Chen's memoir, that the public health experiment in Dingxian demonstrated that "a vertical medical system cannot stand by itself unless it is integrated with other social activities in a joint horizontal attack on the problems of social reconstruction."⁹⁹ In addition, the experiment also proved that a health model could not be applied to another setting without considering its socio-economic reality. Instead of providing medical assistance a low-income countries could not afford by their tax incomes, it would be more sustainable and practical to empower local residents and encourage self-help and take advantage of the medical resources available within local economic ability.¹⁰⁰ It was also important to notice that, although Dingxian public health experiment received advice from international health professionals and funding from the Milbank Memorial Fund, the program was designed and delivered by Chinese intellectuals who had sympathy towards the rural population and had profound understanding and insights of the social, economic, cultural and historical conditions of China. The CCP's famous achievement in primary healthcare in 1950s-1980s was strongly influenced by the Dingxian model.

As Kate Merkel-Hess argued, historians have identified the CCP's success in mobilizing rural population through rural construction since the 1930s as the critical factor in its success, but communists were not the only ones who paid attention to rural construction at that time.¹⁰¹ Intellectuals like Yan and Chen, who were highly educated, as well as socially and economically privileged, were also genuinely and deeply concerned about their rural compatriots, and contributed their efforts to rural reconstruction with "less violent" and "more participatory" methods.¹⁰² Despite their deep understanding of the disadvantaged socio-economic conditions that the rural population suffered from, like many other urban intellectuals they still propagated a moral and intellectual superiority over the rural Chinese who generally lacked opportunity accessing education and healthcare. Their political naivety reflected on the blaming of the rural residents for their innocence and ignorance rather than the inherent cause for the health problems in rural China: structural inequality and social injustice.¹⁰³

⁹⁹ Ibid, ix-x.

¹⁰⁰ Ibid.

¹⁰¹ Merkel-Hess, *The Rural Modern*, 2-3.

¹⁰² Ibid.

¹⁰³ Daniel Immerwahr, *Thinking Small: The United States and the Lure of Community Development* (Cambridge, MA: Harvard University Press, 2015); Tania Murray Li, *The Will to Improve: Governmentality, Development, and the Practice of Politics* (Durham, NC: Duke University Press, 2007), 8.

III. Collaboration between the LNHO and China, 1928-1937

From the 1920s China started to be increasingly involved in international health with the expansion of the LNHO's activities to Asia. Following the Paris Peace Conference that ended World War I, the League of Nations was founded on 10 January 1920. Empowered by Article 23f of the Covenant to "take steps in matters of international concern for the prevention and control of disease", the League of Nations' Epidemic Commission was created to deal with a typhus epidemic in Russia and Eastern Europe in 1920. Ludwik Rajchman, a Polish medical scientist and the head of the Polish State Institute of Hygiene, was appointed as the head of the commission. One year later, the Commission became the League of Nations' provisional Health Section under the direction of Rajchman.¹⁰⁴ Although it was not the LNHO's priority, social and medical reforms including research and programs aimed at improving nutrition, rural hygiene and vital statistics had been promoted under Rajchman's leadership. In order to push forward epidemiological intelligence, the LNHO started to publish weekly epidemiological data and a series of reports. Apart from that, an international service for epidemiological intelligence and public health statistics was established and with the assistance of the RF, Edgar Sydenstricker was recruited as the head of the service. He was an American epidemiologist, economist, and statistician, who served at the United States Public Health Service, and visited Dingxian as the director of the Division of Research of the Milbank Memorial Fund later in 1930.¹⁰⁵

In addition, Rajchman was sympathetic towards China and involved in promoting international health activities in the country.¹⁰⁶ In 1922, Japan took the initiative to expand LNHO's work to South, Southeast and East Asia by proposing to investigate incidence information and prevention methods of epidemic diseases in important ports in this area. The Health Committee of the League of Nations responded to this proposal with a survey in South and East Asia in 1923. Dr F. Norman White, Chief Commissioner Commission of the Epidemic Commission, was assigned to investigate health conditions in Chinese and Manchurian ports. Following his report, the Eastern Bureau of the Health Organization was established in June 1924. After receiving financial contribution from the RF, the International Epidemiological Intelligence Bureau for the Far East set up its headquarters in the British possession of Singapore in March 1925. The early activities of the Far Eastern Bureau

¹⁰⁴ Marcos Cueto, et al., *The World Health Organization: A History*, 18-19.

¹⁰⁵ *Ibid*, 25.

¹⁰⁶ Jürgen Osterhammel, "'Technical Co-Operation' between the League of Nations and China," *Modern Asian Studies* 13, no. 4 (1979): 663.

focused mainly on the collection and distribution of information and intelligence.¹⁰⁷ The Bureau collected data on epidemic outbreaks periodically from 40 national or colonial administrations through cable or radio including Karachi, Madras, Saigon, Hong Kong, Shanghai, Tokyo, etc., and distributed epidemic reports to member states. It also started to participate in technical investigations including pneumonia and plague, oral vaccination against cholera, and the efficacy of dried smallpox vaccine. Due to its vital importance to colonial powers' activities in the Far East, the bureau played an increasingly important role in international health.¹⁰⁸

After the Far East Bureau settled in Singapore in 1925, Rajchman visited Beijing on his way back to Geneva from Japan. In Beijing, he met the Minister of the Interior, Gong Xinzhan (Kung Hsin-chan 龚心湛). Rajchman expected the minister to file a formal request to the Secretary-General of the League of Nations asking for assistance with the establishment of a quarantine service. Rajchman even drafted the letter for the minister and hoped the letter would be in place while he returned to Geneva, but the minister showed little interest and the request had never arrived in Geneva.¹⁰⁹ Rajchman did not receive expected support from his visit to China, but his political motivations behind his inclination of international health collaboration with China raised suspicion from British officials. Sir George Buchanan, the British representative at the Health Committee, questioned Rajchman's invitation to China was more political than hygienical, and it was because of his sympathy towards Chinese people's anti-colonial movements.¹¹⁰

After the Nationalist government unified China, a Ministry of Health was built to take charge of all issues related to health care nationwide in 1928. The organisation was abolished in November 1930, and re-organised as the National Health Administration (NHA, weishengshu 卫生署) under the control of Interior Ministry (neizhengbu 内政部) in 1931.¹¹¹ The Nanjing Decade (1928-1937) witnessed a period of development of institutionalized state medicine. The GMD government considered public health as one important part of Sun Yat-sen's ideals of nationalism, that physical health was closely connected to the prosperity of the race. Without physically strong citizens, the nation was in the danger of being conquered or becoming extinct.¹¹² Some influential health reformers, included the Vice Minister of Health

¹⁰⁷ Ibid.

¹⁰⁸ Cueto, et al., *The World Health Organization: A History*, 26.

¹⁰⁹ Osterhammel, "'Technical Co-Operation' between the League of Nations and China," 663-664.

¹¹⁰ Ibid, 664.

¹¹¹ More about the establishment of the ministry of health, see Watt, *Saving Lives in Wartime China*, 35-42.

¹¹² Ka-che Yip, "Health and Nationalist Reconstruction," *Modern Asian Studies* 26, no.2 (1992): 399.

Dr Liu Ruiheng, Chen Zhiqian, Li Tingan (李廷安, who also graduated from the PUMC and studies in Harvard Medical School), Lin Kesheng (also called Robert Kho-Seng Lim 林可胜)¹¹³, were enthusiastic about state medicine (Gongyi 公医) as a strategy for dealing with health problems in China, which gave more focus on disease prevention (fangyi 防疫), hygiene and sanitation.¹¹⁴ They shared the idea that both preventive and curative medicine should be available for the entire population, regardless of their social status and individual payment potentialities.¹¹⁵ In order to practice the idea of state medicine, rural health demonstration stations were built in Wusong (吴淞) and Gaoqiao (高桥) in Shanghai with the hope to apply the model to larger areas. The effort in the two demonstration areas introduced modern health care including curative medicine, communicable disease control, environmental health, maternal health, data collection, etc. However, limited by socio-economic realities, the models did not apply to broader areas and had limited influence.¹¹⁶

In order to establish rural health demonstration centres under government sponsorship on a long term basis, the Ministry of Health invited Rajchman as a member of the International Advisory Council to assist with the public health reformation of China in 1929. Apart from Rajchman, Victor Heiser from the RF and Arthur Newsholme who served at the British Ministry of Health had also been invited to provide consultancy.¹¹⁷ Following the request, Rajchman and Frank G. Boudreau arrived in China with a Sanitary Mission in November 1929. After reviewing the public health condition in China, Rajchman and Boudreau provided advice on hygiene and sanitation, vital statistics, and communicable diseases control. They also reached agreement on collaboration regarding the Quarantine Service, establishment of a National Hospital, medical education in China and medical professional training overseas, as well as an epidemiological study on smallpox and cholera in Shanghai.¹¹⁸

¹¹³ Fang Zhang, "A Pioneer of Modern Chinese Physiology: Dr Robert Kho-Seng Lim," *Protein & Cell* 11, no. 3 (2019): 1-3. Andrew C. Ivy, "Robert Kho-Seng Lim, M.B., Ch.B., Ph.D., D.Sc. 1897-1969," *Gastroenterology* 58, no. 4 (1970): 580-581.

¹¹⁴ Watt, *Saving Lives in Wartime China*, 31.

¹¹⁵ R. K. S. Lim and C. C. Chen, "State Medicine," *Chinese Medical Journal* 51, no. 6 (1937): 784; Chen, *Medicine in Rural China*, 53.

¹¹⁶ Yip, "Health and Nationalist Reconstruction," 402.

¹¹⁷ Iris Borowy eds., *Uneasy Encounters: The Politics of Medicine and Health in China, 1900-1937* (Frankfurt am Main: Peter Lang, 2005), 207.

¹¹⁸ *Ibid*, 209.

Following the collaboration proposal, Dr Berislav Borčić (鲍谦熙), the director of the School of Hygiene of Zagreb University, arrived in China in the summer of 1930.¹¹⁹ With his consultancy, the Tangshan Rural Health Station was established in January 1931 in Jiangning County, near the capital Nanjing.¹²⁰ In addition, the Central Field Health Station (CFHS, Zhongyang Weisheng Sheshi Shiyanchu 中央卫生设施实验处) was also founded in the same year. Consisting of four departments: Health Education, Sanitary Engineering, Bacteriology and Epidemic Disease Control, as well as Chemistry and Pharmacology, the CFHS served as one of the most important public health demonstration and training centres. With financial support from the Rockefeller Foundation, hundreds of rural health workers graduated from the Health Personnel Training Class (Weisheng Renyuan Xunlian ban 卫生人员训练班).¹²¹ At the same time, Chinese public health officials also played a more important role in the international health. Dr Liu Ruiheng was appointed as the vice-chairman of the Health Committee of the LNHO, and he also served as a member of the Sub-Committee on the Budget of the Far-East Bureau, and a member of the Opium Commission.¹²²

In order to further support the nation building, the League of Nations reached an agreement on technical cooperation and rural construction with the minister of finance of the Nationalist government Song Ziwen (T. V. Soong 宋子文) in 1931, after his approval of a budget for the three-year plan of the National Health Service.¹²³ Following the agreement, a group of experts in public health, education, and agriculture were sent to China, which included William Kenneth Hunter Campbell from the UK, Mario Dragoni from Italy, and Max Brauer, who was a Jewish social democratic urban administrator exiled from Nazi Germany. They were influenced by different ideas on rural development.¹²⁴ As part of the newly expanded program, a team of League of Nations consultants arrived in Jiangxi to investigate education, agriculture as well as infectious diseases and rural health there. Except

¹¹⁹ Željko Dugac, “Public Health Experiences from Interwar Croatia (Yugoslavia) and Making Western Medicine in the 1930s China,” *Acta Medico-historica Adriatica* 16, no. 1 (2018): 87; Watt, *Saving Lives in Wartime China*, 43.

¹²⁰ Yip, “Health and Nationalist Reconstruction,” 405.

¹²¹ Watt, *Saving Lives in Wartime China*, 47.

¹²² Dugac, “Public Health Experiences from Interwar Croatia (Yugoslavia) and Making Western Medicine in the 1930s China,” 88.

¹²³ Other field of cooperation apart from health between the League of Nations and China, see Margherita Zanasi, “Exporting Development: The League of Nations and Republican China,” *Comparative Studies in Society and History* 49, no. 1 (2007), 143–169.

¹²⁴ Sara Lorenzini, *Global Development: A Cold War History* (Princeton and Oxford: Princeton University Press, 2019), 92.

for Max Brauer and E. Briand-Clausen, a Danish specialist in agricultural cooperation, Dr Andrija Štampar was also among the experts working in Jiangxi, where was the front line against the Chinese Soviet Republic (Zhonghua Suweiai Gongheguo 中华苏维埃共和国) established in November 1931.¹²⁵

Štampar was a Yugoslav public health expert who advocated for social medicine. He was deeply involved in the establishment of the WHO and became the chairman of the first World Health Assembly later in 1940s.¹²⁶ Dr Štampar observed the phenomenon of economic policies' determining impact on people's health and stated, "poverty is one of the most pronounced causes of disease". Since 1910, Štampar started to publish articles about social medicine and international health, he argued that:

All our efforts made so far toward the promotion of public health have been considered as charity, as acts of humanity, and that is why the budget allotted for these efforts has been so small, for the understanding of charity can be found only among the few. Social politics and social hygiene have not shown any remarkable results either, because they have been conducted along the same lines; a turning point will occur only when health policy is looked upon as the most important part of national economy....All our efforts will fail until everybody enjoys the benefits of hygienic culture. It is in the economic leveling of society that the success of social hygiene lies.... Examining the relation between disease and social conditions we are faced with a truth which indicts present-day hygienic culture very gravely: poverty is one of the most pronounced causes of disease.... This is a dark side of present-day culture, this state of affairs should be abolished by the rebirth of the maxim according to which human life is the only true currency, the only true wealth. Away with the perilous anomaly that thousands of people go to rack and ruin by producing luxurious articles, under conditions most detrimental to their health, to provide ephemeral joy to the spoilt rich classes. . . . The inadequacy of present day health politics and social hygiene is perhaps not due to our not knowing all the fundamentals which govern them but to the fact that our sense of morality is not social but individual. Nowadays everything is considered from the standpoint of individual morality which in most cases is no morality at all but something quite opposed to it. These ethics are the result of bad management which aims at intensifying the economy of things without taking any account whatsoever of the economy of people....At present we are going through a serious ethical crisis which will be overcome, and mankind will find the way toward ethical revival.... The health budget will not only comprise items relating to the help of the sick but will—to an undreamt-of extent—be used on preventive lines for the benefit of human material on which the nation's attention will be focused.....¹²⁷

He pointed out that the inequalities and inequities in health among rich and poor were driven by two major reasons. Firstly, it arose with natural phenomenon of unequal

¹²⁵ The collaboration work in Jiangxi, see Watt, *Saving Lives in Wartime China*, 58-60.

¹²⁶ Theodore M. Brown, and Elizabeth Fee, "Andrija Štampar: Charismatic Leader of Social Medicine and International Health," *American Journal of Public Health* 96, no. 8 (2006): 1383.

¹²⁷ Andrija Štampar, "On Health Politics", *American Journal of Public Health* 96, no. 8 (2006): 1382, Excerpted from Andrija Štampar. *Jugoslavenska njiva*. 1919; 29–31:1–29. Republished in English in Grmek MD, ed. *Serving the Cause of Public Health: Selected Papers of Andrija Štampar* (Zagreb, Yugoslavia: Medical Faculty of the University of Zagreb, 1966): 58–78.

distribution of income among different social classes, which determined their access to health care and education. Secondly, it was caused by structural determinants such as inadequate social policies and programmes and unequal economic arrangements.¹²⁸ Therefore, the health of their citizens was an ethical issue and a concern of the government. Štampar's idea on social medicine emphasised on social gradients affected the accessing of health between disadvantaged socio-economic groups and advantaged socio-economic groups, which included primary advantages such as employment, income level, education, housing, living conditions, etc.; as well as secondary advantages such as racial or ethnic status, political rights, social status, etc.¹²⁹

In China, Štampar got in touch with John B. Grant and Dr C. C. Chen. Sharing similar interests in social medicine, Štampar recommended Chen for learning experience overseas. In 1935 the League of Nations supported Chen's trips to the Soviet Union, Kingdom of Yugoslavia and India.¹³⁰ C. C. Chen was disappointed about the visit to India and Ceylon. As he recalled, India's vertical approach to health care only allowed a minority of its elite population to enjoy the advantages of modern medical science, which against his belief of "health improvement cannot be achieved without concurrent progress in other socioeconomic areas". He was most impressed by the rural health in Yugoslavia, especially the sanitary engineering such as rural water supply system came with rural health services, which Dr Chen considered lacking in China. The trip to Yugoslavia consolidated Dr Chen's certainty on the path of social medicine and rural health.¹³¹ However, the social injustice Dr Chen observed in India was also a phenomenon Štampar had witnessed in China. During his second visit to Jiangxi, Štampar pointed out that land ownership was one of the fundamental obstacles for the rural reconstruction in China, which was regarded as a priority later in 1950s when the CCP came into power. He also criticised the oversight of prevention and lack of vital statistics regarding major diseases, as well as insufficient investment in rural health of provincial health departments.¹³²

Nevertheless, the LNHO was not the only international health organisation working on rural health in China. Socrates Litsios' research has shown that, during the 1930s, the

¹²⁸ Michael Marmot, Sharon Friel, Ruth Bell, Tanja A. J. Houweling, and Sebastian Taylor, "Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health," *The Lancet* 372, no. 9650 (2008): 1661.

¹²⁹ Paul R. Greenough, "Asian Intra-Household Survival Logics: The 'Shen Te' and 'Shui Ta' Options," in *History of the Social Determinants of Health: Global Histories, Contemporary Debates*, ed. Harold J. Cook, Sanjoy Bhattacharya, and Anne Hardy (Hyderabad: Orient Black Swan, 2009), 31.

¹³⁰ Chen, *Medicine in Rural China*, 99.

¹³¹ *Ibid*, 104-105.

¹³² Watt, *Saving Lives in Wartime China*, 59.

Rockefeller Foundation had also promoted programs for rural development in China. However, the RF's program in China was resisted by the Board of Trustees because it was against IHD's interest in eliminating or even eradicating specific infectious diseases. Selskar Gunn, the vice president of the Foundation and an advocator for the rural development program in China, shared a similar idea with John B. Grant. After visiting China twice in 1931 and 1932-1934, Gunn and Grant submitted a report to the Foundation. In the report, Grant argued that "an effective national medical policy should include medical education, public health, and medical relief, each as part of a unified program"; "the development of such a medical policy is...so dependent upon the progress in other fields of community activity, such as industry, agriculture, education, and transportation, that it should be closely coordinated with a program of national planning."¹³³ The Chinese program was opposed and questioned by members of the Board of Trustees, and they questioned that "Are we to have two techniques in public health — one for the rest of the world and one for China?"¹³⁴ In spite of the objections, Gunn and Grant's suggestions won support from the president of the RF (George Vincent from 1927-1929, Max Mason from 1929 to 1936, and Raymond Fosdick from 1936-1941), and had been granted \$1,000,000 for a three-year rural development program in China from 1937.¹³⁵

Although the social medicine was supported by many international health leaders and national public health activists, which was demonstrated in several selected locations, it has not successfully been applied throughout the country and became a sustainable policy. Apart from the fundamental reason of social injustice, the Gongyi system was also challenged by the political leadership of the Nationalist Government. As John Watt argues, "the organization of the Ministry of Health illustrates the maze of problems into which the healthcare reformers stumbled."¹³⁶ Constant adjustment of the affiliation and name of health administrative agencies, overlapped and unclear jurisdiction, as well as corruption caused confusion and resistance to the policy.¹³⁷ For example, soon after the National Epidemic Prevention Bureau was taken over by the GMD government in 1927, it became an affiliation to the newly built Ministry of Health in 1928, and only a short term later, the Ministry of

¹³³ Report of Committee on Appraisal and Plans, 21 December 1934, Section VII, "Mr. Gunn's Proposal for China," p. 107, RG 1.1, ser. 601, box 14, file 143, Rockefeller Archives Center, Sleepy Hollow, N.Y. (hereafter RAC) in Litsios, "Selskar Gunn and China," 298-299.

¹³⁴ Ibid, 295-296.

¹³⁵ Ibid, 301.

¹³⁶ Watt, *Saving Lives in Wartime China*, 35.

¹³⁷ 张大庆, *中国近代疾病社会史* (济南: 山东教育出版社, 2006), 43 [Daqing Zhang, *A Social History of Diseases in Modern China* (Jinan: Shandong Education Press, 2006), 43].

Health was changed again to the Department of Health of the Interior Ministry in 1931. In 1935, the Central Epidemic Prevention Office was relocated to Nanjing and moved to the Central Health Laboratory of the National Economic Council and later was moved back to the Department of Health of the Interior Ministry.¹³⁸

Moreover, public healthcare had never become a political priority as military and ideological building during Nanjing decade. Watts noted that “(NHA) signalled a hardening conservative and military disdain for science and internationalism as pathways to restore national strength.”¹³⁹ The political naivety of healthcare reformers not only reflected on their neglect of social justice, but also on their incapability of building political support for their public health initiatives.¹⁴⁰ Ka-che Yip pointed out that the annual budget in 1929 available for the Ministry of Health only accounted for 0.1% of the total number, while military expense occupied 42%. Health expenses were although the budget had increased to 0.2% in 1931, and 0.7% in 1936.¹⁴¹ As to the local level, the financial support of public health was entirely relied on the preferences of local government. Although it was regulated by the provincial government that the public health expenses had to take 5% of the administration expenses in each county, it had never been executed thoroughly in reality. Administration fees were expended mostly on security and the military.¹⁴² In addition, mass public health movements were often used as ideological tools for improving state sovereignty. For example, in order to “exterminate” the Communist “bandits”, Jiang Jieshi (Chiang Kai-shek 蒋介石/蒋中正), the supreme leader of the Nationalist Party, gave a speech in Nanchang, the capital of Jiangxi Province and inaugurated the New Life Movement (Xin shenghuo yundong) (NLM) on 19 February 1934. As Nicole Barnes has argued, instead of addressing the health requirements of the poor, the NLM adopted enforcing regulations through compulsion methods to facilitate the universalizing of the hygienic standards of middle-class to gain state sovereignty.¹⁴³

Eventually, the rural health movement in China did not last long. With the Japanese invasion since July 1937 and the GMD government moved to southwest China, it was forced to cease. Despite that, the rural health work in China was considered as an important case of

¹³⁸ Zhao and Zhang, *A Brief History of the Development of Chinese Biological Products*, 77.

¹³⁹ Watt, *Saving Lives in Wartime China*, 45.

¹⁴⁰ *Ibid*, 9.

¹⁴¹ Yip, “Health and Nationalist Reconstruction,” 404.

¹⁴² JPA: 7014-001-001-0140, 解放前苏南卫生工作情况 (Health Work in Southern Jiangsu before Liberation), 1950.

¹⁴³ Barnes, *Intimate Communities*, 23, 31-35.

social medicine, and had attracted attention at the International Conference of Far-Eastern Countries on Rural Health held at Bandoeng (Java) from 3-13 August 1937. The attendants of the conference included Dr Rajchman (Director of the LNHO), Dr C. L. Park (Director of the Eastern Bureau of the LNHO), Dr Berislav Borčić (represented the LHNO office in Shanghai), and delegates from Netherlands Indies, British Malaya, French Indo-China, Netherlands Indies, Burma, India, Philippines, China, Japan and Siam. The Chinese team was led by Dr Wu Lien-teh (Director of the National Quarantine Service).¹⁴⁴ Dr C. C. Chen contributed a report of the Dingxian Experiment although he did not present orally on the conference. In addition, Dr Selskar M. Gunn (Vice-President of the Rockefeller Foundation) attended the conference as an observer.

The conference emphasized the importance of social and economic development to improving health conditions for rural population. It was declared in the conference report that “the aim of any system of public health is, fundamentally, the well-being of the population. To be successfully achieved, the collaboration of various departments, health, education, veterinary, public works and finance is required.” It was pointed out that the improvements in public health would not be sustainable without transformation in the fields of economics, sociology, agriculture, and education to be carried out at the same time. The conference advocated for an ordered and coherent co-operation between public sectors and non-governmental sectors on public health related issues, such as agriculture, animal husbandry, irrigation, public health education and co-operative societies.¹⁴⁵

Before the conference, a group of experts had studied the necessity of undertaking the co-ordination of present activities related to rural health in east counties and reached the conclusion that the best results could be achieved through a comprehensive and effective integration of governmental work, both in planning and execution. The experts suggested paying special attention to economic and social conditions of a certain country when conducting survey of health and medical services. They emphasised that the medical and health workers were incapable of obtaining the best results without understanding the social and economic factors involved. Based on the survey, the conference report specifically pointed out that “it is futile, if not a backward step, to launch programmes which, however

¹⁴⁴ League of Nations, *Report of the Intergovernmental Conference on Far-Eastern Countries on Rural Hygiene* (Geneva: League of Nations, 1937), 18.

¹⁴⁵ *Ibid*, 7-10.

desirable, are not within the economic possibilities of the area concerned, or in line with the customs and educational level of the population involved.”¹⁴⁶

Recommended by the conference, preventive medicine should be taken as a priority. It was believed that decentralised preventive effort could bring greatest benefit to the health conditions of the rural population in eastern countries with relatively smaller cost compared to curative medicine.¹⁴⁷ As to the endeavour of introducing hygienic principles into village life, the report suggested the efforts to improve public health should focus on the improvement of existing practices rather than the introduction of entirely new and comparatively expensive measures from outside.¹⁴⁸ It supported the preventive efforts to be decentralised and adjusted to different local conditions and resources. The report recommended against adopting a single type of organisation in all areas. Instead, the conference advised to apply the preventive work with sufficient thoroughness to the rural population with operations defined according to the local condition. In addition, the report pointed out that the likelihood of attaining sustainable results of those preventive efforts was determined by the capacity of the health workers.¹⁴⁹ Therefore, it recommended to give more attention to training of auxiliary personnel to build links between medical experts and rural population, rather than overwhelmingly focusing on elite medical education.¹⁵⁰

Moreover, in terms of disease control, the conference recommended to avoid focusing on practical solutions rather than technical aspects.¹⁵¹ When launching health programmes in rural areas, it was suggested to work through the general public and lead them into the adoption of the practice of their own free will, rather than imposing systems from above.¹⁵² In between compulsion and persuasion when enacting health measures, the report suggested to only adopt compulsion while epidemics of smallpox and cholera, and “the wholehearted co-operation of the population must be obtained” if lasting results were to be secured. In order to gain “wholehearted co-operation”, increasing public awareness of health knowledge and acceptance of public health practice was a matter of profound importance.¹⁵³ Therefore, delivering appropriate educational campaigns in all levels of education was one of the major objects of public education, especially teaching sanitary principles since their childhood.¹⁵⁴ In

¹⁴⁶ Ibid, 23-26.

¹⁴⁷ Ibid, 43.

¹⁴⁸ Ibid, 51.

¹⁴⁹ Ibid, 43.

¹⁵⁰ Ibid, 25.

¹⁵¹ Ibid, 88.

¹⁵² Ibid, 25 and 51.

¹⁵³ Ibid, 9-10.

¹⁵⁴ Ibid, 51-52.

addition to the social and economic determinants of health, the conference also discussed the role of women in rural betterment. It was recognised that women had been becoming more significant in rural health in eastern countries. The conference also strongly recommended governments to study the methods of land reform, which was neglected but very essential for rural reconstruction to be successful and sustainable.¹⁵⁵

The suggestions made at the Bandoeng conference reflected the development of principles and practices of social medicine in 1920s and 1930s.¹⁵⁶ Socrates Litsios has speculated that the approach emphasizing social and economic as opposed to biomedical factors seemed to be the future of international health would rest at that time, if Rajchman remained in charge of the LNHO and the League of Nations had not collapsed with the start of WWII.¹⁵⁷ As Marcos Cueto's research has shown, Rajchman's position in the League had been threatened by the Japanese because of his defence of China against Japan's invasion since 1931. Moreover, in Europe, Rajchman had been increasingly labelled as "communist," "pro-Soviet," or even "Jewish-Masonic" after the rise of fascism in the 1930s. At the same year of the Bandoeng conference, the Sino-Japanese war broke out in 1937, which forced the LNHO reducing its activities in China. At the same time, Rajchman gradually lost support in the League and was finally forced to resign the same year.¹⁵⁸

At the same time, other major international advocators for social medicine successively left China. Some of them had been marginalised or even prisoned until the end of WWII. Berislav Borčić remained in China until 1938, when he took over the work of School of Public Health in Zagreb.¹⁵⁹ In 1939, John B. Grant relocated to Calcutta and served as the director of the All-India Institute of Hygiene and Public Health until 1945.¹⁶⁰ Štampar was imprisoned by Germans from 1940 until the end of the Second World War.¹⁶¹ Selskar Gunn went back to the US in 1940 and died in 1944 after a long illness.¹⁶² Instead, as one of the Allied "Big Four" in the Declaration by the United Nations in 1942, China received increasing science collaboration from the United States, the United Kingdom, and the Soviet

¹⁵⁵ Ibid, 25-26.

¹⁵⁶ Cueto, et al., *The World Health Organization: A History*, 30.

¹⁵⁷ Litsios, "Selskar Gunn and China," 314-315.

¹⁵⁸ Cueto, et al., *The World Health Organization: A History*, 31.

¹⁵⁹ Dugac, "Public Health Experiences from Interwar Croatia (Yugoslavia) and Making Western Medicine in the 1930s China," 75-106, 96.

¹⁶⁰ Liping Bu and Elizabeth Fee, "John B. Grant International Statesman of Public Health," *American Journal of Public Health* 98, no. 4 (2008): 628-629.

¹⁶¹ Henry van Zile Hyde, "A Tribute to Andrija Štampar, M.D., 1888-1958," *American Journal of Public Health and the Nation's Health* 48, no. 12 (1958): 1578-1582.

¹⁶² Litsios, "Selskar Gunn and China," 314-315.

Union. Technical approach replaced social medicine as the major theme of international health collaboration between China and the international community. Although many visions made at the Bandung conference did not come true at that time, the principles advocated at the conference had profound impact on the public health policies adopted by the communist government in the 1950s, such as taking prevention as priority, focusing on public education, and land reformation.

IV. From social medicine to technological collaboration and smallpox vaccination in 1927-1949

Influenced by international and domestic enthusiasm towards social medicine in 1920s and 1930s, smallpox vaccination during Nanjing Decade (1928-1937) reflected the principles advocated at the Bandoeng conference. Vaccination programmes increasingly sink to the rural areas. Firstly, although the nationalist government announced nationwide regulations for smallpox vaccination, the execution of vaccination programmes fell into the responsibility of provincial and municipal governments. In 1928, the ministry of health published *Regulation for Smallpox Vaccination (Zhongdou Tiaoli 种痘条例)*. The regulation ruled that each individual had to be vaccinated twice at the age between 3 months to 1 years old, and at 7 to 8 years old. The health authorities at municipal and county level were responsible for organizing vaccination campaigns twice a year, from March to May and September to November when smallpox cases were usually increased. Extra vaccination could be organized in other seasons when necessary. The individuals who had not been vaccinated in designated time period or age, or if their vaccination failed would be re-vaccinated in limited time. Municipal and county authorities were responsible for setting up a vaccination bureau according to the population and the proportion in their jurisdiction, and to announce articles for smallpox vaccination 10 days before the vaccination season started. Each vaccinated individual would be issued with vaccination certificate by municipal and county health authorities. Vaccinators had to prepare a form to register vaccinees' information, which included name, gender, age, native place and address, and submit it to municipal health authorities and provincial health authorities for inspection. The health authorities were responsible for submitting the information to the Ministry of Health between June and December each year.¹⁶³

¹⁶³ 韩君玲, *中华民国法规大全 (第一册)* (北京: 商务印书馆, 2011) [Junling Han, *Regulations of Republic of China (Volume One)* (Beijing: Commercial Press, 2011)].

Due to the shortage of the vaccinators, the Ministry of Health published *Articles for Provincial and Municipal Smallpox Vaccination Training Institutions (Shengshi Zhongdou Chuanxisuo Zhangcheng 省市种痘传习所章程)* in 1929 and expected each provincial and municipal government to organise training classes for smallpox vaccination. According to the articles, smallpox vaccination training institutions could be based in health departments of provincial or municipal government, or public and private hospitals. Each training session required at least 20 attendants and a duration of up to 3 weeks. Healthy and literate individuals between 20 and 45 years old were eligible to attend the training sessions regardless of their gender. The trainings did not charge tuition fees, but the stipend would be covered by the trainees or the institutions they were affiliated to. The training sessions provided classes included: introduction to smallpox, smallpox infection, symptoms of smallpox and comparison between variolation and cowpox vaccination, history of smallpox vaccination and current vaccination regulations, the principles of vaccination and the introduction to immunization, section and preservation of vaccinia, introduction to disinfection, vaccination method, vaccination reaction and the treatment of abnormal reaction, vaccination frequency and age. During the training, leaves were not allowed. Attendants who took any leave would be required to restart training in the next sessions or take extra tutoring. The trainees were expected to practice the operation at least for 10 times before graduating. After passing the examination, they would be granted a certification to allow them to practice smallpox vaccination. Those who practiced traditional variolation were required to be trained with scientific vaccination skills in authorised institutions and expected to practice smallpox vaccination instead of traditional inoculation after training.¹⁶⁴

However, even though the Ministry of Health had regulated smallpox vaccination and training at a national level, the rules had been hardly followed by each local government. Health services delivered at provincial and municipal levels, except for those important cities, were not under the direct control of the central government.¹⁶⁵ At county level, the health services “were circumscribed by the economic and social limitations of the Chinese village, and differentiated so as to diffuse medical care throughout the region” as Mary B. Bullock argued.¹⁶⁶ In most of the counties, health services expenditure took less than 1% of the annual budget. Although smallpox vaccination was organized each year, without sufficient funding and supply of vaccines, the campaigns had reached limited results in eliminating

¹⁶⁴ Ibid.

¹⁶⁵ Watt, *Saving Lives in Wartime China*, 50.

¹⁶⁶ Bullock, *An American Transplant*, 166.

communicable diseases. In order to control smallpox, several cities and counties were designated as experimental vaccination areas, but priorities were usually given to children and people who had not been vaccinated in recent three years.¹⁶⁷ However, the vaccination service often only covered residents in urban areas while the rural residents were still relying on variolation delivered by traditional Chinese medicine practitioners.¹⁶⁸

Figure 1.8 Children in Smallpox Vaccination, 1934



Source: “种痘种痘, 小朋友都来种痘,” *卫生月刊* 4, no. 6 (1934): 11 [“Vaccination, Vaccination, Children Come for Smallpox Vaccination,” *Health Monthly* 4, no. 6 (1934): 11].

When launching smallpox vaccination campaigns, enforcement methods were adopted to ensure policy implementation. In the smallpox vaccination regulation in 1928, it was ruled that individuals who were not vaccinated without legitimate reasons such as sickness, and who had not been vaccinated within the designated period, a fine could be charged to the parents or guardians.¹⁶⁹ However, because of general lack of understanding of scientific knowledge about smallpox vaccination, such a penalty was difficult to execute in rural areas. Many of the rural residents still retained superstitious beliefs regarding the transmission and prevention of smallpox. It was widely believed that there was a pox god who was in charge of smallpox infection. Some form of ritual would be practiced before vaccination, such as

¹⁶⁷ JPA: 7014-001-001-0140, 解放前苏南卫生工作情况 (Health Work in Southern Jiangsu before Liberation), 1950.

¹⁶⁸ 陈仰韩, “应取缔旧式种痘的医生,” *医药评论*, no. 56 (1931): 47-48 [Yanghan Chen, “Traditional Variolation Should be Banned,” *Medical Review*, no. 56 (1931): 47-48].

¹⁶⁹ Han, Regulations of Republic of China.

cleaning bodies and changing clothes. On the day of variolation, the family had to worship to the pox god, then pray to the ancestors, and a camphor tree selected to be the goddess. Finally, doctors who practice variolation had to be saluted, and the whole family had to speak blessing words for three days. Moreover, fortune tellers had to be consulted regarding the date and time of the variolation. If the fortune teller said the year was not appropriate to be inoculated, then the variolation would be postponed until a lucky year. Some people had not been inoculated until they were teenagers. If it was regarded as a lucky year to be inoculated, then a fortunate day for variolation should be designated by the fortune teller.¹⁷⁰

Figure 1.9 A Glance of Smallpox Vaccination Campaign, 1933



Source: “种痘运动种痘情形之一斑,” *民众教育* 1, no. 4 (1933): 1 [“A Glance of Smallpox Vaccination,” *Public Education* 1, no. 4 (1933): 1].

In order to work through the general public and lead them into the participation of the smallpox vaccination campaigns, central and local governments also took endeavours to increase public awareness of smallpox and its prevention.¹⁷¹ Since its establishment in 1928, the Ministry of Health started to organise publishing health education brochures. Many of them were related to infectious disease prevention. After the central government promulgated the *Regulations on the Prevention of Infectious Diseases, Regulation for Smallpox Vaccination*, and *Articles for Provincial and Municipal Smallpox Vaccination Training Institution*, smallpox vaccination became a nationwide public health campaign, and the book *Smallpox and Smallpox Vaccination* became a guide for health administrators, a

¹⁷⁰ 朱乡荣, “谈谈内地的种痘事业,” *医药评论*, no. 32 (1930): 36-38 [Xiangrong Zhu, “Discussion about Smallpox Vaccination in China,” *Medical Review*, no. 32 (1930): 36-38].

¹⁷¹ League of Nations, *Report of the Intergovernmental Conference on Far-Eastern Countries on Rural Hygiene*, 9-10.

textbook for training vaccinators, and a reference for public education. However, reading educational materials required basic medical knowledge, therefore, the readers were mostly health professionals such as administrative staff or doctors.

Figure 1.10 Public Education Material of Smallpox and It's Prevention, 1936



Source: 内政部卫生署, “天花及其预防方法: 旧法种痘的坏处, 新法种痘的好处,” *教育短波*, no. 55 (1936): 13-14 [National Health Administration of Ministry of the Interior, “Smallpox and Its Prevention: The Harm of the Variolation, and the Benefits of Vaccination,” *Educational Shortwave*, no. 55 (1936): 13-14].

Moreover, increasing medical journals published by non-governmental sectors were available both to health professionals and the general public, which increased the publicity of medical knowledge to the population who had the ability to read. Started from 1929, *Medical Weekly* (*Yixue Zhoukan* 医学周刊) was one of the most influential medical journals at that time. Regarding the smallpox prevention, tens of articles had been published on the *Medical Weekly* before the Japanese War started in 1937. One of the articles, “Encouraging Smallpox Vaccination (Quan Dajia Zhongdou 劝大家种痘)”, strongly endorsed the safety and effectiveness of the smallpox vaccination. It argued that smallpox vaccination was the safest, economical, and reliable way to prevent smallpox after research by many scientists and medical experts, and one of the most successful achievements of prevention medicine.¹⁷²

In addition, knowledge related to smallpox and its prevention had also been edited into school textbooks in each educational level. Kids had been educated about the importance and

¹⁷² 吴骥伯, “劝大家种痘,” *大众卫生* 3, no. 2 (1937): 2-4 [Jibo Wu, “Urge Everyone to Get Smallpox Vaccination,” *Health for Public* 3, no. 2 (1937): 2-4].

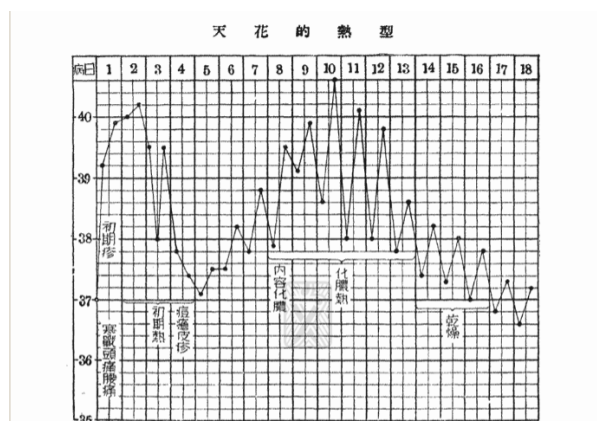
method of smallpox vaccination since their childhood. In the text book for primary school students, basic information about smallpox symptoms and prevention had been delivered in simple text and illustration (see figure 1.11).¹⁷³ For advanced level students, such as secondary students, more complex knowledge had been taught, including the immunological principles of smallpox, the symptoms of smallpox infection, the practice of smallpox vaccination process, the storage of the vaccine, and the examination of reaction to vaccination (see figure 1.12).¹⁷⁴

Figure 1.11 Cover of Fuxing Health Education Textbook (left); Symptoms of Smallpox (right), 1934



Source: 沈百英, 復興衛生教科書第6册 (上海: 商務印書館, 1934), 封面和第8頁 [Baiying Shen eds., *Fuxing Health Textbook Volume 6* (Shanghai: Commercial Press, 1934), cover and 8].

Figure 1.12 Illustration of Progression of Smallpox in Junior High School Textbook, 1933



Source: 孙慕坚, 初中卫生第二册 (上海: 世界书局, 1933), 57 [Mujia Sun, *Junior High School Health Textbook Volume 2* (Shanghai: World Book Company, 1933), 57].

¹⁷³ 沈百英, 復興衛生教科書第6册 (上海: 商務印書館, 1934), 6, 8-10 [Baiying Shen eds., *Fuxing Health Textbook Volume 6* (Shanghai: Commercial Press, 1934), 6, 8-10.

¹⁷⁴ 孙慕坚, 初中卫生第二册 (上海: 世界书局, 1933), 56-59 [Mujia Sun, *Junior High School Health Textbook Volume 2* (Shanghai: World Book Company, 1933), 56-59].

Learning experience from the vaccination endeavours in the first six years, a Spring Mass Vaccination Method was announced in 1935 to expand the vaccination coverage. It further stressed the importance of training for vaccinators that vaccination training courses should be organised at municipal and county levels. The trainees were recruited from primary school teachers, public education workers, and normal school students. Local governments were responsible for selecting qualified trainees who had primary school education in minimum and aged between 20- 45 years old. The instructors of the training course were professional physicians (registered at the Ministry of the Interior). The training method of the vaccination referred to the regulations of the provincial and municipal vaccination clinics. Training courses were designed based on the *Articles for Provincial and Municipal Smallpox Vaccination Training Institutions* published in 1929. In addition, the national authorities also encouraged local authorities to reproduce and disseminate publications, booklets, slogans, and posters related to smallpox and its vaccination to increase public awareness and mass participation. Regarding the vaccine supplies, municipal and county authorities were responsible for raise funding and file official request vaccines from the National Epidemic Prevention Bureau (Zhongyang fangyi chu 中央防疫处). The price of the smallpox vaccine would be discounted for a half. The fees for vaccination should be waved in mass vaccination campaigns. However, if no fixed funding was available for mass vaccination, a small amount of fees could be charged to cover the material and payment for the practice.¹⁷⁵

Nevertheless, Chinese intellectuals also suggested promoting mass vaccination in rural areas. According to an article published on the *Journal of Public Health (Gonggong weisheng yukan 公共卫生月刊)* edited by the NHA, mass smallpox vaccination could be reached by three stages of operation. Each stage took a year's work. The first stage was expected to promote training for vaccinators and voluntary vaccination. The mass vaccination was expected to be expanded in the second year through Baojia System to enlarge the coverage of vaccination. Then the third year as compulsory vaccination period would require the whole population to be vaccinated against smallpox.¹⁷⁶ However, the outbreak of the Japanese War terminated this ambitious plan. After the Japanese occupied the capital city Nanjing before the end of 1937, the nationalist government moved to the Southwest, and border areas were given rapid burst of attention on public health services. Sharing borders with Burma, Cambodia and Vietnam, and adjacent to India and Nepal, the southwest border of China

¹⁷⁵ Han, *Regulations of Republic of China*.

¹⁷⁶ 张崇德, “乡村普遍种痘,” *公共卫生月刊* 2, no. 9-10 (1937): 693-719 [Chongde Zhang, “Mass Vaccination in Rural Areas,” *Public Health Monthly* 2, no. 9-10 (1937): 693-719].

(especially Yunnan, Sichuan and Guizhou) became the hinterland (dahoufang 大后方 “great rear”) and played an important role during World War II.

Figure 1.13 The Japanese Invasion, 1937–45 (Japanese/GMD/CCP territory)



Source: Courtesy of Geospatial Information Science Team, Computing Center, Academia Sinica, in Zarrow, *China in War and Revolution*, 311.

At the onset of the war, the NHA delivered public health policies in the wartime capital of Chongqing, organised vaccination programmes, and coordinated immunological research in the southwest. However, the public health condition in the southwest was much worse than the east coast. The nationalist government was struggling on public health work due to lack of funding and health professionals, Japanese blockade, resistance from local warlords, and lack of medical equipment and supplies. In 1938, the NHA requested assistance from the LNHO in terms of smallpox vaccination and disease control, as well as health education and environmental health. Responding to the request, three League health units were built in Xi’an, Changsha, and Nanning for supporting medical supplies and training. Vaccination against infectious diseases such as smallpox and cholera became one of their priorities. In addition, with the LNHO’s assistance, Chinese immunologists were able to build networks with the international community and to participate in international knowledge exchange and

biological standardization even under the Japanese blockade.¹⁷⁷ However, the operation did not last long due to the escalated WWII and was ceased in February 1939.¹⁷⁸ In the same year, Swiss physician Raymond Gautier replaced Rajchman to be the medical director of the LNHO and the organization kept limited international health work until the end of the war. Before serving as the director of the LNHO, Gautier served as the director of the Far Eastern Bureau from 1924 to 1930, and devoted himself to biological standardization after returning to Geneva in 1930.¹⁷⁹ During the war, the LNHO worked closely with the Allies during the war although it was officially “neutral”.¹⁸⁰ From 1942 onwards, Gautier represented the LNHO to attend meetings and work with experts from the US and the UK on organising public health reconstruction after the war.¹⁸¹

Public health initiatives in the hinterland during the early years of war emphasized the acute challenges in manufacturing and supplying biological products. The National Epidemic Prevention Bureau (Zhongyang Fangyichu 中央防疫处) was the primary national authority in determining biological standard producing biological products including more than 40 types of sera, vaccines, and antitoxins. The bureau was originally established in Beijing in 1919 and was brought under control of the NHA in 1929. A branch laboratory was opened in Lanzhou before the bureau moved to Nanjing in 1935. The Bureau produced an increasing number of biological products before its relocation to Nanjing.¹⁸² In addition, the bureau attempted to implement international standardization for biological products. Samples for standardization had been delivered to the bureau from the LNHO through the State Serum Institute of Denmark laboratories, as well as the American National Institute of Health and British Medical Research Council. Moreover, the quality of the products was required to be tested by Standardization Laboratory. The bureau moved to Kunming in 1937 to avoid the destruction of the war, so did many leading universities and government laboratories.¹⁸³

The war marked a turning point of the nationalist governments’ approach to international health collaboration, where the US and the UK became the country’s major collaborators, and science and technology exchange was preferred to social medicine because of wartime needs. In the fifty years of sending intellectuals studying abroad and building

¹⁷⁷ About LHNO’s work in China between 1937 and 1939, see Brazelton, *Mass Vaccination*, 58-66.

¹⁷⁸ Mary Augusta Brazelton, “Engineering Health: Technologies of Immunization in China’s Wartime Hinterland, 1937–45,” *Technology and Culture* 60, no. 2 (2019): 416.

¹⁷⁹ No author specified, “Obituary: Raymond Gautier, M.D.,” *British Medical Journal* 1, no. 5027 (1957): 1127.

¹⁸⁰ Cueto, et al, *The World Health Organization: A History*, 32-33.

¹⁸¹ “Obituary: Raymond Gautier, M.D.,” 1127.

¹⁸² Watt, *Saving Lives in Wartime China*, 45-46.

¹⁸³ Brazelton, “Engineering Health,” 419.

research and educational institutions inside China, many scientists with expertise in medicine and public health formed a strong force to conduct independent research. However, working in remote regions and lacking equipment and supply, Chinese scientists had to overcome enormous difficulties. The situation was even worse after 1941 when Japan extended the war to Asia Pacific. The universities and laboratories in the hinterland had been fully blockaded and isolated from the international world. At the same time, China officially became an ally of the US, the UK and the USSR fighting against the Axis powers in WWII. As one part of allies' attempt to break Japanese blockade on intellectual and technical exchange, China received assistance on science and technology from multiple foreign aid organizations from 1942, including the American Bureau for Medical Aid to China (ABMAC) and the Sino-British Science Cooperation Office (SBSCO), the British Commonwealth Scientific Office, as well as the United Nations (UN).¹⁸⁴ Their primary tasks of those organisations included maintaining contact between Chinese scientists and the international community, supplying scientific materials to Chinese institutes, assisting publication of Chinese scientific literature in Western journals, providing consultancy for Chinese scientific and technical institutions, as well as facilitating exchange of scientific personnel.¹⁸⁵

From 1942 to 1945, a variety of organizations worked with the Nationalist government and Chinese people to provide scientific assistance in China's hinterlands. The principal collaboration between the east and the west included scientific information interchanges such as research memoranda, monographs and journals, reprints in all disciplinary of science and technology, official government reports, geological and other maps. In addition, the organizations also provided assistance to Chinese research institutions to obtain scientific materials from Europe and North America, including smallpox and other specimens, samples of toxoids, sera, cultures of bacteria, industrial moulds and food yeasts, specimens of plants and animals for identification. They also organised exhibitions of scientific work both in China and overseas.¹⁸⁶ During this period, many Western scientific representatives had been sent to the hinterland of China, biological and chemical materials, research books and journals had been delivered from Europe and North America via Burma and India. Working along with these organisations, Chinese scientists were able to carry on their research, expand their knowledge exchange with international experts by accessing most advanced academic

¹⁸⁴ Joseph Needham and Dorothy Needham, *Science out Post, Papers of the Sino-British Science Co-operation office, British Council Scientific Office in China, 1942-1946* (London: The Pilot Press, 1948), 16-26.

¹⁸⁵ Ibid, 56.

¹⁸⁶ Ibid.

publications while had chance to publish their research in Western journals, as well as developing connections with foreign experts.¹⁸⁷ With intellectual and technical support from allies, research institutions in the hinterland were able to continue to produce new knowledge on medical related studies, and more medical researchers and health workers had been trained. In addition, a large number of biological products were continued to be produced.¹⁸⁸ During war time, Kunming became a centre for medical research and education as well as a major producer of vaccines. Guiyang, where the Chinese Red Cross Medical Relief was located, served as a centre for military medicine. And Lanzhou, which hosted the Northwest Epidemic Prevention Bureau, played an important role as regional centre for medical training and vaccine manufacture.¹⁸⁹

Figure 1.14 Tang Fei-Fan, Director of the NEPB / National Epidemics Prevention Bureau, Hsishan near Kunming, 1944



Source: Joseph Needham, Reference NRI2/10/1/1/5/1/22, SW1 - Southwest journey 1 (NRI2/10/1/1/5/1), 21 Aug. 1944-28 Aug. 1944, Needham Research Institute, <http://cudl.lib.cam.ac.uk/view/PH-NRI-00002-00010-00001-00001-00005/22> (accessed 14 April 2018)

One of the most influential scientists visited China with SBSCO was Joseph Needham, a biochemist, historian, and sinologist who served as the director of the Sino-British Science Co-operation Office in Chongqing from 1942 to 1946. Arriving via Burma Road, his first destination was Kunming, where he met Dr Tang Feifan (also called F. F. Tang 汤飞凡), the director of the National Epidemic Prevention Bureau. Dr Tang was one of the most distinguished Chinese bacteriologists, immunologists, and tropical disease experts who was

¹⁸⁷ Brazelton, *Mass Vaccination*, 77.

¹⁸⁸ *Ibid*, 57.

¹⁸⁹ *Ibid*, 75.

also well known in the US and the UK. Born in Tangjiaping, Liling County, Hunan Province in 1897, Tang graduated from Yale Xiangya (aslo Hsiang-Ya 湘雅) School of Medicine in Changsha in 1921. After working at the PUMC for three years, he went to Harvard School of Medicine to continue his research on virology with Prof. Hans Zinsser. Then he returned to Shanghai to be a faculty member in bacteriology in Medical College of National Central University. At the same time, he also served as the director of the Bacteriology Department of the Henry Lester Institute of Medical Research (Shanghai). In 1936, he visited the National Institute for Medical Research in London, where he worked with Sir Henry Dale, an English pharmacologist and physiologist who was awarded the Nobel Prize in 1936, and who served as the chairman of the Wellcome Trust (1938-1960) later. After the war broke out, Dr Tang was appointed as the director of the NEPB.¹⁹⁰

Figure 1.15 Joseph Needham with Tang Fei-Fan, Director of the NEPB / National Epidemics Prevention Bureau, Hsishan near Kunming, 1944



Source: Joseph Needham, Reference: NRI2/10/1/1/5/1/21, SW1 - Southwest journey 1 (NRI2/10/1/1/5/1), 21 Aug. 1944-28 Aug. 1944, Needham Research Institute, <http://cudl.lib.cam.ac.uk/view/PH-NRI-00002-00010-00001-00001-00005/21> (accessed 14 April 2018)

Under his supervision, the first antibiotic research and penicillin production workshop had been built in China. In addition, the bureau was able to produce various biological products including, but not limited to typhoid inoculation, smallpox lymph, and tetanus

¹⁹⁰ Guansheng Cheng, Ming li, and George F. Gao, “‘A Friend to Man,’ Dr Feifan Tang: a Story of Causative Agent of Trachoma, from ‘Tang’s Virus’ to Chlamydia Trachomatis, to ‘Phylum Chlamydiae,’” *Protein Cell* 5, no. 2 (011): 349-350. 李春发, “新中国伊始战‘疫’专家汤非凡的不凡人生,” *文史月刊* 371, no. 5 (2020): 14-19 [Chunfa Li, “The Extraordinary Life of Tang Feifan, an Expert Who Fought the ‘Epidemic’ at the Beginning of New China,” *Literature and History Monthly* 371, no. 5 (2020): 14-19].

toxoid. The products maintained high standards of quality despite lacking equipment and facilities, even without running water supply.¹⁹¹ Following the scientists moving to the hinterland, the Temple of Heaven strain vaccinia was carried to Nanjing, Changsha, and finally reached Kunming in 1938. To keep the vaccinia from losing potency, it was kept under wells during the transportation. During the producing process, it was difficult to control bacterial contamination in the producing process due to lack of disinfect equipment.¹⁹² In order to improve the quality of smallpox vaccine, Dr Tang started to study the biological characteristics of vaccinia virus with a research team. From their study, the vaccinia virus resisted phenol and ether. Therefore, they developed a method to kill the bacteria contained in the vaccinia virus with phenol and ether. In addition, a *Vaccinia Production Procedure* had also been formulated under his supervision, which was also adopted by the communist government later in 1951.¹⁹³ Despite many difficulties, the bureau produced a large amount of biological products not only to supply the Chinese, but also other United National troops in the East.¹⁹⁴

Figure 1.16 The NEPB / National Epidemics Prevention Bureau Laboratory Building at Hsishan near Kunming, 1944



Source: Joseph Needham, Reference: NRI2/10/1/1/5/1/20, SW1 - Southwest journey 1 (NRI2/10/1/1/5/1), 21 Aug. 1944-28 Aug. 1944, Needham Research Institute, <http://cudl.lib.cam.ac.uk/view/PH-NRI-00002-00010-00001-00001-00005/20>.

¹⁹¹ Needhams, *Science out Post, Papers of the Sino-British Science Co-operation Office*, 88.

¹⁹² Cheng, et al., “A Friend to Man,’ Dr Feifan Tang,” 349-350.

¹⁹³ Zhao and Zhang, *A Brief History of the Development of Chinese Biological Products*, 77.

¹⁹⁴ Needhams, *Science out Post, Papers of the Sino-British Science Co-operation Office*, 89.

Figure 1.17 Dr Yang Yung-nien and Dr Lu Ti-huan of the North-west Epidemic Prevention Bureau Vaccine Production Institute, Lanchow (Lanzhou), 1945



Source: Gordon Sanders, Reference: Nh13. NWEPB, 1 June 1945-31 Aug. 1945, Needham Research Institute, <https://www.hpcbristol.net/visual/nh13-09>.

Figure 1.18 The main laboratory at the farm of the NWEPB / North-west Epidemic Prevention Bureau Vaccine Production Institute, Lanchow, Kansu, 1945



Source: Gordon Sanders, Reference: NRI2/10/1/1/8/5/7, NWEPB (NRI2/10/1/1/8/5), 1 June 1945-31 Aug. 1945, Needham Research Institute, <http://cudl.lib.cam.ac.uk/view/PH-NRI-00002-00010-00001-00001-00008-00005/7>.

In Lanzhou (also Lanchow 兰州), a medical and industrial centre in northwest China, Dr Needham visited the North-west Epidemic Prevention Bureau (NWEPB Xibei Fangyichu 西北防疫处). The Vaccine Production Institute of NWEPC was directed by Dr Yang Yongnian (also Yang Yung-Nien 杨永年), who also studied with Sir Henry Dale, and worked at the National Institute for Medical Research with Dr Percival Hartley, an English immunologist who served as the head of the Medical Research Council (MRC) Biological Standards Division. Like the Kunming Institute, the Lanzhou Institute was a major producer

of biological products, and 80% of its products supplied the Chinese army.¹⁹⁵ Before the collaboration with allies started in 1942, the bureau was already capable of mass manufacturing of biological products independently. For example, more than 10.5 million cubic centimetres of cholera vaccines, 25 million cubic centimetres of cholera-typhoid vaccines, and 4.5 million smallpox vaccines had been produced from 1939 to 1942.¹⁹⁶ Apart from vaccine manufacturing, Lanzhou was also an important medical education centre for health administration personnel training.¹⁹⁷

Figure 1.19 Inside the Smallpox Vaccination Laboratory of the North-west Epidemic Prevention Bureau Vaccine Production Institute, Lanchow (Lanzhou), 1944



Source: Gordon, Sanders, 1 November 1944 - 31 December 1944, Needham Research Institute, <https://www.hpcbristol.net/visual/nh13-01>

Figure 1.20 Scientists at Work in a Standards Diagnostic Laboratory at the NWEPB / North-west Epidemic Prevention Bureau Vaccine Production Institute, Lanchow, Kansu, 1945



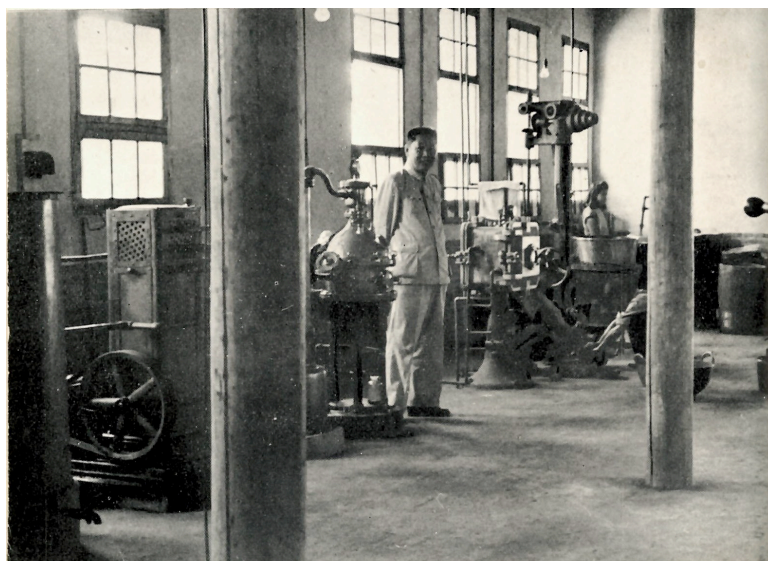
Source: Gordon, Sanders, Reference: NRI2/10/1/1/8/5/19, NWEPB (NRI2/10/1/1/8/5), 1 June 1945-31 Aug. 1945, Needham Research Institute, <http://cudl.lib.cam.ac.uk/view/PH-NRI-00002-00010-00001-00001-00008-00005/19>

¹⁹⁵ Ibid, 134.

¹⁹⁶ Brazelton, *Mass Vaccination*, 76.

¹⁹⁷ Needhams, *Science out Post, Papers of the Sino-British Science Co-operation Office*, 135.

Figure 1.21 NHA Pharmaceutical Factory, Lanchow; Dr Yang Yung-Nien Standing, 1945



Source: Joseph Needham and Dorothy Needham, *Science out post*, papers of the Sino-British science co-operation office, British Council Scientific Office in China, 1942-1946 (London: The Pilot Press, 1948), between 128-29.

As Mary Brazelton has observed, during the war years, medical researchers and public health administrators in China were able to continue working with each other on improving public health and epidemic control in spite of many constraints of environment, such as air raids, short for supplies, social and political instability, economic inflation, and migration of population.¹⁹⁸ In Chongqing, the capital city during the war, special attention had been paid to environmental health and enforcing mass vaccination in order to build it as a model city. The Nationalist government invested heavily in local health infrastructure to improve public health in Chongqing with equal standards to Nanjing and the other eastern coastal cities occupied by Japanese. In November 1938, the Chongqing Bureau of Public Health (CBPH) was established. Mei Yilin (梅贻林) was appointed as the director. After receiving the doctorate from the University of Chicago and Johns Hopkins University, Mei worked as a researcher at the London School of Hygiene and Tropical Medicine in 1927. Under his supervision, mass vaccination campaigns for both smallpox and cholera/typhoid were organised every spring and autumn from December 1938. Forty vaccination teams had been assembled to give free smallpox and cholera vaccination at wharfs, bus stations, teahouses, refugee asylums, and densely inhabited neighbourhoods. In addition, all public and private hospitals, clinics, and social organizations also provided vaccination services without charge. Meanwhile, the CBPH had also organised public education movements through leaflets,

¹⁹⁸ Brazelton, *Mass Vaccination*, 75.

posters, radio and newspaper announcements, public speeches, journal articles and lantern show, etc. Apart from convincing for vaccination, working with Bureau of Police, and the Household Registration Police (kouji jing 户籍警), forcible smallpox vaccination had been implemented by door-to-door visit.¹⁹⁹ Through vaccination campaigns and enforcing regulations to improve hygienic standards during New Life Movement in Chongqing (such as street cleaning, living environment spick-and-span, policing personal hygiene and eating habits, as well as abstaining from all drugs, alcohol, and tobacco), Chiang Kai-shek aimed to improve citizen's solidarity and loyalty to the state, as well as gain geopolitical respect from his key allies, especially the US and British officials stationed at the Capital city.²⁰⁰

As Nicole Bares argues, overly dictatorial health policies failed Chiang's vision of instituting hygienic modernity by disciplining the bodies of the poor. However, it facilitated expansion of state power across the southwest.²⁰¹ With the growth of state power, smallpox vaccination had been expanded in western provinces in China. Obtaining smallpox vaccine supplied by the NHA and private manufacturers, smallpox vaccination campaigns were able to be implemented every spring and autumn. For example, in the smallpox vaccination campaign in 1940, the smallpox vaccination reached the largest scale in southern provinces such as Guangdong (approximately 250,000)²⁰² and Guangxi (about 697,788)²⁰³. In the middle of China, many provinces had also vaccinated similar number of people, such as Henan, 343,288 people had been vaccinated,²⁰⁴ 193,367 in the adjacent province Shanxi.²⁰⁵

¹⁹⁹ Barnes, *Intimate Communities*, 35-40. Also see 刘娟, *疫病防治与健康传播: 重庆的天花灭绝实践, 1891-1952* (北京: 中国传媒大学出版社, 2015) [Juan Liu, *Disease Prevention and Health Communication: the Practice of Smallpox Eradication in Chongqing, 1891-1952* (Beijing: Communication University of China Press, 2015)].

²⁰⁰ Barnes, *Intimate Communities*, 30-34.

²⁰¹ *Ibid.*, 49-51.

²⁰² SHAC: 11-7597, 福普字第 5246 号, 社运部生活科函广东省执行委员会, “准函报办理韶关春季各项卫生运动情形函复嘉勉 (Telegram Fu Pu no. 5246, from Department of Social Affairs to Guangdong Executive Commission “Letter approval for Health Movement in Shaoguan in Spring”), 13 June 1940.

²⁰³ SHAC: 11-7597, 福普字 8261, 广西省执委会函社会运动处生活指导科, “函送春季种痘人数统计表请查照” (Telegram Fu Pu no. 8261, from Guangxi Executive Commission to Department of Social Affairs, “Statistics of Smallpox Vaccination in Guangxi in the spring of 1940”), 27 September 1940.

²⁰⁴ SHAC: 11-7597, 社字 0754 号, 河南省执委会函组织训练司、社会福利司, “呈报淇县等四十八县推行种痘运动情形统计表备查照由” (Telegram She no. 0754, from Henan Executive Commission to Organization Training Division and Social Welfare Division, “Statistics of Smallpox Vaccination in 48 Counties including Qi County”), 5 December 1940.

²⁰⁵ SHAC: 11-7597, 福普字 8492 号, 陕西省党部呈社会运动处生活指导科, “呈报长安等扩种痘人数统计表” (Telegram Fu Pu no. 84925, from Shanxi Party Committee to Department of Social Affairs, “Statistics of Expansion of Smallpox Vaccination in Changan etc.”), October 1940.

South to the two provinces, 258,362 people had been vaccinated in Hunan,²⁰⁶ and 300,000 in Jiangxi.²⁰⁷

However, Brazelton's research has also shown that Yunnan was an exceptional case. Although the NEPB was located in Kunming, the capital city of Yunnan, the vaccination work was difficult to implement because of its political complications. The province was the home to more than 50 ethnic minorities, with different culture and social organisation systems. After the Xinhai Revolution, it was controlled by local warlord Tang Jiyao (唐继尧), and his successor Long Yun (龙云). From the late nineteenth century onwards, French and British colonising powers started to establish settlement in Yunnan and fought for trust and respect from Yunnanses by building health infrastructures and providing smallpox vaccination service. However, both colonial powers failed to supersede the autonomy retained by local warlords. Even during the war, the authority was still held in Long's hands, who oversaw activities of scientists and physicians who worked in Yunnan.²⁰⁸ Therefore, when the NEPB moved to Kunming, smallpox, as well as other infectious diseases such as malaria, scarlet fever, plague, cholera, had been scourging the area frequently. In addition, only limited population had been exposed to western medicine and smallpox vaccination, even traditional variolation, so that vaccination campaigns often were against by local residents in where mostly minority ethnics lived such as Huaping County. As a result, in the vaccination campaign in 1940, only 32,732 people had been vaccinated in Yunnan Province.²⁰⁹

By the end of the war, a new regulation for smallpox vaccination announced in 1944 reinforced mandating immunization against smallpox by forceful method. The regulation proclaimed that smallpox vaccination was free from charge for all the citizens. Each individual had to be vaccinated 3 times at the age before 1 year old, at 5-6 years old, and 11-12 years old. The health authorities at municipal and county level were responsible for organizing vaccination campaigns twice a year, in spring and autumn each year when

²⁰⁶ SHAC: 11-7597, 福普字 9011, 湖南省党部函社会运动处生活指导科, “函复推行种痘运动情形及统计数字” (Telegram Fu Pu no. 9011, from Hunan Party Committee to Department of Social Affairs, “Statistics and Report of Smallpox Vaccination”), 22 October 1940.

²⁰⁷ SHAC: 11-7597, 福普字 7399 号, 江西省执委会函社会运动处生活指导科, “函送推行种痘运动情形案报表请备查” (Telegram Fu Pu no. 7399, from Jiangxi Executive Committee to Department of Social Affairs, “Report of Smallpox Vaccination”), 30 August 1940.

²⁰⁸ Brazelton, *Mass Vaccination*, 52, 75.

²⁰⁹ SHAC: 11-7597, 福普字 8314 号, 云南省党部呈社会运动处生活指导科, “呈报本省推行种痘运动成绩及数字请核备” (Telegram Fu Pu no. 8314, from Yunnan Party Committee to Department of Social Affairs, “Statistics of Smallpox Vaccination in Yunnan”), 30 September 1940.

smallpox highly possible to be epidemic. The vaccination campaigns would recruit health professionals in public hospitals and private institutions, and the person who was recruited was not allowed to decline the government's call. The household administrators were responsible for investigating and encouraging people to be vaccinated. Educational institutions were responsible for investigation of the students' vaccination histories and instructing students to be vaccinated. Smallpox vaccination was mandatory when there was an outbreak for both juveniles and adults. The vaccination certification should be prepared and issued to vaccinated individuals by county and city health authorities. For those who were not vaccinated due to sickness or other legitimate reasons and had not been vaccinated before the designated period, a fine could be charged to the parents or guardians by the county or municipal health authorities. Vaccinators had to prepare a form to register vaccinees' information and submit it to municipal and provincial health authorities. The health authorities, who would then report the result to the Department of Health.²¹⁰

After the war ended in 1945, the Nationalist government regained control over eastern China. Many researchers and physicians went back to major metropolis, the biological manufacture centres forged in Kunming, Chengdu, Lanzhou, as well as other cities in the hinterland remained as major medical administration and vaccine manufacture centres in the 1940s onwards. In addition, mass immunization campaigns for the reunited nation were mandated by the national government.²¹¹ However, the Civil War brought many challenges to deliver nationwide smallpox vaccination programmes. Severe financial crisis and inflation caused dramatic fluctuation of the price of smallpox vaccine. For example, the Department of Health of Jiangsu Province ordered smallpox vaccines from the NBPL in 1946. On 20 November, health administrators in Jiangsu received the quote from the NBPL for 1,300 yuan/unit²¹² with a discounted price of 900 yuan/unit.²¹³ About 20 days later, the NBPL requested for further payment since the price had been raised to 1,500 yuan/unit.²¹⁴

In addition, public health was given less priority compared to security and the military. Only less than 1% of the budget had been spent on public health in most of the counties in

²¹⁰ SHAC: 12(6)-543, 种痘条例 (Smallpox Vaccination Regulation), 13 March 1944.

²¹¹ Brazelton, *Mass Vaccination*, 128-129.

²¹² JPA: 1010-1946-002-0209-0115, 卫生署中央生物化学制药实验处公函为准函询痘苗价格复请查照由 (Respond to the Query of the Price of Smallpox Vaccines from the Central Biochemical Pharmaceutical Laboratory of the Department of Health), 13 December 1946.

²¹³ JPA: 1010-1946-002-0209-0123, 为函复本处采购痘苗售价仍请照发函价计算由 (Request of the Original Price of Smallpox Vaccine), 13 December 1946.

²¹⁴ JPA: 1010-1946-002-0209-0126, 为准函购痘苗已交来员带上除收来款外尚有余欠检附单据函请查照拨汇见复由 (Smallpox Vaccine Has Been Handed Over, and Please Arrange Payment for Unpaid Balance), 6 December 1946.

Jiangsu. Without sufficient funding, the vaccination campaigns had limited results in eliminating epidemic diseases. In 1948, cholera was epidemic in the areas between Nanjing and Shanghai, although with special funding for vaccination, the coverage was still limited to cities. 10%-20% of population in big cities were vaccinated, less than 10% were vaccinated in small cities, while it barely covered rural areas. In order to control the smallpox, several counties were designated as experimental vaccination areas, which gave priority to children and people who had not been vaccinated in recent three years.²¹⁵ However, without a fully functioning government and sufficient budget, and the escalation of war, the smallpox vaccination campaigns in Jiangsu Province were soon terminated²¹⁶ even though the nationalist government received supplies of smallpox vaccines from the United Nations Relief and Rehabilitation Administration (UNRRA).²¹⁷

V. Conclusion

As a symbol of modernizing states, Western medicine was “self-evidently superior”.²¹⁸ As an achievement of scientific medicine, smallpox vaccination arrived in China with the expansion of colonising powers in the east. Historiographies regarding international influence on medicine and public health in China have focused overwhelmingly on the Anglo-American and Japanese actors, while few studies have paid attention to other European presence in China, such as French and German or smaller countries like Poland and Yugoslav.²¹⁹ However, as Margherita Zanasi argues: “Western knowledge arrived in China, not as a homogeneous and consistent body of scientific theories, but as a hodgepodge of notions already corrupt, reinterpreted, at times contradictory, and often skewed by religious or political agendas.”²²⁰ Their knowledge exchange and international health activities during the first 50 years of the 20th century helped China strive to build its research capacity in biology, medical science, and public health, which empowered the country with independent

²¹⁵ JPA: 7014-001-001-0140, 解放前苏南卫生工作情况(Health Work in Southern Jiangsu before Liberation), 1950.

²¹⁶ JPA: 1010-1946-002-0061-0035, 为仰积极推行普通种痘工作具报由,江苏省卫生处令溧阳县政府,民政厅发送该县第八次县政会议记录 (In Order to Actively Promote the General Vaccination Work, the Jiangsu Provincial Health Depart Ordered the Shuyang County Government, and the Civil Affairs Department Sent the County’s Eighth County Council Meeting Record), 6 November 1946.

²¹⁷ JPA: 1010-1946-002-0208-0166, 函请延将牛痘苗拨发本处应用并见复由 (Request for Smallpox Vaccines), 15 February 1946.

²¹⁸ Harrison, “A Global Perspective,” 666.

²¹⁹ AnElissa Lucas, *Chinese Medical Modernization: Comparative Policy Continuities, 1930s-1980s* (Praeger, 1982).

²²⁰ Zanasi, “Exporting Development,” 145.

ability to produce biological products against infectious diseases, to identify its needs and goals, and to solve its fundamental health problems.

As the chapter shows, the adoption of mass immunization against smallpox and other infectious diseases in China entails a long and complex process of institutionalization, internal co-ordination, and international cooperation through the first half of the twentieth century. Foreign institutions and experts played a crucial role in connecting modern medicine with international and local actors. By studying the various international actors working in China during different periods of time, especially the Yugoslav health experts worked in China with the LNHO in the 1930s, this chapter has demonstrated that the western medicine and public modern concept of public health arrived in China under the influence of different groups of powers with diversified purposes and interests. In addition, motivated by the strong will of improving the nation, Chinese intellectuals attempted to strengthen the country by improving its citizens' physical health. Through sending intellectuals studying abroad and building research and educational institutions inside China, a large number of scientists with expertise in medicine and public health had been produced. However, instead of simply accepting abstract notions of Western development, Chinese intellectuals connected the knowledge of scientific medicine and public health to their understanding of the social and political situation of China and proposed their solutions of improving public health through a bottom-up rather than top-down approach. Their proposal and practice of social medicine in the 1920s and the 1930s was benefited from, as well as contributed to, the knowledge exchange and international health cooperation. It facilitated China becoming an active participant, rather than a passive recipient, of international health.

The historical processes of public health in the first half of 20th century profoundly influenced the shape and structure of the health policies of communist China, which, will be analysed in the next chapter, the success of smallpox eradication in the country would rely on. Towards the end of WWII, China had already equipped with a full range medical research and educational system with world leading experts including Dr Tang Feifan and Dr Yang Yongnian. The vaccine manufacture centres built before and during the war across the country continued to play important roles in the 1950s. Moreover, many of the principles of the social medicine had been adopted by the CCP, such as taking preventive medicine as priority, paying special attention to economic and social conditions, focusing on community health, etc. Finally, the increasingly expanded smallpox vaccination campaigns not only formed the basis of the eradication programmes under the communists' reign and protected more people from the threats of the disease, but also promoted public awareness and

acceptance of smallpox vaccination. All these themes will be examined and explained in the chapter follows.

Chapter 2 Re-mapping International Health and Smallpox Vaccination in China, 1949-1952

Following the devastating WWII, the creation of the World Health Organization (WHO) in 1946 as a specialized agency of the United Nations brought international health a broader mandate and coverage. However, the growing tension between two blocks: the western bloc composed of the United States, its (North Atlantic Treaty Organization) NATO allies and others, and the eastern bloc, which included the Soviet Union and its Warsaw Pact allies, embodied Cold War ideologies in the organization, which considered international health as a tool in the contested terrain of the developing world. Participated in the establishing of the WHO, China was an important member of the organization. However, the communist regime's taking over China in 1949 brought challenges for the relationship between the WHO and the country with the largest population. The communist government refused to join in the organization in protest the US's promotion of the ROC within the international arena. At the same time, it entered into broad-ranging political and developmental agreements with the USSR and other Eastern European countries. China's smallpox control and eradication programmes developed in this context, where the country devoted itself to eliminating the disease through comprehensive reporting and vaccination structures. This chapter begins with a discussion of the establishment of the WHO and its regional offices, and how cold war politics influenced its priority setting and decision making. It then examines the Withdrawal of Eastern Bloc countries in 1949-1950 and China's seat in the WHO. It examines how the communist government gauged the value of international political alliances and worked out its own approaches to improving public health, which brought mass smallpox vaccination to an unprecedented scale. Through the case of Southern Jiangsu Province, this chapter argues that apart from mass vaccination, other interventions such as identifying and separating cases, the improvement in primary health care at grassroot level, and emotional mobilisation in Patriotic Health Campaigns all played important roles in the elimination of smallpox in China in the early 1950s.

I. The WHO and the “two Chinas” issue

Establishment of the WHO and its regional offices

During the first half of the twentieth century, China had gradually become an active participant, rather than a passive recipient, of international health. During and after WWII, as one member of the “Big Four” of the Allies of WWII, the ROC was provided a platform for participation in dialogues of new world order by its wartime partners, including the United

States the United Kingdom and the Union of Soviet Socialist Republics. Along with other allied countries, they signed the “Declaration of the United Nations” in 1942 to encourage wartime collaboration and plan for the new world order after the war.¹ In 1943, the UNRRA was established to coordinate war relief activities in areas controlled by the United Nations.² The organization initially concentrated on providing wartime necessities including food, clothing, shelter, etc., but its activities soon expanded to medical supplies and services. A health division was established in 1944, which was directed by Wilbur Sawyer, who served as the director of IHD of the RF before his retirement.³ The US contributed the most to the budget and staff of the health division of the UNRRA. The organization soon provided its service to China, and a special agency, China National Relief and Rehabilitation Administration (CNRRA) was established to charge the UNRRA’s work in China. However, as Rana Mitter argued, the US-centered narratives often pictured the UNRRA’s work in China as American philanthropic activity to relieve victims, while its counterpart in China, CNRRA, in contrast, was usually described as a corrupted agency that embezzled supplies. His research showed that the organization and the Chinese nationalist government shared different goals of their collaboration. The UNRRA committed to relieving suffering while representing a vector of imperialism, while the Nationalist government aimed to use the UNRRA as a vehicle to gain state sovereignty by improving national health service.⁴ Although the UNRRA’s activities in China became an “embarrassment” in the end,⁵ it provided a platform for Chinese health professionals participating in international health under the new world order. The Chinese delegates to the UNRRA included Shi Siming (Simon Sze, 施思明), a young health worker who had studied medicine in Cambridge, and one of the members who proposed the establishment of the World Health Organization later.⁶

From April to June 1945, Shi attended the United Nations Conference on International Organization in San Francisco as a ROC representative. Shi, along with Dr Karl Evang of Norway and Dr Geraldo de Paula Souza of Brazil, proposed to the conference a resolution to

¹ Gordon Barrett, “Between Sovereignty and Legitimacy: China and UNESCO, 1946-1953,” *Modern Asian Studies* 53, no.5 (2019): 1519. Robert C. Hilderbrand, *Dumbarton Oaks: The Origins of the United Nations and Search for Postwar Security* (Chapel Hill: University of North Carolina Press, 1990), 229-44. On China’s wartime relations with its allies and wartime position, see: Rana Mitter, *China’s War with Japan: The Struggle for Survival* (London: Allen Lane, 2013).

² Cueto et al., *The World Health Organization: A History*, 34-35.

³ *Ibid*, 35.

⁴ Rana Mitter, “Imperialism, Transnationalism, and the Reconstruction of Post-war China: UNRRA in China, 1944-7,” *Past & Present* 218, no. suppl_8 (2013), 51-69.

⁵ *Ibid*, 67.

⁶ Cueto et al., *The World Health Organization: A History*, 37.

establish an international health organization under the auspices of the United Nations (UN). After failing to get the resolution passed initially, they accepted advice from Dr Alger Hiss, the Secretary-General of the conference, to present their proposal as a declaration instead of a resolution.⁷ Their proposal for an international health organization was approved by the Economic and Social Council in February 1946.⁸ The council convened a Technical Preparatory Committee (TPC) for the preparation of the organization of a UN specialized agency in health. After two rounds of TPC conferences in Paris and New York City, the new health organization was named the World Health Organization following the suggestion by the Chinese delegation.⁹ Representatives of 61 states signed the WHO Constitution on 22 July 1946. Based on the constitution, the WHO would “act as the directing and coordinating authority on international health work” with the goal of “the attainment by all peoples of the highest possible level of health”.¹⁰ The organization would be responsible for setting biological standards, providing technical support to member states, monitoring health trends and disseminating epidemiological data, guiding health-related research agenda, and shaping global health policies, etc.¹¹ After TPC meetings, an Interim Commission (IC) was created to coordinate international health activities before the first World Health Assembly. The IC took over part of the work of the Office International D’hygiène Publique (OIHP) and the LNHO, as well as the UNRRA’s health services in China, Greece, Ethiopia, Italy, and Poland.¹²

After a transition period operated by the IC, the first World Health Assembly was held from 24 June to 24 July 1948 in Geneva, which marked the establishment of the World Health Organization. The constitution of the organization was formally ratified by 26 Its constitution formally came into force on 7 April 1948. Dr Andrija Štampar served as the

⁷ In legal terms, both declaration and resolution have a vague and variable meaning in the UN Charter, neither of them has legal effect on their own. Declarations only interpret or restate the law in principle, while ‘resolution’ has a generic sense, including recommendations and decisions. For the difference of the terminology, see Marko Divac Öberg, “The Legal Effects of Resolutions of the UN Security Council and General Assembly in the Jurisprudence of the ICJ,” *European Journal of International Law* 16, no. 5 (2005): 879–906.

⁸ Szeming Sze, “WHO: From Small Beginnings / Forum interview with Szeming Sze,” *World Health Forum* 9 no. 1(1988): 29-34, <https://apps.who.int/iris/handle/10665/46414>.

⁹ Cueto et al., *The World Health Organization: A History*, 44.

¹⁰ WHO: 1_400_1_1, Purpose and Functions of Organizations under the Auspices of the United Nations-International Medical Conference, Association Professionnelle Internationale des Medecins, and British Medical Association, 9 October 1946.

¹¹ WHO: 1_400_1_1, Association Professionnelle Internationale des Medecins, and British Medical Association, Purpose and Functions of Organizations under the Auspices of the United Nations-International Medical Conference, 9 October 1946.

¹² World Health Organization and Interim Commission, *Report of the Interim Commission to the First World Health Assembly: Part I: Activities* (New York; Geneva: United Nations, World Health Organization, Interim Commission, 1948), <https://apps.who.int/iris/handle/10665/85588>; Cueto et al., *The World Health Organization: A History*, 46. More about the establishment of the WHO, refer to Marcos Cueto et al., “Chapter 2 The Birth of the World Health Organization, 1945-1948,” in *The World Health Organization: A History*.

president of the first WHA. The assembly elected Dr Brock Chisholm from Canada as the first Director-General of the WHO and decided the procedures, budget, goals, and objectives of the organisation. It defined 22 primary functions of the organization, including standard-setting, data collection, epidemiologic surveillance, training and research, emergency relief, and cooperative activities, etc. In addition, the assembly also decided the organization to work in a decentralized model. Based on this model, the Headquarters in Geneva would coordinate the organization's work at the international level, the regional committees would oversee its activities at the regional level and individual member states would be responsible for implementing policies and programme strategies at the country level.¹³

The WHO HQ consisted of three layers of structure including the World Health Assembly the Executive Board, and a secretariat headed by the Director-General (DG). Based on the principle of "one state, one vote" regardless of a country's economic or political power, the WHA met annually to decide the general policy of the WHO. It was responsible for reviewing and approval of the budget and activities of the EB, as well as the electing of the DG every five years. The EB oversaw the implementation of the policies decided by the WHA. Members of the EB met twice each year to review the organization's budget and programme operation, and to draft the General Programme of work and proposals for new initiatives. Consisting of the headquarters at Geneva, regional offices, and liaison offices in selected member states, the Secretariat served as the administrative body of the WHO and was responsible for delivering the organization's programs and activities.¹⁴ The funding of the organization came from two major parts: mandatory contributions from member states and voluntary contributions from both public and private sectors. Known as the regular budgetary funds (RBFs), the mandatory contributions of member states would be calculated and decided every two years by their gross national product (GNP) and population. The regular budget of the organization would be proposed by the DG and reviewed by EB then voted by the WHA. In addition to the RBFs, the extrabudgetary funds (EBFs) for specific purposes or programmes were to be provided by voluntary contributions from governmental or non-governmental organizations (such as other UN agencies, Rockefeller Foundation, Ford Foundation), member states, private companies (except for certain industries such as tobacco industry) or individuals.¹⁵

¹³ World Health Assembly, *First World Health Assembly, Geneva 24 June to 24 July 1948: Plenary Meetings: Verbatim Records: Main Committees: Summary of Resolutions and Decisions* (Geneva: World Health Organization, 1948), <https://apps.who.int/iris/handle/10665/85592>.

¹⁴ Lee, *The World Health Organization (WHO)*, 25-28.

¹⁵ *Ibid*, 38-39.

In order to strengthen the links with member countries and to enhance the WHO's capacity to fulfil its responsibilities in different geographical areas, regional organizations were decided to be established in the Constitution of the WHO. In carrying out the decision of establishment of regional health organizations, the Second Session of the Interim Commission adopted a resolution requesting the Executive Secretary to prepare documents to define geographical areas in November 1946. The issue was discussed again during the Third Session of the Interim Commission from March to April 1947. As a result, the Interim Commission instructed the Executive Secretary to undertake studies concerning geographical areas.¹⁶ According to chapter XI of the Constitution of the WHO regarding the regional arrangements, each regional organization would have consisted of a Regional Committee (RC) and a Regional Office (RO). Composed of representatives of member states and associate members in the region, the RCs met as often as necessary to formulate policies, supervise activities, convene technical conferences, collaborate with other UN agencies, providing consultancy to the DG.¹⁷ As the administrative organ of the RC, the RO was subjected to the general authority of the DG and was responsible for carrying out the decisions of the WHA of the EB within the region.

After investigation and discussion of the Interim Commission, the geographical boundaries and names of the regions were proposed by the Interim Commission and discussed by the Committee on Headquarters and Regional Organization at the First WHA from 24 June to 27 July 1948.¹⁸ Dr J. Zozaya from Mexico and Dr A. Ungar from Czechoslovakia served as the Chairman and Vice-Chairman of the Committee.¹⁹ The Delegation of the Philippines proposed to the chairman of five regional areas including Far Eastern, African, Middle East, and South East Asia, while Europe could be considered as a transitory regional area with a temporary administrative office.²⁰ The terms of Middle East, Near East, Far East, and Mediterranean countries had frequently been mentioned in the

¹⁶ WHO: 1_900_1_2, Letter from Brock Chisholm (Executive Secretary) to Melville Mackenzie (Minister of Health of the UK), 4 June 1947.

¹⁷ WHO: 1_900_1_2, Interim Commission of the WHO, Chapter XI of the Constitution of the World Health Organization, 1947.

¹⁸ World Health Assembly, *Committee on Headquarters and Regional Organization: [List of Documents]* (Geneva: World Health Organization, 1948), <https://apps.who.int/iris/handle/10665/97956>.

¹⁹ World Health Assembly, *12.4.3 Headquarters (Off.Rec.Who, 10, Page 87): First Report of the Committee on Headquarters and Regional Organizations* (Geneva: World Health Organization, 1948), <https://apps.who.int/iris/handle/10665/97714>.

²⁰ World Health Assembly, *12.4.4 Definition of Geographical Areas (Off.Rec.Who. 10, Page 92): Committee on Headquarters and Regional Organization: Paper Submitted by the Delegation of the Philippines* (Geneva: World Health Organization, 1948), <https://apps.who.int/iris/handle/10665/97961>.

discussions.²¹ However, the proposal was challenged by Dr George Brock Chisholm, the Executive Secretary of the Interim Commission then. Regarding the naming of the region as “far east”, he asked, “...but far east from where?” Following the question, he asked if it was regarded the region as far from centres of world population, far from the major incidence of disease, or far from the centre of needs for help from the WHO.²²

Table 2.1 Regional Organizations of the World Health Organization, 1948

Region	Delimitation of Geographical Areas
Africa (AFRO)	A primary region is suggested for all Africa south of the 20 degree N. parallel of latitude to the western border of the Anglo-Egyptian Sudan, to its junction with the northern border of Region Congo, thence eastwards along the northern borders of Belgian Congo, thence eastwards along the northern borders of Uganda and Kenya; and thence southwards along the eastern border of Kenya to the Indian Ocean
Americas (AMRO or PAHO)	Americas
Eastern Mediterranean (EMRO)	Egypt, Saudi Arabia, Iraq, Syria, Lebanon, Transjordan, Yemen, Iran, Turkey, Pakistan, Greece ¹ , Ethiopia, Eritrea, Tripolitania, British Somaliland, French Somaliland, Aden, Cyprus
Europe (EURO)	The whole of Europe
Southeast Asia (SEARO)	Burma, Siam, Ceylon, Afghanistan, India; the inclusion of the Malay Peninsula to await the definite decision of this country as to which regional organisation desire to join
Western Pacific (WPRO)	Australia, China (ROC), Indochina, Indonesia, Japan, Korea, the Philippines, New Zealand, and provisionally the Malay Peninsula

Notes: 1. In regard to the inclusion of Greece in the area served by the Alexandria Regional Bureau, the Delegate of Greece declared that he was awaiting the instructions of his government (Greece expected to be assigned to European region)

Source: WHO: 1_900_1_4, Correspondence with United Nations, 3 August 1948.

After discussion of the committee, it was agreed that the regions should have been named as relevant to them, rather than someone else’s orientation to the world. Therefore, after ratification on the First WHA, six regional organizations were decided to be established, including Africa, Americas, Eastern Mediterranean, Europe, Southeast Asia, and Western Pacific (see Table 2.1). Delimitation of geographical areas of each region was decided by not only geographical locations and epidemiological considerations, but also international relationships and geopolitics, and the names and constituents of the regional offices have

²¹ World Health Assembly, *Committee on Headquarters and Regional Organization: Provisional Minutes of the Second Meeting, Palais Des Nations, Geneva, Wednesday, 30 June 1948 at 2:30 P.M.* (Geneva: World Health Organization, 1948), <https://apps.who.int/iris/handle/10665/97963>.

²² Marcel André Boisard, et al. ed., *Multilateral Diplomacy: The United Nations System at Geneva: A Working Guide* (The Hague: Martinus Nijhoff Publishers, 1998), 110, <https://digitallibrary.un.org/record/250117?ln=en>.

been changing over time.²³ After the delimitation of geographical areas of regional offices was approved on the first WHA, and the EB authorised the DG to allot 300,000 USD for the administration of regional offices. 200,000 USD was allotted to regional offices already existed: the WHO South East Regional Organization to be effective from 1 March 1949²⁴, special temporary administrative office for Europe, and the Pan American Sanitary Organisation, which had already decided to be integrated with the WHO. The rest of the funding was allotted to the regional offices to be established in the coming years.²⁵

Directors of regional offices were elected by constituent countries rather than being appointed by the DG, and they had the power of appointment and removal personnel of the office, especially the country representatives.²⁶ The regional offices had considerable autonomy in terms of their leadership, budget, priority settings, and programme operations, which allowed them to adopt their own rules of procedure according to the constitution.²⁷ However, the level of autonomy and independence of regional offices often created tensions and ambiguity with headquarters and their constituent countries. Therefore, the relationship between the WHO HQ and regional offices regarding their independence and responsibility has been constantly under debate.²⁸ Although I recognised the complexity of the relationship among the WHO HQ, regional offices, and member countries, the thesis will only focus on the WPRO, which China has been affiliated to.

Along with the other five regional offices, the WPRO was approved at the first WHA in 1948. The office was located in Shanghai in the beginning, and Chinese was made an official language of the Regional Committee Meeting (RCM) of the WPRO. The first members of the region included Australia, China (ROC), Indochina, Indonesia, Japan, Korea, the Philippines, and New Zealand. The office relocated to Hongkong temporarily in 1949 after the CCP took over Shanghai. After considering several other candidates for the Regional Office Secretariat, including Singapore, Korea (Seoul), and the Philippines (Manila), the office moved to Manila in 1951.²⁹ Moreover, the RCM decided to replace Chinese with English and French as its

²³ WHO: 1_900_1_4, Correspondence with the United Nations, 3 August 1948.

²⁴ WHO: 1_900_1_3, Third Session: Allocation of Funds for Regional Offices, 19 February 1949.

²⁵ WHO: 1_900_1_3, Executive Board, Third Session: Allocation of Funds for Regional offices, 19 February 1949.

²⁶ WHO: 1_900_1_2, Interim Commission of the WHO, Chapter XI of the Constitution of the World Health Organization, 1947.

²⁷ Fee, et al., "At the Roots of The World Health Organization's Challenges," 1912.

²⁸ Lee, *The World Health Organization (WHO)*, 32-33.

²⁹ Regional Committee for the Western Pacific, *WHO Western Pacific Regional Committee: A Historical Overview* (Manila: WHO Regional Office for the Western Pacific, 2016), 6-7, <https://iris.wpro.who.int/handle/10665.1/13460>.

official languages.³⁰ By the time it was relocated to Manila, 12 members constituted the WPRO, which included Australia, Cambodia, Japan, Korea, Laos, Philippines, New Zealand, the United States of America, France, the Netherlands, Portugal, and the United Kingdom of Great Britain and Northern Ireland.³¹

Cold War and the WHO's priority setting

From its establishment, the WHO devoted itself to numerous health issues in most urgent priorities. The earliest focus of its work included strengthening health systems and containing infectious diseases such as malaria, smallpox, tuberculosis, leprosy, and cholera, as well as improving life expectancy and reducing maternal and infant death rates.³² However, like other UN agencies, the technical possibilities of the organization had been constantly challenged by the political and economic constraints of member states. The priorities of international health had often been influenced or even directly shaped by geopolitical agenda, especially in the first several decades when the cold war was taking hold.³³ The rising tension between the two rival groups challenged the WHO's role of a directing and coordinating authority of global health. It also increased the dispute of fundamental philosophy and ideology of determinants of health between the perspectives which valuing societal influence on health and the envision focusing on solving health problems through technology.³⁴

From the first International Sanitary Conference held in Paris in 1851 to the end of WWII, numerous colonial powers and international organizations had delivered international health programmes in Asia, Africa, and Latin America, including controlling infectious diseases such as malaria, hookworm, yaws, and yellow fever, as well as improving environmental health. Those international health interventions were rooted in colonial settings and shaped by colonial values. The idea of promoting social improvement through permanent eradicating endemic diseases came from the International Health Commission (IHC) of the Rockefeller Foundation (RF)'s efforts of eliminating yellow fever and

³⁰ Ibid, 11.

³¹ Countries with overseas territories: France for French Polynesia, New Caledonia and Wallis and Futuna; the United Kingdom for Pitcairn Islands; the United States of America for American Samoa, Guam, Commonwealth of the Northern Mariana Islands. ROC withdrew from the WHO in 1949. See Regional Committee for the Western Pacific, *WHO Western Pacific Regional Committee*.

³² World Health Assembly, *First World Health Assembly*.

³³ Nitsan Chorev, *The World Health Organization between North and South* (Ithaca: Cornell University Press, 2012), 4-5.

³⁴ Lee, *The World Health Organization (WHO)*, 14; and Fee et al., "At the Roots of The World Health Organization's Challenges," 1912-1917.

hookworm in Latin America in the early 20th century. The model that combined technological intervention and health education had been considered as a magic bullet and became a dominant perspective that shaped international health policy.³⁵ It usually adopted approaches depended on the application of biomedical technologies to deal with health problems “empowered by faith in the superiority of Western medical knowledge and technology”.³⁶ Both American and European colonial medical networks had developed their own international health models. Although some of them had recognised the link between health and social-economic development, the connection was primarily focused on stimulating economic development by improving health conditions.³⁷

An alternative approach of improving health through a more comprehensive strategy addressing the influence of social and economic factors on public health had gained growing interest in the late 1920s and 1930s. This perspective shaped the LNHO’s agenda, which encompassed broader determinants of health, including but not limited to the roles of housing conditions, nutrition, rural hygiene, income level, and economic development.³⁸ The values were subsequently reflected in some of the rural hygiene programs the LNHO had developed or participated in Europe and other parts of the world in the 1930s, especially in China (which has been discussed in the first chapter). Although colonial ideology was still retained in those activities, the LNHO’s health interventions in China had departed from the colonial medicine model and challenged the dominance of technical solutions to health problems. It advocated for a broader social and economic reformation as essentials to improving health. Apart from the LNHO, some other international health actors had moved some attention away from the disease elimination campaign model. For example, the Rockefeller Foundation had also attempted to build basic health services in its activities in Mexico, Ceylon, and Java in the 1930s. However, those attempts of social medicine in the 1930s did not fully achieve the social and economic reform goals Rajchman or Štampar had provisioned. In addition, the ideology of social determinants of health advocating for a broader social reformation was

³⁵ Peter J. Brown, “Failure-as-success: Multiple Meanings of Eradication in the Rockefeller Foundation Sardinia Project, 1946-1951,” *Parassitologia* 40, no. 1-2 (1998): 117-118.

³⁶ Packard, *A History of Global Health*, 8.

³⁷ Packard, *A History of Global Health*, 8-9; Nancy Stepan, *Eradication*; Peter J. Brown, “Malaria, Miseria, and Underpopulation in Sardinia: the ‘Malaria Blocks Development’ Cultural Model,” *Medical Anthropology* 17, no. 3 (1997): 239-254; Litsios, “Malaria Control, the Cold War, and the Postwar Reorganization of International Assistance,” 255-78; Randall M. Packard & Peter J. Brown, “Rethinking Health, Development, and Malaria: Historicizing a Cultural Model in International Health,” *Medical Anthropology* 17, no. 3 (1997): 181-194.

³⁸ Birn, “The Stages of International (Global) Health,” 53; Packard, *A History of Global Health*, 66-67.

speculated as bolshevism by many politicians and international health personnel of Western countries.³⁹

Cold war politics played an important role in forcing the WHO's departure from its original vision of achieving "health for all". Dominated by the cold war ideology, the WHO was seen as a terrain to win geopolitical influence by the two rival powers.⁴⁰ Initially, right-wing politicians of the US government opposed the creation of the WHO due to the country's longstanding resistance to participating in international organizations, which they considered would harm the country's interests. The congress finally ratified the constitution of the WHO, but it reserved the country's right of withdrawal from the organization. Moreover, the congress had also set a limit to the country's contribution of funding to the WHO, which challenged the financial capability of the organization to practice its international health interventions. These conditions allowed the US to exert its influence over the WHO, and to hold hostage of the organization by cutting off funding and leaving when its policies against the country's interests.⁴¹ Regarding the regional health organizations, the United States had also strongly defended the independence of the Pan American Sanitary Bureau (PASB) and refused to subordinate the bureau to the WHO. Although the US finally agreed to transform the PASB to the Pan American Health Organization (PAHO), a regional office of the WHO, it remained a great level of autonomy and worked with Geneva through cooperation in distance rather than subordination.⁴²

In addition, preoccupied with the hostility towards communism, the US government concerned the expanding influence of the concept of social medicine in international health would challenge its existing healthcare system dominated by free-market economies.⁴³ In terms of the election of the first Director-General of the WHO, the US voted against Štampar, a strong social medicine advocator, to be elected as the first Director-General of the organisation. Instead, Brock Chisholm, a Canadian psychiatrist, was in favour by most of the member states and elected as the first Director-General of the WHO.⁴⁴ However, like Štampar, Chisholm also believed that health improvement could not be achieved without

³⁹ Packard, *A History of Global Health*, 57-66.

⁴⁰ Cueto et al., *The World Health Organization: A History*, 67; Litsios, "Malaria Control," 269; Birn, "The Stages of International (Global) Health," 56. Brown, "Malaria, Miseria, and Underpopulation in Sardinia," 239-254. Packard and Brown, "Rethinking Health, Development, and Malaria," 181-194.

⁴¹ Packard, *A History of Global Health*, 120-122.

⁴² Lee, *The World Health Organization (WHO)*, 14; and Packard, *A History of Global Health*, 123.

⁴³ Litsios, "Malaria Control," 271; More about the dominance of market economies in health system of the US, see Nancy Tomes, *Remaking the American Patient: How Madison Avenue and Modern Medicine Turned Patients into Consumers* (Chapel Hill: The University of North Carolina Press, 2016).

⁴⁴ Cueto et al., *The World Health Organization: A History*, 46.

addressing the social and economic factors that influenced health outcomes, and he devoted himself to manifest principles laid down in the WHO's constitution. He recommended taking an aggressive approach toward public health problems and outlined the principles the organization should have adopted in developing its annual programme. The EB agreed on the principles and stressed that quarantine and similar passive measures against preventable diseases were no longer adequate and the WHO would make an investment in public health by concentrating on the elimination of reservoirs of major diseases. In addition, the board also suggested to weigh the economic and social implications of a potential programmes rather than their benefits to improve health.⁴⁵ However, his attempts to adopt a broad-based, integrated approach to international health were challenged by cold war politics.⁴⁶

In order to compete for influence over newly independent nations in Africa, Asia, and Latin America with communist countries, the US and its allies considered technical assistance as an essential tool to win hearts and minds of the third world populations.⁴⁷ Some successful examples of regional eradication programmes against malaria, yellow fever, yaws, etc. in the 1930s-1950s delivered by the US government or international organizations such as the RF and the PASB, had increased the confidence over the concept of disease eradication.⁴⁸ Moreover, new technologies and medicines that emerged during the war such as DDT and penicillin enhanced the faith in biomedical technologies to deal with health problems. As a consequence, eradicating malaria by using DDT was considered as one of the most promising programmes,⁴⁹ despite the malaria problem did not fit well into the magic bullet type of intervention.⁵⁰ As P.J. Brown has argued, malaria eradication represented a set of ideas “empowered by an American ‘can-do’ hubris resulted from a technologically-based victory in WWII.”⁵¹ For the US, the malaria eradication campaign was not only a war fighting against infectious disease, but also a tool against communism.⁵² As a major funder of the WHO, which also provided a large number of its staff, the US had a strong influence in the organization. For instance, the WHO started to embrace the “vertical approach” as a

⁴⁵ WHO: 1_900_1_5, WHO Executive Board Lays down Principles for Future Action: 1950 Program Outlined, 9 November 1948.

⁴⁶ Cueto et al., *The World Health Organization: A History*, 64.

⁴⁷ Litsios, “Malaria Control,” 255-278; also see Marcos Cueto, *Cold War, Deadly Fevers*.

⁴⁸ Cueto et al., *The World Health Organization: A History*, 92-93.

⁴⁹ Litsios, “Malaria Control,” 272.

⁵⁰ John Farley, “Mosquitoes or Malaria? Rockefeller Campaigns in the American South and Sardinia,” *Parassitologia* 36, no.1-2 (1994), 165-173.

⁵¹ Brown, “Failure as Success,” 118. Siddiqi, *World Health and World Politics*.

⁵² Birn, “The Stages of International (Global) Health,” 56; Brown, “Failure as Success,” 117-118.

preferred operational strategy in the 1950s and 1960s, which targeted specific diseases for elimination or eradication in the short- or medium-term with centralised management.⁵³

Withdrawal of Eastern Bloc countries and China's seat in the WHO

The USSR and its Eastern European allies were discontented with the strong US influence in the WHO and the reduction of funding available to the communist countries, which caused their early withdrawal from the organization.⁵⁴ The Polish Minister of Health claimed that the WHO had “surrendered to the imperialistic States and in particular to the United States.”⁵⁵ In February 1949, the Director-General received a message from N.A. Vinogradov, the Deputy Minister of Public Health of the USSR, declared the country's withdrawal from the WHO. It claimed that the USSR was not satisfied with the international health work undertaken by the WHO including infectious disease control and health information and knowledge exchange. He accused the WHO had departed from the principles the organization had set up at the inaugural conference in 1946, despite the huge financial contribution from the member states.⁵⁶ However, the message was not clear when or in what degree of participation it would terminate in the organization. Some other Eastern Bloc countries had followed the Soviets' lead and left the organization soon after, including Albania, Bulgaria, Byelorussia, Czechoslovakia, Romania, and Ukraine.⁵⁷ The Director-General refused the USSR's request for withdrawal. Instead, he suggested the minister to submit the complaint towards the organization and the country's motion of withdrawal to the third session of the EB, and the issue should have been discussed and decided by the WHA as regulated by the WHO constitution. Dr Chisholm insisted that the organisation was for all nations and the USSR's participation was desired. He also proposed a visit to Moscow by himself to dispel the misunderstandings. However, the Soviets turned down his suggestions.⁵⁸

In fact, no provision had been made in the WHO's constitution regarding the withdrawal of members from the organization. For instance, there was no legal clause that had clarified the definition of the termination of membership of the WHO, nor the World

⁵³ Cairncross et al., “Vertical Health Programmes,” S20-21.

⁵⁴ Litsios, “Malaria Control,” 269.

⁵⁵ World Health Organization, “Poland Decides to Withdraw from WHO,” *Chronicle of the World Health Organization* 4, no.10 (1950): 324. <https://archive.org/details/in.ernet.dli.2015.71456>.

⁵⁶ WHO: 1_16_1_1, Executive Board Third Session, Action Taken by Certain Countries with regard to Membership of WHO, 18 February 1949.

⁵⁷ World Health Assembly, *Third World Health Assembly, Geneva, 8 to 27 May 1950: Resolutions and Decisions: Plenary Meetings Verbatim Records: Committees Minutes and Reports: Annexes* (Geneva: World Health Organization, 1950), 52, <https://apps.who.int/iris/handle/10665/85607>.

⁵⁸ Ibid.

Health Assembly was authorised to approve any motion of withdrawing. Chisholm consulted Melville Mackenzie, a member of the EB and the Minister of Health of the UK. Regarding the termination of membership, Chisholm suggested the WHA could:⁵⁹

- Suspend all services, except epidemiological information to these countries;
- Suspend the right of participation and voting power in the Assembly or any organs of the organization;
- Make those countries ineligible for election to designate members to the Executive Board;
- Terminate the membership in the Executive Board of any members from those countries;
- Discontinue assessments against those countries for the Regular Budget of the Organization

The DG expected to deal with the situation in the least controversial way without legal complication. He suggested those countries could be treated as “inactive members” of the organization, which allowed them to remain members legally but cease their privileges and obligations.⁶⁰ After discussing with Calderwood, a representative of the US Embassy in London, Mackenzie suggested taking no action to countries that declared withdrawal from the organisation, but making efforts to persuade them to change their decisions.⁶¹ As Mackenzie suggested, the third Health Assembly declared that “while the World Health Organization will always welcome the resumption by these members of full co-operation in the work of the organization, it is not considered that any further action at this stage is desirable.”⁶² Therefore, the USSR remained inactive in the WHO until it recovered its membership of the organization in 1957. The departure of Eastern Bloc countries created financial challenges to the organization. However, the downside was not only limited to the shortage of funding, but also reflected on the reduction of the voices and influence from Eastern European countries, which were the centre for social medicine back to the 1930s.⁶³ In addition, the withdrawal of eastern blocs undermined the WHO’s leadership in global health. In a letter to Geneva, P. M. Kaul, the director of Singapore Epidemiological Intelligence Station then, said the news related to the withdrawal of the Soviet Members was circulating and being discussed among local medical communities, and it was believed that “the

⁵⁹ WHO: 2_OD_14_1, Letter from Brock Chisholm to Melville Mackenzie, 13 April 1950.

⁶⁰ Ibid.

⁶¹ WHO: 2_OD_14_1, Letter from Melville Mackenzie to Brock Chisholm, 13 June 1950.

⁶² World Health Assembly, *Third World Health Assembly, Geneva, 8 to 27 May 1950: Resolutions and Decisions: Plenary Meetings Verbatim Records: Committees Minutes and Reports: Annexes* (Geneva: World Health Organization, 1950), 52, <https://apps.who.int/iris/handle/10665/85607>.

⁶³ Packard, *A History of Global Health*, 123.

Organisation has certainly lost thereby the truly worldwide presentation that it had so far possessed.”⁶⁴

Apart from the Eastern bloc’s withdrawal, another membership issue that challenged the WHO’s leadership in the first several decades was the legal representation of China. When the World Health Organization was inaugurated, a civil war broke out in China between the country’s then ruling party Guomindang and the Chinese Communist Party in competition for power during 1946-1949. The newly built international organization’s officials in Geneva and its representatives in the West Pacific Region were forced to navigate a strategy to deal with the membership of China after 1949, when the CCP replaced the GMD as the ruling party. Both regimes at the Chinese mainland and Taiwan claimed to be the legal representative of China at the United Nations. Like other UN specialized agencies, the WHO was inclined to retain the status quo of the ROC’s membership, and welcome the PRC’s participation in the organization, while the communist government insisted on a complete replacement of the nationalist government. The organization suggested such a political question should be settled first by the UN in New York.⁶⁵

With support from the US and its allies, the ROC continued to claim the legal representation of China at the UN and its specialist agencies including the WHO after it was forced to flee to Taiwan in 1949. However, on 5 May 1950, Dr Chisholm received a Telegram from George Ke Yeh (叶公超 Ye Gongchao), the Foreign Minister of the ROC, claiming its withdrawal from the WHO. The message from Taipei (Taipei 台北, capital city of the ROC) provided a more detailed agenda of its termination of membership of the WHO than the Soviets. It informed the organization that the withdrawal would take effect from 7 May, and by then, China would not be represented by any delegates, representatives, or any other presences with official capacities in any organs of the WHO including the Third World Health Assembly to be convened. However, despite terminating its membership, it claimed that the ROC would adhere to the principles of the organization, and cooperate with the organization, its affiliated organization, or other member states to the fullest possible extent.⁶⁶ Regarding the ROC’s request of withdrawing, the WHO did not take any substantial action like how it resolved the withdrawal of Eastern Bloc Countries, in order to avoid political

⁶⁴ WHO: 1_452_6_3, Letter from Dr P. M. Kaul (the Director of World Health Organization, Epidemiological Intelligence Station, Singapore) to Yves Biraud (Director of Division of Epidemiology of WHO, Geneva), 22 March 1949.

⁶⁵ Samuel S. Kim, *China, the United Nations and World Order* (Princeton: Princeton University Press, 1979), 349.

⁶⁶ WHO: 2_OD_14_1_4, Telegram from Foreign Minister of the ROC to Director-General, 7 May 1950.

controversy and legal complication. 25 May 1950, the WHA confirmed the receiving of the requests from the ROC for terminating its membership, but neither accepted nor refused its request,⁶⁷ and left open the possibility of the resumption of its full participation in the organization.⁶⁸

A week later on 12 May 1950, another telegram from Zhou Enlai (Chou En-Lai 周恩来), the Foreign Minister of the PRC, to the Director-General referring to the GMD as the “reactionary remnant clique”, who no longer had the qualification to participate in the WHO and must be dispelled from the various organs of the organisation including the coming World Health Assembly. And the Central People’s Government of the PRC was the only legal government representing China and the Chinese people.⁶⁹ After the third WHA, the Director-General informed Zhou of the withdrawal of the ROC, and the resolution adopted at the assembly on 25 May, that the organization would “always welcome the resumption of full participation in the work of the organization by members”.⁷⁰

However, the argument about China’s seat in the WHO was not only determined by the legal terms of the United Nations, but also subjected to the complexity and contingency of the escalating Cold War.⁷¹ Although the CCP won the civil war and took control over the mainland China, it did not terminate the GMD’s existence, and the ROC was still recognised as a legal government by many UN members. The PRC did not accept the co-existence with the ROC in the UN and required to fully replace it. The CCP had set several conditions for international organizations to participate, which included the “correct” ideological orientation” of other member states, the absence of the ROC, and a “favourable” political environment. Byron Weng argued that Beijing’s conditions to participate in international organizations in the 1950s and 1960s also contributed to the dilemma of China’s seat in the UN.⁷²

Regarding the potential conflicting decisions about the representation of a member state in the United Nations specialized agencies and relevant organs, the 325th plenary meeting of the UN adopted Resolution 396 (V) based on reports of the Ad Hoc Political Committee on

⁶⁷ WHO: 2_OD_14_1_4, Legal Office, Resolution of the Withdrawal of the ROC, 13 June 1950.

⁶⁸ WHO: 2_OD_14_1_4, Letter from Martha M. Eliot (Assistant Director-General, Geneva) to I. C. Fang (Chief of the WHO Temporary Regional office for the Western Pacific, Hongkong), 24 February 1951.

⁶⁹ WHO: 2_OD_14_1_4, Telegram from Foreign Minister of the PRC to Director-General, 12 May 1950.

⁷⁰ MFA: 113-00013-02, 世界卫生组织威任姆致周恩来 (Telegram from Brock Chisholm to Zhou En-lai), 13 June 1950.

⁷¹ Barrett, “Between Sovereignty and Legitimacy,” 1519.

⁷² Byron S. J. Weng, “Some Conditions of Peking’s Participation in International Organizations,” in *China’s Practice of International Law: Some Case Studies*, ed. Jerome Alan Cohen (Cambridge, MA: Harvard University Press, 1972), 322.

14 December 1950. The resolution suggested that “there should be uniformity in the procedure applicable whenever more than one authority claims to be the government entitled to represent a member state in the United Nations.”⁷³ It decided the subject of controversy in the United Nations system should be considered by the General Assembly, or by the Interim Committee if the General Assembly was not in session, based on the Purposes and Principles of the Charter and the circumstances of each case. It recommended other UN organs and specialised agencies taking into account the attitude of the General Assembly or its Interim Committee concerning the controversies over membership issues.⁷⁴

Based on the UN constitution, the credentials of representatives submitted separately to the Security Council and the General Assembly, and neither of the organs could claim the sole right of the representation of China. The credentials of representatives at the General Assembly were considered by a Credentials Committee, which would have to be approved by the Assembly in plenary session. Therefore, representing China by the communist government could be admitted by the General Assembly as soon as a majority of the members had recognised its legitimacy. However, its position in the Security Council was more complicated because China was one of the Big Five (China, France, the US, the UK, and the USSR) and a permanent member of the Security Council, which possessed a veto right. The Nationalist government could veto any motion to remove itself from its place in the security council.⁷⁵

Despite it was difficult for the PRC to challenge the ROC’s seat in the Security Council legally, it was recognised by the UK Foreign Office that the council would not be able to adhere to the legal procedure with the Soviets’ intervention. As a member of the security council who held veto, the UK, the US and the USSR’s opinion was crucial for China’s seat in the UN. In the UK Foreign Office’s opinion, the ROC’s position might have not remained tenable for long in practice. And fundamentally, the question of Chinese representation in the Security Council was also one of recognition. As long as the communist government was recognised as the only legal representative of China by the majority members of the UN, a legal transfer of power could ensure the communists taking the seat.⁷⁶ In addition, the UK government was concerned about its political and economic interests in Hong Kong and

⁷³ WHO: L 2/308/2, General Assembly – Fifth Session: Resolution Adopted on Reports of the Ad Hoc Political Committee, 396 (V) Recognition by the United Nations of the representation of a Member State, 14 December 1950.

⁷⁴ Ibid.

⁷⁵ TNA: FO 371/75831, Minutes: China and the United Nations, 19 August 1949.

⁷⁶ Ibid.

British corporations doing business in China.⁷⁷ Therefore, although the foreign office of the UK would like to consider the US's position on the issue of China's seat in the UN, the office was also interested to know "whether the admission of a Chinese Communist to replace the Nationalist representative" could provide "any kind of leverage", which would enable them to "secure some kind of interests" in China by the communist regime.⁷⁸ As a result, the UK government decided to recognize the communist government, and not to oppose its claim to the UN seat in January 1950.⁷⁹

However, Harry S. Truman (President of the US, 1945-1953) was not happy with the decision made by Clement Attlee (the Prime Minister of the UK, 1945-1951). To the US, allowing the PRC to replace the ROC in the UN would undermine its policy of containment of communism around the world, and it was believed that pressure, instead of conciliation, would be able to divide the Sino-Soviet relationship and erode the Communist alliance. In the 1940s and 1950s, the right-wing politicians gained ascendancy in the US, and they objected to Washington building connections with the new Beijing government. The Americans were not satisfied with Chiang Kai-shek's leadership, but they determined to support the ROC to remain its legal representation of China in the UN, although it was recognised that they would have to accept the PRC taking up the seat if a majority of the UN members voted in favour of it. After the communist government intervened in the Korean War in November 1950, the US intensified its efforts to prevent the PRC taking position in the UN.⁸⁰ 18 May 1951, the General Assembly adopted a resolution to embargo shipments of war supplies to the areas controlled by the PRC and North Korean authorities from 1951 to 1953.⁸¹ Meanwhile in the UK, Winston Churchill, a strong opponent to communism, was re-elected as the Prime Minister in 1951. Relying on the US support, and not being able to obtain expected interests from the CCP, the UK government decided to back the US on the issue of China's seat in the UN, although not always willingly.⁸²

⁷⁷ Jonathan Howlett, "'The British Boss Is Gone and Will Never Return': Communist Takeovers of British Companies in Shanghai (1949–1954)," *Modern Asian Studies* 47, no. 6 (2013): 1941–76; Jonathan Howlett "Accelerated Transition: British Enterprises in Shanghai and the Transition to Socialism," *European Journal of East Asian Studies* 13, no. 2 (2014): 163-187.

⁷⁸ TNA: FO 371/75831, Minutes: China and the United Nations, 19 August 1949.

⁷⁹ TNA: FO 371/105225, Brief for Lord Henderson for the I.P.U. Conference in Washington, September 1953.

⁸⁰ Victor S. Kaufman, "'Chirep': The Anglo-American Dispute over Chinese Representation in the United Nations, 1950-71," *The English Historical Review* 115, no. 461 (2000): 355.

⁸¹ United Nations, "Part 1: The United Nations. Section 3: Political and Security Questions. Chapter F: The Question of Korea," *Yearbook of the United Nations 1951* (New York: Department of Public Information, United Nations, 1951), 228-229,

<https://www.unmultimedia.org/searchers/yearbook/page.jsp?volume=1951&page=238&searchType=advanced>.

⁸² Kaufman, "'Chirep'," 354.

Influenced by the cold war politics, the PRC, a country with a quarter of the world's population in 1950, was not directly involved in any WHO programme until 1971, when its representation of China was recognised by the 26th World Health Assembly.⁸³ As Samuel Kim argued, “no specialized agency (of the UN) is completely politicized or completely depoliticized”.⁸⁴ The WHO, as well as other UN specialised agencies, was “not established as a supranational health administration to take the place of national health authorities in the carrying out their normal functions,” as Dr Chisholm had pointed out, that “it was created to help those authorities directly, by putting at their disposal the knowledge and the skills needed for the improvement of their own health services, and in directly, by mobilizing all available resources for the solution of problems which lend themselves to international action”⁸⁵ Therefore, the organization's presence, its missions and programmes had to gain legitimacy and support from individual states, which composed the WHO's “symbolic resources”.⁸⁶ On the other hand, apart from material and technical support, as well as knowledge and information exchange, individual states also needed “symbolic resources” from the organization to obtain political endorsement or exert political and economic influence. This “symbolic politics” of the WHO and other UN specialized agencies hinged on the “representational issue.”⁸⁷ It appeared that the PRC won its place in the UN and its specialized agencies in the 1970s, but the “two Chinas” issue had not been completely resolved. It was, and still is, a major theme in the context of the WHO's consultative relationship with the PRC and Beijing's symbolic diplomacy at Geneva.

II. China's view towards the WHO

Cutting off the tie with the “West”

The PRC's relationship with the WHO and other UN agencies mirrored a wider context of its international policy. When the country-wide victory of the civil war came into sight, the Second Plenary Session of the Seventh Central Committee of CCP was held in Xibaipo Village in Pingshan County of Hebei Province from 5 to 13 March 1949. Thirty-four members and nineteen alternate members of the Central Committee attended the plenary. The leader of the party, Mao Zedong (also Mao Tse-tung 毛泽东), delivered the opening speech,

⁸³ United Nations, *Restoration of the Lawful Rights of the People's Republic of China in the United Nations*, 25 October 1971, <https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/NR0/327/74/IMG/NR032774.pdf?OpenElement>.

⁸⁴ Kim, *China, the United Nations and World Order*, 341-342.

⁸⁵ Brock Chisholm, “The World Health Organization,” *British Medical Journal* 1, no. 4661 (1950): 1022.

⁸⁶ Chorev, *The World Health Organisation between North and South*, 26.

⁸⁷ Kim, *China, the United Nations and World Order*, 349.

which depicted the blueprint of the achievement of the nationwide victory of the Communist Revolution. Mao explained that the party should shift its emphasis from rural areas to urban areas, decide the basic political, economic, and foreign policies for the party to adopt after the victory, and set the general tasks and main course for transforming China from an agricultural into an industrial country. His speech formed the basis for the policies embodied in the Common Programme adopted by the First Plenary Session of the Chinese People's Political Consultative Conference, which served as a provisional constitution after the establishment of New China.⁸⁸

Mao recognized China as a semi-colonial and semi-feudal country under imperialist domination, not only in politics, but also in economics and culture. He claimed that the imperialist powers who supported the GMD had been weakened by the war, while the anti-imperialist front headed by the Soviet Union was strengthened. In terms of foreign policy, he suggested the party to adopt a policy to destroy imperialism systematically and completely in China. To do so, he suggested the party to repudiate the legal status of any foreign diplomatic establishments recognized by the GMD and any unequal treaty signed by the nationalists, expel "imperialist" propaganda agencies, take immediate control of foreign trade, and reform the customs system once the People's Liberation Army (PLA) taking over the big cities. As for the issue of recognition, Mao agreed the communist government should establish diplomatic relations with all countries, but he also acknowledged that the regime would not be recognised by imperialist countries hostile to Chinese people. Therefore, the issue of recognition, especially the recognition by the "imperialist" countries, would be a long-term challenge, which was not expected to be resolved immediately.⁸⁹

Soon after the Xibaipo meeting, the CCP took over Beijing and announced the establishment of the PRC on 1 October 1949. Regarding the membership of the WHO, a discussion among ministers of the new communist government in December 1949 recommended against joining in the organization. From political consideration, they recognised that the WHO was under the US control. The staff of the organization, especially high-level employees, were mostly from Western bloc led by the US and the UK, while personnel from new democratic countries were not given important positions. In addition, the organization was closely connected with the General Assembly of the UN and the Pan American Health Bureau. Based on their investigation, the newly established government

⁸⁸ 毛泽东, *毛泽东选集第4卷* (北京: 人民出版社, 1991), 1434 [Zedong Mao, *Selected Works of Mao Zedong Volume IV* (Beijing: People's Publishing House, 1991), 1434].

⁸⁹ *Ibid*, 1434.

believed that the WHO was not an organization would genuinely serve the people of the third world countries, although the organization described itself as a philanthropic international health organization, and it had provided some medical related support to those less powerful nations. In their opinion, improving health was a camouflage and excuse for the imperialist powers to interfere in another nation's internal affairs. Moreover, there was not a third party to oversee or evaluate the organization's activities. The organization was composed of an enormous system with complex international relationships but had limited power. Therefore, in their opinion, participating in the organization would not help with improving public health, but would allow the Americans to collect intelligence information and to control Chinese people's minds.⁹⁰

In terms of the financial status of the organization, according to the Chinese investigation, the budget of the organization from 1946 to 1949 cost 15,027,224 US dollars in total. Judging from the budget spending in 1948, that only about half of the funding was spent on technical support while the other half was used for conferences, offices, and unexpected purposes, it was believed the organization's work was bureaucratic and superficial. Moreover, the membership contribution was a huge cost for a poor country that had just ended years of wars. Therefore, for the leaders of the party, it was not worth joining the organization by paying expensive membership contributions in exchange for limited support for improving health.⁹¹ In addition, the USSR, Belorussia and Ukraine informed China of their withdrawal from the organization, because of their dissatisfaction with the organization's work and its unreasonable membership contribution. The Eastern Bloc countries also warned China that the WHO was not the organization it would need, and they would not give up their membership as long as the organization could do anything actually serving the welfare of people. Therefore, the report recommended not joining in the WHO as it was more like a political tool. In addition, it suggested that health problems were caused by the inequality of society, which could only be solved by supporting independence and decolonization movements in third world countries, and liberating the labour force in capitalist countries, instead of relying on technical solutions.⁹²

After deciding against joining in the organization, the communist government also suspended the epidemic information exchange with individual countries and the WHO

⁹⁰ MFA: 113-00044-02, 中国应否参加国世界保健组织的报告 (Report of China's participation of the WHO), 23 December 1949.

⁹¹ Ibid.

⁹² Ibid.

affiliated institutions. In February 1950, Shanghai municipal government requested instructions from the central government regarding the epidemic information exchange with western countries including the UK, France, the US and Norway, as well as international organizations such as the Epidemiological Intelligence Station at Singapore. Before the city's "liberation", the Epidemic Prevention Department of Shanghai Health Bureau had been exchanging 10-daily epidemiological reports with foreign countries regularly through their consulates in Shanghai. The exchange stopped after the city was taken over by the CCP. Apart from bi-lateral information exchange with individual states, the Shanghai Port Quarantine Office had also been broadcasting epidemic reports weekly and exchanging epidemiological reports with the Epidemiological Intelligence Station at Singapore, in order to prevent infectious diseases outbreaks. However, the service was interrupted by the communist takeover.⁹³

The Bureau of Epidemiological Intelligence in Singapore was established by the League of Nations in 1935. The epidemic information reporting service in Singapore was initiated in 1928 under Article 7 of the 1926 International Sanitary Convention.⁹⁴ The regulation designated five diseases, including smallpox, cholera, plague, typhus, and yellow fever, as quarantine diseases. Countries signing the regulation were obliged to investigate and report to Geneva and Singapore regarding the location, date, source, condition, case and death numbers of the disease, infected areas, as well prevention measures, etc. The epidemic country was also required to notify the arriving ships and aircrafts in order to prevent the spread of the disease. The quarantine and epidemic prevention policies were independently managed by individual countries in terms of administrative management and cooperated internationally in terms of technology.⁹⁵ In 1939, the Bureau established an infectious disease information network across over 180 ports of the eastern coast of Africa, the southern and eastern coasts of Asia and islands of the West Pacific through cable and radiotelegraphy communication. Epidemiological bulletins were shared with the network through twelve wireless stations broadcast daily or weekly. The bureau was administered by a Consultative Council. The members of the council composed of representatives of health administrations of Asia and Pacific region. The senior staff was appointed by the Secretary General of the

⁹³ MFA: 113-00044-04, 国际司关于世界卫生组织新加坡防疫站的情况和我们的意见 (The Situation of the WHO Epidemiological Intelligence Station at Singapore and Our Opinion by International Division), 1950.

⁹⁴ World Health Organization and Interim Commission, *Minutes of the Third Session of the Interim Commission Held in Geneva from 31 March to 12 April 1947*. (New York; Geneva: United Nations, World Health Organization, Interim Commission, 1947), 56-57, <https://apps.who.int/iris/handle/10665/85584>.

⁹⁵ MFA: 113-00044-04, 国际司关于世界卫生组织新加坡防疫站的情况和我们的意见 (The Situation of the WHO Epidemiological Intelligence Station at Singapore and Our Opinion by the International Division), 1950.

League of Nations. The League of Nations contributed 60% to the budget of the bureau, while the rest of the funding came from countries in the region on a voluntary basis. In February 1942, the Bureau ceased its function because of Japanese occupation.⁹⁶

Based on the consideration of urgent health safeguards for Asian countries during the war, the DG of the UNRRA requested the League to reopen the bureau in March 1944. When Singapore was liberated, the Allied South-Eastern Asia Command resumed part of the bureau's work after the League allocated necessary funds in 1946. Using material and personnel of the league, the bureau gradually expanded its work of issuing bulletins, collecting and broadcasting information. In April 1946, the League of Nations Assembly decided to transfer the health functions of the League to the United Nations. The International Health Conference decided to transfer the functions, activities, and assets of the LNHO to the Interim Commission. In June 1946, the representative of the UK requested the UN to take over of the Bureau, and it was discussed and approved at the second session of the Interim Commission. Taking into consideration the need for an efficient epidemiological intelligence institution in the East and the desirability of the international status of the institution, the Executive Secretary decided to assume the responsibility of the Singapore Bureau for purely epidemiological functions in March 1947.⁹⁷

After the bureau transformed into the Epidemiological Intelligence Station,⁹⁸ it served one of the WHO's missions to collect and provide information and statistics on epidemics in various countries. The WHO HQ at Geneva collected epidemic information all over the world and distributed it to three intelligence stations: the Singapore Epidemiological Intelligence Station in the Far East, the Alexandria Regional Health Bureau in the Middle East, and the Pan American Sanitary Bureau in Americas. The Singapore Epidemiological Intelligence Station received epidemic report from Geneva, and collected epidemic information from 334 seaports and airports in Asia, including Saigon, Hong Kong, Shanghai, Xiamen, Tokyo, Karachi, Madras, Batavia, Antananarivo, Madagascar, Ceylon, etc. Based on collected information, the station broadcasted epidemic announcement daily through twelve radio stations. The station was also responsible for editing and publishing collected epidemic information into the Weekly Bulletin.⁹⁸ The Singapore Station was considered as a successful example of existing international health service. In spite of the broad geographical coverage,

⁹⁶ World Health Organization and Interim Commission, *Minutes of the Third Session of the Interim Commission Held in Geneva from 31 March to 12 April 1947*, 56-57.

⁹⁷ Ibid.

⁹⁸ MFA: 113-00044-04, 国际司关于世界卫生组织新加坡防疫站的情况和我们的意见 (The Situation of the WHO Epidemiological Intelligence Station at Singapore and Our Opinion by the International Division), 1950.

the facilities of this office were not over stretched. However, the unsettled conditions in China and other countries of Asia made it impossible for the administrations themselves to undertake any constructive work.⁹⁹

Regarding the epidemic information exchange with the Epidemiological Intelligence Station at Singapore, the International Division of the Ministry of Health of PRC suggested to continue the exchange with the station, but all the epidemic information should be centralised, that reported to and distributed from the ministry.¹⁰⁰ However, the International Division insisted to cease the information exchange with the institution, because it was a branch of the WHO, and the PRC was not a member of the station and the UN. The division also concerned the epidemic information would be used as propaganda against the communist regime. Therefore, the International Division suggested suspending the correspondence with the station until the PRC built any formal relationship with the WHO and the UN. Instead, the division suggested obtaining epidemic information through alternative channels, such as Hong Kong.¹⁰¹ Despite this, both departments agreed to develop epidemic information exchange with the USSR and North Korea, and to cooperate closely with other new democratic countries regarding infectious disease control.¹⁰² The decision to cease the information exchange with the Singapore station had interfered with the regular reporting of full epidemiological information. “It could cope with a much bigger volume of statistics and quarantine information,” P. M. Kaul, the director of the station said, he “would have pushed the Eastern Administrations for better and more up to date information”.¹⁰³

Dependence of the Eastern Bloc

Only sharing information with socialist countries had also reflected the PRC’s foreign policy emphasized on “leaning to one side (yibiandao 一边倒)”.¹⁰⁴ The decision was

⁹⁹ WHO: WHO 1_452_6_3, Letter from Dr P. M. Kaul (the Director of World Health Organization, Epidemiological Intelligence Station, Singapore) to Yves Biraud (Director of Division of Epidemiology of WHO, Geneva), 22 March 1949.

¹⁰⁰ MFA: 113-00044-04, 中央人民政府卫生部卫生部（呈）文化教育委员会为拟定国际疫情通报办法由 (Letter regarding Epidemic Information Exchange from Ministry to Culture and Education Commission, copy Foreign Ministry), 31 March 1950.

¹⁰¹ MFA: 113-00044-04, 国际司关于世界卫生组织新加坡防疫站的情况和我们的意见 (The Situation of the WHO Epidemiological Intelligence Station at Singapore and Our Opinion by the International Division), 1950.

¹⁰² Ibid

¹⁰³ WHO: WHO 1_452_6_3, Letter from Dr P. M. Kaul (the Director of World Health Organization, Epidemiological Intelligence Station, Singapore) to Yves Biraud (Director of Division of Epidemiology of WHO, Geneva), 22 March 1949.

¹⁰⁴ More about Sino-soviet relationship in 1950s, see Dieter, Heinzig, *The Soviet Union and Communist China, 1945-1950: The Arduous Road to the Alliance* (Armonk: Routledge, 1998). Zhihua Shen and Danhui Li, *After Leaning to One Side: China and Its Allies in the Cold War* (Stanford: Stanford University Press, 2011). Zhihua

influenced by a wide spectrum of concerns including new world order after war, the dependency on external support, the role of the state and the Party, the conflict of science and revolutionary ideology, as well as the relationship between science and development. After taking over the country, the CCP faced immense challenges to govern a geographically broad, culturally diversified, politically fragmented, and economically devastated country recovering from a century of wars.¹⁰⁵ The CCP recognized that the recovery of the industrial and agricultural production, restructuring of the economy, and the alleviation of poverty could not be achieved without external aids. Dominated by the ideological conflicts, the new communist regime identified the US and its allies as enemies and relied on the support from the USSR and Eastern Bloc countries. The reliance on the Soviet Union was further increased after the UN passed the embargo against China in 1951.¹⁰⁶

From early 1949, the leaders of the CCP started to request the USSR to send experts to China to support its industrialization and economic development. However, in order to maintain the USSR's interests in Asia and avoid challenging the US directly, Joseph Stalin did not determine to support the CCP until 1949, when witnessing its military success in China. In June 1949, a Chinese delegation led by Liu Shaoqi (刘少奇) visited Moscow. Except for military and economic aid, Liu also requested Stalin to send technological experts. Four days later, Mao announced that the new China would lean to the socialist camp. When Liu returned in August, 220 senior Soviet economic officials and engineers were sent with him to China.¹⁰⁷ The experts were warmly welcomed by the CCP, but the dependence on the USSR was not generally accepted by the public in the beginning.¹⁰⁸

As discussed in chapter one, western science and technology arrived in China with colonial expansion in 19th and 20th century, not homogeneously, but as a mixture of theories shaped by different scientific traditions and political agendas. In addition, during WWII, the Anglo-American science increased its influence in China because of wartime collaboration. Therefore, many people questioned whether the USSR was as advanced as the US and the UK in terms of science and technology.¹⁰⁹ There were also concerns over Soviet's intention

Shen and Yafeng Xia, *Mao and the Sino-Soviet Partnership, 1945-1959: A New History* (Lanham: Lexington Books, 2015).

¹⁰⁵ Jeremy Brown and Paul G. Pickowicz, *Dilemmas of Victory: The Early Years of the People's Republic of China* (Cambridge, MA: Harvard University Press, 2007), 2.

¹⁰⁶ 沈志华, *苏联专家在中国, 1948-1960* (北京: 社会科学文献出版社, 2015), 86 [Zhihua Shen, *Russian Experts in China 1948-1960* (Beijing: Social Science Academic Press, 2015), 86].

¹⁰⁷ *Ibid*, 47-54.

¹⁰⁸ *Ibid*, 132.

¹⁰⁹ *Ibid*, 133-134.

of sending experts. The aids from the USSR were considered similar to imperialist intervention, like Japan, Germany or the US in the past. Negative opinions towards the Soviets' support were common in the early 1950s, and the reliance of their technology was often considered as a form of dependence. For example, among teachers in universities in Tianjin and Hebei, it was often heard comments like "Chairman Mao said that the Chinese people stood up, but unfortunately, we fell down immediately".¹¹⁰

In order to popularize the Soviet model, the Sino-Soviet Friendship Association (SSFA) was inaugurated in October 1949 to organise cultural and educational activities encouraging people learning from the USSR, with branch organizations in schools, factories, business enterprises, and government offices in national, provincial and local level.¹¹¹ However, until 1952, the negative views towards the dependence of the Soviet Union were still popular. Regarding the resistance, Mao advocated for learning from the Soviets on multiple occasions in 1952. In the closing remarks of the fourth session of the first National Committee of the Chinese People's Political Consultative Conference (CPPCC) on 7 February 1953, he emphasized again:

"we should learn from the Soviet Union. We must carry out the great task of the construction of our country. The work in front of us is difficult and our experience is insufficient, therefore we must earnestly study the advanced experience of the Soviet Union. Regardless of whether they are in the Communist Party or outside the Communist Party, old cadres or new cadres, technical personnel, intellectuals, or the masses of the workers and the masses of the peasants, [our people] all must wholeheartedly learn from the Soviet Union. We should not only learn from the theories of Marx, Engels, Lenin and Stalin, but must also learn from the Soviet Union's advanced science and technology. We must whip up a high tide of learning from the Soviet Union throughout the whole country [in order] to build our country."¹¹²

Moreover, the central government issued a *Regulation of Strengthening the Role of Soviet Experts*, outlining detailed instructions on how to learn from the Soviet experts. The regulation claimed that learning Soviet experience was an important step to achieve China's construction goals.¹¹³ The official advocacy for learning from the USSR encouraged the emergence of a blind copy of Soviet experience. Due to increased political intervention in academic practice, Lysenkoism was promoted in 1950s, which harmed the research and

¹¹⁰ 新华社, *内部参考*, no. 233. 1951年12月18日, 78-80 [Xinhua News Agency, *Internal Reference*, no. 233. 18 December 1951, 78-80].

¹¹¹ Shen, *Russian Experts in China*, 132.

¹¹² 毛泽东, *毛泽东文集第6卷* (北京: 人民出版社, 1999), 263-264 [Zedong Mao, *Selected Works of Mao Zedong Volume VI* (Beijing: People's Publishing House, 1999), 263-264].

¹¹³ Shen, *Russian Experts in China*, 137-139.

teaching in biomedical disciplines. The CCP sought to develop a “people’s science”, while banning scientific education, research, and publication from the US and western European countries, which was developed in the early 20th century. For example, in the field of evolutionary biology and genetics, Thomas Hunt Morgan’s theory was widely accepted and respected among Chinese genetic scientists, especially those who were educated in western countries in the early 1950s. However, Morgan’s theory was criticized as a bourgeois and idealistic pseudoscience in the Lysenkoism dominated the USSR and China after the CCP’s advocacy for the Soviet experience. Therefore, Chinese scientists who supported Morgan’s theory were openly criticized by the state-operated newspaper – *People’s Daily*.¹¹⁴

The invocation to learn blindly from the USSR also reflected on the smallpox vaccine manufacturing. Chapter one showed that a local strain of vaccinia used for smallpox vaccine manufacturing, the Temple of Heaven Strain, had been developed in the 1920s, and gradually became a major strain used for vaccine production in China. In 1954, influenced by the political agenda, the Ministry of Health decided to adopt the regulation and production method of smallpox vaccine from the USSR and ruled that only the Morozov Strain from the USSR could be used in smallpox production later in 1955, while other strains, including the Temple of Heaven strain, were instructed to be destroyed by the ministry. However, the director of Beijing Institute of Biological Products, Li Yanmao, secretly kept some samples of the Temple of Heaven strain.¹¹⁵ After the Sino-Soviet relationship deteriorated in late 1950s, the Morozov Strain was criticized, and the Temple of Heaven strain again became the major strain used for smallpox vaccine manufacturing in China in the 1960s.¹¹⁶

While medical research was hindered by political intervention in science, the bio-product industry, including vaccine manufacturing, was largely expanded as the CCP aimed to shift China from an agricultural country to an industrialised country. The new government took over the Laboratory of National Epidemic Prevention Bureau in Beijing, and its branches in Shanghai, Kunming, and Lanzhou, as well as public and private funded biological products research institutes at Changchun and Dalian. After restructuring, six high level biological product research institutes were established in Beijing, Shanghai, Wuhan, Chengdu, Changchun, and Lanzhou, which built a national network for the research,

¹¹⁴ Ibid, 207.

¹¹⁵ Zhao and Zhang, *A Brief History of the Development of Chinese Biological Products*, 78.

¹¹⁶ Ibid, 79; 钱信忠, *中国卫生事业发展与决策* (北京: 中国医药科技出版社, 1992), 857 [Xinzhong Qian, *The Development and Decision of Public Health in China* (Beijing: China Medical Science and Technology Press, 1992), 857].

manufacture, supply of biological products covering different regions of the country.¹¹⁷ In addition, learning from the Soviet Union, the manufacturing procedures of these biological product research institutes were standardised and overseen by a third party. In 1950, the National Institute for the Control of Biological Products was established under the supervision of the Ministry of Health to monitor the quality of biological products. Later, the institution was merged with the National Institute for the Control of Pharmaceutical Products, and it was re-named as the National Institute for the Control of Pharmaceutical and Biological Products (NICPBP). In addition, the Ministry of Health also established a Biological Products Committee to provide scientific consultation for biological products. The committee was responsible for coordinating the scientific research of biological products development and quality monitoring. Under the consultancy of the committee, the first regulation of biological products was formulated in 1951.¹¹⁸

The industrialisation and standardisation of biological products manufacturing improved the quality and production capacity of the smallpox vaccine. Firstly, the technology for producing vaccines has been improved. The new regulation of biological products strictly controlled the health and hygiene of cattle, which were usually used for making vaccinia. Producing procedures and facilities followed surgical hygiene standards, which maintained high quality of smallpox vaccines produced by state owned manufacturers.¹¹⁹ Another achievement made during that time was the development of freeze-dried vaccine in 1958.¹²⁰ In order to improve the stability and the potency of smallpox vaccines, all the institutes of biological products started to work on the freeze-dried technology in vaccine manufacturing. The Institute of Biological Products in Wuhan first used the peptone as the protection and successfully extended the potency of the smallpox vaccine from two months to twelve months. The freeze-dried vaccine was easier for transportation which made it largely available to remote regions and border areas.¹²¹ In the 1960s, tissue culture vaccines started to be used in smallpox vaccine manufacturing in China. Vaccinia virus strains could be used in tissue culture vaccine producing strains after adapting for 1-2 generations on a single layer of chicken embryo cells. Based on the clinical trials, the vaccine reaction rate was 97%-100%, and the reaction was relatively mild. Because of its simple production process, low cost, and

¹¹⁷ Qian, *The Development and Decision of Public Health in China*, 851.

¹¹⁸ *Ibid*, 853.

¹¹⁹ *Ibid*, 858.

¹²⁰ *Ibid*.

¹²¹ Zhao and Zhang, *A Brief History of the Development of Chinese Biological Products*, 79.

lower chance of bacterial contamination, the tissue culture vaccines were quickly approved for mass production.¹²²

The beginning of smallpox eradication in the PRC

In terms of the public health of new China, the CCP emphasised preventive medicine and primary health care, which, as discussed in the first chapter, had been promoted by Chinese public health reformers in the 1930s and 1940s. Before the Japanese war, the Nationalist government was assisted mostly by the RF and the LNHO in its health modernization. However, social medicine was not widely adopted before the war, apart from the political and financial reasons analysed in the first chapter, it was also due to the different cultural and political structure. Although the Chinese rural health experiments in 1930s, (discussed in the previous chapter) were significantly influenced by the East European rural health models, there were certainly differences between the two. The “Xian” health centres in China “were not welfare centres like the zadrugas¹²³ in Yugoslavia, nor were the village health workers trained physicians as the feldshers¹²⁴ in the Soviet Union”.¹²⁵ As Mary Bullock has concluded, the Chinese Xian rural health structures “were circumscribed by the economic and social limitations of the Chinese village, and differentiated so as to diffuse medical care throughout the region.”¹²⁶

At the same time, the Chinese public health reformers promoted social medicine in 1930s, there was another group of revolutionaries, the communists, who also made efforts in improving health conditions in rural China. Building its power from rural areas, the CCP had better understanding of rural situation of China than the nationalist government controlled by social elites and was able to integrate primary healthcare into economic and social structures at grass root level. After the Nanchang Uprising and Autumn Harvest Uprising in 1927, the

¹²² Qian, *The Development and Decision of Public Health in China*, 858.

¹²³ In 1920s, the movement to establish rural health centres was undertaken in Yugoslavia to meet the most basic needs of medical care, sanitation, and health education. In 1923, the Agricultural Zadrugas (cooperative societies) started to be responsible for the supervision of the rural health centres. The Union of Health Zadrugas was established to take over health centre work, and a headquarters office was opened in Belgrade. The new organization was later approved by the Ministry of Health, which take charge of health zadruga work in 1923. See Victor O Freeburg, “Yugoslavia Leads in Rural Health Centres,” *The Milbank Memorial Fund Quarterly* 12, no. 1 (1934): 15-27.

¹²⁴ Feldsher refers to a type of health care professional who provides primary medical services limited to emergency treatment and ambulance practice in rural medical centres and clinics in the USSR, See Union of Soviet Socialist Republics, Ministerstvo, Zdravoohraneniya, and World Health Organization, “The Training and Utilization of Feldshers in the USSR: A Review / Prepared by the Ministry of Health of the Ussr for the World Health Organization,” *Public Health Papers*, no. 56 (1974). <https://apps.who.int/iris/handle/10665/39783>.

¹²⁵ Bullock, *An American Transplant*, 166.

¹²⁶ *Ibid.*

communists built the first rural revolutionary base in Jinggangshan, Jiangxi. The rural revolutionary bases were expanded in coming years, and the Chinese Soviet Republic (CSR) was established in Ruijin, Jiangxi in 1931 by future leaders of the CCP including Mao Zedong, Zhu De and Zhou En-lai. Mao served as both the state chairman and prime minister of the CSR. The regime controlled several rural areas in Jiangxi, Hunan, Hubei, Anhui, Sichuan, Guizhou, Shaanxi, Gansu, and Ningxia. The CSR was destroyed by the GMD army in a series of 1934 encirclement campaigns and the communist military started a long march to Yan'an and joined its force with other communist armies in North China. Following the Xi'an Incident of December 1936 and the Japanese invasion, the CCP and the GMD decided to settle the confrontation and formed the Second United Front to fight against the Japanese.¹²⁷

Although the CSR was short lived, it provided the communists opportunities to bring their political theory into play in the field of health. The early experience in public health during this period also shaped the CCP's health policy after taking power in 1949. The communist revolutionary bases were usually built in remote rural areas with limited transportation and inadequate access to scientific medicine. The epidemic diseases including smallpox, cholera and malaria were widely transmitted among the army and local residents, which affected the fighting capability of the Red Army and the stability of the communist regime.¹²⁸ In December 1931, the General Military Medical Office of the Central Military Commission was established, and it was transformed into the General Ministry of Health later. He Cheng (贺诚) was designated as the Minister of Health of the CSR. The ministry carried out public health and epidemic prevention work in the CCP controlled areas. Firstly, a mass health campaign was launched in the Red Army, and then expanded to local residents. After 1932, health and disease prevention systems were built inside each level of the military sectors, which was extended to non-military sectors later. Moreover, various health regulations were promulgated to instruct the public health work in the CCP controlled areas. For example, the Outline of the Health Campaign announced by the Ministry of Internal Affairs of the Provisional Central Government of the CSR in March 1933, and the Temporary Regulations of the Prevention of Infectious Diseases approved by the Military Commission. In October the same year.¹²⁹ Due to the geographical location, the relative lack of economic

¹²⁷ Edward J. M. Rhoads, Edward Friedman, Ellis Joffe, and Ralph L. Powell, *The Chinese Red Army, 1927–1963: An Annotated Bibliography* (Cambridge, MA.: Harvard University Asia Center, 1964), 17-33.

¹²⁸ Qian, *The Development and Decision of Public Health in China*, 3-4.

¹²⁹ Ibid

development, and limited access to scientific medicine, the public health work of CSR focused on environmental health and infectious disease prevention. It also created a model of promoting public participation in the mass health movements. The outline of the health had pointed out that public health movements could not succeed by an empty political decision or an administrative order. Instead, it had to rely on in-depth and durable health education and health campaigns at grass-root level.¹³⁰

The experience learned by health sectors of the communist party during the early 1930s formed the basis of the public health policy of the PRC. In September 1949, the Ministry of Health of the Central Military Commission held the first National Health Administration Conference in Beijing to discuss how to carry out health work after achieving the victory of national revolution against the Republic government. The conference determined the principles of health work in China as ensuring production and construction, and serving people working in agricultural, manufacturing and mining industrials, as well as relying on the general public to improve public health.¹³¹ In addition, the health authorities considered infectious diseases as a major public health problem in China. Therefore, targeting the most harmful infectious diseases to carry out intensified prevention strategies was considered as an effective method to save lives and improve public health conditions. At the conference, He Cheng pointed out that the general policy of national health construction should take prevention as priority.¹³²

In addition, the conference also gave preliminary instructions on the eradication of smallpox. Before the meeting, a smallpox epidemic broke out in multiple locations in the CCP controlled areas in the spring 1949, especially Shandong and Hebei.¹³³⁻¹³⁴ Witnessing the damage caused by smallpox epidemic, He Cheng pointed out that although smallpox could be prevented by vaccination, it was still far from being eradicated, especially in the rural areas. Due to extreme shortage of trained medical professionals and medical resources, as well as the lack of awareness of scientific medicine and disease prevention knowledge among rural residents, smallpox was still a major infectious disease threatening peoples' health. Based on limited data collected from the CCP controlled areas damaged by the war

¹³⁰ Ibid, 4-5.

¹³¹ 山东省卫生史志办公室, *山东省卫生志* (济南: 山东人民出版社, 1992), 347 [Shandong Provincial Health History Office, *Shandong Health Gazette* (Jinan: Shandong People's Publishing House, 1992), 347].

¹³² Ibid.

¹³³ Ibid.

¹³⁴ 河北省地方志编纂委员会, *河北省志·卫生志* (北京: 中华书局, 1995 年), 204 [Local Chronicles Compilation Committee of Hebei Province, *Health Gazette of Hebei Province* (Beijing: Zhonghua Book Company, 1995), 204].

and political fragmentation, he estimated that there were about 4.75 million smallpox cases in China in 1949.¹³⁵

Soon after the meeting, on 1 October 1949, Mao announced the establishment of the PRC and formed the Central People's Government. Madame Li Dequan (李德全) was designated as the first Minister of Health. In two months, smallpox cases were reported in various rural areas in many provinces including Xinjiang, Sichuan, Hebei, Shanxi, Henan, Shandong Anhui, Jiangxi, Guangdong Province, as well as several big cities including Beijing, Tianjin, Nanjing, Shanghai, and Wuhan.¹³⁶ In order to control the smallpox epidemic, vaccination campaigns were carried out in areas with concentrated outbreaks of smallpox in 1950. The authorities recognised that epidemic prevention was a mass work that had to mobilize all medical professionals, education workers, and women cadres, and its success relied on the participation from the general public all over the country. They also stressed that social mobilization required extensive and in-depth public education based on the needs of the general public and to inspire their voluntary participation, instead of enforcement. According to the official media of the CCP, Xinhua News Agency, the authorities estimated that smallpox could be eradicated in eastern coast areas in China in three years.¹³⁷ Later in October, a "Notice on the Campaigns for Smallpox Vaccination of Autumn 1950" was announced by the Prime Minister, Zhou En-lai.¹³⁸ On 12 October, the Ministry of Health issued a *Temporary Regulations for Smallpox Vaccination*, which marked the beginning of smallpox eradication in China.¹³⁹

It was recognized that although smallpox was highly contagious and there was no treatment, vaccination could effectively prevent the disease. Therefore, the disease could be completely eradicated as long as vaccination could reach universal coverage over the country. In addition, smallpox vaccination did not require advanced medical education. Female rural

¹³⁵ 冯彩章, 李葆定, 贺诚传 (北京: 解放军出版社, 1984 年), 149-150 [Caizhang Feng and Baoding Li, *Biography of He Cheng* (Beijing: People's Liberation Army Publishing House, 1984), 149-150].

¹³⁶ 刘*湘, "希望在十年内全国消灭天花," *人民日报*, 1949 年 12 月 27 日 [*Xiang Liu, "Expecting to Eradicate Smallpox Nationwide in Ten Years," *People's Daily*, 27 December 1949].

¹³⁷ 新华社, "遏止或限制了传染病的发生与流行全国防疫工作获得巨大成绩半年来近五千万人种了牛痘或注射了预防针灾区无疫病打破了灾荒之后必有病灾的惯例," *人民日报*, 1950 年 8 月 16 日 [Xinhua News Agency, "Great Efforts Have Been Made to Prevent the Epidemic of Infectious Diseases," *People's Daily*, 1950].

¹³⁸ 周恩来, "中央人民政府政务院关于发动秋季种痘运动的指示," *山东卫生* 1, no. 1 (1950): 49 [En-lai Zhou, "Central Government Administration Council Notice on the Campaigns for Smallpox Vaccination of Autumn 1950," *Shandong Hygiene* 1, no. 1 (1950): 49].

¹³⁹ BMA: 180-004-00045, 为抄发中央卫生部颁布的种痘暂行办法希遵照由 (Public Health Bureau of Beijing Municipal Government, the Temporary Regulations for Smallpox Vaccination Issued by the Ministry of Health), 12 October 1950.

cadres, students, primary school teachers and other education professionals could practice smallpox vaccination with short term training.¹⁴⁰ However, although smallpox eradication was announced as the goal of nationwide smallpox mass vaccination movement, the concept and the outcome of the eradication was not clarified. According to *People's Daily* and Xinhua News agency, authorities expected to eradicate smallpox in eastern coast areas in three years,¹⁴¹ and nationwide in ten years.¹⁴² The smallpox eradication, reported by *People's Daily*, “was a decision carrying great importance, which could prove the new government was responsible to its people.”¹⁴³

III. Mass smallpox vaccination in China: a case study of Southern Jiangsu Province, 1950-1951

After the blueprint of smallpox eradication being drawn up in Beijing, regional and provincial governments started to respond to the central government's call and communicated mass vaccination strategies with lower-level authorities. In this section, I choose Southern Jiangsu to focus on this part as an example of smallpox eradication delivery in China during 1949-1952. China is a country with vast territory, as well as socio-economic and cultural diversity. The experience of Chinese people could vary depending on their geographic location, social status, political standing, or personal experience.¹⁴⁴ Therefore, it has to be recognised that it is difficult to provide a uniform model to explain smallpox eradication in China because of the diversity of the country.¹⁴⁵ I planned to look at multiple provincial cases, but the pandemic-related travel restrictions, as well as tightened control over accessing to archives related to communist China in recent years made it difficult to present a cross section of diverse policy approaches. Located in a region wealthy in natural resources, the Southern Jiangsu Province has long been considered as one of the most prosperous areas in China with more advanced social and economic development. In addition, it was one of the regions open to international trade and access to scientific medicine. Despite the social economic condition and medical history in southern Jiangsu hardly make it representative of

¹⁴⁰ 新华社, “中央人民政府政务院指示各地发动秋季种痘运动减少人民生命财产重大损失,” *人民日报*, 1950年10月19日 [Xinhua News Agency, “Council of the Central People's Government Instructed All Regions to Launch the Autumn Smallpox Vaccination Campaign to Reduce the Significant Loss of People's Lives and Property,” *People's Daily*, 19 October 1950].

¹⁴¹ Xinhua News Agency, “Great Efforts Have Been Made to Prevent the Epidemic of Infectious Diseases”.

¹⁴² Liu, “Expecting to Eradicate Smallpox National-wide in Ten Years”.

¹⁴³ *Ibid.*

¹⁴⁴ Brown and Pickowicz, *Dilemmas of Victory*, 3.

¹⁴⁵ *Ibid.*, 8.

other regions in China, the centralised control of medical and public health administration of the communist government in 1950s made it less exceptional.¹⁴⁶

Figure 2.1 National Administrative Divisions, 1949-1951



Source: 陈潮, 陈洪玲编, *中华人民共和国行政区划沿革地图集* (北京: 中国地图出版社, 2003) [Chao Chen, and Hongling Chen ed., *Map Collection of the Evolution of the Administrative Division of the People's Republic of China* (Beijing: China Map Publishing House, 2003)]

On 27 September 1949, the first Plenary Session of the National Political Consultative Conference divided the country into six general regions: North China, Northeast, East China, South Central, Southwest, and Northwest, which was drastically different from the provinces set up today.¹⁴⁷ Each region served as a unit implementing integrated management of the party politics, administration, and military, which followed a military governance model during the Civil War. As one province in East China Region, the Southern Jiangsu Administrative Office (SJAO) was established in April 1949 after the Red Army won military success in this region. After an adjustment in November after the establishment of the new government. The SJAO controlled areas included today's Wuxi, Suzhou, Zhenjiang,

¹⁴⁶ Brazelton, *Mass Vaccination*, 124.

¹⁴⁷ 陈潮, 陈洪玲编, *中华人民共和国行政区划沿革地图集* (北京: 中国地图出版社, 2003) [Chao Chen, and Hongling Chen ed., *Map Collection of the Evolution of the Administrative Division of the People's Republic of China* (Beijing: China Map Publishing House, 2003)].

Changshu and some subdistricts of Shanghai and Nanjing, while the city of Shanghai and Nanjing was directly controlled by the central government. According to incomplete data, there were 243 administrative villages, 8370 natural villages, 187 townships and 8643 residential groups in Southern Jiangsu, with a population close to 12 million.¹⁴⁸ (see table 2.2) In November 1952, the SJAO merged with the Northern Jiangsu Administrative Office as Jiangsu Province, and Nanjing was transferred from a municipality directly controlled by the central government to the capital city of the province.¹⁴⁹

Based on the policies developed at the first National Health Administration Conference, a comprehensive system of healthcare administration was built at each administrative level. At provincial level, a Department of Health was established in May 1950 to plan, deliver, and oversee the health work of the whole province. Under the provincial level, each municipality had a health bureau, and the health work at county level was handled by the county health centres. As to the medical facilities, each county had a county hospital. Apart from five municipal public hospitals at Zhenjiang, Changzhou, Suzhou, Songjiang and Wuxi, there were also two cadre hospitals, a cadre sanatorium, an infectious disease hospital, and a schistosomiasis control station in the province.¹⁵⁰ Despite new public health structure improved healthcare provisions, financial shortage adversely affected the development of the new healthcare structures. The funding of health work at provincial level was allocated by the provincial government initially. After the establishment of the Department of Health in April 1950, the annual budget for public health work of Southern Jiangsu Province was managed and funded by the Ministry of Health. Because the destructed financial system in early 1950s, the finance was usually calculated by the volume of rice. According to the annual report of the Department of Health of Southern Jiangsu Province, a total of 5.4 million Jin (斤, a unit of weight=1/2 kilogram) of rice was distributed in the district for health work throughout the year of 1950, and a total of 5,113,142 Jin rice was spent. In the expenses of the year, 25,09,533 Jin rice was used for paying stipend of employees, 78,987 Jin rice for office expenses, 2,323,584 Jin for professional fees, and 201,038 Jin for temporary expenses.¹⁵¹

¹⁴⁸ JPA: 7014-001-001-0139, 苏南人民行政公署卫生处 1950 年工作总结草案 (Summary of Work of Department of Health at Southern Jiangsu Province in 1950), 1950.

¹⁴⁹ Chen and Chen ed., *Map Collection of the Evolution of the Administrative Division of the People's Republic of China*.

¹⁵⁰ JPA: 7014-001-001-0139, 苏南人民行政公署卫生处 1950 年工作总结草案 (Summary of Work of Department of Health at Southern Jiangsu Province in 1950),” 1950.

¹⁵¹ Ibid.

Table 2.2 Population in Administrative Districts by City and County in Southern Jiangsu Province, 1950

Administrative Region/County or city		Whole county				Notes
		No. of Administrative District	No. of Administrative County	Population	Survey Time	
Cities and counties under direct control	Wuxi City (无锡市)	—	—	380,260	Mar. 1951	2,098 residential groups
	Suzhou City (苏州市)	—	—	332,784	Dec. 1950	2,466 residential groups
	Wuxi County (无锡县)	15	250	932,116	Dec. 1950	947 residential groups
Zhenjiang District (镇江专区)	Zhenjiang City (镇江市)	—	—	138,684	Dec. 1950	8,370 natural villages
	Dantu (丹徒)	9	1180	380,000	Dec. 1950	
	Danyang (丹阳)	12	1125	523,183	Dec. 1950	
	Jiangning (江宁)	10	779	465,877	Oct. 1950	
	Jurong (句容)	10	558	313,808	Dec. 1950	
	Lishui (溧水)	8	400	200,637	Dec. 1950	
	Gaochun (高淳)	7	—	279,351	Dec. 1950	
	Yangzhong (扬中)	5	374	199,558	Dec. 1950	
Changzhou District (常州专区)	Changzhou City (常州市)	—	—	156,390	Dec. 1950	2,664 residential groups
	Wujin (武进)	15	1661	101,000	Dec. 1950	
	Jiangyin (江阴)	13	1400	870,000	Nov. 1950	
	Liyang (溧阳)	10	549	380,000	Nov. 1950	
	Jintan (金坛)	8	600	284,500	Nov. 1950	
	Yixing (宜兴)	11	111	627,657	Aug. 1950	
Suzhou District (苏州专区)	Taicang (太仓)	8	1234	320,000	Dec. 1950	149 natural villages and towns 468 residential groups
	Wuxian (吴县)	10	—	668,130	Dec. 1950	
	Changshu City (常熟市)	—	—	74,050	Dec. 1950	
	Changshu County (常熟县)	14	2164	1,043,034	Oct. 1950	
	Kunshan (昆山)	10	879	307,974	Aug. 1950	
	Wujiang (吴江)	11	1127	473,358	Dec. 1950	
	Taihu Office (太湖区行政办事处)	4	—	111,347	Mar. 1951	
Songjiang District (松江专区)	Songjiang (松江)	9	809	372,244	Dec. 1950	No data of admin. villages
	Baoshan (宝山)	4	322	144,477	Dec. 1950	
	Chuansha (川沙)	6	567	282,727	Sep. 1950	
	Qingpu (青浦)	7	594	260,130	May 1950	
	Jinshan (金山)	5	464	178,625	Dec. 1950	
	Shanghai County (上海)	4	—	165,000	Dec. 1950	
	Fengxian (奉贤)	6	705	260,961	Nov. 1950	
	Nanhui (南汇)	9	746	375,000	Nov. 1950	
Jiading (嘉定)	7	745	200,000	Nov. 1950		
Total		247	19343	11,842,862	—	8643 residential groups, 8370 natural villages, 187 towns

Source: JPA: 7014-001-0139, 苏南人民行政公署卫生处 1950 年工作总结草案 (Summary of Work of Department of Health at Southern Jiangsu Province in 1950), 1950.

Following the general guidelines for national health work that taking preventive medicine as corner stone, and considering the actual situation of this area, the Department of Health determined several priorities of health work in the province. Firstly, in terms of

medical administration, it was agreed to improve medical service institutions, strengthen the management of public and private hospitals and clinics, organize and unite medical and health workers, transform and train medical cadres, and provide unified deployment of personnel and dispatch of medical facilities. Secondly, in terms of epidemic prevention, the emphasis was placed on vaccination against smallpox, cholera, and typhoid, improving environmental health and recovery of endemic disease prevention and treatment systems. Although smallpox eradication was announced by the central government, it was not an independent disease eradication programme, but was planned and delivered as one part of the overall regional public health policy.¹⁵²

Regarding epidemic prevention and control, an infectious disease reporting system was first built to surveillance the epidemic outbreaks in this region. A ten-day epidemic reporting system was immediately built after the establishment of the Department of Health. All cities and counties were required to list and report the infectious disease cases that occurred within the area every ten days. In order to encourage local authorities to implement the rules of the reporting system, the department introduced scoring mechanisms to reward local authorities reporting infectious disease cases accurately and timely. Later in 1950, the Department of Health promulgated an Interim Measures for Infectious Disease Reporting, which designated fifteen infectious diseases as mandatory reported diseases, including smallpox, diphtheria, cholera, plague, epidemic encephalomyelitis, typhoid and paratyphoid, dysentery, scarlet fever, typhus, relapsing fever, whooping cough, measles, cerebritis, schistosomiasis, and malaria. Among the fifteen infectious diseases, the first eight were categorised as primary targets for prevention and control, the other seven were grouped as secondary focuses.¹⁵³

Responsible institutions or personnel who identified infectious diseases cases or suspected cases was mandatory to report to the local health authority regardless of whether the patient had recovered or died. These institutions and personnel included public and private hospitals; individual medical practitioners (including doctors and other medical personnel with certain knowledge of infectious diseases who had been trained with infectious diseases knowledge); public and private medical laboratories; health workers in government organizations, factories, and schools; as well as person in charge of infectious disease hospitals and epidemic prevention and quarantine units at all levels. The mandatory reporters were required to fill in an infectious disease report form (table 2.3) when reporting an

¹⁵² Ibid.

¹⁵³ JPA: 7014-001-001-0139, 苏南人民行政公署卫生处传染病报告暂行办法 (Interim Measures for Infectious Diseases Reporting of the Health Department of Southern Jiangsu Province), 1950.

infectious disease. Emergencies could be reported by telephone first, then be filed in form after. Apart from mandatory reporters listed above, voluntary reporting was also encouraged and requested by household registration officer of Public Security Bureau (or Branch Office); operators of public places, including restaurants, hotels, retails, etc.; local leaders at streets, villages, or residential areas; public transportation operators; as well as family members and cohabitants of patients. Voluntary reporters could report cases in writing or orally. In terms of the reporting time, smallpox, diphtheria, cholera, plague, epidemic encephalomyelitis, typhoid and paratyphoid, dysentery, and scarlet fever were requested to be reported to local public health authorities within 24 hours of discovery. Typhus, relapsing fever, whooping cough, measles, and cerebritis were required to be reported within 48 hours, while schistosomiasis and malaria were expected to be recorded in the nearest ten-day epidemic report.¹⁵⁴

Table 2.3 Infectious Disease Reporting Form in Southern Jiangsu Province, 1950

Filling Instructions

<p>1. The report is for the use of the 15 designated infectious diseases listed on the Interim Measures for Infectious Diseases Reporting</p> <p>2. “?” should be added after the Name of Disease for not diagnosed or confirmed cases</p> <p>3. Occupation information should be as detailed as possible</p> <p>4. For “Bacterial Inspection or Laboratory Testing (Y/N)”, testing item should be provided if yes.</p> <p>5. In the treatment result column, fill in the recovery date if recovered, and fill in the date of death if patient died</p> <p>6. Post the form back in express</p> <p>Form size: Width: 14.5mm Length: 10mm Postcard standard</p> <p>“Filling Instructions” should be printed on the left side of the form</p>	<p>Name of Disease:</p> <p>Name of Patient: Age: Gender:</p> <p>Occupation:</p> <p>Native Place: Province City/County</p> <p>Address:</p> <p>Disease Onset: Onset Date: Year</p> <p>Month Day</p> <p>Bacterial Inspection or Laboratory Testing (Y/N) :</p> <p>Symptoms:</p> <p>Isolation (Y/N) :</p> <p>Isolation Address:</p> <p>Treatment Result: Under Treatment, Recover, Death, or Unknow</p> <p>Date: Year Month Day</p> <p>Burial Situation:</p> <p>Reporting Date: Year Month Day Time</p> <p>Reporter:</p> <p>Reporter’s Address:</p>
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Source: JPA: 7014-001-0139, 苏南人民行政公署卫生处传染病报告暂行办法(Interim Measures for Infectious Diseases Reporting of the Health Department of Southern Jiangsu Province), 1950.

After receiving infectious diseases reports from mandatory reporting institutions or personnel, local public health authorities were responsible for investigating those cases. Valid cases were required to be reported emergently to higher level public health authorities. Regarding the first 8 designated infectious diseases, public health authorities at each

¹⁵⁴ Ibid.

administrative level should send specialised personnel to investigate the cases and provide guidance for prevention and control on the spot. As to other 7 diseases, public health authorities were expected to provide remote guidance based on the scale of epidemic. All reported cases of the 15 diseases should be filled as ten-day epidemic reports and filed to the Department of Health. The performance of reporting infectious diseases cases of the municipal and county health authorities would be regularly assessed. Awards would be granted for authorities continuing complying with the regulations, while education and warning would be given to those who did not comply.¹⁵⁵

Table 2.4 Numbers of Cases and Deaths of Major Infectious Diseases in Southern Jiangsu Province, 1950

Infectious Disease	Number of Cases	Number of Deaths	Case Fatality Rate
Smallpox	137	38	27.73%
Diphtheria	1315	63	4.79%
Meningitis	126	17	13.49%
Typhoid and Paratyphoid	3306	39	1.17%
Dysentery	6313	21	0.33%
Scarlet Fever	47	9	19.15%
Typhus	75	3	4%
Relapsing Fever	73	0	0
Whooping cough	377	1	0.27%
Measles	172	3	1.74%
Cerebritis	4	0	0
Schistosomiasis	4910	10	0.2%
Malaria	21861	27	0.12%
Visceral leishmaniasis	205	2	0.98%
Total	398921	233	0.60%

Source: JPA: 7014-001-0139, 苏南人民行政公署卫生处 1950 年工作总结草案 (Summary of Work of Department of Health at Southern Jiangsu Province in 1950), 1950.

Following the infectious disease reporting procedure, 137 smallpox cases were reported in Southern Jiangsu in 1950 (see table 2.4). Although it was not the most widely transmitted, smallpox was one of the deadliest infectious diseases in the region. 38 cases died from the disease and the cases fatality rate was nearly 30%. Before the central government's call for eradicating smallpox in Autumn, mass smallpox vaccination had already started in Spring 1950. It was generally recognised that the incidence of smallpox was featured with seasonal variation, which was highly incidental in winter and spring (December - May), while occurring less frequently in summer and autumn (August - November).¹⁵⁶ In addition, smallpox cases were reported in Shanghai and Wuhan in early 1950, which were close to Southern Jiangsu. In order to prevent a large scale smallpox epidemic in the province, the

¹⁵⁵ Ibid.

¹⁵⁶ Hui Xu and Yutu Jiang, "The Eradication of Smallpox in Shanghai, China, October 1950-July 1951," *Bulletin of the World Health Organization* 59, no. 6 (1981): 914.

Department of Health issued an instruction to municipal and county public health authorities regarding intensive smallpox vaccination in spring of 1950.¹⁵⁷

The instruction indicated that local public health authorities were responsible for smallpox vaccination in their precincts. In areas where public health division of the local government had not established or was under construction, the department of civil affairs or public affairs should be responsible for organizing intensive smallpox vaccination work. The intensive vaccination started from March and ended in May, and vaccination working reports and data were expected to be submitted to the provincial department of health by the end of June.¹⁵⁸ The ratio of the number of smallpox vaccinations to the general population was expected to reach 15% in medium-sized cities and 8% in rural areas.¹⁵⁹ Moreover, because children were the major susceptible group of smallpox, the intensive vaccination was primarily targeted at children under 12 years old. It instructed that the number of smallpox vaccinations given to children should account for 60% of the total number. For the population over 12 years old, priority should be given to those who had not been vaccinated within three years. However, smallpox vaccination should not be given to people with acute infectious diseases or those who were particularly unhealthy, and re-vaccination could be arranged after their recovery.¹⁶⁰

In terms of vaccinators, the participation of public health officials and personnel at all levels of the government, as well as medical professionals at public hospitals and public medical institutions was mandatory. In addition, other medical practitioners who worked at private hospitals or clinics, and health related professionals affiliated to medical associations were encouraged to participate voluntarily or with reward. Moreover, it also called for public health authorities and public hospitals to train elementary school teachers and village cadres in rural areas with smallpox vaccination knowledge and skills in order to assist with vaccination. Apart from fixed medical establishments as vaccination sites, the instruction also recommended local authorities to provide mobile vaccination service by vaccination teams composed of at least 3 members, including one staff for registration, one for disinfection, and another for vaccination, to provide mobile vaccination service. Regarding the medical

¹⁵⁷ JPA: 7014-001-002-1076, 苏南行政公署训令为颁发 1950 年种痘工作实施办法仰即飭属遵照办理由 (Instruction of Smallpox Vaccination in Sparing 1950 of the Government of Southern Jiangsu Province), 1950.

¹⁵⁸ JPA: 7014-001-002-1076, 为颁发 1950 年种痘工作实施办法仰即飭属遵照办理由 (Instruction of Smallpox Vaccination in Sparing 1950 in Southern Jiangsu Province), 1950.

¹⁵⁹ JPA: 7014-001-0139, 苏南人民行政公署卫生处 1950 年工作总结草案 (Summary of Work of Department of Health at Southern Jiangsu Province in 1950), 1950.

¹⁶⁰ JPA: 014-001-002-1076, 为颁发 1950 年种痘工作实施办法仰即飭属遵照办理由 (Instruction of Smallpox Vaccination in Sparing 1950 in Southern Jiangsu Province), 1950.

equipment and materials required in the vaccination campaign, smallpox vaccines would be distributed by the provincial department of health, based on the population in each district. Urban areas would be provided with vaccine available for 15% of their population and 8% for rural areas. As to the expenses on disinfection materials, such as medical alcohol and cottons, etc., would be covered by public health expenditure of each district, and purchased by local health authorities themselves.¹⁶¹ The instruction also encouraged health authorities at all levels to carry out public education campaigns in order to mobilise the public to participate in mass smallpox vaccination. It recommended local health authorities to report smallpox cases and publish smallpox prevention knowledge in local newspapers and publications. Moreover, it suggested printing and distributing smallpox vaccination related slogans, posters, leaflets, brochures, slides, photos, etc. Apart from that, it also advised local authorities to organise public engagement activities after working hours such as address or folk arts performance at mass rally in order to improve public understanding of health and hygiene knowledge and facilitate the mass vaccination work. The expenses of public education, such as printing and producing educational materials including slogans, posters, educational brochures, and pamphlets, were expected to be covered by local public health expenditures.¹⁶²

However, although the instruction gave advice on targeted vaccination number, the organization of mass vaccination movement, training vaccinator, as well as public education there was not a uniform strategy for each local authority to follow. In the country, the detailed vaccination plan in each area was up to the local public health authorities themselves to decide, based on the specific circumstances of the county or city's population density, public health infrastructure, difficulty of vaccination, etc.¹⁶³ Therefore, the level of enforcement of the instructions varied from regions according to the economic development, availability of public health infrastructures, and the capability of local authorities. As shown in Table 2.5, in the mass smallpox vaccination movement in spring term in 1950, the number of vaccinations in several cities and counties including Zhenjiang, Changzhou and Nanhui had reached about 20% of their population, while in Dantu, Jiangning, Wuxian, and Songjiang, the vaccination rate was lower than 3% of population. The annual report of the Department of Health attributed the success of cities and counties like Zhenjiang, Changzhou and Nanhui to the

¹⁶¹ JPA: 7014-001-002-1076, 苏南行政公署训令为颁发 1950 年种痘工作实施办法仰即飭属遵照办理由 (Instruction of Smallpox Vaccination in Spring 1950 of the Government of Southern Jiangsu Province), 1950.

¹⁶² Ibid.

¹⁶³ Ibid.

proper organization and leadership of local authorities, while blaming the lower vaccination rate to inadequate planning and implementation.¹⁶⁴

Table 2.5 Number of Smallpox Vaccinations by Region in Southern Jiangsu Province, 1950

Administrative Region/County or city		Spring Vaccination 1950		Autumn Vaccination 1950	
		Number of Vaccinations	Percentage to population	Number of Vaccinations	Percentage to population
Provincil-administered Districts	Wuxi City (无锡市)	33,335	10.29%	97,092	No data
	Suzhou City (苏州市)	60,835	16.76%	11,661	
	Wuxi County (无锡县)	72,838	7.28%	34,632	
Zhenjiang District (镇江专区)	Zhenjiang City (镇江市)	35,220	19.57%	20,877	No data
	Dantu (丹徒)	10,654	2.85%	18,701	
	Danyang (丹阳)	44,692	8.4%	48,595	
	Jiangning (江宁)	9,120	1.9%	13,606	
	Jurong (句容)	9,241	2.96%	11,809	
	Lishui (溧水)	6,829	3.41%	-	
	Gaochun (高淳)	14,235	5.27%	11,999	
	Yangzhong (扬中)	8,851	4.02%	15,243	
Changzhou District (常州专区)	Changzhou City (常州市)	41,562	25.7%	5,217	No data
	Wujin (武进)	94,217	9.25%	1,365	
	Jiangyin (江阴)	73,490	8.46%	65,217	
	Liyang (溧阳)	19,601	5.44%	13,910	
	Jintan (金坛)	17,233	6.02%	17,071	
	Yixing (宜兴)	42,825	6.71%	8,393	
Suzhou District (苏州专区)	Taicang (太仓)	26,240	8.75%	14,670	No data
	Wuxian (吴县)	2,934	0.42%	-	
	Changshu City (常熟市)	80,168	67.6%	5,837	
	Changshu County (常熟县)	N/A	N/A	1,678	
	Kunshan (昆山)	18,845	6.14%	17,732	
	Wujiang (吴江)	51,220	11.02%	6,062	
	Taihu Office (太湖区行政办事处)	N/A	N/A	N/A	
Songjiang District (松江专区)	Songjiang (松江)	1,507	0.41%	2,282	No data
	Baoshan (宝山)	10,880	7.53%	-	
	Chuansha (川沙)	18,232	5.81%	10,006	
	Qingpu (青浦)	9,751	3.75%	15,968	
	Jinshan (金山)	14,755	8.26%	768	
	Shanghai County (上海)	9,180	7.33%	-	
	Fengxian (奉贤)	17,491	6.73%	-	
	Nanhui (南汇)	75,499	26.96%	16,572	
	Jiading (嘉定)	23,425	8.37%	20,650	
Total		954,905	-	507,613	

Notes: Incomplete data edited from separate forms manually insert

Source: JPA: 7014-001-002-1074, 苏南区 1951 年春季种痘统计 (Number of Smallpox Vaccination in Spring 1950 in Southern Jiangsu Province), 1950.

¹⁶⁴ JPA: 7014-001-0139, 苏南人民行政公署卫生处 1950 年工作总结草案 (Summary of Work of Department of Health at Southern Jiangsu Province in 1950), 1950.

Responding to the central government's call for smallpox eradication in autumn 1950, an order of mass smallpox vaccination in autumn term from 1 October to the end of November was given to local authorities by the Department of Health of Southern Jiangsu province. It advocated for through implementation of three principles for national health work set on the first National Health Conference in the mass vaccination work, including focusing on workers, peasants, and soldiers; prioritising prevention; and uniting traditional Chinese medicine and western medicine. Following the instruction of spring mass vaccination, the department instructed local public health authorities to cooperate effectively with all relevant sectors such as civil affairs, public security, and mass education. Special attention was given to public education. Because of smallpox's higher occurrence rate in winter and spring, the vaccination in spring was considered more important than in other seasons. In order to increase public awareness of the importance of vaccination in all seasons, the department suggested local health authorities to conduct wide and in-depth publicity and education programmes through rural primary schools and grassroots cadres in villages and towns, in order to increase public awareness of the importance of mass vaccination in autumn. In addition, the mass vaccination in autumn term would primarily focus on newly born babies, infants, children, and adults who had never been vaccinated and had not been vaccinated in three years.¹⁶⁵

The establishment of national smallpox vaccination campaigns demonstrated a commitment of the new regime to infectious disease prevention. As the first chapter has shown, the mass smallpox campaigns under the leadership of the CCP were not novel, but a systematic expansion of existing infrastructure, technologies, and knowledge which was shaped in the first half of the century.¹⁶⁶ Despite that, the improvement of the public health system, infectious disease reporting and surveillance, and accountability of implementation of public health policies, the vaccination campaigns had covered more population.¹⁶⁷ During the first year of mass vaccination, in Southern Jiangsu Province 1,497,183 doses of smallpox vaccines were administered, 963,756 in spring term and 533,427 in autumn term.¹⁶⁸

¹⁶⁵ JPA: 7014-001-002-1076, 苏南行政公署训令:为防止天花发生发动秋季种痘运动仰遵照办理 (Instruction from Southern Jiangsu Province: Mass Smallpox Vaccination in Autumn 1950 of Southern Jiangsu Province), September 1950.

¹⁶⁶ Brazelton, *Mass Vaccination*, 123-124.

¹⁶⁷ *Ibid*, 123.

¹⁶⁸ The number is different from the form submitted to the department after the vaccination campaign and it does not match the number reported in three years review in 1953. JPA: 7014-001-0139, 苏南人民行政公署卫生处 1950 年工作总结草案 (Summary of Work of Department of Health at Southern Jiangsu Province in 1950), 1950.

However, the vaccination rate in urban areas including Wuxi, Suzhou, Changzhou and Zhenjiang was much higher than counties with larger rural residents such as Dantu, Jiangning, Jurong, and Songjiang (See Table 2.5). Apart from reporting smallpox vaccination data by region, the provincial health department required municipal and county health administrations to record immunization data by age, gender, and/or the number of times individuals had been vaccinated against smallpox. The details of vaccination reports provided better quality of data to help illustrate the effectiveness of immunization in different gender, age, or geographical location, and identify problems that arose in the process of vaccination.

However, the provincial government's requirement on data reporting was not strictly followed by lower level of authorities. For example, in the report of Number of Smallpox Vaccination by Gender and times of vaccination. Some counties followed the instruction and reported numbers separated primary vaccination and secondary vaccination, while some others did not. One county, Yangzhong county recorded data by the doses of vaccine had been administered but did not report the numbers by age.¹⁶⁹ In addition, misreporting of data was common. The numbers of the same vaccination movement in different reports often could not be cross validated, which compromised the credibility and quality of the data. For example, 954,905 doses of vaccine were administered in the spring smallpox vaccination in 1950 calculated from the data reported by region (see table 2.5), while the number showed as 963756 counted by age and gender (see table 2.6), and the number changed again in a survey carried out later, which showed as 1,138,777 (see table 2.7).

Table 2.6 Number of Smallpox Vaccinations by Age and Gender in Southern Jiangsu Province, Spring 1950

Age	Male	Female	Total
0-1	51246	44496	95742
2-4	94790	73772	168562
5-9	146690	96800	243490
10-14	137978	95478	233456
15-19	59524	50361	109885
20-29	36158	26847	63005
30 +	24794	15971	40765
*Yangzhong County	510	3743	8851
Total	551690	407468	963756

Notes: 1. the form was edited from Number of Smallpox Vaccination in Spring 1950 in Southern Jiangsu Province I and II. Form I reported numbers in counties separated primary vaccination and secondary vaccination. Form II reported numbers in counties did not separate. The form calculated the total numbers of both forms.

2. Yangzhong did not record statistics by age, number was listed in the row with *

Source: JPA: 7014-001-002-1074, 苏南区 1950 年春季种痘统计(Number of Smallpox Vaccination in Spring 1950 in Southern Jiangsu Province), 1950.

¹⁶⁹ JPA: 7014-001-001-0151, 1951 年 1 至 6 月苏南区天花病例(Number of smallpox cases in Southern Jiangsu Province, January-June, 1951), 1951 (edited from reports of city and county ten-days epidemic reports).

Table 2.7 Survey of Smallpox Vaccination in in Southern Jiangsu Province, 1950-1951

	1950		1951	
	Spring	Autumn	Spring	Autumn
Population (estimated)	13,000,000	13,000,000	13,000,000	13,000,000
Number of vaccinations	1,138,777	713,240	2,426,720	1,179,205
Percentage to population	8.07%	5.47%	18.66%	9.00%

Source: JPA: 7014-001-002-1074, 苏南区 1950-1951 年种痘情况调查 (Survey of Smallpox Vaccination in in Southern Jiangsu Province, 1950-1951), 1951.

Despite improvements made in smallpox vaccination campaigns under the new government's leadership, the two seasonal smallpox vaccination campaigns in 1950 did not cut off the transmission of the disease in the region. In the first half of 1951, 644 smallpox cases and 96 related deaths were reported in Southern Jiangsu Province (see table 2.8). The Ministry of Health issued two orders on 3 January and February 1951 to regional authorities regarding eradicating smallpox in three to five years. Although the central government's order called for vaccinating one quarter of the whole population, and it required lower-level government to organise mass vaccination and submit a detailed report after mass vaccination movement, there was not a unified plan for every region of the country. Instead, the regional health authorities were required to make detailed vaccination plans for their own region. On 24 March, the instruction of intensified smallpox vaccination from the regional health along the central government's order was delivered to the department of health of Jiangsu Province. The regional office instructed Southern Jiangsu Province to vaccinate 2.3 million of the population over the year 1951, and the detailed plan of achieving the goal was up to the provincial health authority to decide. Although the decentralization of planning and delivery of smallpox vaccination programme had taken care of the diversity of the social economic and cultural diversity of local society, the long process of delivering administrative order from central government to local authorities challenged the efficiency of the vaccination programmes. After provincial government's interpretation of the upper-level authorities' order and planning its own vaccination plan, the message was finally sent to district level on 5 April, when the smallpox mass vaccination movement in spring term of the year had already nearly finished.¹⁷⁰

¹⁷⁰ JPA: 7014-002-003-1063, 为转发中央卫生部春季种痘指示希查照由 (Notice from Department of Health of Southern Jiangsu Province to District Health Authorities regarding Ministry of Health's Order on Intensification of Smallpox Vaccination), 5 April 1951.

Table 2.8 Number of Smallpox Cases in Southern Jiangsu Province, January-June, 1951

Month	Number of reported Cases	Number of Reported Death
January	57	13
February	170	26
March	166	18
April	117	21
May	54	6
June	80	12
Total	644	96

Notes: The form is edited from reports of city and county ten-days epidemic reports.

Source: JPA: 7014-001-001-0151, 1951年1至6月苏南区天花病例 (Number of smallpox cases in Southern Jiangsu Province, January-June, 1951), 1951

The Department of Health decided to focus on densely populated cities and remote villages in the province as primary target for vaccination in 1951. The department instructed local authorities to coordinate multiple sectors including public security, cultural and educational institutions, as well as health workers from non-governmental professional organizations, and divide them into three teams to oversee public education, technical work, as well as inspection in vaccination campaigns. The public education group was composed of employees at cultural and educational departments of local government in cooperation with non-governmental organizations. The members of technical team and inspection team included employees of local health agencies in cooperation with the health workers' association. In areas with insufficient number of health workers, young teachers and local cadres among the public could receive short term training to assist vaccination work.¹⁷¹

Learning experience from the previous year, the mass vaccination movement was largely expanded in the spring vaccination in Southern Jiangsu Province. According to incomplete data reported from each county after the campaign, nearly 2.5 million doses of vaccines was administered in spring 1951, which covered about 19% of the population (Table 2.9). In autumn term, another 1.1 million vaccinations were delivered. Overall, the smallpox vaccination in 1951 covered about 14% of the population of Southern Jiangsu Province.¹⁷² However, as discussed earlier, the accuracy of the data was questionable. In the Summary of the Smallpox Vaccination Work in Autumn 1951 in Southern Jiangsu, it also pointed out that because of blind implementation of vaccination while overlooking data collecting and reporting, some statistics of vaccination could not be tracked and testified, which challenged

¹⁷¹ JPA: 7014-002-003-1063, 苏南区一九五一年秋季种痘工作总结(Summary of the Smallpox Vaccination Work in Autumn 1951 in Southern Jiangsu Province), 1951.

¹⁷² JPA: 7014-002-003-1063, 苏南区一九五〇年秋季种痘工作总结(Number of Smallpox Vaccination in Autumn 1950 in Southern Jiangsu Province).

the arrangement of future vaccination work. Moreover, in a few areas, blind pursuit of numbers resulted in repeated vaccinations and abuse of vaccines.¹⁷³

Table 2.9 Number of Smallpox Vaccinations by Region in Southern Jiangsu Province, 1951

Administrative Region/County or city		Spring Vaccination 1951		Autumn Vaccination 1951	
		Number of Vaccinations	Percentage to population	Number of Vaccinations	Percentage to population
Provincial-administered Districts	Wuxi City (无锡市)	153,391	47.37%	52,281	16.5%
	Suzhou City (苏州市)	123,579	34.05%	78,743	26%
	Wuxi County (无锡县)	124,599	12.4%	196,289	20%
Zhenjiang District (镇江专区)	Zhenjiang City (镇江市)	36,139	20%	41,200	14%
	Dantu (丹徒)	47,453	12.65%	27,666	9%
	Danyang (丹阳)	70,410	13.23%	123,110	22.5%
	Jiangning (江宁)	100,387	20.91%	32,125	7%
	Jurong (句容)	54,134	14.14%	54,134	18%
	Lishui (溧水)	42,791	-	31,663	16%
	Gaochun (高淳)	63,808	-	39,500	20%
	Yangzhong (扬中)	34,730	15.8%	28,222	12%
Changzhou District (常州专区)	Changzhou City (常州市)	80,995	7.94%	55,589	23.5%
	Wujin (武进)	186,212	17.26%	95,581	9.5%
	Jiangyin (江阴)	196,063	-	90,000 (?)	-
	Liyang (溧阳)	51,469	14.29%	41,469	11%
	Jintan (金坛)	43,079	15.01%	34,512	11%
	Yixing (宜兴)	91,688	14.34%	49,037	8%
Suzhou District (苏州专区)	Taicang (太仓)	42,791	14.26%	11,312	39%
	Wuxian (吴县)	113,165	16.12%	43,080	6%
	Changshu City (常熟市)	30,992	26.03%	10,373	10%
	Changshu County (常熟县)	145,873	15.80%	44,513	5%
	Kunshan (昆山)	73,636	23.98%	40,000 (?)	-
	Wujiang (吴江)	79,247	-	55,813	11%
	Taihu Office (太湖区行政办事处)	N/A	N/A	N/A	N/A
Songjiang District (松江专区)	Songjiang (松江)	91,266	24.80%	33,982	12.5%
	Baoshan (宝山)	33,993	23.44%	15,948	10%
	Chuansha (川沙)	37,537	11.95%	38,379	12%
	Qingpu (青浦)	68,748	26.34%	13,731	5%
	Jinshan (金山)	33,060	18.40%	29,878	16.5%
	Shanghai County (上海)	23,674	18.78%	27,874	16%
	Fengxian (奉贤)	41,110	15.81%	30,000 (?)	-
	Nanhui (南汇)	89,327	31.98%	28,797	14%
	Jiading (嘉定)	81,364	29.06%	29,076	10%
Total	2,486,710	19.12%	1,523,877	14%	

Notes: 1. Incomplete data edited from separate forms manually insert;
2. number with (?) was reported through telephone, only estimated number in form.

Source: JPA: 7014-001-002-1074, 苏南区 1951 年春季种痘统计 (Number of Smallpox Vaccination in Spring 1951 in Southern Jiangsu Province), 1951; and JPA: 7014-001-002-1074, 苏南区 1951 年秋季种痘统计 (Number of Smallpox Vaccination in Autumn 1951 in Southern Jiangsu Province), 1951.

¹⁷³ JPA: 7014-002-003-1063, 苏南区一九五一年秋季种痘工作总结 (Summary of the Smallpox Vaccination Work in Autumn 1951 in Southern Jiangsu Province), 1951.

IV. Patriotic Health Campaign and improvement of primary health care structures

While the vaccination work making achievement in Southern Jiangsu, military intervention of Korean war since October 1950 motivated social and political mobilization inside of China. The contest with the US and its allies encouraged intensification of mass immunization movement in the coming two years, especially after the allegation against the US of using bacteriological weapons in the Korean War in 1951.¹⁷⁴ The germ warfare significantly challenged China's public health activity methodologically and behaviourally.¹⁷⁵ The Chinese allegation of germ-warfare delivered a double message that the new communist regime was threatened by two enemies: American aggression and natural bacteria.¹⁷⁶ To fight against both enemies, the CCP launched the Patriotic Health Campaign (爱国卫生运动), which promoted smallpox vaccination alongside other public health activities included but not limited to improving environmental health, immunisation programmes and primary health care. As several scholars, such as Ruth Rogaski, Yang Nianqun, Mary Brazelton have pointed out, although it was not clear whether the accusations were true, the Patriotic Hygiene Campaign not only effectively promoted public acceptance of intensification of mass immunization programmes, but also increased the central government's political control at grassroot level, which had a lasting and widespread impact on social mobilization and public health in China.¹⁷⁷

Responding to the UN troops pushing the Korean People's Army (KPA) northwards past the 38th Parallel, the CCP decided to step into the Korean War under the fear of the US invading China. The North East Frontier Force of the People's Liberation Army was reorganized as the People's Volunteer Army (PVA, 志愿军) in support of the Communist Workers' Party of Korea in the Korean War in October 1950.¹⁷⁸ In May 1951, North Korea appealed to the UN security council accusing the US of launching germ-warfare by spreading smallpox in its territory to the UN security council. After North Korea made germ warfare allegations to the UN, the International Red Cross and the World Health Organization ruled

¹⁷⁴ Brazelton, *Mass Vaccination*, 123.

¹⁷⁵ Nianqun Yang, "Disease Prevention, Social Mobilization and Spatial Politics: The Anti Germ Warfare Incident of 1952 and the 'Patriotic Health Campaign'," *The Chinese Historical Review* 11, no. 2 (2004): 156.

¹⁷⁶ Ruth Rogaski, "Nature, Annihilation, and Modernity: China's Korean War Germ-Warfare Experience Reconsidered," *Journal of Asian Studies* 61, no. 2 (2002): 381-415; Stephen Ednicott and Edward Hagerman, *The United States and Biological Warfare: Secrets from the Early Cold War and Korea* (Bloomington: Indiana University Press, 1998).

¹⁷⁷ Brazelton, *Mass Vaccination*, 123-124; Yang, "Disease Prevention, Social Mobilization and Spatial Politics," 156.

¹⁷⁸ 军事科学院军事历史研究所, *抗美援朝战争史* (北京: 军事科学出版社, 2000), 160 [Chinese Military Science Academy, *History of War to Resist America and Aid Korea* (Beijing: Chinese Military Science Academy Publishing House, 2000), 160].

out biological warfare.¹⁷⁹ The Chinese government denounced the investigation result by the IRC and the WHO, and claimed it was a biased investigation highly intervened by the US. Therefore, another investigation was organised by the World Peace Council (WPC), which was affiliated to the USSR. An International Scientific Commission was organised by the council to investigate bacterial warfare in China and Korea. The commission was composed of scientists and doctors from Sweden, France, Italy, UK, Brazil, and the USSR. The most famous member of the commission was Joseph Needham, a renowned biochemist and sinologist who also served at the United Nations Educational, Scientific and Cultural Organization (UNESCO). Based on the narratives of eyewitnesses, confession of Prisoners of Wars (POWs), testimonies of doctors, as well as samples of bomb casings, the commission validated the allegations of germ warfare and signed a final report on 15 September 1952.¹⁸⁰

At the same time, a number of reports regarding germ-warfare started to appear in Chinese newspapers. In April, two witness accounts of germ warfare reported by Chinese journalists based in warfront in Korea were published on *People's Daily* (*Renmin Ribao* 人民日报), the official newspaper of the CCP.¹⁸¹ Later from May 1952 to February 1953, several confessions made by American POWs admitted conducting germ warfare attacks. More Chinese newspapers and media published reports providing details of germ-warfare having occurred inside of China. These reports deliberately blurred the differences between local epidemics and germ-warfare and built connections between public health and patriotism.¹⁸² Thus, a mass movement that promoting a variety of public hygienic and immune activities was launched nationwide to protect Chinese people from bacteria and American imperialism. Apart from environmental health activities such as street cleaning, home hygiene competition, eliminating disease vectors including rats, fleas, and flies, etc., mass immunization programmes had also been organised across the country, including vaccination against smallpox, cholera, tuberculosis, etc.¹⁸³

¹⁷⁹ Jeanne Guillemin, *Biological Weapons: From the Invention of State-sponsored Programs to Contemporary Bioterrorism* (New York: Columbia University Press, 2005), 99–105.

¹⁸⁰ International Scientific Commission, *Report of the International Scientific Commission for the Investigation of the Facts Concerning Bacterial Warfare in Korea and China*, Beijing, 1952, <https://www.documentcloud.org/documents/4334133-ISC-Full-Report-Pub-Copy.html>.

¹⁸¹ 人民日报, “新华社记者和英国‘工人日报’记者报道目击美国侵略军撒布毒虫毒物情形,” 人民日报, 1952年4月9日 [People's Daily, “Journalists from Xinhua News Agency and the British Workers Daily Witnessed the Spray of Poisonous Insects and Materials by American Aggressors' Airplanes,” *People's Daily*, 9 April 1952].

¹⁸² Yang, “Disease Prevention, Social Mobilization and Spatial Politics,” 156.

¹⁸³ Brazelton, *Mass Vaccination*, 130-131.

In addition, more propaganda materials started to connect germs and enemies by visualizing germ warfare, which created vivid imagination for the general public. For example, a poster in 1951-1952 (figure 2.2) has shown that an evil' arm representing the US was spreading rats, flies and germs, while the sword of "Chinese and North Korean armies", as well as the spray representing the "peace-loving people all over the world". Thus, the general public could contribute to protecting the country by participating in the health movements. The poster in figure 2.3 has shown a medical professional spraying disinfectant in the front and a soldier dropping a grenade. The slogan under the painting clearly delivered the message that "to do a good job in epidemic prevention and hygiene work is concrete patriotic behaviour". As an important part of prevention of infectious diseases, vaccination was also pictured as a patriotic behaviour of smashing the germ warfare and American imperialism. (see figure 2.4).

Figure 2.2 Resolutely Cut Off the Bloody and Criminal Hand of the American Aggressor that Spreads Germs!, 1951-1952



Source: chinese posters.net, <https://chinese posters.net/posters/e15-833.php>.

Figure 2.3 To Do a Good Job in Epidemic Prevention and Hygiene Work is Concrete Patriotic Behaviour, 1952



Source: chinese posters.net, <https://chinese posters.net/posters/pc-1952-004.php>.

Figure 2.4 Everybody Must Take Precautions against Epidemics to Smash the Germ Warfare of American Imperialism!, 1952



Source: chinese posters.net, <https://chinese posters.net/posters/e13-964.php>.

Similar messages were delivered on public education materials for smallpox vaccination. In the poster in figure 2.5, four groups of paintings educated people with the symptoms and danger of smallpox, the route of infection, what to do after identifying cases, and the importance of vaccination. The red slogans wrote “completely defeat the germ warfare of U.S. imperialism” on the left side, and “everyone must participate in patriotic health campaigns” on the right side. The poster not only emphasized the importance of vaccination against smallpox, but also stressed the patriotic nature of participating in the vaccination. Martha Nussbaum argued, “all societies are full of emotions ...— anger, fear sympathy, disgust, envy, guilt, grief, many forms of love. ... Some of these episodes of emotion, ... frequently intense, have large-scale consequence for the nation’s progress toward its goals. They can give the pursuit of those goals new vigour and depth, but they can also derail that pursuit, introducing or reinforcing divisions, hierarchies, and forms of neglect or obtuseness.”¹⁸⁴ The CCP, as Elizabeth Perry argued, was able to effectively use such kind of collective emotions to transform “radical ideas and images into purposeful and influential actions”.¹⁸⁵

Figure 2.5 Everyone Must Have Vaccination Against Smallpox, 1952



Source: Chinese Public Health Posters, US National Library of Medicine
<https://www.nlm.nih.gov/hmd/chinese/posters/public.html>.

¹⁸⁴ Martha C. Nussbaum, *Political Emotions: Why Love Matters for Justice* (Cambridge, MA: Harvard University Press, 2013): 2.

¹⁸⁵ 裴宜理, “重访中国革命:以情感的模式,” *中国学术* 3, no. 4 (2001): 98-99 [Elizabeth Perry, “Revisiting the Chinese Revolution: A Paradigm of Emotion,” *China Scholarship* 3, no. 4 (2001): 98-99].

Table 2.10 Number of Various Vaccinations by Region in Southern Jiangsu Province, January-August, 1952

Administrative Region/County or city		Smallpox	Cholera	Cholera and Typhoid	Cholera, Typhoid and Paratyphoid	Plague
Provincially-administered Districts	Wuxi City	346,058	164,022	130,685	34,127	183,254
	Suzhou City	188,179	13,834	-	124,000	242,452
	Wuxi County	420,737	100,000	77,200	1,112,431	378,254
Zhenjiang District	Zhenjiang City	49,658	77,900	27,063	64,880	101,300
	Dantu	172,210	1,312	55,264	48,565	174,570
	Danyang	330,340	34,006	120,574	86,628	242,417
	Jiangning	297,917	30,000	31,831	217,456	233,839
	Jurong	237,199	10,602	263,312	8,436	128,597
	Lishui	76,396	1,500	-	160,000	108,016
	Gaochun	207,685	18,100	187,840	91,056	138,021
	Yangzhong	116,484	23,152	67,200	18,000	93,068
Changzhou District	Changzhou City	64,121	78,014	-	123,365	162,713
	Wujin	623,170	25,198	79,677	479,527	375,000
	Jiangyin	705,118	150,529	43,093	108,676	288,776
	Liyang	245,143	62,040	243,188	47,286	116,619
	Jintan	185,141	49,205	105,733	91,039	133,160
	Yixing	297,089	64,452	157,988	189,723	284,921
Suzhou District	Taicang	141,488	18,881	17,237	105,470	62,754
	Wuxian	455,674	128,401	252,260	151,818	210,193
	Changshu City	76,643	29,814	-	92,519	47,885
	Changshu County	698,021	138,000	319,001	161,067	303,370
	Kunshan	148,751	29,707	148,133	126,933	126,395
	Wujiang	333,847	12,234	-	-	201,794
	Taihu Office					
Songjiang District	Songjiang	204,735	32,827	68,517	87,362	131,390
	Baoshan	102,664	35,000	-	105,038	71,665
	Chuansha	190,834	6,700	155,680	-	35,189
	Qingpu	192,036	32,268	89,886	114,746	80,577
	Jinshan	106,932	56,742	103,705	45,585	118,316
	Shanghai County	81,312	24,334	53,034	55,681	74,245
	Fengxian	205,712	23,603	20,440	21,745	106,166
	Nanhui	181,379	133,518	105,787	-	-
Jiading	99,266	40,000	10,000	-	140,000	
Total		7,753,919	1,645,535	2,934,328	4,073,177	5,086,677

Source: JPA: 7014-001-002-1135, 苏南区 1952 年一至八月各种接种统计 (Number of Various Vaccinations by Region in Southern Jiangsu Province from January to August 1952), 1952.

The propaganda materials provoked the hatred emotions of Chinese people towards both germs and enemies, which encouraged them to participate in vaccination programmes. The mass vaccination against smallpox was further expanded in 1952. 7,753,919 doses of smallpox vaccines were administered from January to August, which showed significant increase from 1950 and 1951. Apart from smallpox, mass vaccinations against Cholera, Typhoid, Paratyphoid and Plague had also been issued at the same time (see table 2.10). There was no doubt that the germ warfare and Patriotic Health Campaigns largely motivated public participation in mass vaccination and other public health movements, but such a success could not be achieved without a functioning infectious disease surveillance mechanism and a primary health care system at grassroot level. In addition, although

vaccination was an essential part of infectious diseases control, an effective case identification, reporting, isolation system also played significant roles in the eradication of smallpox and the elimination of several other infectious diseases.

The infectious disease reporting and surveillance system was further developed in 1952. Responding to the central government's call for anti-germ warfare campaign, the provincial health department of Southern Jiangsu issued an Interim Measures for Reporting Emergency Epidemic Diseases in order to effectively detect and prevent the spread of the epidemic in June 1952.¹⁸⁶ Apart from calling for expanded propaganda and education activities of the Patriotic Health Campaign in order to increase public awareness of infectious diseases, the provincial health authorities also instructed local health authorities to strengthen the sense of responsibility and organization of the infectious reporting work in various localities. Except for reiterating the clauses in the Interim Measures for Infectious Disease Reporting issued in 1950, the emergency measures designated cholera, Japanese encephalitis, and plague as human emergent reporting human diseases. All cases or suspected cases were ordered to be reported to Southern Jiangsu Epidemic Prevention Committee within 24 hours, regardless of relating to the germ war fare. After the first report of these three designated infectious diseases, the provincial health authorities also required lower-level health authorities to report the epidemic situation daily until the first confirmed case recovered or died, and no further cases or suspected cases were reported. Reporting from district-level was required on-site inspections to make a preliminary diagnosis. If the diagnosis was not able to be made, detailed symptoms were required to be reported. Epidemic prevention agencies at the municipal and county level were required to conduct research and analysis, as well as confirm the diagnosis of the epidemic in local hospitals at the early stage. Hiding, misreporting, or lying about cases were strictly prohibited.¹⁸⁷

Moreover, the department of health also issued an Instruction for Acutely Infectious Diseases Patients, in order to reduce the chance of contact between infectious diseases patients and healthy people to prevent the spread of the disease. The major infectious diseases were categorized into two groups, strictly isolated and generally isolated. Disease required strict isolation included plague, cholera, smallpox, epidemic meningitis, yellow fever, and psittacosis. Others required general isolation included diphtheria, epidemic cerebrospinal

¹⁸⁶ JPA: 7014-001-002-1134, 紧急疫情报告暂行办法 (Interim Measures for Reporting Emergency Epidemic Diseases), 26 June 1952.

¹⁸⁷ JPA: 7014-001-002-1134, 紧急疫情报告暂行办法 (Interim Measures for Reporting Emergency Epidemic Diseases), 26 June 1952.

meningitis, typhus, scarlet fever, measles, typhoid and paratyphoid, dysentery, whooping cough, and regression fever. All patients with listed infectious diseases were required to be isolated once the diagnosis was confirmed. If an epidemic was happening, the suspected patients were also required to be isolated in time.¹⁸⁸

Table 2.11 Isolation Period of Major Infectious Diseases in Southern Jiangsu Province, 1952

Plague	From the date of onset to the complete disappearance of symptoms
Cholera	From the date of onset until the second stool culture was negative, or from the date of onset to the fourteenth day without testing equipment
Smallpox	From the onset of symptoms until the smallpox scabs completely fell off
Japanese meningitis	From the date of onset to the complete disappearance of symptoms
Yellow fever	5 to 7 days.
Psittacosis	From the date of onset to complete recovery
Diphtheria	From the day of onset until the second culture of nasopharyngeal secretions was negative, or from the date of onset to the fourteenth days without testing equipment
Epidemic cerebrospinal meningitis	From the day of onset until the second culture of nasopharyngeal secretions was negative
Typhus	From the date of onset to the complete disappearance of clinical symptoms
Scarlet fever	From the date of onset to the fourteenth day without complication, or until recovery from complications for patients with purulent complications (otitis media)
Measles	From the date of onset to one week after the rashes occurred.
Dysentery	From the date of onset to the negative result of dysentery bacillus or amoeba in stool samples, or five days after the clinical symptoms disappear without testing equipment
Typhoid	From the date of onset until the second urine sample was negative, or ten days after the clinical symptoms disappear without testing equipment
Pertussis	From the date of onset to three weeks after the occurrence of coughing
Relapsing fever	From the date of onset to the complete disappearance of clinical symptoms

Source: JPA: 7014-001-002-1134, 急性传染病隔离办法 (Instruction for Acutely Infectious Diseases Patients), 26 June 1952.

Patients in strict isolation were required to be isolated in hospital wards. In areas without infectious disease wards, patients were instructed to be isolated in designated buildings, such as temples, as temporary isolation locations. During the isolation period, patients were not allowed to have visitors, nor to be discharged before the isolation period ended. No person other than medical staff were allowed to have close contact with patients. If necessary, any visit must have been approved by the doctor, and visitors must have worn protective gears and masks. It was also not allowed to pass in or out from isolation wards of clothing, food, utensils, books, and newspapers, etc. Patients were not allowed to exchange their beds, enter, or leave wards without permission. As to patients infected with diseases required general isolation, they were allowed to be isolated at home, but must have stayed in a separate room from other family members. A sign was required to be attached at the door of the residence and indicate infectious disease patients inside and visiting was prohibited.

¹⁸⁸ JPA: 7014-001-002-1134, 急性传染病隔离办法 (Instruction for Acutely Infectious Diseases Patients), 26 June 1952.

Family members of the patient must have been vaccinated and trained with the isolation techniques and disinfection methods delivered by the local health and epidemic prevention agencies. Caregivers were required to wear protective gear and masks within the possible transmission distance. The instruction had also stipulated isolation period for the 15 infectious diseases listed above (see table 2.11).¹⁸⁹

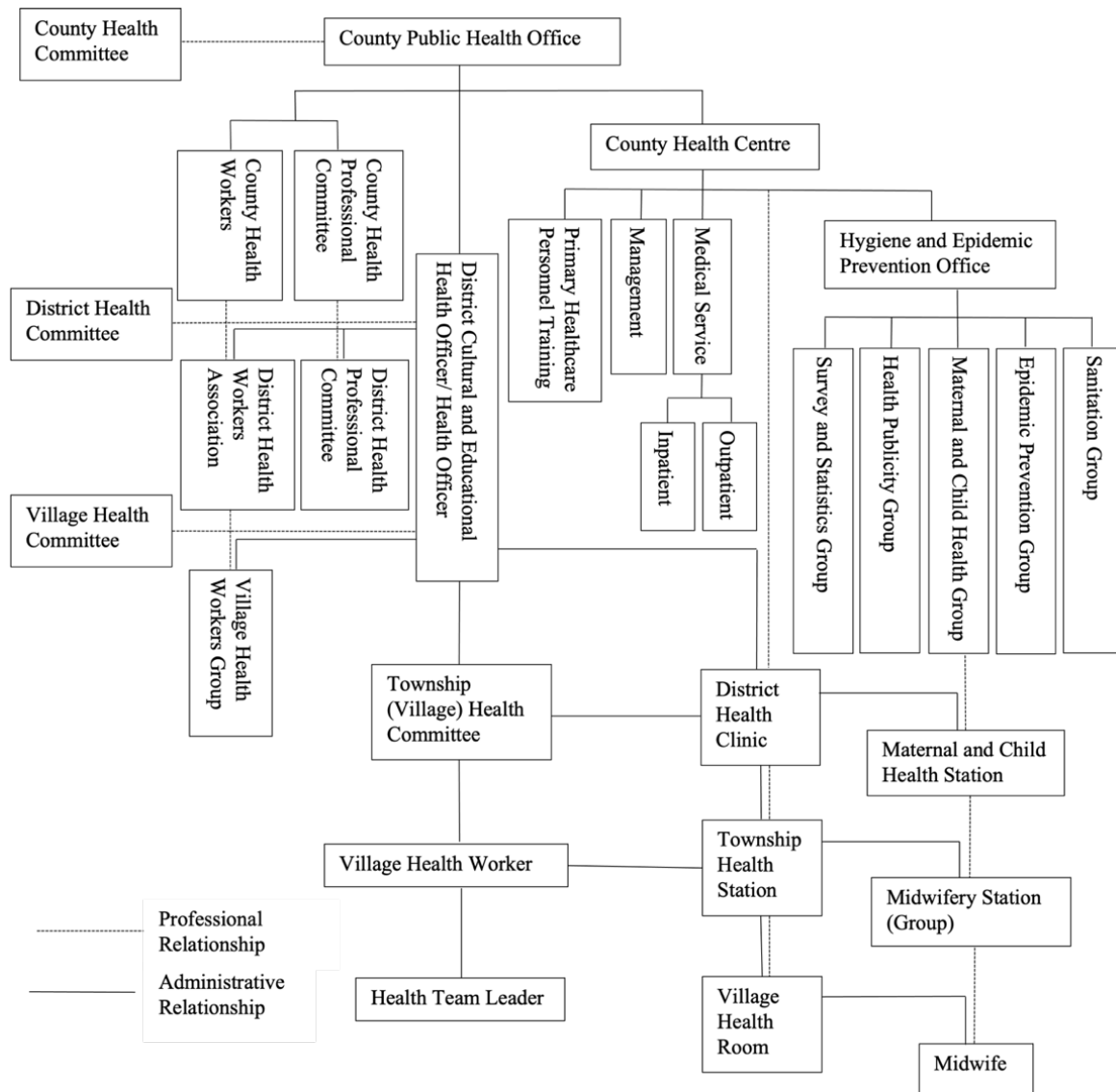
In addition, the elimination of smallpox also benefited from the improvement of primary health care system. In order to improve the public health system and infrastructure at county and lower administrative level, the Ministry of Health of central government issued a Decision on Improving and Developing Health Administrations at Grassroot Level (关于健全和发展全国卫生基层组织的决定) on in August 1951. The public health system at county and lower administrative level was composed of three types of organizations: administrative organisations, professional organizations, and mass organizations. Administrative organizations referred to public health offices at county government, district cultural and educational health officers or health officers, township (administrative village) health committees, village health workers, resident health team leaders. Professional health organizations included county health centres, district health clinics, township (administrative village) health stations, village clinics (including hospitals, clinics, maternal and child health stations, and midwifery stations). Mass organizations referred to public health or epidemic prevention committees at each administrative level, mass organizations of health professionals, or other non-governmental health committees at different levels.¹⁹⁰ Counties' primary health service would be provided by county health centres, and service at district level would be provided by district health clinics. In areas where district health clinics were absent, general public health and epidemic prevention work could be covered by private medical institutions jointly funded by public sectors (such as polyclinics and medical cooperatives). Professional health institutions in counties and districts would be supervised by health authorities at or above the provincial level. Other county and district health and epidemic prevention institutions (such as epidemic prevention clinics or stations, maternal and child health care stations, and midwifery stations, etc.) should be uniformly managed by county and district health authorities.¹⁹¹

¹⁸⁹ Ibid.

¹⁹⁰ JPA: 7014-001-002-1114, 关于县以下卫生基层组织的组织系统、编制及任务的规定 (Provisions of Organization System, Composition and Responsibility of Primary Health Organizations Under County Level), 1952.

¹⁹¹ Ibid.

Figure 2.6 County and Lower-level Health System in China, 1951



Source: JPA: 7014-001-002-1114, 关于县以下卫生基层组织的组织系统、编制及任务的规定 (Provisions of Organization System, Composition and Responsibility of Primary Health Organizations Under County Level), 1952.

The county health office was composed of three to five staff members, and was responsible for the county’s health administrative work, including planning, statistics, reports, inspections, funding distribution, performance evaluation, as well as assigning and supervising counties and districts to carry out public health, epidemic prevention, and medical work. In addition, the office was also responsible for management of public and private medical and pharmaceutical sectors and personnel, leading the counties mass health groups to assist the government in the implementation of health work, as well as organizing and leading the educating and training of public and private health personnel in the county. Under the county level, a Cultural and Educational Health Officer/ Health Officer was

appointed to manage health related work in each district. One to three part-time workers in townships and villages, and one in residential groups would be assigned as township/village/street health committee, village health worker, or resident health team leader to be in charge of local health work. The part-time health workers at grassroots level were responsible for collecting and reporting epidemic data, as well as birth and death information to their superiors, collaborating with health institutions and organizations at the same level to supervise health professionals to carry out sanitation, epidemic prevention, public education and basic medical treatment in townships, villages, and residents' groups.¹⁹²

Table 2.12 Responsibilities of County Health Centres, District Health Clinics and Village Health Rooms, 1952

Institution	Responsibilities
County health centres	<ol style="list-style-type: none"> 1. vital statistics and biostatistics collecting; 2. investigation, reporting and handling of infectious diseases and endemic diseases 3. improvement of environmental health. 4. smallpox vaccination and other immunization work; 5. instructing maternal and child health care, scientific midwifery and nursery operations; 6. school health; 7. industrial health; 8. health propaganda and public education; 9. inpatient and outpatient medical care; 10. rural mobile medical team; 11. primary health care personnel training; 12. supervising and leading the operations of Supervise and lead the business of district health centres and other health institutions in the county; 13. other health works assigned by superiors.
District health clinics	<ol style="list-style-type: none"> 1. vital statistics and biostatistics collecting; 2. investigation, reporting and handling of infectious diseases and endemic diseases 3. improvement of environmental health. 4. smallpox vaccination and other immunization work; 5. maternal and child health care and scientific midwifery; 6. school health; 7. health propaganda and public education; 8. basic medical treatment and first aid; 9. other health works assigned by superiors
Village health rooms	<ol style="list-style-type: none"> 1. vaccination service of the village; 2. maternal and child health care; 3. infectious disease cases isolation and reporting; 4. instructing environmental health; 5. health propaganda; 6. basic medical treatment and first aid.

Source: JPA: 7014-001-002-1114, 关于县以下卫生基层组织的组织系统、编制及任务的规定 (Provisions of Organization System, Composition and Responsibility of Primary Health Organizations Under County Level), 1952..

The medical and immunization service was provided by county health centres at county level (县卫生院), district health clinics (区卫生所) at district level, township health stations

¹⁹² JPA: 7014-001-002-1114, 中央人民政府卫生部公布令(52)卫医字第七九四号 (Executive Order from the Ministry of Health of the Central People's Government (52) Health no. 794), 21 August 1952.

at township level, village health rooms in villages (details of responsibilities of each level see table 2.12). In order to instruct the management of medical service under county level, the central government issued the Temporary General Regulation for County Health Centres (县卫生院暂行组织通则) and Temporary General Regulation for District Health Clinics (县属区卫生所暂行组织通则).¹⁹³ County health centres were affiliated to the county government, and their work would be supervised and guided by the superior health authorities. In counties that did not have a health administrative department, the county health centres were also expected to oversee the county's health administrative services. County health centres were responsible for counties' public health, epidemic prevention, medical service, and primary health personnel training, as well as supervising and leading the operation of the clinics and other health institutions in the area.¹⁹⁴

Moreover, county health centres were divided into four grades depending on the population based on the population, transportation, economic development, public health condition and existing health infrastructures of each county. The centres with more than 50 staff would be categorized as first grade, centres with 35-50 staff were the second grade, the ones with 25 to 35 staff were third grade health centres, and centres with 15 to 20 staff were the fourth grade. The county health centres were composed of four units: a health administrative in charge of administration; a health and epidemic prevention unit responsible for public hygiene, epidemic prevention, maternal and child health care, public education, and health statistics; a medical service unit which was responsible for outpatient and inpatient treatment; and a management unit in charge of general affairs, accounting, paperwork, and human resources. County health centres were also responsible for the training of primary healthcare personnel in the county. In terms of medical service, the county health centres were allowed to decide the number of hospital beds by themselves according to the grade of the centres and the number of their inpatients, although de jure, it was expected to have over 50 beds in first grade centres, over 30 beds in second grade centres, 20 beds in third grade centres, and at least 10 in fourth grade centres. Apart from that, common diseases hospital beds were expected to reach half of the total number, while special beds for infectious diseases and maternal use were expected to reach one-quarter of the total number of beds, but the detailed arrangement of hospital beds setting was allowed to be adjusted based on the

¹⁹³ Ibid.

¹⁹⁴ Ibid.

actual situation of the county. The county health centres were also able to establish specialised health institutions or stations after approval of superior health authorities.¹⁹⁵

Table 2.13 Numbers of Smallpox Vaccination Delivered by Each Type of Institutions or Individuals in Southern Jiangsu in 1952

Administrations	Type of Institutions or Individuals						
	Military Health Institutions	Hospitals or Clinics	Nursing Schools	Midwifery Schools	Others Institutions	Vaccinators	Total
Wuxi City		164358			256489		420847
Suzhou City		49128	27876	12310		98875	188189
Wuxi County		345058					345058
Zhenjiang City	660	42373	2134		4526		49693
Dantu		172260					172260
Danyang		299850					299850
Jiangning		297917					297917
Jurong		239199					239199
Lishui		80199					80199
Gaochun	320	48276				159090	207686
Yangzhong						116484	116484
Changzhou City		14309			4809	42984	62102
Wujin		622147			8124		630271
Jiangyin						705118	705118
Liyang						245143	245143
Jintan		39253			129150	16738	185141
Yixing		139242				151477	290719
Taicang		33000				88488	121488
Wuxian		422664					422664
Changshu City	29073	45861			1609		76543
Changshu County		698021					698021
Kunshan		8751			140000		148751
Wujiang		333851					333851
Taihu Office							
Songjiang		38000	6500		160235		204735
Baoshan		93666					93666
Chuansha		226834					226834
Qingpu		192036					192036
Jinshan		60488			46445		106933
Shanghai County		81312					81312
Fengxian		205712					205712
Nanhui		181379					181379
Jiading		58655					58655
Total	30053	5233798	36510	12210	751389	1624397	*7688357

Note: *The number in original form was 7,600,455, which was not the sum of the units, here used calculated value.

Source: JPA: 7014-002-003-1077, 苏南区 1952 年担任种痘单位完成种痘人数表 (Numbers of Smallpox Vaccination Delivered by Each Type of Institutions or Individuals in Southern Jiangsu Province in 1952), 1952.

The improvement in primary health care provided systematic guarantees for mass vaccination programmes to be carried out at grassroot level. Although political propaganda in Patriotic Health Campaigns played an important role in motivating mass participation in the public health movement, the systematic improvement of primary health care increased the

¹⁹⁵ Ibid.

capacity of providing basic health services to the underprivileged sections of the society. As is shown in table 2.13, the majority of smallpox vaccinations were delivered in hospitals or clinics. Discussed in previous sections, although smallpox eradication was announced by the national authorities, it was not carried out top-down with a centralised plan. Instead, smallpox mass vaccination was planned and delivered as one part of the local public health policy with oversight from the central government. In addition, although vaccination was a major part of smallpox eradication, multiple interventions had been adopted, including identifying and isolating infectious disease cases. It provided a coordinated approach to the delivery of mass vaccination while increasing accessibility to other basic health services for the underprivileged community.

V. Conclusion

In the context of the cold war, the PRC, a country with a quarter of the world's population, was not directly involved in the WHO since the communist takeover in 1949. The communist government worked to its own timetables, independently gauging the value of international political alliances, and carried out public health reformation, which brought mass smallpox vaccination to an unprecedented scale. Apart from improvement of the capacities of primary healthcare, the germ warfare allegation against the US during the Korean War also played a significant role in the mass vaccination movement. More importantly, China's relationship with the UN and its specialised agencies further deteriorated. The Chinese government had further tightened restrictions on sharing information with international bodies. On 5 July 1952, the Ministry of Health issued a notice to all health departments, divisions, and bureaus of provinces (regions) and cities, as well as medical schools in Eastern China to deny any connection with UN agencies. It was reported by the Culture and Education Council that the Oriental Cooperation Pavilion of the UNESCO intended to distribute Catalogue of South Asian (India, Myanmar, Ceylon) and other journals to higher education institutions. The academic institutions and groups were required to report to the Ministry of Foreign Affairs through higher-level authorities if they had received any books, specimens and other materials or letters sent by the UNESCO in the future (or already had in the past). Apart from that, all academic institutions and groups were not allowed to build connection with the UNESCO.¹⁹⁶

¹⁹⁶ JPA: 7011-002-003-0515, 华东军政委员会卫生部通知 (Notice from Ministry of Health of East China Military and Political Committee), 5 July 1952.

In addition, the Chinese government had also tightened the restrictions of the release of infectious disease figures. On 29 May 1952, the Ministry of Health issued an order indicating that data and information of morbidity, mortality and infectious diseases were national secrets, especially when the US was conducting biological warfare. The released epidemic data and information would provide enemies information of the effect of their bacterial weapons, and gave them opportunities to spread rumours, and mislead “peace-loving people in the world”. Therefore, epidemic data was not allowed to be published by health authorities at each level without authorisation. Any violation would be considered as leaking state secrets.¹⁹⁷ The alienation of China from the Western world limited its exposure to new scientific methods and entanglements of global health developed in 1950s and 1960s. The increasing importance of mathematical modelling in epidemic control, and the rising of outcome evaluation methods required more standardised data collecting. The counting of simple things like how many vaccines were given out had gradually been considered as insufficient for the accountability work of global health. Instead, biostatistics acquired a propaganda significance in China, and were expected to reflect advances for which the regime claimed credit. The next chapter will examine the smallpox eradication across China and the approaches adopted in its biostatistical work. Then it will place the Chinese experience into global smallpox eradication programme in the West Pacific Region and the global context.

¹⁹⁷ JPA: 7011-002-003-0515, 华东军政委员会卫生部通知: 为各种卫生期刊、公开文件不准发表各种传染病统计数字及流行情形希准找切实执行由 (Notice from Ministry of Health of the Central People's Government: Restriction of Health Journals Publishing Various Infectious Disease Statistics and Epidemic Situation), 29 May 1952.

Chapter 3 Reframing the Timeline of Smallpox Eradication: China and the Western Pacific Region in Smallpox Eradication, 1953-1970

By the early 1950s when China launched mass vaccination to cut off the transmission of smallpox, the global Smallpox Eradication Programme had not yet been initiated at global level. However, the historical narrative about smallpox eradication, especially those inhabited mainly by retrospective histories prepared by retired officials, has often only focused on the intensified period when the WHO was heavily involved in 1967. Here, Western Africa, the South Asian sub-continent and the endgame in Eastern Africa get a look in within the historiography of smallpox eradication as these regions saw the involvement of some American officials, who were seconded to the WHO (India, Nepal, and Bhutan) or worked openly as representatives of the US CDC (Western Africa, Pakistan, Bangladesh, and Eastern Africa). This type of narrative has been promoting the writing of largely teleological, simplistic and US- and Western Europe-centric history that only celebrates the contribution of a few participants from the global north. As Sanjoy Bhattacharya has argued, “the use of a more expansive timeline for the SEP allows us to recover details of complex projects carried out in a variety of geographical contexts that have generally not received scholarly attention.”¹ Therefore, this chapter aims to add timelines to the history of global smallpox eradication, which challenges the institutional history that only highlights the contribution of US and non- Western European actors by critically investigating the programmatic complexities of smallpox control and eradication campaigns in China and Western Pacific Region before 1967. It also aims to increase the understanding of the reasons behind the lack of evidence about smallpox eradication in China through analysing the management of public health statistics in the country and the complex relationship between Beijing and Geneva.

I. Politicising public health and smallpox eradication in China

In November 1952, the SJAO merged with the Northern Jiangsu Administrative Office (NJAO) as Jiangsu Province, and the department of health started to oversee the public health work of both south and northern Jiangsu from the beginning of 1953. After the intensive mass vaccination work in the previous 3 years, no smallpox case was reported in Jiangsu Province in 1953. However, the mass vaccination work was not abolished even after smallpox cases were no longer reported in China. In order to eradicate smallpox in the province, the department expected the coverage of smallpox vaccination to reach all the newly born infants

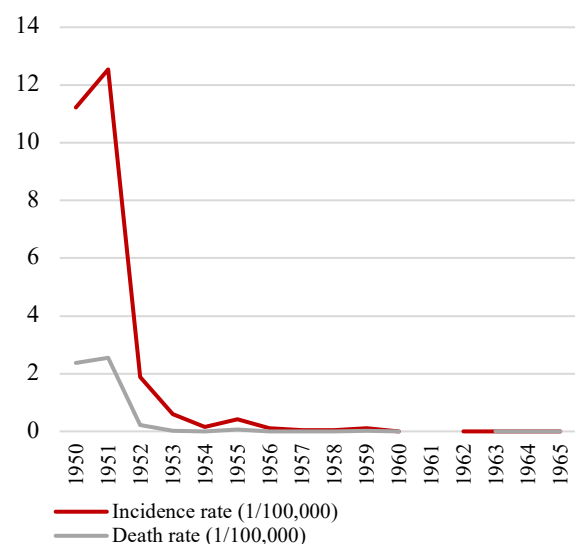
¹ Sanjoy Bhattacharya and Carlos Eduardo D’Avila Pereira Campani, “Re-Assessing the Foundations: Worldwide Smallpox Eradication, 1957–67,” *Medical History* 64, no. 1 (2020): 92.

and children who had not been vaccinated. Apart from the regular immunization of adolescents, mass vaccination against smallpox was still one important part of the province's public health work. In 1953, 810 million doses of smallpox vaccines were planned to be administered,² and this number was reduced to 500 million in the following year.³ However, although smallpox was no longer the primary concern of Jiangsu Province, infectious diseases were still a burden of public health. The incidence rate of several infectious diseases of the respiratory and digestive tract significantly increased in 1953 compared to the previous year. The reported cases of epidemic cerebrospinal meningitis increased 100.4%, scarlet fever increased 277.8%, measles increased 131.6%, Japanese encephalitis increased 377%, and dysentery increased 199%.⁴

Table 3.1 Smallpox Incidence Rate, Death Rate, and Case Fatality Rate in China, 1950-1965

Year	Incidence rate (1/100,000)	Death Rate (1/100,000)	Case Fatality Rate (%)
1950	11.22	2.37	21.15
1951	12.54	2.55	20.32
1952	1.88	0.22	11.63
1953	0.59	0.03	5.87
1954	0.15	0.01	7.2
1955	0.43	0.07	16.96
1956	0.1	0.01	14.41
1957	0.05	0.003	5.08
1958	0.05	0.01	17.49
1959	0.11	0.02	13.46
1960	0.01	0.001	15.91
1961	-	-	-
1962	0.0002	-	-
1963	0.01	0.0001	0.99
1964	0.004	0.0004	9.38
1965	0.0004	0.0003	66.67

Figure 3.1 Smallpox Incidence Rate and Death Rate (1/100,000) in China, 1950-1965



Source: 中华人民共和国卫生部, “全国 1959-1988 年各种急性传染病发病率、死亡率、病死率,” 建国四十年全国卫生统计资料 (北京: 中华人民共和国卫生部, 1989), 166 [Ministry of Public Health of the PRC, *Health Statistics Information in China, 1949-1988* (Beijing: Ministry of Public Health of the PRC, 1989), 166].

As discussed in Chapter 2, Jiangsu was among the first provincial administrations to eradicate smallpox as one of the areas with the most advanced social and economic development in China. Along with Jiangsu, municipalities, and provinces in eastern coast

² JPA: 4018-001-001-2, 江苏省一九五三年卫生工作计划 (Working Plan of Public Health of Jiangsu Province in 1953), 1953

³ JPA: 4018-001-001-2, 本省 1953 年工作检查及 1954 年工作的初步意见 (The Inspection of Work in 1953 and Preliminary Working Plan in 1954), 1953.

⁴ JPA: 4018-001-001-2, 一九五三年卫生工作总结初稿 (Draft of Summary of Public Health Work in 1953), 1953.

areas, the middle and south of China including Beijing, Tianjin, Hebei, Shandong, Zhejiang, Jiangxi, Hubei, Hunan, and Guangxi had no longer reported smallpox cases after 1953. In comparison, the eradication of smallpox took longer in border areas including Inner Mongolia autonomous regions in the northern border of China to the Republic of Mongolia; Xinjiang autonomous regions adjacent to the USSR, Pakistan, Republic of Mongolia, India, and Afghanistan; Xizang autonomous regions (Tibet) next to Burma, India, Bhutan, and Nepal; as well as Yunnan province, which shared border with Burma, Laos and Vietnam.

After four-year mass national vaccination work from 1949-1953, more than 560,000 million doses of smallpox vaccinations were administered across the country. The incidence rate of smallpox cases dropped from 11.22/100,000 in 1950 to 0.59/100,000 in 1953 (Table 3.1). Except for border areas which were homes to the country's ethnic minorities, the mass smallpox vaccination work was accomplished in east and middle of China where resided majority of the population especially in urban areas and townships, smallpox cases were no longer reported after 1953. Based on the primary achievement of smallpox eradication in part of the country, the Ministry of Health adjusted its guidance on smallpox vaccination.⁵ In February 1954, the ministry issued a notice to provincial health authorities to provide guidelines for the smallpox vaccination work in the next stage. In order to maintain the immunity against smallpox among population and achieve the eradication as a final result, the ministry decided to continue implementing regular vaccination for children and adolescents four times in their 6 months after birth, and at their 6-, 12-, and 18-years old. At the same time, mass vaccinations would still be carried out in areas where smallpox occurred. Mass vaccination was primarily carried out in spring and autumn mass vaccination mainly targeting infants born after spring vaccination.⁶

In urban areas, health workers teams were expected to be responsible for the vaccination work in each district. In rural areas, the ministry of health instructed lower-level health authorities to select active local doctors or activists as vaccinators in their villages. The ministry recommended against circulating vaccinations by temporary teams, which, in their opinion, would not be able to reach the level of coverage required to contain the transmission of the disease, while driving health workers and medical professionals away from their daily work. When private practitioners were recruited in vaccination work, local health authorities were also expected to provide sufficient living allowances based on their skills and the salary

⁵ BMA: 011-002-00124, 中央人民政府卫生关于 1954 年开展定期种痘的通知 (Ministry of Health, Notice of the Central People's Government on the Launch of Regular Smallpox Vaccination in 1954), 2 February 1954.

⁶ Ibid.

standards for the employees of the public health care system. In regions where geographically remote and ethnic minorities lived, epidemic prevention teams or health teams sent by local health authorities were expected to provide supervision and assistance with smallpox vaccination work. Moreover, smallpox vaccination was to be carried out in coordination with the patriotic health campaign, and in conjunction with social conventions and customs of the residents. The ministry also encouraged strengthening public education in disease prevention instead of taking forceful measures in favour of mandatory participation in mass vaccination programmes.⁷

In addition, the Ministry of Health also instructed provincial and municipal health authorities to stockpile a small amount of smallpox vaccine to guarantee the supplies for unexpected outbreaks. Smallpox vaccination was free of charge in both public and private services. Private medical practitioners who did not provide service through state or local government ran health facilities were prohibited from charging vaccination fees and using traditional vaccinia materials. When smallpox vaccination work was carried out, health authorities at provincial level were instructed to visit each district to provide instruction and inspection. Each vaccination delivered was expected to be recorded for inspection by local or upper-level health authorities later. After the spring mass vaccination work ended, a brief summary was required to be reported to higher-level health authorities. In remote and ethnic minorities lived areas where had not administered expected number of vaccines in seasonal vaccination campaigns, supplementary vaccination campaigns were instructed to be carried out.⁸ However, with the dramatic dropping of reported cases in 1953, smallpox was no longer a primary focus of public health work. At the same time, the public health in China was increasingly politicised and further derived from evidence-based policies.

At the beginning of 1953, the Central Military Commission (CMC) decided to set up a political department in the Ministry of Health of CMC. Bai Xueguang (白学光), the president of *August 1 Magazine* (1 August is the anniversary of the founding of the Chinese People's Liberation Army), was nominated as the director of the department. After Bai took office, he reported to Mao that the leaders of the Ministry of Health paid overwhelming attention to administrative work, but provided limited to none instruction and leadership to health work of the CMC and its affiliated units. In Mao's opinion, the report had exposed the extreme bureaucracy in the leaders of the Ministry of Health of CMC, and the problem was intolerable

⁷ Ibid.

⁸ Ibid.

which needed to be solved immediately. Mao suggested He Cheng, who served as the vice ministers of both the Ministry of Health of the CMC and the Ministry of Health, to no longer hold his position in the Ministry of Health of the CMC. Instead, he instructed the CMC to find someone else to take the position of the Vice Minister of Health of the CMC and the person did not have to be educated in medical related studies. Based on Bai's report, Mao also suspected the Ministry of Health was the same bureaucratic as the department at CMC, which provided neither political leadership nor technical leadership. Therefore, Mao instructed the Commission for Cultural Affairs of the Central Committee of the CCP (Commission of Cultural Affairs, CCA, 中央文化委员会, 简称文委) to inspect the work of the Ministry health and eliminate bureaucracy in government ministries thoroughly to build government offices that conducting real work.⁹

After the investigation, the Party Group of the Ministry of Health submitted an inspection report to the Central Committee of the CCP. The report was discussed at the Politburo of the Central Committee in November 1954. Mao praised the inspection of the Ministry of Health for its adoption of both top-down and bottom-up methodologies, which was helpful in completely solving the existing problems in the Ministry of Health. Mao pointed out that although great achievements had been made in national health work in recent years, there were also many shortcomings. One of the biggest shortcomings of health work, Mao argued, was the lack of politics and the direction of Marxism-Leninism and socialism. The many technical problems unsolved in medicine and health were due to this deficiency of political leadership.¹⁰ For instance, Mao specifically stressed that the party must have led everything, including health work. He said to the members of the Politburo that the leaders of the Ministry of Health believed that the health work was technical, and the central government did not understand technology and could not give instructions, so many major issues had not been reported and requested instructions from the central government. In Mao's view, the health authorities showed insufficient respect to the leadership of the CCA, and considered the commission was a cultural sector which could not provide instruction to medicine. Following the argument, Mao gave an analogy in military sectors. He said, a

⁹ 毛泽东, “对白 xx 同志关于军委卫生部情况报告 (1953 年 4 月 3 日),” *毛泽东思想万岁 (1949.10-1957.12)* (武汉: 钢二司武汉大学总部, 1968), 34-35 [Zedong Mao, “Responding to Report from Comrade Bai xx on the Situation of the Ministry of Health of the Military Commission (3 April 1953),” *Long live Mao Zedong Thought (1949.10-1957.12)* (Wuhan: Wuhan University Headquarters, 1968), 34-35].

¹⁰ 毛泽东, 对卫生工作的指示: 在中央政治局讨论中央卫生部党组报告时所作 (1954 年 11 月), *毛泽东思想万岁 (1949.10-1957.12)* (武汉: 钢二司武汉大学总部, 1968), 48-50 [Zedong Mao, “Instruction of Health Work (November 1954),” *Long live Mao Zedong Thought (1949.10-1957.12)* (Wuhan: Wuhan University Headquarters, 1968), 48-50].

Commander-in-Chief might not be an expert in driving tanks and airplanes, or firing artillery, but Commander-in-Chief was more than qualified to lead the army because of his capability in political leadership. Mao also pointed out that the thought of “you could not control our work if you had no specialisation in this field” was common and existed not only in health authorities, but also the military, which should be tackled in every sector.¹¹

Mao further instructed that the party should have taken leadership in all specialised fields including military, economics, cultural and education, public health, etc. He claimed that one could not speak of leadership without politics. The main job of the Minister of Health was to engage in leadership, which was, political work. Mao criticized the division of political and technical duties among different deputy Ministers of Health. In Mao’s opinion, the separation of political and technical work was wrong, and all leaders should have fulfilled their duty of leadership politically. If a public health leader only paid attention to their specialized field, and only cared about subcutaneous intramuscular injection, there would be no space for politics to squeeze in. Those who were working in leadership roles must have understood the work of the party and the work of the masses, and they must not have only taken care of medical work while ignoring political work. Moreover, Mao also pointed out that there was a strong bourgeois ideology in health sectors, and its concrete manifestation was the unwillingness to be led by the party, lack of politics, oversight of views of the masses, and no collective leadership. He believed this kind of “bourgeois thinking” was common in the national health authorities, which had to be criticised. He stressed that health work had to be under the leadership of the CCP, instead of “establishing an independent kingdom”.¹²

In addition, Mao also advocated for promoting Traditional Chinese Medicine (TCM)¹³. In his opinion, Chinese medicine was one of the great contributions China had made to the world. The valuable experience of Chinese medicine must have been inherited and carried forward.¹⁴ Earlier on 30 July 1954, Mao gave an instruction of TCM work. He pointed out that Chinese medicine had a history of thousands of years, while Western medicine had only been introduced into China for decades. Among 60 billion Chinese people, more than 50 billion were relying on traditional Chinese medicine for the diagnosis and treatment for

¹¹ Ibid.

¹² Ibid.

¹³ There are multiple understandings of TCM. I am referring here to the state-imposed definition of TCM. Qihe Xu, et al., “The Quest for Modernisation of Traditional Chinese Medicine,” *BMC Complementary and Alternative Medicine* 13, no. 1 (2013): 132; Michael Eigenschink, et al., “A critical Examination of the Main Premises of Traditional Chinese Medicine,” *Wiener klinische Wochenschrift* 132, no. 9 (2020): 260-273.

¹⁴ Ibid.

diseases, while only tens of millions could access to Western medicine, most of whom lived in big cities. However, instead of being inherited and promoted, TCM had been underestimated and rejected. For example, TCM practitioners were not issued certificates without passing examinations involving physiology, pathology, and other western medicine courses. In addition, there were regulations on TCM and TCM practitioners were not to be hired in hospitals. Mao stressed again the importance of the unity of Chinese and Western medicine, which, in his opinion, should have started from transforming the perception of TCM at health officials at all levels.¹⁵

In the future, Mao said, the most important thing was to let Western medicine learn from Chinese medicine instead the other way around. To do this, he instructed to send graduates from medical universities or medical schools to learn clinical experience from famous TCM practitioners. Secondly, all hospitals were instructed to systematically invite TCM practitioners to participate in consultation and treatment, allow inpatients to use traditional Chinese medicine, and make requirements to guarantee the respect of TCM systematically, so that the TCM practitioners did not feel difficulties and worries about going to the hospital for diagnosis. Thirdly, he instructed to protect and promote the research, production, and distribution of Chinese herbal medicine. Finally, he suggested to protect and promote TCM books, organise experienced practitioners to translate books from ancient Chinese into modern Chinese and edit them into a series of textbooks. Health authorities failed to unify TCM and Western medicine would be dismissed.¹⁶ Having disagreements with the central government in terms of general guidelines of public health work, especially on the unity of Chinese and Western medicine, medical education, policies facing workers, peasants and soldiers, and cadres, He Cheng, was publicly criticized by the Mao and revoked as Secretary of the Party Leadership Group and Deputy Minister of Health for committing serious mistakes of principle.¹⁷

At the same time, China had accelerated the pace of industrialisation. Mao delineated a general route for the transitional period in 1953. In his opinion, “the time between the

¹⁵ 毛泽东, 对中医工作的指示: 在中央政治局讨论中央卫生部党组报告时所作 (1954年7月30日), *毛泽东思想万岁 (1949.10-1957.12)* (武汉: 钢二司武汉大学总部, 1968): 51-52 [Zedong Mao, “Instructions for Traditional Chinese Medicine Work (30 July 1954), *Long live Mao Zedong Thought (1949.10-1957.12)* (Wuhan: Wuhan University Headquarters, 1968), 51-52].

¹⁶ Ibid.

¹⁷ 毛泽东, 中共中央关于贺诚同志的错误的决定(1955年9月30日), *毛泽东思想万岁 (1949.10-1957.12)* (武汉: 钢二司武汉大学总部, 1968): 68-70 [Zedong Mao, “The CCP Central Committee’s Decision on the Mistakes of He Cheng (30 September 1955), *Long live Mao Zedong Thought (1949.10-1957.12)* (Wuhan: Wuhan University Headquarters, 1968), 68-70].

founding of the People's Republic of China and the basic completion of socialist transformation is (was) a period of transition. The Party's general line or general task for the transition period is basically to accomplish the country's industrialization and the socialist transformation of agriculture, handicrafts and capitalist industry and commerce over a fairly long period of time."¹⁸ Accordingly, the first Five Year Plan was launched in 1953, which aimed to follow the Soviet model to drive the development of heavy industry. However, the official document of the Five-year Plan was not released until July 1955, which was not a detailed plan requiring strict compliance, but a series of general guidelines.¹⁹

Based on the principles general line of building socialism with greater, faster, better, and more economic results, the Ministry of Health developed a blueprint of national health work from 1956 to 1967. The health work in this period was to be conducted under the principles of comprehensive planning, unified deployment, active development, improvement of quality, and strengthening of scientific research. The goals of health work for this decade were to eradicate the most harmful diseases, eliminate four pests, reduce the overall morbidity and mortality of various diseases, and improve general health standards. The first priority of the health work from 1956 onwards was to eradicate schistosomiasis, plague and malaria in 7 to 12 years. The second priority was to eliminate four pests including rats, flies, mosquitoes, and sparrows, which were considered as major vectors transmitting diseases.²⁰ In addition, the ministry also deployed work on Patriotic Health Campaigns, maternity and child health, as well as development of public health infrastructures at each level, and with specific focus on ethnic minority habited areas. The ministry had also given instructions on disease surveillance, medical education, promoting TCM, developing pharmaceutical industries, public-private partnership, and public education.²¹

Smallpox was eventually considered eradicated in China in the mid-1960s against this background. According to the Chinese authorities' report to the WHO for the certification of smallpox eradication in 1979, a man named Hu Xiaofa from Yunnan Province who was infected with the virus in March 1960, was considered as the last smallpox case occurred in China. Located in the country's southwest periphery, Yunnan shared borders with Burma, Laos, and Vietnam, and had been home of more than 20 ethnic minority groups. Although

¹⁸ Mao Tse-tung, "The Party's General Line for the Transition Period (August 1953)," *Selected Works of Mao Tse-tung, Volume V* (Oxford: Pergamon Press, 1977), 102.

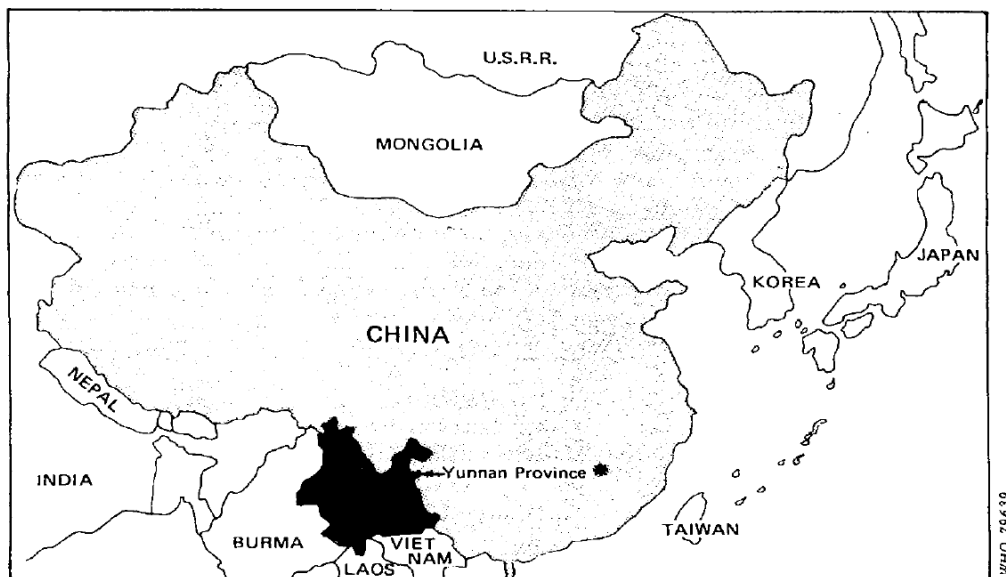
¹⁹ Arunabh Ghosh, *Making It Count: Statistics and Statecraft in the Early People's Republic of China* (Princeton and Oxford: Princeton University Press, 2020), 157.

²⁰ BMA: 135-001-00357, 一九五六年到一九六九年全国卫生工作规划要点草稿 (Ministry of Health, Main Points of the National Health Work Plan from 1956 to 1969 Draft), 13 March 1956.

²¹ *Ibid.*

during the Japanese war, government organization and educational retreated to the hinterland had brought here science and infrastructures, Yunnan was still one of the least developed areas in China in the 1950s and 1960s. The mountainous topography of the province, poor transport infrastructure, underdeveloped modern industry and economy, language and cultural differences, low education levels, as well as resistance to western medicine were among the reasons that limited the accessibility of public health services in rural areas of the province, especially those close to the borders.²²

Figure 3.2 Province of Last Reported Smallpox Cases in China, March 1960



Source: China, World Health Organization, and Global Commission for the Certification of Smallpox, *Smallpox Eradication in China* (Geneva: World Health Organization, 1979), 1, <https://apps.who.int/iris/handle/10665/68275>.

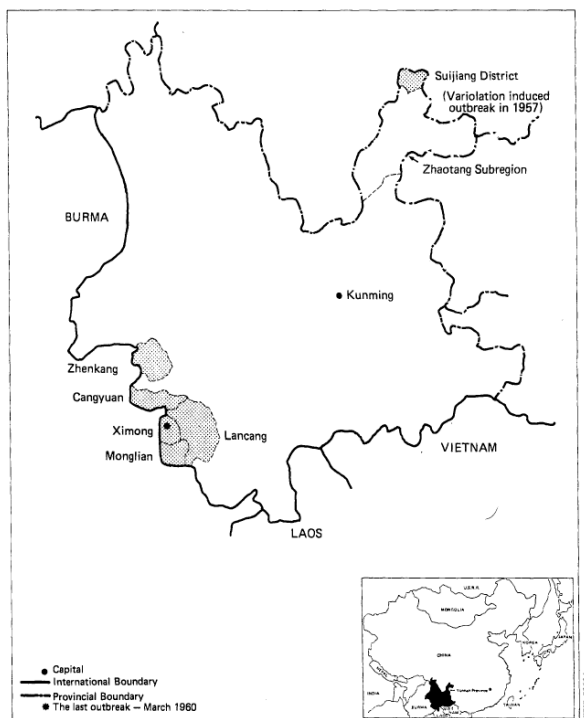
Located in the western of Yunnan Province bordering Burma, Monglian and Cangyuan were two districts reported the last local transmissions of smallpox in mainland China. The investigation carried out in late 1970s by Chinese authorities had shown that an outbreak of smallpox occurred in Monglian in 1958 following a case introduced from Burma, which caused 333 cases and 59 deaths in total. In 1959, 672 cases and 96 deaths were reported in Cangyuan district, which was also caused by imported cases from Burma.²³ These outbreaks, the Chinese authorities reported, had resulted from frequent contacts between the residents of

²² Yunnan Department of Health and World Health Organization, *Special Report on Smallpox and Its Eradication in Yunnan Province, China* (Geneva: World Health Organization, 1979), 1, <https://apps.who.int/iris/handle/10665/68312>.

²³ China, World Health Organization, and Global Commission for the Certification of Smallpox, *Smallpox Eradication in China* (Geneva: World Health Organization, 1979), 6-9, <https://apps.who.int/iris/handle/10665/68275>.

the two countries, the attacks of the remaining Kuomintang troops at the China-Burma border, as well as the insufficient coverage of smallpox vaccination. In January 1959, 7 residents of Jiada village in Danjia subdistrict of Cangyuan district who were infected with smallpox travelled back to the village from Burma. In addition, another two infected individuals went back to the villages Banmo and Bankao. However, smallpox vaccination coverage in this area was insufficient. It was estimated that 12,508 out of 58665 residents in Cangyuan district had not been vaccinated in 1959. In Danjia sub-district, where the outbreak hit the hardest, the vaccination only covered 39.7% of population.²⁴

Figure 3.3 Yunnan Province: Location of Districts Affected by Smallpox in 1957-1960



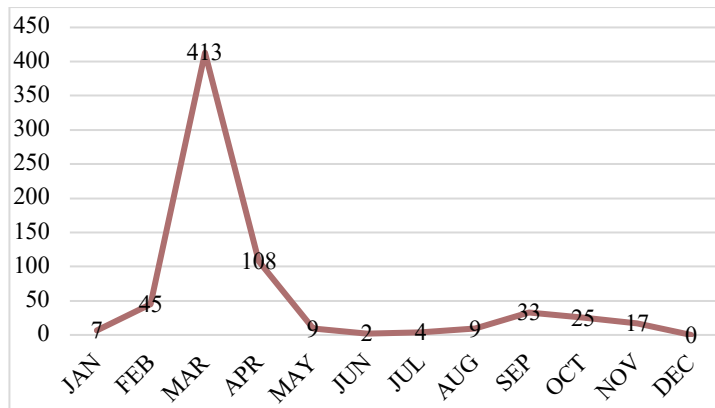
Source: China, World Health Organization, and Global Commission for the Certification of Smallpox, *Smallpox Eradication in China* (Geneva: World Health Organization, 1979), <https://apps.who.int/iris/handle/10665/68275>.

During this outbreak, five out of six sub-districts in Cangyuan district reported smallpox cases apart from Yanshuai, which was separated from the others by mountains. In the five affected sub-districts, Danjia reported the highest number of smallpox cases (Table 6), which stood at 447, 66.52% of a total of 672 cases reported in Cangyuan district in 1959. The outbreak reached its peak in March and the number of cases dropped in April. Smallpox cases continued to be reported from May to July, but the number of cases increased again in

²⁴ Ibid, 9.

August. After introducing epidemic containment interventions carried out by local health services with assistance from the provincial health authorities, the epidemic had been brought under control. The number of cases decreased from September to November. (Figure 3.4). Although the outbreak in Cangyuan was under control at the end of 1959, it caused another cluster of cases in Monghai District, which reported 20 cases and one death early in 1960.²⁵

Figure 3.4 Reported Smallpox Cases by Month, Cangyuan District, Yunnan Province, 1959



Source: China, World Health Organization, and Global Commission for the Certification of Smallpox, *Smallpox Eradication in China* (Geneva: World Health Organization, 1979), 9, <https://apps.who.int/iris/handle/10665/68275>.

According to the Chinese official report to the WHO in 1979, the last case of local transmission of smallpox in China occurred in Ximeng district in March 1960, which was also an area bordering Burma. The cluster of cases traced back to a 9 years old girl who travelled back to Dai Cao La village, Jingkan commune, Xinchang subdistrict, Ximong district in Yunan Province to visit a family member from Banyue village in Burma in December 1959. In Dai Cao La village, the girl had shown symptoms and passed smallpox to another 11 years old girl who infected another 5 individuals in Yong Bing village. The cluster expanded to another commune called Lisao, which reported 10 cases and 1 death in total from December 1959 to March 1960. Among those cases, a 23 years old man named Hu Xiaofa was considered as the last locally infected case of smallpox in China.²⁶ Apart from this cluster, there was another introduced case in Jingxin subdistrict of Monglian district in March 1960, but it did not cause any local transmission. The young man named Ya Ah, who

²⁵ Ibid, 9.

²⁶ Ibid, 11.

came back to Yunnan after being infected in Burma, was recognised as the last case of imported smallpox in China.²⁷

Table 3.2 Reported Smallpox Cases and Deaths by Subdistrict, Cangyuan District, 1959

Sub-district	Population	Cases	Deaths
Yonghe	4302	48	6
Danjia	3355	447	39
Bonhong	8518	36	1
Nuo Liang	15500	83	36
Mongjiao	7080	58	14
Yanshuai	19910	0	0
Total	58665	672	96

Source: China, World Health Organization, and Global Commission for the Certification of Smallpox, *Smallpox Eradication in China* (Geneva: World Health Organization, 1979), 10, <https://apps.who.int/iris/handle/10665/68275>.

However, after the eradication of smallpox was certified by the independent commission appointed by the WHO in 1979, another investigation carried out by Chinese authorities in early 1980s found 28 additional cases in Yunnan in 1961, which were not reported in the documents submitted for certification in the previous year. Apart from the cluster of cases in Yunnan, a total of additional 6 cases were found in Xizang Autonomous Region (Tibet), one in 1962, and five in 1964, which were caused by an importation from Nepal. More importantly, the investigation uncovered an outbreak of smallpox in 1963-1965 in Shanxi and Inner Mongolia Autonomous Region caused by inappropriate storage of variolation material.²⁸ Before this outbreak, the smallpox cases were last reported in Shanxi in 1952, and in Inner Mongolia in 1956. As mentioned earlier, smallpox vaccination was interrupted by the great famine in 1959-1962. A vaccination survey in Dalat County, Inner Mongolia in 1963 showed about a quarter of residents had not been vaccinated, and most of them (87.5%) were children under 5 years old. In addition, due to shortage of supplies of smallpox vaccines, local residents relied on variolation to immunize an individual against smallpox with the material taken from a patient or a recently variolated individual. Apart from that, holding beliefs on traditional inoculation could not only prevent smallpox, but also dispel “poison” in new-borns which protected them from other illnesses, local residents prefer infants to be inoculated by local or visiting variolators.²⁹

²⁷ Ibid, 11.

²⁸ Yutu, Jiang, et al., “Outbreaks of Smallpox Due to Variolation in China, 1962–1965,” *American Journal of Epidemiology* 128, no. 1 (1988): 39-45.

²⁹ Ibid.

Table 3.3 Occurrence of Variolation and Smallpox Cases in Dalat County, Inner Mongolia Autonomous Region, China, by Five-Day Periods, 1963

Month	Date	No. of successfully variolated persons	No. with a generalized rash	No. of secondary smallpox cases
March	5-9	32	0	0
	10-14	36	0	0
	15-19	53	10	0
	20-24	56	2	0
	25-31	95	25	1
April	1-4	90	45	10
	5-9	46	15	3
	10-14	12	14	11
	15-19	32	25	13
	20-24	12	0	13
	25-30	0	0	5
May	1-4	0	0	6
Unknow		0	46	0
Total		464	182	62

Source: Jiang, et al., "Outbreaks of Smallpox Due to Variolation in China," 43.

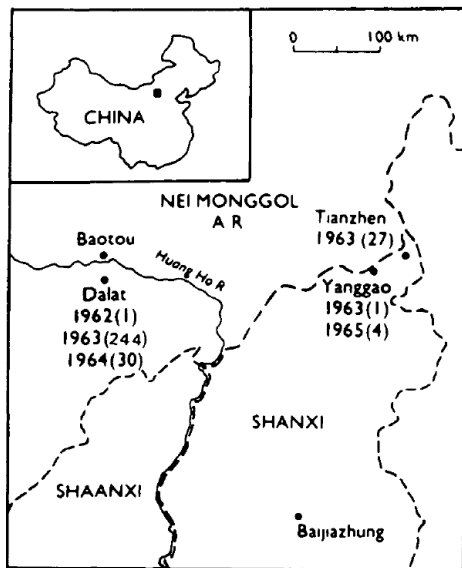
As discussed in Chapter 1, smallpox inoculation had been practiced hundreds of years in China before the introduction of Jennerian form of vaccination. Traditional Chinese medicine practitioners and variolators inoculated individuals periodically. Often, the family members of patients harvested the scabs of the resulting pox in order to sustain the potency of variolation materials. However, different methods were adopted by individuals in preserving. Some variolators wrapped the scab with paper then placed in a jar with honey, which was stored in a dark and cool place in summer and warm place in winter. Some carried the paper wrapped scabs with him beneath his underwear. Some other practitioners placed the scabs in dried pitted dates or wrapped the scab with paper and preserved it in cane sugar then stored it in a porcelain jar. There were also practitioners who placed the material in the cock quills then stored in dry place. When practicing inoculation, the variolators usually mixed grinded scabs with human milk and took the mixture as variolation lymph. Then they used a scalpel to make a cut on the upper arm of the vaccinee and drop the lymph on into the cut.³⁰

An investigation carried out by Dr Jiang Yutu in 1985 found that this practice resulted in smallpox outbreaks in Shanxi Province in 1963-1965, 11 years after the previous endemic in 1952. The first case was traced back to March 1963. The outbreak reached its peak in May, when the county health authorities had been notified and taken interventions to contain the transmission including disposal of variolation material and equipment, banning traditional

³⁰ Ibid.

inoculation, as well as targeted mass vaccination. During this outbreak, 28 cases were reported in total. 27 of them were from Tianzhe County and one case from Yanggao County. Among the 28 cases, 13 were directly caused by variolation, while the other 15 were secondary cases. After reported to the local health authorities, eight specimens of variolation material were collected, which all contained variola virus.³¹

Figure 3.5 Sites of Smallpox Outbreaks in Northern China, 1962-1965



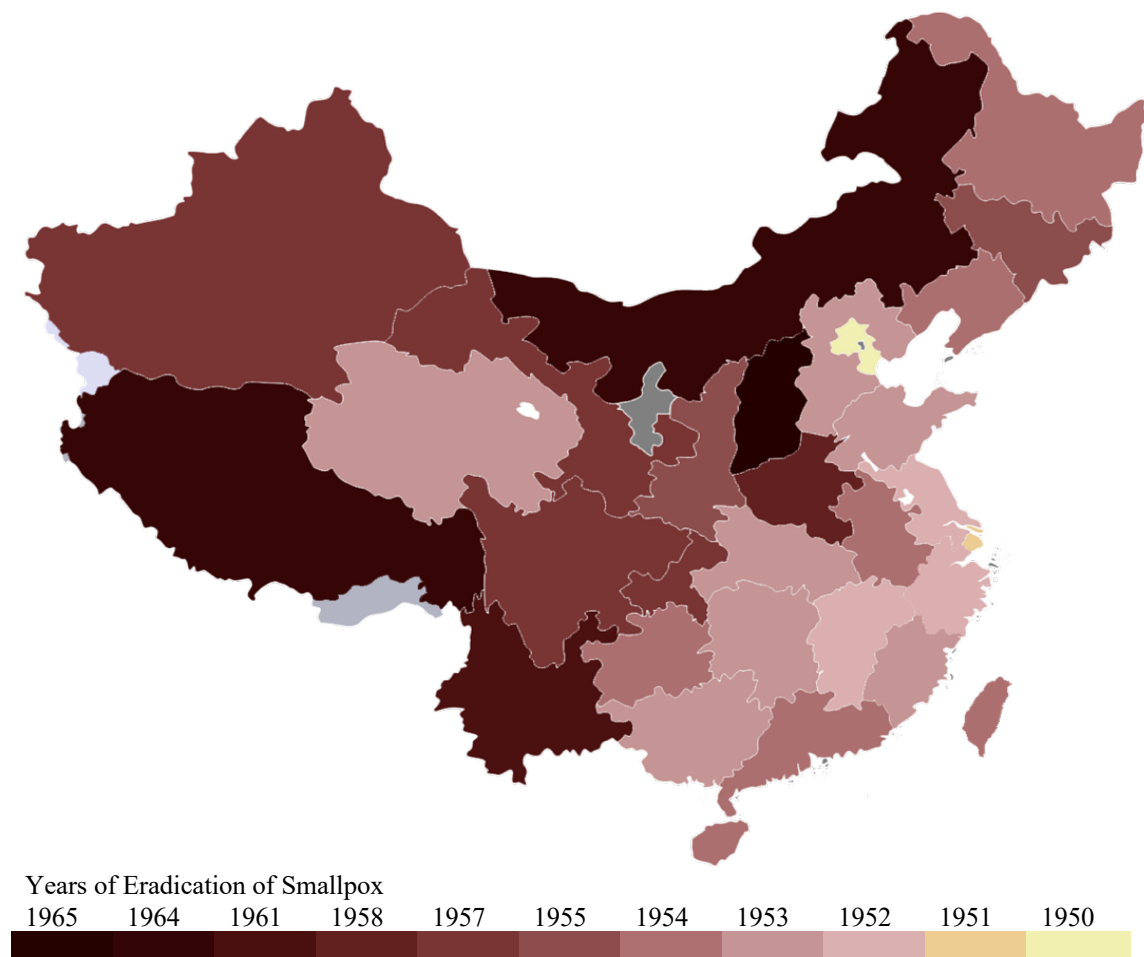
Source: Jiang, et al., "Outbreaks of Smallpox Due to Variolation in China, 40.

In Inner Mongolia, Dr Jiang's investigation revealed that the first case of smallpox outbreak after its last incident in 1956 occurred in 1962, which was not captured by the local record from epidemic control station. The first case in Inner Mongolia was traced to an 15-year-old orphan girl, who lived with her relatives in a remote area. She was infected by an infant who had been successfully variolated by an unidentifiable variolator when she was visiting another village. However, this case did not cause any secondary infection, which was independent from the outbreak in Dalat County in 1963-1964. The later outbreak was involved with a 70-year-old variolator who learned the technique from his uncle. He did not practice the variolation between 1952 and 1963 when smallpox vaccination was provided by the government for free. After the great famine, smallpox vaccination was interrupted due to shortages of vaccines. He re-established his variolation service for the residents of the county with a charge. Using similar preservation and variolation methods adopted by variolators in Shanxi Province, he practiced variolation from March to June each year. According to local

³¹ Ibid.

record, 464 individuals had been variolated in Dalat County in 1963. 60.8% (282/464) of them developed local lesion, and 182 developed mild reaction with rash from 4 to 13 days, with an average of 6.8 days. However, these cases were not considered as smallpox cases by the county health authorities and the subregional epidemic control stations, and they were not counted or reported to the Autonomous Regional Health Bureau and upper-level epidemic control station. Unfortunately, cases with symptoms of naturally occurring smallpox began to occur in the county on 29 March 1963. The county health authority recorded 62 smallpox cases from March to May in Dalat County. The medium duration of their symptoms was approximately 17.2 days, and very few of them exhibited pockmarks after recovery.³²

Figure 3.6 Smallpox Eradication in China-Year in Which Reported 0 Smallpox Case in Each Province, 1950-1965



Source: WHORASSEP: ID1209 Box659, Letter to Frank Fenner, Professor, the John Curtin School of Medical Research, Canberra, Australia, from Jiang Yu-tu, Academy of Military Medical Sciences Institute of Microbiology and Epidemiology, Beijing, the PRC, 21 November 1984, Map generated by Lu Chen.

³² Ibid.

In 1964, another independent outbreak occurred in the same county but in different districts, which involved another variolator, who inoculated 118 individuals from January to March. Four of the individuals developed rash, and they infected another 26 patients who showed symptoms of naturally occurring smallpox. However, no deaths had been reported related to the smallpox outbreaks in Shanxi and inner Mongolia in 1962-1965. In all outbreaks in the two provinces, the county health authorities had taken epidemic containment measures after receiving notice, including isolating cases, confiscating variolator's material and equipment, and mass vaccination. The measures efficiently contained the transmission of the disease and no further cases had been reported in Inner Mongolia and other places in China after 1965 on Chinese official record (see figure 3.6).³³

Although the health system was compromised after the controversial strategy of great leap forward³⁴ in 1958 and the coming great famine, the county level disease surveillance and responding system was still able to capture outbreaks of infectious diseases and deliver vigorous containment measures. However, the lack of transparency in each level of public health authorities in sharing information and data of infectious diseases had restricted the efficiency and efficacy of epidemic prevention and control. As discussed in the previous chapters, public health was considered as a representative of the image of the Chinese state, and the information of morbidity, mortality, and infectious diseases was considered as national secrets. Moreover, the government further restricted the release of infectious disease figures after the Korean war. In addition, the figures of infectious diseases and vaccinations were often connected with the performance assessment of local health authorities. Therefore, when infectious diseases outbreaks occurred, local authorities would prefer to suppress the information and contain the transmission under the table, unless the outbreaks developed beyond their control. Dr Jiang's investigation showed that during the smallpox outbreak in Inner Mongolia, the information was not shared with other counties and regions but had been suppressed by the authorities of the Dalat County. Even health professionals in neighbouring counties were not aware of the outbreak. In Jiang's opinion, the outbreak in the following year which was also caused by inappropriate storage of variolation material, could have been avoided if they had been informed of the information and had taken measures to prohibit local practitioners from practicing variolation.³⁵

³³ Ibid.

³⁴ An economic and social campaign led by the CCP from 1958 to 1962, for more information, read Alfred L. Chan, *Mao's Crusade: Politics and Policy Implementation in China's Great Leap Forward* (Oxford: Oxford University Press, 2001).

³⁵ Jiang, et al., "Outbreaks of Smallpox Due to Variolation in China," 41.

However, information regarding smallpox, along with other infectious diseases, is considered highly confidential today as it was in the 1960s. In order to study the details of smallpox eradication in Yunnan Province and supplement the narratives Chinese official report submitted for the certification of smallpox eradication in 1979, I visited Yunnan Provincial Archive in Kunming, but was not able to access the original records. I was told the information was “sensitive”, and the access required to obtain a formal letter from the Yunnan Provincial Health and Family Planning Commission, but no department claimed responsibility for the authorisation. Therefore, this section of smallpox eradication in 1960s has heavily relied on the Chinese official report to the WHO and the reports and publications of retrospective investigation conducted by Chinese scientists. The challenge of obtaining data and questioning of the authenticity of data have been shared by many China scholars. Borrowing a metaphor from Arunabh Ghosh, “statistics from the PRC was treated like gold dust: nearly impossible to obtain, but with the additional (and often justifiable) fear that they were the product of alchemy.”³⁶

II. Management of health statistics in China and a secret state

Apart from the political restrictions, the quality of Chinese data had also been determined by the data science adopted by the government. Like other socialist states, the statistics in China had drawn inspiration from the Soviet model, and adopted a centralized system, which was in favour of a national agency to be responsible for the standardizing, collecting, utilizing, and releasing data of the whole state. The exhaustive enumeration through periodic complete counts was dominant in China from 1950s to early 1980s among other approaches to statistics including ethnographic and stochastic approaches. The adoption of exhaustive approach, as Ghosh argues, was based on the classification of statistics as social science rather than natural science, which excluded mathematical methodology especially probability from statistics. However, exhaustive enumeration had its limitations, and was frequently inefficient and impractical in some certain fields, especially in a country as large and diverse as China. After recognising the limitations of exhaustive enumeration, the Chinese turned to Indian statisticians who were able to access the advanced knowledge from international community and had various experience of applying the method.³⁷ In 1956, Zhou Enlai visited the Indian Statistical Institute and built connection with the director of the

³⁶ Ghosh, *Making It Count*, 282.

³⁷ *Ibid*, 6.

institution, Prasanta Chandra Mahalanobis³⁸, who was a pioneer in experimenting different approaches in statistics, especially pilot surveys and optimum survey design, to manage the agricultural economy of a vast and decentralized country.³⁹

The stochastic approach they learned from India had been developed rapidly in 1950s in western world after WWII due to advances in mathematical statistics and probability theory in 1920s-1930s, which generated more accurate data in a cost-effective way.⁴⁰ The advancement in statistics had also transformed how data in health and medicine had been counted and utilised after the war. The development in probability theory and statistics stimulated the demand for randomized experiments. In addition, achievement had also been made in the ethical issues inherent in human experimentation after the Nazi's unethical human experiment during the war. The Nuremberg Code and related Declaration of Helsinki formed the basic principles that ensure the rights of human subjects in medical research. They protected the patients' right to informed consent and the necessity of ethical review by an independent body.⁴¹ The advancement in statistics and medical ethics had encouraged the adaptation of the randomized clinical trial (RCT) into medical research. The implementation of RCT had stimulated the theoretical consideration and development of biostatistical methods in the 1950s.⁴² Biostatistics were derived from health statistics, which mainly based on observational data analysis, and had been readdressed and restructured as new approaches of analysis adopted both qualitative and quantitative methods.⁴³

While Chinese scientists had limited access to these new developments in clinical trials and biostatistics, they were encouraged to learn from the USSR in every possible field by the communist government in the 1950s. Although the Chinese started to question the Soviet model and sought for different path in interpretations of Marxism–Leninism and geopolitics during the Cold War in 1956, Soviet methods were still dominant in terms of science and technology.⁴⁴ In the field of health statistics, it mainly adopted periodic complete counts and observational data analysis. In 1951, the Ministry of Health had issued two documents

³⁸ Prasanta Chandra Mahalanobis was an Indian scientist and statistician, who has been considered as the father of modern statistics in India. He played an important role in the development of India and in the British Commonwealth and Non-Aligned Movement. Benjamin Zachariah and Renu Kohli, *Developing India: An Intellectual and Social History C.1930-50* (New Delhi: Oxford University Press India, 2005).

³⁹ Ghosh, *Making It Count*, 221.

⁴⁰ Ibid, 2-7.

⁴¹ Paul Weindling, "The Origins of Informed Consent: The International Scientific Commission on Medical War Crimes, and the Nuremberg Code," *Bulletin of the History of Medicine* 75, no. 1 (2001): 37–71.

⁴² Lloyd D. Fisher, "Advances in Clinical Trials in the Twentieth Century," *Annual Review of Public Health* 20, no. 1 (1999): 122.

⁴³ Chin Long Chiang, and Marvin Zelen, "What Is Biostatistics?" *Biometrics* 41, no. 3 (1985): 771-75.

⁴⁴ Ghosh, *Making It Count*, 77.

regarding health statistics to regulate the data collection and utilization, including the *Opinions on Establishing a Statistical System* (建立统计制度的意见) and the *Interim Measures on the Release and Supply of Statistics* (关于发布和供应统计数字的暂行办法). Later in 1952, the Ministry established a health network reporting system regarding data of the national health institutions, beds, personnel and major equipment, which was renamed as the *Reports for the Basic Status of Health Services* (卫生事业基本情况报表). During the First-Five Year Plan from 1953 to 1957, the ministry had standardised statistical reporting methods of various major health services and population health, including numbers of hospitals, nursing homes, outpatient clinics, medical service levels for residents, hospitalization, outpatient disease classification, infectious diseases, vaccination, maternal and child health, as well as industrial health, morbidity, and mortality rate in industrial and mining enterprises, etc. In 1957, the method was synthesized and transferred into the *National Health Statistics Report System* (全国卫生统计报表制度), which had strengthened the state control over the collecting, utilizing and releasing data. The system formed the basis of the health statistics report and management at all levels in nearly 40 years. In addition to the regular data reporting, the ministry had also periodically organised demographics census and other one-time complete counts of health metrics based on the needs of national health policies and priorities in different periods. However, the quality of data was significantly compromised by the “Great Leap Forward” programme, when faking data was common in pursuing unrealistic development goals. Moreover, the subsequent Cultural Revolution significantly interrupted the national health statistic work, although local authorities still kept limited data. The ten years’ national health statistics were not available until 1979 when limited data in local record during 1966-1976 was recovered through retrospective investigations and studies.⁴⁵

However, “statistics are rarely only about numbers”⁴⁶, and they are not able to prove anything themselves alone. The statistics have to form a narrative to speak what they claim to represent.⁴⁷ It is specifically true in the case of China in the 1950s-1970s. Health metrics, especially in Mao’s era, frequently acquired a propaganda significance, and they were expected to reflect advances for which the regime claimed credit. The international

⁴⁵ 田凤调等, “建国以来我国卫生统计事业发展过程的回顾,” *中国卫生统计* 11, no.5 (1994): 5-12 [Fengdiao Tian et al., “Review of the Development of Health Statistics in China since the Founding of the Country,” *Chinese Journal of Health Statistics* 11, no.5 (1994): 5-12].

⁴⁶ Ghosh, *Making It Count*, 1.

⁴⁷ Vincanne Adams eds., *Metrics: What Counts in Global Health* (Durham and London: Duke University Press, 2016), 9.

knowledge exchange had often carried such a purpose. As discussed in chapter 2, the communist regime turned down the invitation to join in the WHO and interrupted scientific exchange with western countries but heavily relied on Soviet science in the 1950s. However, scientists were still able to attend some international medical conferences approved by the government. For example, Chinese representatives attended World Medical Congress in Vienna in 1953. *People's Daily* reported the conference, and gave special attention to the speech on the impact of war on people's health delivered by Fang Shishan (方石珊), the head of the Chinese delegation. Dr Fang showed the audiences of the public health achievement made in China after 1949, using health statistics including the elimination of smallpox cases in big cities and coastal areas, decreased case numbers of tuberculosis, the dropping maternal mortality rate, as well as the increasing numbers of trained medical professionals. He attributed these achievements to the leadership of the communist government. "The only reason why public health conditions had fundamentally changed," Dr Fang said, "was that the government acted according to the people's wishes."⁴⁸

In spite of various restrictions on international scientific exchange introduced by the central government based on its political agenda, some Chinese scientific research institutions were still able to build scientific and technological cooperation with their international counterparts, mostly socialist countries during the 1950s. Through limited information and personnel exchange, Chinese scientists were able to access some newly developed scientific knowledge and technology, technical materials and specimens, as well as books and publications published overseas. However, some issues occurred during the process of exchange, such as individual scientists discussing collaboration without authorisation from the government, and foreign scholars publishing information obtained from China without permission.⁴⁹ As a result, the Foreign Affairs Office introduced new restrictions on scientific and technological collaboration with international bodies in August 1960. The new restrictions further tightened the rules of both personal and organizational external communications among scientific communities. It required all the scientific exchanges to go through the national government, and the correspondence with foreign individuals and

⁴⁸ 新华社, "在维也纳举行的世界医学会议上方石珊报告新中国保健事业的巨大成就,号召全世界医生们团结一致谴责战争促进人类的福利," *人民日报*, 1953年6月1日 [Xinhua News Agency, "At the World Medical Conference Held in Vienna Fang Shishan Reported on the Great Achievements of the New China's Health Work, and Called on Doctors from All Over the World to Unite in Condemning War to Promote the Welfare of Mankind," *People's Daily*, 1 June 1953].

⁴⁹ JPA: 4018-001-003-906, 科学技术委员会关于同社会主义国家相应科学机构之间通讯联系的建议 (Instructions of the Commission for Science and Technology regarding Correspondence with Scientific Institutions in Socialist Countries), 1963.

institutions was required to obtain approvals from the authorities. The rules not only applied to correspondence involving work or academic issues, but also included personal mails to foreign scholars such as holiday greetings and birthday wishes.⁵⁰

In accordance with the instructions from the Foreign Affairs Office in 1960, scientific institutions and academic sectors such as the Chinese Academy of Sciences had ceased their communication and collaboration with international bodies due to time-consuming and cumbersome approval process. Individual scientists and scholars had also cut off their ties with foreign personnel in fear of misconducts and penalties. However, it did not take long for the central government to recognise the drawbacks that came with the strict and broad control over international scientific exchange. In February 1963, the Foreign Affairs Office of the State Council forwarded two documents issued by the Central Committee of the CCP. The two documents drafted by the Commission for Science and Technology (CST) and the Chinese Academy of Sciences (CAS) provided instructions regarding lifting restrictions of international correspondence in scientific research sectors.⁵¹

According to the report of the Commission for Science and Technology, some Chinese scientific research institutions continued to receive collaboration invitations and publication from socialist countries during 1960-1962 despite the various restrictions. For example, the Vietnam Research Institute of Chemical Industry of the Ministry of Heavy Industry intended to build connections with Shanghai Research Institute of Chemical Industry, and Czech Cable Research Institute requested to establish contact with Shanghai Cable Research Institute. The commission regarded the restrictions introduced in 1960 as unreasonable and inappropriate, which only allowed scientific collaboration at national level while cutting off institutional and personal exchange with socialist countries. The commission suggested the restrictions generated negative effects both academically and politically. Refusing to build connections with academic sectors worsened ties with socialist countries. With reduced contact with foreign scientific organizations and personnel, less advanced science and technology had been introduced to China in the two years. Therefore, it was also counter-productive to intelligence organizations to obtain international scientific and technological information. The strict rules had also provoked resentment among Chinese scientific researchers, and

⁵⁰ JPA: 4018-001-003-906, 中国科学院关于科学研究人员对外通讯联系的一些情况和今后处理掌握的意见 (Situations of Scientific Researchers' Correspondence with International Sectors in Chinese Academy of Sciences and Suggestions for Future Management), 1963.

⁵¹ JPA: 4018-001-003-906, 江苏省人民委员会外事办公室通知(Notice from the Foreign Affairs Office of the People's Committee of Jiangsu Province), 1963.

aroused criticism from foreign scholars for the lack of freedom of communication and speech.⁵²

Therefore, the commission recommended to recover communications with scientific institutions in socialist countries, but not to the level before 1960. Under the premise of maintaining confidentiality and no trading in foreign currency, the institutions were able to exchange scientific and technological publications that have been approved by the Foreign Affairs Office of the State Council, as well as a small amount of seeds, samples, specimens, bacteria strains, seedlings, cuttings, etc. They could also exchange general information and open published standards, quotas, and technical standards. Chinese scientists were allowed to enquire foreign experts regarding general scientific and technical issues, and to respond to foreign experts' technical enquiries. All other matters beyond the above scope should be resolved through scientific and technological cooperation at state level.⁵³

In addition, the Chinese Academy of Sciences had identified two types of scientific researchers' international correspondence. One type of contact with foreign institutions or scholars was where the person in charge of the research institution or responsible for a research project. Although the type of connection was made in the form of private communication, it was inherently an official contact, which could be categorized as foreign affairs activities. Regarding this type of communication, the CAS suggested to continue the requirement of review and approval by the administrative and party authorities. Another type was private communication between individual scholars. The CAS recommended to be treated separately from the communication for working purposes, which should have been individuals' personal responsibility. However, it was difficult to separate personal communication from working correspondence, which caused confidentiality issues such as leaking information without official authorisation.⁵⁴

Therefore, the CAS suggested the private contact with foreign institutions and individuals should not have involved work related content, such as: discuss scientific cooperation; participating in international specialized associations or attending academic conferences; acceptance or rejection of academic titles or prize awarded by foreign countries; issues involving confidentiality or non-disclosure information during scientific exchange;

⁵² JPA: 4018-001-003-906, 科学技术委员会关于同社会主义国家相应科学机构之间通讯联系的建议 (Instructions of the Commission for Science and Technology regarding Correspondence with Scientific Institutions in Socialist Countries), 1963.

⁵³ Ibid.

⁵⁴ JPA: 4018-001-003-906, 中国科学院关于科学研究人员对外通讯联系的一些情况和今后处理掌握的意见 (Situations of Scientific Researchers' Correspondence with International Sectors in Chinese Academy of Sciences and Suggestions for Future Management), 1963.

gifting books and publications, as well as important specimens, seeds, samples and other items without export approval from the state. Correspondence involving the above issues should have been reported and authorised by the head of the institution through Foreign Affairs Approval Procedure. Reporting and authorisation were not required if the correspondence was not work related, such as friendship between individuals, including holiday greetings, birthday wishes, and condolence; expressing appreciation for the books, materials, specimen seeds, samples and other items gifted by foreign scholars personally; gifting and exchanging books, publications, specimen seeds, and samples that were approved for export by the state.⁵⁵

The CAS also suggested individuals avoid initiating any discussions involving politics in private external communications. If their international counterparts raised any political issues, Chinese scientific researchers should have responded on the basis of articles and reports published on the *People's Daily or Red Flag* (a theoretical political journal published by the Chinese Communist Party) and requested approval from relevant department leaders. If the leaders were not certain with the response, decisions should be made by the foreign affairs departments. In addition, the CAS had also stressed the significance of ideological education of scientific researchers to make them attach importance to the disciplines of foreign-related activities, strictly and consciously abide by the confidentiality regulations, and increase political vigilance in international exchange activities.⁵⁶ The rules of international contact drafted by the CAS was approved by the Foreign Affairs Office of the State Council and distributed to all levels of educational and scientific research sectors on 12 September 1965 as principles of their international communication activities.⁵⁷

Through these rules, the CCP had established an absolute control over scientific information shared with international communities, even including other socialist countries, which were considered as China's allies. The visits to China by experts from socialist states had also been subjected to various restrictions of information exchange. In 1960, China signed the Health Collaboration Agreement with Democratic Germany, Poland, and Czech-

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ BMA: 135-002-00518, 中国科学院致外交部关于开展国际书刊交换和科学研究人员对外通讯联系问题的请示报告(Request for instructions from the Chinese Academy of Sciences to the Ministry of Foreign Affairs on the Issue of International Book Exchange and Scientific Research Personnel's External Communications, 14 December 1972.

Slovakia,⁵⁸ as well as a Cultural Cooperation Agreement with Bulgaria.⁵⁹ According to these agreements, experts in health and medicine in these countries had visited China in 1960. However, the exchange mainly focused on traditional Chinese medicine, including manufacturing and use of traditional herbal medicine and acupuncture techniques. Through the activities arranged by the Chinese side, the Ministry of Health expected the experts from those countries could learn the general roadmap of the communist regime's socialist construction and the achievement of Great Leap Forward in industrial and agricultural production, culture, education, and public health. The ministry also expected the hosting organizations to give special focus on the achievements made in integration of Chinese and Western medicine, Patriotic Health Campaigns, and the successful experience in eliminating pests and infectious diseases.⁶⁰

In October 1960, another Czechoslovak delegate, an infectious disease expert Professor P.⁶¹, visited China for 2 months to study the prevention and control plan of parasitic diseases and infectious diseases through China-Czech Health Cooperation Agreement. The hosting organizations were instructed to meet the expert's needs if they were not related to any confidential issues. During the introduction of infectious diseases control experience, the integration of Chinese and Western medicine and comprehensive measures of multiple interventions should be emphasized, while exaggeration and leaking confidential information should be avoided. At the same time, the authorities also expected to learn Czech Republic's experience in the prevention and control of parasitic diseases and epidemics and the achievements of scientific research from the visit and exchange activities.⁶²

In addition, China had signed health cooperation agreements with Asian socialist countries including North Korea and Vietnam. Through the agreement, 22 North Korean students were sent to China to participate in a two-year TCM educational programme in

⁵⁸ JPA: 4018-001-003-906, 中华人民共和国卫生部办公厅为通知德、保、波、捷来华考察针灸医师赴宁、沪、杭考察事 (Notice from Ministry of Health regarding Visitors from Germany, Bulgaria, Poland, Czech to Study Acupuncture in Nanjing, Shanghai, and Hangzhou), 1 July 1960.

⁵⁹ JPA: 4018-001-003-658, 中华人民共和国卫生部保加利亚考察人参代表团计划 (The Ministry of Health's Plan of Bulgaria Ginseng Study Delegation), 25 April 1960.

⁶⁰ JPA: 4018-001-003-906, 中华人民共和国卫生部办公厅为通知德、保、波、捷来华考察针灸医师赴宁、沪、杭考察事 (Notice from Ministry of Health regarding Visitors from Germany, Bulgaria, Poland, Czech to Study Acupuncture in Nanjing, Shanghai, and Hangzhou), 1 July 1960; JPA: 4018-001-003-658 中华人民共和国卫生部保加利亚考察人参代表团计划 (The Ministry of Health's Plan of Bulgaria Ginseng Study Delegation), 25 April 1960.

⁶¹ The document only recorded the Chinese translated name of the professor 普罗哈斯卡 (Puluohasika), I use initial letter P refer to his name.

⁶² JPA: 4018-001-003-658, 呈报接待普罗哈斯卡教授计划 (Letter from Department of Health of Jiangsu Province to Ministry of Health, Hosting Plan for Professor P.'S Visit), 12 October 1960.

1962.⁶³ Similarly, a Vietnamese TCM delegation visited China to learn experience in practicing and education of TCM, the planting and manufacturing of herbal medicine, as well as integration of Chinese and Western medicine. The Department of Health of Jiangsu Province suggested to lift some restrictions on information exchange such as gifting handouts, but authorisation from foreign affairs office was needed if confidential information was involved. If the delegation suggested establishing contact, exchange experience, books and medical materials, the department instructed hosting organizations to express welcome orally but not take any actions and report their request to the Ministry of Health to make decision. The department of health also recommended against discussion of political issues related to the 22nd National Congress of the Communist Party of the USSR, Soviet-Albanian relations, and Sino-Soviet relations. If visitors raised the topic, views were allowed to be expressed personally and had to be aligned with the external publicity made by the central government and the spirit of the national leaders' speeches in newspapers.⁶⁴

China had also hosted medical personnel and delegations from countries outside the socialist world such as Japan, Canada, and France. Knowledge exchange, especially TCM, was the focus of the visits by socialist delegations, but political propaganda played a more important role in the international exchange activities with individuals and organizations outside of socialist world. On behalf of the Ministry of Health, the Chinese Medical Association invited the medical delegation of the Federation of Democratic Medical Institutions (FDMI) from Japan for a friendly visit for three weeks. According to the introduction made by the ministry, the FDMI was a mass medical organization under the leadership of the Japanese Communist Party. There were 257 hospitals and clinics with about 4500 staff in Japan associated with this federation. More than 10 million patients received medical treatment from those medical institutions each year. The Ministry of Health described the FDMI as an organization which organized Japan's progressive medical institutions to serve the working people, fought for the improvement of the medical system, and actively participated in the anti-US patriotic movement. In May 1960, four representatives including the chairman and the vice chairman of the federation visited China for more than a month and signed an agreement with the Chinese Medical Association. The visit in 1962 was based on this agreement. The major purpose of the activity was to learn

⁶³ JPA: 4018-001-003-832, 请准备接待朝鲜实习生的参观实习 (Letter from Ministry of Health to Department of Health of Jiangsu Province, "Prepare to Host the Visit of North Korean Interns), 24 July 1962.

⁶⁴ JPA: 4018-001-003-832, 报送接待越南中医中药考察团计划 (Letter from Department of Health of Jiangsu Province to Ministry of Health, Hosting Plan for Vietnamese Delegation), 21 September 1962.

China's experience in fighting against imperialism in order to empower people under the suppression of Japanese and American imperialist forces, to understand medical workers' role in revolutionary movement and socialist construction, and to gain knowledge about the medical establishments and facilities available in related research institutions.⁶⁵

In the same year, Professor Wilder Penfield of McGill University of Canada visited China. Professor Penfield was an American-Canadian expert in neurology and neurosurgery, who expanded methods and techniques of brain surgery and revolutionized scientific understanding of the human brain. Funded by the Rockefeller Foundation, he also established the famous Montreal Neurological Institute at McGill University.⁶⁶ Funded by the Rockefeller Foundation, a Chinese neurosurgeon, Zhao Yicheng (赵以诚), had studied at Montreal Neurological Institute with Professor Penfield in 1938-1940, and became a professor at Tianjin Medical University and Vice President of Beijing Xuanwu Hospital in 1950s.⁶⁷ The Ministry of Health had invited Professor Penfield and his wife to China in 1956 through the director of Chinese Medical Association Fu Lianzhang (傅连璋), but he did not make the trip. In a letter written in 1961, Professor Penfield expressed his willingness to visit China with his wife between his trip to Australia for the centenary of the University of Melbourne in August 1962 and a visit to Moscow on 7 October. They hoped to learn the achievement China had made in the field of neurology and neurosurgery during his three-week stay from 12 September 1962. The Ministry of Health instructed hosting organizations to arrange professional activities with focus, and to introduce the achievements China had made in national development and construction, as well as medicine and health in a matter-of-fact way. Meanwhile, the ministry also expected the hosting organisation to obtain specialised knowledge and information of medical and health conditions in Canada through Professor Penfield's visit.

However, more instructions had been made for political purposes. Through more "correct and comprehensive" understanding of major issues of the country, including its peace foreign policy, "Three Red Banners, and national construction achievements, the ministry expected to dispel some misunderstandings the Canadian guests might hold against

⁶⁵ JPA: 4018-001-003-832, 请审批接待日本民医联代表团计划 (Approval Request of the Hosting Plan for the Delegation of the Japanese Federation of Democratic Medical Institutions), 5 September 1962.

⁶⁶ William Feindel, "Wilder Penfield (1891-1976): The Man and His Work," *Neurosurgery* 1, no. 2 (1977): 93-100.

⁶⁷ 薛庆澄, "赵以成教授——新中国神经外科的开创人," *中华神经外科杂志*, no. 1 (1987) [Xue Qingcheng, "Professor Zhao Yichen: the Creator of the Neurosurgery of New China," *Chinese Journal of Neurosurgery*, no.1 (1987)].

China due to the influence of the “reactionary propaganda” from the United States. Regarding the propaganda of China’s peaceful foreign policy to the guests, the ministry instructed hosting organizations to “use concrete examples to illustrate the aggressive nature of the American imperialism and hostility to our country” and its conspiracy to create two Chinas, but care should have been taken in the process to not impose opinions on the guests aggressively. In terms of issues related to the alliance between Canada and the United States, and Canada as a member of NATO, comments and accusations should be avoided. If questions were asked about rice imported from Canada due to the natural disasters, responds could be made according to the spirit of Vice Premier Chen Yi (陈毅)’s conversation with Canadian reporters on TV interview in Geneva on 29 June 1961.⁶⁸ After going back to Canada, Professor Penfield wrote a letter, which expressed his wishes to send academic papers to neurosurgery experts who he had met in the institutions he visited, including Beijing Xuanwu Hospital, Nanjing Medical College, Shanghai First Medical College, Shijiazhuang Bethune International Peace Hospital, and Tianjin Medical College. It was approved by the ministry that materials sent from Professor Penfield to relevant experts in these institutions were allowed, but any new connections built with him would require inspection of the head of these institutions.⁶⁹

Of course, the international knowledge exchange activities were not limited to the cases mentioned above. The cases showed the extreme restrictions on sharing scientific knowledge and information in terms of medicine and health. The very limited personnel connections like the one with Professor Penfield and restricted exchange of books and journals with foreign countries formed one of the channels for Chinese scientists to catch the development of science and technology outside of the socialist world. In addition, scientific institutions like the Chinese Academy of Sciences also served as a hub of scientific knowledge exchange with the outside world. Before the Cultural Revolution started in 1966, the institutions affiliated to the CAS, including its intelligence office, libraries, and various research institutes, all had been involved in exchanging books, journals, pictures, materials, standards, and a small amount of seeds, specimens, bacteria strains, samples, etc. with their counterparts overseas. Such exchanges not only served as knowledge exchange portal, but also a platform of

⁶⁸ JPA: 4018-001-003-832, 接待加拿大品菲尔德教授夫妇计划(Hosting Plan for the Visit of Professor Wilder Penfield from Canada), 1 September 1962.

⁶⁹ JPA: 4018-001-003-906, 函告今后与加拿大品菲尔德教授联系信件需经审查发出 (Inspection Requirement of Correspondence with Professor Pinfield in Canada), 19 February 1963.

propaganda of socialist construction achievements had been made in China.⁷⁰ The strict control over international exchange had long-lasting effects on Chinese science communities' interactions with international bodies. Adding to the problem, academics and intellectuals were widely persecuted during the cultural revolution, which had halted scientific research and high education. In addition, the anti-America and anti-UN sentiment also generated long rhetoric of international information exchange.⁷¹ Even after China established diplomatic relations with the US and recovered its place in the UN, the strict restrictions on international exchange were still applied, which made it difficult for the WHO to obtain any information from China.

III. Debates of the representation on China in the WHO

In addition to restrictions on bi-lateral information exchange and cooperation in the field of medicine and health, the communist regime also refused to join in the WHO or participate in any activities related to the organization due to the dispute of Taiwan's position in the UN, as discussed in the previous chapter. In line with the WHO's policy of regionalization and the political situation in China,⁷² the organization's office in Shanghai was closed on 31 July 1950. However, the Ministry of Foreign Affairs was not aware of the closing of the organization's Shanghai Office until December 1950, when it was requested for instructions regarding the handing over of the property, equipment and supplies possessed by the WHO Shanghai Office from the Chinese Red Cross and Shanghai Foreign Affairs Office. In order to obtain more information about the termination of the office, the Foreign Office of Shanghai contacted Jan Smid, Acting Principal Officer of East Asia Science Cooperation Office (EASCO) of the UNESCO in Shanghai, for the details of how the WHO terminated its work in China, the date and reason of the closure of the office was closed, list of the staff, as well as the distribution of the WHO property (books, supplies, etc.) before the office's closure.⁷³ Jan Smid contacted the WHO Temporary Regional Office for the Western Pacific in Hongkong concerning the closure of the WHO office in Shanghai. Hans Th. Johnsen, the administration and finance officer of the temporary office of WPR replied with

⁷⁰ BMA: 135-002-005,中国科学院致外交部关于开展国际书刊交换和科学研究人员对外通讯联系问题的请示报告 (Request for Instructions from the Chinese Academy of Sciences to the Ministry of Foreign Affairs on the Issue of International Publication Exchanges and External Contact of Scientific Research Personnel), 14 December 1972.

⁷¹ Xing Lu, *Rhetoric of the Chinese Cultural Revolution: The Impact on Chinese Thought, Culture, and Communication* (Columbia: University of South Carolina Press, 2004).

⁷² Fee, et al., "At the Roots of the World Health Organization's Challenges," 1912-1917.

⁷³ MFA: 113-00080-02, 报告联合国世界卫生组织中国办事处结束一事 (Report on the Closing of the United Nations World Health Organization China Office), 1951.

requested details. According to the letter from Hongkong, the closure of the WHO China Office was part of a general policy of regionalization decided at the first WHA in 1948. Six regional offices were established based on the decision, including Eastern Mediterranean Regional Office in Alexandria, South East Asia Regional Office in New Delhi, North and South America Regional Office in Washington, and finally Western Pacific Regional Office, which temporarily located in Hongkong from 1 September 1950. Until March 1951, the WPRO provided services for Australia, New Zealand, the Philippines, the countries of French Indo-China, Korea, and the British possessions in the areas such as Singapore, Malaya, Borneo and Hongkong, and expected to expand its coverage to China and Japan. At the time when the letter was written, the regional offices for Africa and Europe were still being administered from Headquarters in Geneva, and the individual missions to countries were to be closed with the establishment of regional offices. However, although it was part of the general policy, Johnsen wrote, it was “not possible to close the China Office as early as intended due to conditions prevailing in China in 1949”.⁷⁴

As a result, the WHO China office officially closed on 31 July 1950, and the last chief of the office, Mr. Arthur B. Morrill, left Shanghai on 14 September 1950. Before leaving the office, Morrill notified the Ministry of Health in Beijing about the closure of the WHO office in China and informed the authorities about the opening of a temporary regional office for the Western Pacific in Bangkok, Siam, by the WHO. The letter also explained the closure of the China office was in accordance with the decision of the WHA that the work of the organization should be handled by regional offices instead of missions in individual countries. He instructed the authorities to contact Dr I. C. Fang, Director of the WHO Regional Office for the Western Pacific, regarding any proposals for health projects in China, and all the matters handled by Shanghai office would be referred to Bangkok.⁷⁵

In addition, the communist regime also turned down the invitation to join in the WHO from third parties. In 1950, Rajkumari Bibiji Amrit Kaur Ahluwalia (Amrit Kaur), the first federal health minister of India, was elected as the president of the third World Health Assembly.⁷⁶ Madame Kaur invited the communist regime to join in the WHO on various

⁷⁴ MFA: 113-00080-02, Letter from Hans Th. Johnsen, Administration & Finance Officer of the temporary office of WPR to Jan Smid, Acting Principal Officer of East Asia Science Cooperation Office (EASCO) of UNESCO in Hongkong, 8 March 1951.

⁷⁵ MFA: 113-00080-02, Letter from Arthur B. Morrill, WHO Representative in China, to the Ministry of Health of the PRC, 31 July 1950.

⁷⁶ World Health Assembly, *Third World Health Assembly, Geneva, 8 to 27 May 1950: Resolutions and Decisions: Plenary Meetings Verbatim Records: Committees Minutes and Reports: Annexes* (Geneva: World Health Organization, 1950), 11, <https://apps.who.int/iris/handle/10665/85607>.

occasions in 1951 through the Chinese ambassador to India. In a dinner with the Chinese ambassador, she expressed her expectation that China would send a representative to the WHO. Recognising China's relationship with the UN, she said there were non-UN-related countries participating in this organization.⁷⁷ The Ministry of Foreign Affairs instructed the Chinese ambassador to turn down Kaur's invitation politely.⁷⁸ Again in March, Madame Kaur wrote a letter to the Chinese ambassador to India, in the name of herself instead of representing the WHO, inviting the PRC to send representatives to the World Health Assembly to be held in May. Kaur said she was "sad" about the absence of the PRC in the WHO. She believed that humanitarian efforts could increase understanding among nations in the world. The WHO had positive influence in India, and she believed that China's participation would strengthen the organization. Although the PRC was not a member of the organization, she expected the country could send a few observers, best to be medical professionals, to attend the World Health Assembly and build an accurate understanding of the WHO's work and policy. She was also keen to introduce Chandra Mani, the director of the South-East Asia Regional Office of the WHO, to the Chinese ambassador to give a detailed introduction of the organization.⁷⁹ Kaur's invitation was rejected again by the Chinese ambassador after consulting the Ministry of Foreign Affairs in Beijing, with the response that WHO was a specialized agency of the UN that served no good, and this was testified by the USSR and other socialist countries' withdrawal from the organization.⁸⁰

Apart from refusing to build political relationship with the WHO, China had also declined any technical collaboration with the organization. In March 1951, Dr Chisholm wrote to the director of the National Vaccine and Serum Institute to designate the institutions as a WHO influenza Collaborating Centre.⁸¹ The first World Influenza Centre (WIC) was established at the National Institute for Medical Research in London following the discussions on the third and fourth Interim Commission in 1947. Later in the winter of 1947-8, a collaborated laboratory was designated in the US to work with the WIC in London. After the WHO was formally established, WICs continued to be designated across the 6 regions.

⁷⁷ MFA: 113-00080-05, 印卫生部长邀请我参加国际卫生组织 (The Minister of Health of India Invited us to Participate in the WHO), 8 February 1950.

⁷⁸ MFA: 113-00080-05 告袁大使我暂不参加国际卫生组织 (Inform Ambassador Yuan we Don't Participate in the WHO Temporarily), 13 February 1950.

⁷⁹ MFA: 113-00080-06, 印卫生部长邀我列席世卫年会 (The Minister of Health of India Invited US to Attend the WHA), 6 March 1951.

⁸⁰ MFA: 113-00080-06, 复印度参加世卫年会问题 (Response to India's Invitation of Attending the WHA), 10 March 1951.

⁸¹ MFA: 113-00094-06, Letter from Brock Chisholm, Director-General of WHO, Geneva to the Director of National Vaccine and Serum Institute, Beijing, 2 February 1951.

The WICs served two major functions. Firstly, the centres were responsible for collecting and reporting the occurrence of influenza to national authorities, regional offices, appropriate reference laboratories in London or New York, and the Epidemiological Information and Morbidity Statistics Section at the WHO Headquarters in Geneva. Secondly, the WICs were also responsible for identifying the type of influenza by serological tests. Until 1953, there were a total of 54 influenza centres in 42 countries had been designated by the WHO. Among those centres, most were in Europe and North America, and only 3 of them were in the Western Pacific Region.⁸² In the letter to Beijing, Dr Chisholm clarified that the designation of National Vaccine and Serum Institute as a WHO influenza Centre would be for one year and automatically renewed for the same period of time unless notice was given by either party 3 months prior to the end of each calendar year.⁸³ However, the Ministry of Foreign Affairs recommended the Ministry of Health to disregard the designation from Geneva and instruct its affiliated departments not to build any connection with the WHO because China was not a member of the organization.⁸⁴

Although the communist government was strongly against joining in the organization due to its relationship with the UN, it paid close attention to the discussions brought up to the WHO regarding the representation of China in the organization. After withdrawing from the WHO in 1950 due to financial difficulties, the ROC proposed to resume its active participation in the organization to the Sixth World Health Assembly in 1953. The discussion at the assembly had been informed Beijing by the Chinese Embassy to Switzerland. According to the ambassador Feng Xuan (冯铨)'s report, the Indian representative objected the motion and pointed out that only the PRC could represent China, but would agree if Taiwan only represent the island itself rather than mainland China. The Indian representative suggested to postpone the discussion of Taiwan's position in the WHO until the coming year. 12 countries including Norway, India, Sweden, Nepal, Ceylon, Britain, Tunisia, Indonesia, Yugoslavia, Finland, Egypt, and Iran (the last three countries were not sure) voted for the motion while 28 voted against it. Based on the result, the group moved to the Philippine representative's proposal called for Taiwan resuming its activity in the WHO. Regarding the voting of the motion, 32 members voted in favour it, 7 voted against it, and 12 abstained,

⁸² A. M. M. Payne, "The Influenza Programme of WHO," *Bulletin of the World Health Organization* 8, no. 5-6 (1953): 758-769, <https://apps.who.int/iris/handle/10665/266293>.

⁸³ MFA: 113-00094-06, Letter from Brock Chisholm, Director-General of WHO, Geneva to the Director of National Vaccine and Serum Institute, Beijing, 2 February 1951.

⁸⁴ MFA: 113-00094-06, 议对世界卫生组织致中央生物制品研究所函不予置理 (Recommendation of Ignoring the Letter from the WHO to the National Vaccine and Serum Institute), 23 March 1951.

including West Germany, Austria, Afghanistan, Canada, Luxembourg, Pakistan, and Switzerland.⁸⁵ As a result, the Sixth World Health Assembly held in 1953 passed the proposal of Taiwan to resume its active participation in the organization. Taking into account its financial challenges, the ROC was allowed to postpone the fulfilment of its full financial obligations to the World Health Organization until the conditions improved.⁸⁶

Meanwhile, the absence of representation of mainland China, a country with the largest population in the world, was often brought up for discussion in the WHO. From 1948, a Committee on Credentials was convened annually to examine the credentials deposited by the delegations during the World Health Assembly.⁸⁷ At the Eighth World Health Assembly in 1955, after hearing the report made by the committee, the Chief Delegate of Norway, Dr Evang made a statement regarding the representation of the PRC at the organization. As he pointed out, the resolution passed by the General Assembly of the United Nations in 1950 indicated the dispute regarding membership of a specific country in any specialized agencies should have referred to the UN's position. But the issue of the PRC was continued to be postponed by the UN, which caused lack of representation of a country with huge population and vast territory in the WHO. Therefore, he suggested the WHO, as a technical organization, to take an independent decision from the UN.⁸⁸ He said:

We all felt when we heard the long list that there were nevertheless certain names that were missing. If anything at all has come out quite clearly in the confused ten years after the Second World War, it is the fact that the world's problems at large cannot be solved unless greater attention, more constructive initiative, are turned to, and also more money invested in, the vast so-called underdeveloped areas of this world, especially in Asia, Africa, and South America.

My country did not oppose the acceptance of the first report of the Committee on Credentials, but my Government would like to take this opportunity to express its regret that the People's Republic of China has not yet resumed its membership in the World Health Organization. The People's Republic of China, with its overwhelming population and its vast territories, representing some of the most pressing problems but at the same time some of the greatest possibilities of our day, ought in the opinion of my Government to take the seat of China as soon as possible in the World Health Organization and in the other specialized agencies, as well as in the United Nations itself.

We all know that in 1950 the General Assembly of the United Nations recommended that if a specialized agency ran up against any problems regarding the membership of a nation, that specialized agency should turn to the United Nations and take into account the attitude which

⁸⁵ MFA: 113-00080-07, 关于国际卫生组织大会情况的报导 (Report on the World Health Assembly, 1 May 1953).

⁸⁶ World Health Assembly, *Assessment of China* (Geneva: World Health Organization, 1953) <https://apps.who.int/iris/handle/10665/87058>

⁸⁷ World Health Assembly, *First Report of the Credentials Committee* (Geneva: World Health Organization, 1948) <https://apps.who.int/iris/handle/10665/97692>.

⁸⁸ World Health Assembly, *Eighth World Health Assembly: Mexico, D.F., 10-27 May 1955: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1955), 55, <https://apps.who.int/iris/handle/10665/85662>.

had been taken by that body in regard to the membership of that same country. However, as the United Nations has only postponed this matter and taken no positive action, my Government feels that the time has now come for the specialized agencies to take a more active attitude in welcoming the People's Republic of China and also others who are not Members. It was therefore disappointment to my Government that no application for membership at this time was forthcoming from the People's Republic of China.⁸⁹

However, the plenary was adjourned after his statement, and no discussion regarding the representation of China was followed up on the Eighth World Health Assembly. In spite of limited influence in that year, his speech initiated the debate over the representation of China among member states during the plenary meeting for the credentials of members at the WHA in the coming years. However, the plenary meeting for the voting of the annual report of the Committee on Credentials only decided the eligibility of member states for that year's WHA, which had no legal bounds to a nation's permanent membership at the organization. In spite of that, it became a major platform for the debate of the PRC's participation in the the WHO, although related discussions had also been made in other sessions in the World Health Assembly. Especially due to the re-entry of the USSR and its allies in the WHO in 1956, the voice of admitting the Chinese Communist Regime as a legitimate member of the organization gained increasing support. In 1953, the USSR changed its strategy in the UN system after the death of Joseph Stalin. His successor Nikita Khrushchev called for "peaceful co-existence" with the US in international activities. As a result, the USSR proposed to recover its membership at the WHO and full participation in the UN. Waived from the majority of their previous financial obligation to the organization, the USSR and its allies re-joined the WHO in 1956 with the exception of China.⁹⁰

At the Ninth World Health Assembly in 1956, Dr Evang represented Norway, again, made a statement calling for the assembly to accept the PRC as a member of the WHO. He expressed his "regrets" that no application or desires of re-joining the WHO had been made from the People's Republic of China. He stressed the WHO was a "global" and "technical organization", and the methodological issue of how to apply science and technology into practice was a bigger challenge than the technological issue itself. He said, "types of personnel, material, equipment, administration -those are the questions, and therefore we, as a technical organization, would welcome all those countries who have been experimenting with new methods and who have been trying, facing great difficulties, to apply a modern scientific approach in prophylaxis, in curative medicine, rehabilitation, etc." Therefore, the People's

⁸⁹ Ibid, 55-56.

⁹⁰ Fee, et al., "At the Roots of the World Health Organization's Challenges," 1913.

Republic of China, which represented the largest single population of any country in the world, he concluded, should have fully participated in the organization.⁹¹

The representative of the ROC strongly opposed Dr Evang's statement. He emphasized that the Government of the ROC was the only legitimate government to represent China, which was recognized by the World Health Assembly, as well as the UN and its specialized agencies. He also stressed that the legitimacy of the ROC was unquestionable because it was one of the founding members of the WHO and a signatory of its constitution. The representative of the ROC condemned the communist regime for participating in the Korean war. He also accused the regime had "murdered in cold blood more than twenty million innocent people on the Chinese mainland", and had "put at least another twenty -five million in the numerous slave -labour camps on the mainland of China." Such a regime, he said, could not be accepted either in the WHO or any other international organizations as "a legal, useful and honest partner in the work for the good of humanity." In conclusion, he represented his government strongly protested against the remarks made by the delegate of Norway.⁹² Following the ROC, the representatives of the Republic of Korea and Turkey had also expressed their opposition to Dr Evang's proposal of admitting the PRC as a member.⁹³ Among the delegations of the socialist camps, Dr Štampar made a statement on behalf of Yugoslavia. Unfortunately, Dr Štampar said, the rostrum had been "used for propaganda purposes". He supported the PRC to have a seat in the World Health assembly, but the country had never applied for admission. And he believed that the PRC would apply some day and the application would be passed, but he protested the debate over the issue in the plenary.⁹⁴

After the re-joining of the WHO from countries of the socialist camps, a more heated debate over the representation of China happened at the Tenth World Health Assembly held on 7 May 1957. During the assembly, the discussion of credentials of member states started from an address by Professor J. Parisot from France, who served as the president of the first plenary meeting. He indicated that the World Health Assembly concerned the welfare of all the nations of the world. And for both technical reasons and for psychological reasons, he also congratulated member states for re-joining the WHO no matter for what reasons they had

⁹¹ World Health Assembly, *Ninth World Health Assembly, Geneva, 8--25 May 1956: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1956), 59, <https://apps.who.int/iris/handle/10665/85678>.

⁹² *Ibid*, 59-60.

⁹³ *Ibid*, 60.

⁹⁴ *Ibid*.

found it was necessary to leave some time ago. Following the presidential address, Dr Anwar from Indonesia presented the report prepared by the Committee on Credentials. He announced a list of countries were eligible to take part in the work of the WHA as defined by the Constitution of the WHO and recommendation to the assembly to recognize their credentials.⁹⁵

Regarding the proposal, the Indian representative Arcot Mudaliar firstly expressed his opinion that it was “a little unfortunate” that the report of the committee was not able to be accepted unanimously by all the member states for the past few years. From the beginning of the issue of the representation of China had taken place, he said, the Indian delegation felt that “whatever may have been the reasons in the past, the emergence of a country with a population of six hundred million people is a problem for the World Health Assembly, and the sooner that country gets a place of recognition in the World Health Assembly, the better it will be for the objectives that the World Health Assembly has in view.”⁹⁶ Mudaliar suggested the issue of the representation of China should have no longer been ignored. He addressed that “the same psychological approach” that Professor J. Parisot welcomed other countries’ return to the organization should also have been applied to the representation of China. As a neighbour to the PRC, a country with vast dimensions and a large population, India was particularly interested in the health and welfare of the people living in the country. Because of its importance, the Indian representative suggested the health condition in the PRC should not only be an immense concern to its neighbours, but also all countries in the world. Regarding the legal complexities between the UN and the WHO related to membership issues, Mudaliar suggested the WHO to take a more democratic approach, which was independent from the United Nations’ position.⁹⁷ He said:

“I should like to state that, whatever may be the position that may be adopted in the United Nations, the World Health Assembly is a sovereign body in itself and has a right to recognize nations which it feels it ought to recognize. If the World Health Assembly had not taken up that attitude our strength, our present strength, would have been denied to us for many years. While in the United Nations interminable indecisions were noticed, while the veto, for instance, was exercised for one country or another and only fifty -one nations were represented in the United Nations, the World Health Assembly had increased its strength to over seventy -twos. This shows, Sir, that the World Health Assembly can recognize nations irrespective of what the United Nations has got to say. Moreover, fortunately, we are the most democratic assembly among the international organizations, and we do not yield to anyone in that democratic

⁹⁵ World Health Assembly, *Tenth World Health Assembly, Geneva, 7-24 May 1957: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1957), 64, <https://apps.who.int/iris/handle/10665/85686>.

⁹⁶ Ibid.

⁹⁷ Ibid.

approach. There is no question of a place on the Security Council, fortunately; there is no question of a veto; and here every nation is as responsible and has the same rights as any other nation.”⁹⁸

The Indian representative suggested the WHA to exercise its independent power from the UN and accept the PRC as a member of the assembly. Dr Evang, the Norwegian delegate, seconded the call for admitting the PRC as a member of the organization. He stressed that, considering the fact that several member states just re-admitted and several others just re-activated their full participation, the WHO had found itself in not only an “undesirable”, but also rather a “ridiculous situation”, that “the only country is (was) not participating actively in the health work of the Organization is (was) the biggest country in the world, representing a vast population which is (was)... doing extremely active work in this field of health.” As one of the countries recognised the communist government, Dr Evang said, Norway supported the PRC to take seat in the United Nations and its specialized agencies as soon as possible. The Norwegian delegate then emphasised that the WHO was a technical organization, which meant it could admit any country even its membership was not formally recognised by the United Nations.⁹⁹

Apart from delegations of India and Norway, the admission of the PRC was also supported by the representatives of the USSR and Indonesia. Professor Grashchenkov, the Soviet delegate indicated that the WHO’s work was particularly hampered by the absence of representation of the PRC, and the seat was occupied by people who did not represent citizens of mainland China. Based on the interests of peaceful international cooperation, he called for respecting the legitimate rights of the PRC in the organization. Grashchenkov also presented some public health achievements that had been made in the country, especially the control and elimination of various infectious diseases such as cholera, plague, and schistosomiasis. He indicated that the PRC’s successful experience in public health was of great interest to many countries. Moreover, the ignorance of “legitimate rights” of 600 million people of the country “jeopardized” and “hampered” the work of the WHO, and “undermined its principle of universality”. Therefore, he suggested the assembly to resolve this “long-standing problem” and to make it possible for the PRC to participate in the current and subsequent World Health Assembly, which “would greatly enhance the Organization’s

⁹⁸ Ibid.

⁹⁹ Ibid, 64-65.

authority and its role in the sphere of health and social progress both in Asia and the whole world.”¹⁰⁰

Not surprisingly, delegates of the ROC and the US strongly protested against the statement supporting the PRC pursuing a seat in the WHO. Apart from the accusation towards the PRC made in the previous year, Tsing -Chang Liu, the representative of the ROC, also referred it was “regrettable” that the Soviet delegate had “injected a political and discordant note into the otherwise harmonious atmosphere of this Assembly” from the beginning of their re-entry into the organization. And it was doubtful if the Soviet participation would “jeopardize the effectiveness of our important work in this organization to improve the health conditions of the world.” Therefore, he strongly contested the remarks made by representatives of India, Norway, the USSR and Indonesia.¹⁰¹ Opposing the Indian and Norwegian’s view that the WHO was a technical organization, and the organization did not have to submit to the political position of the UN, the US representative emphasised the relations between the two. He stressed that “the World Health Organization is a specialized agency of the United Nations, working within the United Nations framework.” Apart from the affiliation between the WHO and the UN, he also condemned the communist regime for departing “drastically from normally accepted standards of international conduct” of the United Nations because of its participation in the Korean War. The US government, therefore, opposed any suggestion to remove the ROC from the organization, while admitting the Chinese Communist regime.¹⁰² Following the US, the representative of the Republic of Korea had also expressed the same opposition.¹⁰³

Professor Hurtado, the Cuban representative, on the other hand, took a third position. He suggested taking an apolitical approach and avoiding the spectacle of a political debate within the assembly. He pointed out that what the plenary was discussing was the report of the Committee on Credentials, which was the declaration of acceptance or not of the nations listed in the report as members states of the WHO. The status of the member states, however, should not have been discussed in the plenary, which was not a forum for the applications for membership of the organization. The membership issue had another procedure to be discussed separately, and the debate of the immediate incorporation of the Communist China, Professor Hurtado said, was eminently political, which had deviated from the matter to be

¹⁰⁰ Ibid, 65.

¹⁰¹ Ibid, 66.

¹⁰² Ibid, 66-67.

¹⁰³ Ibid.

dealt with at the WHO. The Government of Cuba, for instance, he stressed, opposed any political debate in the organization, and supported such debate to be held in the United Nations. He suggested the plenary to take measures to prevent political arguments and to bring attention back to the discussion of the report of the Committee on Credentials.¹⁰⁴

At the same time, in order to compete for influence in the WHO with the US, the USSR called for all socialist countries to formulate a common long-term plan and detailed guidelines in activities related to international organizations in the late 1950s. The Soviet big brother also supported the PRC competing for its place with the ROC in various international organizations including the WHO despite the deteriorating relations between the two nations. In October 1959, the head of the permanent delegation to the international organizations at Geneva of various socialist countries met at the Soviet representative office. The Soviet representative proposed a strategy for the collective work of socialist countries in the World Health Organization, the International Labour Organization, the International Telecommunications Union, the World Meteorological Organization, and other specialized agencies of the United Nations. The primary focuses of the strategy included taking action to weaken the US power in these organizations while strengthening the influence of the socialist camp, expelling the “Chiang Kai-shek Group” (an uncomplimentary appellation of the Nationalist Government used by the communist regime) and admitting China and Mongolia as members of those organizations, and enlisting support from backward countries. The Soviet representative encouraged the socialist countries to increase their activities in various international organizations, propagandize more about their achievements, and exchange scientific and technological experience. He also suggested socialist countries to provide more propaganda materials to those organizations, and to send personnel to participate in the meetings held by international organizations in regions outside of Europe. The Soviet representative pointed out the biggest challenge of the socialist camp was the lack of a long term coordinated action plan in those international organizations. Therefore, he proposed several cooperation strategies and asked the representatives of various socialist countries to report the plan to their governments, and to hold a further discussion on how to coordinate actions at the Czech representative office in Geneva in early November.¹⁰⁵

Regarding the Soviet Union’s proposal, the Ministry of Foreign Affairs in Beijing expressed its support for the strategy of strengthening the influence of the socialist camp and

¹⁰⁴ Ibid, 67.

¹⁰⁵ MFA: 113-00368-01, 兄弟国家常驻日内瓦国际组织代表团集会情况 (Meeting of Permanent Delegation to the International Organizations at Geneva of Socialist Countries), 16 October 1959.

weakening the influence of the US, but it rejected the proposal to join in any UN specialized agencies. The Ministry of Foreign Affairs instructed the Chinese representative to express the government's attitudes towards the United Nations and specialized agencies, as well as its opposition to the creation of "two Chinas". The Chinese representative was told to make the declaration that China would not participate in any UN specialized agencies and all meetings convened by them, provide them with any information about the country or build any contact with them. The ministry claimed that the UN General Assembly had passed an unfair resolution against China, and the WHO and the International Labour Organisation (ILO) also attempted to interfere in its internal affairs. Therefore, Beijing expressed its expectation of other socialist countries not to provide those organizations with any information about China.¹⁰⁶ In spite of its claim, the PRC provided information of public health achievement for those socialist countries for the debate at the World Health Assembly. Before attending the Fourteenth World Health Assembly in New Delhi in February 1961, the Albanian representative reached out to the Chinese embassy to India asking for information and opinions regarding their statement supporting the PRC's representation in the WHO to be made at the assembly.¹⁰⁷ The Ministry of Foreign Affairs appreciated Albania's effort in supporting the PRC pursuing seats in the UN specialized agencies and provided them with information on Tibet requested by the socialist friend.¹⁰⁸

Based on the information provided by Beijing, Dr Pistoli, the delegate of Albania made a lengthy statement on the Fourteenth World Health Assembly. He questioned the universality of the WHO for the lack of representation of the PRC and accused the US of imposing pressure on Geneva to let the ROC occupy an illegal seat, which was "an open breach of international law and the basic principles of WHO". He also condemned the "United States imperialists and their partners" for their "hostile and aggressive policy" towards the PRC. In addition, apart from praising the peaceful nature of the communist regime including its relationship with neighbouring countries, and the principles of peaceful co-existence, particularly the Five Principles agreed at the Bandung Conference, the Albanian delegate also spoke highly of the progress the PRC had made in science, culture, education, and most importantly, public health. The Albanian delegation insisted to expel the "Chiang

¹⁰⁶ MFA: 113-00368-01, 外交部致驻瑞士使馆并驻日内瓦总领事馆 (Telegram from Ministry of Foreign Affairs to the Chinese Embassy in Switzerland and the Consulate General in Geneva), 27 October 1959.

¹⁰⁷ MFA: 113-00415-01, 关于阿出席卫生组织大会代表支持我代表权的答复 (Reply of the Representative of Albania Supporting Our Right of Representation at the World Health Assembly), 6 February 1961.

¹⁰⁸ MFA: 113-00415-01, 中央人民政府外交部致驻阿尔巴尼亚电报关于西藏问题 (Telegram from Ministry of Foreign Affairs to Chinese Embassy to Albania regarding Information about Tibet), 6 February 1961.

Kai-shek clique” and restore the seat of the RPC, “the real representatives of the Chinese people”.¹⁰⁹

Table 3.4 Countries Made Statement Support/Against the Representation of the PRC in the WHO in the Plenary Meeting for the Voting of the Report of the Committee on Credentials in Each WHA, 1955-1970

Years of World Health Assembly	Countries made statement support the representation of the PRC in the WHO	Countries made statement against the representation of the PRC in the WHO	Neutral/ Apolitical
1955 ¹¹⁰	Norway		
1956 ¹¹¹	Norway, Yugoslavia	The ROC, Republic of Korea, Turkey	
1957 ¹¹²	India, Norway, the USSR, Indonesia, Yugoslavia, Poland	The ROC, Turkey, the United States, Republic of Korea,	Cuba, Argentina
1958 ¹¹³	No discussion had been made about the PRC at the Plenary meeting for the voting of the report of the Committee on Credentials, but announcement had been made by Albania, the USSR and other socialist countries in other sessions		
1959 ¹¹⁴	Czechoslovakia, Bulgaria, Indonesia, India, Iraq, the USSR, Poland, Romania	Republic of Korea, Viet-Nam, the US, the ROC	United Kingdom
1960 ¹¹⁵	Romania, Bulgaria, Norway, the USSR, Indonesia, Poland, Ghana, Yugoslavia	The US, Republic of Korea, the ROC, Viet-Nam	United Kingdom,
1961 ¹¹⁶	The USSR, Poland, Bulgaria, Ghana, Norway, Romania, Albania, Cuba, Czechoslovakia, Somalia	The US, the ROC, Republic of Korea, Turkey, Republic of Viet-Nam	United Kingdom
1962 ¹¹⁷	Poland, Albania, Cuba	Republic of Korea, the US, the ROC, Republic of Viet -Nam	
1963 ¹¹⁸	Albania, the USSR, Czechoslovakia, Romania, Cambodia, Cuba,	The ROC, Philippines, the US, Viet -Nam, Republic of Korea	United Kingdom

¹⁰⁹ World Health Assembly, *Fourteenth World Health Assembly, New Delhi, 7-24 February 1961: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (Geneva: World Health Organization, 1961), 33-34, <https://apps.who.int/iris/handle/10665/85738>.

¹¹⁰ World Health Assembly, *Eighth World Health Assembly: Mexico, D.F., 10-27 May 1955: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1955), 55, <https://apps.who.int/iris/handle/10665/85662>.

¹¹¹ World Health Assembly, *Ninth World Health Assembly, Geneva, 8--25 May 1956: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1956), 59-60, <https://apps.who.int/iris/handle/10665/85678>.

¹¹² World Health Assembly, *Tenth World Health Assembly, Geneva, 7-24 May 1957: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1957), 64-68, <https://apps.who.int/iris/handle/10665/85686>.

¹¹³ World Health Assembly, *Eleventh World Health Assembly, Minneapolis, 28 May--13 June 1958: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1958) <https://apps.who.int/iris/handle/10665/85706>.

¹¹⁴ World Health Assembly, *Twelfth World Health Assembly, Geneva, 12-19 May 1959: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1959), 64-68, <https://apps.who.int/iris/handle/10665/85719>.

¹¹⁵ World Health Assembly, *Thirteenth World Health Assembly, Geneva, 3-20 May 1960: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (Geneva: World Health Organization, 1960), 25-29, <https://apps.who.int/iris/handle/10665/85729>.

¹¹⁶ World Health Assembly, *Fourteenth World Health Assembly, New Delhi, 7-24 February 1961: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (Geneva: World Health Organization, 1961), 28-35, <https://apps.who.int/iris/handle/10665/85738>.

¹¹⁷ World Health Assembly, *Fifteenth World Health Assembly, Geneva, 8-25 May 1962: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (World Health Organization, 1962), 27-31, <https://apps.who.int/iris/handle/10665/85749>.

¹¹⁸ World Health Assembly, *Sixteenth World Health Assembly, Geneva, 7-23 May 1963: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (World Health Organization, 1963), 27-31,

1964 ¹¹⁹	Czechoslovakia, Albania, Cambodia, Cuba, Bulgaria, Romania, France, Indonesia, Mongolia, Algeria, Mali, Guinea, the USSR, Somalia, Ghana, Yugoslavia	ROC, Philippine, Republic of Korea, Viet-Nam, the US	
1965 ¹²⁰	Albania, Cambodia, Poland, Cuba, France, the USSR, Czechoslovakia, Bulgaria, Romania, Yugoslavia, Mali, Guinea, Hungary	The ROC, Republic of Korea, Viet-Nam, Turkey, the US	Turkey
1966 ¹²¹	Albania, Cambodia, Czechoslovakia, Mongolia, Cuba, France, Hungary, Romania, Congo-Brazzaville, the USSR, Poland, Yugoslavia, Algeria, USSR	The ROC, the US, Japan, Republic of Korea, Turkey	
1967 ¹²²	Albania, Cambodia, Congo-Brazzaville, Cuba, Mali, Czechoslovakia, Hungary, Yugoslavia, the USSR, Romania, France, Poland, Central African Republic, Guinea, Algeria, India, Ceylon	the US, the ROC, Japan, Republic of Korea	Malawi
1968 ¹²³	Cambodia, Hungary, the USSR, Romania, Cuba, Afghanistan, Poland, Bulgaria, Yugoslavia, Mali, France, Mongolia, Algeria, Yemen, Cambodia, Norway	The US, the ROC	
1969 ¹²⁴	Hungary, Pakistan, the USSR, Romania, Guinea, Yugoslavia, Bulgaria, France, Poland, Finland, Mongolia, Mauritania, Cuba, Algeria, Iraq, Afghanistan, Syria	The ROC, Republic of Korea, the US, Australia, Uruguay	
1970 ¹²⁵	Pakistan, Bulgaria (spoke at other sessions at the WHA), Mongolia, Romania, Iraq, Albania, Syria, Guinea, Cuba, Mauritania, the USSR, France, Czechoslovakia, People's Republic of Congo, Sudan, Afghanistan, Poland, Hungary	Iran, the ROC, Japan, the US	

Source: see reference of each year

<https://apps.who.int/iris/handle/10665/85759>.

¹¹⁹ World Health Assembly, *Seventeenth World Health Assembly, Geneva, 3-20 March 1964: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (World Health Organization, 1964), 30-39 <https://apps.who.int/iris/handle/10665/85770>.

¹²⁰ World Health Assembly, *Eighteenth World Health Assembly, Geneva, 4-21 May 1965: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (World Health Organization, 1965), 32-38, <https://apps.who.int/iris/handle/10665/85781>.

¹²¹ World Health Assembly, *Nineteenth World Health Assembly, Geneva, 3-20 May 1966: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (Geneva: World Health Organization, 1966), 32-38 <https://apps.who.int/iris/handle/10665/85789>.

¹²² World Health Assembly, *Twentieth World Health Assembly, Geneva, 8-26 May 1967: Part II: Plenary Meetings: Verbatim Records: Committees: Summary Records and Reports* (Geneva: World Health Organization, 1967), 101-107. <https://apps.who.int/iris/handle/10665/85801>.

¹²³ World Health Assembly, *Twenty-First World Health Assembly, Geneva, 6-24 May 1968: Part II: Plenary Meetings: Verbatim Records: Committees: Summary Records and Reports* (Geneva: World Health Organization, 1968), 126-131, <https://apps.who.int/iris/handle/10665/85809>.

¹²⁴ World Health Assembly, *Twenty-Second World Health Assembly, Boston, Massachusetts, 8-25 July 1969: Part II: Plenary Meetings: Verbatim Records: Committees: Summary Records and Reports* (Geneva: World Health Organization, 1969), 90-96, <https://apps.who.int/iris/handle/10665/85817>.

¹²⁵ World Health Assembly, *Twenty-Third World Health Assembly, Geneva, 5-22 May 1970: Part II: Plenary Meetings: Verbatim Records: Committees: Summary Records and Reports* (Geneva: World Health Organization, 1970), 115-124, <https://apps.who.int/iris/handle/10665/85825>.

In the coming years, under the leadership of the USSR, the countries from socialist camps increased their voices calling for the legal representation of the PRC at various international organizations, although Beijing called Moscow's efforts of supporting the PRC's representation at various international organizations "hypocritical (伪善的)" and "defrauding of political capital (骗取政治资本)".¹²⁶ The delegation of socialist countries (except for Viet-Nam) made statements at the World Health Assembly annually supporting the PRC pursuing its seat at the WHO, apart from of a brief interruption in 1962 due to the Sino-Soviet split (see table 3.4). After years of propaganda of socialist camps, increasing number of member states made statements at the World Health Assembly advocating for the PRC's legal representation at the WHO, not only by under-developed Asian and African countries, including Indonesia, Mali, Guinea, Somalia, Ghana, Congo-Brazzaville, Central African Republic, Ceylon, etc, but also Western countries such as Finland. More importantly, the representation of the PRC at the WHO had won support from France, one of the five permanent members of the United Nations Security Council (also known as the Permanent Five, Big Five, or P5).¹²⁷ From 1964, the French delegation made statements at the WHA each year expressing their preference for the participation of the PRC in the work of the assembly, and the admission of the communist regime to the WHO (see table 3.4).¹²⁸

Regarding the heated debate of the issue of the representation of the PRC at the plenary meeting for the voting of the report of the Committee on Credentials, the delegation of the UK, another member of the Big Five, had pointed out multiple times that the approval of the credentials of member states listed in the report did not necessarily "construed as implying recognition of each of the authorities by whom the credentials were issued".¹²⁹ The representatives of the United States further indicated that "such controversial issues, which involve the representation of member states within the United Nations system, should properly be debated and decided in the political organs of the United Nations". With regard to controversies concerning the representation of member states in the organs of the United Nations and its specialised agencies, the US delegation suggested following the resolution

¹²⁶ MFA: 113-00392-01, 我对苏提出我在万国邮联代表权问题的态度 (Our Attitudes towards the USSR's Proposal of the Representation of China at the Universal Postal Union, 8 June 1964.

¹²⁷ The importance of the Security Council in the issue of China's representation at the UN refers to chapter 2.

¹²⁸ World Health Assembly, *Seventeenth World Health Assembly, Geneva, 3-20 March 1964: Part II: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports* (World Health Organization, 1964), 34, <https://apps.who.int/iris/handle/10665/85770>.

¹²⁹ World Health Assembly, *Twelfth World Health Assembly, Geneva, 12-19 May 1959: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1959), 68, <https://apps.who.int/iris/handle/10665/85719>.

396 (V) that the General Assembly adopted in 1950, which recommended such disputations to be considered and decided by the attitude of the General Assembly. Therefore, the US delegation emphasised, the controversy concerning the representation of China should have been debated and decided by the political organs of the UN, while the specialized agencies, such as the WHO, should have devoted “all their time and resources and energies to carrying out the vital task for which they bear the primary responsibility.”¹³⁰

IV. Global smallpox eradication in the Western Pacific Region

The nature of the WHO, a technical organization affiliated to the United Nations, had been used in both sides of the debate over the representation of China. Countries supporting the PRC indicated that the organization could decide its members independently without restrictions of the UN, while the states opposing it claimed that the WHO should have only dealt with technical issues, and the legal problem was to be decided by the UN. From its establishment, the WHO claimed to carry out its work on an apolitical basis,¹³¹ which was often challenged and compromised by the political interests of great powers, as discussed in Chapter 2. Instead of social medicine, the framework of “technical assistance”, which focused on providing assistance to developing countries through transferring knowledge of science and technology, was promoted as the primary approach towards the WHO’s goals.¹³² To deliver technical assistance, specialized research groups were often set up by different departments at headquarters or regional offices to provide consultancy for a certain programme. However, as Sanjoy Bhattacharya argued, the process from technical advice to designing and implementing policy was subjected to different layers of complexities. Apart from medical considerations, the decisions were often subjected to not only officials’ personal identities and experience, but also a variety of political, economic, and social context. In addition, the regional offices of the WHO had played important roles in the formulation and implementation of the policies of the organization.¹³³

Smallpox had been one of the major concerns of international health organizations including the predecessors of the WHO such as the League of Nations, the Office International D’hygiène Publique and the UNRRA. The disease had been engaged attention from the WHO since the early days of its establishment. As early as 1948, an OIHP/WHO

¹³⁰ World Health Assembly, *Twentieth World Health Assembly, Geneva, 8-26 May 1967: Part II: Plenary Meetings: Verbatim Records: Committees: Summary Records and Reports* (Geneva: World Health Organization, 1967), 103, <https://apps.who.int/iris/handle/10665/85801>.

¹³¹ Sanjoy Bhattacharya, “The World Health Organization and Global Smallpox Eradication,” 909.

¹³² Fee, et al., “At the Roots of the World Health Organization’s Challenges,” 1912-1913.

¹³³ Bhattacharya, “The World Health Organization and Global Smallpox Eradication,” 910.

Joint Study Group of Smallpox was appointed by the Interim Commission.¹³⁴ The eradication of smallpox was brought up for discussion in the early 1950s. The Third World Health Assembly in 1950 requested the Expert Committee on Biological Standardization to consider the establishment of a centre for the testing and standardization of smallpox vaccines, especially the dried vaccine, and the assembly recommended to give importance to smallpox in the organization's regular programme for 1952.¹³⁵ Then the Fourth World Health Assembly in 1951 designated smallpox as one of the quarantine diseases and recommended regional committee to take action to encourage member states to level up sanitary conditions and protection by vaccination.¹³⁶ Since 1952, the World Health Assembly had manifested a continuing concern for smallpox control. The assembly called for further research on the disease, urged governments to integrate smallpox control measures into their general public-health practice and suggested providing assistance to member states in their fight against the disease.¹³⁷ However, the prospect of eradicating smallpox worldwide did not win broad support across member states, even it was proposed by Dr Brock Chisholm, the first Director-General of the WHO in 1953. Countries including El Salvador, India, Pakistan, the UK, the US, and Venezuela argued that “the problem of smallpox was really a regional or even a local one”.¹³⁸

Before the Smallpox Eradication Programme was proposed by the Soviet delegates in 1958, regional offices had already started regional smallpox control and eradication interventions. The eradication of smallpox in the Western Pacific Region was proposed and planned as early as 1954. In the early 1950s, smallpox was still a major public health concern of many member states of the Western Pacific Region. In 1951, cases were reported in Korea, Japan, Taiwan, Vietnam, Laos, Cambodia, and Malaya. Although the case number in this region significantly dropped from January 1949 to June 1953, hundreds and thousands of cases were still reported in Cambodia, South Korea, and Vietnam. (see table 3.5).¹³⁹

¹³⁴ Joint OIHP-WHO Study-Group on Smallpox, and Organization World Health, *Summary Report on the 2nd Session of the Joint OIHP-WHO Study-Group on Smallpox* (Geneva: World Health Organization, 1948), <https://apps.who.int/iris/handle/10665/67121>.

¹³⁵ World Health Assembly, *Third World Health Assembly, Geneva, 8 to 27 May 1950: Resolutions and Decisions: Plenary Meetings Verbatim Records: Committees Minutes and Reports: Annexes* (Geneva: World Health Organization, 1950), 21, <https://apps.who.int/iris/handle/10665/85607>.

¹³⁶ World Health Assembly, *Fourth World Health Assembly, Geneva, 7 to 25 May 1951: Resolutions and Decisions: Plenary Meetings Verbatim Records: Committees Minutes and Reports: Annexes* (Geneva: World Health Organization, 1952), 52-53, <https://apps.who.int/iris/handle/10665/85614>.

¹³⁷ Regional Committee for the Western Pacific, *Planning National Programmes for Smallpox Eradication* (Manila: WHO Regional Office for the Western Pacific, 1958), 1, <http://iris.wpro.who.int/handle/10665.1/8767>

¹³⁸ Fenner et al., *Smallpox and Its Eradication*, 392.

¹³⁹ Regional Committee for the Western Pacific, *Resume of Resolutions Concerning Smallpox* (Manila: WHO Regional Office for the Western Pacific, 1953), 4, <http://iris.wpro.who.int/handle/10665.1/8387>.

Following the recommendation made by the Fourth World Health Assembly in 1951, the Second Regional Committee Meeting suggested all governments of member states were advised to implement the resolution recommended by Geneva.¹⁴⁰ The Third Regional Committee Meeting in 1952 paid further attention to smallpox and convened a study group to examine the reasons caused smallpox outbreaks in the Western Pacific Region in order to eradicate the disease in the region. Member states would be visited by a medical officer designated by the WHO. The medical officer would collect information about the incidence, origin and transmission of smallpox and make recommendations to control the disease. After the investigation, the representatives of member states of the West Pacific Region would meet and prepare a “co-ordinated programme pf eradication”. Then the regional office would provide necessary assistance in the form of vaccines and personnel based on the needs of member states. It was hoped that “with this international approach, the disease can be eradicated from the Western Pacific”.¹⁴¹

Table 3.5 Reported Smallpox Cases and Deaths in West Pacific Region, January 1949-June 1953

Countries	1949		1950		1951		1952		1953*(:)	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Cambodia	214*	59*	101	20	319*	64*	1006	366	1220	247
China (Taiwan)	192	20	78	27	7*	0*	39	0	9	0
Korea (South)	X	X	97*	5*	39802	9959	885	164	485	67
Laos	1239*	601*	0	0	16	0	33	8	46	43
Japan	124	13	5	1	86	17	2	0	4	0
Vietnam	1092*	270*	266	114	2837*	1648*	2235	1077	398	115
Hongkong	11*	7*	1* #	0*	0*	0*	3	0		
Malaya	46*	0*	0	0	2		2		3	
Netherland New Guinea			3		0					
North Borneo	0*	0*	1* #	0						
Adjacent countries in the South East Asia Region										
Burma	3451	1028	10222	3853	2414	598	2407	989	116	19
Indonesia	X	X	83107	13388	100376	18523	X	X	26	7
Thailand	52*	10*	352*	41*	34	2*	43	10	38	0

Notes: * Figures from Weekly Fasciculus, Epidemiological Intelligence Station, Singapore

Imported

X Includes imported cases

(:) January to June 1953

Source: Regional Committee for the Western Pacific, *Resume of Resolutions Concerning Smallpox* (Manila: WHO Regional Office for the Western Pacific, 1953), 8, <http://iris.wpro.who.int/handle/10665.1/8387>.

Following Dr Brock Chisholm’s proposal for smallpox eradication in 1953, a worldwide campaign against the disease was discussed and considered at the Eleventh

¹⁴⁰ Ibid., 3.

¹⁴¹ Ibid., 4.

Session of the Executive Board. The board recommended the Sixth World Health Assembly to consider Chisholm's suggestion on the stimulation of certain worldwide programmes and the feasibility of campaigns against smallpox on a global scale. The EB had also requested the Director-General to submit a study report to the Sixth World Health Assembly, including a general programme of smallpox eradication to be implemented by the WHO and the estimated cost of the programme.¹⁴² Once again, the Sixth WHA and the Executive Board in 1954 considered the possibility of global eradication and requested the DG to consult with member states, Regional Committees and members of the relevant WHO Expert Advisory Panels, to obtain suggestions and information on this matter for the thirteenth session of the board.¹⁴³ Responding to the resolution of the Sixth WHA and the Twelfth Session of the Executive Board regarding smallpox, the regional director processed the regional smallpox survey authorised in 1952 "with the greatest expedition possible".¹⁴⁴ In 1954, the regional office of the Western Pacific Region sponsored a smallpox survey for the purpose of "obtaining information concerning the incidence, origin and distribution of the diseases, the measures concerning the incidence, origin and distribution of the disease, the measures being taken for its control and how these measures may be improved."¹⁴⁵ Dr W. W. Dixon, who was working at the Department of Preventive Medicine and Public Health of the University of Leeds, was appointed by the regional committee to be in charge of the survey.¹⁴⁶

As a result of the 6-month survey across member states in the Western Pacific Region, Dixon's smallpox report was released in 1955, despite the Director-General's proposal for a global smallpox eradication had been turned down by the Eighth World Health Assembly in the same year.¹⁴⁷ Dixon's report consisted of two parts: a general report circulated to all member states in the region, and a confidential country report only addressed the concerns of a specific nation. According to Dixon's report, variola major was the only form of smallpox identified in the Western Pacific Region until 1954. In order to illustrate the geographical distribution of smallpox in the Western Pacific Region, Dixon drew an imaginary line (the smallpox line) running from north to south dividing countries into the smallpox free zone which located in the east side to the line and others which were still suffering from smallpox

¹⁴² Ibid., 5.

¹⁴³ Ibid., 5-6.

¹⁴⁴ Regional Committee for the Western Pacific, *Campaign against Smallpox (Resolution WP/RC4/R16)*, 9 (Manila: WHO Regional Office for the Western Pacific, 1953), <http://iris.wpro.who.int/handle/10665.1/8450>.

¹⁴⁵ Regional Committee for the Western Pacific, *Planning National Programmes for Smallpox Eradication (Manila: WHO Regional Office for the Western Pacific, 1958)*, 1. <http://iris.wpro.who.int/handle/10665.1/8767>.

¹⁴⁶ Regional Committee for the Western Pacific, *Campaign against Smallpox* (Manila: WHO Regional Office for the Western Pacific, 1954), <http://iris.wpro.who.int/handle/10665.1/8279>.

¹⁴⁷ Cueto et al., *The World Health Organization: A History*, 117.

endemic in the west side. Until 1949, smallpox free territories included British Borneo territories, New Guinea, and Australia. When the regional survey was conducted in 1954, the smallpox line receded to the west in 1954, and the smallpox free regions expanded to Hong Kong, the Philippines, and Singapore, while seven countries and territories reported smallpox cases, which included Cambodia, Federation of Malaya, Japan, Republic of Korea, the Republic of China (Taiwan, which was a member of the WHO and the WPRO in the 1950s and 1960s), Ryukyus, and Viet Nam. Among the countries and territories reported smallpox cases, Vietnam (3384 cases), the Republic of Korea (781 cases), and Cambodia (443 cases) had experienced outbreaks in epidemic form.¹⁴⁸ Responding to the Regional Director's report at the Sixth Session of the Regional Committee and the resolution of the Eighth World Health Assembly in 1955, member states of the region reported the campaigns against smallpox they had conducted based on the regional survey at the Seventh Session of the Regional Committee held in 1956. Macau, North Borneo, the Philippines, the ROC (Taiwan) Singapore and Vietnam reported to the committee their campaigns against smallpox.

In the Philippines, smallpox control was an integral part of the public health programme undertaken by the Department of Health. Campaigns against smallpox were carried out through rural health services by the Bureau of Health. According to the report of the government of the Philippines, the last outbreak of the country was reported in the province of Mindoro in 1948, which was traced to a Chinese mestizo travelling back from Taiwan. No known smallpox cases were reported after 1948. The Philippine government attributed the early eradication of smallpox to the systematically organised mass vaccination and rigidly enforced quarantine measures. The smallpox vaccination programme started in the Philippines as early as 1916. Carried out through collaboration of multiple health agencies and bureaus at provincial and municipal levels, the Philippine smallpox vaccination programme attempted to deliver mass vaccination across the state and re-vaccination its citizens every five years. According to the report, a total number of 16,717,355 smallpox vaccines were administered by the Philippine health agencies from 1 July 1948 to 30 June 1951. In accordance with Dr Dixon's suggestion, the Bureau of Health adopted a conservative policy of monitoring the immune response of smallpox vaccination, that the vaccination would only be considered as effective when positive immune reaction was read. Based on this policy, 17,772,428 smallpox vaccinations with positive immune response from

¹⁴⁸ Regional Committee for the Western Pacific, *Planning National Programmes for Smallpox Eradication* (Manila: WHO Regional Office for the Western Pacific, 1958), 2, <http://iris.wpro.who.int/handle/10665.1/8767>.

1 July 1951 to March 1956 in the Philippines, which covered a total of 38.54% of its population.¹⁴⁹ In order to increase smallpox vaccination coverage, improve systematize operation procedures, and strengthen scientific supervision on the vaccination and immunization activities, the Bureau of Health planned to integrate mass vaccination with the Rural Health Services, and to bring mobile vaccinating service into the unified management of the provincial and municipal health offices from the Fiscal Year 1957. The bureau expected to perform 4,800,000 vaccinations each year for five years until 1960, so that all population of the country could be vaccinated against smallpox. In addition, the bureau also planned to send two Special Teams of Vaccinators and Sanitary Inspectors to the area of Sulu Archipelago (see figure 3.7)¹⁵⁰, where the smallpox vaccination work was compromised due to the outlying groups of Islands and Islets and its proximity to Borneo and the Malay States. The bureau expected to vaccinate 85-90% of the 120,000 islanders living in the six groups of islands in the Sulu Archipelago, with the cooperation of the Philippine Navy and the Bureau of Quarantine.¹⁵¹

Figure 3.7 The Sulu Sea



Source: Stefan Eklöf Amirell, “Chapter II: The Sulu Sea,” in *Pirates of Empire Colonisation and Maritime Violence in Southeast Asia* (Cambridge: Cambridge University Press, 2019), 43.

In the colony of Singapore, an outbreak from May 1946 to March 1947 with 152 cases caused 42 deaths, and a further 5 cases in 1948 was recognised as the last incidence of

¹⁴⁹ Regional Committee for the Western Pacific, *Report of the Government of the Philippines: Campaign against Smallpox* (Manila: WHO Regional Office for the Western Pacific, 1956), 1, <https://iris.wpro.who.int/handle/10665.1/8520>.

¹⁵⁰ Stefan Eklöf Amirell, “Chapter II: The Sulu Sea,” in *Pirates of Empire Colonisation and Maritime Violence in Southeast Asia* (Cambridge: Cambridge University Press, 2019).

¹⁵¹ Regional Committee for the Western Pacific, *Report of the Government of the Philippines: Campaign against Smallpox* (Manila: WHO Regional Office for the Western Pacific, 1956), 2, <http://iris.wpro.who.int/handle/10665.1/8520>.

endogenous smallpox endemic. No smallpox transmission had been reported in Singapore up to 1956 when the report was submitted, apart from 12 cases arriving from outside of the colony that had been identified and isolated in the quarantine station at St. Johns Island. In the report to the WPRO, Singapore attributed its successful containment of smallpox to the prevention of introducing the disease from overseas and the maintenance of a high level of herd immunity¹⁵² through vaccination. As an international trading centre for Southeast Asia, and one of the most important ports in the British Commonwealth, the colony of Singapore was exposed to high risks of introducing infectious diseases due to intensive traffic and population movement. Therefore, Singapore maintained the Port Health Service responsible for maritime and air quarantine work, as well as a quarantine station in St. Johns Island for the isolation of cases with infectious diseases. New arrivals were subjected to health inspection and vaccination before being released into the Colony. All ships arriving from areas affected by infectious diseases outbreaks were required to be anchored at the quarantine anchorage and were only allowed to leave after clearance by the port health officers. Moreover, it was compulsory for all travellers coming into Singapore holding valid certificates of vaccination.¹⁵³ If the quarantine service failed to detect smallpox cases at the border and the disease was introduced to Singapore, a specially trained professional team, which composed of port health staff and medical officers of health, both the government and the city council as well as their sanitary inspectors, was able to control potential outbreaks of smallpox. In addition, infant vaccination was carried out in Singapore, that at least 85% of the new-borns were vaccinated against smallpox, and kids were re-vaccinated in the schools. Apart from child immunisation programmes, mass smallpox vaccination campaigns were also organised periodically. In 1952, 600,000 out of 1,077,000 population in Singapore had been vaccinated against smallpox in a period of 3 and a half months, and another mass vaccination was planned to be delivered in 1957.¹⁵⁴

After Japanese forces were defeated in WWII, Taiwan was made a province of the Republic of China in 1945. Due to the damage of the war and intensive population movement after, smallpox and various other infectious diseases once had been under control during Japanese rule started to prevail in Taiwan. 5193 smallpox cases were reported in Taiwan in 1947, which was recognised as the largest outbreak after the war. To contain the epidemic of

¹⁵² The term “herd immunity” is used in the original file.

¹⁵³ Regional Committee for the Western Pacific, *Report of the Colony of Singapore: Campaign against Smallpox* (Manila: WHO Regional Office for the Western Pacific, 1956), 1, <https://iris.wpro.who.int/handle/10665.1/8520>.

¹⁵⁴ *Ibid*, 2.

the disease on the island, three major interventions had been adopted by the Taiwanese authorities, which included complete vaccination of new-born infants, re-vaccination of the whole population once every two years, and intensive vaccination of areas reported smallpox cases. Smallpox vaccination in Taiwan had reached a broad coverage that the immunity level among the population was high. Each year, 95-98% infants received primary smallpox vaccination. Moreover, a population of 6,649,065, 6,773,595, and 5,758,538 had been vaccinated in the three biennial mass smallpox vaccination campaigns in the years of 1950, 1952, 1954, which covered 88.02%, 83.94% and 67.18% of the total population of about 9,000,000 in Taiwan.¹⁵⁵

Table 3.6 Cases and Deaths of Smallpox in Taiwan from 1947 to May 1956

Year	Population	Cases	Cases per 100,000 population	Death	Death per 100,000 population
1946	6,097,117	1,561	25.60	315	5.16
1947	6,497,734	5,193	79.91	1,725	26.54
1948	6,807,601	288	4.23	50	0.73
1949	7,396,131	625	8.45	173	2.33
1950	7,554,399	78	1.037	27	0.35
1951	7,869,247	7	0.090	0	0
1952	8,069,959	37	0.470	0	0
1953	8,369,404	14	0.160	0	0
1954	8,578,567	9	0.10	1	0.01
1955	9,020,938	0	0	0	0
1956 (Jan-May)	(Feb) 9,123,707	0	0	0	0

Source: Regional Committee for the Western Pacific, *Report of the Government of China (Taiwan): Campaign against Smallpox, from 1946 to May 1956* (Manila: WHO Regional Office for the Western Pacific, 1956), 3, <https://iris.wpro.who.int/handle/10665.1/8520>.

In addition, the control of smallpox in Taiwan also involved a disease surveillance system to monitor any potential outbreaks. In Taiwan, a Provincial Health Administration was responsible for the health work of the whole island. Under the provincial level, health centres were responsible for the health work at county level in 17 counties and 5 cities, while health stations oversaw the health care at villages and townships level. When a suspect case was reported, the region would be visited by the responsible officers at health centres, who would investigate the case and provide guidance in diagnosis and isolation of the case, disinfection, as well as quarantine of the contact. Once the case was confirmed by the lab tests, a smallpox vaccination campaign would be organised in the region where the case

¹⁵⁵ Regional Committee for the Western Pacific, *Report of the Government of China (Taiwan): Campaign against Smallpox, from 1946 to May 1956* (Manila: WHO Regional Office for the Western Pacific, 1956), 1, <https://iris.wpro.who.int/handle/10665.1/8520>.

originated. Because of the successful mass vaccination and disease surveillance system, no more smallpox cases had been reported in Taiwan since 1955 (see table 3.6).¹⁵⁶

Table 3.7 Number of People Who were Vaccinated in Taiwan from 1946 to 1955

Year	Population	No. of people received vaccination	Percentage received vaccination
1946	6,096,117	2,120,312	***
1947	6,497,734	6,399,768 **	98.49
1948	6,806,601	856,726	***
1949	7,396,131	1,709,146	***
1950	7,554,399	6,649,065 *	88.20
1951	7,869,247	529,715	***
1952	8,069,959	6,773,595 *	83.94
1953	8,369,404	1,130,611	***
1954	8,578,567	5,758,538 *	67.13

Notes: * Mass campaign of smallpox vaccination for the whole population

** Mass campaign of smallpox vaccination during the epidemic period

*** The number of people who were vaccinated included: (1) infants of primary vaccination, (2) infants whose vaccinations showed no reaction last year, (3) people who were revaccinated due to the fact that they lived in the area where smallpox cases were reported. So there is no need to calculate the percentages.

Source: Regional Committee for the Western Pacific, *Report of the Government of China (Taiwan): Campaign against Smallpox, from 1946 to May 1956* (Manila: WHO Regional Office for the Western Pacific, 1956), 5, <https://iris.wpro.who.int/handle/10665.1/8520>.

While in Macau, then a part of the Portuguese Empire, the Health Services followed Dr Dixon's recommendations on the mass smallpox vaccination. The health authorities in Macao provided vaccines of good quality and adopted an appropriate technique to maintain high level immunity within the population, although they found it was difficult to confirm the immunity reaction of each case. The Health Service of Macau believed the major problem of the smallpox control of the colony was the intense movement of Chinese between Hongkong and Macau and lack of co-operation of the Chinese population. Unlike the strict maritime and air quarantine adopted in Singapore, the colonial government of Macau considered it was impossible to require evidence of vaccination from all the passengers entering the border. In addition, although the Macau health authorities required all smallpox cases to be isolated and treated in the state hospital after confirming positive, they found it was difficult to identify cases early, because a large portion of the population avoided isolation away from their families, and many Chinese residents were in favour of the traditional approach "to call upon quack or herb doctors."¹⁵⁷ In terms of vaccination, the family members of the confirmed

¹⁵⁶ Ibid.

¹⁵⁷ Regional Committee for the Western Pacific, *Report of the Government of Macau Campaign against Smallpox* (Manila: WHO Regional Office for the Western Pacific, 1956), <https://iris.wpro.who.int/handle/10665.1/8520>.

cases were required to be vaccinated, but the emergent vaccination had often been extended to a larger scale than expected in the areas where cases occurred. Instead of enforcing compulsory vaccination, the health authorities in Macau were keen to encourage public participation by informing residents of the importance and benefits of the vaccination. However, the voluntary smallpox vaccination did not reach satisfactory coverage. Therefore, periodic vaccination campaigns were also organised in Macau. Despite various smallpox control interventions, the results of smallpox vaccination re-vaccination had not been assessed by the Macau Health services, so that the authority was not aware of the detailed immunity rate among the population by the time of the report submitted.¹⁵⁸

In sum, many member states in the Western Pacific Region had adopted various interventions to control smallpox before the global eradication was proposed by the Soviet representative at the Eleventh World Health Assembly, including border quarantine, early diagnosis of cases, isolation of contacts, as well as regular and mass smallpox vaccination. Those interventions had contributed to the reduced smallpox transmission in the region. According to a consolidated report prepared by WHO, there were 7212 cases with 2134 deaths in the Western Pacific Region from 1954 to 1957. However, the regional office indicated that the number of cases might be underreported which caused the high fatality rate of 29.5%. As discussed earlier, transmission of smallpox had already been halted in member states in the Western Pacific Region including British Borneo territories, New Guinea, Australia, Hong Kong, the Philippines, and Singapore by 1954. During 1955 and 1956, smallpox cases had only been reported in three countries: Cambodia (110 cases), Korea (7 cases), and Vietnam (83 cases). By 1958, the smallpox free zones further expanded to Japan and Taiwan, and the endemic areas in this region were confined to Korea, Cambodia, Laos and Vietnam. The regional committee believed that the continuous endemicity of smallpox in the countries in Mekong River region suggested the national smallpox eradication programme would be difficult to achieve and maintain success without international cooperation.¹⁵⁹

Based on the same concern, in 1958, Dr Viktor M. Zhdanov, who was the deputy minister of Health of the Soviet Union, represented the Soviet Union proposed to the Eleventh World Health Assembly to eradicate smallpox worldwide. Reflected the successful eradication within the USSR, he suggested interrupting smallpox transmission globally

¹⁵⁸ Ibid.

¹⁵⁹ Regional Committee for the Western Pacific, *Planning National Programmes for Smallpox Eradication* (Manila: WHO Regional Office for the Western Pacific, 1958), 3, <http://iris.wpro.who.int/handle/10665.1/8767>.

through a five-year mass immunisation campaigns across the endemic countries.¹⁶⁰ Although the WHO officially launched the global Smallpox Eradication Programme in the following year,¹⁶¹ the organization was deeply involved in the US-backed global malaria eradication at that time, which strained financial and human resources of the organization, so that the smallpox program had made little progress for nearly a decade.¹⁶² According to D.A. Henderson, limited funding was available for smallpox eradication from 1959 to 1965, that only about 100,000 to 200,000 US dollars were contributed to the programme annually through the regular budgetary funds, and another 100,000 US dollars voluntary contributions solicited primarily by the USSR in the form of vaccine donation. Dr Viktor M. Zhdanov expressed his frustration regarding the slow progression of the smallpox programme at WHA every year.¹⁶³ The SEP did not make a significant progress until 1966, when the Nineteenth World Health Assembly took a decisive step to launch an intensified smallpox eradication programme in 1966, after the United States joined Russian counterparts calling for more efforts on smallpox from the WHO in the previous year. In 1967, the Twentieth World Health Assembly approved the budget plan of adding 2,400,000 US dollars to the smallpox eradication programme presented by the Director-General, Marcolino Candau (1953-1973). As a result, the global smallpox eradication programme received substantial support from the regular budget of the WHO to be carried out across six regions of the organization, and finally achieved success in 1977.¹⁶⁴

Following the discussion of smallpox eradication in Minneapolis in 1958, the Regional Committee of the Western Pacific adopted a resolution requesting the Regional Director to provide advice on the planning and implementation of smallpox programmes to member states who were seeking it, and to report the actions, difficulties and results to the next

¹⁶⁰ World Health Assembly, *Eleventh World Health Assembly, Minneapolis, 28 May--13 June 1958: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1958), 508-12, <https://apps.who.int/iris/handle/10665/85706>; Marcos Cueto et al., *The World Health Organization: A History*, 119-121; Manela, "A Pox on Your Narrative," 299-323.

¹⁶¹ World Health Assembly, *Twelfth World Health Assembly, Geneva, 12-19 May 1959: Resolutions and Decisions: Plenary Meetings: Verbatim Records: Committees: Minutes and Reports: Annexes* (Geneva: World Health Organization, 1959), 572, <https://apps.who.int/iris/handle/10665/85719>.

¹⁶² Randall M. Packard, "'No Other Logical Choice': Global Malaria Eradication and the Politic of International Health," *Parassitologia* 40, no. 1-2 (June 1998): 217-230; See also Randall M. Packard, "Malaria Dreams: Postwar Visions of Health and Development in the Third World," *Medical Anthropology* 17, no.3 (1997): 279-296. Litsios, "Malaria Control, the Cold War, and the Postwar Reorganization of International Assistance," 255-278.

¹⁶³ Donald A. Henderson, "Smallpox Eradication: A Cold War Victory," *World Health Forum* 19, no. 2 (1998): 114.

¹⁶⁴ Global Commission for the Certification of Smallpox Eradication and World Health Organization, *The Global Eradication of Smallpox: Final Report of the Global Commission for the Certification of Smallpox Eradication* (Geneva: World Health Organization, 1979), <https://apps.who.int/iris/handle/10665/39253>.

meeting of the Regional Committee.¹⁶⁵ Two interventions were considered as the principal objectives of the national eradication programme by the regional committee, including increasing herd immunities against smallpox among the population through vaccination to prevent the occurrence of the disease, as well as preventing outbreaks caused by introduction of cases through isolating and quarantining contacts. The attainment of the two principal objectives, the committee further suggested, required the availability of a stable vaccine, an organization to carry out vaccination programme effectively, and robust control measures to prevent the spread of the disease.¹⁶⁶

In terms of smallpox vaccine, the regional committee recommended both wet and dry vaccine if either of them maintained potency when it was used for vaccination. Wet vaccine required cold chain for transportation and storage to prevent it from losing potency, while dried vaccine was able to keep potency for a longer period of at least six months, which was particularly useful in tropical areas. However, the potency of the dried vaccine varied and could be compromised by contamination or faulty dilution. Therefore, the regional office suggested taking precautions in the process of assay, storage, and reconstitution of the dried vaccine. By 1958, there were ten countries or territories in the western pacific region producing either wet or dried smallpox vaccine, including Australia, Cambodia, Hong Kong, Japan, Korea, Federation of Malaya, New Zealand, the ROC (Taiwan), the Philippines, and Viet Nam. The regional committee considered it was not necessary to establish new vaccine production facilities in each member states, and the existing vaccine production capacity was possible to be increased to meet the needs of the whole region through some technical support.¹⁶⁷

With regard to the national smallpox control programmes, the regional committee recognised two challenges including poor planning and insufficient technical guidance. The committee suggested integrating smallpox control and eradication into the national health system. The containment of smallpox was recommended to follow the principles and procedures applicable for the control of other infectious diseases, and to be carried out as part of regular work of the health professionals. The committee believed the smallpox control measures could also achieve success in settings where health organizations were in the developmental stage that lacked professional personnel resources through appropriate

¹⁶⁵ Regional Committee for the Western Pacific, *Smallpox Eradication* (Manila: WHO Regional Office for the Western Pacific, 1959), 2-3, <https://iris.wpro.who.int/handle/10665.1/8834>.

¹⁶⁶ Regional Committee for the Western Pacific, *Planning National Programmes for Smallpox Eradication* (Manila: WHO Regional Office for the Western Pacific, 1958), 3, <http://iris.wpro.who.int/handle/10665.1/8767>.

¹⁶⁷ Ibid.

training in control measures and vaccination techniques, as well as supervision by medical professionals with expertise in epidemiology. The committee also recognised the importance of identifying the disease, which required a medical officer who was familiar with laboratory recognition of smallpox to charge related work. In countries where smallpox cases had not been reported in recent years, the committee recommended sending expert team to provide training for medical institutions in endemic areas to help them identifying the disease. In addition, the committee stressed the mild form of smallpox was as infectious as the malignant form. Therefore, either of the forms of smallpox was identified, it was necessary to alert health authorities immediately to carry out remedial and preventive measures.¹⁶⁸

In addition, vaccination of the total population was considered as an ideal strategy to eradicate smallpox in a nation by the Regional Committee. However, the committee also recognised that universal immunisation was not practicable due to political, social, economic and other factors. Therefore, the committee suggested to vaccinate the population with priority that children should be the principal target of the vaccination programme due to the high fatality rate among infants. Especially for regular smallpox vaccination when there was not an endemic, the committee recommended vaccinating the children at the time of birth and re-vaccinating them at their school age. An outbreak, on the other hand, required vaccination of all contacts. In these circumstances, household members and close contacts were recommended as priorities for vaccination, followed by mass vaccination of the community in nearby areas.¹⁶⁹

Concerning the international quarantine measures to prevent imported cases, the committee recommended a certificate of successful vaccination in recent three years for travellers by the time of travelling. In addition, the committee suggested member states to plan for a mass vaccination programme for the susceptible population at five years intervals, especially in areas continually exposed to the virus, based on epidemiology besides economic considerations. The committee also stressed the importance of surveillance measures and infectious disease reporting system in order to locate and control any cases introduced from outside. Health education concerning anti-smallpox measures was recommended to improve public awareness of reporting suspected cases and their obligation to follow vaccination policy. In countries where illegal entry was frequent, periodic mass vaccination to prevent transmission would be essential according to the regional committee's instruction.¹⁷⁰

¹⁶⁸ Ibid, 4.

¹⁶⁹ Ibid, 4-5.

¹⁷⁰ Ibid, 5.

As for the WHO's role in the national eradication programmes, the committee suggested the headquarters and regional offices to contribute by providing technical assistance, including information exchange especially in notification of reportable diseases; consultancy to countries that requested support, either in vaccination production or in national smallpox eradication programme; as well as training in freeze-dried vaccines for qualified technicians. In addition, the headquarters at Geneva developed an inter-regional training programme to be held in 1960 for technicians from countries in the Western Pacific and South-East Asia Regions, as well as Asian countries in the Eastern Mediterranean Region. The Headquarters also planned to organise an inter-regional conference for the public-health administrators of the three regions in 1960, to exchange experience and international collaboration for the eradication of smallpox. More technical support had been provided by the WHO on vaccines potency test for member states through laboratories in Singapore and Japan, as well as on stimulating research in smallpox vaccine and treatment development through its expert advisory panels.¹⁷¹

After discussing the WHO's potential role in smallpox eradication, letters were sent to the authorities of the member states in the Western Pacific where smallpox was endemic by the regional director, offering advice and assistance in the planning and implementation of their smallpox programmes. Responding to the request of Cambodia, a regional public health administrator was assigned to the country for one month to provide assistance in the planning and implementation of smallpox eradication. Arrangements had also been made in testing the quality of smallpox vaccine produced in requested member states, including Cambodia and the Republic of Korea, at WHO-collaborated Poliomyelitis Centre in Singapore. In addition, the regional office had provided support to the Republic of Korea and Japan in the production of freeze-dried smallpox vaccine by awarding fellowships for laboratory workers to study the Lister Institute technique in the United Kingdom, which helped the mass production of freeze-dried vaccine in Japan. No further request had been made by the member states in the West Pacific Region regarding smallpox eradication. The regional office expected member states to reach out for further assistance and had included spending of four-month's consultancy in the budget of 1961.¹⁷²

¹⁷¹ Ibid, 6.

¹⁷² Regional Committee for the Western Pacific, *Smallpox Eradication* (Manila: WHO Regional Office for the Western Pacific, 1959), 2-3, <https://iris.wpro.who.int/handle/10665.1/8834>.

Table 3.8 Reported Cases from Smallpox Countries and Territories of the Western Pacific Region, 1960-1961

	KH	China (Taiwan)	Hong Kong	Japan	Laos	MY	Niue	Republic of Korea	Ryukyu Islands	SG	Vietnam +
1950	-	-	-	5	-	-	0	-	-	-	173
1951	720	7	-	86	16	2	0	43213	-	-	2640
1952	1748	39	3	2	30	2	0	1313	1	-	2235
1953	1788	14	-	6	15	5	0	3349	-	-	1682
1954	435	9	-	2	-	-	0	790	-	-	3588
1955	485	-	-	1	-	-	-	2	1	0	923
1956	523	-	-	-	-	-	-	9	-	0	256
1957	125	-	-	-	-	-	-	10	-	-	83
1958	18	-	-	-	-	2	-	6	-	...	30
1959	4	-	-	-	-	38	-	-	-	10	12
1960	-	-	-	-	-	15	^s 1	3	-	-	-
1961	++	-	-	-	-	-	-	1	-	-	-

Notes:

KH: Cambodia

MY: Malaysia

SG: Singapore

+: Up to July 1954, including North Vietnam

++: The International Quarantine Unit of WHO has received Directly notification of the following case: Cambodia, 1961: 1

s: Suspected case

-: Null or magnitude negligible

...: Data not available

Source: Regional Committee for the Western Pacific, *Smallpox Eradication Programme* (Manila: WHO Regional Office for the Western Pacific, 1966), 9-10, <http://iris.wpro.who.int/handle/10665.1/9013>.

According to a report prepared by the regional committee in 1966, no cases of smallpox had been reported in the Western Pacific Region since 1961 (see table 3.8),¹⁷³ apart from 5 introduced cases in Malaysia in 1966, which was recorded in the official history of smallpox eradication written by authors affiliated to the WHO (see table 3.9).¹⁷⁴ Meanwhile, the mainland China was still not a member of the WHO, and limited information was available to the headquarters and the regional office of the organisation, and was not counted in the report. Although the disease was no longer endemic in the Western Pacific Region when the global eradication programme intensified in 1966, most countries and territories had maintained a vaccination programme and other preventive measures. Therefore, the regional office decided to focus the regional smallpox eradication on the certification of the absence of the disease in member states, especially in where the details of the reliable case reports were difficult to obtain. The regional smallpox eradication programme also included information collecting regarding the smallpox vaccination and other preventive measures adopted by member states, technical assistance in planning and implementation of the national smallpox

¹⁷³ Regional Committee for the Western Pacific, *Smallpox Eradication Programme* (Manila: WHO Regional Office for the Western Pacific, 1966), 1, <http://iris.wpro.who.int/handle/10665.1/9013>.

¹⁷⁴ Fenner et al., *Smallpox and Its Eradication*, 345.

eradication programme, as well as mobilizing members to contribute to the global eradication in other regions.¹⁷⁵

Table 3.9 Numbers of Reported Smallpox Cases in Selected Countries in Western Pacific Region, 1948-1966

	China ^a	Japan	Indochina ^b	Korea ^c	Philippine	Federated Malay States (Malaysia) ^d
1948	4806	29	2,569	1197	282	521
1949	862	124	2,644	9949	27	46
1950	50,675	5	396	2349	0	0
1951	61,553	86	4,336	43213	0	2
1952	10,388	2	4,024	1377	0	2
1953	3,325	6	3,385	3349	0	5
1954	856	2	4,007	790	0	0
1955	2,576	1	2,390	2	0	0
1956	587	0	1,531	9	0	0
1957	315	0	597	10	0	0
1958	671	0	53	6	0	0
1959	476	0	17	0	0	0
1960	23	0	0	3	0	338
1961	28	0	0	1	0	15
1962	2	0	1	0	0	0
1963	283	0	0	0	0	0
1964	35	0	0	0	0	0
1965	4	0	0	0	0	0
1966	0	0	0	0	0	5

Notes: a. Including the reported number of mainland China and Taiwan.

b. Comprising Democratic Kampuchea, Lao People's Democratic Republic, and two sections of Viet Nam when the form was derived.

c. The figures refer only to the Republic of Korea.

d. Including Singapore.

Source: Fenner et al., *Smallpox and Its Eradication*, 337.

V. Conclusion

To conclude, the use of unpublished archive from the published and unpublished archive from the WPRO allows us to recover a different smallpox eradication history from those promoting narrow institutional interests. The available data has shown that countries in the Western Pacific Region, including the PRC, which was not yet a member of the WHO back in 1950s and 1960s, had no longer reported smallpox cases by 1966, when the intensified global eradication programme started. Moreover, the PRC, which refused to join the WHO, neither agreed to participate in the technical collaboration associated with the organization, had also worked to its own timetables, eradicated smallpox through vaccination and appropriate containment interventions. By carefully studying the unpublished

¹⁷⁵ Regional Committee for the Western Pacific, *Smallpox Eradication Programme* (Manila: WHO Regional Office for the Western Pacific, 1966), 9-10, <http://iris.wpro.who.int/handle/10665.1/9013>.

correspondence between the Foreign Ministry Office and Chinese embassies overseas, as well as multiple archives at provincial and municipal levels of the PRC, this chapter has also demonstrated the lack of transparency of Chinese data regarding smallpox eradication was caused not only by the political restrictions, but also by the technological gap in health statistics related to the political interests of the communist government. In addition, through analysing the debate over the Chinese representation at the WHO in each of the World Health Assembly in 1955-1970, as well as the Foreign Ministry's correspondence with countries of socialist camps, this chapter has also shown that increasing number of countries recognised the importance of the PRC in the organization and called for the inclusion of its participation in global health during the two decades absence of representation of the communist regime.

Due to the limited access to public health information of the PRC through either official or private channels, the smallpox free status of the country was not confirmed by the WHO until 1979, through an independent evaluation of the Global Commission for the Certification of Smallpox Eradication headed by Dr Frank Fenner, a distinguished Australian virologist. From the start of the intensified global smallpox eradication programme in 1966, the situation of the transmission and control of the disease was concerned by the WHO and its regional office in Manila. Rumours had been heard by the officials in Geneva that China had already been free from smallpox for about ten years in the 1960s. Various attempts had also been made by Geneva and Manila to obtain the information of smallpox eradication in China through a third party or publications, no evidence was available to confirm the statement.¹⁷⁶ Even after 1972, when the PRC recovered its representative in the UN and its specialised agencies, the smallpox eradication in China still remained a mystery.¹⁷⁷ Therefore, to uncover the complexities of the certification of smallpox eradication in China, the next chapter will examine the recovery of the country's representation at the WHO, following with the analysis of the engagements among the headquarters of the organization at Geneva, the WPRO, the foreign ministry and select municipal and provincial governments of the PRC in the process of the certification.

¹⁷⁶ WHORASSEF: ID398_Box225, Letter blind copy to Dr A. S. Benson, Department of Health Data, Division of Preventive Medicine, Walter Reed Army Institute of Research, Washington D. C., USA, from D. A. Henderson, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 26 December 1967.

¹⁷⁷ Fenner et al, *Smallpox and Its Eradication*, 1248.

Chapter 4 Certification of Smallpox Eradication in China

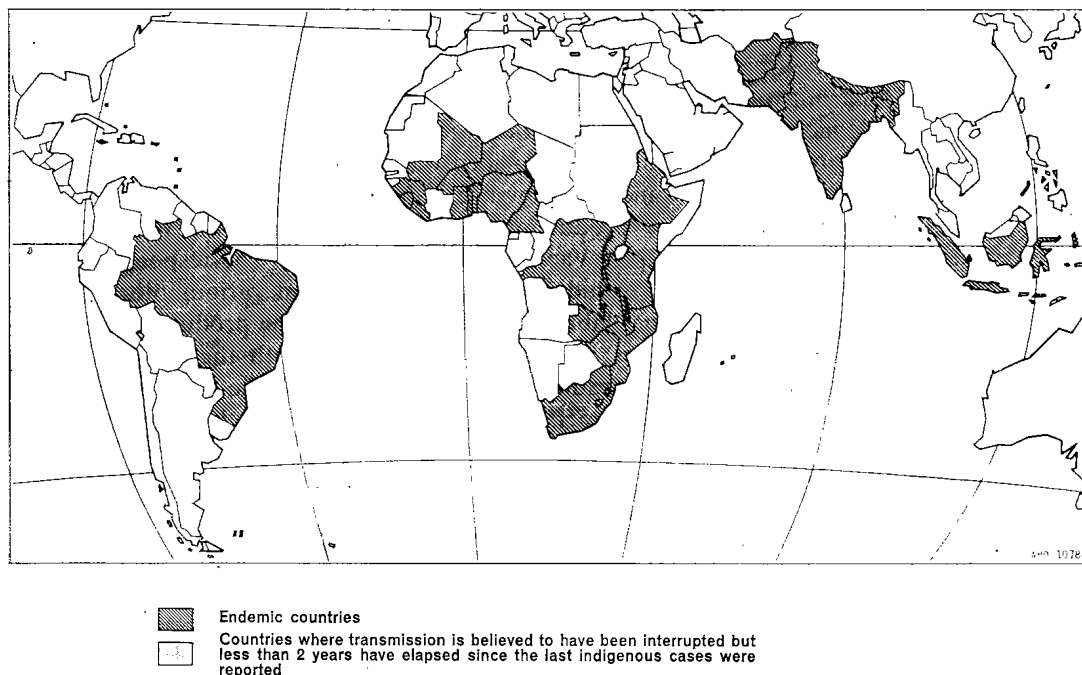
As Chapter 3 has shown, smallpox was eradicated in China and the Western Pacific Region before the intensified global smallpox eradication programme began. Certification of smallpox free status of countries no longer reported cases was an important part of the global smallpox eradication. However, as discussed in previous chapters, the PRC was self-excluded from the United Nations and its specialized agencies due to cold war politics. The political complexity made the certification of China an extra challenging task for the WHO. Based on original archival materials from the Archives of the WHO in Geneva, Archives of Beijing, and Shanghai, as well as articles published by Chinese state media, this chapter studies the engagement between the WHO Headquarters, the WPRO, and various member states regarding the exclusion and inclusion of China in the World Health Organization and its impact on the certification of smallpox eradication. It aims to reveal the epidemiological, legal, and political challenges in the complex process of the certification of smallpox eradication in the case of China. This chapter starts with an introduction of the concept, criteria, and progress of the certification of smallpox eradication. It then analyses the political contest between China and the United Nations including its specialized agencies during 1950-1971 and how it affected the WHO getting smallpox information from the country. The third part of this chapter examines the process of China's re-joining the WHO and Beijing's cautious re-engagement with Geneva. Section 4 then analyses the challenges in the negotiation between the WHO HQ, the WPRO and China regarding certification of smallpox eradication during 1971-1978, and how the political reformation in the country and the Director-Generals' multiple visits to China in 1970s had improved the mutual understanding and collaboration between Geneva and Beijing. This chapter ends with section 5, which examines the final achievement of the certification of smallpox eradication in the country and the continuous discussion of the credibility of the information provided by China.

I. Certification of smallpox eradication: concept, criteria, and process

At the time when the intensified global eradication programme initiated in 1967, smallpox was considered endemic in 30 nations in most countries in African Region, Brazil in Pan-America Region, Afghanistan and Pakistan in Eastern Mediterranean Region, as well as India, Indonesia, and Nepal in South-East Asia Region (see map 4.1), while many adjacent countries were subjected to the risk of re-introduction of the disease. The first success of the programme was achieved in 1970 when smallpox transmission was halted in 20 countries in

west and central Africa.¹ In 1971, the number of countries reporting smallpox cases decreased to 16, of which only 7 countries were believed to be in endemic transmission, including Afghanistan, Ethiopia, India, Indonesia, Nepal, Pakistan, and Sudan. However, smallpox status in some countries was difficult to assess due to insufficient information, such as Iran. In the first 5 years of the intensified programme, Sudan was the only country that became endemic after being considered as smallpox free.²

Figure 4.1 Countries with Endemic Smallpox Situation, 1967



Source: WHO Expert Committee on Smallpox Eradication and World Health Organization, *WHO Expert Committee on Smallpox Eradication: Second Report* (Geneva: World Health Organization, 1971), 7, <https://apps.who.int/iris/handle/10665/40960>.

In order to review the progress of the global smallpox eradication programme, to assess the epidemic situation of the disease and the global to national eradication programmes, as well as to plan the strategy and methodology of future implementation of the programme, the WHO Expert Committee on Smallpox Eradication was convened for the second time from 22 to 29 November 1971. Dr Alfredo N. Bica³, Dr R. Gispen⁴, Dr F. C. Grant⁵, Dr S. S.

¹ WHO Expert Committee on Smallpox Eradication and World Health Organization, *WHO Expert Committee on Smallpox Eradication: Second Report* (Geneva: World Health Organization, 1971), 6, <https://apps.who.int/iris/handle/10665/40960>.

² Ibid, 13.

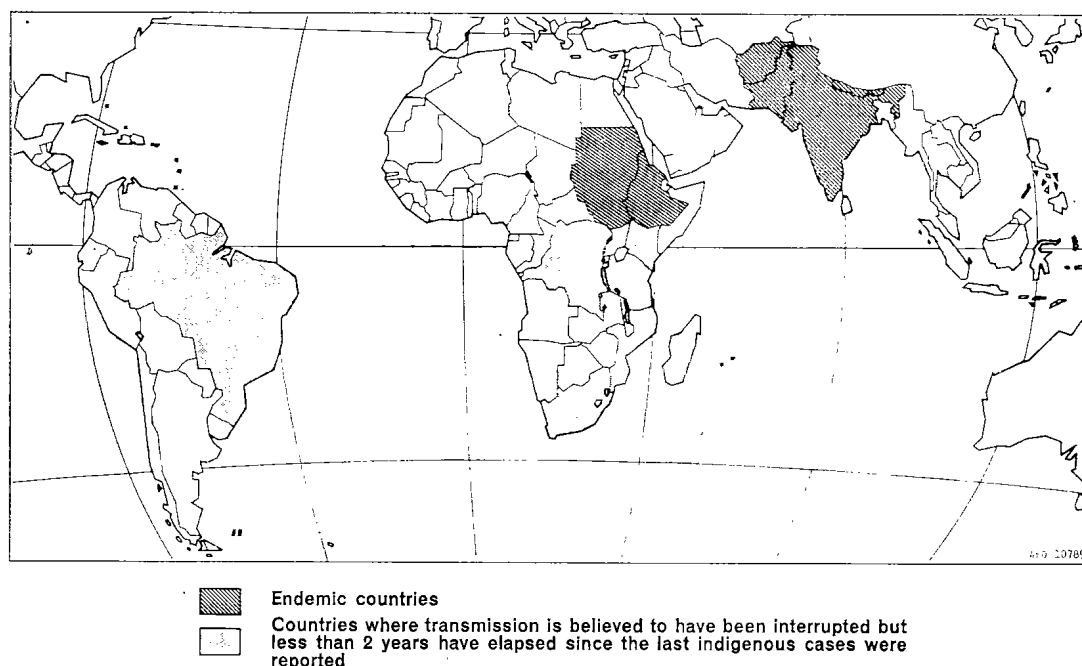
³ Secretary of Public Health of the Minister of Health of Brazil.

⁴ Director of the National Institute of Public Health of Netherlands.

⁵ Director of Operations at the Epidemiological Division of Ministry of Health of Ghana.

Marennikova⁶, Dr I. F. Setiady⁷, Dr Mahendra Singh⁸, and Dr P. F. Wehrle⁹ served as members of the committee. Based on the epidemiological and technical considerations and the experience acquired from the smallpox eradication programme so far, the Committee believed that the global eradication of the disease was possible.¹⁰ In their report to the organization, the committee defined the concept and criteria of smallpox eradication.¹¹

Figure 4.2 Countries with Endemic Smallpox Situation, 1971



Source: WHO Expert Committee on Smallpox Eradication and World Health Organization, *WHO Expert Committee on Smallpox Eradication: Second Report* (Geneva: World Health Organization, 1971), 7, <https://apps.who.int/iris/handle/10665/40960>.

The definition of smallpox eradication was described by the committee as “the elimination of clinical illness caused by variola virus.”¹² The members of the committee recognized that there was no known animal reservoir in the transmission of smallpox, so it

⁶ Chief of the Laboratory of Smallpox Prophylaxis at Institute of Virus Preparations of USSR.

⁷ Chief and Directorate for the Control of Epidemics at Ministry of Health of Indonesia.

⁸ Deputy Assistant Director-General (Smallpox) and Directorate General of Health Services of India.

⁹ Hastings Professor of Pediatrics and Director of Children’s Division at University of Southern California Medical Center in the USA.

¹⁰ WHO Expert Committee on Smallpox Eradication and WHO, *WHO Expert Committee on Smallpox Eradication* (Meeting Held in Geneva from 22 to 29 November 1971): Second Report (Geneva: World Health Organization, 1972), 5-6, <http://apps.who.int/iris/handle/10665/40960>.

¹¹ *Ibid*, 1; The first WHO Expert Committee met in Geneva 1964, see, WHO Expert Committee on Smallpox and World Health Organization, *WHO Expert Committee on Smallpox: First Report* (Geneva: World Health Organization, 1964), <https://apps.who.int/iris/handle/10665/40597>.

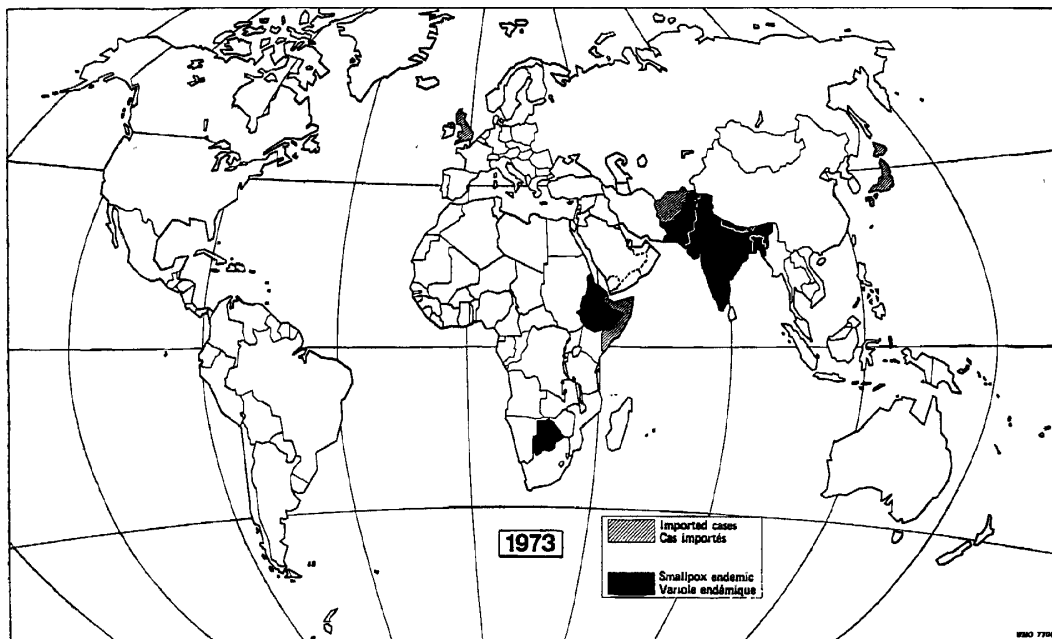
¹² WHO Expert Committee on Smallpox Eradication and World Health Organization, *WHO Expert Committee on Smallpox Eradication: Second Report* (Geneva: World Health Organization, 1971), 5, <https://apps.who.int/iris/handle/10665/40960>.

was reasonable to assume that the absence of clinical cases of smallpox possibly signified the absence of naturally occurring smallpox.¹³ Based on the assumption and previous experience, the committee suggested the criteria for confirming the interruption of smallpox transmission as stated:

“Recent experience indicates that, in all countries with a reasonably effective surveillance programme, residual foci can be detected within 12 months of apparent interruption. Thus, in countries with active surveillance programmes, at least 2 years should be elapsed after the last known case — excluding well-defined and contained importations — before it is considered probable that smallpox transmission has been interrupted.”¹⁴

On the basis of the recommendation, two criteria had been adopted in the process of confirming the interruption of smallpox transmission: first, the smallpox cases had not occurred for at least two years, and second, an active surveillance system must be confirmed to be sensitive enough to detect any possible smallpox cases.¹⁵

Figure 4.3 Countries Reporting Smallpox Cases, 1973



Source: World Health Organization, “Smallpox Eradication,” *Weekly Epidemic Record*, no. 17-25 (1980): 123, <https://apps.who.int/iris/handle/10665/223015>.

¹³ Ibid, 5.

¹⁴ Ibid, 6.

¹⁵ L. B. Brilliant and L. N. Khodakevich, *The Certification of Smallpox Eradication in Countries without Recent Reported Endemic Transmission* (Geneva: World Health Organization, 1978): 2, <http://www.who.int/iris/handle/10665/68234>.

In addition, the committee recognised that although smallpox transmission could be interrupted from one country to another, the concept of “eradication” could be only applied to a continent. Moreover, even if smallpox cases might be considered to have been reduced to zero from certain continents, it was not able to declare “eradication” of the disease from the continent.¹⁶ Therefore, the certification of smallpox eradication was requested by the WHO to verify smallpox free status in each country by teams of independent experts. The “certification” was defined as “a series of independent international assessments, undertaken under the WHO’s auspices, of the efficacy of smallpox eradication programmes and surveillance in countries throughout the world, especially those in which smallpox had been endemic in 1967 and others at special risk”.¹⁷

The second five years in the progress of the intensified global smallpox eradication programme witnessed an increasing number of achievements. The milestones of zero-smallpox status were achieved in Brazil in 1971, in Indonesia in 1972, in most parts of Africa apart from the Horn of Africa in 1973, and in Asia in 1975 (see Map 4.3 and 4.4).¹⁸ Accordingly, eight international commissions were convened to certify the smallpox free status in the Americas (1973), Indonesia (1974), West Africa (1976), Pakistan and Afghanistan (1976), India/Nepal/Bhutan (1977), Central Africa (1977), Burma (1977) and Bangladesh (1977).¹⁹ The international commissions confirmed the eradication in individual countries by reviewing the available data, and visiting the countries concerned, in which

¹⁶ WHO Expert Committee on Smallpox Eradication and WHO, *WHO Expert Committee on Smallpox Eradication (Meeting Held in Geneva from 22 to 29 November 1971): Second Report* (Geneva: World Health Organization, 1972), 5-6, <http://apps.who.int/iris/handle/10665/40960>.

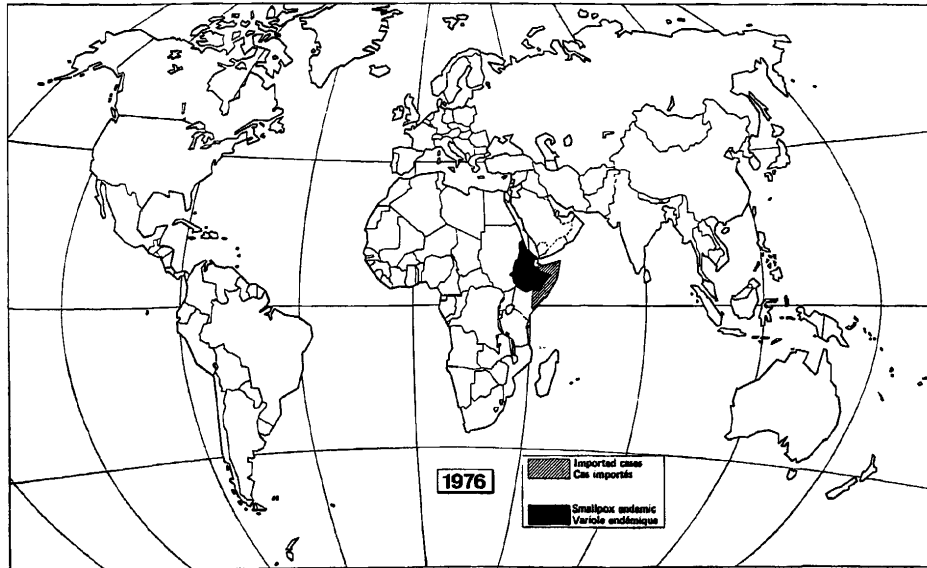
¹⁷ Fenner et al, *Smallpox and Its Eradication*, 1104.

¹⁸ World Health Organization, “Smallpox Eradication,” *Weekly Epidemic Record*, no. 17-25 (1980): 123, <https://apps.who.int/iris/handle/10665/223015>. For the details of global smallpox eradication, see Henderson, *Smallpox: The Death of a Disease*; Fenner et al, *Smallpox and Its Eradication*; Isao Arita, *The Smallpox Eradication Saga: An Insider’s View* (Hyderabad: Orient Blackswan Private Limited, 2010); Sanjoy Bhattacharya and Sharon Messenger ed., *The Global Eradication of Smallpox* (New Delhi: Orient Longman, 2010). For a detailed account of the Western and Central African smallpox eradication programmes, see William H. Foege, J.D. Millar and D.A. Henderson, “Smallpox Eradication in West and Central Africa,” *Bulletin of the World Health Organization* 52, no. 2 (1975), 209–222. For Smallpox eradication in South Asia, see Bhattacharya, *Expunging Variola: The Control and Eradication of Smallpox in India, 1947-1977*; Bhattacharya, “International Health and the Limits of its Global Influence,” 461–486. Paul Greenough, “Intimidation, Coercion and Resistance in the Final Stages of the South Asian Smallpox Eradication Campaign, 1973–1975,” *Social Science & Medicine* 41, no. 5 (1995), 633–645; Susan Heydon, “Death of the King: The Introduction of Vaccination into Nepal in 1816,” *Medical History* 63, no. 1 (2018): 24–43; Foege, *House on Fire*; For CDC’s workers in South Asia, Greenough, “‘A Wild and Wondrous ride’,” 491–501. For smallpox eradication in Indonesia, see Vivek Neelakantan, “Eradicating smallpox in Indonesia,” 61–87. For smallpox eradication in Brazil, see Gilberto Hochman, “Priority, Invisibility and Eradication: The History of Smallpox and the Brazilian Public Health Agenda,” *Medical History* 53, no. 2 (2009), 240–244; Sanjoy Bhattacharya and Carlos Campani, “Re-Assessing the Foundations,” 71–93.

¹⁹ L. B. Brilliant, N. Khodakevich, and World Health Organization, *The Certification of Smallpox Eradication in Countries without Recent Reported Endemic Transmission* (Geneva: World Health Organization, 1978), 2, <https://apps.who.int/iris/handle/10665/68234>.

smallpox transmission had been interrupted for at least two years and robust surveillance was available since the discovery of the last case.²⁰

Figure 4.4 Countries Reporting Smallpox Cases, 1976



Source: World Health Organization, “Smallpox Eradication,” *Weekly Epidemic Record*, no. 17-25 (1980): 123, <https://apps.who.int/iris/handle/10665/223015>.

In 1976, the last battle ground for smallpox eradication moved to southern Ethiopia, which nomadic groups inhabited.²¹ (see map 4.4) As the global eradication was achieving its final success, the Twenty-ninth World Health Assembly requested the Director-General “to undertake a study of the organization of a world conference on the problems of eradicated smallpox and to report on the subject to the Executive Board and to the Thirtieth World Health Assembly”.²² Responding to the Director-General’s report on smallpox eradication, the Executive Board expressed appreciation of the efforts being made by the Organization at the twenty-second meeting on 25 January 1977. The board suggested member States to continue to provide maximum possible support to the smallpox eradication programme to interrupt transmission of the disease at the earliest possible date, and recommended the organization to verify and document this achievement.²³

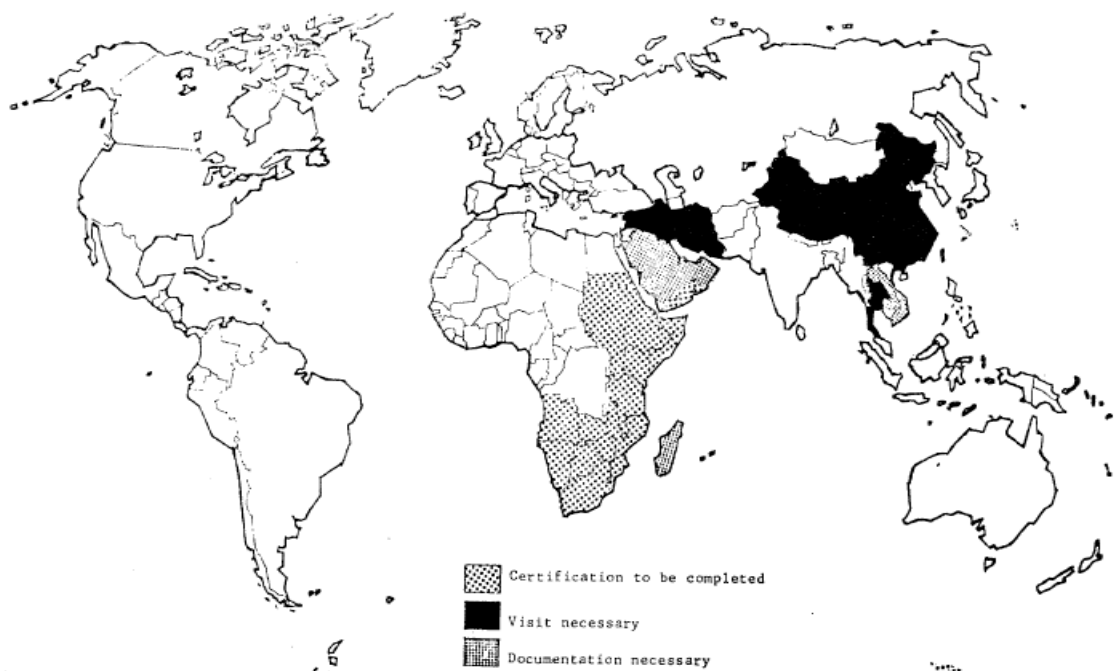
²⁰ World Health Organization, “Smallpox Eradication,” *Weekly Epidemic Record*, no. 17-25 (1980): 123, <https://apps.who.int/iris/handle/10665/223015>.

²¹ Donald. A. Henderson, “Smallpox Eradication,” *Proceedings of the Royal Society of London Series B, Biological Sciences* 199, no. 1134 (1977): 95.

²² World Health Assembly, *World Health Assembly, Geneva, 3-21 May 1976: Part I: Resolutions and Decisions: Annexes* (Geneva: World Health Organization, 1976), 35, <https://apps.who.int/iris/handle/10665/86029>.

²³ Executive Board, *Smallpox Eradication* (World Health Organization, 1977), <https://apps.who.int/iris/handle/10665/91054>.

Figure 4.5 Countries Remaining for Global Certification of Smallpox Eradication, 1978



Source: L. B. Brilliant, N. Khodakevich, and World Health Organization, *The Certification of Smallpox Eradication in Countries without Recent Reported Endemic Transmission* (Geneva: World Health Organization, 1978), 8, <https://apps.who.int/iris/handle/10665/68234>.

Following these requests, a Consultation on Worldwide Certification was convened by the Director-General in Geneva on 11-13 October 1977. Seventeen experts in virology, epidemiology, and public health, who were familiar with the science, development, and operation of smallpox eradication programme, provided their advice on the strategy of the certification. Dr I. Ladnyi, Assistant Director-General, proposed to build a committee or commission to assist the WHO's work on global certification. The Director-General, Dr Mahler, endorsed the proposal of establishing such a commission to advise him on the progress and the final achievement of the certification of smallpox eradication.²⁴ By examining available data including population statistics, confirmed smallpox cases, laboratory investigations report, information regarding existing surveillance systems and reports of suspected cases, the group of experts evaluated the smallpox status throughout the world and made prospects for the global certification. They categorized member states into three groups:

²⁴ WHO Consultation on Worldwide Certification of Smallpox Eradication and World Health Organization, *Report of the Consultation on Worldwide Certification of Smallpox Eradication: Held in Geneva from 11-13 October 1977* (Geneva: World Health Organization, 1977), 1, <http://apps.who.int/iris/handle/10665/68224>.

- “(a) those already certified as free from smallpox, or where sufficient information is presently available for immediate recommendation to the Global Commission;
- (b) those where certification using the established commission procedures would be required;
- (c) those where information and/or surveillance data are incomplete, and require special consideration or evaluation prior to final action by the Global Commission.”²⁵

The consultation agreed the interruption of the smallpox worldwide was imminent, and they recognised the necessity of constituting an International Commission for the Global Certification of Smallpox Eradication as Dr I. Ladnyi and Dr Mahler’s had suggested. The group scheduled certification by relevant international commissions for 13 countries involved in the intensified smallpox eradication programme, which had already interrupted the transmission of the disease or with the prospect of interruption, including Angola, Botswana, Democratic Yemen, Djibouti, Ethiopia, Kenya, Lesotho, Namibia, Somalia, Southern Rhodesia, South Africa, Swaziland, and Yemen Arab Republic. Apart from that, the group also identified 15 countries required special procedures for the certification. Among those 15 countries, 10 were required to provide special detailed documentation of their eradication operations, including verified smallpox incidence data since 1960, reports of the last known outbreak and control measure, and the method adopted for recognising suspected cases. These countries included Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates, Democratic Kampuchea, Laos, Madagascar, and the Socialist Republic of Viet Nam. Moreover, another 5 countries were required to be visited by international commissions or WHO consultants, which included China, Iran, Iraq, Syria, and Thailand.²⁶

Soon after the consultation, the last case of naturally occurring smallpox incidence was identified in Somalia in October 1977. Following the recommendation on the consultation, a Global Commission for the Certification of Smallpox Eradication was established to continue the international commissions’ task of providing consultation and verification for the formal endorsement of smallpox eradication. Dr Frank Fenner was elected as the Chairman of the commission.²⁷ The global commission expected to carry out the certification work “in all countries and areas of the world, regardless of political consideration,” based on the best available scientific data generated from the visits by consultants and staff members of the WHO, as well as from national health authorities. The first meeting of the Global

²⁵ Ibid, 2.

²⁶ Ibid, 3.

²⁷ World Health Organization Global Commission for the Certification of Smallpox Eradication, *Report of the Global Commission for the Certification of Smallpox Eradication First Meeting: 4-7 December 1978: Plan for Global Certification of Smallpox Eradication by the End of 1979* (Geneva: World Health Organization, 1978), 2, <https://apps.who.int/iris/handle/10665/68264>.

Commission for the Certification of Smallpox Eradication in December 1978 decided the major objectives of the commission, which included:

- To ascertain whether human smallpox transmission has been interrupted in each country.
- If information is insufficient to certify smallpox eradication in any country, to recommend what additional steps are required.
- To ascertain what measures should be undertaken to minimize the risk of reintroduction of smallpox to human population from variola virus stocks in laboratories.
- To recommend research activities regard possible animal reservoirs of variola virus; the importance to man of monkeypox and whitepox viruses; the possible emergence of new variola-like viruses.
- To determine whether termination of routine smallpox vaccination is appropriate and, if so, when.
- To recommend measures regarding the maintenance and distribution of reserves of smallpox vaccine for possible emergencies.
- To decide when global smallpox eradication has been certified and to present conclusions and recommendations with supporting documentation to the Director-General of WHO and through him to the World Health Assembly.
- To consider how the Global Commission could express its conclusions regarding the eradication of smallpox to the world community so that the achievement will be universally recognized.
- To recommend measures for continuing surveillance and other appropriate activities following certification of global smallpox eradication.²⁸

In order to achieve those objectives, the Global Commission firstly endorsed the conclusions of these commissions by careful review of the previous work by International Commissions and certified 51 countries in category I free from smallpox shown in table 4.1. Among 13 countries originally selected by the Consultation on Worldwide Certification in 1977 as requiring formal certification by the International Commissions, Namibia, Southern Rhodesia and South Africa had also reached the standard for certification by being reviewed of detailed country reports and special surveys, as well as being visited by members of the Global Commission and/or WHO consultants, while other 10 countries were subjected to further reviewing.²⁹ Apart from that, among 15 countries required special procedures for the certification by the consultation, 13 were certified by the global commission by reviewing submitted detailed country reports and country visits by members of the commission and/or WHO experts, while only 3 of them were subjected to further action, which included Democratic Kampuchea, Thailand and China.³⁰ (see table 4.1)

²⁸ Ibid, 3.

²⁹ World Health Organization Global Commission for the Certification of Smallpox Eradication, *Report of the Global Commission for the Certification of Smallpox Eradication First Meeting: 4-7 December 1978: Plan for Global Certification of Smallpox Eradication by the End of 1979* (Geneva: World Health Organization, 1978), 5-6, <https://apps.who.int/iris/handle/10665/68264>.

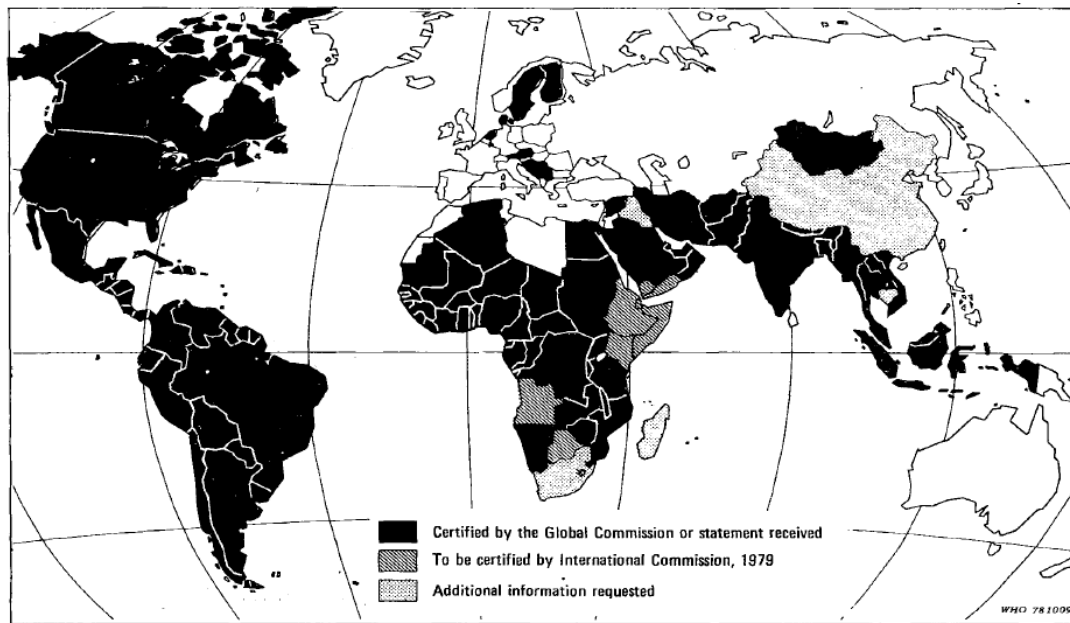
³⁰ Ibid, 6-7.

Table 4.1 Status of the Certification of Smallpox Eradication of Individual Countries and Areas, 1978

I. Countries certified free of smallpox by the Global Commission by the end of 1978		
Certification Date	International Commission	Certified countries
14-25 August 1973	South America	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, French, Guiana, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela
15-25 April 1974	Indonesia	Indonesia
23 March-15 April 1976	West Africa	Benin, Gambia, Ghana, Guinea, Guinea Bissau, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Toga, Upper Volta
22-29 November 1976	Afghanistan	Afghanistan
6-18 December 1976	Pakistan	Pakistan
6-13 April 1977	Nepal	Nepal
6-20 April 1977	India	India
6-20 April 1977	Bhutan	Bhutan
6-30 June 1977	Central Africa	Burundi, Central African Empire, Chad, Congo, Equatorial Guinea, Gabon, Rwanda, United Republic of Cameroon, Zaire
21-30 November 1977	Burma	Burma
1-14 December 1977	Bangladesh	Bangladesh
6-29 March 1978	South-East Africa	Malawi, Mozambique, United Republic of Tanzania, Zambia
11-27 October 1978	Uganda	Uganda
15-29 November 1978	Sudan	Sudan
II. Countries scheduled to be certified by international commissions on the Consultation in 1977		
Countries	Certification Status	
Namibia, Southern Rhodesia and South Africa	Certified by the International Commission and endorsed by the Global Commission	
Angola, Botswana, Democratic Yemen, Djibouti, Ethiopia, Kenya, Lesotho, Somalia, Swaziland, Yemen Arab Republic	Pending to be certified by International Commissions	
III. Countries Designated for Visits/Detailed Country Reports in the consultation in 1977		
Countries	Certification Status	Notes
Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates	Certified by the Global Commission	These six geographically related countries were considered together. Detailed individual country report were submitted in 1978
China	Pending	The commission was confident with the smallpox free status of China, but certification subjected to a more detailed country report
Democratic Kampuchea	Pending	Certification subjected to the Government of Democratic Kampuchea's endorsement of data submitted by the Global Commission
Iran, Iraq and Syria	Certified by the Global Commission	Certified by reviewing detailed country report and country visit
Lao's People's Democratic Republic	Certified by the Global Commission	Country report was submitted
Madagascar	Pending	Certification subjected to a visit by a WHO staff member and review of additional information
Socialist Republic of Viet Nam	Certified by the Global Commission	
Thailand	Certified by the Global Commission	Certified by a country report and visit by a member of the commission

Source: World Health Organization Global Commission for the Certification of Smallpox Eradication, *Report of the Global Commission for the Certification of Smallpox Eradication First Meeting: 4-7 December 1978: Plan for Global Certification of Smallpox Eradication by the End of 1979* (Geneva: World Health Organization, 1978), 4-7, <https://apps.who.int/iris/handle/10665/68264>. Form abstracted from the report by Lu Chen.

Figure 4.6 Plan for Global Certification of Smallpox Eradication by the End of 1979, 7 December 1978



Source: World Health Organization Global Commission for the Certification of Smallpox Eradication, *Report of the Global Commission for the Certification of Smallpox Eradication First Meeting: 4-7 December 1978: Plan for Global Certification of Smallpox Eradication by the End of 1979* (Geneva: World Health Organization, 1978), 1, <https://apps.who.int/iris/handle/10665/68264>.

The certification of China was among the major concerns of the global commission. Before the first meeting of the Global Commission for the Certification of Smallpox Eradication held in December, “A General Introduction on the Eradication of Smallpox in the People’s Republic of China” was submitted to the Global Commission by the Government of China on 27 November 1979.³¹ The report indicated that 500 million vaccinations were performed from 1949 to 1952, and the number of reported smallpox cases had decreased from 67021 in 1950 to 446 in 1954. No smallpox cases had been reported in urban areas from 1954 onwards, and the last case of the country was recorded in Yunnan province in 1960.³² The global commission was confident that smallpox transmission had been interrupted in China as the government had claimed, considering the capacity of delivering health services and effective surveillance of the country. Despite being convinced themselves, the commission indicated it was necessary for the PRC to provide persuasive evidence of smallpox eradication to the world community. Therefore, to certify the smallpox free status

³¹ WHORASSEP: ID0020_Box269, Letter to Halfdan Mahler (Director-General of World Health Organization) from Dr Chiang Yi-chen (Ministry of Public Health of the PRC), “A General Introduction of the Eradication of Smallpox in the People’s Republic of China, 27 November 1978.

³² WHORASSEP: ID0020_Box269, Letter to Halfdan Mahler (Director-General of World Health Organization) from Dr Chiang Yi-chen (Ministry of Public Health of the PRC), “A General Introduction of the Eradication of Smallpox in the People’s Republic of China, 27 November 1978.

of China, they suggested requesting a more complete country report, which provided smallpox eradication information on a province-by-province basis, including the record of the last cases, description of past eradication activities, as well as current epidemiological surveillance operation.³³ However, it was still challenging to access acquired information from Beijing, although the PRC had already recovered its seat in the UN and its specialized agencies in the early 1970s. Apart from the technical issue regarding the health data collecting and dissemination which has been addressed in the previous chapter, the political situation in China, and the legacy of anti-US and anti-UN sentiment in the 1950s and the 1960s had also played imported roles in the lack of accessing Chinese data for the certification of smallpox eradication.

II. Political contest with the UN and the difficulty of obtaining smallpox information from China

As discussed in chapter 2, the exclusion and inclusion of the PRC into the United Nations system was determined by the General Assembly and the Security Council, while other UN organs and specializations agencies took a back seat and passively accepted the decision of the Assembly.³⁴ The evidence in chapter 2 also showed that the question of the admission of the communist government's representation at the UN General Assembly was decided by the recognition of its legitimacy from member states.³⁵ Therefore, China saw the General Assembly as one of the most important arenas to fight for its legitimacy.

After the General Assembly passed the resolution 498 recognizing China as the principal aggressor of the Korean War and embargoed the country in 1951, the Soviet Union sponsored World Peace Council criticized the UN as a universal peace broker. In October 1952, the China Peace Council (a loose affiliation to the WPC) hosted the Asia-Pacific Peace Conference (APC) in Beijing, which addressed the failure of the UN among other issues raised regional concern by Asian countries.³⁶ Rachel Leow's research has shown that the conference had been used by the PRC as an "emotive symbolic theatre". She suggested that "peace as an emotive, anti-imperialist political idea was a crucial linkage in the development

³³ World Health Organization Global Commission for the Certification of Smallpox Eradication, *Report of the Global Commission for the Certification of Smallpox Eradication First Meeting: 4-7 December 1978: Plan for Global Certification of Smallpox Eradication by the End of 1979* (Geneva: World Health Organization, 1978), 6, <https://apps.who.int/iris/handle/10665/68264>.

³⁴ Kim, *China, the United Nations and World*, 98.

³⁵ See chapter 2.

³⁶ Rachel Leow, "A Missing Peace: The Asia-Pacific Peace Conference in Beijing, 1952 and the Emotional Making of Third World Internationalism," *Journal of World History* 30, no. 1-2 (2019): 28.

of more popular forms of internationalist Afro-Asianism beyond the high diplomatic summitry of Bandung.”³⁷ The “structure of feeling” around the concept of “peace” had won sympathies and support for the PRC in South and Southeast Asia,³⁸ despite the conflicts regarding Tibet between China and India.³⁹ Jawaharlal Nehru, the Prime Minister of India, considered the integration of China into the regional unity was a strong pillar for the peace in Asia and the world,⁴⁰ and the exclusion of the communist regime from the UN was one of the factors that contributed to the chaos from Korean Peninsula to Indo-China.⁴¹ At the end of the second day the Conference, Nehru announced a treaty of friendship with China, and proposed five principles for the relationship, which was called Panchsheel.⁴² The principles between the two nations were advocated as “Five Principles of Peaceful Coexistence” by the Chinese Prime Minister Zhou En-lai at the Bandung Conference in 1955 as guidelines for activities among post-colonial African and Asian nations.⁴³

The Bandung Conference held in 1955 with attendance of 29 countries marked the coalition of these countries newly possessed independence in Africa and Asia. The coalition of these Afro-Asian countries, which represented an estimated 1.5 billion people and comprised a group nearly half of the size of the UN, formed a strong political force alternative to the imperialist countries from the colonial past and the rival powers of the US and Soviet Union in the nascent postcolonial world.⁴⁴ Observing this historical trend, the communist government considered the so-called “third world” countries as a major force driving the formulating of a new world order, which was mirrored in the General Assembly.⁴⁵ Hence, the communist regime sought international recognition from third world countries through promoting anti-imperialism and anti-colonialism, as well as calling for Afro-Asian solidarity.⁴⁶ From 1960s to 1970s, the PRC increased its political engagement with African countries and expanded the recognition of the communist regime, despite the internal and external crisis including the failure of the Great Leap Forward in 1958-1959, the deterioration

³⁷ Ibid.

³⁸ Ibid.

³⁹ Cindy Ewing, “The Colombo Powers: Crafting Diplomacy in the Third World and Launching Afro-Asia at Bandung,” *Cold War History* 19, no. 1 (2019): 9.

⁴⁰ Ibid.

⁴¹ Leow, “A Missing Peace,” 34-35.

⁴² Ewing, “The Colombo Powers,” 9-10.

⁴³ Joshua Eisenman, “Comrades-in-Arms: The Chinese Communist Party’s Relations with African Political Organisations in the Mao Era, 1949–76,” *Cold War History* 18, no. 4 (2018): 431.

⁴⁴ Christopher J Lee, “At the Rendezvous of Decolonization,” *Interventions* 11, no. 1 (2009): 87.

⁴⁵ Kim, *China, the United Nations and World Order*, 98.

⁴⁶ Joshua Eisenman, “Comrades-in-Arms,” 430.

of Sino-Soviet relationship coming after and the ten-year disruption in Cultural Revolution from 1966 to 1976.⁴⁷

The coalition of newly independent countries in Africa and Asia had challenged the postcolonial world order and the United Nations system. Drawing on the principles agreed at the Bandung Conference, the Afro-Asian Peoples' Solidarity Organization (AAPSO) was established in Cairo in December 1957. The conferences it organized from 1958 to 1965 included wider involvement from African and Asian states. In 1961, the Non-Aligned Movement (NAM) was established in Belgrade, Yugoslavia through an initiative of the Egyptian President Gamal Abdel Nasser, Ghanaian President Kwame Nkrumah, Indian Prime Minister Jawaharlal Nehru, Indonesian President Sukarno, and Yugoslav President Josip Broz Tito. The two NAM conferences held in Belgrade in 1961 and later in Cairo in 1964 culminated Afro-Asian solidarity.⁴⁸ Apart from the discussions regarding colonialism, racial discrimination, self-determination, and peaceful coexistence, etc., the participants also supported the Joint Declaration of the Seventy-Seven Countries at the United Nations Conference on Trade and Development (UNCTAD) in June 1964. The Group of 77 established within the United Nations in 1964 had formed a joint negotiating capacity to promote member states' collective economic interests in the UN. However, resulted from the unresolved differences inside the Afro-Asian group such as the border conflict between China and India in 1962, and the dispute regarding the NAM between Sukarno and Tito, the trend of Afro-Asian solidarity moved downwards with the failure to agree on a second Afro-Asian meeting in Algiers in 1965.⁴⁹ In January 1965, Indonesia withdrew from the United Nations in protest of the election of Malaysia as a non-permanent member of the Security Council, which had triggered off an uprising against the UN.⁵⁰

In support of Sukarno and against the UN and the United States, a government statement was published in *Peking Review*, an English weekly magazine for the Chinese government to promote new China and its politics which was launched in 1958.⁵¹ Beijing indicated the withdrawal of the Republic of Indonesia from the United Nations was a "correct and revolutionary action".⁵² The article claimed the exclusion of the PRC and the forced

⁴⁷ Ibid, 430.

⁴⁸ Ibid, 88-89.

⁴⁹ Ibid, 89.

⁵⁰ Matthew Jones, *Conflict and Confrontation in South East Asia, 1961-1965* (Cambridge: Cambridge University Press, 2002), 233-294.

⁵¹ *Peking Review*, "Introducing Peking Review," *Peking Review* 1, no. 1 (4 March 1958), 3.

⁵² *Peking Review*, "Indonesia Quits U.N.: A Just, Correct and Revolutionary Action," *Peking Review* 8, no. 3 (15 January 1965), 5.

withdrawal of Indonesia had proven that the UN had become “a tool of imperialism and old and new colonialism headed by the United States” which committed evils of commission and omission.⁵³ Therefore, the statement suggested newly independent Asian and African countries to end the blind faith in the compromised organization that “the people of the world who cherish independence and freedom must never entertain any unrealistic illusion about the United Nations.”⁵⁴ It also claimed that the country could live on well without the United Nations.⁵⁵

In another article complimented the Indonesia’s action of withdrawing translated from the *People’s Daily*, Beijing government described the UN as a pliant tool and a cult fostered by the US imperialism. It stated that:

Despite its seemingly imposing structure and pious appearance, the United Nations is in fact a pliant tool in the hands of imperialism headed by the United States for deceiving and oppressing the Asian and African countries and all revolutionary peoples. ... The increase in the number of Asian and African members in the United Nations has by no means brought about any fundamental change in the fact that the UN has become a US imperialist instrument of aggression. ... The UN is not the place where the Asian and African countries can uphold justice; it is the place where US imperialism bullies and oppresses people. ... They describe the UN as an effective organ in safeguarding world peace. In fact, the UN has never played any positive role in this respect. ... agreements on major international issues in postwar years, such as the Korean armistice, the restoration of peace in Indo-China and the peaceful settlement of the Laotian question, were reached outside the UN and through the resolute struggles of the people of all countries. This fully shows that world peace can be effectively safeguarded not by relying on the UN but by getting rid of its intervention. ... The United Nations is described as the protector of the sovereignty and security of all countries. ... As a matter of fact, the United Nations has degenerated into a dirty international political stock exchange in the grip of a few big powers; the sovereignty of other nations, particularly that of the small ones, is often bought and sold there by them like shares.⁵⁶

The article criticised the UN as “paper tiger” in the end and claimed that the PRC, a country had been deprived of its legitimate rights in the United Nations for 15 years, had not been harmed by the exclusion. Instead, the country had gained increasing international influence and prestige by upholding the anti-imperialist stand.⁵⁷ Similar anti-UN articles appeared frequently in *Peking Review* in 1965.⁵⁸ In the report on the work of the government

⁵³ Ibid.

⁵⁴ Ibid, 6.

⁵⁵ Ibid.

⁵⁶ Peking Review, “Indonesia’s Bold, Revolutionary Action,” *Peking Review* 8, No. 3 (15 January 1965), 7-8.

⁵⁷ Ibid, 9.

⁵⁸ Similar anti-UN articles, see Peking Review, “Justice Cannot Be Upheld in U.N.,” *Peking Review* 8, no. 4 (22 January 1965), 13-14; Peking Review, “U.N. Must Be Thoroughly Recognized,” *Peking Review* 8, no. 5 (29 January 1965), 5-6; Peking Review, “The More He Tries to Cover Up, The More He Exposes: On Adlai Stevenson’s U.N. Speech,” *Peking Review* 8, no. 6 (5 February 1965), 12-15; Peking Review, “Wither the United Nations? Commentary on de Gaulle’s February 4 Press Conference,” *Peking Review* 8, no. 8 (19

at the 1st Session of the Third National People's Congress on December 21-22, 1964, Premier Zhou Enlai described the international relationship of China was in the situation which "East Wind prevails over the West Wind."⁵⁹ He claimed that China had retaliated upon the anti-Chinese campaigns under the support of the US imperialism and modern revisionism while strengthening its relationship with many third world countries, which enhanced the country's prestige.⁶⁰ Regarding the representation at the UN, Premier Zhou strongly condemned the United States for perpetuating its influence in Taiwan and impeding the recovery of the communist regime's legitimate rights in the United Nations. He accused the US of plotting to create "two Chinas", or "One China, one Taiwan", and reiterated that "the government of the People's Republic of China is the only lawful government representing the entire Chinese people, and no other person or group, under whatever name, can represent China or part of Chinese territory and occupy a seat in the United Nations." Therefore, he emphasized that China would not build any connection with the United Nations, unless the organization had expelled the "Chiang Kai-shek clique" and recognised the PRC's legitimate rights completely.⁶¹

At a press conference for Chinese and foreign correspondents on 29 September, the Vice-premier and Foreign Minister Chen Yi (陈毅) responded to questions including the Sino-Indian boundary conflict, Indian-Pakistan conflict, trade relations between China and West Germany, sharing nuclear knowledge, Viet Nam war, the second African-Asian conference, etc.⁶² In response to the question of China's seat in the United States, Chen claimed that China refused to take part in such a United Nations, which had been controlled by the United States and the Soviet Union.⁶³ In justifying the refusal of joining in the UN, he said, "during the U.S. war of aggression against Korea, the United Nations adopted a resolution naming China as an aggressor. How can China be expected to take part in an international organization which calls her an aggressor? Calling China an aggressor and then asking the aggressor to join would not the United Nations be slapping its own face?"⁶⁴ He

February 1965), 13-15; Peking Review, "What a Mess the U.N. Has Become," *Peking Review* 8, no. 10 (5 March 1965), 10-11; Peking Review, "The United Nations: Instrument for U.S. Aggression," *Peking Review* 8, no. 42 (15 October 1965), 42-43.

⁵⁹ Peking Review, "Premier Chou En-lai Reports on Work of the Government," *Peking Review* 8, no. 1 (1 January 1965), 6.

⁶⁰ Ibid.

⁶¹ Ibid, 19.

⁶² Peking Review, "Vice-Premier Chen Yi's Press Conference: China is Determined to Make All Necessary Sacrifices for the Defeat of U.S. Imperialism," *Peking Review* 8, no. 41 (8 October 1965), 7-14.

⁶³ Ibid, 12.

⁶⁴ Ibid.

reiterated that the PRC's presence would remain unsolved unless the United Nations expelled the "Chiang Kai-shek clique" and recovered the legal rights of the communist government, which was unlikely under the control of the United States. Therefore, he demanded the UN to conduct reformation internally in accordance with the purpose and principles of its Charter, to admit and correct its mistakes, especially in how it mistreated the PRC, as well as to include all independent states while excluding "imperialist puppets".⁶⁵

In spite of the claims of discontentment and indifference towards the United Nations, the PRC expressed its disappointment of the voting result regarding the question of Chinese representation at the 22nd Session of the General Assembly, and commented that "Speaking frankly, the Chinese people are not at all interested in sitting in the United Nations, a body manipulated by the United States, a place for playing power politics, a stock exchange for the United States and the Soviet Union to strike political bargains, and an organ to serve the U.S. policies of aggression and war."⁶⁶ However, less attention from Beijing was given to the United Nations after 1965. From 1966 to 1970, although anti-America was still a popular topic in *Peking Review*, which appeared in almost every issue of the magazine. The articles regarding anti-UN had reduced to a single digit and was barely mentioned in the last few years in the 1970s. More importance was given to the United Nations again in 1971, especially after the PRC won its legal representation in the organization (see table 4.2).⁶⁷

Table 4.2 Article on the United Nations System Appearing in *Peking Review*, 1962-1972

Year	No. of Articles	Year	No. of Articles
1962	0	1968	1
1963	7	1969	1
1964	8	1970	5
1965	29	1971 (before 25 Oct.)	15
1966	7	1971 (after 25 Oct.)	37
1967	5	1972	88

Source: *Peking Review*, 5 January 1962 – 29 December 1972, in Kim, *China, the United Nations and World Order*, 102.

As a result of its foreign policy, China had taken strict control in sharing information with the international community, including the health data. It created a barrier for the WHO to access information related to the transmission, control, and eradication of smallpox in the country(see section 2 Chapter 3). After the intensified global smallpox eradication

⁶⁵ Ibid.

⁶⁶ *Peking Review*, "China's Great Influence in the World is Irresistible," *Peking Review* 10, no. 50 (8 December 1967), 21.

⁶⁷ Kim, *China, the United Nations and World*, 100-102.

programme launched in 1967, the Smallpox Unit at the WHO HQ and the regional office of Western Pacific Region both intended to get information in relation to smallpox eradication in China. There was, however, no information reported to the WHO from mainland China, as smallpox is concerned. The smallpox unit at the WHO HQ had received from various informal sources of information indirectly that no smallpox cases had occurred in China from some time in the 1950s, but no information could be relied upon. They were informed by Dr Raska, who visited China in the 1950s, that a widespread vaccination programme had been carried out and smallpox had already been eradicated in the country according to some anecdotes he was told during his visit to China. However, a report from the Walter Reed Army Medical Center overturned this account and indicated that there was a smallpox epidemic in South China in 1961-62. A former Health Officer in Hong Kong, David McKenzie, informed staff of WPRO that immigrants were checked carefully with their vaccination record, and according to his observation, there was no smallpox in the early 1960s.⁶⁸ In order to have a more complete picture of smallpox in China, and to help with the strategy for smallpox eradication programme in the region, Dr Donald R. Thomson (Director of Health Services of the WPRO) wrote to Dr P. H. Teng (Director of Medical and Health Services of Hongkong) requesting cooperation from Hong Kong health officials to obtain information regarding the smallpox situation in mainland China through pockmarks survey of those who moving into Hong Kong from the mainland.⁶⁹

In addition, after obtaining any information in relation to the smallpox situation in China, the WHO staff at Geneva and Manila would often reach out to the source of information for more details or confirmation. For example, after hearing comments from Dr Robert Netter, who worked at the National Laboratory of France, that no smallpox cases had occurred in China from 1950 onwards, Dr D. A. Henderson (director of the WHO Smallpox Eradication Program from 1966 to 1977) wrote to him for additional details of the steps that were taken to eliminate smallpox and information on incidence by year.⁷⁰ However, the pieces of information collected from informal sources were extremely insufficient to build a full picture of the smallpox eradication in China. The situation of lacking information from

⁶⁸ WHORASSEP: ID0398_BOX225, WPRO Memorandum, Smallpox in China, 26 December 1967.

⁶⁹ WHORASSEP: ID0398_BOX225, Letter from Dr Donald R. Thomson (Director of Health Service, WPRO) to Dr P. H. Teng (Director of Medical and Health Services, Medical and Health Department, Hongkong), 8 January 1968,

⁷⁰ WHORASSEP: ID0398_BOX225, Letter from D. A. Henderson (Chief of Smallpox Eradication Unit) to Robert Netter 9 Laboratoire National de la Santé Publique), 12 January 1971.

the mainland was not improved even after the PRC resumed its legal representation in the United Nations in 1971 and was included as a member of the WHO in the coming year.

III. China's re-joining in the WHO and cautious re-engagement

From the late 1960s, both China and the US had been interested in changing relations between the two nations, which resulted in Henry Kissinger and Richard Nixon's visit to China in 1971 and 1972. Due to the detente between the two countries, the US recognised the PRC as the only legal government of China and backed the communist regime to replace the ROC with the seat in the UN.⁷¹ On 25 October 1971, the United Nations General Assembly passed Resolution 2758, which was also recognised as the "Albanian resolution" (A/L. 630) by a roll-call vote of 76 to 35 with 17 abstentions. The resolution recognized that "the representatives of the Government of the People's Republic of China are the only lawful representatives of China to the United Nations and that the People's Republic of China is one of the five permanent members of the Security Council."⁷²

After the resolution was adopted at the UN, the heads of specialized agencies, including Dr Candau, the Director-General of the WHO, were informed of the resolution. The Secretary General revoked the Resolution 396 (V) passed on the 5th Session of the General Assembly of the United Nations in February 1951, which recommended that: "...the attitude adopted by the General Assembly or its Interim Committee concerning any such question should be taken into account in other organs of the United Nations and in the specialized agencies."⁷³ Based on Resolution 396 (V), the issue of China was dealt with as a legal problem of which Government entity should be entitled to represent China and be seated in our Constitutional Bodies, instead of admitting a new member state in the UN, as well as in the WHO. Therefore, although specialized agencies such as the WHO were constitutionally distinct from the UN itself and not bound by the decision of the UN or its Constitutional Bodies, their decisions in New York were concerned by the specialized agencies. The replacement of the ROC by the PRC at the WHO required a vote to take place in the coming World Health

⁷¹ For the Sino-US relationship during this period, see Raymond L. Garthoff, *Detente and Confrontation: American-Soviet Relations from Nixon to Reagan* (Washington, D.C.: Brookings Institution, 1994), at pp. 227-278, Jim Mann, *About Face: A History of America's Curious Relationship with China from Nixon to Clinton* (New York, Alfred Knopf, 1999), and Patrick Tyler, *A Great Wall: Six Presidents and China: An Investigative History* (New York, PublicAffairs, 1999). For developments in U.S-China relations after Nixon's trip through early 1977, see William Burr, ed., *The Kissinger Transcripts: The Top Secret Talks with Beijing and Moscow* (New York, The New Press, 1999).

⁷² United Nations General Assembly, *Resolution A/RES/2758(XXVI): Restoration of the Lawful Rights of the People's Republic of China in the United Nations, Twenty-sixth Session of the General Assembly, 25 October 1971*, United Nations Digital Library, <https://digitallibrary.un.org/record/654350?ln=en>.

⁷³ WHO: L 2/308/2, Circular letter C.L.5.1951 from Director-General, November 1971.

Assembly to be held in May 1972.⁷⁴ After consulting advice from legal office of the organization, Dr Candau responded that the question of representation of China in the WHO was to be evoked at the 49th session executive board in January 1972, and the final decision regarding this issue would be decided by the competent body of the organization at the following session of the World Health Assembly which held in Geneva in May.⁷⁵ However, the legal office raised concerns that the voting result at the World Health Assembly might not be in accordance with the result of the voting at the General Assembly in October 1971.⁷⁶

In order to exchange information on the implications of the resolution regarding China on the specialized agencies and UN programmes, a consultation meeting was arranged by the Office for Inter-Agency Affairs among representatives of the specialized agencies and UN programmes. Kittani, the Executive Assistant to the Secretary-General of the UN, indicated that although the decision at the General Assembly was not automatically binding upon specialized agencies, it was necessary to take a uniform approach to the problem in any actions to be taken and any statements to be given to the press by the agencies. Therefore, the UN required the specialized agencies to provide more pertinent and specific information about the immediate situation confronting them in terms of the change of representation of China, which was not only about the question of seat, but also the financial status and the situation of on-going programmes in the Republic of China (Taiwan). Specialized agencies, including the UNDP, the International Maritime Organization (IMCO), the International Atomic Energy Agency (IAEA), and the United Nations Children's Fund (UNICEF), raised concerns over the questions related to the collaboration with Taiwan, such as whether they should have withdrawn invitations already sent to the Taiwanese authorities, or cease the ongoing collaboration with and/or technical assistance to the region.⁷⁷ In later sessions of the consultation on 2 November 1971, the UN Legal Office suggested "not to take any drastic action", because the United States was in the process of reviewing its policy regarding the PRC's participation in the activities of specialized agencies. In terms of the ongoing activities in Taiwan, the legal office suggested taking action aligned with the UN resolution. Therefore,

⁷⁴ WHO: L 2/308/2, Letter from Director of Legal to Director-General regarding Representation of China, 14 October 1971.

⁷⁵ WHO: L 2/308/2, Telegram from Candau (Director-General of the WHO) to U Thant (secretary general of the UN), 29 October 1971.

⁷⁶ WHO: L 2/308/2, Letter from Director of Legal to Director-General regarding Representation of China, 14 October 1971.

⁷⁷ WHO: L 2/308/2, Memorandum from Director of Liaison Office with United Nations to Office of the Director-General, 29 October 1971.

what the specialized agencies should have concerned was “how to extricate the programme” (in Taiwan).⁷⁸

After consultation meetings with the UN legal office and other specialized agencies, a letter by the Director-General was circulated with member states and specialized agencies regarding the General Assembly’s decision on China. Referring to Resolution 396.V, the Director-General informed the recipients that the question of the representation of China in the organization would be proposed to be included in the provisional agenda of the Twenty-fifth World Health Assembly to be held in 1972. In addition, the issue would also be added to the agenda of the forty-ninth session of the Executive Board. He also indicated that the WHO sponsored technical programmes undertaken in Taiwan might also be sustained.⁷⁹ However, F. Getteridge, the director of the Legal Office of the WHO, indicated that the existing projects in Taiwan would be continued, unless the Director-General were requested to suspend them, because the constitution did not exclude the provision of assistance or aid to non-members or other geographical entities. He also referred to the arguments opposing Taiwan’s participation in the organization at the sixth World Assembly made by Drs Evang and Mudaliar and the Rajkumari Amrit Kaur, that the WHO could provide assistance in any part of the world, regardless of whether it was a member state of the organization or not.⁸⁰ Although the technical assistance to Taiwan was not officially sustained, the invalidation of the UN passport to be used in the travels to Taiwan made some of the activities impossible. Several technical assistance trips to Taiwan had been cancelled because of the prohibition of using the UN passport or personal passport of WPRO staff to travel to the region.⁸¹

After receiving Dr Candau’s letter regarding the inclusion of the question of admission of the PRC in the agenda of the 49th Session of the Executive Board and the 25th Session of the World Health Assembly, C.H.Yen, the Director-General of National Health Administration of the ROC expressed his regret of hearing the news. He indicated that the WHO was an independent and non-political body which was not necessarily bound by the UN resolutions. He expected the Director-General to drop the proposal of inclusion the PRC, because there was not any member state of the Organization had proposed so. However, he agreed with the Director-General that all approved projects in related to Taiwan should be

⁷⁸ WHO: L 2/308/2, Memorandum from Director of the Liaison Office with United Nations to Office of the Director-General, 2 November 1971.

⁷⁹ WHO: L 2/308/2, Circular letter C.L.5.1951 from Director-General to Member States, November 1971.

⁸⁰ WHO: L 2/308/2, Letter from F. Getteridge (Director, Legal Office of WHO) to Mr H. N. Roffey (Department of Health and Social Security, UK), 12 November 1971.

⁸¹ WHO: L 2/308/2, Telegram from Flache (WPRO) to Candau, 9 December 1971.

fully implemented. In response to the issue of travel documents, he confirmed that his government would grant visas to all the WHO staff members and all participants, trainees, and consultants affiliated to the organization, regardless of whether their countries had diplomatic relations with Taiwan.⁸² However, Beijing opposed any connection between UN bodies and Taiwan including any on-going technical assistance projects. On 12 January 1972, the Secretary General received a notice from the permanent representative of the PRC to the UN demanding the United Nations and all its related bodies to cease all their contacts and technical collaborations with Taiwan immediately, including all on-going projects and projects which have not yet begun. Dr Candau was informed by the legal department of the UN that the PRC considered the continuation of projects of assistance in Taiwan was in complete violation of the UN resolution.⁸³

Before the 49th Session of the Executive Board, the legal department advised the Director-General that it was doubtful if the board was only an executive organ exercising delegated powers instead of a decision or policy making authority. He mentioned that the World Health Assembly had been following General Assembly Resolution 396 (V) in dealing with questions of the representation of a member state in the past. The resolution had been referred in response to the question of the representation of China on a number of occasions in connection with the discussion on the report of the Committee on Credentials although no formal or procedural proposals or resolutions had been voted on the issue (see Chapter 3 Section 3). In addition, under Article 28 (e) of the constitution of the WHO, the Executive Board was empowered to submit advice or proposals to the Health Assembly on its own initiative. Therefore, the director of the legal department suggested that the same policy should have been adopted in the changed circumstances on the ground of consistency, so the EB was in a position to give effect to General Assembly Resolution 2758 (XXVI) and to transmit the notice of convocation of the World Health Assembly to Beijing while addressing other matters related to the PRC's admission, such as its financial contribution, to the assembly.⁸⁴

As a result, as the meeting on 26 January 1972, the Executive Board authorized the invitation to Beijing to attend the Twenty-fifth World Health Assembly and recommended

⁸² WHO: L 2/308/2, Letter from C.H.Yen, Director-General of National Health Administration of Republic of China to Dr M. G. Candau, Director-General of WHO, WHO Headquarters, Geneva, Switzerland, 11 December 1971.

⁸³ WHO: L 2/308/2, Telegram confidential for Dr Candau, 14 January 1972.

⁸⁴ WHO: L 2/308/2, Memorandum from the director of Legal Department to Director-General, 21 December 1971.

the assembly to recognize the PRC as the only government representing China. The Permanent Representative of the ROC Cheng Paonan wrote to Dr Candau to protest against the EB's decision and called it illegal. He also demanded the Director-General to circulate the letter to all member states of the organization.⁸⁵ On the basis that the representation issue had not been decided until the assembly to be held and in May and Beijing's request for no contact with Taipei, the legal department suggested the Director-General not to reply but only circulate the letter with member states as requested, including Taiwan.⁸⁶ The Director-General informed Beijing with the decisions of the EB and sent the authorities with the notice of convocation of the Twenty-fifth World Health Assembly, along with the provisional agenda of the session and supporting documentation.⁸⁷

On 10 May 1972, the Twenty-fifth World Health Assembly adopted a resolution recognizing the People's Republic of China as the only legitimate representative of China to the World Health Organization and decided to restore all its legal rights⁸⁸ by 76 votes in favour, 15 against, and 27 abstentions.⁸⁹ Apart from informing Beijing of the resolution at WHA immediately after the voting, Dr Candau also wrote a letter to the Minister of Public Health, expecting to establish closer contacts with the ministry in Beijing. The Director-General also invited Chinese representatives of the Minister of Public Health to visit the WHO Headquarters in Geneva and expressed his expectation to send a WHO team to Beijing to exchange information. Mutual understanding between Geneva and Beijing, Dr Candau said, "on the one hand, would enable China to take the best and fullest advantage of what WHO has to offer and, on the other hand, would enable WHO to make the fullest possible use of China's great store of knowledge and experience in its own world-wide activities."⁹⁰

However, in the first several years after China re-joined the WHO, the negotiation and collaboration between the two sides had not significantly improved, which brought challenges to the certification of smallpox eradication in China. Although more information related to smallpox eradication in China was available, it was limited to anecdotes, which could not be supported by detailed evidence. Through Dr Chang Wei-hsun, the Assistant

⁸⁵ WHO: L 2/308/2, Letter from Cheng Paonan (Permanent Representative of the ROC) to Dr Candau, 27 January 1972.

⁸⁶ WHO: L 2/308/2, Memorandum from the director of legal office to Director-General, 3 February 1972.

⁸⁷ WHO: L 2/308/2, Letter from the WHO to the Minister of Foreign Affairs of the PRC, 10 February 1972.

⁸⁸ WHO: L 2/308/2, Resolution of Representation of China in the World Health Organization, A25/VR/3, Third Plenary Meeting, Twenty-fifth World Health Assembly, 10 May 1972.

⁸⁹ WHO: L 2/308/2, Telegram from Director-General of WHO to the Minister of Public Health of the PRC, 10 May 1972.

⁹⁰ WHO: L 2/308/2, Letter from Director-General of WHO to the Minister of Public Health of the PRC, 11 May 1972.

Director-General of the WHO, who has connection to Beijing, the smallpox unit in the WHO HQ obtained the information that the last smallpox case occurred in China around 1960.⁹¹ However, Dr Chang did not provide more details regarding the claim. More information on smallpox eradication in China was provided by Chinese delegates at the Twenty-sixth World Health Assembly in May 1973. It was known that smallpox had been eradicated in China in 1959 through massive vaccination programmes started in 1949. After the mass vaccination, smallpox vaccination was integrated into the general immunization program of the nation so that all the citizens had to be vaccinated against smallpox every six years.⁹² Although the WHO started to send study groups to visit China since 1973 and more information on its public health system was available, details of smallpox eradication in China still remained absent.⁹³

In the first few years after re-joining the WHO, the PRC was taking cautious steps resuming its collaboration with the organization. When the PRC won its legal representation in the United Nations system, the country was still in the period of Cultural Revolution. The movement from 1966 to 1976 was considered as one of the extreme authoritarian rules that had been implemented that all aspects of society were controlled by the state, which included but not limited to economy, education, media, culture, and even individuals' personal lives. During the ten years of Cultural Revolution, the country was subjected to 'politics in command' under the banner of Marxism-Leninism-Mao Zedong Thought, and the public was often being mobilized to participate in the political campaigns or movements aimed at purging remnants of capitalist and traditional elements from Chinese society.⁹⁴

As a result, in the first few years after resuming its legal rights, Beijing was taking cautious steps resuming its connections with the United Nations and its specialized agencies, as well as other international sectors. In an interview on 28 October 1971, Premier Zhou Enlai commented Beijing's strategies towards the UN. He said: "We have not yet made adequate preparations. In connection with our attitude toward the United Nations, ... we do

⁹¹ Fenner et al, *Smallpox and Its Eradication*, 1248-1250.

⁹² World Health Assembly, *Technical Discussions at the Twenty-sixth World Health Assembly "Organization, Structure and Functioning of Health Services and Modern Methods of Administrative Management"* (Geneva: World Health Organization, 1973), accessed 10 August 2017, <http://apps.who.int/iris/handle/10665/146223>.

⁹³ Fenner et al, *Smallpox and Its Eradication*, 1250.

⁹⁴ Beverley Hooper, *Foreigners under Mao: Western Lives in China, 1949-1976* (Hong Kong: Hong Kong University Press, 2016), 4; For more about Cultural Revolution, see Jie Li and Enhua Zhang ed, *Red Legacies in China: Cultural Afterlives of the Communist Revolution* (Cambridge: Harvard University Asia Center, 2016); Xing Lu, *Rhetoric of the Chinese Cultural Revolution: The Impact on Chinese Thought, Culture, and Communication* (Columbia: University of South Carolina Press, 2004); Yiching Wu, *The Cultural Revolution at the Margins: Chinese Socialism in Crisis* (Cambridge, MA: Harvard University Press, 2014).

not have too much knowledge about the United Nations and are not too conversant with the new situation which has arisen in the United Nations. We must be very cautious. This does not mean, however, that we do not have self-confidence; it means that caution is required and that we must not be indiscreet and haphazard.”⁹⁵

Therefore, a cautious strategy had been adopted in resuming the collaborations with the WHO. After the 25th World Health Assembly, Dr Candau decided to visit China from 4 to 11 August 1972.⁹⁶ The legal department suggested the director-general to approach Beijing in a way they would feel comfortable. During the visit to Beijing, Dr Candau discussed the question of accepting the Nomenclature Regulations 1967 and the International Health Regulation of 1969, as they concerned technical matters. The Chinese authorities indicated they would like to have some time to consider the two questions and requested separate letters to be sent regarding the two regulations.⁹⁷ In 1973, a Danish physician, Dr Halfdan Theodor Mahler, was elected as the Director-General of the WHO at the Twenty-sixth World Health Assembly. After the election, he accepted the invitation from Dr Huang Shu-tse (黄树则), the Vice-Minister of Health of the PRR to visit China in winter.⁹⁸ Accompanied by Dr F. J. Dy, Regional Director of WRPO, and Dr S. Flache, Director of Health Service of the WPRO, Dr Mahler visited China from 9 to 16 November.⁹⁹ A week later, a team led by Dr L.E. Bernard, Assistant Director-General visited China for technical collaborations in training of primary health organizations, environmental sanitation, family planning, maternal and child health, the prevention of infectious and parasitic diseases, and the training of auxiliary personnel.¹⁰⁰

The Ministries of Foreign Affairs and Health informed host organizations of the nature and functions of the WHO. They indicated that the WHO was controlled by the US in the past, and mainly served Western countries for collecting intelligence materials and infiltrating Asian and African countries. They suggested the US manipulated the organization through

⁹⁵ *New York Times*, 9 November 1971, 1. In Kim, *China, the United Nations and World Order*, 109-110.

⁹⁶ WHO: D 4/441/36, Letter from Candau (Director-General) to Wang Chung-li (Consul-General of the People's Republic of China to Geneva), 30 June 1972.

⁹⁷ WHO: L 2/308/2, Message from Director-General to Director of Legal Office, 25 August 1972.

⁹⁸ WHO: D 4/441/36, Letter from Dr Huang Shu-tse (Vice-Minister of Health, the PRC) to Dr Mahler (Director-General, WHO), 27 June 1973; WHO: D 4/441/36, Letter from Dr Mahler (Director-General, WHO) to Dr Huang Shu-tse (Vice-Minister of Health, the PRC), 20 August 1973.

⁹⁹ WHO: D 4/441/36, Letter from H. Mahler to the Minister of Public Health of People's Republic of China, 19 October 1973.

¹⁰⁰ WHO: D 4/441/36, Telegram from Dr Mahler to Ministry of Health Peking, 23 October 1973, Geneva: Archives of World Health Organization; SMA: B242-3-416, 外交部、卫生部文件 (73) 卫外字第 481 号, 接待世界卫生组织考察组计划 (Document of the Ministry of Foreign Affairs and Ministry of Health (73) Weiwaizi No. 481, Plan to Host the World Health Organization Team), 9 November 1973.

the bait of financial aid. For example, the country contributed to 30.87% regular budgetary fund to the organization and made a large amount donation to influence the organization's activities such as medical research programs including cardiovascular and cancer research programs, as well as the global malaria eradication program. They claimed that the US held major real powers to the organization, which led to the withdrawal of the Soviet Union in 1949. They also mentioned the Soviet Union re-joined the organization after Khrushchev came to power, and actively expanded its influence in the WHO, but its influence was not comparable with the US. The ministries informed the host organizations the exclusion and inclusion of China in the organization. They indicated that the "old China" (the ROC) was one of the countries that proposed the establishment of the WHO. However, "Chiang Kai-shek Clique" occupied China's legal representative in the organization under the US' support, and the PRC was not a member of the organization until 10 May 1972, when its legal right was recognized at the organization. They also briefed the host organizations the previous visit by Dr Candau and collaboration activities between Beijing and Geneva, and they pointed out that the newly elected Director-General, Dr Mahler, was also friendly to China.¹⁰¹

The ministries instructed host organizations to do hospitality work in the spirit of "warmth and friendship (热情友好)", as well as "modest and cautious (谦虚谨慎)". They expected host organizations to be fully prepared for the WHO staff's visit, and to make it delightful while keeping inside information from outsiders, as well as act in line with principles of foreign affairs work. They told host organizations to satisfy visitors' reasonable requirements as far as possible, and to propagandize the guiding principles of the Chinese Communist Party's 18th National Congress, as well as the achievements, policies, and guidelines of the country's health work. The ministries also reminded them to be prepared for the questions that visitors might ask, and to be practical and realistic when answering those questions that to not only mention success and achievements but also to be frank about shortcomings in progress. The host organizations were also expected to have a united ground when answering questions. Any confidential or immature projects were not allowed to be introduced to the visitors. Some public health figures were allowed to be revealed to the guests, but epidemic data was not included. The range of data could be shared would be decided by the related municipal and provincial governments. The ministries also suggested arranging some small group visits and workshops based on the visitors' specializations. If any

¹⁰¹ Ibid.

of the visitors raised an issue involving the collaboration with the World Health Organization, host organizations were not authorized to make any commitment.¹⁰²

The Foreign Affairs Brief regarding the WHO team's visit prepared by the International Liaison Group of the Revolutionary Committee of Shanghai Municipal Health Bureau had recorded the activities of the group. According to the report, the visitors were pleased to be the birth place of the primary health care and they were interested to learn more about the "barefoot doctors (赤脚医生)". The report recorded that the guests' interests in publications of the 10th National Congress of the Chinese Communist Party in English, as well as their compliments on the prevention-oriented approach to public health, the peasant-worker alliance, and China's cost-effective methods in improving public health.¹⁰³ Through the communications with the WHO team, the Chinese authorities recognized that the organization was more interested in technical issues instead of political debates. The brief indicated that this group of visitors raised a lot of questions, but few expressed their opinions, and no provocative issue was raised. Instead, they were mostly interested in technical issues. All visitors represented their departments offered technical assistance and invited the Chinese counterparts to collaborate in related fields. Through the WHO staff's visit, the host organizations in Shanghai recognized the gaps in the disease prevention and environmental sanitation work. In addition, the Shanghai team also pointed out that the reception work was hindered by the lack of commitment for further collaboration because they were not authorised by the Ministry of Public Health to make any commitment.¹⁰⁴

Although the Chinese authorities had been collaborative in visits by the WHO team led by the Director-Generals or the technical professionals and recognized that the organization was more interested in technical issues, the sharing of public health data and information with institutions and individuals overseas was still under strict control. Following the change in international relationships, Chinese science communities received increasing invitations for international collaboration and information exchange from institutions and individuals overseas. As discussed in Section 2 Chapter 3, in 1965, the Foreign Affairs Office of the

¹⁰² SMA: B242-3-416, 沪卫革外联(73)80号市卫生局革命委员会(请示)关于世界卫生组织考察组访沪接待计划的请示报告(Report of the Revolutionary Committee of the Municipal Health Bureau (for instructions) on the Hosting Plan of the World Health Organization Team to Visit Shanghai), 27 November 1973.

¹⁰³ SMA: B242-3-416, 上海市卫生局革委会对外联络组, 外事简报第65期, External Liaison Group of the Revolutionary Committee of Shanghai Municipal Health Bureau, Foreign Affairs Briefing No. 65), 7 December 1973.

¹⁰⁴ SMA: B242-3-416, 上海市卫生局革委会对外联络组, 外事简报第66期(External Liaison Group of the Revolutionary Committee of Shanghai Municipal Health Bureau, Foreign Affairs Briefing No. 66), 11 December 1973.

State Council approved principles of international communication activities drafted by the Chinese Academy of Sciences (CAS) which adopted strict limits on international knowledge exchange activities, and it instructed all levels of educational and scientific research sectors to follow the principles.¹⁰⁵ After China recovered its legal representation at the United Nations, the CAS received increasing requests for collaboration and information from international individuals and institutions. Therefore, the academy reported to the State Council asking for lifting the restrictions in December 1972. The CAS indicated that the exchange of books and journals with foreign countries was one of the channels for Chinese science communities to understand the trend of science and technology overseas, and it was also an important form of international exchanges. The commission also suggested exchanging publication could also serve as propaganda machine to promote Mao Zedong thought and the great achievement of the country's socialist revolution and construction to expand China's international influence. The new rules drafted by the CAS recommended to gradually expand the scope of international exchange to include all open published books, journals, pictures, materials, scientific standards, as well as a small amount of seeds, specimens, strains, samples, etc. The CAS suggested scientists to be allowed to exchange publications with their connections overseas under the approval of the heads of their institutions. The commission supported the Chinese institutions to accept gifted publications overseas and to gift away Chinese publications in return. It also recommended Chinese scientific communities to gradually recover information exchange with international sectors which was once interrupted, and to allow Chinese individuals to gift away publications when asked by foreign guests after approval of the institution. The CAS reminded scientific communities to be vigilant about "reactionary propaganda materials" in the books and journals sent overseas, and to immediately report the case to the security department.¹⁰⁶

As a result, the smallpox unit at Geneva was still receiving very limited information in terms of smallpox in China. The team had to continue to search for information through indirect and informal channels. In the 1970s, Dr Visctor W. Sidel, an American physician and a President of the American Public Health Association, visited both China to learn about health care reform in the country. Dr D. A. Henderson wrote to him requesting for details in relation to smallpox in China. Dr Sidel indicated that he and his team were not given national

¹⁰⁵ BMA: 135-002-00518, 中国科学院致外交部关于开展国际书刊交换和科学研究人员对外通讯联系问题的请示报告 (Request for Instructions from the Chinese Academy of Sciences to the Ministry of Foreign Affairs on the Issue of International Publication Exchanges and External Contact of Scientific Research Personnel), 14 December 1972.

¹⁰⁶ Ibid.

incidence figures of any sort. Instead, they were only able to access very limited local incidence data for specific infectious diseases, in which smallpox was not included. According to Dr Sidel, in one neighbourhood health station, they were shown a chart of immunization rates for children in the district. The immunization rates for measles, polio, DPT, etc. were very close to 100%, while the rate of immunization against smallpox was only 80.9%. He was told by the Chinese hosts that the risk of smallpox vaccination might exceed the protection offered, therefore they stopped routine vaccination against smallpox. In Dr Sidel's opinion, the smallpox situation in China was very close to the stage where the US was.¹⁰⁷ Based on his observation in China, Dr Sidel also published a book named *Serve the People: Observations on Medicine in the People's Republic of China* in 1974. Regarding smallpox vaccination, he said:

“We were told that since the last case of smallpox in China had occurred 1954 vaccination is not given if there is any contraindication. It is worth noting that in a society in which mass participation is an important principle, individual exceptions can be made when there is good reason to do so...”¹⁰⁸

Like much of the other information the WHO obtained from various sources had indicated, smallpox was eradicated in China in the 1950s through mass vaccination, but no detailed supporting data or documents could support this account. In October 1976, smallpox cases had only been reported in Ethiopia and Somalia for 15 months. The last known case in Ethiopia occurred on 9 August 1976. After that, Somalia was the only country still reporting smallpox cases.¹⁰⁹ As the global smallpox eradication programme was achieving its final success, the situation in China was more concerned by the Smallpox Eradication Unit at the WHO HQ. However, there was still not any reliable source of information that could certify the smallpox free status in China. In addition, Beijing kept the channel of communication with various UN agencies limited. The Chinese authorities indicated that they wished to maintain a direct channel of communication with Headquarters on matters of general policy, while dealing with all other issues involving joint activities of collaborative programmes, visits, and the organization of operational activities through the WHO office in Beijing in conjunction with the Regional Office in Manila. The regional office of the Western Pacific

¹⁰⁷ WHORASSEP: ID0398_Box 225, Letter from Victor W. Sidel to Donald A. Henderson, 2 May 1972.

¹⁰⁸ WHORASSEP: ID0398_Box 225, Victor Sidel and Ruth Sidel, *Serve the People: Observations on Medicine in the People's Republic of China* (New York: Josiah Macy Jr. Foundation, 1974), 55, in Letter to Isao Arita, 23 May 1977.

¹⁰⁹ WHORASSEP: ID0398_Box 225, WHO, Smallpox Surveillance, WHO weekly Epidemic Record, no.2 (1977): 9, 14 January 1977.

also served as a channel of communication with Beijing for some other UN agencies without representation in China, such as the UNDP.¹¹⁰

IV. Certification of smallpox eradication in China

In 1977, smallpox cases were only reported in Somalia and Ethiopia. When the global eradication proceeded to the final stage, the certification of smallpox free status of China became a top priority of the Smallpox Eradication Unit at the WHO HQ, while the specific information concerning the country's immunization activities was still not available to Geneva. It was not until 1978, after a political reformation inside of the country, that the collaboration between China and various UN agencies including the UNDP, the UNICEF and the WHO was improved, which facilitated the process of the certification of smallpox eradication of the country with the largest population in the world.

In April 1977, Dr F. J. Dy, the Director of the WPRO, sent an invitation to China to send representatives to join the International Commission for the Certification of Smallpox Eradication in Bangladesh and Burma from 20 November to 16 December, and he suggested the same participants to represent China to attend the Consultation on Worldwide Certification held at the end of 1977. However, China declined this invitation "due to heavy working arrangement".¹¹¹ Dr Arita was concerned by the rejection from Beijing, and he wrote to Dr Dy requesting him to send another letter inviting representatives from China to attend the Consultation on Worldwide Certification. In his letter, he said to Dr Dy that "I believe you well understand the position. For the global certification, information is missing from that vast country with a population of 800 million." Responding to his request, Dr Dy sent a letter again inviting Chinese representatives to attend the Consultation on Worldwide Certification held in October 1977.¹¹² In order to get cooperation from Chinese authorities, Dr Arita also asked assistance from Dr Ch'en Wen-Chieh, the Assistant Director-General of the WHO. Dr Arita indicated that he believed that smallpox eradication had already been achieved in China for many years, but little was known about this by Geneva. He expected to get information including the past programme activities for the eradication efforts, continuing smallpox surveillance and the current smallpox vaccination programme in China. He also introduced the Consultation and pointed suggested that "the opinion of the Chinese

¹¹⁰ WHORASSEP: ID0398_Box 225, Memorandum from Director-General to Regional Director of WPRO, Relations with the People's Republic of China, 15 March 1977.

¹¹¹ WHORASSEP: ID(WP)S2/76/3_BOX228, Letter to F. J. Dy, Regional Director, WPRO, Manila, from Hsueh Kung-cho, Director, Foreign Affairs Bureau, Ministry of Health, Beijing, the PRC, 28 May 1977.

¹¹² WHORASSEP: ID(WP)S2/47/4_BOX228, Letter to F. J. Dy, Regional Director, WPRO, Manila, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 22 July 1977.

participants would be very valuable in view of China's large population and wide geographical area." He hoped that Dr Ch'en would personally discuss this proposal with Chinese authorities and inform him of the result.¹¹³ However, the invitation had also been refused the excuse of "heavy working arrangement".¹¹⁴

Later in September, Dr Dy passed on an official request from the WHO HQ to China requesting for a summary of smallpox eradication of the country, which was expected to contain the information of the last smallpox case, surveillance activities, vaccination policy and the situation of retaining variola virus. One month later on 24 October 1977, China replied with a very brief introduction:

"After liberation our country has implemented in a positive manner the principle of 'putting prevention first' laid down by Chairman Mao. We promulgated in 1950 "the preliminary provision for smallpox vaccination," in which decision was made to launch a national vaccination program for the eradication of smallpox, and henceforth a re-vaccination every six years. Specific provision for infants has been made. Smallpox was thus eradicated our country in 1959 and no verified smallpox case has been found since then. To prevent smallpox case from transmitting from abroad, all persons are required to produce valid certification of vaccination against smallpox upon entry. A case reporting system has been set up from province, prefecture, county, people's commune, production brigade down to team for the surveillance of smallpox. Case or suspected case, if found, shall be reported in a shortest time. Smallpox virus are kept by specific institutions assigned by the government."¹¹⁵

The information briefly introduced the year of eradication, vaccination strategy, as well as the retaining of variola virus of China as requested by Dr Dy, but no detailed data was provided regarding the incidence of the disease, the detailed report of smallpox vaccination strategy and surveillance system, nor the details of the last reported cases. The information provided by the Chinese authorities was not able to reach the standard for certification. On the basis of the suggestions of the Consultation on Worldwide Certification of Smallpox Eradication held in Geneva from 11 to 13 October 1977, China was among the priorities of the certification work in 1978. On the 4th of January, Dr Dy informed the Ministry of Public Health of the PRC of the decision of the consultation. He stressed the importance of the certification that smallpox vaccination could be terminated once a country had been certified and the eradication, and it would confirm an unprecedented event in the history of medicine. He informed Beijing that the implementation of the certification required two activities. Firstly, the eradication of clinical smallpox had to be verified with a robust surveillance system for several months. Secondly, the certification also involved collecting smallpox

¹¹³ WHORASSEP: ID(WP)S2/47/4_BOX228, Letter from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, to Ch'en Wen-Chieh, Assistant Directors-General, WHO HQ, Geneva, 29 July, 1977..

¹¹⁴ Fenner et al, *Smallpox and Its Eradication*, 1250-1251.

¹¹⁵ WHORASSEP: ID0020_Box269, Letter to F. J. Dy, Regional Director, WPRO, Manila, from Huang Shu-tse, Ministry of Public Health, Beijing, the PRC, 24 October 1977.

eradication information in different parts of the world so that the international community could be confident with the termination of smallpox vaccination. Therefore, based on the suggestion of the consultation, he proposed to the Ministry of Public Health that to arrange a visit by three experts during July or August 1978 to review and collect data in relation to the past smallpox eradication activities and current vaccination and surveillance activities, and to discuss the safety issues of variola laboratory retention. Dr Dy also proposed several candidates for the group of visitors, including Professor J. Kostrzewski from Poland, Dr J. Kilgour from the UK, the former director of Smallpox Eradication Unit of the WHO HQ Dr D. A. Henderson, Dr W. Koinange-Karuga from Kenya, Dr R. Netter from France, Dr P.N. Shrestha from Nepal, as well as WHO Medical Officers such as Dr I. Arita, Dr R. Lindner, Dr Z. Jezek, and Dr J.G.Breman.¹¹⁶ As China was considered as the “key country in the context of global certification”¹¹⁷, Dr Arita and his colleagues were “very much look forward to the reply” from Beijing.¹¹⁸ In addition, Dr I. Arita suggested to include a Chinese member in the Global Commission for the Certification of Smallpox Eradication and to attend the commission meeting on the 28th of February, which would be helpful to build direct communication channels between Geneva and Beijing, rather than delivering messages through Manila. With little acknowledgement of the public health experts in China, Dr Arita asked advice from Dr Ch’en Wen-Chieh, the Assistant Director-General of the WHO for the potential Chinese members of the Global Commission.¹¹⁹⁻¹²⁰

However, Beijing refused the invitation to designate a Chinese member of the Global Commission. Again, this was declined with the excuse of a “heavy working arrangement of the specialists concerned” in a response on 29 April.¹²¹ Apart from that, a visit by Global Commission members to China sent by Dr Dy earlier had also been rejected. The letter from Huang Shu-tse, the Vice-minister of Health of the PRC, reiterated that smallpox had been eradicated in China since 1959 and the efficiency of the disease surveillance system was unquestionable. He declared that:

¹¹⁶ WHORASSEP: ID0020_Box269, Letter to the Ministry of Public Health, Beijing, the PRC, from F. J. Dy, Regional Director, WPRO, Manila, 4 January 1978.

¹¹⁷ WHORASSEP: ID0020_Box269, Memorandum from I. Arita to Director CDS, 20 February 1978.

¹¹⁸ WHORASSEP: ID0020_Box269, Letter to I. Ladnyi, Assistant Directors-General, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 2 May 1978.

¹¹⁹ WHORASSEP: ID0020_Box269, Letter to Ch’en Wen-Chieh, Assistant Directors-General, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 8 February 1978.

¹²⁰ WHORASSEP: ID0020_Box269, Letter to F. J. Dy, Regional Director, WPRO, in Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 28 February 1978.

¹²¹ WHORASSEP: ID0020_Box269, Letter to F. J. Dy, Regional Director, WPRO, Manila, from Huang Shu-tse, Vice Ministry of Public Health, Beijing, the PRC, 29 April 1978.

“I would like to refer to my letter sent to you dated 24 October 1977 and reiterate that no smallpox case has been found in our country since its eradication 1959. China is a large and populous country. The eradication of smallpox after liberation hinges on our socialist system and the concern of our Government for the health of our people. Under the guidance of the principle “putting prevention first” as formulated by Chairman Mao Tse-tung, a health and epidemic prevention network has been set up from the central, local level down to the grass-roots units, mass prevention work carried out frequently and nationwide smallpox vaccination performed periodically. It is based on the principle of responsibility for the health of the Chinese people and the people of the world and on the conscientious and careful conclusion reached after long years of thorough investigation and scientific surveillance that the Chinese Government has declared smallpox eradicated. As to the proposed visit to China by a group including member of the Global Commission with a purpose to “certify” whether or not China has really achieved smallpox eradication, as is recommended by the Consultation of Worldwide Certification of Smallpox Eradication, I regret that such a visit could not be arranged, and your understanding would be highly appreciated.”¹²²

The letter did not provide additional information to the previous message received in October 1977, but the tone in the letter showed impatience and discontent with the distrust of Beijing’s declaration. Dr Huang emphasized that the smallpox eradication in China was an achievement of Maoist primary health-care model, and their declaration of smallpox eradication was a responsible conclusion based on scientific investigation and surveillance. Through the letter, the smallpox unit at the WHO HQ) had recognized that the Chinese authorities had misunderstood the purpose and the philosophy of certification, and the misunderstanding was exacerbated because of the ineffective communication between Geneva and Beijing.¹²³ In order to increase China’s interests and support of the certification, Dr Arita asked the Director-General to stress the importance of the involvement of China in global certification. He also intended to discuss the certification with the Chinese delegates directly during the World Assembly to improve the dysfunctional communication and to exchange views on the certification.¹²⁴

As a result, a meeting with Dr Hsueh Kung-Cho, the director of the Bureau of Foreign Affairs of the Ministry of Public Health of China, was arranged during the Thirty-first World Health Assembly held in Geneva in May 1978. Dr Arita, Dr Dy and Dr A Zahra (Director of the Communicable Disease Department of the WHO HQ) attended the meeting with the Chinese delegate in the Palais des Nations. Dr Hsueh announced that smallpox eradication in China started in 1950 and ended in 1959. After smallpox was eradicated, the surveillance

¹²² WHORASSEP: ID0020_Box269, Letter to F. J. Dy, Regional Director, WPRO, Manila, from Huang Shu-tse, Vice Ministry of Public Health, Beijing, the PRC, 29 April 1978.

¹²³ Fenner et al, *Smallpox and Its Eradication*, 1251.

¹²⁴ WHORASSEP: ID0020_Box269, Letter to H. T. Mahler, Director-General, WHO HQ, Geneva, I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 2 May 1978.

system and vaccination policy in China would be able to preserve smallpox free status. Dr Arita stressed that he personally believed smallpox had been eradicated in China, but this achievement should have been acknowledged by the international community through a confirmation process by a number of public health experts. Dr Arita had also indicated that if China was willing to be certified, compromises could be made on the process of certification. He indicated that some other countries with political sensitivity were allowed to collect information regarding smallpox eradication by their own nationals instead of by the members of the Global Commission, and the certification of China could also adopt this process. Dr Hsueh agreed to provide a country report on the surveillance of smallpox eradication in China, although the visit by the Global Commission members was still not accepted.¹²⁵

The meeting with Dr Hsueh improved mutual understanding between Geneva and Beijing. Dr Arita recognized that more frequent communication was necessary to obtain collaboration from China on the certification of smallpox eradication. For instance, he suggested China to nominate a technical officer to join the smallpox eradication unit at the WHO HQ, so that they can discuss the certification work in a more direct and effective way.¹²⁶ However, Beijing insisted on negotiating the activities regarding certification through official channels in Manila. After the meeting with Dr Arita, Dr Hsueh had a private conversation with Dr Dy and stated that the Chinese side preferred communicating issues regarding smallpox, especially technical matters, through the WPRO, instead of negotiating with the smallpox unit at the WHO HQ directly.¹²⁷ Dr Dy suggested that the decision was from a political consideration. He assured Dr Arita that the communication between Manila and Beijing was timely, and that all the information regarding smallpox certification would be delivered to China without any delay, and he was committed making the best effort in persuading Chinese authorities to accept the country visit for certification.¹²⁸

In order to provide assistance to China in terms of the preparation of a detailed country report meeting the requirement of the global certification, Dr Arita sent Dr Hsueh four smallpox eradication country reports on Bangladesh, Burma, India, and Nepal. He suggested China to prepare its report following the list of content of the Burma report, because China was in a similar situation with Burma, that the eradication happened many years before the

¹²⁵ WHORASSEP: ID0020_Box269, I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, note for the record titled "Smallpox Eradication – China", 17 May 1978.

¹²⁶ Ibid.

¹²⁷ WHORASSEP: ID0020_Box269, Memorandum to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from F. J. Dy, Regional Director, WPRO, in Geneva, 18 May 1978.

¹²⁸ Ibid.

certification. Therefore, he provided a table of contents of the country report that the Smallpox Eradication Unit had expected to receive.¹²⁹ As showed in table 4.3, the country report Geneva expected was detail oriented which could provide a general introduction of the system and activities and surveillance of communicable disease, a detailed account of the smallpox eradication programme and incidence of the last epidemic, epidemiological data of the smallpox cases each year, as well as the number of vaccines had been administered annually, etc. Concerning the large population and vast territory of the country, as well as the fact that the smallpox eradication in China happened many years before the certification,¹³⁰ Dr Arita suggested to send members of the Global Commission to help China prepare its country report.¹³¹ However, this suggestion did not get any response from Beijing.

Table 4.3 Items to Be Included in Documentation of the Smallpox Eradication Programme and Current Surveillance Situation in China, WHO, 1978.

<p>A. Basic demographic data</p> <p>B. Administrative structure</p> <p>C. Organization of health services related to communicable disease control</p> <p>D. Reporting system for notifiable communicable diseases</p> <p>E. Smallpox Eradication Programme (from _____ to _____)</p> <p>1. Case and deaths reported by year and by major administrative divisions;</p> <p>2. Initiation of eradication programme;</p> <p>3. Organization and personnel of the programme;</p> <p>4. Brief description of the last major smallpox epidemic:</p> <ul style="list-style-type: none"> - period - number of cases/deaths - locations which were heavily infected - containment measures <p>5. Detailed description of the last smallpox outbreak:</p> <ul style="list-style-type: none"> - period - number of cases/deaths - source of infection - location (with map) - containment measures <p>6. Smallpox vaccination campaign:</p> <ul style="list-style-type: none"> - period - organization and personnel - vaccine used; name of producers; freeze-dried or liquid vaccine - vaccination techniques - take rate in primary vaccines - number of vaccinations performed - primary and revaccinations if possible by major administrative division - coverage of population with vaccination
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¹²⁹ WHORASSEP: ID0020_Box269, Letter to Hsueh Kung-cho, Director, Foreign Affairs Bureau, Ministry of Health of the PRC, in Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 17 May 1978.

¹³⁰ Joel G Breman, and Isao Arita, "The Certification of Smallpox Eradication and Implications for Guinea Worm, Poliomyelitis, and Other Diseases: Confirming and Maintaining a Negative," *Vaccine* 29, supplement 4 (2011): D43.

¹³¹ WHORASSEP: ID0020_Box269, Letter to Hsueh Kung-cho, Director, Foreign Affairs Bureau, Ministry of Health of the PRC, in Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 17 May 1978.

7. Smallpox surveillance activities since the last smallpox outbreak in ____ year

Diagnostic laboratories;
Names and Addresses

- Method used for testing
- Number of specimens tested for diagnosis of smallpox suspects by year
- Field investigations of smallpox suspects by major administrative divisions and by year
- Surveillance situation in areas where risk of smallpox importation was present in the past, such as areas adjacent to Burma, India and Nepal.

F. Training materials (posters, manuals, etc.) and forms used for the past eradication campaign

G. Laboratories retaining stocks of variola virus

- Names and Addresses
- Quantities of stocks
- Current research activities employing variola virus
- Future plans as to whether the stocks will be destroyed or maintained.

Source: WHO: ID0020_Box269, Letter to Hsueh Kung-cho, Director, Foreign Affairs Bureau, Ministry of Public Health of PRC, in Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 17 May 1978.

The accomplishment of the certification of smallpox eradication in China was decided by the willingness to cooperate from Beijing. As Dr Joel Breman recognized that local interests on the certification had usually diminished when the smallpox eradication was achieved many years earlier than certification.¹³² However, the certification of the achievement was an urgent and important task for the WHO. By the mid-1970s, the technical approach adopted by the WHO in the first two decades, which focused on the eradication of a certain disease, was increasingly questioned by the international health community because of the fiasco of malaria eradication.¹³³ Although the global SEP had achieved a positive result, the downside of the eradication had also been criticized, especially regarding its focus on technical approach while overlooking the integration of disease eradication into local and national health infrastructures, as well as with the social and political conditions of a specific member state.¹³⁴ Therefore, it was necessary for the WHO to prove that smallpox eradication had been achieved globally. But the absence of the certification of China, the most populous developing country in the world, would downplay the success of a global eradication programme. For instance, Dr Arita was keen to visit China personally, especially the Tibetan border areas.¹³⁵ He regarded the visit to China as a priority of the smallpox unit, and he would “cancel any other commitments if China proposes a certain date.”¹³⁶

¹³² Breman and Arita, “The Certification of Smallpox Eradication and Implications for Guinea Worm, Poliomyelitis, and Other Diseases,” D43.

¹³³ Gill Walt, “WHO under Stress: Implications for Health Policy,” *Health Policy* 24, no. 2 (1993): 133.

¹³⁴ Sanjoy Bhattacharya, “The World Health Organization and Global Smallpox Eradication,” *Journal of Epidemiology and Community Health* 62, no. 10 (2008): 909-912.

¹³⁵ WHO: ID0020_Box269, Letter to William Foege, Director, CDC of USA, Atlanta from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 25 July 1978.

¹³⁶ WHO: ID0020_Box269, Letter S. Flache, Assistant Directors-General, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 11 August 1978.

Recognising the challenges of the certification of China, the Smallpox Eradication Unit at the WHO HQ was also making efforts to reduce the misunderstanding between the Geneva and Beijing regarding the certification of smallpox eradication. Dr Arita and his colleagues expected the Chinese authorities to understand that the process of certification was not questioning the achievement of smallpox eradication in China or the country's capacity in public health, but to persuade the rest of the international community that the world was free from smallpox and the vaccination against the disease could be terminated.¹³⁷ After hearing William Forge, the Director of the CDC, was going to visit China in June 1978, Dr Breman and Dr Arita asked him to use his "usual tactful and effective way" to collect smallpox information, including facial pockmark checks, the last smallpox case in each area he would visit, and the overall surveillance system of the country, etc., and to file a report to Geneva about his observations.¹³⁸ They also expected Dr Forge to discuss global certification with Chinese officials including the proposal of the country visit and the nomination of a member to the Global Commission.¹³⁹ Based on his observation and communication with local residents, Dr Forge had the impression that the latest smallpox case appeared in 1958 approximately, and China had a robust surveillance system to effectively detect any smallpox case. In response to Dr Arita's request, Dr Forge had a conversation with the Chinese Medical Association to explain the importance of providing documents of smallpox eradication of the country requested by the WHO. Dr Forge suggested that "the Chinese are increasingly open and much more responsive when you are on the spot than if you are trying to correspond for information".¹⁴⁰

At the same time, a political and economic transformation was undertaken in China. Mao's death on 9 September 1976 brought an end to the Cultural Revolution, which left China with a devastated economy and unstable political and social order. Hua Guofeng (华国锋) succeeded Mao as the Chairman of the PRC, but his succession was threatened by Mao's widow and her rebellious group, which was named as "The Gang of Four (四人帮)". With support from the army, the Gang of Four was suppressed in October. However, instead of carrying out social and political reformation, Hua continued to advocate Mao's policies and ideology, and he intended to recover the economic and political system from the early 1950s.

¹³⁷ Fenner et al, *Smallpox and Its Eradication*, 1251.

¹³⁸ WHO: ID0020_Box269, Letter to William Foege, Director, CDC, Atlanta, USA, from J. G. Breman, Medical Office, Smallpox Eradication Unit, WHO HQ, Geneva, 25 April 1978.

¹³⁹ Ibid.

¹⁴⁰ WHO: ID0020_Box269, Letter to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from William Foege, Director, CDC, Atlanta, USA, 13 July 1978.

On the other hand, reformers like Deng Xiaoping suggested to solve the social crisis by reconstructing China's political and economic structure. Deng outmaneuvered the successor Hua Guofeng and seized power at the Third Plenum of the Tenth Central Committee held in July 1977. He was elected as the Vice-Chairman of the party, Vice-Premier and Chief of Staff of the People's Liberation Army and became the de facto leader of China.¹⁴¹ After taking the leadership, Deng and the reformers of the party started moving towards ideology and economic reform in China.

As Dr Forge had suggested, the political reformation of the country in 1977-1978 had facilitated collaboration between China and various UN agencies including the UNDP, the UNICEF, and the WHO. In December 1977, Chiang Yi-chen (江一真), the Minister of Public Health then invited Dr Mahler to visit China in the coming year. The Director-General decided to visit China from 28 September to 7 October, and to attend the celebration of its national day on 1 October.¹⁴² In order to discuss the future orientation of the WHO's collaboration with China and plan for the Director-General's forthcoming visit to Beijing, a meeting was held in Dr Mahler's office on 9 June 1978. Dr Ch'en Wen-chieh, ADG, Dr S. Flache, ADG, Dr A. Mochi, Chief CPD, and Mr P. Lawton CPD attended the meeting. Dr Mahler outlined several fields to be focused on the future collaboration with China. Firstly, he suggested expanding scientific research cooperation in the fields of virology, immunology, production of biologicals, sera and vaccines, vector biology, parasitic disease, and material medica. Secondly, he expected to develop collaboration with China in terms of technology for health, especially in the environmental health field, and particularly in rural water supply and sanitation. He also proposed to carry out joint studies between the two sides as a part of health manpower development. In addition, cancer, traditional medicine, and acupuncture, as well as instrumentation and equipment were also among the priorities to be discussed. As to the collaborative mechanism, Dr Mahler indicated it was necessary to establish a more effective communication machinery between Beijing and Geneva. He also suggested other ways and modes to strengthen the cooperation between the WHO and China, including study missions, study tours and training courses, large-scale projects jointly organized with other UN agencies such as the UNDP, visits by WHO staff members, exchange of health

¹⁴¹ Harry Harding, *China's Second Revolution: Reform after Mao* (Brookings Institution Press, 1987): 59.

¹⁴² WHO: D 4/441/36, Letter from Mahler to Chiang Yi-chen, 8 February 1978.

professionals and research workers, supply and purchasing medical products, as well as coordinating committee specifically responsible for the collaboration with the two sides.¹⁴³

After the meeting, Dr Mahler wrote to various departments of the organization and regional offices requesting advice regarding the potential collaboration plans to be discussed with Chinese authorities. The Director of the African Regional Office indicated that China had set an example of self-reliance in public health in resources restrained settings, through the utilisation of traditional medicine, traditional pharmacopeia, and barefoot doctors at community level. In order to seek an African way of self-reliance, he suggested learning from China by training, direct technical collaboration, as well as exchange of trainers, trainees, researchers and other health professionals.¹⁴⁴ The WHO Regional Office for Europe, which had hosted several Chinese scientific and public health groups, suggested that the Chinese experts were mostly interested in the latest technical development in Europe but did not lay on particular emphasis on Traditional Medicine.¹⁴⁵

In response to the Director-General's request for suggestions regarding his visit to China, Dr Arita required attention from Dr Mahler to the certification of smallpox eradication of the country. He indicated that detailed information about how the disease had been eradicated from China had not yet been available to the WHO. He stressed to the Director-General that the Global Commission was most interested in obtaining evidence from China, considering its vast territory and its huge population of one billion. Dr Arita suggested the importance of China's participation in global certification should have been noted by Beijing that it was not only necessary to meet the WHO's technical requirements recommended by the World Health Assembly, but also a contribution to the global health activities which would help China to strengthen its position in this field. He also pointed out that the confirmation of the smallpox free status of China itself was a valuable information to the world community.¹⁴⁶ He hoped that Dr Mahler would urge China to submit its detailed country report of smallpox eradication by the 1st of November 1978, and to provide detailed

¹⁴³ WHORASSEP: ID0020_Box269, Letter from Director-General to Various department, Official Visit to China 28 September-7 October 1978, 17 July 1978.

¹⁴⁴ WHO: D 4/441/36, Letter from Comlan A. A. Quenum (Regional Director of WHO Regional Office for Africa) to Director-General regarding DG's Official Visit to China from 28 September to 7 October 1978, 18 August 1978.

¹⁴⁵ WHO: D 4/441/36, Memorandum from Leo A. Kaprio (Regional Director of WHO Regional Office for Europe) to Director-General, "DG's Official Visit to China, 28 September to 7 October 1978, 1 September 1978.

¹⁴⁶ WHORASSEP: ID0020_Box269, Memorandum titled "Director-General's Official Visit to China, 28 September-7 October 1978", to Director CDS, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva 19 July 1978.

information regarding the laboratories retaining of variola virus, including their names, addresses, safety measures, and policy, so it could be decided whether the virus would be destroyed or transferred to a WHO Collaborating Centre. Again, he suggested to include a Chinese member in the Global Commission which had been rejected earlier. In order to better inform the Chinese authorities and scientists about how the WHO sponsored country programmes were processed in countries with limited health resources and infrastructures, he also suggested Dr Mahler to invite a few Chinese epidemiologists to visit Somalia, where the final stage of smallpox eradication programme was taking place. Moreover, Dr Arita stressed: “it would be the most desirable for the Chief SME (Smallpox Eradication) to visit China late September for discussions on China’s participation in the global certification.” In addition, realizing the inefficient communication with China that was an obstacle to obtain its participation, he also suggested the establishment of a special WHO office in Beijing to build a close and continuous communication with China, because “the size of China’s population deserves (deserved) such special treatment”.¹⁴⁷

In addition, after the request for visiting China was rejected, Dr Arita asked Dr Dy to reach out to Beijing again to facilitate a visit to the country in September by him to assist the country with the preparation of the documentation of smallpox eradication and to investigate its surveillance system.¹⁴⁸ Dr Dy suggested that he would bring up this issue during the coming visit to China with the Director-General. He also suggested Dr Arita to contact Dr Flache, who would visit China one week ahead of him, and to request him discussing this issue with Chinese authorities, so that Dr Dy could follow up their discussion later in order to reach a better result.¹⁴⁹ Apart from expecting the Director-General and the Regional Director of the WPRO to facilitate the collaboration with Chinese authorities in terms of the certification through official channel, personal connections were also used to collect information about smallpox eradication of the country during this visit. John Wickett, the Administrative Officer of Smallpox Eradication Unit wrote to Paul Lawton (the senior representative of the Pan American Health Organization), who would visit China with the Director-General, and asked him to collect smallpox eradication information privately when it was possible. He listed several issues that the smallpox unit was most concerned with,

¹⁴⁷ WHORASSEP: ID0020_Box269, Memorandum titled “Director-General’s Official Visit to China, 28 September-7 October 1978”, to Director CDS, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva 19 July 1978.

¹⁴⁸ WHORASSEP: ID0020_Box269, Personal letter to F. J. Dy, Regional Director, WPRO, Manila from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 25 July 1978.

¹⁴⁹ WHORASSEP: ID0020_Box269, Personal letter to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from F. J. Dy, Regional Director, WPRO, Manila, 3 August 1978.

including details of the mass vaccination campaign, the vaccine technology and production, the vaccination policy, the epidemic prevention mechanism, and the laboratory retention of variola virus. Wickett indicated that they “would be eternally grateful” if Lawton “could somehow manage to get someone’s signature and some answers. Negative answers, information not available – as long as it is a reply of some kind.”¹⁵⁰

During the Director-General’s visit to China, the two sides signed a memorandum of health technology cooperation on 5 October 1978, which opened a new era of collaboration between the two sides.¹⁵¹ On 6 October, a round-up discussion was held in Beijing. The attendants included representatives from the Ministry of Public Health of the PRC, including the Vice-Minister Dr Chien Hsin-chung, Professor Hseuh Kung-cho¹⁵², Dr Wang Lieu-Sheng¹⁵³, Dr Liu Hai-lin¹⁵⁴, and Mr Tsao Yun-Lin¹⁵⁵, as well as representatives of the WHO such as Dr Mahler, Dr Dy, and Mr P Lawton from the Division of Coordination of the WHO HQ.¹⁵⁶ In regard to the lack of experience of collaboration between the WHO and China, Dr Mahler suggested the Ministry of Public Health to consider designating a liaison officer in Beijing to deal with the communication and daily work between the Ministry and the WPRO. The Vice-Minister indicated that his government was committed to building closer links with the WHO, particularly with the Regional Office. Therefore, the Vice-Minister agreed with this suggestion and indicated that it would help to reduce misunderstandings and to speed up correspondence between the two sides. It was agreed that the officer would be responsible to the Ministry of Public Health, and act as an advisor to the Regional Director of the WPRO on all business related to the preparation and implementation of joint programme. In addition, a “China desk” was being set up at the Regional Office directly responsible to the regional director.¹⁵⁷ Dr Dy also hoped the Chinese government could provide a WHO diplomatic pouch service between Beijing and Manila and an English-speaking contact so that the two

¹⁵⁰ WHORASSEP: ID0020_Box269, Letter to Paul Lawton, Senior Representative, Pan American Sanitary Bureau Area Iv, Buenos Aires, Argentina, from John Wickett, Administrative Officer, Smallpox Eradication Unit, WHO HQ, Geneva, 1 September 1978.

¹⁵¹ WHO: D 4/441/36, Note for the Record: Round-up discussion between Dr Chien, Vice-Minister of Public Health People’s Republic of China and Dr H. Mahler, Director-General, World Health Organization, 6 October 1978.

¹⁵² Director of Foreign Affairs Bureau, Ministry of Public Health.

¹⁵³ Deputy Chief of International Organization Division of Foreign Affairs Bureau, Ministry of Public Health.

¹⁵⁴ Staff of Division of Academic Exchanges at Bureau of Medical Research and Technology, Ministry of Public Health.

¹⁵⁵ Staff of Ministry of Public Health.

¹⁵⁶ WHO: D 4/441/36, Note for the Record: Round-up Discussion between Dr Chien, Vice-Minister of Public Health People’s Republic of China and Dr H. Mahler, Director-General, World Health Organization, 6 October 1978.

¹⁵⁷ Ibid, 2.

sides could communicate through phone calls in a timely matter. Mr Lawton also asked the possibility to build a telex system to facilitate the correspondence. The meeting had also agreed to implement technical assistance programmes as expeditiously as possible. The WHO would provide advice and assistance through the WPRO once the ministry had made any request.¹⁵⁸

The questions China was most interested in was how to start dialogue and to expand international collaboration with countries it had limited contact with. The Vice-Minister was keen to learn what bilateral and multilateral technological and scientific cooperation China could expect from other countries directly or through the WHO. He was also eager to know how the Ministry could unfold bilateral cooperation with a specific country in a specific field of medicine and public health, for example, the Scandinavian countries which Dr Mahler helped to initiate contact with during his trip. The Vice-Minister had also asked what fields his ministry should seek such cooperation in and what fields other countries were interested in collaborating with China. Dr Mahler indicated the questions could be further discussed with Chinese delegates when they were in Geneva in January 1979.¹⁵⁹ Dr Mahler indicated the organization was willing to serve as the intermediary and to help China to start dialogue with countries it hitherto had no contact with, as well as assist the country to strengthen the links and expand collaboration with countries it had already built links with. He suggested the memorandum just signed by the two sides was a good way to build bilateral cooperation between China and other countries. Dr Mahler indicated that an example of what potential bilateral collaboration could be expected was the forthcoming mission to China on human reproduction by Dr Dicxfalucy of the Karolinska Institute in Stockholm. He suggested the discussion of further bilateral collaboration with Sweden could emerge outside of the establishment of the WHO Collaborating Centre, so that the Chinese research workers could build connections with the institute and develop other collaborative programmes. These programmes might require financial support, which, Dr Mahler suggested, the Swedish International Development Cooperation Agency (SIDA) might be involved. In addition, they had also discussed the issues including dispatching Chinese missions in support of other developing countries, and the Vice-Minister wished such teams to be operated under the WHO's multilateral rules.¹⁶⁰ The meeting had showed that China was committed to seeking international cooperation with a more active attitude.

¹⁵⁸ Ibid, 2-3.

¹⁵⁹ Ibid, 3-4.

¹⁶⁰ Ibid, 4.

However, although the visit by the Director-General had strengthened the collaboration with China, it did not get the smallpox unit the detailed country report they expected. On 27 November 1978, a “General Introduction on the Eradication of Smallpox in the People’s Republic of China” was received from the Minister of Health, Chiang Yi-chen. This two-page report mostly repeated the information already known to Geneva, but some new information was provided based on the list of items to be included in documentation of the smallpox eradication programme requested by Dr Arita in May. The report mentioned the smallpox eradication programme in China started in 1950, and no smallpox cases had been reported in all big- and medium-size cities since 1954. It also indicated that the last known case of this country was identified in March 1960 at Meng-lien county of Yunnan Province. The report also briefly introduced the vaccination regulation and mass vaccination in China. Based on the regulation, smallpox vaccination was given to all children within six months after their birth, and every six years until they were eighteen years old. Apart from regular vaccinations, mass vaccinations had also been organized across the country. From 1949 to 1952, about 500 million doses of vaccines had been administered, and thereafter, the number of reported smallpox cases decreased to 446 in 1954 from 67,021 in 1950. After 1960, when the disease was considered to have been eradicated, smallpox vaccination continued, and the surveillance system including the quarantine services was strengthened. Regarding the laboratories retaining stocks of variola virus, the report indicated a laboratory affiliated to the Institute for the Control of Drugs and Biological Products has been designated to retain the variola virus under strict safety measures, which was overseen by the Ministry of Public Health.¹⁶¹ Although some numbers and new information was included in the report, none of them was supported by data or detailed accounts, which was far from meeting the requirements for global certification.

While a satisfying country report was still not available and no agreement had been made regarding the visit to China, there was another sensitive issue that would potentially undermine the collaboration with Beijing, which was the certification of smallpox eradication in Taiwan. Both Dr Arita and Dr Dy agreed that the carelessness in dealing with the certification of Taiwan would compromise the collaboration with mainland China.¹⁶² As discussed in the previous section, Beijing opposed any connection between UN bodies and

¹⁶¹ WHORASSEP: ID0020_Box269, Letter to H. T. Mahler, Director-General, WHO HQ, Geneva, from Chiang Yi-chen, Ministry of Public Health, Beijing, the PRC, 27 November 1978.

¹⁶² WHORASSEP: ID0020_Box269, Confidential letter to F. J. Dy, Regional Director, WPRO, Manila, I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 24 November 1978.

Taiwan including any on-going technical assistance projects. The communist government regarded Taiwan as a part of the Chinese territory and strongly opposed referring to it as an independent sovereign. Instead, Beijing expected referring to Taiwan as a province of China in any official document of the UN and its specialized agencies.¹⁶³ Therefore, Dr Arita and Dr Dy suggested dealing with the certification of Taiwan “unofficially and carefully”.¹⁶⁴ After a report of smallpox eradication of Taiwan was prepared by the WHO, Dr Arita asked Dr Dy to find a suitable person from the WPRO to require signature from officials of Taiwan. Dr Dy made an unofficial and careful contact with Wang Chin-Mu, the Director-General of the Health Administration of Taiwan, and asked him for approval of the smallpox eradication report.¹⁶⁵ Dr Wang sent back with a signed declaration confirming Taiwan’s smallpox free status soon after being requested. However, he required Dr Dy to replace “China (Province of Taiwan)” with “Taiwan, Republic of China” in the report and he expected Taiwan to be considered as an independent state.¹⁶⁶ He had also capitalized the institutional title, “NATIONAL HEALTH ADMINISTRATION of Taiwan”,¹⁶⁷ in the letter to clarify his administration’s national status. However, in the final report, the title remained the same, “China (Province of Taiwan).”¹⁶⁸

However, although political reasons were heavily concerned by Geneva regarding the lack of collaboration from China in the certification of smallpox eradication, on the Chinese side, there were also technical issues, miscommunication and language barriers involved. In a documentary about smallpox eradication made by the China Central Television in 2006, Zhandouji (战痘记, Defeating Smallpox), Zhao Kai (赵恺), a scientist who was involved in the preparation of the documentation explained the challenges in an interview. Recalled by Zhao, records of the infectious diseases were reported from the ground, and the poor quality of local documentation made it difficult to trace and locate those cases, especially after nearly two decades. When he was sent to Xizang Autonomous Region (Tibet) to investigate the last

¹⁶³ Joint Statement Following Discussions with Leaders of the People’s Republic of China, Shanghai, February 27, 1972, <https://history.state.gov/historicaldocuments/frus1969-76v17/d203>.

¹⁶⁴ WHORASSEP: ID0020_Box269, Confidential letter to F. J. Dy, Regional Director, WPRO, Manila, I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 24 November 1978.

¹⁶⁵ WHORASSEP: ID0020_Box269, Letter to Wang Chin-Mu, Director-General, National Health Administration Executive Yuan, Taipei, Taiwan, from F. J. Dy, Regional Director, WPRO, Manila, 1 December 1978.

¹⁶⁶ WHORASSEP: ID0020_Box269, Letter to F. J. Dy, Regional Director, WPRO, Manila, from Wang Chin-Mu, Director-General, National Health Administration Executive Yuan, Taipei, Taiwan, 5 December 1978.

¹⁶⁷ WHORASSEP: ID0020_Box269, Letter to F. J. Dy, Regional Director, WPRO, Manila, from Wang Chin-Mu, Director-General, National Health Administration Executive Yuan, Taipei, Taiwan, 5 December 1978.

¹⁶⁸ WHORASSEP: ID0020_Box269, Memorandum titled “Certification of Smallpox Eradication in China”, to Members of the Global Commission for the Certification of Smallpox Eradication, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 21 August 1979.

outbreak in the region later in 1979 after the WHO required a supplement report of Tibet, he described the process as “Dahai Laozhen (大海捞针, to find a needle in the sea)”. In addition, he indicated that the Ministry of Public Health did not fully understand what documents the WHO expected. Another problem was the language barrier. According to Zhao, the translations of terminology and geographic names were often challenging and confusing. Some English terms in the correspondence with the WHO could have variety of possible translations in Chinese.¹⁶⁹

Due to the difficulty in the certification of smallpox eradication of China, a special meeting with a sub-group of the Global Commission was convened by Dr Arita on the 4th of December 1978, during the first meeting of the commission held in Geneva¹⁷⁰. The participants of the special meeting included Dr Fenner (Chairman of the Global Commission), Dr William Foege (who had recently visited China), Dr D. A. Henderson (former Chief of the Smallpox Eradication Unit), Dr Kostrzewski (Chairman of the Certification of Smallpox Eradication in India), and Dr Shrestha (who had organized the pockmark survey of Tibetan refugees in Nepal).¹⁷¹ Dr Arita started the meeting with a briefing of the correspondence with China since the consultation in 1977. Dr Forge then reviewed his visit to China. The participants of the meeting expressed their confidence in Beijing’s statement that smallpox had been eradicated in China in 1960, but the document submitted was inadequate to meet the certification criteria. Dr Forge indicated that to certify China, a detailed report of smallpox eradication for each province should be provided, and a visit to the country by a group of experts was also necessary. However, considering the difficulties in the negotiation with Beijing, he suggested the Global Commission to consider certifying China with less evidence than required.

In addition, both Dr Forge and Dr Henderson suggested using other bilateral channels to facilitate the negotiation with China, such as the US National Academy of Science, and the advisors to the U.S. President on Scientific Affairs. Dr Kostrzewski suggested to consider technical and diplomatic issues separately. He agreed to collect information related to the last case, pockmark surveys, and active searches for technical purposes through informal channels, but he does not believe the information collected unofficially would be sufficient to certify smallpox eradication of the country. More importantly, he pointed out, the

¹⁶⁹ 魏宝和编导, *纪录片战痘记* (北京: 中央电视台, 2006) [Baohe Wei directed, *Documentary: Defeating Smallpox* (Beijing: China Central Television, 2006)], <https://tv.cctv.com/2012/12/15/VIDA1355571898817348.shtml>.

¹⁷⁰ Details of the meeting of the Global Commission for Smallpox Eradication, see section 1 of this chapter.

¹⁷¹ Fenner et al, *Smallpox and Its Eradication*, 1252.

certification required official endorsement and signing of the declaration. In addition, the special meeting also discussed potential ways to improve communication with China. Both Dr Henderson and Dr Arita indicated that communication with high-level Chinese authorities through Dr Mahler would be more productive. Dr Breman pointed out one possible reason for the lack of response from Chinese authorities regarding the certification of smallpox eradication could be that the disease was no longer a health priority of the country. Therefore, he suggested bringing out the benefits of the certification of smallpox eradication to Chinese authorities, such as, encouraging tourism, being recognized for its health achievement, confidence in stopping vaccination, and increasing its influence in international affairs.¹⁷² Dr Kostrzewski indicated that patience was necessary when approaching China through diplomatic channels and the political situation in China might be changed in the coming year.¹⁷³

Based on discussion of the special meeting, the subcommittee suggested the certification of China be subjected to more substantial documentation to provide persuasive evidence to the world community. Firstly, they suggested the requirement of a more complete country report with information on a province-by-province basis, including the documentation of the last case, an account of past smallpox control activities in each province and current epidemiological surveillance system. The subcommittee decided that “certification of freedom from smallpox (in China) was deferred pending receipt of additional information.”¹⁷⁴ Meanwhile, it was decided at the first meeting of the Global Commission that the evidence of certification of smallpox eradication world-wide would be reviewed by the EB and the WHA in 1980, and the result of the certification was expected to be announced at the same time.¹⁷⁵ However, the reluctance of collaboration from the Chinese side made it a challenging task for the Global Commission to achieve its goal of declaring global smallpox eradication by 1980.

During the Global Commission meeting in Geneva in December 1978, as Dr Kostrzewski suggested, China was experiencing dramatic changes with its domestic and

¹⁷² WHORASSEP: ID0020_Box269, Confidential Draft titled “Discussions on Preparations for Certification of Smallpox Eradication in China”, 4 December 1978.

¹⁷³ WHORASSEP: ID0020_Box269, Confidential Draft titled “Discussions on Preparations for Certification of Smallpox Eradication in China”, 4 December 1978.

¹⁷⁴ World Health Organization Global Commission for the Certification of Smallpox Eradication, *Report of the Global Commission for the Certification of Smallpox Eradication First Meeting: 4-7 December 1978: Plan for Global Certification of Smallpox Eradication by the End of 1979* (Geneva: World Health Organization, 1978), <http://apps.who.int/iris/handle/10665/68264>.

¹⁷⁵ WHORASSEP: ID0020_Box269, Letter to A. Zahra, Director, CDS, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 15 January 1979.

foreign policies. As mentioned earlier in this section, the reformers of the CCP started to seek ideology and economic reform in China after Deng seized power in 1977. Their reforming strategy was established as a fundamental national policy at the 3rd Plenary Session of the 11th Central Committee of the CCP held from 18 to 22 December 1978.¹⁷⁶ The plenary repudiated the Cultural Revolution, and it set China on the course for nationwide economic reforms. It reshaped the political ideology and emphasized on seeking truth from facts. In addition, the plenary decided to shift the priority of the party's work from class struggle to economic development. In order to promote economic development, the party adopted an economic reform which promoted market economy. In addition, Deng announced the Open-Door Policy which aimed to open the Chinese market to foreign businesses, and to increase the country's interaction with the international economy, as well as its technological and scientific exchange with the international community.¹⁷⁷ The political reformation and the adoption of Open-Door Policy had also facilitated China's collaboration with the United Nations and its specialized agencies. A number of programmes collaborated with the UNDP, the UNICEF and other UN agencies were launched to promote development in China.¹⁷⁸ The political reformation in China shifted its attitude towards the international cooperation, which encouraged the final achievement of the certification of smallpox eradication of the country.

V. The achievement of the certification of smallpox eradication in China

On the basis of the decisions made at the meeting of the Global Commission in December 1978, Dr Arita initiated intensified negotiations with Beijing regarding the certification of smallpox eradication in China from the beginning of the new year. He planned to meet Dr Hsueh Kung-Cho again and to inform him about the decision made by the Global Commission. He expected that China would submit additional information on smallpox eradication before 1 October, or at the latest by 4 December 1979, before the second and the last meeting of the Global Commission.¹⁷⁹ In addition, he also expressed concerns about the retention of smallpox virus in China, which was one of the seven countries that still held smallpox virus stocks (the other six countries include Britain, the

¹⁷⁶ 中国共产党第十一届中央委员会第三次全体会议公报 (Communique of the Third Plenary Session of the 11th Central Committee of the Communist Party of China), 22 December 1978, <http://cpc.people.com.cn/GB/64162/64168/64563/65371/4441902.html>.

¹⁷⁷ Harding, *China's Second Revolution*, 155.

¹⁷⁸ WHORASSEP: ID0020_Box269, Report to the Joint Coordination Committee China Programme Second Meeting, 17-21 December 1979, 4 December 1978.

¹⁷⁹ WHORASSEP: ID0020_Box269, Letter to A. Zahra, Director, CDS, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 15 January 1979.

Soviet Union, the United States, the Federal Republic of Germany, South Africa and the Netherlands) at that time.¹⁸⁰ However, Dr Breman suggested dealing with the two issues separately because the certification had a certain deadline while the investigation of the variola stock did not.¹⁸¹

Concerning the safety of variola stocks, a meeting of laboratories retaining variola virus was held in Geneva on 23-24 April 1979, and three Chinese experts including Professor Jiang Yu-Tu, Professor Li Heming, and Dr Zhao Kai representing China attended the meeting. At the meeting, the Chinese representatives insisted on retaining variola virus stocks in Beijing for diagnostic and research purposes. They indicated that China planned to build laboratories with the highest level of biosafety to retain the virus, which they expected to be appointed a WHO collaborative centre. However, Dr Arita expressed his doubts about China's ability to build such a laboratory. He pointed out that "the construction of such a containment laboratory would be an extremely ambitious project in China and would require substantial technical and financial assistance from outside."¹⁸² In addition, he indicated that the laboratory was able to be built before the smallpox eradication programme was completed, so it would be difficult for the WHO to process the nomination. Therefore, he suggested China to build a laboratory for wider use. However, the Chinese representatives indicated that they were not authorized to make a decision on this issue and they suggested Dr Arita to discuss it with Dr Tan Yun Heh, who would attend the World Health Assembly in May.¹⁸³ After the meeting, Dr Arita expressed that he was "extremely glad that China would participate (in the meeting)"¹⁸⁴, and the discussion with the Chinese delegates went smoothly. He felt they finally made the first step towards the certification of smallpox eradication of China.¹⁸⁵

¹⁸⁰ WHORASSEF: ID0020_Box269, Letter to Gustav Nossal, Director, Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 13 February 1979.

¹⁸¹ WHORASSEF: ID0020_Box269, Letter to P. Lawton, CPD, WHO HQ, Geneva, from J. G. Breman, Medical Office, Smallpox Eradication Unit, WHO HQ, Geneva, 16 January 1979.

¹⁸² WHORASSEF: ID0020_Box269, Letter to Gustav Nossal, Director, Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 13 February 1979.

¹⁸³ WHORASSEF: ID0020_Box269, Letter to P. Lawton, CPD, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 26 April 1979.

¹⁸⁴ WHORASSEF: ID0020_Box269, Letter to Gustav Nossal, Director, Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 13 February 1979.

¹⁸⁵ WHORASSEF: ID0020_Box269, Letter to P. Lawton, CPD, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 26 April 1979.

With increasing positive and frequent responses, Dr Arita felt more confident about receiving further information on smallpox eradication from China.¹⁸⁶ He believed that they would receive a full country report from China eventually, and the only important issue left was the visit by members of the Global Commission and WHO staff to China. Therefore, he once again proposed to arrange a visit by Frank Fenner, the Chairman of Global Commission, accompanied by WHO staff.¹⁸⁷ Having learned lessons from the failed negotiations before, Dr. Arita first conveyed this message to Beijing through informal channels. He realized that the main reason for China's unwillingness to cooperate in the certification of smallpox eradication was a lack of communication and mutual understanding, especially about the surveillance and documentation standards of the WHO. He indicated that it was reasonable for China to question the necessity of the certification, because the disease had already been eradicated for nearly two decades in the country. Therefore, after he heard Sir Gustav Nossal, the Director of the Walter and Elizabeth Hall Institute for Medical Research in Australia and the Chairman of the WHO Western Pacific Advisory Committee for Medical Research, was going to visit China in April, Dr Arita asked him to emphasize the importance of the certification of smallpox eradication to Beijing when the opportunities arose.¹⁸⁸

Dr Dy also requested Sir Nossal to propose the visit by a team led by Dr Fenner to some high-level Chinese authorities, perhaps the Vice-Minister Chien Hsin-Chung, and to bring back their conditions. However, Dr Dy also reminded Sir Nossal that the certification of smallpox eradication of China was a politically sensitive issue, but Sir Nossal's visit was a technical visit. Dr Dy suggested Nossal to consider the smallpox problem as a side issue which should not affect the original purpose of his visit, and he asked the messenger to evaluate Chinese authorities' attitudes and to decide if it would be appropriate to bring up this sensitive issue.¹⁸⁹ Although concerning the sensitivity of this topic and uncertainty of the reaction of the Chinese authorities,¹⁹⁰ Sir Nossal found opportunities to broach the subject of

¹⁸⁶ WHORASSEP: ID0020_Box269, Letter to Gustav Nossal, Director, Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 13 February 1979.

¹⁸⁷ WHORASSEP: ID0020_Box269, Confidential letter to F. J. Dy, Regional Director, WPRO, Manila, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 15 February 1979.

¹⁸⁸ WHORASSEP: ID0020_Box269, Letter to Gustav Nossal, Director, Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 13 February 1979.

¹⁸⁹ WHORASSEP: ID0020_Box269, Letter to Gustav Nossal, Director, Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, from F. J. Dy, Regional Director, WPRO, Manila, 2 March 1979.

¹⁹⁰ WHORASSEP: ID0020_Box269, Letter to David M. Macfadyen, Research Promotion and Development, WPRO, Manila, from Gustav Nossal, Director, Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, 21 February 1979.

the certification of smallpox eradication during his visit. He discussed the issue informally with Vice-Minister Tan Yen-He, Professor Hsueh Kung-Cho, the Director of Foreign Affairs Bureau of the Ministry of Public Health; and Wang Lien-Sheng, the Deputy Chief of the Division of International Organization under the Foreign Affairs Bureau of the Ministry of Public Health. He passed on Dr Arita's proposal for a visit by Dr Fenner's team, which was accepted and welcomed by Chinese authorities informally. Sir Nossal detected a "positive and flexible attitude" from Chinese authorities, and he believed the certification work would progress smoothly.¹⁹¹

However, after this informal endorsement, no formal confirmation or official invitation was received from Beijing regarding this visit. Considering limited time was left for the Global Commission to complete the certification world-wide, Dr Arita requested Dr Dy again to ask China for official endorsement of the visit and the submission of the country report.¹⁹² It was planned that the Director-General would announce the global eradication of smallpox in 1980. If the data from China was still absent, Dr Arita said, "the situation would be quite embarrassing".¹⁹³ Soon he was informed by Dr Lawton from the WPRO that China had informally confirmed that Dr Frank Fenner, the Chairman of the Global Commission, could visit China in July, and it was decided that Dr Joel Breman, from the smallpox unit in Geneva, would accompany him.¹⁹⁴ Although it was not an official invitation, the visit that is crucial to the certification of smallpox eradication in China had eventually been agreed.

After hearing this information, Dr Arita and Dr Fenner began to prepare for this visit immediately. Dr Arita pointed out two main purposes of the visit. The first was to assist Chinese officials in preparing their country report and to bring it back to Geneva with Dr Fenner himself. The second purpose was to investigate the status of laboratories retaining variola viruses of the country. Recognising the challenges of convincing China to destroy the virus, Dr Arita expected to confirm whether their security procedures could ensure the safety of the virus storage.¹⁹⁵ For Dr Fenner, this was not his first visit to China. As a member of a

¹⁹¹ WHORASSEP: ID0020_Box269, Letter to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from Gustav Nossal, Director, Walter and Eliza Hall Institute for Medical Research, Melbourne, Australia, 20 April 1979.

¹⁹² WHORASSEP: ID0020_Box269, Memorandum to F. J. Dy, Regional Director, WPRO, in Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 23 May 1979.

¹⁹³ WHORASSEP: ID0020_Box269, Letter to P. Lawton, CPD, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 11 May 1979.

¹⁹⁴ WHORASSEP: ID0020_Box269, Letter to I. Ladnyi, Assistant Directors-General, WHO HQ, Geneva, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 29, May 1979.

¹⁹⁵ WHORASSEP: ID0020_Box269, Letter to Frank Fenner, Director, Centre for Resource and Environmental Studies, The Australian National University, Canberra, Australia, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 29 May 1979.

group of Australian doctors, he had visited the country in 1957.¹⁹⁶ In order to achieve the maximum efficiency of the visit, Dr Fenner to Dr Hseuh Kung-Cho before the visit introduced his main purposes and expectations of this trip.¹⁹⁷ In the letter, Dr Fenner indicated that China was a large country with twenty-nine provinces, a detailed description of each province would make the report too lengthy. Therefore, he suggested Dr Hseuh to provide a concise report, introducing the history of smallpox eradication since the founding of the People's Republic of China, including the details of the eradication process of selected provinces and municipalities, describing the operations of mass vaccination campaigns, as well as the current healthcare and disease surveillance system. Dr Fenner expected this report to be available when he and Dr Breman arrived in Beijing, so that they would have time to edit the English version. He also hoped to visit the National Institute for the Control of Drugs and Biological Products in Beijing, where the variola virus was retained. His final expectation was to visit several provinces, especially the one with the last outbreak, and to conduct facial pockmark surveys during his trip.¹⁹⁸

The visit by Dr Frank Fenner and Dr Joel Breman took place from 14 to 30 July 1979. When they arrived in Beijing, they found that their itinerary had already been arranged. The cities they visited included Beijing, Shanghai, and Kunming, the capital city of Yunnan Province, where was believed to be the last smallpox case was reported. During this trip, Dr Fenner and his team investigated the country's public health system and the infectious disease control and surveillance system at state, provincial, municipal and district levels. They visited local health service providers, including hospitals, health centres, and primary health clinics. During their stay in Beijing, they visited the National Institute for Biological Station where the variola virus was retained, the National Serum and Vaccine Institute, Fangshan county, and Doudian, a rural commune of the county. In Shanghai, they visited the First Medical College of Shanghai, the Shanghai Serum and Vaccine Institute, the hygiene and epidemic station of the city, and two districts Caoyang and Luwan. In Kunming, they visited the Yunnan Province Bureau of Health, the Institute of Medical Biology, the epidemic prevention stations at the provincial and municipal levels, and they did pockmark surveys in several schools and kindergartens. The evidence collected from their investigation had proved that China had built a strong public health system to provide vaccination services that

¹⁹⁶ WHORASSEP: ID0020_Box269, Letter to Hsueh Kung-cho, Director, Foreign Affairs Bureau, Ministry of Health, Beijing, the PRC, from Frank Fenner, Chairman, Global Commission for the Certification of Smallpox Eradication, in Geneva, 22 June 1979.

¹⁹⁷ Ibid.

¹⁹⁸ Ibid.

eradicated the smallpox and continued to monitor the potential outbreaks of the disease. It also provided additional information about the country's public health system that had not been available to the WHO and the world scientific community previously.¹⁹⁹

Figure 4.7 The WHO team of Joel Breman and Frank Fenner in Kunming, 1979

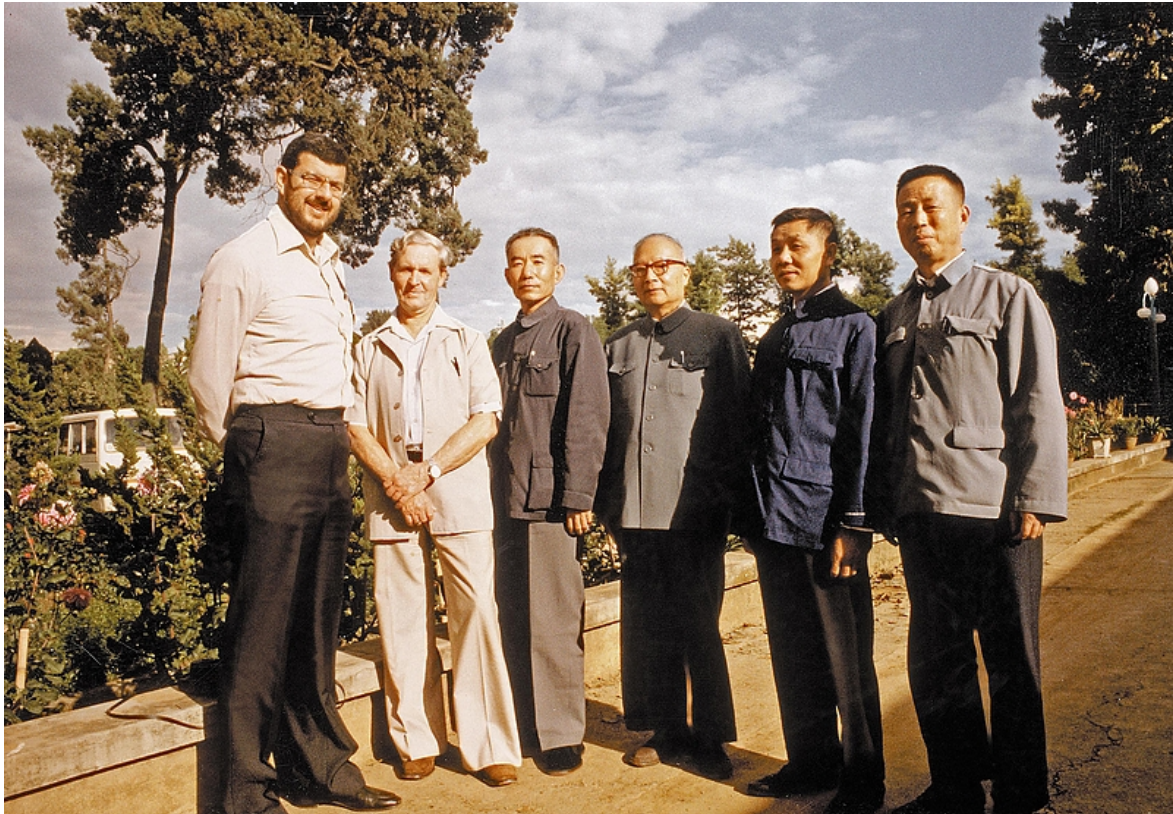


Photo Description: China, Yunnan Province, People's Republic, 1979. The WHO team of Joel Breman and Frank Fenner. in Kunming, Yunnan Province, China, with Fu Guichen, Jiang Yutu, Jiang Weizhang and Zuo Kejia. Jiang Yutu accompanied the WHO team; the other Chinese were health officials of Yunnan Province.

Credit: WHO, J Breman

Source: WHO Photo Library

In addition, Dr Fenner and Dr Breman visited the National Institute for the Control of Biological Products, and they discussed the variola virus stocks with the director of the institute and officials from the Ministry of Public Health, as well as Dr Jiang, the expert who attended the WHO variola virus retention meeting in April. According to Dr Fenner and Dr Breman's observation, the environment for variola retention at the institute did not reach the WHO standards. The retained virus was last used for an investigation of a suspected case of smallpox in 1967. The Chinese authorities indicated that they intended to retain the virus in a

¹⁹⁹ Frank Fenner, Joel Breman, and World Health Organization, *Report on a Visit to the People's Republic of China to Consider Matters Relating to the Certification of Smallpox Eradication, 14-30 July 1979* / F. Fenner and J.G. Breman (Geneva: World Health Organization, 1979), 4, <http://apps.who.int/iris/handle/10665/68313>.

laboratory with the highest level of biosafety, which would be built in 1980, and they expressed their expectation of technical support from the WHO, including the facilities and equipment, such as high efficiency particulate air filters. The Chinese were concerned about the potential outbreaks and considered it was necessary to retain the virus for diagnosis of the disease and development of vaccines and treatment. In addition, they believed that the variola virus would contribute to their upcoming comparative study on the origin of the monkeypox virus.²⁰⁰

Most importantly, they received the country report of smallpox eradication in China, with details and numbers, as well as a special report of the last outbreaks of smallpox in Yunnan Province. This report was prepared by Dr Jiang Yu-Tu, Dr Li Heming, and Dr Zhao Kai, who attended the laboratories retaining variola virus meeting held in Geneva in April.²⁰¹ The report provided epidemiological data of smallpox outbreaks in China, the number of vaccines were administered each year, the statistics of smallpox vaccine potency and detailed account of the mass vaccination and other public health measures related to smallpox control and surveillance.²⁰² In addition, they also provided a detailed report of the smallpox outbreak in Yunnan in 1961, which was believed to be the last outbreak of the country by then, and it included a pockmark survey result covering 73,820 samples from the border areas of Yunnan from March to May in 1979.²⁰³ Dr Fenner and his colleagues were impressed at the details provided in the report, considering almost twenty years had passed since the last smallpox outbreak in Yunnan. The only concern about the report was the lack of specific information on smallpox eradication in the Tibet, although information from the report indicated that no smallpox case was identified in the region since 1960. Responding to the WHO team's questioning, the Chinese authorities promised to carry out a facial pockmark and vaccination scar surveys in Tibet and to provide a supplementary report within the next few months.²⁰⁴ In addition to providing necessary reports, China had also agreed to send two representatives to attend the second meeting of the Commission in 1979.²⁰⁵

²⁰⁰ Ibid.

²⁰¹ Ibid.

²⁰² China, World Health Organization, and Global Commission for the Certification of Smallpox, *Smallpox Eradication in China* (Geneva: World Health Organization, 1979), <http://apps.who.int/iris/handle/10665/68275>.

²⁰³ Fenner et al, *Smallpox and Its Eradication*, 1254.

²⁰⁴ WHORASSEP: ID0020_Box269, Telegram to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from Frank Fenner, Director, Centre for Resource and Environmental Studies, The Australian National University, Canberra, Australia, 7 August 1979.

²⁰⁵ Fenner et al, *Smallpox and Its Eradication*, 1254.

After the visit, Dr Fenner returned to Australia, while Dr Breman went back to Geneva with the country report prepared by the Chinese experts.²⁰⁶ The team submitted a report with the evidence they collected from China and recommended the country to be certified as smallpox free. In a personal note to Dr Arita, Dr Fenner said:

“If the Director-General of WHO will declare Africa free of smallpox at a meeting in Nairobi on 26 October, it would be highly anomalous if China, where smallpox was eradicated years before the Smallpox Eradication Programme, began, remained the only country in the world not certified by the Global Commission (perhaps barring Democratic Kampuchea, if contact with that Government cannot be achieved). Needless to say, I would not write in this way if I were not convinced that the statements made by the Chinese authorities about smallpox were correct, and if I did not have confidence in the surveillance machinery for infectious diseases operating in that country”.²⁰⁷

Dr Fenner’s letter expressed his confidence in smallpox eradication in China and he pointed out the urgency of this matter. Therefore, he suggested the Global Commission and the Smallpox Eradication Unit at Geneva to consider the certification of China with the data they already had, even though the Tibet report was not yet available, because the last case in China occurred in Yunnan instead of Tibet, and it was not possible to arrange another visit to Tibet before the scheduled deadline of the global certification.²⁰⁸ Dr Arita agreed with Dr Fenner to certify China with available documentations, which included: a country report prepared by the Ministry of Health, Beijing, China; a provincial report prepared by the Health Department of Yunnan Province where the last case occurred in 1960; a report on the visit to China prepared by Dr F. Fenner and Dr J. Breman; a report on smallpox eradication in Taiwan Province (already submitted to you during the first meeting of the Global Commission 4-7 December 1978).²⁰⁹ He contacted the members of the Global Commission to evaluate these reports and to decide whether they would recommend for the certification of smallpox eradication in China, based on the decisions made during the first meeting of the

²⁰⁶ WHORASSEP: ID0020_Box269, Record Note of call from Frank Fenner and Joel Breman, recorded by I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 30 July 1979.

²⁰⁷ WHORASSEP: ID0020_Box269, Memorandum titled “Certification of Smallpox Eradication in China”, to Members of the Global Commission for the Certification of Smallpox Eradication, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 21 August 1979.

²⁰⁸ WHORASSEP: ID0020_Box269, Telegram to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from Frank Fenner, Director, Centre for Resource and Environmental Studies, The Australian National University, Canberra, Australia, 7 August 1979.

²⁰⁹ WHORASSEP: ID0020_Box269, Memorandum titled “Certification of Smallpox Eradication in China”, to Members of the Global Commission for the Certification of Smallpox Eradication, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 21 August 1979.

Global Commission in December 1978.²¹⁰ He expected the members of the Global Commission to make response to the four questions:

1. Do you think that the Global Commission should now approve certification of smallpox eradication in China?

or

2. Do you as an individual member of certification of smallpox eradication certification should not be declared meet again 6-9 December 1979?

or

3. Do you think that the visit and reports require further action or supplementary data and that certification of smallpox eradication in China should still be postponed, and if so, what further action or supplementary data are required?

or

4. Do you have any other comments or recommendations which do not fall into the above three categories? ²¹¹

Eight out of Seventeen members of the Global Commission, including the former director of the smallpox unit, Dr D.A. Henderson, and the director of the Global Commission, Dr F. Fenner, recommended for immediate certification, while five of them, including Dr J. Kostrzewski, recommended for further discussion.²¹² As the former director of the Smallpox Eradication Unit, Dr D. A. Henderson was aware of the difficulty of getting information from China. He was impressed by the many details contained in the country report, and he strongly recommended the Global Commission to certify that smallpox had been eradicated in China.²¹³ Dr R.N. Basu, Assistant Director of General of Health Services of India, also agreed to grant approval for the certification for smallpox eradication of China, but he opposed the country retaining variola virus by designating a WHO collaborating laboratory like the ones that had been established in the US and the USSR.²¹⁴

²¹⁰ Ibid.

²¹¹ Ibid.

²¹² WHORASSEP: ID0020_Box269, Responses of Members of the Global Commission to Proposals for Certification for the Certification of Smallpox Eradication in China Made on 21 August, 21 August 1979.

²¹³ WHORASSEP: ID0020_Box269, Letter to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from D. A. Henderson, Dear, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, USA, 29 August 1979.

²¹⁴ WHORASSEP: ID0020_Box269, Letter to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from Robert Netter, Director-General, National Health Laboratory, Paris, France, 29 August 1979.

Figure 4.8 Members of the Global Commission for the Certification of Smallpox Eradication, Geneva, 9 December 1979



Photo Description: Members of the Global Commission for the Certification of Smallpox Eradication, Geneva, 9 December 1979. Left to right, front row: Dr Svetlana S. Marennikova (USSR), Dr Jesus C. Azurin (Philippines), Dr Pyotr N. Burgasov (USSR), Dr Frank J. Fenner (Australia), Dr Jan Kostrzewski (Poland), Dr Donald A. Henderson (USA), Dr Wilfred Koinange Karuga (Kenya), Dr Zhang Yi-hao (China); left to right, back row: Dr Paul F. Wehrle (USA), Dr Rabinder N. Basu (India), Dr Jalal M. Aashi (Saudi Arabia), Dr Holger B. Lundbeck (Sweden), Dr Bichat A. Rodrigues (Brazil), Dr Keith R. Dumbell (United Kingdom), Dr Robert Netter (France), Dr Isamu Tagaya (Japan), Dr J. Simon Moeti (Botswana), Dr Kalisa Ruti (Zaire), Dr Purushollam N. Shrestha (Nepal), Dr Abdullahi Deria (Somalia).

Credit: WHO /L. Bianco

Source: WHO Photo Library

However, Dr Holger Lundbeck, who worked at the National Bacteriological Laboratory of Sweden, had expressed different views. In his opinion, the certification of China was more like a choice without a better solution. He pointed out that Dr Fenner's report contained strong preconceived opinions and personal judgement. He also raised concerns about the credibility of the reports prepared by Chinese nationals because of the lack of transparency in the process of data collecting. He indicated that in other countries with similar situation to China that the certification was carried out years later after the eradication, country reports were prepared by the members of the Global Commission and/or WHO staff after careful

investigation, but China was allowed to collect data by its own nationals.²¹⁵ Despite that, he agreed the certification of China, but he indicated that:

“Refusal to accept the statement of the Chinese Government would place China in another category than these countries and would mainly be based on lack of trust in the credibility or the ability of the Chinese authorities. There is no basis for such mistrust. There will be no way for WHO or any other organization to check the smallpox situation satisfactorily in China. Collection of further information will not provide much additional evidence considering the vastness of the country and the size of the population. The Global Commission will, in any case therefore, have to rely on the official Chinese statement.”²¹⁶

As Dr Lundbeck concerned, the certification of China did not follow the criteria set by the Global Commission or the same process with other countries with similar situation. However, considering the importance of China in the international community, especially its huge population, a global eradication programme without the Chinese story would hardly justify claims to global scale. Therefore, the WHO had to compromise some of its standards of the certification on the case of China. As Dr Lundbeck pointed out, it was difficult for the WHO to obtain additional evidence needed for certification without the cooperation from Beijing. The challenging process of the certification of China showed that despite the WHO was intended to improve the world’s health with largely scientific and technical strategies, the implementation of its programmes had to be adjusted to world politics.²¹⁷

Because the eradication of smallpox in Tibet was a concern of the members of the Global Committee, in September, Dr Arita requested Beijing for the supplementary report of this region.²¹⁸ Based on the agreement made when Dr Fenner visited China, a pockmark survey was conducted in Tibet in August, and the report was submitted to Geneva by Dr Qian Xin-Zhong, the Minister of Public Health, on 17 November 1979. This supplement report provided additional data and information of smallpox outbreaks in Tibet during 1954-1960, the surveillance and vaccination policy after the disease was eradicated, as well as a result of vaccination scar and pockmark survey of local residents. After receiving this report, the

²¹⁵ WHORASSEP: ID0020_Box269, Letter to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from Holger Lundbeck, Director, National Bacteriological Laboratory, Stockholm, Sweden, 29 August 1979.

²¹⁶ Ibid.

²¹⁷ Lee, *The World Health Organization (WHO)*, 45.

²¹⁸ WHORASSEP: ID0020_Box269, Letter to the Minister of Public Health, Beijing, the PRC, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 7 September 1979.

Global Commission officially granted certification to China regarding the smallpox eradication of the country.²¹⁹

Figure 4.9 Dr Zhang Yi-hao (China) signing the Declaration of Global Smallpox Eradication, 1979



Photo Description: Dr Zhang Yi-hao (China), Deputy Director, National Serum and Vaccine Institute, Beijing (China), and member of the Global Commission for the Certification of Smallpox Eradication, formally signs the document declaring “that Smallpox has been eradicated in every country in the World”.

Credit: WHO /Didier Henrioud

Source: WHO Photo Library

Between the 6th and 9th of December, the Global Commission, an independent panel of scientists from 19 nations, had their second and the last meeting at the WHO Headquarters in Geneva. Two representatives from China, Dr Zhang Yi-hao and Dr Jiang Yu-tu attended the meeting. After reviewing and accessing the process of the certification of smallpox eradication by the International Commissions and Global Commission, the members of the Global Commission made final recommendations regarding the policy for the post-eradication era and signed the document declaring “that Smallpox has been eradicated in every country in the world”.²²⁰ At the Thirty-third World Health Assembly on the 8th of

²¹⁹ China, and World Health Organization, *Smallpox Eradication in the Autonomous Region of Tibet in the People’s Republic of China: Including the Results of Pockmark and Vaccination Scar Surveys Conducted in August 1979* (Geneva: World Health Organization, 1979), 12, <https://apps.who.int/iris/handle/10665/68284>.

²²⁰ World Health Organization Global Commission for the Certification of Smallpox Eradication, *The Global Eradication of Smallpox: Final Report of the Global Commission for the Certification of Smallpox Eradication*,

May 1980, Dr Mahler, the Director-General of the WHO had also formally declared that smallpox eradication had been achieved throughout the world and there was no evidence that smallpox would return as an endemic disease.²²¹

Figure 4.10 Parchment signed at Geneva on 9 December 1979, by the members of the Global Commission for Certification of Smallpox Eradication



Source: WHO Photo Library

As far as Dr Lundleck was concerned, the data collected by Chinese experts was proved to be inaccurate after certification. Based on the country report Dr Fenner received in 1979, the WHO recognized and endorsed that the last smallpox case in China occurred in Yunnan Province in 1961. However, in December 1980, Dr Jiang Yu-tu wrote to Dr Fenner and informed him that a smallpox outbreak of 20-30 cases in Inner Mongolia in 1963 – 1964 was identified by his team through retrospective studies, and they were still investigating the outbreak. Dr Jiang suggested the WHO to make a general statement that smallpox was eradicated in China “in the early 1960s,” instead of announcing the exact year of 1961.

Geneva, December 1979 (Geneva: World Health Organization, 1979), <http://apps.who.int/iris/handle/10665/39253>.

²²¹ World Health Assembly, *Thirty-third World Health Assembly, Geneva, 5-23 May 1980: Resolutions and Decisions, Annexes* (Geneva, World Health Organization, 1980), <http://apps.who.int/iris/handle/10665/154893>.

However, Dr Fenner suggested to Dr Arita that the publications should not wait for the verification of this information.²²²

However, no follow up information was provided regarding the newly identified outbreak in mid-1960s until 1984, when Dr Fenner contacted Dr Jiang Yu-tu for supporting data and photos of smallpox eradication in China for his book *Smallpox and Its Eradication*. Authorized by the Ministry of Health of the PRC, Dr Jiang provided additional data to Dr Fenner. The new information showed the number of smallpox cases in each province in China from 1950 to 1983. Two major corrections were made in the new piece of information compared to the country report submitted in 1979. First, instead of the year 1960, the last outbreak in Tibet was in 1964 with three deaths, which was caused by imported cases from Nepal. Second, the last smallpox outbreak happened in Shanxi Province and Inner Mongolia in 1963-1965 rather than Yunnan in 1961.²²³ The new evidence overturned the statement made in the Chinese country report and the supplementary reports of Yunnan and Tibet, which certified the eradication of smallpox in China in 1979.

Dr Fenner asked Dr Jiang to provide more details on the outbreak in Shanxi and Inner Mongolia.²²⁴ According to Dr Jiang's further investigation, additional 28 cases in Shanxi, and 73 in Inner Mongolia in 1963, 26 cases in Inner Mongolia in 1964, and another 3 in Shanxi in 1965 were documented in local record while not reported to the Ministry back in 1979. However, this new evidence raised concerns to Dr Fenner, because the latest case recorded before the newly discovered outbreak in Inner Mongolia was in 1956 (7 years before the outbreak), and 1952 in Shanxi (11 years before the outbreak). Dr Fenner indicated that based on their observation during the smallpox eradication programme, the variola virus could not stay viable for more than two years, while in the cases of Shanxi and Inner Mongolia, the virus was still pathogenic after seven and eleven years. Therefore, he was concerned the criteria used for the certification of smallpox eradication might be incorrect, and there was still risk for smallpox to be epidemic again. Dr Arita took this information seriously and informed the Regional Director of the WPRO to put this on records and he wished to obtain

²²² WHORASSEP: ID0020_Box269, Letter to I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, from Frank Fenner, the John Curtin School of Medical Research, Canberra, Australia, 11 December 1980.

²²³ WHORASSEP: ID1209_BOX659, Letter to Frank Fenner, the John Curtin School of Medical Research, Canberra, Australia, from Jiang Yu-tu, Academy of Military Medical Sciences Institute of Microbiology and Epidemiology, Beijing, the PRC, 21 November 1984.

²²⁴ WHORASSEP: ID1209_BOX659, Letter to Jiang Yu-tu, Academy of Military Medical Sciences Institute of Microbiology and Epidemiology, Beijing, the PRC, from Frank Fenner, in Geneva, 10 December 1984.

assistance from Manila, if Dr Jiang failed to provide more information regarding the outbreaks in 1963-1965.²²⁵

Dr D.A. Henderson also paid close attention to the new information. He wrote to Dr Jiang and asked if he could arrange an investigation of the outbreak in Shanxi and Inner Mongolia in 1963-1965. He indicated that their studies of Afghanistan and Ethiopia suggested the variola virus was unlikely to survive for more than two years, which was the scientific basis for one of the criteria for the certification of smallpox eradication, that required two years' interruption of the transmission of the disease before a certain area was certified as smallpox free. If the virus was still pathogenic after seven years or longer like the cases in Shanxi and Inner Mongolia, it would challenge the criteria of certification of smallpox eradication.²²⁶

Signalling the seriousness of the issue, Dr Jiang provided Dr Fenner and Dr D. A. Henderson with new data and explanation to the outbreak in 1963-1965. According to Dr Jiang, the outbreak was caused by poor vaccine handling and storage of variolation materials in the use of traditional Chinese variolation method. After 1949, the government provided free smallpox vaccination to all population.²²⁷ However, due to the shortage of supplies of smallpox vaccine during the great famine in 1959-1962, some residents in remote areas vaccinated their children against smallpox by herb doctors with traditional variolation method, who usually "kept their variolation material in a sealed jar with honey and passed the material among relatives to keep the variolation material fresh once every year."²²⁸ However, the poor storage method caused infection in a village in Shanxi, and the disease soon spread to Inner Mongolia. In addition to the outbreaks in these two areas, Dr Jiang also provided additional information to the misreporting of the last case in Yunnan province. He indicated that the statement made by Chinese representatives in Geneva in 1973 that the last smallpox case in China occurred in 1960 in Cangyuan, Yunnan, was based on an oral report instead of

²²⁵ WHORASSEP: ID1209_BOX659, Memorandum to Regional Director, WPRO, Manila, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 18 December 1984.

²²⁶ WHORASSEP: ID1209_BOX659, Letter to Jiang Yu-tu, Academy of Military Medical Sciences Institute of Microbiology and Epidemiology, Beijing, the PRC, from D. A. Henderson, Dean, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, USA, 27 December 1984.

²²⁷ WHORASSEP: ID1209_BOX659, Letter to D. A. Henderson, Dean, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, USA, from Jiang Yu-tu, Academy of Military Medical Sciences Institute of Microbiology and Epidemiology, Beijing, the PRC, 18 January 1985.

²²⁸ WHORASSEP: ID1209_BOX659, Letter to D. A. Henderson, Dean, School of Hygiene and Public Health, The Johns Hopkins University, Baltimore, USA, from Jiang Yu-tu, Academy of Military Medical Sciences Institute of Microbiology and Epidemiology, Beijing, the PRC, 18 January 1985.

a careful investigation. This false reporting was suggested to be corrected when Dr Fenner visited China in 1979, but the local government did not provide data until the end of 1984.²²⁹

After receiving Dr Jiang's additional information, the WHO did not make an official announcement correcting the changes from the report of the Global Commission. Instead, the investigation of outbreaks in 1962-1965 in Shanxi and Inner Mongolia was published as a paper in the *American Journal of Epidemiology* in 1988. Dr Jiang's explanation dispelled some of the concerns of the WHO officials, but the question of the credibility of the certification of smallpox eradication in China still existed. In Dr Arita's letter to Dr Fenner, he said: "The critical question is how can China assure WHO that the variolators completely stopped their practice and that the material no longer exists."²³⁰ China's issue also raised his concern over the risk of potential outbreaks of the disease in other areas. Dr Joel Breman argued that the credibility of the certification relied on the rigor of the process, as well as authoritative and independent certifying groups.²³¹ As he claimed, although the information provided by China was questionable, the certification process of the WHO was not questionable because it had followed a scientific and a justifiable procedure.

VI. Conclusion

To conclude, as the authors of *Smallpox and Its Eradication* have recognized, "certification of smallpox eradication was not solely a technical matter but also involved many managerial and political questions,"²³² which was specifically true in the case of China. Chapter 2 has already argued that the WHO, as well as other UN specialised agencies, was not completely politicized or completely depoliticized. The organization was not established as a supranational health administration. Instead, its presence, missions and programmes had to gain legitimacy and support from member states. The certification of smallpox eradication of China has reflected legal, political, and institutional complexities of a global health programme under the leadership of the WHO. Using published and unpublished documents, including the correspondence, minutes, studies, travel and mission reports, this chapter has shown that the WHO had to make compromises of its standards in the certification of

²²⁹ WHORASSEP: ID1209_BOX659, Letter to Frank Fenner, Professor, the John Curtin School of Medical Research, Canberra, Australia, from Jiang Yu-tu, Academy of Military Medical Sciences Institute of Microbiology and Epidemiology, Beijing, the PRC, 6 January 1985, Folder 1209, Box 659, WHORASSEP.

²³⁰ WHORASSEP: ID1209_BOX659, Letter to Frank Fenner, Professor, the John Curtin School of Medical Research, Canberra, Australia, from I. Arita, Chief, Smallpox Eradication Unit, WHO HQ, Geneva, 11 January 1985.

²³¹ Breman and Arita, "The Certification of Smallpox Eradication and Implications for Guinea Worm, Poliomyelitis, and Other Diseases," D48.

²³² Fenner et al, *Smallpox and Its Eradication*, 1114.

smallpox eradication in China that its own nationals were allowed to collect data and prepare documentation of the smallpox eradication. Without Beijing's endorsement and collaboration, it was not possible for the WHO to achieve its goal in announcing the global eradication of smallpox at the time it was planned. Considering the importance of a country with a quarter of the world population in a global programme, with or without trust, Geneva had no choice but to rely on the information provided by the Chinese government.

Conclusion

Following the endorsement of the Global Commission for the Certification of Smallpox Eradication, an independent panel of scientists from 19 nations, in December 1979, the then Director-General of the World Health Organization, Dr Halfdan Mahler, declared “The world and all its peoples have won freedom from smallpox”¹ on 8 May 1980 at the 33rd World Health Assembly. The eradication of smallpox in 1980 ignited the hope and expectations of disease eradication and global health. Lessons learned from smallpox eradication efforts are used in current public health practice. Epidemic surveillance, case-finding, testing, contact-tracing, isolating cases, quarantining contacts, mass vaccination and public communication are still essential in responding to disease outbreaks, especially in the current COVID-19 pandemic. The pandemic of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) emerged from the late 2019 has overwhelmed health systems, caused a dramatic loss of human life worldwide, and intrigued devastating social and economic disruption. As the leading global health agency, the WHO has played an essential role in collecting and communicating epidemiological data, developing scientific and technical guidelines, and coordinating efforts to fight the disease. At the same time, smallpox eradication celebrated its 40th anniversary in 2020. This “humanity’s victory over smallpox”, Dr Tedros Adhanom Ghebreyesus said, “is a reminder of what is possible when nations come together to fight a common health threat.”² Once again, public health experts and policy makers are drawing lessons from the history of smallpox eradication.

History makes significant contributions to contemporary policymaking not only because it provides lessons from the experience in the past, but also because historical research investigates cultural, social, political complexities in individual or collective health and suffering of disease, which often engages with interdisciplinary perspective.³ However, many of the historical accounts failed to provide nuanced assessments of the multilayers of complexities interwoven in the developing, expanding, and evaluating of national, international, or global health campaigns, which involved factions of officials and politicians, as well as participants with different nationality, ethnicity, religion, educational background,

¹ World Health Assembly, *Thirty-third World Health Assembly, Geneva, 5-23 May 1980: Resolutions and Decisions, Annexes* (Geneva: World Health Organization, 1980), <http://apps.who.int/iris/handle/10665/154893>.

² WHO Commemorating 40 Years Smallpox Eradication. <https://www.who.int/news/item/08-05-2020-commemorating-smallpox-eradication-a-legacy-of-hope-for-covid-19-and-other-diseases>.

³ Sanjoy Bhattacharya, Alexander Medcalf, and Aliko Ahmed, “Humanities, Criticality and Transparency: Global Health Histories and the Foundations of Inter-Sectoral Partnerships for the Democratisation of Knowledge.” *Humanities and Social Sciences Communications* 7, no. 6 (2020): 1-11.

social-economic position or gender, all of whom had diverse memberships and views. In the case of smallpox eradication, a global health initiative interwoven with complex legal, political, and institutional complexities has often fallen into a scientific and technological success/failure narrative, that has affected the media output, academic research, and policymaking in the current and future event. The institutional accounts hailed the smallpox eradication as one of the greatest public health successes in history led by the World Health Organization, “that involved thousands of health workers around the world to administer half a billion vaccinations to stamp out smallpox.”⁴ In this type of narrative, the intensified phase of the smallpox eradication from 1967 to 1977 when the big players in the international and global health, such as the WHO and the US CDC, deeply involved the campaigns in Africa, the South Asian sub-continent and the endgame in Eastern Africa, was considered to be the central to the eradication.⁵

The story of smallpox eradication in China presented in this thesis has contributed to adding new timelines to the history of global smallpox eradication, which challenges the institutional history that only highlights contribution of a few participants from the global north. Refusing to join the WHO and participating in the organization’s activities due to cold war politics, the People’s Republic of China worked to its own timetables to fight against smallpox and achieved the eradication of the disease in the mid-1960s without much external support in money, vaccine, and personnel in less than two decades after its founding, which was even before the intensified global eradication programme started. The thesis has demonstrated that, the eradication of smallpox in China, as well as other countries in the Western Pacific Region, was achieved not only by mass vaccination, but also by epidemic surveillance, case-finding, testing, contact-tracing, isolating cases, quarantining contacts, mass vaccination and public communication. The ability of independently developing, manufacturing, and distributing vaccines, as well as the capacity to enforce nationwide compliance in smallpox vaccination among other public health interventions at a mass scale played crucial roles in this remarkable accomplishment considering the country’s vast territory, huge population, its poor economic growth, and extreme limited public health resources. It proved the importance of empowering developing countries with science, technology, as well as management skills to solve their own public health problems. As the Covid-19 pandemic evolves, the African continent has been left dependent on external

⁴ WHO Commemorating 40 Years Smallpox Eradication, <https://www.who.int/news/item/08-05-2020-commemorating-smallpox-eradication-a-legacy-of-hope-for-covid-19-and-other-diseases>.

⁵ Bhattacharya and Campani, “Re-Assessing the Foundations,” 73.

suppliers because of lacking the capacity to manufacture its own vaccines. As a result, affected by vaccine nationalism, stockpiling of vaccines by rich countries and disturbances to international supply chains, the African continent was left behind in the vaccination rolling and the fight against the pandemic, which further weakened its already fragile public health system. It is important to draw lessons from the smallpox eradication in China that the inequality and inequity in the covid vaccine distribution can only be resolved by empowering African countries with the science and technologies they need and helping them transitioning from vaccine dependency to vaccine self-sufficiency.

Moreover, through the case of negotiating smallpox eradication with China, this thesis has also explained the legal, political, and institutional complexities in WHO's actions. During the Covid-19 pandemic, the WHO's responding to the disease has also attracted wide criticism, especially in relation to the information provided in the beginnings of the pandemic in China. China's public health and its relationship with the WHO are in the spotlight. The president of the United States Donald Trump sharply criticized the WHO and informed the UN Secretary-General António Guterres of its intention to withdraw from the organization.⁶ In response, the director-general of the WHO, Dr Tedros Adhanom Ghebreyesus said, "one of the greatest threats we face continues to be the politicisation of the pandemic. ...COVID politics should be quarantined." He appealed to all nations to work together with science, solutions, and solidarity.⁷ The thesis has discussed, the WHO, as well as other UN specialised agencies, was not completely politicized or completely depoliticized. The organization was not established as a supranational health administration. Instead, its presence, missions and programmes had to gain legitimacy and support from member states. Drawing the case of the negotiation between China and the WHO in terms of smallpox eradication its certification, the thesis has demonstrated that as a venue for international political negotiation and diplomacy, the organization's scientific, technical, and humanitarian works are subjected to intricate political challenges that await international coalitions. In addition, the thesis has also discussed questions closely connected to current concerns from historical perspective, such as the legal representation of China and Taiwan in the WHO, and the quality and

⁶ Lawrence O. Gostin, Harold Hongju Koh, Michelle Williams, Margaret A. Hamburg, Georges Benjamin, William H. Foege, Patricia Davidson, et al., "US Withdrawal from WHO Is Unlawful and Threatens Global and Us Health and Security," *The Lancet* 396, no. 10247 (2020): 293-95.

⁷ Dr Tedros Adhanom Ghebreyesus, Answer to Media's Question, COVID-19 Virtual Press Conference 23 July 2020, 00:22:11, https://www.who.int/docs/default-source/coronaviruse/transcripts/covid-19-virtual-press-conference---23-july.pdf?sfvrsn=89cb51c2_2.

trustworthiness of public health data from China, which provides important historical context for the current debate.

Finally, the thesis has provided new perspective to reconsider the history of global health by evaluating China's role in international and global health activities through the case of smallpox control and eradication. Although the Communist government did not participate in the global smallpox eradication campaigns directly, the Chinese healthcare system that prioritised prevention medicine that the achievement relied upon, was shaped by a variety of interpretations of health and well-being, political agendas, public health models, and diplomatic agreements, and the space given to communities in decision-making. Through studying the knowledge exchange between China and various groups of experts shifted from time in the 20th century, (including the Yugoslav experts, the Rockefeller Foundation, and the League of Nations Health Organization before the war, the technical assistance from the United Nations, the United States and the United Kingdom during the war, as well as the Soviet experts after the war), the thesis has presented a complex analysis of the establishment of the Chinese healthcare system and its role in international and global health in the case of smallpox eradication. As discussed in the beginning of the thesis, global health has evolved from colonial legacies, including but not limited to colonial medicine, missionary medicine, tropical medicine, and international health.⁸ The historical analysis of global health often assesses the roles played by the global south through a foreign gaze promoting a US- and Western Europe-centric superiority.⁹ In addition, the socialist world gets short shrift despite the different strands of socialist medicine played important roles in shaping global practices and composed essential part of global health. The narrow interpretation of international and global health centred on the international/global health organizations based in the US or Western Europe, or the rich countries who enforced major influence in those organizations has distorted the understanding of the history of global health. Instead, by engaging perspectives of wide-ranging actors in global smallpox eradication in China, this thesis contributed to a more understanding of the intricacies of an important episode of internationalism in health that remains largely ignored in the historiography.

8 Mishal Khan, et al., "Decolonising Global Health in 2021," e005604.

9 Abimbólá, "The Foreign Gaze," e002068.

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