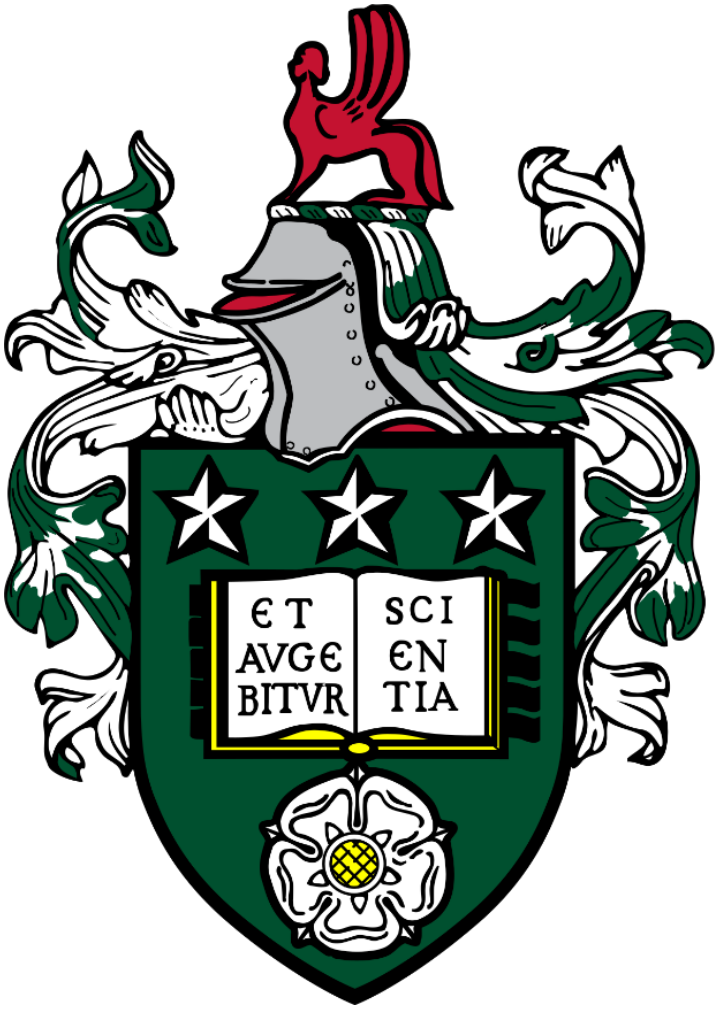
Improving support for people with severe mental illness to quit smoking: comparing a bottom-up with a top-down quality improvement approach.



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The University of Leeds, Department of Psychology

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I confirm that the work submitted is my own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

Tobacco use remains a leading cause of preventable mortality, with individuals experiencing severe mental illness (SMI) being disproportionately affected, facing a life expectancy reduced by 13-30 years. Despite comparable motivation to quit, people with SMI are underserved by cessation services. This thesis examines best practice in smoking cessation for SMI by integrating 'top-down' evidence from the literature with 'bottom-up' insights from practice. A systematic review confirmed that people with SMI can successfully quit using interventions effective in the general population, whilst highlighting the growing use of digital tools to do so. Two empirical studies within inpatient mental health services were conducted. Study 1, conducted within the national Quality Improvement in Tobacco Treatment (QUiTT) Collaborative, found that staff alignment around cessation goals, effective use of outcome measures, and empowerment to enforce smoking cessation policies facilitated engagement, though translation into patient and service outcomes remained unclear. Study 3, using the Positive Deviance approach to investigate individual level high performance, revealed that successful practice was shaped by language framing, rapport-building in informal 'third spaces,' and interdisciplinary collaboration, with service users emphasising empathetic staff and timely access to nicotine replacement therapy as essential.

Synthesised through triangulation, these findings reinforced the value of motivational interviewing and relationships between ward staff and Tobacco Dependency, whilst divergences highlighted cultural barriers, alongside the absence of electronic cigarettes from the evidence base- despite their ground level acceptability. A gold standard for cessation in SMI is proposed, emphasising careful use of language, embedding motivational approaches into ward practices, prioritising staff-advisor relationships, and ensuring access to high quality e-cigarettes, supported by rigorous evaluation. This thesis contributes to reducing health inequalities by offering a holistic account of smoking cessation practice in SMI, where the rigour of research evidence meets the realities of frontline care.

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Ethical Approval

This PhD has obtained ethical approval from the Health Research Authority (HRA), Research and Ethics Committee (REC) (REC Reference: 24/WS/0111), and University of Leeds Ethics Committee. (PSCETHS-781).

List of Abbreviations

Chapter	Abbreviation	Expansion
General	SMI	Severe Mental Illness
	TDA	Tobacco Dependency Advisor
	PD / PDs	Positive Deviance / Positive Deviants
	MI	Motivational Interviewing
	CI	Complex Interventions / Confidence Interval (context dependent)
	RQ	Research Question
	TA	Thematic Analysis
	NRT	Nicotine Replacement Therapy
1	PTSD	Post-Traumatic Stress Disorder
	ICD10	International Classification of Diseases, 10th Revision
	DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, 4th Edition
	TMS	Transcranial Magnetic Stimulation
	CO	Carbon Monoxide
	ppm	Parts Per Million
	ng/ml	Nanograms per Millilitre
	ml	Millilitre
2	RoB 2	Risk of Bias 2 (Cochrane tool)
	RR	Risk Ratio
3	4D/6D	Define, Determine, Discover, Design, Discern, Disseminate (Positive Deviance framework)
	STEMI	ST-elevation Myocardial Infarction

Chapter	Abbreviation	Expansion
4	QUiTT	Quality Improvement in Tobacco Treatment
	NG209	NICE guideline NG209 (mental health & smoking cessation)
	LTP	NHS Long Term Plan
	NCCMH	National Collaborating Centre for Mental Health
	QI	Quality Improvement
	PDSA	Plan, Do, Study, Act cycle
5	ONS	Office for National Statistics
	SCIMITAR+	Smoking Cessation Intervention for Severe Mental Illness Trial
	STS	Smoking Toolkit Study
	NAMI	National Alliance on Mental Illness
	HRA	Health Research Authority
	REC	Research Ethics Committee
	GDPR	General Data Protection Regulation
	PPIE	Patient and Public Involvement and Engagement
	STS (survey)	Service user Tobacco Survey
	DS	Discharge Survey
6	RCT	Randomised Controlled Trial
	CBT	Cognitive Behavioural Therapy
	NCSCT	National Centre for Smoking Cessation and Training

Conferences and Presentations

Smith, M., Baxter, R., Peckham, E., Hanbury, A., & Conner, M. (2023, March). *Improving support for people with severe mental illness to quit smoking: an overview.* Oral presentation at the Yorkshire Quality and Safety Research Group (YQSR), University of Leeds, Leeds, UK.

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Smith, M., Baxter, R., Peckham, E., Hanbury, A., & Conner, M. (2024, November). *Improving support for people with severe mental illness to quit smoking (research update).* Oral presentation at the Patient Safety Group, University of Leeds, Leeds, UK.

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Publications

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Chapter 1: An introduction to smoking and smoking cessation

1.1 Chapter Summary

This chapter aims to provide an overview of the problem of smoking and smoking cessation in both the general population and people with Severe Mental Illness (SMI). It begins by outlining the global and national context, emphasising tobaccos ongoing burden on public health, before describing the addictive neurobiology of nicotine, alongside the social, cultural and systemic factors that contribute to the difficulty of smoking cessation. This highlights the importance of evidence based interventions, with national guidance recommending combined behavioural, pharmacological, and harm reduction approaches, including electronic cigarettes and NRT. Following this, this chapter then considers smoking in people with SMI- whereby prevalence is disproportionately high, quit rates are lower and smoking contributes significantly to health inequalities and a reduced life expectancy. Despite national policy prioritising this group, systemic barriers and a pro smoking culture persist. However, evidence from tailored interventions such as the SCIMITAR trials, demonstrates that bespoke approaches informed by an understanding of an individuals mental health condition, are more effective than standard care. This highlights that despite these health inequalities, people with SMI can achieve smoking cessation with appropriate support.

Moreover, this chapter also describes the initial Patient and Public Involvement, Engagement, and Participation (PPIEP) work conducted- which identified both barriers to smoking cessation research in people with SMI, whilst reinforcing the need for compassionate and flexible support. Finally, it concludes by outlining the four overarching aims of this PhD; to synthesise existing evidence (top-down), explore ground-level experiences (bottom-up), integrate these perspectives through triangulation, and propose a model of best practice for smoking cessation in people with SMI.

1.2 Smoking and smoking cessation within the general population

1.2.1 Overview

The tobacco epidemic remains one of the most serious public health challenges worldwide. Tobacco use is responsible for the deaths of more than half of its consumers, causing around 8 million deaths globally each year (World Health Organisation, WHO, 2025). Of these, approximately 7 million deaths are the direct consequence of tobacco use, whilst 1.2 million result from non smokers' exposure to second hand smoke (World Health Organisation, WHO, 2025). Although global smoking prevalence has declined since 1990 (Dai et al., 2022), large numbers of people continue to smoke. In the UK, 11.9% of adults smoked in 2023, of which 13.7% were men and 10.1% were women- equating to 6.0 million people (Office for National Statistics, ONS, 2024). These figures highlight the ongoing burden tobacco continues to place on public health.

Moreover, smoking is strongly linked to diseases of the airway, oral cancers, chronic obstructive pulmonary disease, and asthma (Wills et al., 2022). Despite this, smoking remains the leading cause of preventable death in the UK with the NHS estimating estimated 506,100 hospital admissions in England between 2019-2020 were directly attributable to smoking (NHS England, 2023)- underscoring the substantial impact that smoking has on public health. Importantly though, individuals who quit smoking before the onset of tobacco related illness can largely avoid the heightened risk of such premature mortality (Wills et al., 2022). These figures emphasise the significant burden that smoking places on the healthcare system, alongside highlighting the critical importance of smoking cessation.

Whilst many people begin smoking for reasons such as stress relief or enjoyment- nicotine addiction is the primary factor driving continued use. Nicotine, the addictive substance in cigarettes, produces a subjectively pleasant experience (reward), which increases the likelihood that smoking behaviour will occur again (reinforcement) (Wills et al., 2022). Moreover, it exerts both positive and negative reinforcing effects; by enhancing brain reward pathways (positive reinforcement) whilst reducing the discomfort of withdrawal by dampening aversion circuits (negative reinforcement) (Wills et al., 2022). Alongside this reward pathway, nicotine reaches the brain within just 10 to 16 seconds of inhalation and has a distributional half life of just 15 to 20 minutes- meaning that often hourly cigarette use is needed to maintain nicotine levels (National Institute for Health and Care Excellence, NICE, 2021). Alongside nicotine's low half life, it also activates the brains nicotinic acetylcholine receptors (nAChRs). This triggers the release of dopamine in the nucleus accumbens. Importantly, this pattern mirrors the neurochemical effects of other addictive substances such as cocaine and amphetamines- being hallmark feature of addiction (Wills et al., 2022). Therefore, both the properties of nicotine, and the resulting neurobiological profile, makes smoking cessation particularly challenging.

However, smoking behaviour is not shaped solely by pharmacological factors. Social, economic, personal, and political influences also play crucial roles in determining smoking prevalence and cessation outcomes (Jarvis, 2004). In the UK, smoking is strongly patterned by socioeconomic status, with adults in routine and manual occupations more than twice as likely to smoke compared with those in professional and managerial roles (Action on Smoking and Health, ASH, 2024). Moreover, globally, around 80% of smokers live in low and middle income countries, where tobacco use perpetuates poverty by diverting household income away from essential needs such as food and shelter (World Health Organisation, WHO, 2025). Combined with the powerful addictive properties of nicotine, these inequalities make reducing tobacco consumption particularly challenging, as individuals in lower socioeconomic groups often face chronic stress, limited access to healthcare and evidence-based cessation support, and fewer social and material resources to sustain quit attempts (Kreuter et al., 2023). This underscores the multifaceted nature of smoking and the pressing need for effective, accessible cessation strategies.

Building on the neurobiological mechanisms outlined above, the experience of withdrawal symptoms represents a further barrier to cessation and helps to explain why nicotine dependence is so persistent. When smoking is discontinued, individuals frequently experience affective disturbances such as depressed mood, irritability, restlessness, and dysphoria, alongside cognitive impairments such as reduced concentration and physiological changes including increased appetite, weight gain, and disrupted sleep (Jarvis, 2004; Robinson et al., 2019; Watkins et al., 2000). These symptoms reflect underlying neuroadaptations within dopaminergic systems- whereby chronic nicotine exposure alters receptor sensitivity and neurotransmitter regulation (Zhang et al., 2012). Importantly, the acute relief of withdrawal through renewed nicotine intake provides powerful negative reinforcement- driving continued nicotine use, despite intentions to quit (Jarvis, 2004; Watkins et al., 2000). In this way, the neurobiological effects of nicotine intersect with lived behavioural experiences of withdrawal, creating a cycle of self medicating, that reinforces nicotine dependence and illustrates the substantial difficulty of achieving sustained cessation.

Although nicotine is the component of cigarettes that sustains addiction, it is the other constituents of tobacco smoke that cause the greatest harm to both smokers and non smokers (National Cancer Institute, 2017). Tobacco smoke contains more than 7,000 chemicals, of which at least 250 are known to be harmful, including hydrogen cyanide, carbon monoxide, and ammonia. Among these, at least 69

are established carcinogens, such as arsenic, benzene, formaldehyde, and cadmium (National Cancer Institute, 2017). Beyond cancer, these toxicants are strongly associated with a range of serious health conditions, such as cardiovascular disease, stroke, and chronic obstructive pulmonary disease (COPD) (Lee, 2018). The scale of this damage is illustrated by evidence showing that smokers who switch to lower-tar cigarettes- where tar refers to the mixture of toxic and carcinogenic particulate matter in tobacco smoke, experience reduced risks of major smoking-related diseases, including a 23% lower risk of stroke, 22% lower risk of lung cancer, 19% lower risk of COPD, and 14% lower risk of heart disease (Lee, 2018). These findings emphasise the substantial impact of cigarette smoke on health outcomes and reinforce the urgent need for effective smoking cessation strategies across the population.

1.2.2. Current UK guidelines and best practice for smoking cessation

Unsurprisingly, given nicotine's highly addictive properties, rates of successful unassisted smoking cessation attempts are extremely low, being estimated at approximately 4 to 7% in a given quit attempt - highlighting the limited effectiveness of unassisted cessation (Hughes et al., 2004; West & Papadakis, 2015). Furthermore, this underscores the importance of evidence based smoking cessation interventions. Importantly, access to professional support and the use of established smoking cessation methods have been shown to more than double the likelihood of successfully quitting (World Health Organisation, WHO, 2025). Hence, the following section will outline the current guidance and best practice for smoking cessation within the UK.

In the UK, the primary smoking cessation guidance for the general population is provided by the National Institute for Health and Care Excellence (NICE) in its guidelines, NG209. These recommend that at the initial point of contact, healthcare professionals (i.e., General Practitioners) should inform people who smoke of the services available to support quitting and offer direct support or referral where appropriate (National Institute for Health and Care Excellence, 2021). Once individuals access smoking cessation services, the guidelines advise that a range of interventions must be available. These include behavioural support (delivered individually, in groups, or as very brief advice), licensed pharmacological treatments such as bupropion, varenicline, and nicotine replacement therapies (NRT), as well as nicotine containing electronic cigarettes (e-cigarettes). Importantly, NICE highlights that combining behavioural support with pharmacological treatment significantly increases the likelihood of a successful quit attempt, with the most effective approaches combining a short-acting (i.e., nasal or mouth spray) and long-acting (i.e., patch) NRT (National Institute for Health and Care Excellence, 2021). Moreover, when advising on e-cigarettes, professionals are expected to provide clear and evidence-based guidance, making it explicit that whilst e-cigarettes are regulated under the Tobacco and Related Products Regulations (2016), they are not licensed medicines (Medicines and Healthcare products Regulatory Agency, 2016). Current evidence does not establish the long-term health risks of e-cigarettes- however, they are considered to be substantially less harmful than smoking (McNeill et al., 2021). Collectively, these recommendations outline the framework of best practice for smoking cessation care within the UK.

Moreover, in March 2024, the National Centre for Smoking Cessation and Training (NCSCT), in collaboration with the NHS, published 'best practice' guidelines for addressing tobacco dependence in general acute inpatient settings (excluding mental health services) (National Centre for Smoking Cessation and Training, 2024). It is worthwhile noting that these are training guidelines, rather than smoking cessation policy. These guidelines were developed for NHS trust leadership, clinical staff,

and Tobacco Dependence teams- with the aim of standardising the management of tobacco dependency treatment across inpatient care. The recommendations emphasise several key areas such as; recognising the highly addictive nature of smoking; understanding nicotine withdrawal symptoms and the need for timely management within hospital settings, and, ensuring the availability of evidence based tobacco dependency treatments, such as those mentioned previously. Crucially, the guidance also stresses the importance of continuity of care following discharge, enabling patients to maintain abstinence beyond their hospital stay. The following sections will outline the tobacco dependency treatments individually in further detail, alongside the guidelines and the support available to those accessing general inpatient smoking cessation services in the UK.

1.2.3 Nicotine replacement therapy and e-cigarettes

Nicotine Replacement Therapy (NRT) is a core component of smoking cessation support and, according to both NICE guidelines (*NG209*) and NCSCT, should be given routinely (National Centre for Smoking Cessation and Training, 2024; National Institute for Health and Care Excellence, 2021). NRT delivers controlled doses of nicotine without the harmful constituents of tobacco smoke- such as tar, carbon monoxide, and other toxic chemicals (Public Health England, 2019). Alongside their effectiveness, NRT products are absorbed through the oral or nasal mucosa, inhaled via specialised inhalators, or delivered transdermally- avoiding gastrointestinal complications that can arise with nicotine tablets (Stead et al., 2012).Thus NRT's work by alleviating cravings and reducing both the physiological and psychomotor symptoms of nicotine withdrawal, reducing the urge to smoke and improving the chances of sustained abstinence (West et al., 2001).

The effectiveness of NRT's is further supported by evidence from a meta analysis of over 100 randomised controlled trials (Hartmann-Boyce et al., 2018). This demonstrated that all major forms of NRT are broadly equivalent in effectiveness for achieving long term smoking cessation (Aveyard & West, 2007; Silagy et al., 2004). However, there is strong evidence that using a combination of NRT products specifically, or NRT in conjunction with another treatment, is significantly more effective than single product use (Hartmann-Boyce et al., 2018). Moreover, these findings underpin the recommendations set out by policy outlined above, and reinforce the central role of NRT in evidence based smoking cessation strategies.

More recently, electronic cigarettes (e-cigarettes) have emerged as a prominent smoking cessation aid and are now the most widely used cessation support in England (Warner et al., 2023). Their popularity may in part reflect the fact that they replicate aspects of smoking behaviour, such as inhalation, hand to mouth action, and social cues, which traditional NRT products do not provide. In this way, e-cigarettes are often perceived less as a medical treatment and more as an acceptable alternative to smoking (Hartmann-Boyce et al., 2022). Notably, e-cigarettes are hand-held, battery-operated devices that heat a liquid typically composed of propylene glycol and/or glycerin, flavouring agents, and usually nicotine (although non-nicotine options exist), producing an aerosol that the user inhales (Warner et al., 2023). This process delivers nicotine without most of the harmful constituents of tobacco smoke- specifically, without tar or carbon monoxide (Public Health England, 2019). Public Health England has estimated that e-cigarettes are approximately 95% less harmful than smoking (McNeill et al., 2015) a finding that underpins their inclusion within NICE guidance. As with other cessation aids, e-cigarettes are most effective when used in combination with behavioural support, such as that provided by NHS stop smoking services (National Institute for Health and Care Excellence, 2021).

Moreover, evidence increasingly supports the effectiveness of e-cigarettes as a smoking cessation aid. A 2022 Cochrane review of 78 studies evaluating six month quit rates found that nicotine e-cigarettes led to higher abstinence rates than several comparators- an additional 4 quitters per 100 compared with NRT, 7 per 100 compared with non-nicotine e-cigarettes, and 2 per 100 compared with behavioural support or no support (Hartmann-Boyce et al., 2022). These findings indicate that e-cigarettes are a viable alternative to conventional cessation methods. Combination approaches appear particularly effective, consistent with NICE recommendations outlined above. For example, a randomised controlled trial demonstrated that combining nicotine e-cigarettes with NRT patches resulted in 7% of participants quitting at six months, compared with only 2% when patches were used alone (Walker et al., 2020), further strengthening the evidence base for their use. Public Health England has also highlighted the population level impact of e-cigarettes, estimating that approximately 50,000 smokers successfully quit in 2017 with their use (McNeill et al., 2021). Collectively, these findings support the conclusion that e-cigarettes represent an effective and increasingly important tool for smoking cessation in the general population.

Although e-cigarettes are an effective aid for smoking cessation, current NHS guidance emphasises that individuals who do not already smoke should not start vaping, as e-cigarettes are not risk-free, though they are substantially less harmful than conventional cigarettes (Committee on the Review of the Health Effects of Electronic Nicotine Delivery Systems, 2018; McNeill et al., 2021). Reported adverse effects include medium-term outcomes such as throat and mouth irritation, headache, cough, and nausea, with some studies also noting dry mouth, chest pain, and evidence of cellular level lung damage (Hartmann-Boyce et al., 2022). This underpins the recommendation that e-cigarettes should be offered only to current smokers as a harm reduction strategy (Ker et al., 2019; McNeill et al., 2021) Crucially, the long-term health impacts of e-cigarette use remain unknown, as evidence beyond two years of regular use is currently lacking (Hartmann-Boyce et al., 2022). Therefore, while e-cigarettes represent a promising tool for smoking cessation, their use should be limited to smokers seeking to quit, and further research is required to clarify their long-term safety profile.

1.2.4 Pharmacology

In addition to NRTs, current smoking cessation guidelines also recommend the use of pharmacological therapies, most notably the antidepressant Bupropion (brand name Zyban) and the nicotinic receptor partial agonist Varenicline (Sharma et al., 2016). Each is discussed in turn below.

Bupropion

Bupropion was originally licensed as an antidepressant but has since been shown to be effective in aiding smoking cessation (Zwar et al., 2014). Although its precise mechanism of action remains unclear, several hypotheses have been proposed. These include firstly, its potential to alleviate depressive symptoms associated with nicotine withdrawal, secondly, its ability to substitute for the antidepressant effects of nicotine, or to act on mesolimbic neural pathways by influencing neuronal nicotinic acetylcholine receptors (nAChRs), which play a role in maintaining nicotine addiction, discussed above (Wills et al., 2022). Importantly, Bupropion is a licensed medicinal product recommended for smoking cessation within the general population.

Bupropion is supported by evidence from multiple meta-analyses demonstrating that it significantly increases quit rates compared with placebo- with an additional 5 to 7 per 100 people achieving smoking cessation at six months (Aveyard & West, 2007; Howes et al., 2020; Hughes et al., 2007).

However, despite the positive effects Bupropion may have, its use is associated with a higher incidence of adverse events, in particular, psychiatric side effects, leading to discontinuation in use in approximately 9% of users (Howes et al., 2020). Therefore, this highlights the importance of tailoring cessation support to an individual's needs and considering alternative approaches when Bupropion is not well tolerated.

Varenicline

Varenicline is a second pharmacological therapy recommended for smoking cessation. It acts as a partial agonist at neuronal nicotinic acetylcholine receptors (nAChRs), selectively stimulating these receptors and thereby mimicking the effects of nicotine. This produces a moderate and sustained release of dopamine in the mesolimbic pathway- which reduces cravings for nicotine, whilst simultaneously blocking the rewarding and reinforcing effects of smoking (Cahill et al., 2007; West, 2017; Zwar et al., 2014).

Evidence consistently demonstrates Varenicline's effectiveness. Meta analyses indicate that Varenicline approximately doubles the likelihood of successful quitting compared with placebo at both standard and reduced doses of the medication (Aveyard & West, 2007; Cahill et al., 2007). Importantly, amongst available pharmacological treatments, Varenicline is associated with the largest effect sizes for both short and long term smoking cessation, demonstrating its effectiveness further (Mills et al., 2009; Wu et al., 2006). Furthermore, clinical trial data supports this, outing that 4 week smoking cessation rates were 48% for those receiving Varenicline, compared to 17% in placebo groups. Notably, this abstinence was sustained at 52 weeks in 14.4% of varenicline participants, compared to just 4.9% in controls (Nides, 2006). Alongside this, a further study demonstrated that participants also achieved significantly higher smoking cessation rates with Varenicline than with Bupropion (Gonzales, 2006; Mills et al., 2012; Nides, 2006). Thus, outlining the effectiveness of Varenicline for smoking cessation, and supporting its recommendation within the NICE (NG209) guidance.

Despite its strong evidence base, Varenicline's use within the NHS was temporarily halted in 2021 after safety concerns arose regarding an impurity in the branded formulation called 'Champix' However, more recently, Varenicline was reintroduced in August 2024 as a generic formula (National Centre for Smoking Cessation and Training, 2025).

Alongside their individual effectiveness as pharmacological aids, recent evidence suggests that combining Varenicline and Bupropion may prove effective in aiding smoking cessation. A systematic review of four studies revealed that this combination yielded greater efficacy than varenicline monotherapy. For example, Vogeler et al., (2016) revealed greater smoking abstinence rates for combination therapy at 4 week smoking abstinence with combination (39.8%) versus monotherapy (25.9%). These findings have been echoed across further reviews, showing that combination therapies improve abstinence rates for six months at the end of treatment- although these findings do not persist to 12 months (Zhong et al., 2019). However, concerns remain regarding potential psychiatric adverse effects, and further safety evaluation is required, particularly in vulnerable populations such as individuals with Severe Mental Illness (SMI) (Vogeler et al., 2016).

Cytisine

Cytisine is a further nicotinic acetylcholine receptor (nAChR) partial agonist, operating in a similar way to varenicline as a smoking cessation aid (Tutka & Zatoński, 2006). Evidence for its effectiveness has grown steadily, with a landmark trial demonstrating that cytisine significantly

increased long-term smoking abstinence when compared with placebo (West et al., 2011). Alongside this, further evidence has highlighted that Cytisine demonstrates such effectiveness with a favourable safety profile when compared to varenicline- however showing more adverse events than NRT's or placebo treatments for smoking cessation (Ofori et al., 2023). However, it is worth noting that within the UK Cytisine was previously unlicensed, and but was only granted MHRA approval in March 2019, becoming available by prescription in early 2024. Although not included in the NICE 2021 guidelines due to this unlicensed status, a 2025 update to the pre-existing NICE guidance now recognises cytisine (cytisinicline) as a recommended smoking cessation option alongside varenicline, NRT and other treatments.

1.2.5 Behavioural interventions

In addition to NRT's. e-cigarettes, and pharmacological therapies, NICE also recommends the use of psychosocial and behavioural interventions to support smoking cessation. These may include self-help materials, brief interventions delivered by healthcare professionals (i.e., advice from a physician or nurse), intensive one-to-one counselling, group-based programmes, or, a combination of these approaches (Lancaster & Stead, 2017). Hence, behavioural interventions for smoking cessation are discussed below.

The NHS smoking cessation provide structured behavioural support to individuals attempting to quit smoking (National Institute for Health and Care Excellence, 2021). This support is delivered by trained advisors, often Tobacco Dependence Advisors (TDAs), and can be offered through one-to-one appointments, group sessions, or remote formats such as telephone or video calls. Core components include discussing personal motivations for quitting, agreeing on a target quit date, and, using tools such as carbon monoxide (CO) breath tests to provide individuals with immediate feedback on their health progress- an approach shown to enhance motivation and reinforce abstinence (West et al., 2010). These strategies are underpinned by motivational processes and closely align with the principles of motivational interviewing (MI), a client centred yet directive counselling style designed to strengthen commitment to change and resolve ambivalence (Hartmann-Boyce et al., 2019).

As aforementioned, behavioural interventions can occur at an individual, or group level. Research supports the effectiveness of individual behavioural counselling for smoking cessation. For example, a Cochrane review of 49 trials found that individual counselling was more effective than both minimal behavioural interventions or brief advice- and that its benefits were further enhanced when combined with NRT's or pharmacotherapy (Lancaster & Stead, 2017). Similarly, a systematic review of 65 trials demonstrated that by adding behavioural support alongside pharmacological treatments, quit rates increased by an additional 10 to 20%. This was regardless of if this was intensive counselling or brief interventions delivered either in person or remotely (Hartmann-Boyce et al., 2019). Therefore, these findings highlight that behavioural counselling is particularly effective when delivered intensively- or in combination with pharmacological therapies, providing strong justification for its inclusion in the NICE recommendations (National Institute for Health and Care Excellence, 2021)

Alongside occurring at the individual level, behavioural interventions for smoking cessation may also occur in the form of group therapy- with over 100 types being described (Hajek, 1996). These behavioural interventions involve methods such as coping and social skills training, contingency management, self-control help and cognitive behavioural interventions, being structured to help participants practice relapse prevention tactics, redefine habitual responses to smoking cues, and bolster self regulatory capacity through peer support and shared learning experiences (Stead et al.,

2017). Moreover, evidence examining the effectiveness of group therapies compared to other behavioural therapies for smoking cessation comes from a Cochrane review of 26 trials. This revealed that group behavioural therapy was more effective than when people were given written self help materials, brief support from a healthcare provider, or no intervention (Stead et al., 2017). However, despite the positive effects of group therapy, it was not more effective than individual counselling or when people were given pharmacology alone vs group therapy (Stead et al., 2017). Thus, whilst group therapy is beneficial compared to minimal support, its relative effectiveness appears limited. Future research should explore whether group based approaches yield unique benefits for specific populations, such as individuals with mental health conditions, who may particularly benefit from the communal and social dimensions of group interventions.

1.2.6 Summary: Smoking cessation within the general population

Smoking remains a multifaceted public health issue within the general population- driven not only by the pharmacological addictiveness of nicotine but also by the behavioural, social, and cultural elements that sustain smoking habits. Despite these challenges, structured support is widely available through the NHS, underpinned by guidance from NICE and the NCSCT, which recommend a combination of pharmacological, behavioural, and psychosocial interventions- these are summarised in Figure 1.1. Whilst these evidence based strategies are effective for many, the presence of additional factors, such as co-occurring mental health conditions, further complicates both smoking behaviours and cessation outcomes. Hence, addressing these additional complexities requires tailored approaches, which will be the focus of the following section.

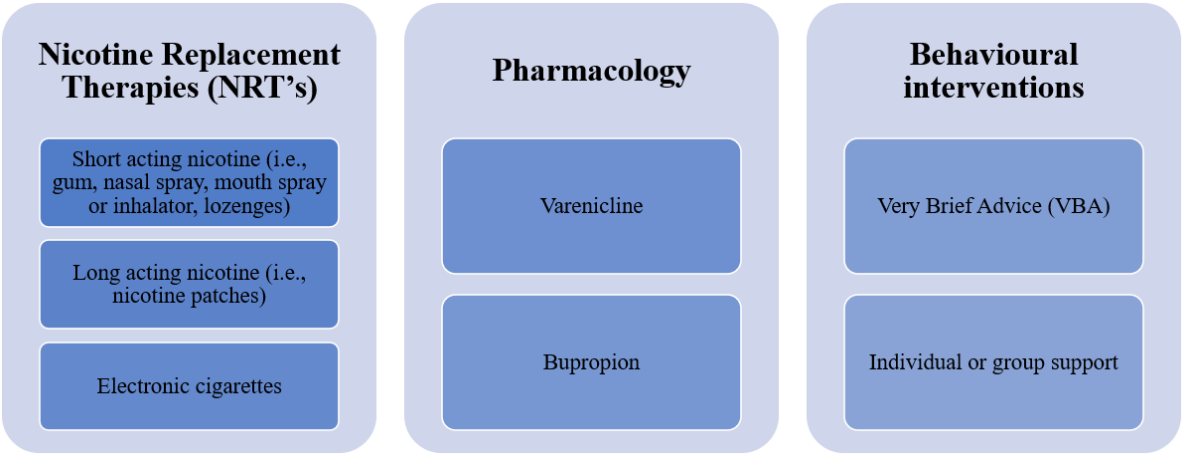


Figure 1.1: Overview of the evidence based smoking cessation treatments outlined in NICE guidance, comprising of Nicotine Replacement Therapies, Pharmacology, and behavioural interventions.

1.3 Smoking and smoking cessation within people with SMI

1.3.1 Overview

Severe Mental Illness (SMI) is commonly described as a diagnosable mental, behavioural, or emotional disorder that results in serious functional impairment, substantially interfering with or limiting one or more major life activities (National Institute of Mental Health, 2024). In research contexts, SMI has been operationalised to include conditions such as schizophrenia and other psychotic disorders, bipolar disorder, and depression with psychotic features (Gilbody et al., 2019). Within the International Classification of Diseases, 10th Revision (ICD-10), this corresponds to diagnostic categories F20.0 - F20.9, F22.0 - F22.9, and F31.0 - F31.9 (American Psychiatric

Association, 1998). However, it is important to note that no single universally accepted definition of SMI exists (Gilbody et al., 2019).

The prevalence of cigarette smoking is markedly higher among individuals with SMI compared with the general population. Between 30% and 70% of people with schizophrenia or bipolar disorder smoke, compared with 11.9% of adults in the general population (Office for National Statistics (ONS), 2024a; Peckham et al., 2016). Furthermore, smoking among people with SMI is often more intensive, with around half of individuals with SMI smoking heavily and consuming an average of 24.2 cigarettes per day- almost double the 12.7 cigarettes per day reported in the general population (Peckham et al., 2016). Importantly, heavier smoking is closely linked to greater nicotine dependence (de Leon & Diaz, 2005). Beyond its negative health impacts, smoking places a substantial financial burden on those with SMI, with estimates suggesting that nearly one third of their monthly income is spent on cigarettes, resulting in reduced resources available for essentials, such as food and housing (Steinberg et al., 2004). This highlights both the disproportionate prevalence and the profound personal and social consequences of smoking within this population.

Importantly, people with SMI not only smoke more than the general population but are also far less likely to quit. Smoking cessation rates are estimated at just 9% among individuals with schizophrenia, compared with 14 - 49% in the general population (de Leon & Diaz, 2005). The implications of this disparity are profound, as people with SMI who smoke have a reduced life expectancy of 13 to 30 years. Strikingly, 81% of these premature deaths are attributable to modifiable risk factors such as smoking related physical illnesses (Peckham et al., 2016). For example, tobacco related conditions account for approximately 53% of all deaths in people with schizophrenia and 48% in those with bipolar disorder (Knowles et al., 2016). Hence, collectively, these figures underscore the disproportionate impact of smoking within the SMI population and the critical importance of targeted cessation support.

Understanding the factors driving both the disproportionately high prevalence of smoking and the reduced cessation rates among people with SMI is crucial for addressing barriers to successful quit attempts. By identifying these underlying motivations, researchers and clinicians can better target the motivational components that may support future cessation efforts (Peckham et al., 2016). Several hypotheses have been proposed to explain the elevated rates of smoking in people with SMI. Firstly, the ‘self medication hypothesis’ suggests that individuals with SMI smoke to alleviate mental health symptoms, whilst the ‘shared vulnerability hypothesis’ proposes that both smoking and SMI arise from overlapping genetic, environmental, and neurobiological risk factors. In contrast, the causal hypothesis argues that smoking itself may contribute to the development of SMI (Sharma et al., 2016).

Moreover, it is useful to reflect on the growing body of international research examining smoking cessation among mental health inpatients with SMI, particularly from Australian groups led by Emily Stockings and John Wiggers. Similar the UK based evidence, these studies show that mental health inpatients smoke at much higher rates than the general population and that interventions initiated during hospitalization and continued post-discharge (e.g., psychosocial and pharmacological support) can increase quit attempts and reduce cigarette consumption, even if sustained long-term abstinence remains challenging (Stockings et al., 2013; Stockings et al., 2014; Metse et al., 2017).

Beyond these theoretical models, additional explanations for elevated rates of smoking within people with SMI have been suggested. For example, individuals with SMI may smoke to counteract the side effects of neuroleptic medications (Tsoi et al., 2013), to cope with stress or boredom (Peckham et al., 2016), or, similar to the general population- to experience the rewarding effects of nicotine (Aveyard & West, 2007). Moreover, nicotine may also provide cognitive benefits for those with SMI- particularly in improving attentional control and filtering of irrelevant information- processes of which are often impaired in schizophrenia (Adler et al., 1998). Hence, these cognitive and executive function difficulties, coupled with inattention, heighten smoking prevalence, alongside reducing motivation and capacity to engage in cessation efforts (Adler et al., 1998; Tsoi et al., 2013). Collectively, these factors provide a multifaceted explanation for the increased levels of smoking observed among people with SMI.

1.3.2 Current UK guidelines and best practice for smoking cessation support in people with SMI

Therefore, given both the higher prevalence of smoking and the lower cessation rates among people with SMI, national policy has identified this population as a priority for smoking cessation interventions. This focus is reflected in both the NHS 10 Year Plan and the Long-Term Plan (LTP)- which identify smoking cessation in mental health settings as a key area of action (NHS England, 2019; UK HM Government, 2025). Specifically, the LTP commits to a universal offer of smoking cessation support within specialist mental health and learning disability services, ensuring long term service users have access to tailored interventions. In line with Public Health England's recommendations, this also includes the option of offering e-cigarettes as a harm reduction tool within inpatient mental health services (NHS England, 2019). Collectively, these policies emphasise the national recognition of the importance of smoking cessation in this population, while highlighting the need for further tailored initiatives.

The LTP's emphasis on smoking in mental health settings is reinforced by NHS England's 'Core20PLUS5' framework (NHS England, n.d.-a) which seeks to reduce healthcare inequalities nationally and locally. This approach defines a target group- the most deprived 20% of the population (Core20) and adds priority populations at higher risk of poor health outcomes (PLUS), such as ethnic minority communities, people with learning disabilities and autism, those with multiple long-term conditions, and socially excluded groups (i.e., people experiencing homelessness, substance dependence, vulnerable migrants, and Gypsy, Roma and Traveller communities). The '5' refers to five clinical priority areas; maternity, severe mental illness (SMI), chronic respiratory disease, early cancer diagnosis, and hypertension. In relation to SMI, the framework builds on the priorities of the NHS Long Term Plan by aiming to ensure that at least 60% of people receive annual physical health checks, following the model of progress already achieved in learning disabilities. Therefore, this further underscores the importance of tackling smoking-related harms among people with SMI.

The smoking cessation guidelines outlined by NICE NG209 (National Institute for Health and Care Excellence (NICE), 2021) for people with SMI closely mirror those for the general population; recommending the use of NRT (including e-cigarettes), pharmacological treatments, and behavioural interventions- with combined NRT and behavioural support being the most effective approach. However, NICE further emphasises that people with SMI may require additional, tailored support delivered by specialist advisers with expertise in mental health, with the intensity and duration of their sessions adapted to their individual needs (See Figure 1.2 . Additionally, NICE highlights the importance of ensuring that individuals with SMI who are due to be admitted to inpatient mental

health settings are informed in advance about the hospitals smoke free policy, the support available to help them remain smoke free during admission, and, the associated risks of smoking.

Despite the strong national focus on smoking cessation in people with SMI, the uptake of cessation services remains low- even though evidence shows that smokers with SMI are just as likely as the general population to want to quit (Hawes et al., 2021; Robson &McEwen, 2018). A key barrier is that standard services are often not sufficiently tailored to account for the specific needs of people with mental health conditions, rather than the interventions themselves being inherently ineffective (Knowles et al., 2016). This is echoed in the National Audit of Schizophrenia (2012), which identified the management of physical health problems as one of the most serious deficits in care for people with psychosis (de Leon & Diaz, 2005), highlighting the urgent need to strengthen assessment, prevention, and treatment of physical health issues in this group. In addition, low confidence in their ability to quit has been cited as another reason why people with SMI may not engage with available services (Robson & McEwen, 2018)

The following sub-sections will explore in greater detail the specific support available to help people with SMI quit smoking and their effectiveness, alongside the potential barriers and considerations for treating smoking cessation in the SMI population.

1.3.3 Nicotine replacement therapy and e-cigarettes

Tobacco harm reduction products, including nicotine replacement therapies (NRTs) and e-cigarettes, are increasingly recognised as important tools to aid smoking cessation among people with SMI. The effectiveness of NRT for smoking cessation in people with SMI comes from Baker et al., (2006). They compared the use of nicotine patches combined with individual behavioural therapy to routine care, which offered no structured smoking cessation support, in people with psychotic disorders. Although overall abstinence rates did not differ significantly between the intervention and control groups- a substantially higher proportion of participants who completed all treatment sessions in the intervention group achieved abstinence at each follow up point. These findings suggest that NRT can be effective in aiding smoking cessation for people with SMI. However, these findings are not universally consistent. Notably, Chen et al., (2013) investigated the effectiveness of high and low dose transdermal nicotine patches on long term hospitalised schizophrenic patients. Although participants in the low-dose group reduced their daily cigarette intake more than those in the high-dose group- there were no significant differences in abstinence rates between conditions. Therefore, these mixed results emphasise the complexity of smoking cessation in people with SMI and underscore the importance of tailored, specialist interventions, an approach reflected in NICE guidance.

Alongside NRT's, evidence also supports the use of e-cigarettes as a smoking cessation tool among people with SMI. For example, O'Brien et al., (2015) found no significant differences in quit rates between nicotine e-cigarettes and patches, but e-cigarettes were far more acceptable (83% vs 37%), leading to greater reduction and adherence. Similarly, Hickling et al., (2019) reported that providing e-cigarettes to people with SMI reduced smoking by over 50% at six weeks, with benefits sustained up to 24 weeks and no adverse effects on psychiatric or respiratory symptoms. Although older, less efficient devices were used (Farsalinos et al., 2015), potentially limiting their replicability- these findings suggest e-cigarettes can be an effective and acceptable harm reduction option.

Further support for the effectiveness of e-cigarettes comes from Caponnetto et al., (2013)- who gave e-cigarettes to 14 people with schizophrenia who had no intention of quitting. After 52 weeks, half reduced their smoking by at least 50%, and two quit entirely, with no worsening of psychiatric symptoms. This reinforces the aforementioned evidence in suggesting that e-cigarettes can substantially reduce cigarette consumption in individuals with schizophrenia with no impact on their mental health symptoms, and supporting the NICE guidance for suggesting them as a smoking cessation aid.

1.3.4 Pharmacology

Alongside NRTs and e-cigarettes, pharmacological interventions that are effective in the general population also show promising effects for people with SMI. As aforementioned, Bupropion and Varenicline are pharmacological aids used to support smoking cessation. A systematic review and meta-analysis by Pearsall et al., (2019) found that bupropion was more effective than placebo for smoking cessation at three months in adults with schizophrenia and bipolar disorder, though this benefit was not sustained at six months. Similarly, a systematic review by Peckham et al., (2017) pooling eight trials, reported no significant short-term benefit (four weeks) but demonstrated improvements in quit rates in the medium term (3.5 months) and longer term (11.75 months). Taken together, these findings suggest that while bupropion can support cessation in SMI populations, the time course of its effectiveness remains uncertain, highlighting the need for further high-quality research.

In addition to bupropion, varenicline has also been explored as a pharmacological aid for smoking cessation in people with SMI. A systematic review by Wu et al., (2016) which pooled four trials in individuals with schizophrenia and bipolar disorder, found that participants receiving varenicline were around four times more likely to achieve abstinence than those given placebo, with an average reduction of 6.39 cigarettes per day. These findings are consistent with a more recent systematic review and meta-analysis by Pearsall et al., (2019) which reported that varenicline was effective in aiding smoking cessation at three and six months in people with SMI. . Therefore, consistent with the wider evidence base, this demonstrates that medications shown to be effective in the general population can also support cessation in people with SMI, with a wide body of supporting evidence.

However, pharmacological aids such as bupropion, whilst effective in the general population, may require careful tailoring for individuals with SMI- due to potential interactions with antipsychotic medications (Tsoi et al., 2013). For example, bupropion is not generally recommended for people with schizophrenia because of the theoretical risk of psychotic relapse, given its dopamine agonist properties (Tsoi et al., 2013). Therefore, this underscores the importance of adapting smoking cessation guidance for people with SMI, as outlined in NG209, and highlights the need for tailored interventions that account for both mental health conditions and concurrent medications.

Concerns also extend to varenicline, with evidence suggesting its use may exacerbate psychiatric symptoms such as psychosis and mood disturbances (Liu et al., 2011). These concerns are supported by UK Medicines and Healthcare Products Regulatory Agency (MHRA) yellow card reports, which noted higher rates of depressive disorders and non fatal suicidal behaviour associated with both varenicline and bupropion compared with other cessation medications (Thomas et al., 2014). However, the evidence remains mixed. For instance, the EAGLES trial comparing varenicline and

bupropion with nicotine patches across psychiatric and non-psychiatric populations found that moderate to severe neuropsychiatric adverse events (e.g., nausea, insomnia, abnormal dreams, headaches) occurred at similar rates in all groups, with no increased risk for psychiatric patients (Anthenelli et al., 2016). Similarly, a systematic review of four studies comparing varenicline to placebo found no significant differences in suicidal ideation, depression, or anxiety (Wu et al., 2016). The current consensus is therefore that varenicline is safe and effective for people with SMI, although some clinicians remain cautious in prescribing these medications in practice. This highlights the importance of providing reassurance about safety, while ensuring cessation strategies remain tailored to the needs of individuals with mental health conditions.

1.3.5 Behavioural therapies

As with the general population, NICE guidelines recommend behavioural support to aid smoking cessation in people with SMI. The evidence for such interventions, however, has historically been less clear than for pharmacotherapy, with earlier reviews noting inconsistent findings and uncertainty around the optimal format or duration of behavioural approaches (Evins et al., 2007; Peckham et al., 2017). However, more recent evidence is more encouraging, with a systematic review demonstrating that tailored face to face behavioural interventions for adults with SMI significantly increased smoking cessation rates compared to usual care, both in the medium and long (Hawes et al., 2021). Therefore, behavioural support remains a critical element of treatment, with NICE recommending that people with SMI are offered both pharmacological and psychosocial interventions, since combining these approaches is more effective than using either alone (National Institute for Health and Care Excellence (NICE), 2021).

However, evidence for behavioural interventions in people with SMI is mixed. Psychosocial approaches such as cognitive behavioural strategies, motivational interviewing, and technology-based interventions- can support short-term quitting in schizophrenia, though evidence for sustained abstinence remains limited (M. Bennett et al., 2014). For example, Baker et al., (2006) found that individually delivered sessions combining motivational interviewing, CBT, and NRT led to greater smoking reduction compared with usual treatment in people with acute psychotic disorders- although they did not significantly increase abstinence rates. This suggests that behavioural therapies can help reduce smoking in people with SMI, but further research is needed to identify which approaches best support long-term cessation.

Building on this, NICE guidelines highlight combined methods of treatment, notably, the use of both pharmacological and behavioural support, as the most effective approach to smoking cessation, including for people with SMI (National Institute for Health and Care Excellence (NICE), 2021, p. 202). Furthermore, research supports this recommendation, though findings remain mixed. For example, George et al., (2008) compared bupropion plus a nicotine patch with placebo plus a patch in individuals with schizophrenia. At both 10 weeks and six months, quit rates were higher in the bupropion group, and importantly, no worsening of psychiatric symptoms was observed. This suggests that combination therapy involving bupropion can be both effective and well tolerated in this population. However, other evidence advises caution. Research by Evins et al., (2007) tested bupropion combined with NRT and cognitive behavioural therapy versus the same intervention without bupropion in adults with schizophrenia. Whilst the experimental group showed greater short-term reductions in smoking, their long-term abstinence rates did not significantly differ. As highlighted by Pearsall et al., (2019) these findings reflect the complexities of supporting smoking cessation in SMI and the need for continued investigation into tailored, innovative strategies.

1.3.6 Summary: Smoking cessation within the SMI population

Therefore, the NICE guidance (NG209) recommends a range of smoking cessation treatments for both the general population and people with SMI, including NRTs, e-cigarettes, pharmacological aids (bupropion and varenicline), and behavioural interventions- with combination therapies often proving to be most effective (Figure 1.2). However, whilst the recommended methods are broadly similar across groups, people with SMI are advised to receive more tailored, intensive support, often delivered by specialists and adapted to mental health settings. Despite these provisions, smoking prevalence and quit rates remain markedly unequal, highlighting the need to consider the barriers people with SMI face in accessing and sustaining cessation support.

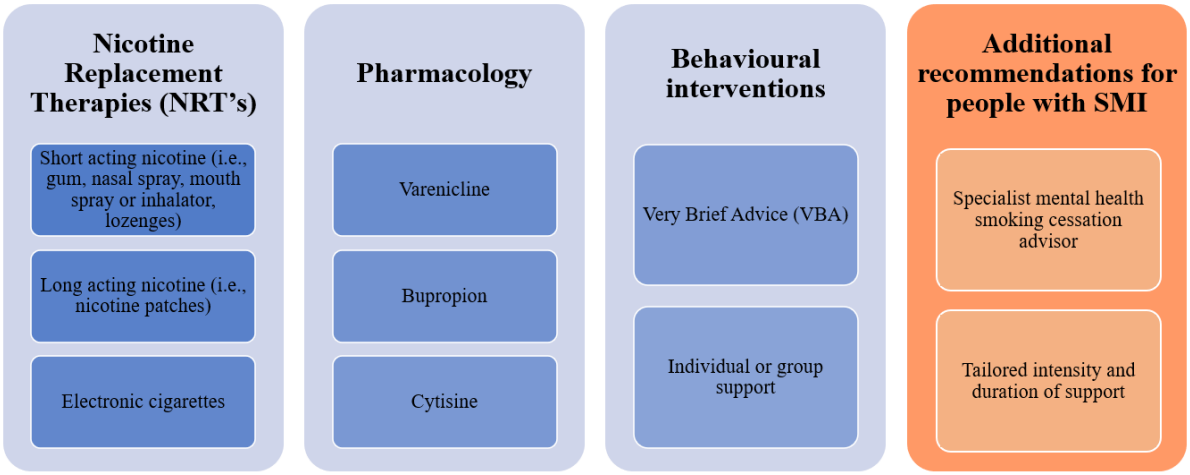


Figure 1.2: Overview of the evidence based smoking cessation treatments outlined in NICE guidance, comprising nicotine replacement therapies (NRT), pharmacological options, and behavioural interventions- alongside the tailoring recommended for people with SMI (National Institute for Health and Care Excellence, 2021).

1.4 Barriers to treating smoking cessation in people with SMI and bespoke smoking cessation interventions

1.4.1 Systemic and cultural barriers

Despite evidence outlining their effectiveness- individuals with SMI have historically shown lower engagement with mainstream smoking cessation services. This may reflect systemic barriers within mental health care, including a culture that normalises smoking (Knowles et al., 2016; S. J. Lawn, 2004) and negative staff attitudes towards supporting cessation (Dwyer et al., 2009; Knowles et al., 2016, 2016). For example, observations in Australian psychiatric hospitals found that long stay psychiatric inpatients were charged at a reduced rate to facilitate their purchasing of cigarettes. Alongside this, staff, who often acted as social role models to service users, also smoked and expressed a limited concern for the physical health consequences of tobacco use. This is highlighted by one consultant's reflection- *"Patients with schizophrenia, I feel they haven't got much left for them… if they want to smoke, let them"* (S. J. Lawn, 2004). Such systemic factors make quitting particularly difficult in mental health settings and highlight the need for tailored and evidence based interventions- alongside support from peers and staff members. Thus, research that identifies effective strategies in practice is essential to both inform policy and strengthen smoking cessation guidelines for people with SMI.

As mentioned above, negative staff attitudes towards smoking cessation can also act as a significant barrier for people with SMI. A descriptive survey of 289 mental health nurses revealed a strong pro smoking culture, with many nurses viewing smoking as a way to facilitate communication and build rapport with patients (Dwyer et al., 2009). This attitude presents as a barrier to smoking cessation, as there is a greater tolerance to smoking and therefore less motivation to quit. Furthermore, 16% of these nurses were smokers who acknowledged an individuals' 'right to smoke'. Therefore, it is less likely nurses will engage with patients about quitting if they regard smoking as a matter of pro-choice, presenting a clear barrier to smoking cessation. Therefore, these findings highlight how staff attitudes can undermine cessation efforts in mental health settings, and reinforces the need for targeted cultural and service level changes to better support patients with SMI in quitting.

1.4.2 Bespoke smoking cessation interventions

Hence, alongside the systemic and cultural barriers- standard smoking cessation services often fail to meet the needs of people with SMI, creating barriers to successful quit attempts. In response, bespoke interventions such as the SCIMITAR (Smoking Cessation Intervention for Severe Mental Ill Health) trials have been developed, to adapt mainstream smoking cessation services for this population (Gilbody et al., 2019). In SCIMITAR, a structured cessation programme is delivered by trained Mental Health Smoking Cessation Practitioners (MHSCP) and tailored to the individual's needs. These key adaptations included multiple assessments with the individual prior to setting a quit date, a "cut down to quit" approach with NRT offered in advance, explicit recognition of the role that the individuals mental health plays in their smoking behaviour, home visits, and additional in person support in the event of relapse. Importantly, this tailored approach proved effective, with quit rates in the intervention group being more than double those of usual care at six months. Moreover, these quit rates remained higher, though not significantly, at 12 months post intervention (Gilbody et al., 2019). Hence, these findings demonstrate that smoking cessation is achievable in the SMI population when interventions are adapted to account for their specific mental health needs, which is something often overlooked in general cessation services.

The value of incorporating trained mental health practitioners into bespoke interventions is reinforced by qualitative research embedded within the SCIMITAR trials (Knowles et al., 2016). Semi-structured interviews with 13 service users and three MHSCPs. This highlighted that participants valued the tailored nature of the support, alongside the practitioners' understanding of how mental health, motivation, and medication interacted with smoking. Importantly, these service users reported feeling less stigmatised compared with their experiences in general smoking cessation services. These findings indicate that, whilst individuals with SMI can achieve smoking cessation- standard services are often unsuitable. Developing a gold-standard, tailored approach is therefore essential to address the disproportionate tobacco burden and associated health inequalities in this population.

Therefore, this introduction has highlighted both the widespread challenges of smoking cessation and the disproportionate burden faced by people with SMI. Despite evidence that people with SMI are equally motivated to quit, their success rates remain substantially lower than in the general population (Szatkowski & McNeill, 2015) Current guidelines (National Institute for Health and Care Excellence (NICE), 2021) and tailored trials such as SCIMITAR+ (Gilbody et al., 2019) demonstrate promise, but they leave unanswered questions about what works best in routine practice and how national policy translates into meaningful outcomes at the service user level. This gap underscores the need to examine smoking cessation through both *top-down* approaches (systematic review and meta-analysis of the evidence base) and *bottom-up* perspectives (exploratory and participatory studies of ground-

level experiences). By triangulating these two approaches, the present PhD aims to generate a clearer understanding of best practice, with the ultimate goal of informing more effective, tailored smoking cessation strategies for people with SMI.

1.5 Understanding the smoking cessation landscape: Initial Patient and Public Involvement, Engagement and Participation (PPIEP) work

1.5.1 Initial PPIEP group

Smoking cessation (SC) services are often less effective for people with SMI, highlighting the importance of embedding service users' voices in research and service design. To ensure this PhD was grounded in lived experience, an initial PPIEP group was held on 1st February 2023 with the Sheffield Lived Experience Advisory Panel (LEAP). Access to the group was arranged through a clinical academic at the University of Sheffield, with the LEAP facilitator distributing an invitation poster to potential participants. Participants were thanked for their time with a Love to Shop voucher. The one hour session, facilitated by the primary researcher (MS) and supervisor (EP), involved two service users. This aimed to explore how SMI specific SC services are structured, alongside identifying barriers to quitting, and, capture service user priorities to inform future research design.

Notably, participants reported that SC services generally follow a standardised model, most often combining nicotine replacement therapy (NRT) with weekly calls from a practitioner. However, they also described multiple barriers to quitting (Table 1.1). These included smoking as a source of emotional support and stability, situational triggers (e.g., waking up, eating, or waiting for a bus), and difficulties with smoker identity and motivation. Early smoking initiation, often in childhood, and dissatisfaction with e-cigarettes as alternatives further reinforced the challenge.

Table 1.1: Themes of the initial PPIE consultation, highlighting key barriers to smoking cessation in people with SMI, with illustrative quotes and descriptions.

Theme	Quote & Description
Social Connections	"Smoking acted as a friend…" - Emotional support, hard to replace if quitting.
Environmental Cues	"Eating, waking up, bus stop…" - Daily triggers reinforced smoking.
Identity & Motivation	"Being a 'smoker was my identity" - Identity and timing made quitting difficult.
Early Initiation	"I started smoking at eight years old." - Early uptake enforced smoking.
Pleasure & Satisfaction	"Vapes were not the same." -Smoking was enjoyed and alternatives were less satisfying.

Alongside these barriers, participants suggested service improvements. They stressed the importance of a practitioner who is caring, non-stigmatising, and able to provide person centred support, which was viewed as a strong motivator to quit. These perspectives echo findings from the SCIMITAR trials (Gilbody et al., 2019) and qualitative work (Knowles et al., 2016) which highlight the value of mental health-trained practitioners who understand the interplay between smoking, motivation, and medication. Participants also called for greater clinical oversight, with GPs and psychiatrists more actively monitoring lifestyle factors such as smoking, diet, and weight, and improving communication across services to ensure coordinated care.

These insights highlighted the need for smoking cessation services that are both structured and flexible, tailored to the specific needs of people with SMI. They also reinforced the importance of embedding service users' voices throughout this PhD- not only to refine the research aims, but also to justify the central role of service user involvement within the study. Whilst the exact form of this involvement was not yet fully defined, this early consultation established its necessity and set the foundation for integrating both top-down evidence and bottom-up lived experience in order to better understand how smoking cessation support can be delivered most effectively in practice.

1.5.2 Secondary PPIEP Group

Once the PhD's study aims were refined to focus on inpatient settings, it was important to ensure that this direction reflected the lived experiences of people currently receiving smoking cessation (SC) support during hospital admission. To achieve this, a second PPIEP group was conducted within a NHS Mental health trust (notably, Trust 1 within this study), facilitated by the primary researcher (MS) with support from the trusts' tobacco dependency service lead- who identified eligible patients across wards. Recognising the low attendance of the earlier LEAP group, the session was carefully scheduled to avoid clashes with ward activities (i.e., ward rounds) in an effort to maximise participation. Despite these adjustments, engagement remained challenging: three patients from the smoking cessation pathway across three different wards within the trust agreed to participate. Each was thanked with a Love2Shop voucher for their time.

This difficulty in sustaining engagement reflected the wider challenges of involving inpatients, many of whom are unwell or disinterested in research discussions about smoking cessation?. It also reinforced the need for flexible methods of service user involvement. Importantly, these challenges informed the design of the present study, whereby surveys were later chosen as a pragmatic way of increasing reach and capturing a broader range of service user experiences- see Chapter 5 for more detail.

The PPIE discussion itself focused on patients' engagement with smoking cessation services, the aspects of support they found most helpful, and the barriers they faced. All three participants had accessed e-cigarettes (vapes) through the hospital pathway, with two also receiving nicotine replacement therapy (NRT) in the form of lozenges or patches. Vaping was consistently described as the most helpful tool for reducing smoking. One participant reported setting his first ever quit date (28th January) during his hospital admission, attributing this to the combined use of smoking and vaping. Another described vapes as helpful in reducing his smoking "a lot"- though he could not quantify the reduction. However, all participants emphasised issues with the quality of the hospital provided vapes, including flavour, puff strength, and satisfaction compared with cigarettes, suggesting that improved provision could make a meaningful difference to their quit attempts.

Together, these insights reinforced two key points for the PhD. Firstly, that service users' voices must remain central when evaluating smoking cessation support in inpatient mental health settings; and second, that practical barriers to participation necessitate flexible methods, such as surveys, to ensure these voices are adequately captured and represented.

1.6 Aims of the current PhD

Therefore, the present PhD seeks to develop a clearer understanding of best practice in smoking cessation for people with SMI, with the ultimate goal of informing more effective and tailored strategies. To achieve this, the project has four key aims, outlined in Table 1.2.

Table 1.2: Outline of the four overarching aims of this PhD thesis, spanning top-down (systematic review), bottom-up (ground level research), and triangulated approaches to identify best practice for smoking cessation in people with SMI.

Aim 1	Aim 2	Aim 3	Aim 4
Examine **top-down** approaches by systematically reviewing and synthesising the evidence on which smoking cessation methods enable success for people with SMI.	Investigate **bottom-up** perspectives through exploratory and participatory research to understand what works at the ground level to support people with SMI to quit smoking.	Integrate these perspectives through **triangulation,** identifying both convergences and divergences between formal evidence and lived experiences. Rather than disregarding practices not captured in systematic reviews, this approach treats them as valuable sites of insight.	Use this integrated methodology to propose a model of **'gold standard'** smoking cessation practice that can guide both frontline staff and national policy.

Thus, these aims are addressed across the subsequent chapters of this thesis, and outlined within Figure 1.3. Chapter 2 presents a systematic review and meta-analysis of smoking cessation interventions for people with SMI, providing a top-down perspective by synthesising the existing evidence base and identifying which methods appear most effective- thus, meeting Aim 1 of this PhD. However, evidence alone cannot reveal how these approaches are experienced, implemented, or challenged in practice.

To address this, two bottom-up studies were conducted to address Aim 2 of this PhD. Notably, Chapter 3 outlines the approach which acts as a framework for the following two chapters. Then, Chapter 4 reports an exploratory qualitative study designed to understand how high performing smoking cessation services within the NHS mental health collaborative are characterised. Specifically, this study sought to identify and examine the factors that enable strong performance within the Royal College of Psychiatrists collaborative- Quality Improvement in Tobacco Dependency Treatment (QuiTT). To investigate this questions, the study employed semi-structured interviews, a focus group, and thematic analysis to distil the key enablers of high performance.

Moreover, building on this, Chapter 5 applies a bottom-up approach called 'positive deviance', to identify and explore the behaviours of individual staff members within three different inpatient mental health settings, that deliver exceptional smoking cessation support to people with SMI- despite working under the same constraints as their peers. This is conducted through semi-structured interviews with staff members, and surveys with service users. Surveys were chosen as a result of the previous PPIEP involvement, detailed within this chapter. Notably, because these individuals succeed

under comparable conditions, their strategies are often practical, replicable, and more easily adopted at the ground level. In doing so, this approach uncovers innovative, context-driven practices that may not appear in formal evidence bases but hold significant value for improving smoking cessation support.

Finally, Chapter 6 addresses Aim 3 of this PhD by bringing together the top-down and bottom-up strands through triangulation. This comparative process examines where the findings from the systematic review align with, or diverge from, the insights gained from the empirical studies. Rather than treating divergences as anomalies, they are considered valuable opportunities for understanding why certain approaches succeed in practice but may be overlooked in formal evidence. In doing so, the thesis develops a more nuanced picture of best practice in smoking cessation for people with SMI, addressing Aim 4. These insights are then consolidated in Chapter 7, which discusses their implications for the design of tailored interventions and the shaping of future policy. Together, the studies reported in Chapters 2-6 help to address this thesis' key aims, outlined in Table 1.2. How these perspectives converge is shown in Figure 1.3.

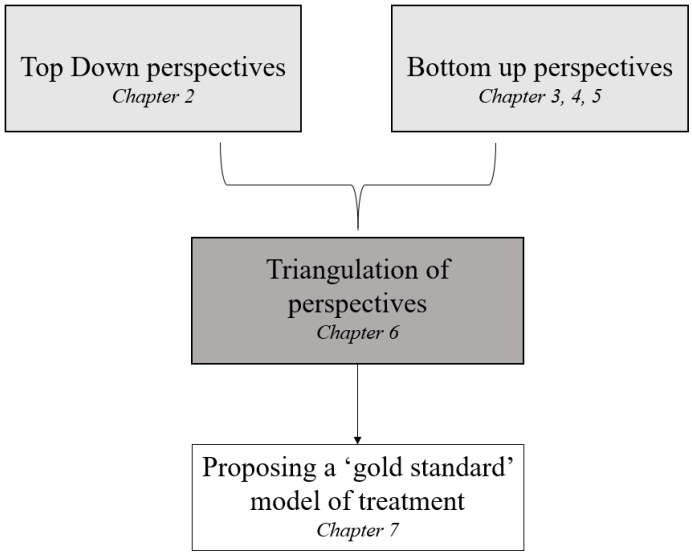


Figure 1.3: Overview of this thesis' aims, showing how they interconnect and are addressed across the individual chapters.

Chapter 2: Investigating the effectiveness of smoking cessation interventions in people with severe mental illness: an updated systematic review

2.1 Chapter summary

Although people with severe mental illness (SMI) can quit smoking at rates similar to the general population, significant health inequalities persist. This review updates Peckham et al. (2017), incorporating recent evidence on digital tools, e-cigarettes, and complex interventions to evaluate the effectiveness of smoking cessation aids in people with SMI. MEDLINE, EMBASE, PsycINFO, CINAHL, and Cochrane CENTRAL were systematically searched from inception to May 2025. Peer-reviewed studies of adults (18+) with SMI, as defined by ICD-10 or DSM-IV criteria, evaluating pharmacological, behavioural, digital, or complex smoking cessation interventions were included. Primary outcomes included biochemically verified or self-reported smoking cessation; secondary outcomes included smoking reduction, weight change, psychiatric symptoms, adverse events, and cost-effectiveness. Twelve new studies were identified, combined with 26 from the previous review. Eight trials showed that bupropion significantly improved quit rates in the medium (RR = 2.93, 95% CI 1.61–5.34) and long (RR = 3.04, 95% CI 1.10–8.42), but not in the short-term. Five varenicline trials showed medium-term benefits (RR = 2.54, 95% CI 1.15–5.61), with no short- or long-term data. Two NRT trials showed medium (RR = 4.13, 95% CI 1.80–9.44) and long-term (RR = 4.80, 95% CI 2.02–11.43) effectiveness. Fourteen complex intervention trials demonstrated benefits across all time points, with the strongest effect in the short-term (RR = 2.53, 95% CI 1.38–4.65). Adverse events were rare but inconsistently reported. Only four studies reported change in BMI, and two studies reported cost-effectiveness. The highest proportion of included studies were variations of complex interventions - likely reflecting the change in smoking cessation policy. Three studies explored digital interventions, and no studies investigating electronic cigarettes were eligible for inclusion for this review. Smoking cessation aids effective in the general population are also effective for individuals with SMI. However, although e-cigarettes have been tested in the general population, they have not been evaluated in people with SMI, and further research is needed to prevent widening inequalities in this group. The findings of this review provide a top-down perspective on evidence based best practice.

Footnote: MS is the PhD student who primarily conducted this research. EP is her supervisor. DP aided titles and abstract screening. This chapter has been amended from a paper currently under review for publication.

2.2 Introduction

The tobacco epidemic is one of the world's biggest public health threats, killing over 8 million people a year (Reitsma et al., 2021). Within the UK, there are 6.9 million adult smokers (11.9% of the population (Office for National Statistics (ONS), 2024b), costing the National Health Service (NHS) ~£1.9 billion per year (Action on Smoking and Health (ASH), 2024). Since regular smoking results in a 50% increased likelihood of premature death and an average reduction of life expectancy by 10 years (Doll et al., 2004) it represents a major public health problem. Notably, smokers who quit before the onset of tobacco-related illness largely avoid the increased mortality risk (Doll et al., 1994; Peto, 2000; Wills et al., 2022).

The prevalence of cigarette smoking in people with Severe Mental Illness (SMI) is higher than in the general population (Horvitz-Lennon et al., 2006; Olfson et al., 2015; Sharma et al., 2016), as outlined in Chapter 1. Whilst there is not a single definition for SMI, to align with the population included in UK Primary Care SMI registers, previous studies have defined SMI as schizophrenia or other psychotic illnesses, bipolar disorder and depression with psychotic features (Peckham et al., 2017). It is estimated that 30% - 70% of individuals with schizophrenia and bipolar conditions smoke, compared to 11.9% of the general population (Office for National Statistics (ONS), 2024b; Peckham et al., 2016). Notably, 50% of individuals with these conditions smoke heavily, smoking 24.2 cigarettes on average per day, compared with 12.7 cigarettes per day in the general population (Peckham et al., 2016). Together, these findings demonstrate the significant impact that smoking has on the health of people with SMI.

Despite the clear need for effective smoking cessation interventions for people with SMI , echoed within the NHS Long Term Plan, and NHS 10 year health plan (NHS England, 2019; UK HM Government, 2025), smoking cessation interventions offered to the general population are often not accessed by the SMI population (Knowles et al., 2016). This is potentially because people with SMI require services tailored to their needs and accounting for their mental health coition, rather than the services themselves being ineffective (Knowles et al., 2016). People with SMI are equally as likely to want to reduce or quit at similar rates as people who smoke and do not have SMI (Hawes et al., 2021; Peckham et al., 2017; Royal College of Physicians of London & Royal College of Psychiatrists, 2013). Notably, the Smoking Cessation Intervention for Severe Mental Illness (SCIMITAR+) trials demonstrated that treatments deemed as effective at aiding people in the general population to quit smoking are also effective at aiding people with SMI, when tailored to support their needs (Gilbody et al., 2019). This is supported by the National Audit of Schizophrenia (Royal College of Psychiatrists, 2012), which reported that the most serious deficits in care for people with psychosis was the management of their physical health problems (de Leon & Diaz, 2005), demonstrating the urgency to identify methods for improving the assessment and management of physical health problems in people with SMI and to provide comprehensive preventative focused services (Knowles et al., 2016). Failure to address smoking behaviour in SMI groups is discriminatory, neglecting the desire and rights of service users, i.e. SMI groups are equally as motivated to quit smoking as the general population, yet only a minority receive smoking cessation interventions (Knowles et al., 2016; Peckham et al., 2017).

2.2.1 Rationale for an updated review

A previous systematic review titled *"Smoking cessation in severe mental illness: what works? An update"* (Peckham et al., 2017), synthesised the evidence on smoking cessation interventions for individuals with SMI. The review concluded that pharmacotherapies such as bupropion and

varenicline, known to be effective in the general population, also support smoking cessation in SMI populations. However, since its publication, there have been three significant developments. Firstly, growing emphasis on combined pharmacological and behavioural approaches tailored specifically to this group. Notably, several large-scale randomised controlled trials (RCTs), including the SCIMITAR trials (Gilbody et al., 2019), have demonstrated that adapting standard cessation interventions to the needs of people with SMI significantly enhances engagement and improves quit rates at six-month follow-up.

Secondly, the previous review predates the COVID-19 pandemic. As this resulted in social distancing restrictions leading to reduced access to healthcare settings and smoking cessation centres, digital solutions to support smoking cessation were utilised to ensure that people received appropriate support despite imposed limitations (McDonnell et al., 2021). This has led to an increase in smoking cessation interventions being delivered in non-traditional formats (e.g. video call, bespoke digital interventions and mobile applications). Accordingly, the present review seeks to evaluate the efficacy and acceptability of these emerging modalities in addressing smoking cessation in SMI populations.

Furthermore, the role of electronic cigarettes (e-cigarettes) was not included in the 2017 review. Since then, e-cigarettes have gained prominence as a potential cessation aid following England's 'Swap to Stop' scheme (Khan OBE, 2022), current National Institute for Clinical Excellence (NICE) guidance (National Institute for Health and Care Excellence (NICE), 2021) and Public Health England advice (Public Health England, 2020). Hence, the present review aims to assess emerging evidence on e-cigarettes. Finally, smoking cessation in SMI populations has been prioritised in recent NHS strategies, including the Long-Term Plan (NHS England, 2019), the recent 10-year health plan for England (UK HM Government, 2025) and the Core20PLUS5 framework, which seeks to reduce health inequalities amongst the most underserved populations, including individuals with SMI (NHS England, n.d.-a). The increase in relevant literature is further illustrated by the inclusion of 19 additional studies in the 2017 review compared to its 2010 predecessor, underscoring the rapid growth and evolution of this field. The current updated systematic review is therefore timely and necessary to inform clinical practice and policy.

Therefore, this review updates the findings of Peckham et al. (2017) and extends the evidence base by incorporating more recent studies. It is also conceptually related to the review by Spanakis et al., which focused specifically on behavioural interventions, whereas the present review considers the full range of intervention types (Spanakis et al., 2022).

2.2.2 Objectives

The aim of this systematic review is to explore which smoking cessation interventions have been tested in people with SMI. The secondary aim is to determine which smoking cessation interventions are effective in people with SMI.

2.3 Methods

2.3.1 Search strategy

This review has been registered on the PROSPERO register of systematic reviews (Reference: CRD42023434325). An electronic search strategy based on that used in the previous review (Peckham et al., 2017) was replicated, combining search terms for severe mental ill health and smoking cessation, adapted from terms developed by the Cochrane groups for schizophrenia and

tobacco addiction. Specific search terms were used to identify papers exploring the use of e-cigarettes. This strategy was used to search the following databases from inception to May 2025; MEDLINE (PubMed), EMBASE, PsycINFO, CINAHL and Cochrane Central Register of Controlled Trials (CENTRAL). Searches were constricted to those written in the English language. Qualitative studies were eligible for inclusion where they reported or explored findings arising from an included randomised controlled trial (RCT), for example through process evaluations or participant perspectives linked directly to the trial.

2.3.2 Inclusion criteria

Types of studies

Randomised Controlled Trials (RCT's) were eligible for inclusion, as were qualitative studies where they reported or explored findings arising from an included randomised controlled trial (RCT), for example through process evaluations or participant perspectives linked directly to the trial. Studies conducted in any country and in either in-patient or outpatient settings were eligible for inclusion. Studies that are not published in English were excluded.

Types of participants

Participants were adults aged 18 years and above who had been diagnosed with SMI. SMI was defined as schizophrenia or other psychotic disorders, bipolar disorder and depression with psychotic features. We[1] have not included personality disorder, severe anxiety disorder, post-traumatic stress disorder (PTSD), major depression or autism in this review. This classification is based on diagnoses that would typically be included on a UK primary care SMI register. Diagnosis needed to be made by using International Classification of Disease (ICD10 F20–29 and F3031) or Diagnostic and Statistical Manual (DSM IV 295.x, 296.x and 297.x) criteria. Studies involving participants who had a problem with substance abuse (other than nicotine addiction) without any other mental disorder, or whose participants had a learning disability, dementia, other neurocognitive disorders or terminal illness were not included in this review. Studies were still eligible for inclusion if more than 70% of their participants had SMI and could be separated out from their results.

Types of interventions

Only peer-reviewed papers were eligible for inclusion. Trials of all types of smoking cessation and reduction strategies, (behavioural or pharmacological as monotherapy or in combination) compared to each other, placebo, usual care or to no intervention were included, including trials of very brief advice. For the purposes of this review, interventions were categorised as follows:

- **Complex interventions (CI):** Interventions comprising multiple active components. These may involve behavioural support (e.g., counselling, reinforcement strategies, or structured cessation programmes delivered in person, digitally, or via app-based platforms) or interventions including contingent reinforcement. The defining feature was the multicomponent design, rather than the evaluation of a single medication in isolation. Complex interventions have been categorised into two subcategories; i. those that involved behavioural support or motivational interviews plus some form of pharmacology and ii. those that involved behavioural support or motivational interviewing alone, defined below as behavioural interventions.
- **Behavioural interventions**: Interventions in which the sole active component was behavioural support. These included structured smoking cessation therapies delivered

individually or in group formats, and could be provided face-to-face, online, or via digital platforms. No pharmacological component was the primary focus of evaluation.

- **Pharmacotherapy:** Interventions in which a medication was the sole element being tested, typically comparing the medication to placebo, usual care, or alternative dosing regimens. Pharmacotherapies included licensed smoking cessation products such as nicotine replacement therapy (NRT), varenicline, bupropion, and nortriptyline, as well as e-cigarettes and very low nicotine content cigarettes when evaluated as the primary intervention.
- **Other:** Interventions that did not fit within the above categories, such as Transcranial Magnetic Stimulation (TMS).

Types of outcome measure

The primary outcome measure was biochemically verified self-reported smoking cessation. Accepted methods of biochemical verification were expired carbon monoxide (CO level of <10 parts per million (ppm), salivary cotinine <15 ng/ml, urinary cotinine <50 ng/ml or serum cotinine <15 ng/ml. All follow-up times were included and categorised as short-term quit if less than or up to four weeks, mid-term quit for over 4 weeks and up to six months, and long-term quit if longer than six months. Participants lost to follow up were treated as smokers.

Secondary outcomes:

1. Smoking reduction; as no acceptable standard exists for its measurement, any measure was acceptable if it was verified by biochemical assay
2. Change in psychiatric symptoms measured by any validated symptom scale
3. Adverse events
4. Cost effectiveness
5. Weight change

2.3.3 Selection of included studies and data extraction

Two authors (MS, DF) independently screened 10% of titles and abstracts of publications identified by the search strategy. Results from this initial screening were compared to check the level of agreement between the two authors over which studies should proceed to full text screening. Both authors agreed over which texts should proceed to full text screening therefore one author (MS) screened the remaining studies. Where there was any uncertainty about whether a study should be included it was taken forwards for full text screening. All studies that did not meet our inclusion criteria were excluded. The full text of the remaining references was obtained. Two authors (MS, DF) independently screened the full texts and decided whether the studies met the inclusion criteria with any disagreements resolved through discussion with a third author (EP).

Data extraction

Two authors independently extracted data (MS, EP), using a pre-determined data extraction template. The template was trialled with 2 studies before proceeding to extract data from all the included studies. Any disagreements were resolved through discussion with a third author where necessary. Any missing data, relating to the primary outcome only, was sought by contacting the Investigators and/or corresponding authors of primary studies.

2.3.4 Assessment of risk of bias in included studies

Risk of bias

Risk of bias of included studies was assessed using the Cochrane risk of bias for randomized trials tool (RoB 2, Table 2.2).

Data synthesis

A narrative overview of study design features, study populations, outcomes, risk of bias and study results is given.

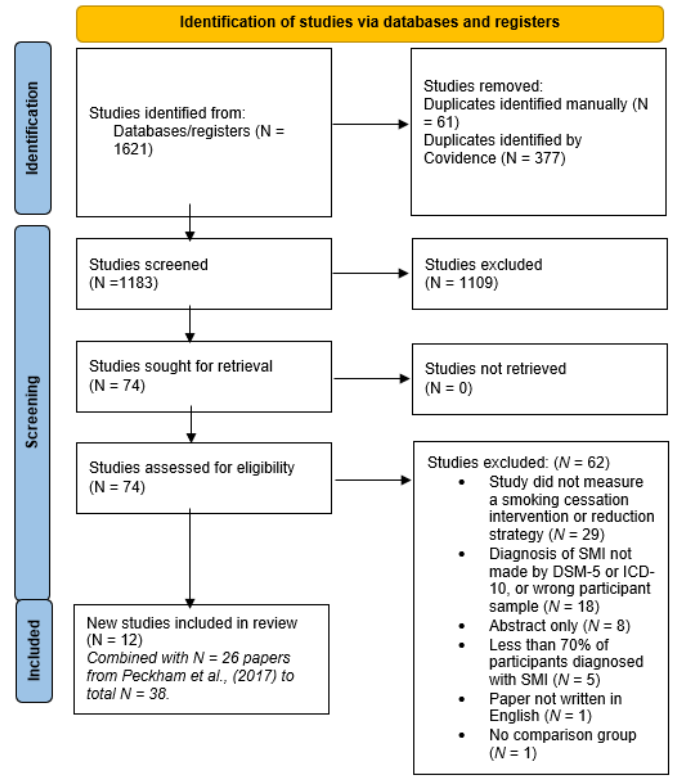
Unit of analysis

The unit of analysis was the individual.

2.4 Results

2.4.1 Summary

Of 1621 studies imported for screening, 1183 were title and abstract screened after removal of duplicates (Figure 2.1). Of these, 74 full texts (plus the 26 texts included in the original review) went through to full-text screening, Of these, in addition to the 26 texts included in the original review, 12 studies met the eligibility criteria, of which 11 were published since the last review. One additional study did not meet the previous review's inclusion criteria because some participants had PTSD. However, this has been added to the current review as it meets the criteria of 70% or more of the participants having SMI (M. E. Bennett et al., 2015) (Figure 2.1). In total, new studies including N =1553 participants met this review's inclusion criteria. This has been combined with the 26 papers included in quantitative and qualitative synthesis from the previous review (Peckham et al., 2017), hence the included studies involved a total of N =3531 participants. The reasons for ineligibility are shown within Figure 2.1, with the most common reason being that the study did not measure a smoking cessation intervention or reduction strategy. Results are reported according to PRISMA 2020 guidelines (Page et al., 2021).



** Bennett et al., (2015) was conducted before 2017 review, but was not included due to it not meeting the inclusion criteria because some participants had PTSD. However, has been added to this review as it meets the criteria of 70% of more of the participants having SMI as per the definition described in our inclusion criteria.*

Figure 2.1: Prisma diagram.

2.4.2 Study Characteristics

Study characteristics for the 38 studies are reported in Table 2.1. Sample size of the studies ranged from five (Weinberger et al., 2008; Wu et al., 2012) to 526 (Gilbody et al., 2019) participants. Most studies recruited participants from an outpatient setting *(N* = 29), two studies recruited solely from inpatient settings (Chen et al., 2013; Lyu et al., 2018) and three recruited from a mixture of inpatient and outpatient settings (Bennett et al., 2015; Smith et al., 2016; Vilardaga et al., 2020). The remaining three studies did not clearly state if the participants were inpatients or outpatients (Fatemi et al., 2013; George et al., 2000; Heffner et al., 2020). Twenty-four of the studies were conducted in the United States, three in Australia, two in England, one in Taiwan, one in China, one in India, one in Korea, and two studies in multiple countries. In three studies the country was not clearly stated.

Most of the studies recruited participants with schizophrenia or schizoaffective disorder (*N* = 19). Six studies recruited participants with schizophrenia only, four recruited participants with bipolar disorder only, and two with psychosis only. Four studies recruited participants with either schizophrenia, schizoaffective disorder and bipolar disorder, whilst two recruited participants with either schizophrenia or psychosis, and one with either schizophrenia, schizoaffective disorder, bipolar disorder or psychosis. In 13 studies, it was a study requirement that participants had both stable symptoms and were on a stable dose of medication, in 11 studies it was a requirement that participants had stable symptoms, and in six studies it was a requirement that participants were on a stable dose of medication. Eight of these studies did not state whether the participants were clinically stable or were on a stable dose of medication.

In most of the studies, participants expressed a willingness to quit smoking (N =22). In six studies, participants were excluded if they already had plans to quit smoking or were currently trying to quit smoking, one study included participants who had expressed both a willingness and disinterest in quitting (Chen et al., 2013), and one study (Smith et al., 2015) required participants to have no current interest in quitting. The remaining eight studies did not specify participants' views on quitting smoking.

Table 2.1: Study Characteristics

	Study/design	Setting	Population.	Interventions	Tailoring of intervention to SMI	Smoking abstinence outcomes	Secondary outcomes
1.1 Complex Interventions							
	Brody et al., (2017)	Outpatient.	34 adult male (M = 56.63) outpatients with a DSM-IV diagnosis of schizophrenia, smoking 10-40 cigarettes per day, who expressed a desire to obtain smoking cessation treatment and quit smoking during the initial interview. Participants had been on stable antipsychotic medication for 6 months. 19 Black (8.82%), 12 White (35.29%), 3 Asian (8.82%). Greater Los Angeles, USA.	1. COMB-EXT- group cognitive-behavioural therapy (CBT), 150mg bupropion, 21mg nicotine patch, and 2/4mg nicotine lozenge, which were initiated within 2 weeks and continued for 26 weekly visits. 2.COMB-EXT + HV- plus biweekly visits to the home with assessment of second hand smoke (SHS) exposure and brief behavioural therapy with participants and others in the home environment. 3. Treatment as Usual (TAU) consisted of group CBT plus serial single or combination medication trials as per standard care. Length determined by preference of participant.	Tailored.	1. Reductions in cigarettes per day at 6 months, 2. 7 day PPA measured at 6 months (post intervention), 3. Fagerstrom Test for Nicotine Dependence (FTND).	Psychiatric symptom related information was collected using the Brief Psychiatric Rating Scale (BPRS), Scale for Assessment of Negative Symptoms (SANS), Clinical Global Impression (CGI) scale, and Beck Depression Inventory (BDI-II). To evaluate issues related to safety, the Columbia Suicide Severity Rating Scale (C-SSRS) and Abnormal Involuntary Movement Scale (AIMS)
	George et al., (2000)	Unclear.	45 participants with DSM IV schizophrenia or schizoaffective disorder with a FTND score of 5.	1. ALA group programme (3 weekly 60 min manualised sessions of group counselling) + NRT patch 2. Specialised group	Tailored.	7 day point prevalence abstinence at week 10, and 26 verified by expired CO <10 ppm. Continuous abstinence	Change in psychiatric symptoms (AIMS, BDI, PANSS, WEPS).

			Participants were willing to quit smoking. 67% male, ≥ 62% white. United States.	programme (3 weeks of 1 h motivational enhancement then 7 weeks 1 h of psychoeducation) + NRT patch. Nicotine patch was 21 mg for 6 weeks then 14 mg for 2 weeks then 7mg for 2 weeks . All manualised.		in last 4 weeks of treatment.	
	Gilbody et al., (2015)	Outpatient.	97 adult outpatients with DSM IV schizophrenia, schizoaffective disorder or bipolar disorder who expressed a desire to cut down or quit smoking and smoked 10 cigarettes per day. 60% male, ≥ 87% white. England	1. Bespoke intervention 2. Usual care Intervention consisted of 8-10 × 30 min manualised sessions tailored to the participants needs.	Tailored.	Smoking cessation at 12 months (CO 10 ppm) ≤ FTND Number of cigarettes per day.	Change in psychiatric symptoms (SF-12, PHQ-9).
	Gilbody et al., (2019)	Outpatient.	526 adults aged 19-72 (M = 46 years, SD = 12.1) with an ICD diagnosis of SMI made by a specialist in mental health services, who smoked at least 5 cigarettes per day and expressed an interest in cutting down or quitting smoking. Recruited from 16 primary care sites and 21 community sites. 472 white (89.7%), 19 Mixed (3.6%), 16 asian (3%), 16 black (3%), 2 chinese (0.4%), 1 missing	1. SCIMITAR intervention-specific modifications to tailor intervention from National Centre for Smoking Cessation and Training (NCSCT) such as having several sessions before setting a quit date, recognising smoking in the context of someone's mental illness, involving other members of a MDT in smoking cessation, meeting taking place in a mutually agreeable location (i.e. home visits), face-to-face support following quit attempt and relapse, informing GP of successful	Tailored.	1. 7 dat PPA, biochemically verified by exhaled CO less than 10ppm at 6 and 12 months, 2. Reduction in the number of cigarettes smoked, 3. FTND and motivation to quit questionnaire.	Questionnaires; Measures of depression and anxiety measured using the patient health questionnaire and generalised anxiety disorder assessment, health status measured by the short form questionnaire, EuroQuol-5 to measure health utility, health economics /utilisation questionnaire for cost effectiveness . BMI. All measured at 6 & 12m.

			(0.2%). England.	quit attempt. Delivered by a mental health smoking cessation practitioner (MH-SCP). 12 sessions, weekly, 30 mins each. 2. Treatment as usual- consultation with GP or local NHS stop smoking services. GP's followed NICE guidelines. Included pharmacotherapies and access to self help materials. Sessions as and when required, managed by GP/NHS service. Untailored.			
	Heffner et al., (2020)	Unclear.	51 adults (M = 49 years, SD = 10.8) with a DSM-5 diagnosis of bipolar disorder, who had been a daily smoker for the past year, smoking at least 5 cigarettes per day for 30 days, with expired-air CO being at least 4ppm and had a desire to quit smoking within 30 days. Participants were clinically stable and on stable medication. 55% male. 24% racial or ethnic minority. Across four sites in USA (Wheat Ridge, CO; Palo Alto, CA; Bedford, MA; Northampton, MA).	1. Intervention of web-based acceptance and commitment therapy (ACT) for smokers with bipolar disorder (WebQuit plus), plus nicotine patches. 2. Control- The national cancer institutes smokefree website Smokefree.gov plus nicotine patches. 10 week trial, plus Nicotine patches for 8 weeks.	Tailored.	1. 7 day PPA from smoking at the end of treatment (EOT) and 1 month post treatment (self reported and verified by expired CO level), 2. 50% reduction in CO level at end of trial and 1 month follow up, 3. 7 day PPA from all nonmedicinal nicotine and tobacco products at EOT and 1M.	Acceptability of intervention measured by avoidance and Inflexibility Scale (AIS), Commitment to Quitting Scale (CQS), mental health symptoms; Patient Health Questionnaire-9 item version (PHQ-9) to measure depression, The Altman Self-Rating Mania Scale (ASMR) to measure mania.

	Tidey et al., (2016)	Outpatient.	27 adult outpatients with a DSM-IV (SCID) diagnosis of schizophrenia of schizoaffective disorder, who have smoked 20-50 cigarettes per day for the last year, and score 6+ on the FTND scale for nicotine dependence. 23 adults acted as controls, with no Axis 1 disorder based on the DSM-IV (SCID). 59% male intervention condition, 48% male in control condition. Intervention condition: 82% white, 11% AA. Control condition: 61% white, 26% AA, 4% hispanic. Brown University, USA.	1. VLNC cigarettes + nicotine patches of 42mg (NIC) 2. VLNC cigarettes + placebo patches (PLA), 3. no smoking + NIC, 4. No smoking + PLA, Usual Brand smoking + no patches. Both people with schizophrenia and controls experienced all three conditions (within-subjects design). 7 sessions total, 5 of interventions plus two of observation, all lasting 1 hour each.	Untailored.	1. Baseline CO (ppm) level, 2. Nicotine dependence severity (FTND score). Topography measures included; 1. Total number of puffs smoked in the 5-hour session, 2. Total session volume (sum of the volumes of all puffs smoked during the 5-hour session), 3. Cigarette volume (sum of the volumes for all puffs smoked per cigarette), 4. Number of puffs per cigarette, 5. Inter-puff interval (time between puffs),6. Puff volume,7. Puff duration and 8. Maximum puff velocity.	Change in psychiatric symptoms (PANSS).
	Williams et al., (2010)	Outpatient.	100 adult outpatients with a DSM-IV diagnosis of schizophrenia or schizoaffective disorder, who Smoke ≥ 10 cigarettes per day and were willing to try and quit smoking. Participants were on a stable dose of medication for at least one month prior. 64% male, 66%	1. Treatment of nicotine addiction in schizophrenia (TANS), which consisted of 24 × 45 min sessions over 26 weeks of manualised motivational interviewing. + nicotine patch. 2. Medication management condition which consisted of 9 × 20 min sessions of manualised active education + nicotine patch 3. individual. Nicotine patches were 21 mg for 12	Untailored.	7 day point prevalence abstinence at 3, 6 and 12 months verified by expired CO <10 ppm. Continuous abstinence at 3 months.	Change in psychiatric symptoms (BDI, PANSS).

			white. United States	weeks and 14 mg for 4 weeks.			
Behavioural Interventions							
Baker et al., (2006) [Including data from Baker 2010]	Outpatient.	298 clinically stable adult outpatients with ICD diagnosis of psychotic disorder who expressed an interest in quitting smoking and smoke ≥ 15 cigarettes per day. 52% male, ethnicity not stated. Australia.	1. Individual motivational interviewing/ CBT 2. Usual care Intervention consisted of 8 × 1 hour sessions of manualised motivational interviewing and CBT over 10 weeks.	Tailored.	Continuous abstinence self report verified by expired CO < 10 ppm at 3,6, 12 months and 4 years 7 day point prevalence smoking abstinence verified by expired CO <10 ppm at 3, 6 12 months and 4 years.		Change in psychiatric symptoms (BDI, BPRS, SF-12, STAI).
Baker et al., (2018)- merged with data from Baker et al., (2015)	Outpatient.	235 adult outpatients with a MINI diagnosis of schizophrenia spectrum or bipolar disorder, who smoked at least 15 cigarettes per day, and were taking antipsychotic medication for at least 2 months with intention to continue for the duration of the study. 58% (71) male in intervention, 59% (67) in control. Ethnicity not stated. Australia.	1. Healthy lifestyles intervention: 16 x 1 hour face to face counselling sessions using motivational interviewing techniques, delivered over 9 months, plus additional 7 weekly sessions, then 6 monthly sessions. Delivered by psychologists guided by an intervention manual. 2. Control: Telephone intervention delivered weekly for 8 weeks, then monthly for 6 months, plus a 30 minute in-person session at week 4 and 8. Both conditions included an initial session to dispense 24 weeks of NRT at	Untailored.	1. Confirmed PPA, 2. Cigarette reduction of 50% or more (compared to baseline), 3. Cigarettes per day (compared to baseline). All at week 15, and months 12, 18, 24, 30 & 26.	Physical factors-10-year CVD risk, sitting and walking time per week, waist circumference. Psychological factors-Brief Psychiatric Rating Scale (BPRS-24), Beck Depression Inventory–II (BDI-II), Global Assessment of Functioning (GAF), SF-12 Mental Component Scale (MCS), SF-12 Physical Component Scale (PCS).	

			weeks 1, 4, 8.				
Bennett et al., (2015)	Inpatient and Outpatient.	178 adults aged 18-75 with a DSM-IV diagnosis of SMI, smoking 10 plus cigarettes per day or had a score of 5 or more on the Fagerstrom Test of Nicotine Dependence (FTND) were included.89.3% male, 10.7% female. 70.8% black, 22.5% white, 6.7% other. Maryland, USA.	1. Multifaceted behavioural group intervention, utilising contingent reinforcement and CO outcomes, 2. supportive group intervention (active control), using discussion, education and assistance. Both integrated within outpatient mental health services. Meetings 2x per week for 12 weeks.	Tailored.	1 week smoking cessation abstinence, number of cigarettes per day, quit attempts during treatment period, expired CO, FTND and smoking history form.	Changes in self-efficacy, temptation, and confidence.	
Brunette et al., (2020)	Outpatient.	162 adult smokers aged 18-65 (Mean = 45.91 years), who were psychiatrically stable and in outpatient treatment, recruited across sites in New Jersey, Massachusetts, and Illinois, USA. Smokers were excluded if they had recently (past month) used evidence-based smoking cessation treatment (indicating the participant was already motivated to use treatment). 66.7% male. 29% white,	Participants were randomised 1:1 to receive one of the brief interventions to motivate them to quit smoking. 1. Web based motivational intervention- this is a web-based intervention tailored for smokers with SMI. 30-90 mins to complete. 2. Computerized national cancer institute patient education.	Tailored.	Follow up at 3 months and 6 months. Verified abstinence as less than 9ppm CO output. Also measured cessation behaviours: The use of treatment, and self reported or verified use of smoking cessation treatment.	Change in psychiatric symptoms (PANSS and BPRS).	

		53.1% black, 19.9% mixed and other race, 13% hispanic. USA.					
Rajalu et al., (2023)	Outpatient.	170 clinically stable adult psychiatric outpatients with an ICD-10 diagnosis of schizophrenia or other related psychotic disorder, who expressed a desire to quit smoking. Participants were clinically stable and on stable medication for at least three months. 166 male, 4 female, with a mean age of 39.4 years (+-10.49). Ethnicity not stated. Bengaluru, India.	1. 1x 40-45 minute face to face intervention delivered by a trained psychiatric nurse and the first author, consisting of motivational interviewing techniques, plus 2 follow up telephone sessions lasting 5-10 minutes. 2. Control- brief advice to stop tobacco.	Untailored.	1. Seven day PPA at 6 months, 2. Reduction of 50% tobacco use at 1, 3 and 6 months. 3. Quit attempts, 4. Smoking scales; Nicotine dependence (FTND), motivation to stop tobacco (M-MTSS) and tobacco craving (R-TCQ-SF).	Clinical symptoms severity (CGI-S)and Clinical improvement (CGI-I) at 1, 3 and 6 months. Urine coitine levels at 6 months.	
Steinberg et al., (2003)	Outpatient.	78 outpatients with DSM IV schizophrenia or schizoaffective disorder smoking 10 ≥ cigarettes per day. 68% male, 77% white. United States.	1. Motivational interviewing (individual) 2. Psychoeducational intervention (individual) 3. Control Motivational interviewing consisted of 1 × 40 minute session.	Untailored.	Expired CO at 1 week and 1 month. Number of cigarettes per day. Heaviness of smoking. Contemplation ladder. FTND. Importance of quitting. Confidence in ability to quit.	None reported.	
Steinberg et al., (2016)	Outpatient.	98 adult smokers aged 22-63 (M = 43.1 years, SD = 10.3) with a DSM-I diagnosis of schizophrenia, schizoaffect	1. 1x 45 minute session using motivational interviewing. Participants were given personalised feedback on their carbon monoxide reading,	Untailored.	1. Self reported 7 day PPA at 1 month post intervention verified by CO reading being less than 10ppm, 2. Follow up on tobacco referral, 3.	Therapeutic alliance.	

		ive disorder or bipolar disorder, who smoked at least 10 cigarettes per day, who were capable of providing informed consent (Folstein Mini Mental Status Exam score greater than 23), who were psychiatrically stable on their medications. Participants did not need to express a desire to quit smoking. Recruited by clinicians at a local outpatient centre. Female 44.90% (22) in MI condition, and 42.86% (21) in IE condition. Ethnicity in MI condition: 29 Caucasian, 14 black, 1 Latino, 1 asian, 1 native American, 3 other. IE condition: 31 Caucasian, 13 black, 4 Latino, 1 other. New Jersey, USA.	financial expenditures on cigarettes and information about medical conditions. 2. A non-personalised intervention. Participants were provided with educational material related to the effects of smoking. Both were guided by manual.		Quit attempt at 1 month follow up.		
Vilardaga et al., (2019)	Inpatient and Outpatient.	62 adult smokers with an ICD-10 diagnosis of SMI, who self reported smoking 5 plus	1. 'Learn to quit' a bespoke app for people with SMI. Uses ACT, key elements of US smoking cessation	Tailored.	Outcomes assessed at 4, 8, 12 and 16 weeks. Reductions in cigarettes per day, 30 day PPA verified by CO outputs.	Change in psychiatric symptoms (PANSS).	

		cigarettes per day, with a CO output >6ppm, and a desire to quit smoking in the next 30 days. Recruited through primary care systems, electronic health records, outpatient clinics and patient portals. 40.33% male. 51% white. Durham, USA.	practice and psychoeducation. 2. 'Quit Guide' - smoking cessation app developed for the general population.				
2.1 Bupropion							
	Evins (2001) (Including data from Evins 2004)	Outpatient.	19 adults with a DSM IV diagnosis of schizophrenia, who were on a stable dose of antipsychotic medication for at least 4 weeks who smoke at least half a pack of cigarettes per day and expressed a wish to quit smoking. 61% male, 89% white. United States.	1. Bupropion (150 mg per day) + CBT Quit Smoking Group 2. Placebo + CBT Quit Smoking group	Untailored.	7 day point prevalence abstinence verified by expired CO < 9 ppm or serum cotinine <14 ng/ml at 12 and 24 weeks and 2 years Significant smoking reduction at12, 24 weeks and 2 years defined by 30% reduction in expired CO and ≥ 50% reduction in number of ≥ cigarettes per day.	Change in psychiatric symptoms (BPRS, SANS, HamD, AIMS, Hillside Akathisia Scale, SAS).
	Evins (2005)	Outpatient.	19 adult outpatients with a DSM-IV diagnosis of schizophrenia or schizoaffective disorder, who smoked 10 cigarettes per day, and had stable symptoms, and were on a stable dose of antipsychotic for >30 days.	1. Bupropion (150 mg) + behavioural group therapy intervention 2. Placebo + behavioural group therapy intervention	Untailored.	7 day point prevalence abstinence at week and week 4, 12 and 24 verified by expired CO <9 ppm. 4 week continuous abstinence at week 24 Number of cigarettes smoked per day.	Change in psychiatric symptoms (SANS, Ham-D, Ham-A, PANSSS, SAS, Barnes akathisia scale). Adverse events.

			HAM-D score was ≤ 20, and were willing to set a quit date within 4 weeks. 68% male, ethnicity not reported. United states.				
	Evins (2007)	Outpatient.	51 adult outpatients with a DSM-IV diagnosis of Schizophrenia, capacity to consent, smoking 10 cigarettes per day with stable symptoms and on a stable dose of antipsychotic for 30 days. Participants were willing to set a quit date within 4 weeks. 57% male, ethnicity not reported. United States.	1. Bupropion (150 mg 1 x daily 7 days then 150 mg 2× daily thereafter) + transdermal nicotine patch, nicotine polacrilex gum and CBT 2. Placebo + transdermal nicotine patch, nicotine polacrilex gum and CBT 21 mg/d 4 weeks, 21 mg/d 2 weeks then 7 mg/d 2 weeks 2 mg as needed up to 18 mg/d	Untailored.	7 day point prevalence abstinence at week12, 24 and 52 verified by expired CO <8 ppm. 4 week continuous abstinence at week 8, 12, 24 and 52.	Change in psychiatric symptoms (SANS, Ham-D, STAI, PANSSS).
	Fatemi (2013)	Unclear.	24 clinically stable adults with DSM-IV diagnosis of schizophrenia or schizoaffective disorder, smoking ≥10 cigarettes per day, who expressed a motivation to quit or reduce smoking. Ethnicity and gender not reported. United States	1. Bupropion + antismoking counselling 2. Varenicline + antismoking counselling 3. Placebo + antismoking counselling		Self report abstinence verified by CO Serum and urine levels of nicotine and cotinine.	Change in psychiatric symptoms (BPRS, SAPS, SANS, BDI, CSSRS, WISDM, MNWS) Adverse events.
	George (2002)	Outpatient.	32 clinically stable adult outpatients, on a stable dose of medication with a DSM IV diagnosis of schizophrenia or schizoaffective disorder. Smoking ≥	1. Bupropion (150 mg 2× day) + specialised schizophrenia smoking cessation program 2.Placebo +specialised schizophrenia smoking cessation program	Tailored.	7 day point prevalence abstinence at week 10, and 36 verified by expired CO <10 ppm. Tiffany questionnaire for smoking urges.	Change in psychiatric symptoms (AIMS, BDI, PANSS, WEPS).

			10 cigarettes per day with expired CO > 10 ppm, plasma cotinine >150 ng/ml and scored 5 on FTND ≥ and 3 on an assessment measure of ≥ self-reported motivation indicating a strong desire to quit smoking. 56% male, 63% white.United States.				
	George (2008)	Outpatient.	58 clinically stable outpatients with DSM IV schizophrenia or schizoaffective disorder diagnosis, on a stable dose of antipsychotic medication for 1 month prior, and smoking ≥ 10 cigarettes per day with expired CO > 10 ppm and scored ≥7 on the contemplation ladder. Participants expressed a willingness to quit within 30 days. 60% male, 48% white. United States.	1. Bupropion + manualised group behavioural therapy + NRT patch (21 mg) 2. Placebo + manualised group behavioural therapy NRT patch (21 mg) 150 mg per day days 1 3and 150 mg 2 x day thereafter	Untailored.	7 day point prevalence abstinence at week 10, and 26 verified by expired CO <10 ppm. 4 week continuous abstinence at week 10.	Change in psychiatric symptoms (BDI, PANS) Adverse events.
	Lyu et al., (2018)	Inpatient.	21 adult mental health inpatients aged 18-35 years old, with an ICD-10 diagnosis of schizophrenia who were on a stable dose of antipsychotic medication for at least one month. Participants were	1. 24-week trial. Naltrexone 15mg & bupoprion 150mg for 2 weeks. After 2 weeks, naltrexone increased to 15mg morning, 10mg afternoon and buproption to 150mg 2x per day as tolerated for remaining trial. 2. Placebo condition.	Untailored.	1. Carbon Monoxide level, 2. Number of cigarettes smoked per week, 3. Craving levels measured using visual analogue scale.	1. Height and waist circumference, 2. Positive and negative symptoms on PANSS scale, 3. Side effects questionnaire.

			recruited from an inpatient mental health centre. Participants had a desire to lose weight and quit smoking. All male. Ethnicity not stated. Based in Shanghai, China.				
	Tidey (2011)	Outpatient.	57 clinically stable adult outpatients with a DSM IV diagnosis of schizophrenia or schizoaffective disorder on a stable dose of psychoactive medication who smoke ≥ 20 cigarettes per day and scored ≥6 on FTND and ≥ 4 on the contemplation ladder- indicating some interest in quitting smoking. 71% male, 75% white. United states.	1. Contingent + Bupropion (150 mg per day days 1 3 and 150 mg 2 x day thereafter) 2. Contingent + placebo 3. Bupropion (150 mg per day days 1 3 and 150 mg 2 x day thereafter) + non-contingent 4. Placebo +non contingent Non contingent = $25 dollar store card Contingent = $25 store card plus bonuses	Untailored.	Cotinine in urine CO breath measure Number of cigarettes per day At weeks 1,2,3 and 4.	Change in psychiatric symptoms (PANSS, UPDRS, AIMS).
	Weinberger (2008)	Outpatient.	5 clinically stable adult outpatients, with DSM-IV diagnosis of Bipolar disorder, smoking ≥ 10 cigarettes per day with expired CO ≥10 ppm. 40% male, 100% white. United States.	1. Bupropion + manualised group behavioural therapy 2. Placebo + manualised group behavioural therapy (Days 1 3 75 mg 1 x day, days 4 7 – 150 mg 1 x day and 150 mg 2× day thereafter)	Untailored.	Abstinence at 10 weeks verified by expired CO <10 ppm.	Change in psychiatric symptoms (YMRS, BDI, Ham-D) Adverse events.
	Weiner (2012)	Outpatient.	41 clinically stable adult outpatients with a DSM IV diagnosis of schizophrenia or schizoaffective disorder, who Smoke 10 per day, and	1. Bupropion + group support programme 2. Placebo + group support programme (Days 1 3150 mg 1 x day and 150 mg 2× day thereafter)	Untailored.	Complete abstinence at 15 weeks defined by expired CO < 10 ppm at last 4 study visits. Complete abstinence at 6 months and 12 months	Change in psychiatric symptoms (BPRS, SANS, SAS) Adverse events.

			expressed a willingness to quit smoking. 79% male. 72% white. United States.			self-report verified by CO < 10 ppm. 7 day point prevalence abstinence at 15 weeks verified by CO < 10 ppm FTND.	
2.2 Varenecline							
	Anthenelli (2023)	Outpatient.	28 adult outpatients aged 18-70 with a DSM-5 diagnosis of Bipolar 1 and 2 disorders, or schizophrenia and schizoaffective disorder, who smoked an average of 10 cigarettes per day, had an expired CO of 10ppm at baseline, and were motivated to quit smoking by scoring 5+ on the Contemplation ladder scale. Participants were deemed stable by the investigator. 14 white, 8 black/African America, 1 Asian, 2 Hispanic, 5 other. San Diego. 42.9% female low dose, 50% female standard dose. San Diego, USA.	1. Slower titration of lower dose varenicline (0.5mg twice daily), 2. Standard titration of standard dose varenicline (1.0mg twice daily. Both conditions received acceptance and commitment therapy sessions, 7 face-to-face, 3 over the telephone, all lasting 30 minutes.	Untailored.	1. Biochemically verified 7 day PPA using CO levels at week 12 and 24, 2. Urine cotine levels, 3. Smoking diary and Nicotine Use Inventory, 4. Scales-Smoking Urges - Brief (QSU-B) and Minnesota Tobacco Withdrawal Scale (MTWS).	Feasibility and acceptability measures, adverse events-Neuropsychiatric Adverse Events Interview (NAEI), The Columbia-Suicide Severity Rating Scale (C-SSRS) and Hospital Anxiety and Depression Scale (HADS).
	Chengappa (2014)	Outpatient.	60 adult outpatients with DSM-IV diagnosis of bipolar disorder on a stable dose of medication. Smoking ≥10 cigarettes per day with expired CO ≥ 10 ppm.	1. Varenicline + smoking cessation counselling 2. Placebo + smoking cessation counselling1 × 0.5 mg per day days 1 3, 0.5 mg 2× per day days 4 7 then 1 mg 2× per day thereafter	Untailored.	7 day point prevalence smoking abstinence verified by expired CO <10 ppm at 12 weeks and 24 weeks Continuous 4 week abstinence at 12 weeks.	Change in Psychiatric symptoms (YMRS, MADRS, HARS, CGI) Adverse events.

			Ethnicity and gender not reported. United States.				
	Jeon (2016)	Outpatient.	59 adult outpatients, aged 18-60 with a DSM 4 diagnosis of schizophrenia, who had less than moderate severity on PANSS scale for 3 months, who were clinically stable, along with no changes in medication for 3 months. Participants already using nicotine replacement products were excluded. 55 Male, 4 female. Korea.	1. Intervention of varenicline (titrated up to 1 mg twice daily for weeks 2–8) for 8 weeks. 2. Placebo. All participants received a self-help booklet for smoking cessation plus weekly telephone visits. Participants could smoke freely for the entire period of study; smoking cessation was their choice.	Untailored.	1. Cigarettes per day, 2. mean expired CO (ppm), 3. Scales-Minnesota Nicotine Withdrawal Scale (MNWS), The Brief Questionnaire of Smoking Urge (QSU-brief), The Modified Cigarette Evaluation Questionnaire (mCEQ).	Clinical scales-Hamilton Rating Scale for DepressionHAM-D; Positive and Negative Syndrome Scale PANSS; Scale for the Assessment of Negative Symptoms SANS.
	Smith (2016)	Inpatient and Outpatient.	87 adults aged 18-65 with a DSM-IV diagnosis of schizophrenia or schizoaffective psychosis/schizoaffective disorder, who were clinically stable, current smokers who smoked at least 6 cigarettes a day for 6 months. Patients were willing to participate in a trial of a drug which might reduce their smoking and improve cognition, but not necessarily to quit smoking. N = 65 were inpatients, and N = 22 outpatients.	1. Varenicline 0.5mg-1.0mg per day for the first week, then 2.0mg/day for the rest of the study period of 8 weeks. 2. Matched placebo. Both conditions received brief cigarette smoking prevention counselling weekly.	Untailored.	1. Cigarettes per day (self reported), 2. Expired CO levels, 3. Plasma nicotine and cotinine levels, 4. Smoking urges (QSU and Cigarette dependence scale).	PANSS scale (Positive and Negative Symptom Scale), SANS (Scale for Assessment of Negative Symptoms) and Calgary Depression Scale.

			74 male, 13 female. Across 4 sites; 2 USA, 1 Israel, 1 China.				
	Weiner (2011)	Outpatient.	9 Clinically stable adult outpatients with DSM IV diagnosis of schizophrenia or schizoaffective disorder for 3 years who smoke ≥ 10 per day and scored ≥4 on FTND. No change in psychiatric medication dose for 3 months. Ethnicity and gender not reported. United States.	1. Varenicline (1 mg 2× day) + individual smoking cessation counselling (ALA) 2. Placebo + individual smoking cessation counselling (ALA)		Smoking cessation at 12 weeks defined by expired CO < 10 at last 4 study visits. Change in CO.	Change in psychiatric symptoms (BPRS) Adverse events.
	Williams (2012)	Outpatient.	128 adult outpatients with a DSM IV diagnosis of schizophrenia or schizoaffective disorder, with stable symptoms who Smoke ≥15 cigarettes per day, and scored ≥7 on the contemplation ladder indicating a willingness to quit in the next month, with no smoking abstinence in the last 3 months. 76% male, 59% white. United States and Canada.	1. Varenicline 2. Placebo 1 × 0.5 mg per day days 1 3, 0.5 mg 2× per day days 4 7 then 1 mg 2× per day thereafter	Untailored.	7 day point prevalence abstinence at 12 and 24 weeks verified by expired CO <10 ppm. Number of cigarettes per day	Change in psychiatric symptoms (SAS, C-SSRS, CGI, PANSS). Adverse events.
	Wu (2012)	Outpatient.	5 psychiatrically stable outpatients with a DSM-IV diagnosis of bipolar disorder I or II, on a stable dose of mood	1. Varenicline (1 mg 2× day) + smoking cessation counselling (group) 2. Placebo + smoking cessation counselling (group)	Untailored.	Smoking cessation verified by expired CO >10 ppm at 10 weeks and 6 months	Adverse events.

			stabiliser, smoking ≥ 10 cigarettes per day. Outpatients 40% male, 100% white				
3. Nicotine replacement therapies							
	Chen (2013)	Inpatient.	184 adult inpatients who were regular daily smokers with a DSM-IV diagnosis of schizophrenia or schizoaffective disorder with stable symptoms. A lack of willingness to quit was not an exclusion factor. 93% male, ethnicity not stated. Taiwan.	1. High dose NRT (31.2 mg for 4 weeks then 20.8 mg for 4 weeks) 2. Low dose NRT (20.8 mg for 8 weeks)	Untailored.	7 day point prevalence self report verified by expired CO <10 ppm at 5 weeks and 8 weeks Number of cigarettes smoked per day FTND	Change in psychiatric symptoms (PANSSS, SAS).
	Dalak (1999)	Outpatient.	19 male veteran outpatients with DSM III diagnosis of schizophrenia, schizoaffective disorder Smoking 20 cigarettes per day ≥ on a stable antipsychotic regime. 100% male, 60% white. United States.	1. Nicotine patches (22 mg per day) 2. Placebo patches	Untailored.	Nicotine blood level. Expired CO. Cotinine blood level.	Change in psychiatric symptoms (BPRS, SANS, HAM-D). Adverse events.
	Gallagher (2007)	Outpatient.	181 stable adult outpatients with DSM-IV diagnosis of schizophrenia or schizoaffective disorder, smoking ≥10 cigarettes per day for 3 years or more with an expired CO of 10 ppm after 15 min of visit. Participants who were already	1. Contingent reinforcement (up to $480) 2. Contingent reinforcement (up to $480) + NRT patch (21 mg) 3. Self-quit group	Untailored.	Smoking cessation at week 20 and week 36 (Cotinine 15 ≤ ng/ml or expired CO ≤ 10 ppm) FTND.	Change in psychiatric symptoms (BSI).

			attempting cessation were excluded. 52% male, 76% white. United States				
4. Other Interventions							
Smith et al., (2015)	Inpatient and Outpatient.	33 outpatients with DSM IV schizophrenia or schizoaffective disorder. Participants had no current desire to quit smoking. 73% male, 30% white.	1. 5 sessions of transcranial direct current stimulation 2. 5 sessions of 'sham' TMS treatment	Untailored.	Self report number of cigarettes smoked and expired CO one week after final treatment session. Urges to smoke.	PANSS and PSYCHRATS hallucination scale.	
	Wing et al., (2012)	Outpatient.	Outpatient. 15 adult outpatients, with a DSM-IV diagnosis of schizophrenia or schizoaffective disorder, smoking ≥ 10 cigarettes per day for 3 years or more with expired CO ≥ 10 ppm and FTND score 4. Participants were motivated to quit within the next month. Participants were psychiatrically stable and had been on a stable dose of antipsychotic medication for at least one month. Ethnicity and gender not reported.	1. Trans cranial magnetic stimulation + weekly group therapy and nicotine patch (21 mg) 2. Sham + weekly group therapy and nicotine patch (21 mg)	Untailored.	Weekly (for 10 weeks) Smoking self report verified by expired CO. Tiffany questionnaire for smoking urges	Change in psychiatric symptoms (PANSS) Adverse events

2.4.3 Description of the interventions

The included studies assessed a range of interventions (Table 1). A total of seven studies explored complex interventions, ten explored the effects of bupropion, and one explored the effects of prescribing both bupropion and varenicline (Fatemi et al., 2013). Seven studies explored the

prescription of varenicline and three explored the prescription of nicotine replacement therapy (NRT). Eight studies explored behavioural interventions and two explored 'other' interventions. No studies explored e-cigarettes. All studies were randomised control trials.

Complex interventions:

Of the seven studies that were assessing a complex intervention- one was assessing a web based intervention (Heffner 2020), five used Motivational Interviewing (MI) Cognitive Behavioural Therapy Techniques. Five CI's delivered a specialised programme for people with SMI (Brody 2017; George 2000; Gilbody 2015; 2019; Heffner 2020). The final study employed a factorial design testing contingent plus bupropion versus non-contingent plus bupropion versus contingent plus placebo versus noncontingent plus placebo (Tidey et al., 2016).

Of the seven studies exploring MI CBT, four were specific to people with SMI, and compared MI to treatment as usual (TAU) (Baker et al., 2006; Brody et al., 2017; Rajalu et al., 2023; Steinberg et al., 2016); two that were not specific to those with SMI compared face-to-face MI to a telephone version, plus offered NRT. The final MI study compared this to both a psychosocial intervention and control (Steinberg, 2003).

Of the web-based interventions within this paper, two were phone applications specific to people with SMI, compared to general stop-smoking applications (Brunette et al., 2020; Heffner et al., 2020; Vilardaga et al., 2020), and one was an Acceptance and Commitment Therapy (ACT) website specific to those with SMI, compared to the national cancer institute's smokefree website, combined with NRT (Heffner et al., 2020).

Behavioural Interventions:

Of the eight studies exploring behavioural interventions, one combined a group intervention with CR (Bennett et al., 2015), three compared the effectiveness of web-based or telephone applications (Baker et al., 2015; Brunette 2020; Vilaradaga et al., 2020) and four used Motivational Interviewing (MI) Cognitive Behavioural Therapy Techniques (Baker et al., 2006; Steinberg 2003; Steinberg 2016; Rajalu 2023). The content of effective behavioural elements are examined in the discussion section.

Pharmacological interventions: Bupropion

Of the ten studies exploring the effect of Bupropion including $N = 327$ participants total, one study compared the effectiveness of Bupropion to Naltrexone (Lyu et al., 2018). Five of these studies investigated the effectiveness of Bupropion versus placebo when combined with group therapy (29,49–52). Two of these studies tested the effect of bupropion versus placebo when combined with group therapy and NRT- nicotine patches in the former, and both patches and nicotine gum in the latter (Evins et al., 2007b; George et al., 2008). One study (Tidey et al., 2011) employed a factorial design, testing contingent reinforcement when combined with Bupropion or placebo, to non-contingent reinforcement when combined with Bupropion or placebo. It is worth noting that this study did not report smoking abstinence. The final study compared the effectiveness of Varenicline, Bupropion and placebo therapy when combined with group therapy (Fatemi et al., 2013).

Pharmacological interventions: Varenicline

The effectiveness of varenicline as a smoking cessation aid was tested in seven studies ($N = 341$ participants). One study (Anthenelli et al., 2023) compared the effectiveness of a slower titration of a lower dose of varenicline to the standard titration of the standard dose, when combined with 10 sessions of acceptance and commitment therapy lasting 30 minutes per session, and being delivered

both face to face (for seven sessions) and over the telephone (for three sessions). Of the remaining six trials, four tested varenicline versus placebo when combined with smoking cessation counselling (Chengappa et al., 2014; Fatemi et al., 2013; Smith et al., 2016; Wu et al., 2012). One trial investigated varenicline versus placebo when combined with group therapy (Weiner et al., 2012), and the remaining trial tested varenicline versus placebo (Williams et al., 2012).

Pharmacological interventions: Nicotine Replacement Therapies

Three studies investigated the effectiveness of nicotine replacement therapies (N = 384 participants). One study compared the effectiveness of a higher dose of NRT for a shorter duration of time (four weeks) to a lower dose of NRT for a longer duration of time (eight weeks) (Chen et al., 2013). One study compared the effectiveness of nicotine patches to placebo patches, whilst the final study explored the effectiveness of contingent reinforcement with or without nicotine patches, when compared to a self-quit group (Gallagher et al., 2007). Surprisingly, no studies were identified exploring the effectiveness of e-cigarettes for smoking cessation.

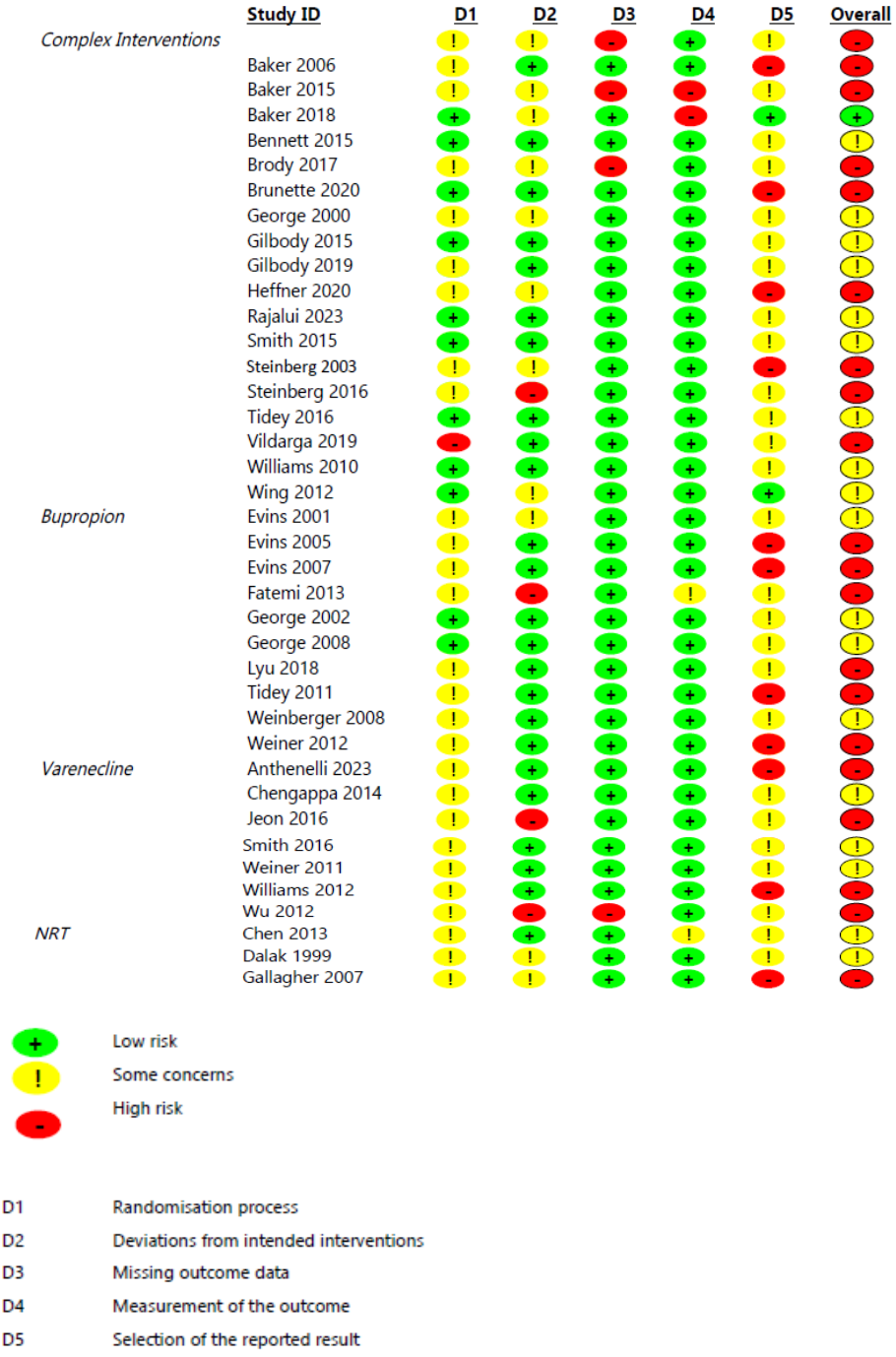
Other Interventions:

Of the remaining studies, two used Transcranial Magnetic Stimulation (TMS), and investigated the effects of contingent reinforcement (CR) (i.e., providing people with cash incentives if they had remained abstinent from smoking at defined time points) compared the use of TMS to 'sham' TMS (Smith et al., 2015; Wing et al., 2012).

2.4.4 Methodological quality of included studies

Table 2.2 summarises the risk of bias in the included studies. The risk of bias was assessed by two reviewers (MS, EP). There were few disagreements, and all were resolved by discussion. Discussion with a third reviewer was not necessary. Overall, no studies were deemed an overall low risk of bias, and most studies were deemed as having some concerns or a high risk of bias. Notably, there was a lack of detail given in the descriptions of key study design features, leading to studies being deemed at an unclear risk of bias. For those studies that were assessed as having an unclear risk of bias, this may be due to issues with reporting rather than study conduct.

Table 2.2: Risk of bias of included studies



2.5 Primary outcome measures and results

2.5.1 Smoking Abstinence and Meta-Analyses

Meta-analyses were conducted using Review Manager (RevMan). Studies were included in quantitative synthesis where they were considered sufficiently similar in terms of the intervention being evaluated. Specifically, studies were pooled where they tested the same pharmacological agent (e.g., varenicline, bupropion, nicotine replacement therapy) or evaluated comparable categories of intervention (e.g., complex interventions). All complex interventions (including behavioural interventions) were included within this meta analysis. Only studies assessing the same primary

intervention component against a comparable control condition were combined in meta-analysis. Where interventions differed substantially in content or focus, findings were synthesised narratively rather than pooled statistically.

A random-effects meta-analysis model was employed due to anticipated clinical and methodological heterogeneity between studies, including differences in intervention content, delivery modality, participant characteristics, and follow-up duration. The random-effects approach was selected as it assumes that the true intervention effect may vary across studies and therefore provides a more conservative pooled estimate when heterogeneity is present.

Moreover, missing outcome data were managed in accordance with the Russell Standard for smoking cessation trials, whereby participants lost to follow-up were assumed to be continuing smokers. This conservative intention to treat approach is recommended in smoking cessation research to minimise attrition bias and avoid overestimation of quit rates, given the high likelihood of relapse among participants lost to follow up (West et al., 2005).

Overall, the meta-analyses demonstrated that complex interventions (including behavioural interventions) were effective at supporting people with SMI to quit smoking at all three time points. Bupropion was effective at the medium and long-term but not in the short-term. Varenicline was deemed effective at medium-term, and finally, NRT was effective in both the medium and long-term. Hence, this review highlighted that methods effective at aiding smoking cessation in the general population also work in people with SMI.

Risk ratio (pooled) were calculated for point prevalence abstinence at short, medium and long-term for studies, exploring the addition of complex interventions (Fig. 2.2), Bupropion (Fig. 2.3) varenicline (Fig. 2.4), and NRT (Fig 2.5). The quit rates utilised in the meta-analysis are outlined in Table 2.3. Nine studies were not included in the meta-analysis (Dalack & Meador-Woodruff, 1999; Fatemi et al., 2013; Jeon et al., 2016; Lyu et al., 2018; Smith et al., 2015, 2016; Steinberg, 2003; Tidey et al., 2011; Wing et al., 2012) as they did not clearly report smoking cessation quit rates. Chen (2003) and Gallagher (2007) were not included in the meta-analysis, as their interventions were not deemed sufficiently similar.

Risk ratios demonstrated the effectiveness of complex interventions for smoking cessation at all three time points; short, medium and long-term. They were most effective in the short-term RR= 2.53 (95% CI 1.38 - 4.65), with medium-term being RR = 1.51 (95% CI 1.15 - 1.98) and long-term being RR = 1.37 (95% CI 1.00 - 1.88). Of the complex interventions involved in the meta-analysis, medium-term was the largest category ($N = 10$).

The risk ratios demonstrated that the addition of bupropion can be effective in aiding smoking cessation in the medium- and long-term, but not in the short-term (RR = 6.42; 95% CI: 0.82–50.07), highlighted by the large confidence intervals. For varenicline, similar to the previous review, it was effective in the medium-term (RR = 2.54; 95% CI: 1.15–5.61). No studies explored short- or long-term effects. Notably, only one new study measuring the effectiveness of varenicline was eligible for inclusion in this meta-analysis. Finally, NRT was effective in the medium-term (RR = 4.13; 95% CI: 1.80–9.44) and long-term (RR = 4.80; 95% CI: 2.02–11.43) for aiding smoking cessation; however, this analysis included only two studies.

Table 2.3: Smoking cessation quit rates for meta-analyses.

Complex Interventions	**Quit rate (%) Intervention (I) Control (C)**
Tidey et al., (2016)	Not reported
Brody et al., (2017)	6 months I (1): 5/11 (45) 1 (2): 2/10 (20) C: 1/13 (8)
Gilbody et al., (2019)	6 months I: 32/265 (12.08) C: 14/261 (5.36). 12 months: I: 34/265 (12.83) C: 22/281 (7.83)
Heffner et al., (2020)	14 weeks I: 2/25 (8) C: 2/26 (7.69)
George et al., (2000)	3 months I: 10/28 (35.7) C: 6/17 (35.3) 8.5 months I: 3/28 (10.7) C: 3/17 (17.6)
Gilbody et al., (2015)	12 months I: 12/33 (36.3) C: 8/35 (22.9)
Williams et al., (2010)	3 months I: 7/45 (15.6) C: 11/42 (26.2) 6 months I: 7/45 (15.6) C: 8/43 (18.6) 12 months I: 6/45 (13.3) C: 6/43 (14.0)
Behavioural Interventions	
Baker et al., (2006) [Including data from Baker 2010]	4 months I: 22/147 (15.0) C: 9/151 (6.0) 7 months I: 14/147 (9.5) C: 6/151 (4.0) 13 months I: 16/147 (10.9) C: 10/151 (6.6) 4 years I: 13/147 (8.8) C: 17/151 (11.3)
Baker et al., (2018) [Merged with Baker et al., 2015]	3 months I: 13/122(10.7) C: 13/113 (11.5) 12 months I: 8/122 (6.6) C: 7/113 (6.2) 24 months I: 11/71 (9) C: 9/62 (8) 30 months I: 13/65 (11) 14/64 (12) 36 months I: 13/66 (11) 9/68 (8)
Vildarga et al., (2019)	4 months I: 4/33 (12.12) C: 1/29 (3.45)
Brunette et al., (2020)	6 months I: 1/78 (1.12) C: 6/84 (7.14)
Bennett et al., (2015)	4 weeks I: 10/71 (14.08) C:6/65 (9.23)
Rajalu et al., (2023)	1 month I: 19/93 (20.43), C: 2/93 (2.15). 6 months I: 26/93 (31.18), C: 10/93 (10.75)
Steinberg et al., (2003)	Abstinence not reported
Steinberg et al., (2016)	1 month I: 8/49 (16.3) C: 5/49 (10.2)
Other (TMS)	
Wing et al., (2012)	Abstinence not reported
Smith et al., (2015)	Abstinence not reported
Varenecline	
Chengappa (2014)	3 months I: 15/31 (48.4) C: 3/29 (10.3) 6 months I: 6/31(19.4) C: 2/29 (6.9)
Weiner (2011)	4 months I: 3 /4 (0.75) C: 0/4 (0.0)

Williams (2012)	3 months I: 16/84 (19.0) C: 2/43 (4.7) 6 months I: 10/84 (11.9) C: 1/43 (2.3)
Wu (2012)	2.5 months I: 1/3 (33.3) C: 0/2 (0.0) 6 months I: 0/3 (0.0) C: 0/2 (0.0)
Jeon (2016)	Not reported
Smith (2016)	8 weeks I:7/42 (16.7) C: 4/45 (8.9)
Anthenelli (2023)	12 weeks I: 4/14 (28.57) C: 4/14 (28.57)
Nicotine replacement therapies	
Chen (2013)	2 months I: 1/92 (1.1) C: 4/92 (4.3) I = high dose C = low dose
Dalak (1999)	Abstinence not reported
Gallagher (2007)	5 months 1a**: 23/60 (38.3) 1b***: 25/60 (41.7) C: 3/60 (5.0) 8.5 months 1a: 22/60 (36.7) 1b: 26/60 (43.3) C: 5/60 (8.3)

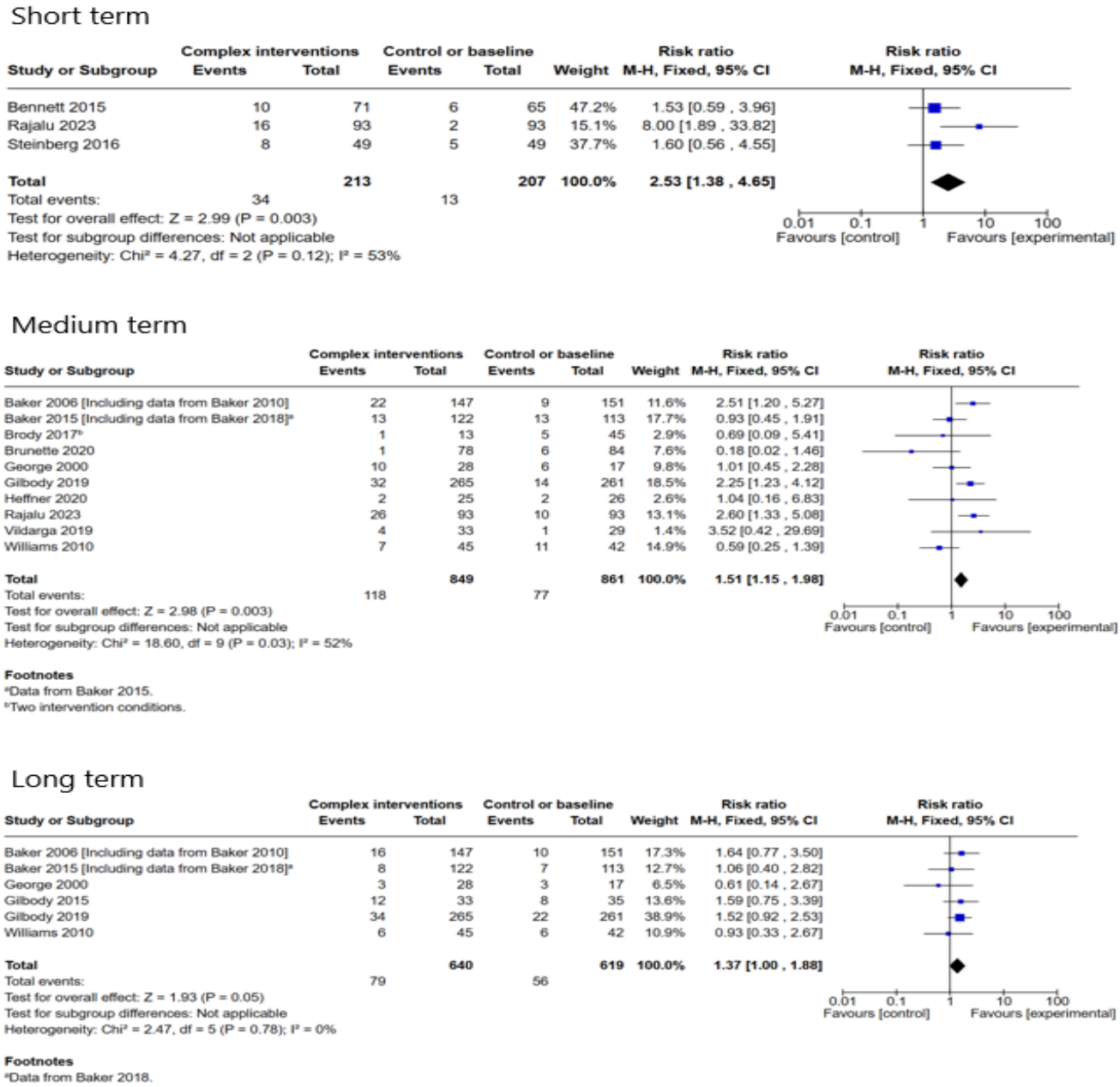


Figure 2.2: Meta-analysis demonstrating the addition of complex interventions within the short, medium and long term.

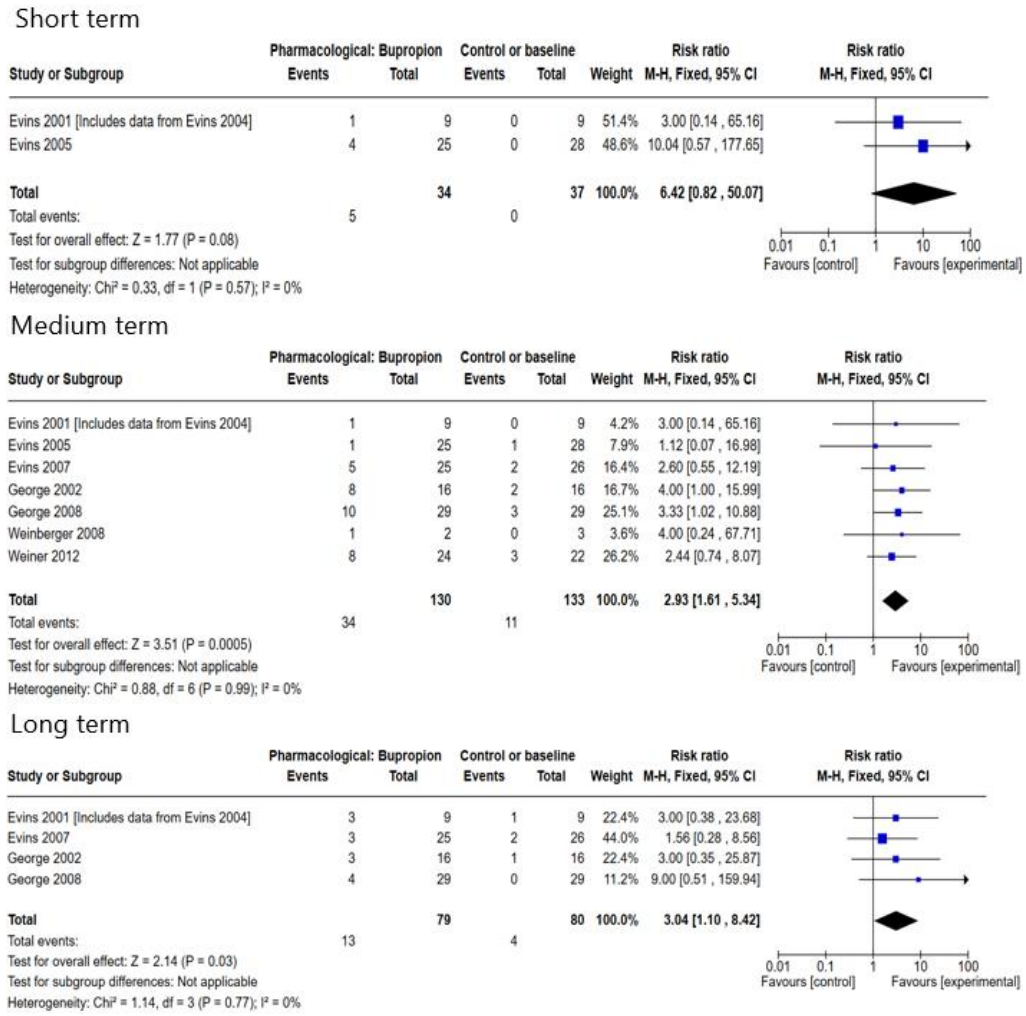


Figure 2.3: Meta analysis demonstrating the addition of Bupropion within the short, medium and long term.

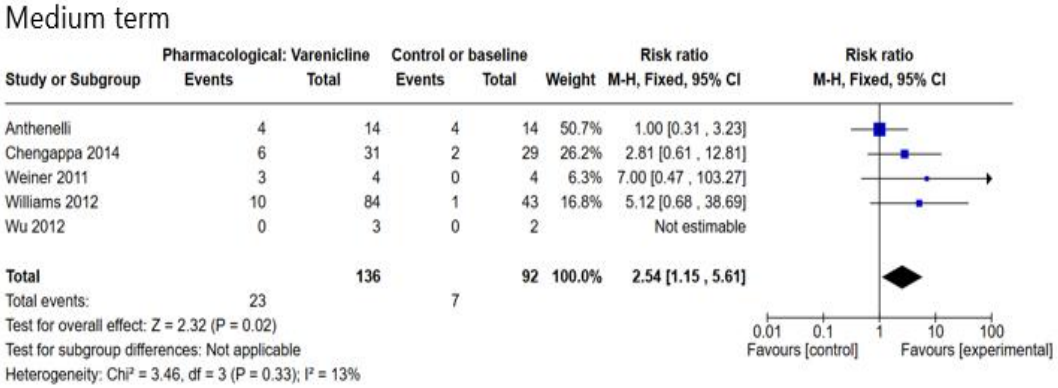


Figure 2.4: Meta analysis demonstrating the addition of Varenicline within the medium term.

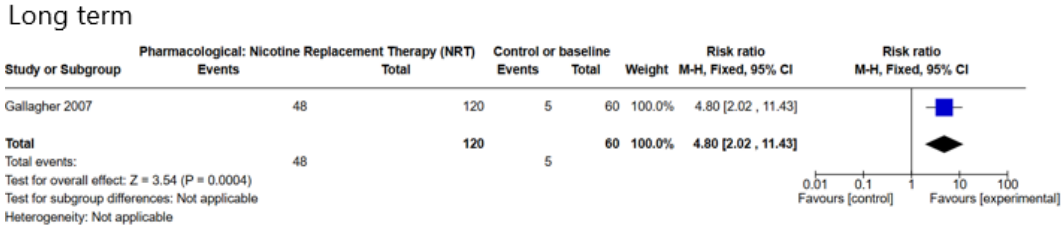


Figure 2.5: The addition of Nicotine Replacement Therapy (NRT) in the long term.

2.5.2 Secondary outcome measures

Change in psychiatric symptoms

Of the included studies, 26 used one or more validated symptom scales to ascertain whether psychiatric symptoms had altered during the trial (Table 2.4). Of the studies that tested outcomes for significance, only one study found a significant worsening of cognitive score in the intervention group compared to placebo (Evins et al., 2005) and one study found a statistically significant increase in Positive and Negative Symptoms of Schizophrenia (PANSS) scores, but a decrease in other psychiatric symptoms measured using the Brief Symptom Inventory (BSI) (Vilardaga et al., 2020). Therefore, it appears that smoking cessation interventions did not worsen psychiatric symptoms. However, due to heterogeneity between the symptom scales and time points used, no meta-analysis was conducted.

Change in BMI

Change in BMI was not routinely measured, with four studies listing BMI as an outcome (Chengappa et al., 2014; Gilbody et al., 2015, 2019; Lyu et al., 2018) and one study reporting weight gain (Anthenelli et al., 2023). Of these studies, only four reported changes in BMI or weight, therefore no meta-analysis was conducted.

Adverse events

Of the included studies 22 reported of adverse events (Table 2.4), although in 5 of these studies this was not fully reported (Anthenelli et al., 2023; Fatemi et al., 2013; Tidey et al., 2011; Weinberger et al., 2008; B. S. Wu et al., 2012). Six studies reported one or more serious adverse effects (SAE's), four reported that there were no SAEs, It is not clearly reported in the remaining studies whether or not there were no SAEs identified or if SAEs did occur but were not reported in the article. No standardised method for reporting adverse events was used and some studies differentiated between serious adverse events and adverse events whereas some did not.

Cost effectiveness

Only two studies (Gilbody et al., 2015, 2019) investigated the cost-effectiveness of bespoke smoking cessation interventions. The primary was a pilot study demonstrating that it was feasible to carry out a cost-effectiveness analysis of a bespoke smoking cessation intervention compared to usual care, however as it was a pilot study it was not sufficiently powered for firm conclusions to be drawn. This approach was subsequently expanded upon in the 2019 Randomised Controlled Trial (RCT), which

provided stronger evidence suggesting that a tailored smoking cessation intervention may be cost-effective, particularly in terms of reduced overall healthcare costs and improvements in quality of life. However, it remains unclear whether these findings can be attributed specifically to the intervention's effectiveness in addressing nicotine dependence among individuals with SMI. Therefore, additional high-quality studies are needed to robustly evaluate the cost-effectiveness of such interventions in this population.

Table 2.4: Secondary Outcome Measures

	Change in BMI	Change in psychiatric symptoms	Number of adverse Events
Complex Interventions			
Tidey et al., (2016)	Not reported	Time points: baseline only. PANSS.	Not reported
Brody et al., (2017)	Not reported	Time points: 3 months. BPRS, SANS, CGI, BDI-II, C-SSRS, AIMS. No significant differences.	N = 11: Insomnia (n = 4), with vivid dreams (n = 2), nausea (n = 2), rash (with patch) (n = 2), and agitation (n = 1) also being reported. There were no serious adverse events.
Gilbody et al., (2019)	No significant difference at 6 and 12 months.	Time points: 6, 12 months. FTND, MTQ, PHQ-9, GAD-7 showed no significant difference.	None reported
Heffner et al., (2020)	Not reported	Time points: 1 month. HQ-9, SMR. No significant differences.	N =18 AEs, 9 serious adverse events (SAEs).
George et al., (2000)	Not reported	Time-points: 3 months, 8.5 months AIMS, BDI, PANSS, WEPS: not significant	Not reported
Gilbody et al., (2015)	Change in BMI not reported. Mean BMI at baseline and 12 month reported	Time points 1,6,12 months PHQ-9, EQ-5D, SF-12 mental reported but not tested for significance	21 events of which 12 SAEs, 10 in intervention 2 in usual care
Williams et al., (2010)	Not reported	Time-point 3 months BDI and PANSS positive and negative not significant	Not reported
Bupropion			
Lyu et al., (2018)	No significant differences between groups in week 24 changes for BMI	No significance in PANSS total and subscale scores (p's > 0.05).	N = 7 adverse events. No serious adverse events.
Evins (2001) (Including data from Evins 2004)	Not reported	Time-points 3 months, 6 months AIMS, SANS, SAS: not significant BPRS (total): significant decrease intervention group 0 3	No adverse events

		months (= 0.03) and 3 6 months (= 0.02). BPRS (+ve symptoms): significant decrease intervention group 0 3 months (= 0.03). –p Not significant 3-6 m. HAM-D: significant increase for placebo group 0 3 months (< 0.01). –p Not significant 3-6 m. HAS: not significant.	
Evins (2005)	Not reported	Time-points 3 months Barnes Akathisia Scale: not significant HAM-A, HAM-D, SANS, SAS, WEPS, PANSS (total): not significant PANSS (subscale); significant increase in excitement score placebo versus intervention group (= 0.017) P Significant decrease cognitive score intervention versus placebo (= 0.029) P Other subscales not significant	3 events requiring withdrawal, 1 in the intervention, 2 group unknown
Evins (2007)	Not reported	Time-points: 3 months AIMS, BDI, SANS, STAI, HAM-D, PANSS: not significant Barnes Akathisia Scale: significantly lower in intervention group (= 0.005) P SAS: significantly lower score in the intervention group (= 0.016)	No SAE's
George (2002)	Not reported	Time-points 2.5 months, 8.5 months AIMS, BDI, WEPS: not significant PANSS: significant decrease in intervention group for negative symptoms (< 0.05; general P positive subscales not significant	Not reported
George (2008)	Not reported	Time-points: 2.5 months, 6.75 months BDI, PANSS: not significant	No SAE's
Weinberger (2008)	Not reported	No details given on secondary outcomes	Not fully reported
Weiner (2012)	Not reported	Time-points: 2 weeks, 1 month, 2 months and 3.5 months BPRS, SANS: not significant	5 SAEs in the intervention group and 2 in the placebo group
Tidey (2011)	Not reported	Time-points 1,2, 3, 4 weeks. PANSS, UPDRC ad AIMS not significant.	Not fully reported incidence of specific AEs reported but not all
Fatemi (2013)	Not reported	Time point: 3 months Significant positive correlation between serum	Not fully reported

		cotinine levels and BPRS total score (= 0.014), p BPRS +ve subscale score (= 0.002), SAPS total p composite score (= 0.02) and SAPS delusion p subscale score (= 0.013)	
Varenecline			
Chengappa (2014)	BMi as an outcome measure. Mean weight gain.	Time-points 3, 6 months Scores for MADRS, YMRS, HARS and CGI reported but not tested for significance.	6 SAEs in the intervention group and 4 in the placebo group
Weiner (2011)	Not reported	Time-points 3 months BPRS +ve items, anxiety/depression not significant	8 side effects in the intervention group 2 in the placebo group
Williams (2012)	Not reported	Time-points: 3, 6 months PANSS not significant	9 SAEs in the intervention group and 4 in the placebo group
Wu (2012)	Not reported	Time-points 2.5 months Psychiatric symptoms not significantly changed	Not fully reported
Jeon (2016)	No details given	Week 8: reduction in PANSS, general psychopathology score, and the HAM-D. The PANSS negative symptom score and the SANS score did not reveal significant results.	5 adverse events reported. *N* = 2 nausea, *N* = 2 aggravated symptoms, *N* = 1 headache
Smith (2016)	Not reported	Time-point 8 weeks Scores for PANSS, and SANS not significant when corrected for multiple comparisons.	Comparisons made between number of AEs in both groups. Concluded that no AE involving emergent psychiatric symptoms could be attributed to varenicline
Anthenelli (2023)	Two participants with schizophrenia experienced weight gain	Not reported	One SAE
Nicotine replacement therapies			
Chen (2013)	Not reported	Time-points: 2 months PANSS, SAS not significant	Not reported
Dalak (1999)	Not reported	Time-points: day 2 AIMS: significantly increased score intervention group day 2 (< 0.05) p BPRS, HAM-D, SANS, SAS: not significant	Assessment for signs of nicotine toxicity none reported
Gallagher (2007)	Not reported	Time points 5, 9 months BSI not significant	Not reported
Behavioural Interventions			

Baker et al., (2006) [Including data from Baker 2010]	Not reported	Time-points: 4 months, 7 months, 13 months CDI: significantly lower score for intervention group < 0.001 at all time-points p BPRS: not significant at any time point SF-12 (mental): significantly lower score for intervention group < 0.001 at all p time-points STAI: significantly lower for intervention group < 0.001 at 7 months	Not reported
Brunette et al., (2020)	Not reported	No detail on secondary outcomes given	No adverse events were reported during the use of the interventions
Bennett et al., (2015)	Not reported	No detail on secondary outcomes given	Not reported
Baker et al., (2018) [Merged with Baker et al., 2015]	Not reported	Time point 3.75, 12 months, 36 months BPRS, BDI, GAF, SF-12 not significant	Not reported
Rajalu et al., (2023)	Not reported	Time points: 1, 3 and 6 months. CGI-S significant reduction ($p < 0.01$) in psychiatric symptoms and CGI-S significant ($p < 0.01$) clinical improvement both at 6 months.	Not reported
Steinberg et al., (2003)	Not reported	Not reported	Not reported
Vildarga et al., (2019)	Not reported	Time point: 4 months. PANSS statistically significant increase. Brief Symptom Inventory small reductions in symptom severity, anxiety, and depression.	No statistical significance between conditions
Other (TMS)			
Smith et al., (2015)	Not reported	Time point after final session PANSS and PYCHRATS no significant differences	15 AEs in active treatment arm and 16 in sham treatment arm
Wing et al., (2012)	Not reported	No detail on secondary outcomes given	Not reported

2.6 Discussion

Interest in smoking cessation in SMI groups is rapidly increasing, with $N = 26$ studies in the previous review (Peckham et al., 2017), and $N = 12$ new studies in the current review. In line with the results of the previous review, findings indicate that people with SMI can quit smoking, and the same interventions that work for people in the general population, work for people with SMI e.g., the use of varenicline, bupropion, NRT or complex interventions to support a quit attempt.

Notably, this updated review builds on the 2017 review by Peckham et al., providing a comprehensive synthesis of smoking cessation interventions in people with severe mental illness that is not limited by intervention type. Unlike the review by Spanakis et al., which focused exclusively on behavioural interventions, or the Cochrane review by Hartmann-Boyce et al., which was limited to nicotine replacement therapy, this review includes pharmacological, behavioural, and complex interventions, offering a broader overview of the evidence base in this population (Hartmann-Boyce 2021, Spanakis et al., 2022; Peckham et al., 2017). Moreover, whilst more focused reviews have been conducted- such as Banks et al. (2023), examining the effects of nicotine reduction, Lindson et al. (2025), evaluating e-cigarettes, and Hawes et al. (2022), exploring psychosocial interventions for people with SMI- the present review provides a broader synthesis of smoking cessation interventions shown to be effective in this population, without restriction to a single intervention type.

The addition of only one new Varenicline (Champix) study since the previous review may be a consequence of the 'supply disruption alert', caused by the original patent expiring in September 2021 (National Centre for Smoking Cessation and Training, n.d.). As a result, there has been a 99% reduction in the number of varenicline prescriptions since 2021, falling from 70,235 items dispensed in 2021-2011, to 73 in 2023/2024 (NHS England, 2025). Additionally, a suitable replacement medication (Cytisinicline, otherwise known as Cytisine) was not approved for use until January 2024, (West et al., 2025). Moreover, this review also has a small number of Bupropion (Zyban) studies, with only one new study included since the last review. It is anticipated that this is due to the current prescription gap occurring in Bupropion, with there being a sharp decrease in Bupropion prescriptions. Notably, 15,304 prescriptions were dispensed in 2023-2024, contrasting those of both 2020-2021 (20,925) and 2022-2023 (50,709) (NHS England, 2025).

It is notable that no included studies investigated the effectiveness of e-cigarettes (e-cigarettes) for smoking cessation among people with SMI. This absence is surprising, given Public Health England's guidance recommending that individuals in inpatient mental health settings be offered the option of e-cigarettes during their hospital stay (Public Health England, 2020). This gap echoes conclusions from the previous review (Peckham et al., 2017) which emphasized the need for further research on e-cigarettes in mental health settings and called for trials targeting smoking cessation among people using mental health services. These calls align with current government and public health priorities outlined by NICE and the UK Government (National Institute for Health and Care Excellence (NICE), 2021; UK HM Government, 2025).

One possible explanation for the lack of studies utilising e-cigarettes, is the absence of any medicinally licensed vaping devices recommended by the NHS- outlined by the recent National Centre for Smoking Cessation and Training (NCSTT) evidence (McEwen et al., 2023) This is notable, given that vaping is widely endorsed as an effective smoking cessation aid within both literature and policy (NHS England, 2022). It is speculated that the lack of licencing hasdiscouraged researchers from studying e-cigarettes for smoking cessation in people with SMI. Additionally, support for e-cigarettes as a smoking cessation aid has only gained traction recently, perhaps contributing to a publication lag and scarcity of research, particularly within the SMI population.

Despite this, evidence within the general population supports e-cigarettes as an effective cessation aid. A large-scale systematic review found that nicotine-containing e-cigarettes significantly improved quit rates compared to both standard NRT and non-nicotine e-cigarettes. However, this review excluded participants with SMI. Given the high smoking rates in this population- and their potential to benefit most from cessation aids, such exclusion likely contributes to widening health inequalities. Crucially, this may explain why the current review found no studies on e-cigarette use in this group.

Thus, while evidence exists for the general population, research remains lacking for this vulnerable population.

Of the complexed interventions included in this study, three were statistically significant; Rajalu et al., (2023) at the short and medium term, alongside Baker et al., (2006) and Gilbody et al., (2019) at the medium term only. Identifying the active components of these successful interventions is important for the wider context of this thesis and understanding what supports cessation in people with SMI. The first shared component across these studies was the use of Motivational Interviewing (MI), which is also emphasised in National Centre for Smoking Cessation and Training (NCSCT) best practice guidance (National Centre for Smoking Cessation and Training, 2024). Importantly, MI is a collaborative and person-centred counselling approach designed to strengthen motivation and commitment to change by supporting individuals to clarify their goals and enhance readiness to act (Miller & Rollnick, 2002a). Practically, MI was used within these interventions to support individuals in exploring uncertainties surrounding smoking cessation, alongside their commitment to quitting, eliciting personal reasons for cessation and exploring the role smoking played in their daily life. Therefore, identifying MI as a common ingredient provides a benchmark for exploring how such approaches are enacted by practitioners at ground level- explored using the Positive Deviance approach later on in this thesis.

A second common feature of these effective complexed interventions was their emphasis on relapse management and sustained encouragement after lapses. Rather than treating relapse as a failure, they anticipated it as part of the cessation process and hence, built in strategies to support recovery. Baker et al., (2006) incorporated structured Cognitive Behavioural Therapy (CBT) techniques such as self monitoring, practising coping skills and rehearsing 'slip management' or relapse plans. Moreover, Rajalu et al., (2023) combined their MI with relapse planning by helping individuals to identify their 'high risk' situations and prepare personalised coping responses. Finally, the SCIMITAR+ trials (Gilbody et al., 2019) embedded relapse support within flexible follow ups, with mental health nurses maintaining contact, offering encouragement after lapses, and re setting quit plans as needed. Collectively, these approaches demonstrate that effective smoking cessation support for people with SMI relies on building but also on longer term, tailored strategies that accommodate relapse.

A further set of shared features across these effective interventions related to the way that support was delivered. All three combined behavioural components with pharmacotherapy, with participants being routinely offered NRT or other cessation medications (Baker et al., 2006; Gilbody et al., 2019; Rajalu et al., 2023), reflecting policy recommendations that advocate combined treatment as the most effective approach to smoking cessation (National Centre for Smoking Cessation and Training, 2024; National Institute for Health and Care Excellence (NICE), 2021). Moreover, the interventions were explicitly tailored to the needs of people with SMI, for example, in SCIMITAR+ this involved simplified written materials, slower pacing, repetition and delivery by trusted mental health professionals in home or community settings (Gilbody et al., 2019). Finally, flexibility and sustained contact were central to their design, with multiple structured sessions provided over extended time periods and follow up contacts maintained after lapses, discussed prior. Therefore, this provides a top-down perspective on successful practice, which can be triangulated with the bottom-up exploration of Positive Deviance in the subsequent three chapters.

Interestingly, three of the smoking cessation interventions were tailored digital interventions (Baker et al., 2018; Brunette et al., 2020; Heffner et al., 2020). Two of these demonstrated greater effectiveness than non-tailored interventions and one was a smoking cessation motivation study, demonstrating that

digital interventions are equally motivational as in person interventions. Evidence suggests that digital interventions such as these are on the rise, with the National Institute for Clinical Excellence (NICE) beginning a scoping review into their effectiveness and safety in 2025 (National Institute for Health and Care Excellence (NICE), 2026). Furthermore, evidence suggests that digital interventions can be effective in aiding smoking cessation in people with SMI (Martinez Agulleiro et al., 2023; Sawyer et al., 2022). However, evidence suggests that people with SMI often have low levels of digital literacy, with a study from 2024 (Spanakis et al., 2024) reporting that 42% of participants with SMI had no foundation skills with technology. As a result, these individuals lack the prerequisite knowledge to interact with and benefit from digital technologies. Further evidence supports this, highlighting that digital applications should be designed specifically with this in mind, perhaps following a simpler interface (Sawyer et al., 2022).

Overall, all studies had some or high bias concerns. The risk of bias is often higher in older studies, though this may be due to changes in reporting protocols in more recent research. For example, the CONSORT reporting protocol was introduced in 1996 for transparent and reliable reporting of RCT's, being updated in 2001, 2010 and 2025 (Page et al., 2021). Hence, research studies may have been abiding to reporting recommendations at their time of publication, which do not necessarily reflect modern day reporting requirements.

Future research directions

Like the previous review, it is recommended that the use of e-cigarettes for smoking cessation in people with SMI should be explored in future high-quality trials, in line with current government priorities. Moreover, research should investigate if smoking cessation methods deemed as effective in community mental health settings are effective in inpatient settings. Finally, tailoring of digital interventions is required, to ensure that the needs of people with SMI are met and smoking cessation can be achieved safely.

2.6.1 Conclusions

The current review suggests that complex interventions as a smoking cessation method are being increasingly utilised, likely reflecting a policy change. Digital interventions are becoming more common, and tailored digital interventions for people with SMI were equally effective as in person interventions, and more effective than non-tailored digital interventions. However, these interventions should be used cautiously due to lower digital literacy in people with SMI, perhaps reducing their accessibility. No new bupropion studies were identified, and only one new study used varenicline, likely due to the current prescription gap and supply disruption alert respectively. Finally, while current evidence suggests that people with SMI can achieve smoking cessation when appropriate support is offered, the percentage of people with SMI who smoke is still higher than that of the general population, indicating further work is needed.

Within the context of the wider thesis

Moreover, the findings from this chapter constitute a central component of this thesis. These findings are subject to triangulation within a later chapter by contrasting the literatures proposed best practices for smoking cessation among people with SMI, with evidence of what is effective in practice at the ground level. Therefore, the subsequent three chapters will introduce (Chapter 3) and examine (Chapter 4, 5) instances of high performance in practice with the intention of identifying potential

discrepancies between the academic evidence base and applied service delivery. As a result, this analysis aims to generate meaningful recommendations for service improvement. Thus, the following chapter sets out the methodological framework and contextual background underpinning the exploration of ground level high performance.

Chapter 3: Exploring the 'Positive Deviance' approach.

3.1 Chapter summary

This chapter outlines the methodology employed in the main empirical study reported in this thesis, the Positive Deviance (PD) approach. This is a quality improvement methodology based on the principle that individuals, communities, or services can succeed despite facing the same constraints as others and hence, are able to learn from this success. Moreover, the underlying assumption is that the mechanisms enabling success in these cases are more likely to be transferable to others working in similar contexts, supporting meaningful and sustainable changes. This chapter begins by tracing the origins of PD in public health, first developed to address childhood malnutrition in Vietnam, before examining its applications within healthcare. It then introduces the main methodological framework for operationalising PD within this PhD, the Bradley et al. approach. This approach is most widely adopted in healthcare settings, with each stage explored in depth. The chapter then considers the strengths and limitations of the PD approach, including strategies for applying this in contexts where robust quantitative data may be lacking. Finally, this chapter outlines how PD is used within Chapter 5, to investigate high performance in smoking cessation within inpatient mental health care. By doing so, this research seeks to identify and understand examples of exceptional practice that have the potential to drive tangible improvements in smoking cessation outcomes for people with severe mental illness (SMI).

3.2 Introduction

3.2.1 Positive Deviance: Definition, Origins and Applications.

The Positive Deviance (PD) approach is based on the notion of identifying individuals, communities or services who demonstrate exceptionally good performance on particular measures. These are identified as 'positive deviants' (Baxter & Lawton, 2022). This is a 'bottom-up' approach, which, unlike 'top-down' change initiatives (i.e., evidence derived from systematic reviews and policies), is rooted in the idea that solutions to complex problems already exist within communities (Baxter et al., 2016). The PD approach is known for its use within the 1990's to improve the nutritional state of children in Vietnam, by identifying the positively deviant but unusual practices of mothers feeding shrimp to their children, to prevent malnourishment (Singhal & Dura, 2017). Through the development of a 'Save the Children' education programme, whereby such PD behaviours were disseminated to the wider community, there was a 74% reduction in severe malnutrition in children under three years old. Notably, these results were sustained for many years after 'Save the Children' left these communities (U. A. T. Mackintosh et al., 2002). Since this, PD has been used within a variety of healthcare settings; from the investigation into hospital treatment times for Myocardial Infarction (Bradley et al., 2009), to improving hand hygiene compliance within hospital wards (Marra et al., 2011). More recently, this has been applied to exploring ethnic inequalities in maternal outcomes during the COVID-19 pandemic (Dooley et al., 2024) and exploring how leaders in maternity and neonatal services shape their local cultures of safety (Mackintosh et al., 2025). Thus, demonstrates the far-reaching impacts that PD can have within a variety of settings and for healthcare outcomes.

Although the PD approach itself can be applied in different ways, it rests on several core assumptions. Firstly, that positive deviants (PD's), or high performers, succeed and achieve exceptional outcomes despite facing similar constraints as others within a community. Secondly, that solutions to common problems already exist within communities- whether in teams, groups, departments and organisations within healthcare, rather than coming from policy makers or those removed from the front line delivery of care (Bradley et al., 2009; Lawton et al., 2014). These solutions are typically uncovered by using qualitative, field based techniques to explore how certain individuals or groups succeed, despite such shared challenges (Baxter & Lawton, 2022). This approach assumes that high performing practices are generally feasible and sustainable because they are already embedded within the community and thus, make use of existing resources. This is thought to increase the likelihood that such practices will be widely adopted and accepted (Baxter & Lawton, 2022; Lawton et al., 2014). Finally, once embedded, these changes can be amplified through follow on programmes, enabling their dissemination and contributing to sustained improvements (Marsh et al., 2002).

3.3 The Bradley et al. Framework for Conducting Positive Deviance

The most common frameworks for operationalising the PD approach are the 4/6Ds framework and the Bradley et al. framework (Baxter & Lawton, 2022; Bradley et al., 2009; Singhal & Dura, 2017). Firstly, the 4/6Ds framework includes the following stages; Defining the problem, Determining the presence of positive deviants, Discovering the uncommon but successful strategies they use, and Designing interventions to spread these behaviours. In some variations of this approach, additional steps such as Discern (to interpret findings) and Disseminate (to evaluate and spread solutions) are included, hence the reference to 4, 5 or 6Ds. Alternatively, the Bradley et al., (2009) framework was developed specifically for use within healthcare settings and has since become the most widely adopted in this context. Notably a recent scoping review highlighted this, indicating that the foundational framework employed in most of their articles was based on the Bradley et al approach (Kassie et al, 2024). Given the focus of this PhD being on inpatient smoking cessation care within the NHS, this chapter concentrates on the Bradley et al. framework, which provides the most relevant and rigorous structure for operationalising PD within healthcare.

The Bradley et al., (2009) approach is exemplified within Figure 3.1 using their original study. Firstly, Stage 1 of this approach begins with the identification of high performers, often using concrete, routinely collected, and widely endorsed data (Stage 1). Secondly, qualitative methods are used to generate hypotheses about the strategies utilised by high performers to succeed (Stage 2). These hypotheses can be tested in larger and more representative samples (Stage 3), and then the newly characterised 'best practice' can be disseminated to others with the help of key stakeholders (Stage 4) (Bradley et al., 2009). These stages are discussed in detail in the following sub-section.

Initially, this approach was designed for use within healthcare organisations, following research into improving 'door-to-balloon' times for patients experiencing ST-elevation myocardial infarction (STEMI)- a type of myocardial infarction, or heart attack, caused by a blocked artery (Bradley et al., 2009). Importantly, the clinical guidance recommends that the interval between a patient's arrival at hospital with a blocked coronary artery and the insertion of a stent to reopen it should be within 90 minutes to maximise survival (Antman et al., 2008). Yet at the time of this study, fewer than 50% of patients within the US received treatment within this target. Hence, Bradley et al., (2009) aimed to identify hospitals consistently meeting this benchmark and understand what made their care effective.

Using national registry data, they identified 11 high performing hospitals and applied their full four-staged PD approach outlined above. Using semi-structured interviews, this revealed eight key strategies which facilitated those trusts to perform exceptionally well such as: hospitals having an explicit goal to reduce this time, visible senior management support and, strong collaboration between interdisciplinary teams. These factors were strongly associated with faster treatment times. Following this, dissemination through the 'Door-to-Balloon Alliance' campaign occurred, where toolkits, webinars and workshops were held to disseminate high performing practices. This resulted in a ~25% increase in the proportion of patients treated within 90 minutes over three years. Therefore, this project demonstrated both the feasibility and impact of a rigorous PD approach in improving outcomes across a national healthcare system.

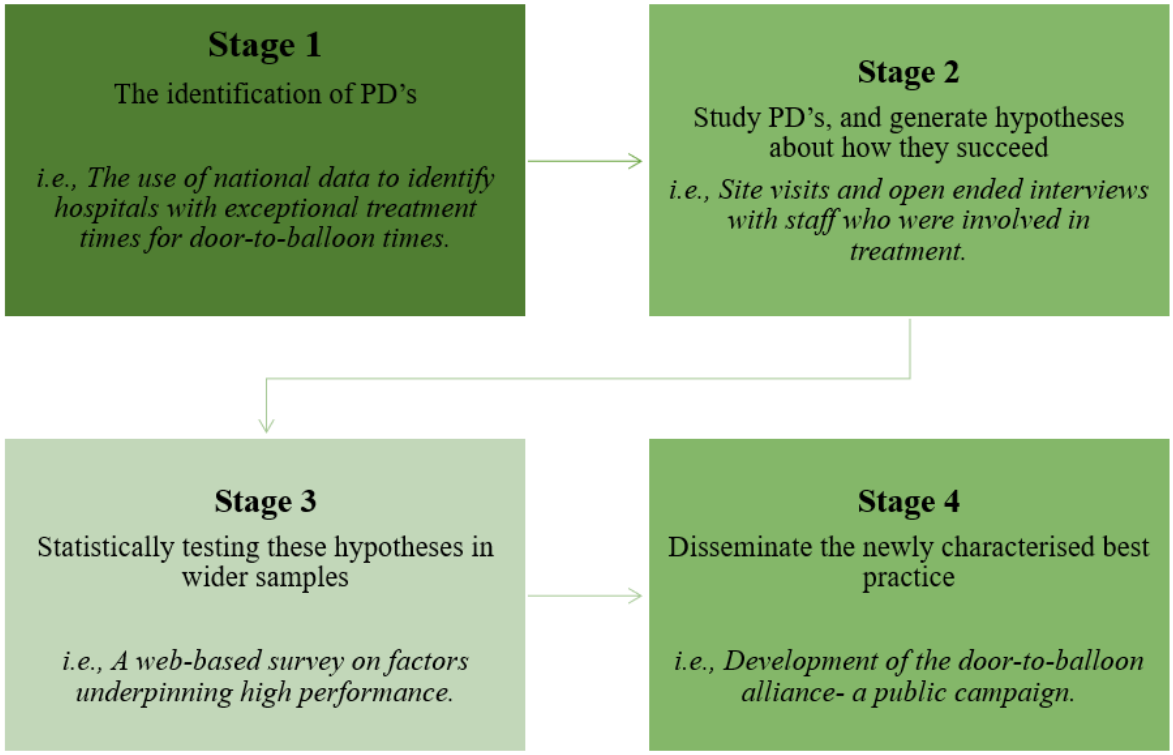


Figure 3.1: Bradley et al., (2009) framework for identifying and sharing positive deviant practices, illustrated using the original study as an example.

3.3.1 Stage 1 of the Bradley et al framework: The identification of Positive Deviants.

The levels of identifying Positive Deviance

As outlined earlier, Stage 1 of this framework focuses on identifying positive deviants (PD's), or high performers. This section will describe this and consider the different levels at which PD's can be identified- i.e., service level versus individual levels, and then discuss the quantitative and qualitative approaches for identifying them, along with their respective advantages and disadvantages.

High performers (PD's) are most commonly identified using quantitative performance data, ideally from routinely collected healthcare metrics (Lawton et al., 2014). This is supported by a systematic review by Baxter et al., (2016) which indicated that quantitative identification for PD's within Stage 1

was most common. Moreover, such data may be in the format of hospital specific data, such as Door-to-balloon times outlined above (Bradley et al., 2009), or similar formats. For example, Baxter identified exceptionally high performing wards for older people through exploring the routinely collected NHS Safety thermometer data (Baxter et al., 2019). Similarly, Rose et al., (2012) applied a Risk-Adjusted percent time metric (Rose et al., 2011) to rank anticoagulation clinics, then compared practices between the top and bottom performing sites. Therefore, this demonstrates how quantitative data can be used in healthcare to identify high performers within Stage 1 of this approach.

A recent example of the PD approach within healthcare settings that utilised such routine data, comes from Dooley et al., (2024). Here, they examined the impact of COVID-19 on ethnic inequalities on maternal and neonatal outcomes, across 128 NHS Trusts. To do so, high performing trusts were identified using the routinely collected Hospital Episode Statistics data. Notably, this data was where the inequality gap between minority ethnic and white women reduced during the pandemic. From an exploration of this data, nine Trusts were labelled as high performing (PD's), whilst ten comparator trusts (who showed no improvement) were identified. Through interviews with staff working within the high performing trusts, it was revealed that these trusts demonstrated proactivity, rapid adaptation, creative role shifting of staff members, improved team working, and more flexible communication with women- perhaps underpinning their high performance. Comparatively, interviews with staff from within comparator trusts revealed that staff felt overwhelmed, were fragmented in their responses, and lacked any perceived benefits from staffing changes. Thus, this research illustrates how routine data can be used to identify high performing trusts within healthcare settings. However, it is worthwhile noting that this study did not explicitly reference the Bradley framework- however they did state that their approach followed the 'two classic stages of positive deviance'- this these results should be interpreted as such.

A further recent example which utilised routine data to identify high performance within healthcare, comes from Mackintosh et al., (2025). They aimed to understand how high performers within maternity and neonatal services actively create and sustain their local cultures of safety. By exploring results from their safety culture survey- which highlighted the top scoring organisations for safety culture, they were able to identify high performers. These were services that consistently outperformed their peers on this safety measure. Following their identification qualitative interviews with the service leaders and unit safety leads within these high performing trusts were conducted to explore the factors underpinning their success. This revealed that high performing trusts improved safety cultures by: bridging organisational and professional boundaries, drawing on service users' voices alongside formal safety data, and leveraging their political networks to shape both everyday practices and board level decisions on safety. Additionally, staff members utilised their relationships with peers to build trust and ensure that safety remained a central organisational priority. This example illustrates how PD's can be identified using routine data mechanisms, as outlined above, and this can be done at the service level. However, like Dooley et al., (2024) they did not specify an employed framework to conduct their PD approach.

Datasets can identify high performance at a variety of different levels, depending on the granularity and scope of the dataset. At the system level (i.e. the macro level), national or regional datasets can be used to compare performance across entire healthcare systems, individual trusts, or specific hospitals, which enables the identification of whole organisations that consistently outperform their peers (Bradley et al., 2009). For example, Dooley et al., (2024) identified services who were demonstrating high performance on reducing ethnic inequalities. At the middle organisational level (i.e., meso level) services or specialty specific datasets allow for the detection of high performing clinical departments or service lines within hospitals. Finally, at the ward based level (i.e., micro level) data is more

granular, and can be used to identify specific wards which are high performing. For example, the NHS Safety Thermometer data, has been utilised to identify older people's medical wards with markedly better safety performance (Baxter et al., 2018). These different levels in which PD's can be identified is demonstrated within Figure 3.2. This tiered approach ranging from whole system comparisons to ward level analysis, enables researchers to match the scale of identification to the aims of the study and the data available.

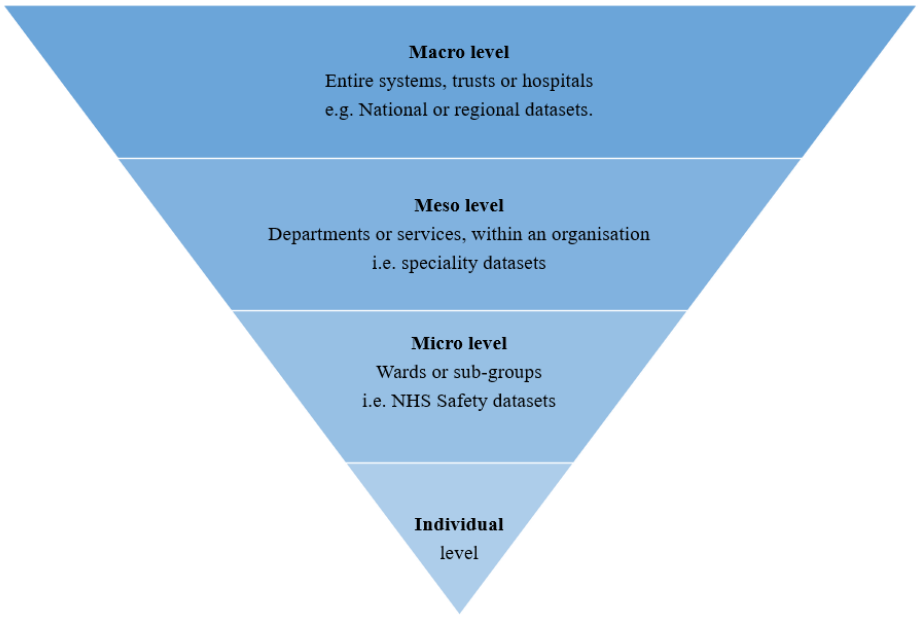


Figure 3.2: The various levels at which positive deviants can be identified, ranging from the system or trust level, through to an individual high performer.

Importantly, and as shown within Figure 3.2, high performers have also been identified at the individual level. However, this is not as common as identification at a higher level (Baxter et al., 2016). One reason may be that publicly available data is rarely published at an individual level, limiting the opportunities for individuals identification through routine metrics. Moreover, where such datasets do exist, their use is often accompanied by sensitivities- such as ethical concerns about labelling individuals as high or low performing, risks of unintended reputational harm of services if their data is not favourable, and regulatory requirements such as GDPR that restricts how personal data can be obtained, processed, and shared. Nonetheless, some evidence demonstrates the feasibility of using data to highlight individual high performers. Notably, Lindberg et al., (2013) identified individuals working in outpatient haemodialysis centres who demonstrated exemplary infection prevention practices. Their identification was conducted primarily by using infection rate data, however, this was combined with recommendations from their peers who highlighted individuals with behaviours that consistently contributed to lower rates of bloodstream infections. This aspect of qualitative identification is discussed in further detail later within this chapter. Following their identification, high performers share their strategies with colleagues and collaboratively designed solutions for their wider adoption. This example illustrates the value of identifying PDs at the individual level, as well as how such identification can directly feed into healthcare service improvement efforts.

More recent evidence has explored individual level high performance. For example, Fetene et al., (2025) explored socially and economically disadvantaged mothers from five sub-Saharan African countries- who typically had very lower access to maternal health services. Their aim was to identify those who despite this, managed to complete their full continuum of maternity care (i.e., antenatal visits, skilled facility delivery and early postnatal care), alongside understanding what factors enabled this. Initially, they identified socially and economically disadvantaged mothers who were at high risk of poor maternal care. Following this, they used Demographic and Health Survey data to pinpoint the minority (13.8%) of these mothers who achieved their full continuum of care, despite being identified as 'high risk'. Multilevel regression analyses were utilised to compare high performers with their peers, exploring the factors which may have contributed to their differential successes. This revealed that that having; stable employment, an educated husband, fewer children, decision making autonomy, and easier access to health facilities- were key enabling factors perhaps underpinning their exceptional performance. Therefore, this demonstrates that PD can be a powerful approach to improving healthcare, and can do so on an individual level. However, it is important to note that this study did not explicitly reference Bradley's framework, but did follow a similar pattern of approach.

Methods of identifying Positive Deviants

Within healthcare settings, identifying PD's using the preferred quantitative methodology highlighted above is notoriously challenging- due to substantial variations in the quantity and quality of available data. As highlighted by Woodcock et al., (2021), routinely collected or otherwise accessible outcome data may not exist and when it does, can be subject to bias, often stemming from the use of self-report methods (i.e., staff surveys) in these datasets. Furthermore, sufficient data is not always publicly available or standardised. For example, clinical coding (i.e., the notion of translating patient records into a standardised metric) can vary across organisations, making it difficult to compare performances across different organisations. Moreover, even when relevant datasets are available, they may not align with the aims of the study being conducted or may be costly and/or resource intensive to obtain. These factors outline the difficulty of accurately measuring performance to identify high performance within healthcare. This complexity is supported by a recent scoping review, which highlighted that the identification of PD's using no consistent validated criteria was common (Kassie et al., 2024a). As Baxter & Lawton, (2022) note, in such circumstances researchers should "consider alternative non-data-driven methods for identifying excellence". Consequently, then, where the preferred route of suitable quantitative datasets are not available, qualitative approaches to conducting Stage 1 can occur.

Beyond issues with the datasets, identifying high performance using quantitative methodology is complicated by variations in how such datasets are analysed. For example, quantitative identification of PD's often relies on rankings or performance tables, yet evidence suggests that these may not consistently capture the true highest (and lowest) performers. For example, Austin et al., (2015) found that only 10% of 844 hospitals rated as high performers in one ranking system were consistently rated as such in other systems. This inconsistency is likely due to the differences in both measurement selection and data quality (e.g., measurement errors or missing data), with each system applying its own rating criteria, emphasis, and performance metrics. Therefore, further complicating the identification of high performance using routine data in healthcare settings.

Moreover, it is worth considering the timescale in which such high performance is measured over. Some studies may identify and learn from one off successes using a single measure- for example, from individual examination performances (Zaidi et al., 2012). Alternatively, others may examine

performance over an extended period, such as tracking falls and pressure ulcers on older people's medical wards (Baxter et al., 2018). This is problematic as stand alone achievements are less reliable indicators of sustained excellence and long standing change. Hence, this demonstrates the complexity of utilising data for the identification of high performance within (Stage 1). Therefore, in cases like this whereby a suitable and robust quantitative measure cannot be identified- qualitative methods of identifying PD's may be sufficient. This is discussed below.

As aforementioned, Stage 1 of this approach can be conducted using non-data driven and qualitative methodology. Importantly, this identification can occur at the individual level (Figure 3.2). Two examples of an individual approach to positive deviance are outlined below. Firstly, a notable example that used qualitative methods to identify individual high performers (PD's) comes from Marra et al., (2011). They investigated hand hygiene compliance within two hospital wards. Here, nursing managers initially identified healthcare workers that they perceived as high performing in demonstrating good hand hygiene. Importantly, these were staff who also consistently demonstrated high policy compliance, showed a willingness to promote change, generated new ideas, and encouraged their colleagues to improve. Following their identification and ongoing observation, snowball sampling was applied- whereby additional high performers were identified by those original participants (the PD's). These high performing individuals participated in regular group meetings with staff from different shifts to discuss their attitudes toward hand hygiene, identify any perceived barriers, share their examples of good practice and design strategies to improve hand hygiene compliance. Through these groups, educational videos and public displays of unit infection rates were produced, alongside and performance comparisons between shifts to foster 'healthy competition' between staff. This resulted in intervention unit seeing a statistically significant, nearly twofold increase in positive hand hygiene episodes within staff, alongside a significantly lower healthcare associated infection rate compared when compared to a control unit. This example demonstrates that Stage 1 of PD can occur using qualitative methodology when suitable quantitative metrics are unavailable. Furthermore, high performance can be identified at an individual level and can still achieve meaningful and measurable improvements in healthcare practices.

Further evidence supports the use of qualitative methods to identify individual level high performers. For example, Sheard et al., (2017) identified high performers through identifying the 15 individuals that received a national award which recognised them as successful UK healthcare innovators. Through this identification, and following the latter stages of this approach, discussed later on within this chapter, they conducted in depth interviews and thematic analysis with these high performers. A set of traits were identified within these individuals, which included personal determination, skill in brokering relationships and building networks, the ability to navigate organisational culture to their advantage, and the strategic use of evidence to influence others. These such insights could inform recruitment strategies and policy developments by highlighting the personal and behavioural attributes associated with exceptional performance. Therefore, this example illustrates that qualitative approaches to PD identification, Stage 1 of the Bradley approach, can effectively identify high performers and generate actionable findings to support change in healthcare settings.

3.3.2 Stage 2 of the Bradley et al framework: Generating Hypotheses about How Positive Deviants Succeed.

Following this, the purpose of Stage 2 is to use qualitative methods, such as open ended questionnaires or interviews, to generate hypotheses about how the identified high performers deliver

exceptional practice, despite facing the same constraints as others (Bradley et al., 2009). This section will explore the methods that qualitative data can be collected to explore high performance.

Qualitative data collection may take a variety of formats, from semi-structured interviews, to focus groups and questionnaires. For example, in the Bradley et al., (2009) study outlined earlier they used both site visits and semi-structured interviews to explore the factors that enabled trusts to achieve lower door-to-balloon times. Here, in-depth site visits, consisting of tours of the hospitals were used to gain a greater understanding of the setting in which high performance occurs. Alongside this, semi-structured and open-ended interviews were conducted with staff members who were identified as being involved in supporting the reduction of door-to-balloon time within high performing trusts. Through this, they determined a set of strategies that were hypothesised to be causally related to the hospitals improvement in treatment times, alongside several organisational factors (i.e., senior management support). Therefore, this outlines how qualitative methodology, such a semi-structured interviews, can be conducted to explore the factors which allow PD's to succeed within Stage 2.

Further examples of this from within healthcare settings comes from Gabbay et al., (2013) who used semi-structured interviews to explore high performance in delivering diabetes care, Notably, after using quantitative methods to rank practices into 'improvement quintiles', according to their average point increase on three measures of diabetes care- they identified the five highest performing practices as PD's (Stage 1). Following this, they conducted semi-structured interviews with staff members from the five highest and lowest performing practices- to explore the factors underpinning their success. These interviews followed an interview schedule which was not guided by a pre-defined underpinning theory. The responses from the high performers were compared to those working in the lower performing services. This revealed that high performing services often had greater structural capabilities (i.e., more electronic health record functionalities), alongside a difference in; leadership styles and shared vision, sense, use, and development of teams, processes for monitoring progress and obtaining feedback, and presence of technological and financial distractions. This provides a further example to how high performance can be explored within Stage 2.

When collecting qualitative data in Stage 2 of the Bradley et al. approach, the use of a guiding framework can be valuable. Frameworks support data collection by ensuring that the factors underpinning exceptional performance are assessed systematically and comprehensively, rather than selectively (Michie, van Stralen, et al., 2011).Frameworks can also improve rigour and comparability across sites. However, they may also introduce limitations, as they can narrow the scope of enquiry and restrict the discovery of unexpected or context specific influences (Baxter & Lawton, 2022). The notion of frameworks and their application is discussed below.

A practical example of this comes from Baxter et al., (2019) who followed the Bradley approach to explore how ward teams delivered exceptionally safe patient care within older peoples medical wards. After identifying four above average and four high performing (PD) wards using routinely collected NHS Safety Thermometer data (Stage 1), they explored the factors enabling these wards to achieve exceptional safety (Stage 2). Focus groups were conducted with staff, guided by the Manchester Patient Safety Framework- which provided consistency and structure to questioning. Focus groups were then analysed using inductive thematic analysis (Braun & Clarke, 2006). This indicated that PD wards were often characterised by having teams that worked well together, demonstrated stability, and had strong familiarity among members. This study illustrates the value of applying a guiding framework to strengthen data collection within Stage 2, and provides a further healthcare example of utilising the Bradley framework.

It is important to note that different frameworks can be applied to data collection, depending on the studies context and aims. One commonly used framework in healthcare research is the COM-B model (Michie, van Stralen, et al., 2011). This model proposes that behaviour (B) is the result of the interaction between capability (C), opportunity (O), and motivation (M). Applied practically, this means exploring if individuals or teams have the necessary knowledge and skills (capability), the physical and social conditions to perform the behaviour (opportunity), and the conscious drives that energise and direct the behaviour (motivation). By utilising this framework it can provide a structured framework for exploring high performing behaviours and helps to ensure that the drivers of success are captured comprehensively.

3.3.3 Stage 3 of the Bradley et al framework: Testing hypotheses in statistically larger, representative samples of populations.

Following Stage 2, hypotheses can be generated on the factors enabling high performance, so that their success can be tested within larger and more representative samples. This allows for an exploration into their associations with improved outcomes (Bradley et al., 2009). This section will outline the process of conducting Stage 3, alongside the potential challenges involved.

The value of testing hypotheses in larger samples is illustrated by (Bradley et al., 2006, 2009), as outlined earlier. They conducted semi-structured interviews with high performing hospitals, which lead to the hypothesis that exceptional D2B times for Myocardial infarction were causally related to factors at the organisational context (i.e., senior management support), alongside service strategies (i.e., allowing emergency physicians to activate the catheterization laboratory directly) (Bradley et al., 2005). Following this, they aimed to test the hypothesis that these factors contributed to improved DTB times. To do so, they created a web based survey exploring the extent to which 500 hospitals within the wider community implemented these high performing processes. Upon analysis, 6 hospital strategies were confirmed to be associated with significantly faster D2B times. Hence, this demonstrates the advantage of conducting Stage 3, as by testing hypotheses in larger and more representative samples, researchers can identify which strategies are genuinely associated with improved outcomes and discard those that are not. In turn, this increases confidence in the conclusions drawn about high performing practices.

However, there are considerations when conducting Stage 3. In particular, when examining the relationship between the identified strategies and high performance, the direction of this relationship is not always clear. This point is outlined by Baxter et al., (2019), who highlight that exceptional performance may in fact give rise to the observed factors, rather than these factors being the cause of exceptional performance. For example, they suggest that high performing teams may experience elevated job satisfaction because of their success, rather than their job satisfaction being the driver of positive deviance. This highlights the need for researchers conducting Stage 3 to consider and account for the potential directionality of such effects, alongside interpreting their findings with caution to avoid drawing inaccurate causal conclusions.

A further challenge arising within Stage 3, is that not all high performing factors can be easily measured. In many cases, the routine data needed to do so may be unavailable, incomplete, or poorly aligned with the behaviours under investigation- limiting the opportunities for their quantitative validation. When this occurs, alternative approaches placing less reliance on existing datasets may be more appropriate. For example, self-report surveys are often used as a substitute, however, these carry a risk of bias when individuals are asked to assess their own, their team's, or their organisation's

performance or other such traits. Social desirability bias, for example, can lead respondents to over-report socially favourable behaviours and under report less favourable ones (Grimm, 2010). This is particularly problematic when assessing contextual or cultural elements, such as those identified by Gabbay et al., (2013) in their work on leadership style and shared vision- rather than when exploring clearly defined processes or procedures. In such cases, the contribution of underlying factors like leadership quality or psychological safety may be underestimated. Given these limitations, more research, such as work aimed at developing and testing less labour intensive but reliable methods for validating Stage 2 hypotheses, could be beneficial.

Alongside this, Stage 3 is infrequently conducted- often due to the time pressures of projects, alongside the labour and resource intensive nature of this phase (Baxter et al., 2016). A systematic review by Baxter and Lawton (2016) found that only 6 of the 37 healthcare PD studies included in their review progressed to Stage 3, five of which were limited. Whilst they stated this could have been a result of a publication lag, more recent evidence has demonstrated the same issue. A scoping review from Kassie et al., (2024) which explored positive deviance within healthcare, highlighted that the selection process of identifying positive deviants is difficult- with there being no consistent and validated criteria that are utilised across studies. Likely as a result of this, Bradley et al., (2009) have been the only example to test their hypotheses in larger and more representative samples. This highlights the need to develop less resource and time intensive approaches for implementing Stage 3, to allow research to make this stage feasible in healthcare research.

3.3.4 Stage 4 of the Bradley et al Framework: Disseminating Positively Deviant Strategies to Others

Once Stage 3 has tested the hypotheses underpinning high performing practices, Stage 4 involves disseminating these strategies to others. This process requires collaboration with key stakeholders, including potential adopting organisations, to share evidence on the newly characterised best practices and support their uptake (Bradley et al., 2009). .

This dissemination of these high performing strategies can be achieved through top-down or bottom-up approaches. Top-down approaches to dissemination may be led by central authorities or governing bodies, whilst bottom-up approaches are often driven by frontline staff and communities (Baxter & Lawton, 2022). Notably, top-down dissemination is often most effective for system level applications, where influence at national or regional scale is needed. An example here is provided by Bradley et al., (2006, 2009) in their work on improving D2B times, outlined previously. Following the identification and testing of strategies within high performing sites- they launched the national D2B Alliance which was joined by 38 organisations. These organisations committed to treating at least 75% of their patients within the recommended 90 minute target (Antman et al., 2008). Alongside this, organisations within the alliance were supported through educational initiatives such as; workshops, seminars, and online resources, and regional champions (clinicians who promoted best practices locally and supported hospitals in implementing the recommended strategies) to do so (Bradley et al., 2009). This coordinated effort of dissemination resulted in a 25% increase in the proportion of patients treated within the target window- which demonstrates the significant positive impacts that Stage 4 may have within healthcare.

Alternatively, dissemination may occur using a bottom-up approach. This is best suited to individual or team level applications with meaningful community involvement, alongside when disseminating less concrete high performance strategies (i.e., cultural factors)- as bringing communities together may enable them to gain a greater understanding of how success is achieved. By involving the wider

community, this increases the likelihood that they will adopt such strategies and appreciate the relevance to their own context (Baxter & Lawton, 2022). For example, Sreeramoju et al., (2018) used a bottom-up approach to reduce the spread of healthcare associated infections. To disseminate their findings and generate improvement (equivalent to Stage 4), those identified as high performers- alongside their ward managers, infection preventionists, and a research team member- created an action planning group. This aimed to help spread the spread and implementation of their high performance hypotheses. Notably, this resulted in a significant decline in healthcare associated infections where this was implemented. Therefore, this demonstrates that a bottom-up approach to dissemination within healthcare settings can be just as effective as a top-down approach in producing change.

However, as mentioned within Stage 3, there are similarly few published examples of Stage 4 in practice. This is echoed within the previously mentioned systematic review Baxter et al., (2016), who found that often studies which did report dissemination often lacked in detail on their intervention design. Additionally, the scarcity of robust examples for both Stage 3 and 4 raises questions about the practical applications of the final two stages of this framework- alongside highlighting an important avenue for future research.

3.4 Positive Deviance in Mental Health: Application in the Current PhD Study

In summary, the Bradley et al. approach to PD is made up of four stages, with the overarching aim being to understand how individuals, communities, or services achieve exceptional performance despite facing the same constraints as others. As demonstrated through its application within healthcare, this approach has been applied to drive positive change across a range of contexts; from improving hand hygiene compliance and reducing infection rates (Marra et al., 2011) to uncovering stronger structural and staffing systems in high performing diabetes care providers (Gabbay et al., 2013). Moreover, it has been applied to exploring ethnic inequalities in maternal settings (Dooley et al., 2024), alongside exploring how maternity services shape their cultures of safety (Mackintosh et al., 2025), and, in improving maternal healthcare (Fetene et al., 2025). These examples suggest that this approach has considerable potential within healthcare, offering a means to inform improvements at the level of staff, wards, trusts, and even policy.

Whilst there are applications of the PD approach to healthcare settings more generally, the evidence base for applying this in mental health contexts is limited. At present, the only identified example comes from the grey literature in the form of a case study by the National Alliance on Mental Illness (NAMI) in Pittsburgh, USA (Loyd & Freund, 2019). Although it does not explicitly follow the Bradley et al. framework outlined previously, its process aligns with the core underlying principles. Firstly, individuals with lived experience of mental illness who had found ways to overcome social isolation were identified through local mental health service discussions and workshops- notably, mapping on to Stage 1. Then, group conversations were then used to explore the specific behaviours and approaches these individuals employed- such as accompanying peers on public transport for the first time or helping them join community activities (Stage 2). These strategies were subsequently shared, and tried within the same service user groups, allowing others to adapt them to their own circumstances (Stage 3). Finally, these ideas continued to spread through peer led groups and community based initiatives, enabling wider participation and sustained social connections (Stage 4). Importantly, this example is the only known documented case of PD in a mental health context. Whilst it illustrates the potential of the PD approach, it also highlights the lack of evidence and as a result, a clear need for rigorous, peer reviewed research to build a stronger evidence base.

In addition to this, the current PhD is to our knowledge, the first to apply the PD approach within mental health settings to explore smoking cessation. However, it is worth noting that a variation of PD methodology has been used in other related contexts, for example, to support smoking cessation among prisoners (Awofeso et al., 2008). Here, in New South Wales prisons, smoking rates exceeded 70%, with most prisoners having no intention to quit, and existing cessation programs proving both costly and difficult to implement. Awofeso addressed this by incorporating PD-like techniques into existing smoking cessation initiatives within the prison, following four stages that were similar to those in the Bradley et al. framework. Notably, this started with defining the community problem using quantitative prison data. Following this, individual PD's were identified through the use of surveys. They were also identified by highlighting prisoners that had not bought tobacco for three consecutive weeks and had participated in smoking cessation programmes. From this, PD's behaviours were explored and disseminated throughout the wider prison environment using infographic posters and peer support. As a result, 70% of programme participants were smoke free three months later, and the number of prisoners making independent quit attempts was significantly higher than at comparison sites using standard cessation programs. This demonstrates that PD may be an effective methodology to improve smoking cessation behaviour, and is worth exploring further.

However, this study had several important limitations that are worth noting. Firstly, it did not apply an established PD framework such as the Bradley et al. approach which, as Baxter & Lawton, (2022) note, can provide methodological rigour and a clear structure for identifying, exploring and disseminating PD behaviours. Furthermore, the reporting in this study was limited, with little detail on how the surveys were designed or distributed, and no description of the analytic approach used to identify PD's behaviours. This echoes findings within a recent scoping review, indicating that often PD studies are poorly reported (Kassie et al., 2024). As a result, these gaps reduce the robustness and reproducibility of their findings. Whilst these results do suggest that PD principles may support the improvement of smoking cessation in prison settings, there remains no direct or generalisable evidence for their application in inpatient or general mental health settings, representing a clear opportunity for future research. Therefore, to the best of current knowledge, this PhD is the first study to utilise the Bradley et al., (2009) framework to PD, to explore smoking cessation within mental health settings. Notably, this element of the PhD is comprised of two studies, which are discussed briefly in turn, before their respective chapters (Chapter 4, Chapter 5). It is worthwhile noting that Chapter 4 is an exploratory approach, whilst Chapter 5 applies the first two stages of the Bradley approach to PD.

In conclusion, this chapter has introduced the Positive Deviance approach, alongside outlining the key Bradley et al. framework for exploring this. This has worked through the four stages in turn, explaining their applications, alongside their strengths and limitations. Moreover, this chapter has discussed the practical alternatives for overcoming such challenges. Finally, this chapter outlines the application of PD within healthcare, and its limited application within mental health settings- providing a future research gap. This therefore provides the methodological foundation for informing the following study (Chapter 4), alongside directly guiding the primary PD study within this thesis, presented in Chapter 5, whereby this approach is applied to explore exceptional smoking cessation practice in inpatient mental health settings.

Chapter 4: Identifying and Exploring High Performance in 'QUiTT': An Explorative Study of a National Smoking Cessation Initiative

4.1 Chapter summary

Smoking cessation in mental health settings has become a priority within national healthcare policy and clinical guidance (i.e., NG209, NHS Long Term and 10 year health plan). Yet there remains limited clarity around what constitutes high performance in this space, and which factors enable it. The Quality Improvement in Tobacco Treatment (QUiTT) Collaborative was the first national quality improvement initiative specifically aimed at enhancing smoking cessation support for individuals receiving inpatient mental health care. Hence, this presented a unique opportunity to explore high performing practices across a diverse landscape of tobacco dependency services. The current study is a qualitative exploratory study, which addressed three key research questions: (1) How high performance on the QUiTT Collaborative is defined, (2) What factors enable such performance and (3) How these factors relate to overall smoking cessation outcomes. Semi-structured, one to one, interviews with all five of the QUiTT coaches were conducted, and factors enabling high performance were inductively coded using reflexive Thematic Analysis (TA; Braun & Clarke, 2006, 2021). Following this, a focus group was conducted with four of the coaches to refine the analysis. TA revealed that high performance is defined as having aligned goals, strong reporting of 'good' outcome measures, and empowered teams. Three central facilitators of high performance were outlined - strong cross-team relationships; a shared sense of importance around tobacco work; and robust internal service structures. Notably, it was unclear how these relate to overall smoking cessation outcomes. By drawing on the insights of those with oversight across multiple NHS trusts, this study provides a high level perspective on what good smoking cessation care may look like within mental health settings. These findings offer an important step towards defining best practice in this area, supporting future service improvement. However, further validation of these findings through comparison with existing literature and the perspectives from frontline staff will be critical for informing wider implementation.

4.2 Introduction

4.2.1 Background and Rationale for the QUiTT Collaborative

As outlined in Chapter 1, smoking cessation support should be available for all people with SMI that are admitted to hospital as per NICE guidance (National Institute for Health and Care Excellence (NICE), 2021). However in practice, the implementation of such support remains highly variable across inpatient mental health trusts. Important survey data from Action on Smoking and Health in 2019 highlighted this, with only 82% of responding mental health trusts reporting that they had implemented a comprehensive smoke free policy (Action on Smoking and Health (ASH), 2019). More recent iterations of this survey from ASH (Action on Smoking and Health (ASH), Cancer Research UK, 2025) found that whilst 70% of NHS mental health trusts had fully implemented tobacco dependency treatment services, only 42% of these reported that treatment was consistently offered to all inpatients who smoked. Furthermore, although 82% of trusts employed dedicated Tobacco Dependency Advisors (TDA's), some did not, leaving many patients without access to specialised support. This is essential, as ground level care differs from that outlined within key smoking cessation policies.

In response to these challenges, and building on the commitments set out in the Long Term Plan (NHS England, 2019)- particularly the emphasis on addressing tobacco dependence among people with severe mental illness (SMI) to reduce health inequalities- the *Quality Improvement in Tobacco Treatment (QUiTT)* collaborative was launched in November 2022. Organised by the Royal College of Psychiatrists in partnership with the National Collaborating Centre for Mental Health (NCCMH), QUiTT was established as a national quality improvement programme with the aim of increasing the proportion of inpatients on mental health wards receiving of 'meaningful' tobacco dependency treatment. Notably, a primary goal of QUiTT was to work with every NHS mental health trust in England to establish this aim, with mental health trusts being encouraged to sign themselves up for the collaborative. Importantly, QUiTT aimed to strengthen and refine the established smoking cessation interventions - namely nicotine replacement therapy (NRT), pharmacological treatment, and behavioural support, so that services could deliver these interventions more consistently and effectively. In doing so, QUiTT sought to bring practice in line with national priorities and, ultimately, contribute to reducing the significant health disparities experienced by this population.

4.2.2 The QUiTT Collaborative: Theoretical Frameworks

The QUiTT collaborative adopted the Model for Improvement (MI), originally developed by Langley et al., (2009). The framework is structured around three fundamental questions:

1. *What are we trying to accomplish?*
2. *How will we know that a change is an improvement?*
3. *What change can we make that will result in an improvement?*

These questions are approached in an iterative manner, allowing teams to revisit and refine their responses as new insights emerge and learning develops.

In addition, the MI incorporates the Plan, Do, Study, Act (PDSA) cycle (Figure 4.1). This cycle provides a structured, four staged approach to testing and evaluating potential service improvements:

- *Plan* the proposed change,
- *Do* or implement the change on a small scale,
- *Study* the outcomes and learning generated, and
- *Act* by adapting or refining the intervention based on the evidence gathered.

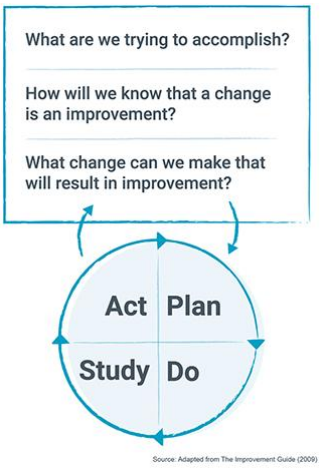


Figure 4.1: The Model for Improvement questions and PDSA cycle utilised by QUiTT, originally outlined by Langley et al., (2009)

The PDSA cycle therefore enables services utilising this model to trial these generated ideas for improving and changing their service in a controlled, temporary manner, systematically assessing their effectiveness before wider implementation. Importantly, these are defined as change ideas- specific, testable actions or interventions which are hypothesised to stimulate service improvement (Langley et al., 2009). Furthermore, the implementation of this framework in practice, and the process of this being embedded independently within inpatient tobacco dependency trusts is discussed below.

4.2.3 The QUiTT Collaborative: Structure in Practice

The collaborative was implemented in two main stages. Round One, which launched in November 2022, involved 15 mental health trusts that already had sufficiently established tobacco dependence treatment services and were therefore in a position to undertake structured quality improvement (QI) projects. Round Two, introduced in January 2024, brought in a further 16 mental health trusts whose services had not been developed enough to participate at the outset of Round One but had since reached a stage where improvement work was feasible. In addition to these two rounds, a third strand was created in the form of the Development Network. This network comprised 16 mental health trusts that did not yet have an established smoking cessation service and consequently had no existing provision on which to base a QI project. Instead, the Development Network functioned as a facilitated peer support and learning community, offering resources, information, and shared expertise to support these trusts in developing their services. The collaborative concluded in January 2025.

Irrespective of whether trusts joined in round one or two, each participating trust was allocated support from the collaborative. Specifically, all participating services ($N = 47$) were assigned a Quality Improvement (QI) advisor, with a total of five advisors working across the programme- each

supporting multiple trusts. The role of the QI advisors was to provide tailored guidance and oversight, ensuring that services were well supported in their efforts to enhance the delivery of meaningful tobacco dependence treatment to meet the overarching aims of the collaborative.

Moreover, within each trust a project team was established to lead improvement activity for the duration of the programme. Membership of these teams was flexible as staff were not required to represent any particular department but rather to have the capacity and commitment to participate. As a result, teams commonly included ward-level staff, such as healthcare assistants, nurses, and Tobacco Dependency Advisors (TDAs). To ensure organisational buy in and strategic alignment, each project team was also required to include a senior sponsor, typically a staff member at managerial or senior clinical level.

Each project team worked on developing and testing a series of 'change ideas', defined above (Langley et al., 2009). These ideas are designed to be implemented on a small scale, making them practical, measurable, and adaptable. Moreover, this approach enabled services to trial potential improvements quickly, learn from the outcomes, and then decide whether changes should be adopted more widely. Alongside this, to structure their work, teams used driver diagrams- a visual tool for mapping the logical links between the project's overall aim, its primary and secondary drivers (the factors contributing to the aim) and, the change ideas designed to influence these drivers. Driver diagrams helped services to clarify their theory of change, align local interventions with collaborative aims, and identify priorities for action (NHS England, n.d.).

Alongside this, all participating trusts were required to report against four core outcome measures, the proportion of patients who; identified as smokers on admission, were offered tobacco dependence treatment, who accepted treatment, and, who received treatment. By focusing on these measures, QUiTT ensured that local change ideas were directly linked to meaningful patient outcomes, while also enabling benchmarking and shared learning across trusts.

Therefore, the QUiTT collaborative was delivered in two stages, with an additional Development Network, ultimately engaging 47 mental health trusts across England. Each trust had an individual project team, and was supported by a Quality Improvement advisor, to design and test small scale change ideas, structured through driver diagrams and measured against four core outcomes relating to the identification and treatment of patients who smoke.

4.2.4 The Identification of 'High Performance'

The present study initially aimed to follow a Positive Deviance (PD) approach, as outlined in Chapter 3, to explore high performance within the QUiTT collaborative. As aforementioned the Bradley et al., (2009) approach to PD recommends the quantitative identification of high performance through routine data. To assess whether this was feasible, the primary researcher (MS) held preliminary individual conversations with the QUiTT QI coaches, the collaborative lead, alongside attending their in person learning events. These discussions highlighted the potential limitations of identifying high performance on QUiTT through available data.

Although the collaborative did collect quantitative data on four outcome measures, this dataset was not publicly accessible for research purposes. More importantly, coaches indicated that the quality of this data was inconsistent- as different mental health trusts defined key outcomes, such as smoking cessation and abstinence differently- making aggregate comparisons across sites unreliable. They also

noted difficulties at the ward level in recording quit attempts. For example, when service users quit independently without informing staff, or when cessation was complicated by switching to vaping. These issues introduced subjectivity in defining and measuring outcomes, limiting the ability of using this data to identify high-performing services and follow the PD approach.

More broadly, these challenges reflect well documented difficulties in using outcome measures in healthcare. Woodcock et al., (2021) highlight that routinely collected data often does not exist, and when it does, it may be compromised by bias arising from self-reporting methods. Where data are available, they may not be publicly accessible or standardised, for example, variations in clinical coding across organisations can undermine comparability- and in some cases data may also be costly or difficult to obtain (Baxter & Lawton, 2022). Collectively, these limitations demonstrate why identifying PD's through routine data is particularly problematic in healthcare contexts, and further support the idea that perhaps a PD approach to identifying high performance on QUiTT using such data is not possible.

Despite the original intention of this study being to adopt a PD approach to identify and learn from high performing services within the QUiTT collaborative, this was not possible in practice. PD relies on robust, comparable outcome data to identify those performing exceptionally well (Bradley et al., 2009) yet such data were not available in this context. Moreover, the QUiTT dataset was neither standardised nor publicly accessible, and considerable variation existed across trusts, discussed above, Hence, this meant that services could not be reliably compared, and crucially, not all faced the same reporting constraints. Without a consistent national dataset, and services which are not comparable- the foundations for a PD study were absent.

In response, the study pivoted to an exploratory qualitative design, utilising semi-structured interviews, reflexive TA and a focus group to draw instead on the perspectives of QUiTT's QI coaches. Hence, whilst this approach diverges from a traditional PD study, it allowed for a more flexible exploration of high performance in the absence of robust comparative data and site variabilities. In doing so, this contributes to a deeper understanding of service level improvements, and provides a foundation for future research that may return to traditional PD methods once standardised and reliable outcome datasets and service structures are available. This is discussed in depth below.

4.2.5 The Present Study: Aims and Research Questions

The QUiTT collaborative was the first national quality improvement initiative focused on enhancing smoking cessation support within inpatient mental health care. Apart from two, all NHS mental health trusts engaged in the programme in some capacity. Importantly, whilst examining service level performance is important, gathering perspectives from these individual services presents limitations, as the services themselves may have limited awareness of how their provision compares with others nationally.

Therefore, the QUiTT collaborative offered a unique vantage point- as its QI coaches worked in collaboration with multiple trusts, developing a calibrated understanding of common challenges and examples of good practice. By drawing on the insights of these coaches who had oversight across a wide range of inpatient tobacco dependence services- the present study explores what high performance on the collaborative looked like, the factors enabling this, alongside exploring if these translate to overall smoking cessation outcomes. This lens is particularly important within the context

of the wider thesis, as this understanding at a national level may help to calibrate findings of individual high performance explored within Chapter 5.

The present qualitative, exploratory study aimed to explore how a high performing smoking cessation service on the collaborative were defined and characterised (Aim 1). Following this, the study aims to identify and explore the factors enabling their high performance on the QUiTT collaborative (Aim 2). Finally, this study aims to explore if these factors underpinning high performance translate to overall smoking cessation outcomes within the mental health trust (Aim 3).

Research Questions (RQ):

RQ1: What does 'high performance' on the QUiTT collaborative look like?

RQ2: What are the factors enabling exceptional performance on the QUiTT collaborative?

RQ3: Does QUiTT high performance translate to overall smoking cessation outcomes?

4.3 Methodology

4.3.1 Data Collection and participant recruitment

A qualitative, exploratory approach was adopted to address the three RQ's and examine what constitutes high performance on the QUiTT collaborative. It is important to note that the collaborative itself had no fixed definition of a 'high performing' service and this was defined per interview. This is likely as a result of trusts recording variability (as discussed above) alongside services being at different points of having a developed tobacco dependency treatment service. For example, some services had been in existence for years, others had not yet started.

To capture a broader perspective of tobacco dependency treatment, participants were recruited due to their role as QI coaches- whose role involved supporting and overseeing the implementation of the collaborative across multiple NHS mental health trusts. All five coaches involved on the collaborative were recruited successfully. Their cross-organisational remit meant they were well placed to comment on performance, enabling factors and outcomes, while also offering a pragmatic means of gathering insights across national services without the considerable challenges of accessing each trust individually.

Notably, all five of the collaborative's five QUiTT coaches took part in semi-structured interviews conducted between October and December 2024. Semi-structured interviews were chosen for their flexibility, allowing participants to share their experiences and perspectives in depth whilst providing a broad structure to guide discussion (Adeoye-Olatunde & Olenik, 2021). Topic guides are presented within Appendix 2. In keeping with a reflexive TA approach (Braun & Clarke, 2006, 2019, 2021) the interviews were not treated as a way of objectively capturing experiences, but rather as opportunities to generate rich and situated accounts that were collaboratively generated between participant and researcher. Interview questions were used as prompts rather than being fixed.

Following these interviews and initial stages of analysis (outlined below), a follow up focus group was held in May 2025 with four of the original participants. This had been planned a priori as a further opportunity for data generation. In keeping with reflexive thematic analysis (Braun & Clarke, 2006, 2019, 2021) the purpose was not to test the accuracy of emerging themes, but to create space for collective reflection and dialogue among participants. Bringing the coaches together facilitated a different kind of interaction from individual interviews, enabling participants to respond to one

another's perspectives, elaborate on points, and surface new insights that had not arisen in one to one conversations. Moreover, group discussions also highlighted areas of convergence and divergence in experience, enriching the dataset and supporting a more nuanced analysis (Morgan, 1996).

Ethical approval for this study was granted by the University of Leeds ethics committee (PSCETHS-781).

4.3.2 Data Analysis

The data were analysed using reflexive thematic analysis (TA), following Braun and Clarke's six-phased framework (Braun & Clarke, 2006), demonstrated in Table 4.1. Reflexive thematic analysis TA was chosen over more structured or coding reliability approaches because it recognises the active role of the researcher in theme development, and allows for a flexible, interpretative exploration of meaning- which was best suited to the exploratory aims of this study.

Analysis was undertaken by the lead researcher (MS) and was iterative, with movement back and forth between phases rather than in a linear sequence. Familiarisation (Phase 1) involved repeated reading of transcripts, listening to recordings, and making initial notes. Inductive coding (Phase 2) was then conducted using Microsoft Word, with codes generated as interpretative tools rather than treated as inherent features of the data. Codes were subsequently organised into themes (Phase 3) that captured patterned meaning in relation to the research questions. These themes were iteratively reviewed (Phase 4) and refined to ensure coherence and distinction, before being defined and named to reflect their essence (Phase 5). Throughout, reflexive notes were used to capture the researcher's interpretative decision making. The final analytic narrative was constructed (Phase 6) by weaving together data extracts and interpretative commentary to address the research questions.

In line with reflexive TA, the analysis reflects the researcher's position as a PhD student external to the collaborative, with an academic interest in smoking cessation. Themes should be understood as analytic constructions shaped through this perspective.

Table 4.1: An iterative six stage process for thematic analysis, adapted from Braun & Clarke, (2006).

Phase	Description
1. Familiarisation	Repeated reading of transcripts and listening to audio recordings; initial analytic notes made to develop immersion in the dataset.
2. Generating codes	Inductive coding conducted in Microsoft Word; codes treated as interpretative tools shaped by the researcher's reflexive engagement rather than as features emerging from the data.
3. Constructing themes	Codes grouped into themes that captured patterned meaning relevant to the RQ's; themes developed as analytic outputs rather than discovered.
4. Reviewing themes	Themes refined for coherence and distinctiveness, being reviewed against both coded extracts and the dataset.

Phase	Description
5. Defining and naming themes	Themes named and defined to capture their analytic essence and scope.
6. Producing the report	Analytic narrative written by weaving together data extracts with interpretative commentary. Focus group insights incorporated as additional data generation rather than validation.

4.4 Results and Thematic Analysis

4.4.1 Research Question 1: What does 'high performance' on the QUiTT collaborative look like?

The findings from the reflexive TA are presented below, organised around the study's three primary research questions. In relation to RQ1, the analysis highlighted that coaches did not frame high performance in terms of numerical outcomes such as percentage quit rates. This resonates with the earlier discussion of the absence of standardised and reliable outcome data across trusts, which limited the feasibility of using such figures as meaningful indicators of success. Instead, participants' accounts constructed high performance in terms of how services *functioned*, for example, through aligned goals, effective collaboration, and consistent practices.

Through interpretative analysis, three themes were developed to capture this functional view of high performance within the collaborative; 1) Aligned goals, 2) Consistent reporting and interpreting of outcome measures, and 3) Empowered teams (see Figure 4.2). These themes are briefly described within Table 4.2. Across these themes, a central pattern was the emphasis on effective collaboration and shared goal alignment between ward based staff and Tobacco Dependency Advisors (TDAs), which was positioned as crucial for delivering meaningful tobacco dependency treatment. These higher level markers of functioning also pointed towards more specific contributory factors underpinning performance, which are examined in response to RQ2.

Figure 4.2: Outlining what 'high performance' on the QUiTT collaborative looked like qualitatively.

Table 4.2: Themes addressing RQ1: What does high performance on the QUiTT collaborative look like?

Theme	Brief definition
Aligned goals	Multidisciplinary teams share objectives across ward staff and TDAs.
Data reporting & interpretation	Outcome data used meaningfully for reflection and improvement.
Empowered teams	TDAs feel valued, supported, and embedded in wider care delivery.

1a. Project teams having aligned goals

High performance on the QUiTT collaborative was consistently characterised by the presence of a multidisciplinary project team, including TDA's and ward based staff. Participants described how this integration across roles was essential for effective implementation of smoking cessation support within mental health services.

Historically, there has been a lack of continuity between tobacco dependency services and ward based care, with the responsibility for smoking cessation often falling between teams. For example, there has been weak goal alignment between the TDA's- who's primary role is to deliver smoking cessation support within the hospital, and ward staff- such as nurses, doctors, and health care assistants. The QUiTT collaborative was seen as a mechanism that enabled communication and collaboration across these traditionally siloed roles. Hence, involving staff from across different stages of patient care signalled a more embedded, team approach to tobacco dependency treatment, which is therefore defined as an indicator of higher performance. A coach highlighted this contrast, that services which are unable to engage ward based staff struggled to perform well on the collaborative, even if the project team were engaged- *"Some services are really, really well engaged and they come and they're brilliant they engage so well, but they just can't get the ward team to like, buy in… I think it maybe holds them back for achieving what they want to achieve".* Hence, having a multi-disciplinary project team appears to be how high performance on the collaborative is defined.

In addition to having a diverse team composition, the alignment of goals across these staff groups was viewed as crucial to enabling high performance. Several participants noted that without shared objectives, efforts to deliver smoking cessation support could appear fragmented or deprioritised. One coach reflected that *"Sometimes it felt like they [ward-based staff and tobacco dependency staff] were trying to achieve two different things that were in conflict".* This illustrates how misalignment between teams could lead to tension and inefficiencies. In contrast, high performing services demonstrated a clear and unified commitment to tobacco dependency treatment, with shared values and priorities across the project team- addressing RQ1.

1b. Reporting and interpreting the collaborative's outcome measures

A second theme concerned the ways in which services engaged with the collaborative's outcome data. All participating trusts were required to collect and submit data throughout the duration of the project,

outlined above. Within the accounts of QI coaches, teams characterised as high performing were those that did not simply comply with reporting requirements, but treated the process as meaningful to their practice. Data submission was described as reflecting an underlying commitment to improvement, signalling that teams valued measurement as part of their ongoing learning rather than as an administrative obligation. As one coach observed, *"Having a sense of investment in the data they were collecting showed they valued it and could use it".* In this sense, engagement with reporting was interpreted as a marker of ownership and a willingness to use data actively to inform change.

However, there was also a strong recognition of the limitations of the collected data. As outlined earlier, the quality of smoking cessation outcome measures was considered poor. These measures were largely restricted to counts such as the number of patients identified as smokers, those offered support, or those receiving pharmacotherapy, with wide variation in how trusts defined and recorded outcomes. As one coach explained, *"It's really hard, the quality of data… every trust seems to do it slightly differently… when we put that all together as an aggregate across the whole collaborative… it's impossible for us to know.*

This inconsistency connects directly to RQ3, as whilst NHS England typically defines successful practice in terms of smoking cessation rates, such measures were not seen by coaches as reliable or even integral to practice. This creates an important tension that whilst the data itself was seen as limited, active and reflective engagement with it was nonetheless interpreted as a hallmark of high performing services. In other words, high performance was not defined by the data outcomes themselves, but by how teams used reporting as a tool for meaningful improvement. This also indicates that it is unlikely that QUiTT performance translates to that of overall smoking cessation outcomes (RQ3), but, by services reporting, interpreting and using this data, they were identified as being high performing on the collaborative (RQ1).

1c. Empowerment

A final theme that characterised high performance within the QUiTT collaborative concerned the extent to which the TDA's within the trusts valued and empowered in their roles. Coaches described how in many services, TDAs often worked in isolation, sometimes as the only individual responsible for smoking cessation support. This lack of visibility left TDA's questioning the significance of their work and contributed to low morale. As one coach reflected, *"People working in tobacco dependency services don't really feel valued and don't really feel like they have any power".*

By contrast, high performing services on QUiTT were typically those where TDAs were part of larger, integrated teams, whereby their work was visibly supported by those in leadership. This reduced isolation of TDA's and provided opportunities for peer support. It also signalled that smoking cessation care was recognised as a genuine organisational priority, rather than a peripheral compliance task by leadership. In these settings, TDAs reported a stronger sense of purpose, agency, and legitimacy, which contributed to more consistent and impactful delivery of support. Thus, empowerment through adequate staffing, peer networks, and visible leadership backing was a key element in how high performance was understood within the collaborative. Importantly, these conditions of empowerment also point towards the broader enabling factors that underpinned high performance explored further in response to RQ2.

4.4.2 Research Question 2: What are the factors enabling exceptional performance on the QUiTT collaborative?

Having outlined how high performance was characterised within the QUiTT collaborative (RQ1), the next stage is to explore the factors enabling this performance (RQ2). This section reflects on participants' interpretations of what distinguished services considered to be performing exceptionally well from those that were less typically engaged with the programme. The following themes represent analytic interpretations of patterns identified across coaches reflections. Three overarching themes were developed to capture these enabling factors; Theme 1 (two sub themes), Theme 2 (two sub themes), Theme 3 (two sub themes). These themes are presented in the sections below. A brief description of these themes and sub themes is given within Table 4.3.

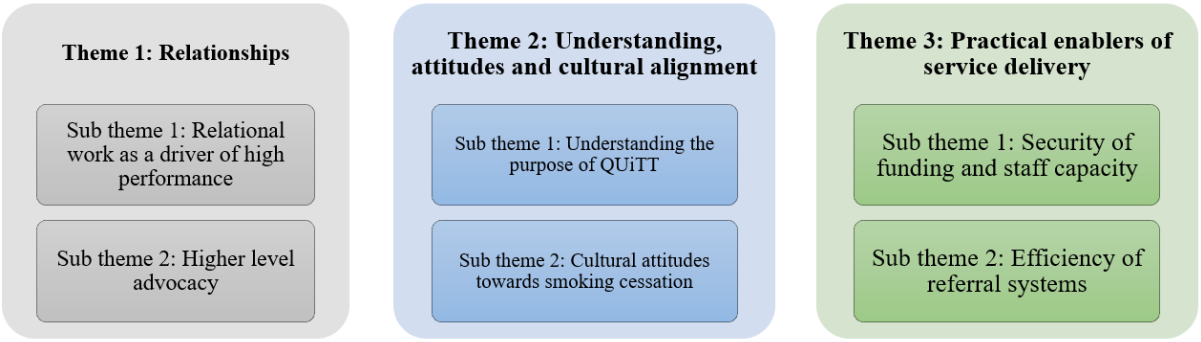


Figure 4.3: Theme map illustrating the three themes and their associated subthemes that enabled high performance on the QUiTT collaborative.

Table 4.3: Themes and sub themes addressing RQ2: What factors enable high performance on the QUiTT collaborative?

Theme	Sub-theme	Definition
1. Relational enablers	1a. Relational work	Collaboration between ward staff and TDAs to adapt and embed change ideas.
	1b. Higher-level advocacy	Senior sponsors remove barriers and reinforce importance of tobacco work.
2. Understanding & attitudes	2a. Understanding QUiTT's purpose	Recognising QUiTT as distinct from smoking cessation policy.
	2b. Cultural attitudes	Wider staff views of smoking cessation as (non) priority in mental health care.

Theme	Sub-theme	Definition
3. Practical enablers	3a. Funding & staff capacity	Stable funding and staffing allow sustained QI engagement.
	3b. Referral systems	Clear, efficient processes ensure patients consistently access support.

Theme 1: Relationships

Theme 1 illustrates that high performance on the QUiTT collaborative was closely linked to the quality of relationships between ward staff, TDA's and senior sponsors. Coaches described strong, collaborative relationships as enabling services to adapt their implementations to local ward constraints, share responsibility for delivering smoking cessation care, and therefore embed tobacco treatment more effectively into routine practice- enabling high performance. High performing teams were characterised by cross level engagement, clear role boundaries, and visible involvement from all stakeholders. This was also perceived as contributing towards better smoking cessation outcomes (RQ3). Barriers such as low visibility of the QUiTT initiative and limited staff awareness were seen to undermine progress, highlighting the importance of maintaining strong relational networks and collective ownership of care.

Theme 1, Sub theme 1: Relational work as a driver for high performance

Strong, collaborative relationships between ward staff and TDAs were described by coaches as a critical factor enabling 'high performance' on the QUiTT collaborative. Whilst RQ1 highlighted that aligned goals were a defining feature of high performing services, RQ2 shifts this focus to how these aligned goals were enacted in practice- notably, through collaboration. This allowed TDAs and ward staff to pilot and adapt the collaborative's change ideas within the everyday realities of ward life. Hence, whilst aligned goals (RQ1) captured what high-performing services possessed, relationships (RQ2) represented the mechanism through which these goals were translated into workable quality improvement activity.

Importantly, coaches emphasised that strong relationships provided the foundation for testing new ideas, ensuring that change efforts were feasible within the constraints of busy inpatient environments. Coaches reflected that without close collaboration, TDAs- who were often external to ward routines- risked suggesting changes that could not be implemented in practice. Ward staff by contrast, acted as mediators of feasibility by drawing attention to practical barriers and helping to shape initiatives around ward rhythms such as rounds, handovers, or therapeutic groups. As one coach observed, *"There could be loads of ideas, but there could just be a stopping point."* Another described this process of negotiation, noting: *"You can't do that on a Wednesday morning because we have ward round… we've already tried that and it didn't work—can we do something different?"*. Therefore, relationships functioned as the bridge between the collaborative's ambitions and the everyday delivery of care, enabling services to actively test and refine change ideas, rather than treating QUiTT as an added burden.

Additionally, these examples highlight the value of integrated relationships as the mechanism through which QUiTT's QI work could be meaningfully enacted. When TDAs and ward teams collaborated

closely, change ideas were more likely to be designed and implemented in ways that were contextually realistic and responsive to ward life. One coach highlighted this clearly, *"Joining of ward team and tobacco team is really, really key because the ward staff know their wards... that input is really, really important and that, I think, has been really difficult"*. Without this integration, efforts to test and embed changes to smoking cessation interventions or practices risked faltering and as a result, services often struggled to meet the collaborative's expectations.

Moreover, a further enabler identified was the sense of shared responsibility that developed when the above inter-disciplinary relationships were strong. In the services where collaboration was limited, responsibilities for smoking cessation care were often unclear, leading to disengagement and uncertainty. As one participant reflected, *"I think there's a real grey area around who's supposed to be policing this?... that causes unrest and a bit of uncertainty… so it's just like we'll just leave it"*.

Conversely, QI coaches stated that in 'high performing' sites, well integrated teams created a greater sense of accountability across ward staff and TDAs, reinforcing the perception of smoking cessation care as a collective rather than individual task. One coach explained, that "*The bigger the divide between those two groups of people, the harder it is to bring them together… but in services where the tobacco dependency treatment service is really well integrated, there's a good working relationship."* Hence, this complements RQ1, suggesting that whilst shared goals defined 'high performing services', it was strong interpersonal connections that allowed those goals to be operationalised through day to day quality improvement practice.

Alongside these enablers, coaches also described a consistent barrier, whereby ward staff often lacked awareness of the smoking cessation service within the trust and as a result, the collaborative itself. Many frontline staff did not initially know that a tobacco dependency service existed or were unclear about what it offered. In these contexts, raising awareness had to precede any improvement activity in the collaborative. One coach explained that "*Some ward staff did not even know that this service existed… a lot of the work at the beginning [was], forget looking at patients quitting, it was right at the start: how can we make staff know that there's even an offer of support for patients?". This was also outlined by a second coach, stating that "One of the things that has helped people take part in the QI collaborative is having a relationship with the wards and a presence on the wards… the people on the wards knowing that the tobacco dependency treatment service exists"*.

Together, these findings illustrate that embedding change ideas into the ward culture required more than the aligned goals outlined in RQ1. It depended on inter-disciplinary relationships that facilitated joint problem solving. This created clarity around shared responsibilities and thus, ensured that the smoking cessation service was visible. These relational enablers supported engagement with the collaborative (RQ2) but also created the conditions in which improvements could plausibly contribute to more effective long term smoking cessation outcomes (RQ3).

Theme 1, Sub theme 2: Higher level advocacy

Another factor identified by coaches as enabling 'high performance' on the collaborative (RQ2) was the presence and active involvement of *higher-level staff members*, particularly senior sponsors. Within the collaborative, each QI project team was expected to include a senior sponsor (outlined previously), who provided organisational oversight, removed barriers, and facilitated ongoing engagement with the programme. Their role was explained as, *"They're the person that sits at the senior level, that isn't expected to come to regular meetings, but they are expected to know what's*

going on with the project, meet with the project leads fairly regularly and help us to unblock barriers that come up. So, stuff like ward staff not attending meetings or issues with retaining staff".

Because senior sponsors typically had a greater levels of influence over financial, structural, and staffing decisions- their active engagement was described as essential for enabling teams to test and refine change ideas through PDSA cycles. Coaches noted that services which performed well on the collaborative almost always had senior leaders who were invested in their work, and willing to advocate for it at an organisational level. As one coach reflected, high performing organisations were ones that*"Have buy in from seniors, within the organization… So, knowing, essentially a senior within the organization, outside of the tobacco dependency treatment service team that is sort of openly accessible and supportive of the team taking part in the in the in the QI collaborative so they will, remove barriers that the team are facing and in terms of sort of taking part and there could be lots of things like red tape policy or funding in some cases".*

Contrastingly, when senior sponsors were absent or disengaged, this was seen to hinder progress and thus, limit the effectiveness of the collaborative. As one coach described, *"Some services, their senior sponsor's really involved and some services like I've never heard from their senior sponsor despite having. Emailed them kind of thing or people are like, oh, I didn't know I was a senior sponsor from this".* This inconsistency was perceived as a key distinction between high and regular performing services (RQ1) as without strong senior level advocacy, project teams lacked the leverage needed to embed smoking cessation initiatives into routine practice (RQ2).

Alongside this, the involvement of senior sponsors was also seen as important for signalling that tobacco dependency treatment was a priority for the wider trust. When senior leaders demonstrated visible support for the collaborative, TDAs and ward staff were more likely to feel their work was valued, which reinforces earlier findings from RQ1 that empowerment and recognition are core markers of high performance. Alternatively, a lack of visible senior advocacy risked undermining staff morale and contributed to tensions between ward staff and TDAs, illustrated in the reflection that, *"Sometimes it felt like they [ward-based staff and tobacco dependency staff] were trying to achieve two different things that were in conflict".*

Finally, coaches suggested that senior level advocacy may also shape the extent to which collaborative success translates into broader smoking cessation outcomes (RQ3). If senior staff were unaware of or disengaged from their organisation's smoking cessation services, they were unlikely to champion the resources or funding needed to sustain improvements. This may limit heir long term impact. Thus, strong relationships between senior sponsors, ward based staff, and TDAs were seen not just as a structural feature of 'high performing' teams but as an active enabler of quality improvement and cultural change within the collaborative.

Theme 2: Understanding, attitudes and cultural alignment towards smoking cessation and QUiTT

Theme 2 highlights how high performance on the collaborative was shaped by staff members' understanding of QUiTT's distinct purpose, alongside their attitudes towards its value, and the wider cultural views of smoking cessation in mental health care. Services that engaged with QUiTT as a quality improvement initiative were better able to embed change ideas and align staff perspectives. Conversely, when staff were unclear as to the aims, or viewed smoking cessation as a low priority- progress faltered, policy adherence was inconsistent, and opportunities for improvement were missed.

Ultimately, shared understanding and cultural alignment were critical enablers of high performance (RQ2) and may also contribute to improved cessation outcomes (RQ3).

Theme 2, Sub theme 1: Understanding the purpose of QUiTT

Coaches highlighted that one of the most consistent differentiators of high performance on the QUiTT collaborative (RQ2). was not only if staff engaged with the collaborative but how well they understood what the programme was designed to achieve. Notably, whereby Theme 1 emphasised the role of strong inter disciplinary relationships in facilitating high performance, Theme 2 shifts the focus to individual factors such as staff attitudes, clarity, and perceptions of the collaborative's value.

A recurring feature of 'high performing' services was their ability to understand the purpose of QUiTT, and maintain a consistent momentum whilst taking part. This was done through project teams having regular and structured meetings , alongside having systematic documentations of their progress. As one participant explained that this was essential to enable high performance (RQ2), explaining that *"Meeting regularly and sticking to those meetings, and being on top of admin actually, taking minutes, taking writing down, change ideas, recording what they're testing" was essential.*

By contrast, in services where staff had an unclear understanding of the purpose or aims of the QUiTT collaborative, their engagement often faltered. Notably, coaches described how ward staff frequently confused the collaborative with the wider hospitals smokefree policy, leading to confusion about its aims and purpose. One coach stated that *"There was a lack of clarity of the [QUiTT] message, so people make their own message". Another emphasised this, explaining that, "People didn't understand why the collaborative exists in the first place, or thinking that it's a something to do with the smoke free policy, which it's not really because the smoke free policy is one thing, but what we're trying to do is improve a service and the experiences that patients have of that service. But that distinction isn't always very clear".*

This confusion mattered because as coaches emphasised, QUiTT was not intended to duplicate or enforce pre-existing smoking cessation policies. Instead, it was designed as a quality improvement initiative to improve the trusts existing service and is built on the use of iterative testing to enhance service delivery. However, where this distinction was understood, staff were more able to see the collaborative as an opportunity to test new approaches and refine smoking cessation support, rather than as an externally imposed compliance exercise.

Moreover, coaches also reflected on how negative staff attitudes towards the collaborative, or smoking cessation overall, had a notable impact on service user's engagement. Importantly, in one service, a creative change idea sought to challenge these perceptions on QUiTT, by working with ward staff to reframe the TDA's role- something often misunderstood. As the coach described, the ward team 'rebranded' TDA's from "The stop smoking lady" to "The vaping lady". This was supported by small business card style leaflets highlighting the trusts tobacco dependency service and what they could offer. This had a tangible impact on service users' engagement, *"All of a sudden, people wanted to talk to the vaping lady… people started engaging, which led to quits".* This illustrates how shifts in how ward based staff frame and communicate about the smoking cessation service could directly impact service users' participation. Moreover, this illustrates how change ideas developed by high performing services on the collaborative can address such issues. It is worthwhile

noting that this may relate to overall smoking cessation outcomes (RQ3), as lower engagement of service users is likely to result in lower quit attempts.

Theme 2, Sub theme 2: Cultural attitudes towards smoking cessation

A further factor influencing 'high performance' on the QUiTT collaborative was the general cultural attitudes held by staff towards smoking cessation in mental health settings. Reflexively, it was clear that whilst TDA's generally embraced the collaborative's aims, ward based staff sometimes framed smoking cessation as a low clinical priority, echoing long standing cultural barriers reported in the literature (Knowles et al., 2016; Peckham et al., 2016), discussed in Chapter 1. One coach described encountering this direct resistance, recalling a ward staff member saying that *"I don't really see it as a priority. I don't think it's the right time… there was a real, real resistance to mental health staff supporting people to stop smoking".* These attitudes highlight how the staff perceptions of smoking cessation as an area of clinical relevance may have shaped their engagement with the collaborative. As such, when ward staff did not see smoking cessation as part of their role, this undermined the implementation of change ideas and limited the collaborative's impact. By contrast, when staff recognised smoking cessation as important, this enabled more consistent engagement with the smoking cessation service and created conditions for 'high performance' (RQ2).

The consequences of this cultural resistance was also operational. Coaches described how, even within trusts with smokefree policies- as per national guidance, psychiatrists or ward staff sometimes permitted smoking leave, creating an inconsistency in care and confusion among patients, *"There's definitely been feedback… psychiatrists, or like people granting leave for smoking… that's not necessarily being for smoking, but… that's the way that it works."* Such practices directly conflicted with the aims of both national guidance (National Institute for Health and Care Excellence (NICE), 2021) and the collaboratives aims, undermining potential progress.

Following this, high performance on QUiTT relied on a shared commitment across the service and levels of staff, As outlined above, if staff attitudes were negative, teams were less able to embed and sustain quality improvement work. Hence, improvements are best made when there is consistency in both policy adherence and patient care (RQ2). One coach noted that*"You can't have one or two picked crusaders… while everybody else around you is kind of not really adhering to it… it needs to be intrinsic from the trust".*

Finally, these attitudes had a knock on effect in shaping everyday operational practices. As one coach noted, the degree to which staff valued smoking cessation determined whether core processes, such as referrals of service users to the tobacco dependency service, were reliably delivered. They stated that it was *"How important do they see it? Do they remember to fill in that form for every new admission as soon after they're admitted?"*. This suggests that shifting cultural attitudes is not only about policy alignment but also about educating the wider clinical team to see smoking cessation as integral to mental health care. In trusts where this cultural reframing occurred, services were better positioned to perform strongly on the collaborative (RQ2) and potentially to improve their overall cessation outcomes (RQ3).

Theme 3: Practical enablers of service delivery

High performance on the QUiTT collaborative was also facilitated by the strength of a service's internal structuring. This is defined here as the stability and clarity of its organisational foundations,

which includes secure funding, consistent staffing, and transparent operational systems. Whilst Themes 1 and 2 highlighted the relational and cultural factors paramount to RQ2, Theme 3 draws attention to structural factors. Notably, those services with robust internal structures were better positioned to engage fully with QuiTT and implement and test change ideas (RQ2). By contrast, services with less robust service structures such as reliance on short-term funding, unclear referral systems or undermined staff capacity, created instability and made it harder to prioritise tobacco dependency work within already stretched mental health services. Hence, this highlights that robust internal structuring is a critical enabler of exceptional performance (RQ2).

Theme 3, Sub theme 1: Security of funding and staff capacity

Internal structuring is closely tied to the stability of the services funding, with consistent investment acting as a critical enabler of high performance on the QUiTT collaborative (RQ2). Many teams described to their coaches that they were struggling with the uncertainty created by short term funding arrangements, which undermined their QUiTT engagement and service development. One coach explained that,*"They have these one year services or the one year contracts because the services are only funded for a year" and "It's hard to plan for a service if you don't know if it's even gonna exist after a few months".*

Alongside the lack of a stable service, recruitment was particularly affected, especially for TDA roles that were often tied to temporary contracts. One coach outlined that *"So the contract [to become a TDA] is for one year… the contract might get renewed. But the initial contract is for one year and it makes it incredibly hard to recruit people because there's no security. And that's something we see across a lot of places."* Hence, both the instability of the service existing and of having stable employment in a year, added notable pressure onto staff members working at the ground level. Therefore, this points to how reliable and secure funding secures staffing and also creates the space for innovation, testing of change ideas, and prioritisation of tobacco dependence treatment. Thus, making financial stability a foundational condition for high performance within the collaborative (RQ2).

Where instability occurred, this often led to overstretched staff covering multiple responsibilities, limiting the time and space available for working on the QUiTT collaborative. As one coach described: *"They're so stretched that they've just literally, they're like just head down, go, go, go… and smoking is such a small thing that they don't have time with management to even have these conversations or look into it."* Reflexively, this illustrates how fragile internal structuring directly constrained staff members' engagement with testing and refining change ideas, the very processes through which QUiTT aimed to drive improvement.

Moreover, the knock on effect of insecure funding extended beyond service capacity and planning, to that of staff morale and sense of value in their role. Importantly, coaches observed the uncertainty of last minute funding decisions, which left staff in somewhat of a professional limbo, *"People would find out at the very last minute whether the NHS would fund the service again, so people would be left in a limbo of 'I don't know if I have a job in a week". Without* organisational investment into smoking cessation and those involved having stable jobs, staff were less likely to be able to take ownership of collaborative activities or sustain a level of commitment to long-term improvement. Alternatively when funding was consistent and reliable, coaches observed that services had the headroom to innovate, test change ideas, and embed tobacco dependency work into practice. This therefore

outlines strong internal structuring a foundation for high performance on the QUiTT collaborative (RQ2).

Theme 3, Sub theme 2: Efficiency of referral systems

Another structural factor enabling high performance on the QUiTT collaborative was the robustness of internal systems, particularly around patient referral pathways into the tobacco dependency service. Coaches suggested that 'high performing' teams were distinguished by having streamlined and reliable procedures that ensured patients who smoked were consistently identified and referred to treatment. By contrast, services with unclear or inconsistent processes often placed unnecessary burden on staff, and risked missing patients in need of support. One coach described this difference, *"That [a non-automated referral system] is a much less robust system that probably wastes a lot of the tobacco dependence advisors' time to kind of turn up on each ward… all of that time of the tobacco dependence advisor having to kind of go hunting for patients"*. This highlights how gaps in the services system design may undermine the feasibility of QI work- as staff are left compensating for structural shortcomings, rather than testing and embedding change ideas to improve their service in the long term.

Conversely, coaches stated that teams who performed strongly on the collaborative often had referral systems that automatically triggered to the tobacco dependency service when a patient was a smoker, freeing up TDA's time to both engage with change ideas, and, prioritise patient care. As one coach explained, *"Some trusts have really clever systems that as soon as somebody has filled in a form for that patient, that is part of the admission that says, you know, do they smoke… it pops into the tobacco dependency service's inbox".* Such operational clarity reflects how internal structuring can create the conditions for efficient quality improvement by embedding smoking status checks into routine workflows.

However, this system robustness also depended on wider staff awareness of the service. In some settings, weak interdisciplinary communication meant that ward staff were unaware that referral pathways even existed, with one coach highlighting that, *"Some ward staff did not even know that this service existed and didn't know that this was something patients could be referred into"*. This illustrates that strong operational systems must be paired with staff knowledge and engagement, outlined previously. Importantly this suggests that system robustness through clear referral processes, cross team visibility and streamlined workflows was a critical enabler of high performance on the QUiTT collaborative (RQ2), with likely downstream effects on the quality and reach of smoking cessation support (RQ3).

4.4.3 Research Question 3: Does QUiTT high performance translate to overall smoking cessation outcomes?

Whether high performance on the QUiTT collaborative translated into improved smoking cessation outcomes has proven difficult to establish. This reflects both the limitations of available data and the challenges of capturing what constitutes 'success' in inpatient mental health contexts. Importantly, coaches consistently described how outcome data varied across trusts, with each organisation defining 'quit' attempts and abstinence differently, as highlighted in one interview, *"It's really hard, the quality of data and when you do get the data as well, the quality of it… every trust seems to do it slightly differently. So, when we put that all together as an aggregate across the whole collaborative… it's impossible for us to know"*. Moreover, this lack of standardisation meant that

robust comparisons between ‘high’ and ‘low’ performing services were not possible, which removes the ability to quantify whether engagement in QUiTT directly produced better smoking cessation rates.

Alongside this, defining cessation outcomes practically was described as inherently complex. For instance, service users might stop smoking without formally reporting it, or transition to vaping, raising questions about how to classify these behaviours. For example, one coach stated that *“Say they [a service user] say I'm going to quit 2:00 PM-how do you then define quit? Because then what if someone doesn't tell you they've quit, and then they just stopped? Or what if someone's moved on to vaping… it seems really hard”*. These accounts highlight how cessation outcomes are shaped by both the measurement practices and the staff interpretations, alongside the service users’ actual smoking behaviour. Furthermore, indicating that it is unclear if high performance on QUiTT translates to overall smoking cessation outcomes (RQ3).

Despite these challenges, coaches identified several ways in which the factors underpinning ‘high performance’ (RQ2) appeared to enhance the quality and consistency of care and as such, suggesting indirect pathways to better smoking cessation outcomes. Services with strong internal systems and shared responsibility across ward staff and TDAs, for example, were more likely to ensure timely referrals and sustained engagement. By contrast where referral processes were weak TDAs were often left “hunting for patients” leading to inefficiencies and missed opportunities for support. Similarly, where cultural attitudes towards smoking cessation were more positive service users were reported to engage more readily- with small changes such as rebranding TDAs as “the vaping lady” increasing the uptake of smoking cessation support.

These findings suggest that whilst high performance on the collaborative cannot be directly linked to improved cessation outcomes through available data, it is likely to contribute towards the structural, cultural, and relational conditions that make positive outcomes more achievable. Moreover, ‘high performing’ services may not guarantee higher quit rates, but they appear better equipped to deliver consistent and meaningful care that increases the likelihood of service user engagement and perhaps, eventual cessation. Reflexively, this shows the limits of outcome data in capturing what ‘good’ care looks like and highlights the value of qualitative insights in understanding how improvement efforts translate into patient experience.

4.5 Discussion and conclusions

This study examined what constitutes ‘high performance’ on the QUiTT collaborative alongside the factors that enable this, addressing three research questions. Through reflexive TA, this revealed that ‘high performance’ (RQ1) was not defined by smoking cessation rates but by functional markers of service delivery- aligned goals across teams, meaningful engagement with outcome data, and the empowerment of TDA’s. Hence, by working reflexively, drawing on the perspectives of coaches with oversight across multiple trusts this study provides valuable insight into how high performance is characterised across diverse contexts.

Importantly, the rationale for choosing reflexive TA, was to allow the researcher’s perspective to be actively incorporated in an iterative analytic process, rather than treating codes and themes as fixed or pre-determined. Alternative qualitative approaches, such as content analysis, could have removed the contextual richness of the smoking cessation services within this context, potentially obscuring the organisational and relational factors that are central to understanding high performance in this setting.

Moreover, reflexivity throughout the analysis ensured that the interpretation of data remained sensitive to both participants' experiences and the broader service context.

Furthermore, three interlinked enablers of high performance (RQ2) were identified; strong interdisciplinary relationships (particularly between ward staff, TDAs, and senior sponsors), a shared understanding of the collaboratives purpose alongside wider beliefs about smoking cessation and services being practically set up for success through stable funding, staffing and clear referral systems. As a result, these factors enabled teams to test, adapt, and embed their change ideas in practice.

Finally, addressing whether high performance on QUiTT translated into overall smoking cessation outcomes was less clear (RQ3). The variability of smoking cessation services, operating at different stages of development with variable priorities, combined with the absence of standardised and reliable outcome data, limited the ability to draw concrete conclusions. Nonetheless, coaches noted that 'high performing' services appeared to create cultural, relational and structural conditions that are likely to support improved smoking cessation outcomes, offering a useful foundation for future research and improvement work.

As previously discussed, the present study highlights the complexity of defining and assessing high performance in this space. Coaches highlighted considerable variation across participating trusts in terms of service offerings, funding levels, staffing models, and stages of development. Importantly, this picture is reflected nationally. A recent ASH survey (2025) supports this, finding that ~ 70% of mental health trusts reported having fully implemented a tobacco dependency service, and only 42% were able to offer support to all patients who smoked (Action on Smoking and Health (ASH), Cancer Research UK, 2025). Moreover, whilst 82% employed TDA's, their capacity varied significantly across sites. This survey also revealed that less than half of trusts reported providing routine smoking cessation training for ward staff, suggesting that frontline implementation remains inconsistent. These findings align with earlier evidence by Knowles et al., (2016) which documented a similar variability and cultural resistance to prioritising smoking cessation in mental health settings. Consequently, this variability makes it difficult to establish a single, standardised definition of success or high performance within the QUiTT collaborative and, critically, complicates efforts to determine whether high collaborative performance translates into improved smoking cessation outcomes more broadly (RQ3).

A central finding of this study was that staff attitudes consistently emerged as a critical factor shaping if services were able to achieve 'high performance' on the QUiTT collaborative. Coaches described how within services where smoking cessation was recognised as a legitimate clinical responsibility, they were better able to test and embed quality improvement work. This reflects the wider literature, where smoking has historically been embedded in mental health care and often used as a tool for behaviour management, perhaps contributing to staff perceptions of smoking cessations legitimacy as a clinical responsibility (Knowles et al., 2016; S. Lawn & Pols, 2005; Peckham et al., 2016). Although NICE guidance (National Institute for Health and Care Excellence (NICE), 2021) does explicitly frame tobacco dependency treatment as part of core care for people with SMI, in practice this expectation remains unevenly applied. This is echoed within the ASH survey, which reported that many services continue to face difficulties enforcing smoking cessation policies and ensuring consistent staff engagement, with smoking often persisting in ward gardens (Action on Smoking and Health (ASH), Cancer Research UK, 2025). Cumulatively, this evidence highlights that it may be

when the cultural reframing of smoking cessation is deemed as an integral, services are distinguished as ‘high performing’.

There was also evidence of a shift in participants’ perspectives, notably on what was important to allow for success on the collaborative between the individual interviews and the follow-up focus group. The initial one to one interviews, were conducted during the collaborative and captured in the moment reflections. Conversely the focus group was held in May 2025 after the programme’s conclusion, allowing coaches time to reflect on QUiTTs longer term impacts. This gap appears to have produced more considered and retrospective views of what truly enabled service success on the collaborative. Notably, when describing high performance, coaches often framed their responses in contrast to what hindered performance, suggesting that negative performance was more readily identifiable than high performance. This pattern points to the complexity of defining high performance in such contexts and signals a key consideration for the next study: that identifying positive outliers at the individual practitioner level may require different strategies than at the organisational level. Additionally, this potentially offers insight into the behaviours and approaches that drive exceptional smoking cessation care in inpatient mental health settings.

Reflecting on the research process, the combination of both individual interviews and a follow-up focus group proved highly invaluable in refining and deepening the analysis. The interviews allowed for detailed, individual perspectives on the factors enabling high performance on the QUiTT collaborative to be explored- whilst the focus group allowed for the emergence of more reflective and collectively shaped insights. Additionally, the group dynamic encouraged a richer discussion, with multiple voices contributing rather than a single dominant speaker. This collaborative dialogue supported a more nuanced understanding of shared experiences, helping to validate and elaborate on themes identified in the earlier interviews.

In conclusion, this study highlights the complexity of defining high performance in smoking cessation services within mental health settings. Variation across trusts in service maturity, funding, staffing, and goals made it difficult to apply a uniform standard of success (RQ1) or directly link collaborative engagement to outcomes (RQ3). Although the positive deviance framework was considered- this study took an exploratory approach rather than a full PD method. High performance was defined qualitatively by coaches, exploring this generally rather than recommending specific services. The prominence of trusts without established services further showed the uneven landscape of smoking cessation in mental health. Interviews and a post collaborative focus group revealed how perceptions of success changed over time as participants understood what helped or hindered performance. Coaches often described high performance by its absence, highlighting the challenges of improving under resourced and varied services. Overall, the study shows the need for flexible and context sensitive approaches to quality improvement in this area and provides valuable insights, through three main themes into what works in improving smoking cessation within inpatient mental health settings.

Moreover, whilst this study was initially informed by the Positive Deviance (PD) approach, it did not follow the traditional sequential stages outlined by Bradley et al. (2009), as discussed previously. Instead, it generated exploratory insights into the factors that may enable contribute to exceptional smoking cessation services and highlighted challenges that complicate more rigorous evaluation. The main contribution of this study lies in its ability to provide a national level perspective by offering a broad understanding of what high performance on the QUiTT collaborative looks like.

In conclusion, this perspective serves as the foundation for the following Chapter 5, which builds on these findings by examining high performance at the level of individual staff members, in delivering smoking cessation care to people with SMI. Moreover, the inclusion of the focus group within this study allowed for the generation of themes that informed the landscape within the final study of this thesis(Chapter 5), providing greater oversight and detail into service delivery, and ensuring that participants were well-positioned to illuminate the factors underpinning high performance across diverse contexts.

Chapter 5: Identifying positively deviant staff members and exploring their exceptional practices in relation to smoking cessation practice for people with Severe Mental Illness (SMI).

5.1 Chapter Summary

This study applies Stage 1 and 2 of the Bradley et al., (2009) approach to Positive Deviance (PD), to identify individual staff members that deliver exceptional smoking cessation care within inpatient mental health settings, and explore the factors which make their care exceptional. To do so, qualitative methodology (semi-structured interviews) were used to identify individual positive deviants- those who delivered exceptional smoking cessation care, within three NHS inpatient mental health trusts. Following their identification, the factors enabling their exceptional performance were explored through further semi-structured interviews. In parallel, service users' perspectives of exceptional smoking cessation support were explored through open ended surveys. Reflexive thematic analysis of interview data revealed that PD's achieved their success by utilising; supportive language and communication with service users surrounding smoking cessation, rapport building through informality and sustained presence and, inter disciplinary relationships to coordinate care. Alongside this, ward level factors such as crisis driven workloads, the use of cigarettes for behaviour management and attitudinal divides between TDAs and ward staff shaped their practice. Trust level factors, such as the flexibility and continuity of care, also supported exceptional practices. Content analysis of service user surveys revealed that empathetic staff and timely access to smoking cessation aids such as e-cigarettes was essential, however their variability in quality was noted. Collectively, these findings show that exceptional smoking cessation support at an individual level emerges from the interaction of individual behaviours, ward cultures and organisational structures. A key finding within this study was the central role that language played in shaping engagement, perceptions and trust in smoking cessation support (see Chapter 6). Therefore, this chapter provides valuable bottom-up insights into what works in enabling individual practitioners to deliver exceptional smoking cessation support for people with SMI.

5.2 Introduction

5.2.1 Background

People with SMI have markedly higher rates of cigarette smoking than the general population, with 30 to 70% smoking compared to 11.9% in the general population (Office for National Statistics, ONS, 2024). Despite being as motivated to quit as people without SMI (Hawes et al., 2021; Peckham et al., 2017; Royal College of Physicians of London & Royal College of Psychiatrists, 2013), these individuals are less likely to be offered appropriate cessation support, and when offered, these services are often not tailored to their needs (Knowles et al., 2016). Evidence, including the SCIMITAR trials, has highlighted that smoking cessation interventions effective in the general population also work for people with SMI when adapted to their needs (Gilbody et al., 2019). Hence, addressing smoking in this population is an essential factor in reducing this disproportionate health burden and upholding service users' rights to equitable, preventative healthcare. This disparity is outlined within Chapter 1.

Therefore, to improve smoking cessation outcomes for people with SMI it is important to understand what 'exceptional' support looks like and how this is delivered. Notably, the Positive Deviance (PD) approach discussed in detail within Chapter 3 of this thesis, offers a rigorous bottom-up route to that understanding. The PD approach identifies individuals, communities or services that demonstrate exceptional performance on particular measures, despite being exposed to the same constraints and

challenges as others (Baxter & Lawton, 2022; Bradley et al., 2009). As reviewed previously, the PD approach emerged in international public health in the 1970s and was effective in reducing childhood malnutrition (U. A. T. Mackintosh et al., 2002; Singhal & Dura, 2017; Wishik & Vynckt, 1976) and has been applied to healthcare settings since, for example, in improving hand hygiene compliance in hospital wards (Marra et al., 2011), exploring ethnic inequalities in maternal settings (Dooley et al., 2024), exploring how maternity services shape their cultures of safety (Mackintosh et al., 2025) and in improving maternal healthcare (Fetene et al., 2025). Hence, demonstrating the impact that PD can have towards healthcare improvement, and perhaps its application into smoking cessation. Therefore, the method used in this present study is the Positive Deviance (PD) approach. Importantly, the Bradley et al., (2009) framework for operationalising PD was applied here, with it offering a clear structure for examining high performance, alongside being widely used in healthcare research. Its use in the present study is thus supported due to the healthcare focus.

5.2.2 The qualitative identification of positive deviants

Traditionally as outlined previously, (Chapter 3) PD's are most commonly identified using quantitative and routinely available data. For example, one of the most well reported approaches to utilising PD is the four staged Bradley et al. (2009) framework. Notably this framework begins most often with the identification of PD's using concrete, routinely collected and widely endorsed data (Stage 1). Next, qualitative methods are used to generate hypotheses about PD strategies which can be used to succeed (Stage 2). Through this, hypotheses are generated and can be tested in larger and more representative samples to ensure their applicability (Stage 3), and a newly characterised 'best practice' can be disseminated to others with the help of key stakeholders (Stage 4).

Whilst the current project had intended to identify organisations or teams using quantitative data, the available national datasets were insufficient to do so. For example, the main national data set- National Health Service (NHS) digital dataset (NHS England, 2025) is the largest publicly available dataset, monitoring the NHS smoking cessation services quarterly. This dataset measures those setting a quit date and successful quitters, measured by abstinence at 4 weeks. Data is defined per region and local authority. However, this dataset is insufficient to identify any specific smoking cessation services offering an outstanding service or individual staff within these services- as this data is only present for national, regional and local authority levels. For example, within the 'Yorkshire and the Humber' region, data is aggregated to a national, regional and local authority level e.g. 'Yorkshire' (regional), 'Leeds' (local) so it is not possible to identify specific services (NHS Trusts or wards within such services) that are performing exceptionally well. Whilst alternative datasets do exist- such as the Office for National Statistics adult smoking habits, and regional datasets such as the Smoking Toolkit study- a monthly household survey measuring smoking trends across England (Buss, et al., 2025)- these issues persist.

Alongside this issue, these datasets often have no subcategory for individuals with SMI. For example, within the NHS Digital dataset smoking cessation data is provided for 'psychiatric community and hospital settings', however this provides little information into the mental health conditions of those within each subcategory. For example, if this is referring to general mental ill health, or a different definition of SMI, this is incongruent with this PhD's aims. This further demonstrates that this dataset is insufficient to identify exceptional performance for supporting smoking cessation within the SMI population. Therefore, this leads to the conclusion that qualitative methodology for identifying PD's for Stage 1 are to be utilised, due to the absence of sufficient quantitative data.

It is worthwhile noting that at the start of this PhD prior to data collection, approximately fifteen exploratory meetings were conducted with individuals working across smoking cessation services. These included service leads, commissioners, and frontline staff working within both community and inpatient contexts. The aim of these conversations was to map the current service landscape, understand how smoking cessation support for people with SMI was organised, and begin to explore what exceptional performance could look like within these settings. Importantly, these discussions highlighted the variability of smoking cessation provision across England. Community services were often described as underdeveloped for people with SMI, with limited specialist expertise, variable funding arrangements, and having inconsistent data reporting. In some areas of community care, smoking cessation provision had stalled or was in the process of recommissioning following COVID-19. These conversations also indicated that access to service users within community services was likely to be difficult, with sporadic referrals and low engagement levels. By contrast, these conversations outlined that inpatient services were more consistent in implementing smoking cessation support for people with SMI. They operated within clearer structure and were mandated to provide support through smokefree policies being implemented on mental health wards. This consistency made inpatient services a stronger context for applying the PD approach, and exploring exceptional performance. These exploratory meetings also reinforced the absence of sufficiently detailed public data to identify high performing services or wards- as such information is not required by local councils. As such this data is inconsistently reported.

On this basis, the present study adopted a qualitative approach for Stage 1- using interviews to identify individual high performing individual staff members delivering exceptional smoking cessation care within inpatient mental health settings. The detailed process for this is outlined in the methodology section of this chapter.

5.2.3 The justification of researching individual level positive deviants

As mentioned above, PD's were identified on an individual level as it was not possible to identify entire high performing NHS services. Importantly, this is because one primary assumption of the PD approach is that individuals, teams or organisations should succeed despite facing similar constraints as others in the population. Importantly, there is a considerable variation across individual NHS trusts with regards to how they are funded and organised- making the identification of NHS Trusts difficult, as services do not face similar constraints. This complexity was verified prior to finalising this project, through visits to a range of NHS trusts, alongside informal discussions with smoking cessation services at national smoking cessation events (see Chapter 4, QUiTT).

However, these issues of comparability can be reduced by investigating high performance within a set trust- as these higher level factors such as funding or service organisation become more consistent. This is because staff working within same ward or NHS trust are experiencing more similar constraints of delivering tobacco dependency care within this mental health setting. Therefore, this means that PD can be identified with more validity, providing further support for the qualitative identification of individual level PD's.

It is worthwhile noting that there are often only a few wards delivering smoking cessation care to people with SMI within most trusts, and often their patient groups are not comparable. For example, their patient groups may differ from being acute to forensic, to long stay adult wards, posing another level of variation. Hence, this poses another barrier to identifying entire high performing NHS trusts,

due to a further level of variation, and further supports the rationale of identifying individual level PD's.

5.2.4 The justification of researching inpatient mental health settings

Alongside minimising variation across trusts, the focus on inpatient mental health settings also reflects the limited availability of community smoking cessation services for people with SMI. In many areas dedicated community provision does not exist, restricting opportunities to identify and compare PD's in those contexts. Furthermore, prioritising inpatient settings aligns with national policy directions, with the NHS Long Term Plan explicitly identifying mental health facilities as a key setting for delivering tobacco dependency treatment (NHS England, 2019). Therefore, this provides support for the present study to investigate smoking cessation for people with SMI within inpatient mental health settings.

Thus, present study applies the Bradley et al., (2009) approach to PD, to identify individuals demonstrating exceptional smoking cessation care (Stage 1) and explore the practices making their care exceptional (Stage 2). Due to the absence of suitable quantitative data- which are overly aggregated, inconsistently reported, and lack SMI specific detail, Stage 1 of this approach is conducted qualitatively. Moreover, the focus is on identifying positively deviant individual practitioners rather than services or trusts- to improve the comparability of the constraints faced by individuals. Additionally, inpatient mental health settings are prioritised, because dedicated community SMI cessation services are often absent and national policy highlights mental health facilities as a key site for tobacco dependency treatment. The present study therefore identifies high performing individuals that provide exceptional smoking cessation care. Through Stage 2 of the PD approach, this study then examines what these individuals do differently and why it works. Hence this study aims to provide bottom-up insights to inform future practice and improvements. Findings will be compared to the top-down recommendations identified from the systematic review (Chapter 2).

5.2.5 Novelty of the present study

Whilst there are applications of the PD approach to healthcare and public health settings more generally, the evidence for applying PD in mental health contexts is limited. At present, the only identified example comes from the grey literature in the form of a case study by the National Alliance on Mental Illness (NAMI) in Pittsburgh, USA (Loyd & Freund, 2019). Although it does not explicitly follow the Bradley et al framework outlined previously, its process aligns with the core underlying principles of PD. Firstly, individuals with lived experience of mental illness who had found ways to overcome social isolation were identified through local mental health service discussions and workshops. Then, group conversations were used to explore the specific behaviours and approaches they employed, such as accompanying peers on public transport for the first time or helping them join community activities. These strategies were subsequently shared and tried within the same service user groups, to see if these strategies proved effective. Finally, these ideas continued to spread through peer led groups and community based initiatives, enabling wider participation and sustained social connections. This example is currently the only documented case of PD like methodology in a mental health context. Whilst it illustrates the potential of the approach, it also underscores the lack of evidence and as a result, a clear need for rigorous, peer reviewed research to build a stronger evidence base.

Building on this gap, smoking cessation represents a critical public health problem, as outlined within Chapter 1. Whilst PD research has previously been applied to diverse public health problems, these have typically been explored within community rather than inpatient healthcare settings. The present study is therefore distinctive in applying PD to a public health issue situated within inpatient services, and specifically within mental health contexts. To our knowledge, this PhD is the first study to employ a PD framework to examine smoking cessation in mental health services. Although a variation of PD methodology has been applied to smoking cessation amongst prisoners (Awofeso et al., 2008), discussed within Chapter 3, this lacked methodological transparency and did not draw on an established framework for conducting PD, which as outlined by Baxter & Lawton, (2022) offers the rigour and structure required to systematically identify, analyse, and disseminate PD behaviours. Moreover, their reporting was limited, with little information on survey design, distribution, or analytic procedures. Therefore, these limitations reduce the robustness and reproducibility of such findings. Thus, the present research seeks to address these gaps by applying a PD approach to smoking cessation- a major public health problem within healthcare services.

5.2.6 Study Aims and Research Questions

This study aims to identify high performing staff members (positive deviants) who deliver exceptional smoking cessation care. Alongside this, it aims to explore the factors that facilitate their exceptional care.

Research Questions

1. Who are the individual level positive deviants supporting smoking cessation care for people with SMI within inpatient mental health settings?
2. What are the individual level factors facilitating exceptional smoking cessation care within inpatient mental health settings?
3. What are the ward level factors impacting exceptional smoking cessation care?
4. What are the trust level factors impacting smoking cessation care?
5. Do the factors deemed to be positively deviant by staff translate to service users' perspectives?

5.3 Methods

5.3.1 Setting and Context

This study aimed to identify individual PD's across three mental health trusts with dedicated tobacco dependency services, outlined below:

Trust 1: A large provider of community and mental health services across a mixed urban-rural county in the Midlands. The local population includes a diverse inner city area alongside rural communities. The organisation has been a smoke free trust since October 2016, however following pandemic relaxations, smoke free rules on mental health wards were fully re-launched on 9 January 2023 with ward based smoking cessation support. This trust had two TDA's.

Trust 2: An urban mental health and social care provider in a northern city, which serves communities with significant deprivation. The population has wide ethnic diversity and a sizable student population. The trust introduced a smoke free and nicotine management policy in May 2016, with an standard operating procedure for its implementation on all inpatient wards the same year. This trust had six TDA's.

Trust 3: A major London specialist mental health provider which serves a highly diverse and densely populated inner city catchment area. A trust wide smoke-free policy was adopted in June 2012 and a smoke free pilot across all inpatient clinical areas began in March 2013. Smoking cessation support remains a routine part of care. This trust had seven TDA's.

Each of these Trusts provides inpatient mental health care with an embedded smoking cessation service for people with SMI. They were therefore well placed to support the aims of the present research. Service leads at all three sites offered work with the lead researcher to facilitate access, enable interviews with staff and support the study through their smoking cessation service infrastructure. Hence, the decision to focus on these three trusts was based on both feasibility and conceptual fit. They represent established inpatient services with active smoking cessation provision for SMI, and they demonstrated willingness to engage with research. These sites provided a diverse but comparable set of cases in which to investigate high performance and identify practices that contribute to exceptional care and improved outcomes.

5.3.2 Participants

Recruitment of PD's was conducted through semi-structured interviews with the Tobacco Dependency service leads, and following this, TDA's- to which the rationale is explained below. From these interviews, the factors defining high performance for smoking cessation within mental health settings were explored, alongside the recommendation of high performing individuals (PDs). After their identification, semi-structured interviews were conducted with these individuals to explore the practices underpinning their exceptional performance. Moreover, interviews were conducted with comparator staff members- who were not identified as PDs but worked within the same services and were deemed as delivering good care. Service user perspectives were also collected through open ended surveys- justified below.

Stage 1: The identification of Positive Deviants

Participants within Stage 1 were recruited for their oversight of smoking cessation provisions within their trust. Although the study initially sought to interview only service managers or tobacco service leads- it was revealed that TDAs often had more detailed knowledge of ward level practices and staff members who delivered exceptional care. Hence, both TDA's and service managers were interviewed within Stage 1 with the aim of identifying positively deviant staff members. Notably, service managers identified TDAs as PDs, however these TDA's also contributed to Stage 1 by identifying ward based staff deemed as PDs, whilst also being explored as PDs themselves in Stage 2. This approach ensured that high performance at the ward level was captured, providing a more holistic picture of PD. A similar staged design has been used in previous research (i.e., Marra et al., 2011). In this study, participants are referred to either as TDAs- whose primary role is tobacco dependency care, or ward-based staff- whose primary role is broader patient care. The latter included nurses, doctors, healthcare assistants, and student nurses.

During Stage 1, participants were asked to identify staff they regarded as PD's and to explain why, providing initial insights into the behaviours and qualities associated with their high performance. Notably, the themes and examples that emerged in Stage 1 directly informed Stage 2, whereby the focus shifted from the identification of high performers to exploring in detail how they delivered exceptional practice day to day. Figure 5.1 demonstrates this relationship.

Stage 2: Exploration of Positively Deviant behaviours

Stage 2 interviews built on the accounts from Stage 1, by exploring in detail using semi-structured interviews with these PD's, what they actually did in practice to deliver exceptional care, how they approached smoking cessation support and understanding the contextual factors that may have shaped their performance.

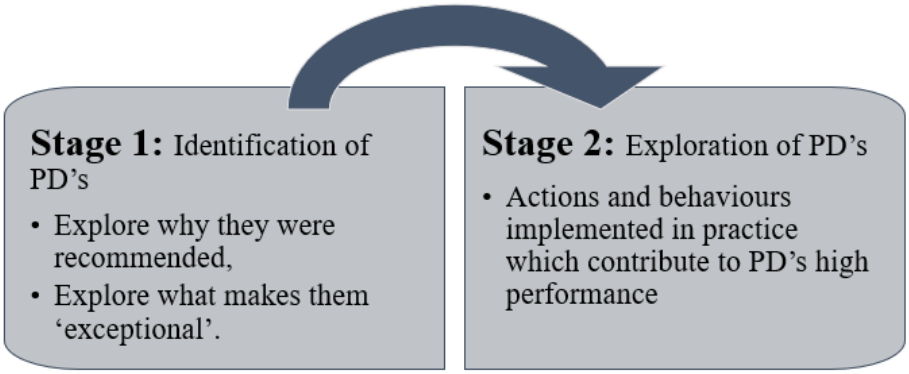


Figure 5.1: The way that Stage 1 identification of PD's informs the exploration of their exceptional practices within Stage 2.

Comparators

Notably, the PD literature frames the inclusion of comparators as a methodological best practice, being important in distinguishing positively deviant behaviours from those that the rest of the population use. Baxter et al., (2016) found that comparator groups were rarely included in healthcare PD research, and that methodological reporting was often weak and heterogeneous. Moreover, Rose and McCullough, (2017) similarly emphasise the inconsistencies of comparator inclusion within many PD applications, as explicit comparator groups are rarely incorporated in individual-level PD studies within healthcare. Therefore, interviews were conducted with comparator staff members- who were not identified as PDs but worked within the same services and were deemed as delivering good care.

Service User Surveys

Service users' perspectives were gathered through anonymous, open ended surveys (defined as STS), with an example provided in Appendix 3. This approach was informed by earlier PPIE work (see Chapter 1), which highlighted the difficulties of engaging this population, particularly in discussions regarding smoking cessation. Moreover, staff members working with service users within their respective trusts frequently reported that many service users did not have the capacity to participate meaningfully, whilst other service users expressed little interest in discussing their smoking habits. Considering these challenges, brief and accessible surveys were then prioritised to maximise inclusion and ensure representation of the patient voice, as emphasised in earlier PPIE work. Moreover, to strengthen this survey dataset, responses were supplemented with existing discharge survey data (DS) collected by Trust 3, which also captured service users' views on smoking cessation support during their inpatient stay.

The open ended survey responses were analysed using qualitative content analysis, which followed the three phased process described by Elo and Kyngäs (2008). In the preparation phase, each response to the open ended questions was treated as a distinct and meaning unit of data. The responses were read multiple times to ensure the primary researcher (MS) was familiar with the content and context of the statements. The organisational phase involved inductive and open coding, as no predetermined coding framework was in place. Codes were generated to capture the key points expressed by service users, and then grouped into subcategories and broader categories that reflected the overall experiences and perceptions of service users. Finally, in the reporting phase, these categories were described in detail and supported by illustrative quotations that provided depth and insight into the aspects of smoking cessation care most valued, or in some cases, critiqued, by participants.

5.3.3 Ethical Considerations

The study received NHS Research Ethics Committee approval and Health Research Authority (HRA) approval (REC reference: [24/WS/0111]). Research passports and letters of access were obtained for all three participating trusts. All participants provided informed consent, and confidentiality was assured by using pseudonyms. Data was stored securely, separate from transcripts, on a password protected University of Leeds One Drive server. All procedures complied with the Data Protection Act (2018) and GDPR. Participants were reminded of their right to withdraw at any time without providing a reason, and a distress protocol was in place.

5.3.4 Procedure

Data collection

Staff members in Stage 1 were recruited via email, whilst Stage 2 participants were approached either directly by email or through their line managers. All participants received an invitation letter, participant information sheet, and consent form. Interviews were scheduled for 45 to 60 minutes and conducted in person, by telephone or via Microsoft Teams. Informed consent was obtained to audio record interviews for transcription.

Semi-structured topic guides were used to frame the interviews (Appendix 4). Guides were informed by the Positive Deviance framework. This allowed practitioners to describe in their own terms what ‘high performance’ looked like, while still orienting discussion towards factors known to shape behaviour. In the present study, topic guides were iterative and responsive, enabling elaboration and the emergence of unanticipated but relevant areas.

For the survey component, service users received an information pack (information sheet, consent form and the survey), which could be completed on the ward with staff support if required. Surveys were selected in response to PPIE feedback, where service users reported difficulties in engaging in interviews- but emphasised the importance of having their voices represented within research. Accordingly, the study survey (STS) comprised a brief Likert type rating of smoking cessation support, to capture experiences of service users who perhaps did not have capacity to complete longer questions- alongside two open ended questions to capture their experience in greater depth. These data were combined with the discharge survey (DS) from Trust 3, which asked parallel questions about smoking cessation support during inpatient care.

Data Analysis

Interview transcripts were transcribed and anonymised by the primary researcher (MS) prior to thematic analysis (Braun & Clarke, 2019, 2021). This approach emphasises the active and interpretative role of the researcher and was chosen to enable an inductive, semantic analysis, that allowed themes to remain closely grounded in participants' accounts whilst also capturing the meanings and practices that defined high performance. Taguette qualitative analysis software was used to organise transcripts, support coding, and manage theme development. Coding decisions and interpretations were discussed within the research team to enhance reflexivity and rigour, recognising that themes were not 'discovered' in the data but actively generated through engagement with it.

Open-ended survey responses were analysed inductively using the three phased qualitative content analysis process previously described by Elo and Kyngäs (Elo & Kyngäs, 2008). Coding of surveys was conducted by the primary researcher (MS) to identify recurring patterns in service users' descriptions of their smoking cessation experiences. Categories were developed to capture key aspects of service users' experiences. Likert scale responses were summarised using descriptive statistics to provide an overview of service users' ratings of the support they received.

5.3.5 Researcher Reflexivity

Reflexive notes were maintained throughout data collection to monitor the researchers (MS) influence on the process. Early interviews tended to follow the question schedule closely, limiting deeper probing, likely due to no prior qualitative research experience. As data collection progressed, questioning was adapted, by focusing more on clarifying the traits held by those identified as positive deviants, alongside asking for clarification on factors discussed in previous interviews. Practical challenges occurred throughout data collection, in particular where interviews were conducted in person on the trust site- such as unpredictable ward activity and interruptions, which occasionally affected the flow of interviews. Hence, flexibility in approaching interviews was necessary to maintain depth while accommodating the realities of the clinical environment.

5.4 Results

5.4.1 Semi-Structured interviews

In total, 36 interviews across Stage 1 and Stage 2 were conducted with staff members across the three trusts. Some individuals contributed to both Stage 1 and Stage 2- so they appear in both datasets. In total, there were N = 24 unique participants.

Semi-Structured interviews: Stage 1- Identification of Positive Deviants

As outlined within Table 5.1, in Stage 1, $N = 16$ participants were interviewed for their oversight of smoking cessation provision. Although the study initially sought to include only service managers or tobacco service leads ($N = 4$), interviews revealed that TDA's held more detailed insights into ward-level practices and hence, could identify positive deviants at a ward level, whereas service leads could not. As a result, TDAs were also interviewed at this stage. This led to $N = 12$ TDAs contributing to Stage 1, alongside service managers and leads. Because TDAs were re-interviewed in Stage 2, they are double counted across the stages.

Semi-Structured interviews: Stage 2- Exploration of Positive Deviants

Following these interviews, Stage 2 ($N = 20$) comprised of interviews with those identified as PD's. Four additional individuals were also identified as PDs (two at Trust 1 and two at Trust 2) but were unavailable for interview. Of those interviewed, $N = 12$ were TDAs and $N = 8$ were ward-based staff working directly in patient care. Hence, there were eight unique participants within stage 2. The ward based PD's included three mental health nurses (all of whom were also ward managers) along with an activity coordinator, an occupational therapist, a junior doctor, a student mental health nurse and a ward administrator.

Comparators

Alongside this, two comparator staff members were interviewed who were deemed as delivering good but not exceptional, smoking cessation care. Four comparators were identified overall, but two were unavailable for interview. Within the present study, the recruitment of comparators was complicated by ward-level constraints, with staff often too busy to participate. In addition, the comparators interviewed were not matched on role or experience, which underlines the methodological complexity of applying the PD approach within healthcare. These issues are discussed in further depth below.

Table 5.1: Participants per trust and study stage.

Stage 1 included service leads and TDAs; Trust 1 (1 lead, 2 TDAs), Trust 2 (2 leads, 4 TDAs), Trust 3(1 lead, 6 TDAs). Stage 2 included TDAs and ward-based staff: Trust 1 (2 TDAs, 2 ward sisters, 1 junior doctor, 1 administrator), Trust 2 (4 TDAs, 1 student nurse), Trust 3 (6 TDAs, 2 nurses, 1 occupational therapist). Service user surveys comprised 4 from Trust 1 and 19 from Trust 3 (including discharge survey data).

Stage	Total (*N*)	Trust 1	Trust 2	Trust 3
1: Identification of PDs	16	3	6	7
2: Exploration of PDs	20	6	5	9
Service user surveys	23	4	0	19

5.4.2 Thematic analysis: Behaviours underpinning exceptional smoking cessation care at an individual level.

Analysis of staff member interviews was conducted by the primary researcher (MS) using reflexive Thematic Analysis (TA) (Braun & Clarke, 2006, 2019, 2021). Rather than treating themes as discovered within the data, this was an active and interpretative process with themes being developed through repeated engagement with the transcripts and reflection on their meaning. This reflexive stance enabled attention to both the behaviours and strategies of PD practitioners, alongside the contextual conditions (i.e., ward and trust level factors) that shaped how these practices were enacted. The findings provide a multi layered account of what constitutes exceptional smoking cessation support in inpatient mental health settings, drawing on perspectives from staff in different roles and across multiple NHS trusts.

This section explores the three key themes which resulted from reflexive TA which represent the factors that PD staff members demonstrated. These three themes are shown and defined within Table

5.2. Importantly, supportive language and communication (Theme 1) transformed initial distrust into engagement by reframing conversations around choice and aligning cessation support with service users' readiness. Humanising care (Theme 2) extended this process through deliberate rapport building practices that generated trust, psychological safety and reduced stigma, thereby enabling more open disclosure of smoking behaviours. These strategies were sustained and reinforced through integration within the wider ward team (Theme 3), where PD TDAs' actively embedded themselves, which improved interdisciplinary relationships and ensured consistency in the delivery of care.

Across these themes, a clear mechanism emerged- appropriate language and communication fostered engagement, trust enabled disclosure and team integration ensured reliable implementation. The reciprocal relationships developed between TDA's and nurses, HCAs, ward managers and care coordinators facilitated the timely management of prescriptions and NRT, alongside creating the conditions for consistent frontline advocacy and practical education in smoking cessation aid use. Collectively, these findings identify the individual level positive deviants (RQ1) and elucidate the factors underpinning their ability to deliver exceptional smoking cessation care in inpatient mental health settings (RQ2).

Table 5.2: A brief definition of all three main themes, which represent the PD practices underlying the individual high performers behaviour.

Theme	Interpretation
1. The impact of language and supportive communication	Positive deviants used supportive language when addressing smoking cessation, avoiding abrupt phrasing (i.e., the 'smoking guy', 'quitting') that could create resistance. By framing conversations openly and gently, they reduced misconceptions of the smoke free service, built trust, and increased the likelihood of engagement with the service.
2. Humanising care through informality and rapport building	Positive deviants built relationships with service users through informal engagement (i.e., playing chess), using third spaces (i.e., walking groups) and having sustained presence on the ward. This fostered psychological safety and made conversations about smoking cessation more accessible.
3. Levels of interconnected care	Positive deviants, specifically TDA's, embed themselves within ward teams, bridging gaps between smoking cessation services and the wider care team. These relationships promote mutual understanding, policy implementation,

	and coordinated delivery of patient-centred interventions.

Theme 1: The impact of language and supportive communication

Those identified as PD's emphasised the importance of using supportive rather than restrictive language when addressing smoking cessation. This approach is critical both during the initial ward level assessment by staff (discussed below), and in the first approach by TDAs. Supportive language between TDA's and ward staff fosters collaboration between these two groups which otherwise often operate independently, whilst poorly framed communication between ward staff and TDA's can lead to misconceptions amongst service users and creating negative attitudes toward the service which often requires later correction. Figure 5.2 outlines the two sub themes within Theme 1

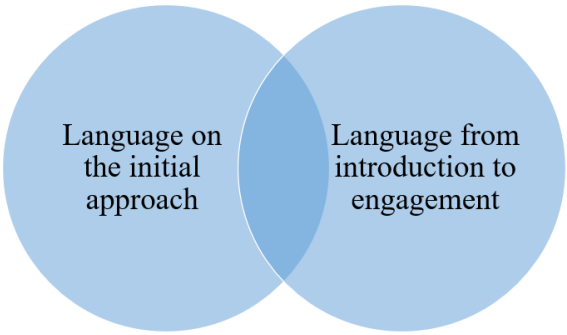


Figure 5.2*:* A Venn diagram outlining the two sub themes within Theme 1 (supportive communication).

Theme 1, Sub theme 1: Framing the first conversation- language on the initial approach.

Throughout Stage 1, participants identified the use of such supportive and non-restrictive language during the initial assessment as an essential factor that distinguishes an exceptional staff member. PD staff members consciously avoid framing their role or the smoking cessation service in a way that implies pressure to quit immediately. As one service manager stressed, *"I really passionately want our advisors not to, you know, go on wards or anywhere and be like, that's it, I'm from the quit team. I'm here able to help people stop smoking. Do you want to stop? No? Right, next"*- Trust 2, Stage 1, Participant 2, Service Manager. Similarly, a further participant within Stage 1 highlighted that PD's adopt language that invites dialogue rather than closes it down- *"I guess with some people, particularly somebody who's perhaps a little bit hesitant…rather than, you know, I'm here to talk about your smoking. Or do you want to stop? So that's quite a negative question to start off with…for example- Have you ever? Have you ever considered stopping…Have you ever previously attempted to stop smoking?"*- Trust 2, Stage 1, Participant 1, Health Improvement Manager. By deliberately avoiding abrupt or restrictive phrasing, PD's create opportunities for engagement, even with those initially uncertain or resistant. Hence, the use of positive and non-restrictive language is critical in facilitating exceptional smoking cessation care within inpatient mental health settings.

When a patient is admitted to hospital a physical health assessment is undertaken, often by ward staff, whose primary role is not tobacco dependency. This assessment is designed to address the individual's physical health needs and where relevant to identify their smoking status, enabling their referral into the tobacco dependency team. As one participant explained- *"On your admission…there's a whole list of things that the nurses will do…physical health, mental health, everything. They go through a section which is they should ask your smoking status, are you a smoker, current smoker, ex-smoker, never smoked"* - Trust 1 Stage 1, Participant 3, TDA. Importantly, the language used during this initial assessment is pivotal. Negatively framed communication can lead service users to resist referral and hence, foster negative attitudes toward the tobacco dependency service.

Following this, a repeated issue was use of reductive labels used by ward based staff to describe the tobacco dependency service, such as referring to TDAs as *"the smoking guy"*- which misrepresents the service as focusing solely on complete smoking cessation. As one TDA expressed, *"Everybody on that Ward knows that I hate the title, I hate it with a passion, 'the smoking guy'… Oh the smoking guy's here"*- Trust 2, Stage 1, Participant 5, TDA. This language is further outlined from another participant, who said that- *"They [service users] were kind of like, oh, here we, here we go again. It's the smoking lady!"*- Trust 1, Stage 1, Participant 2, TDA. By contrast, exceptional ward based staff members adopted supportive and non-restrictive language, that frames the tobacco dependency service as flexible, person centred and not solely about quitting.

When these initial interactions are framed negatively, service users often develop unfavourable attitudes toward the tobacco dependency service. As one TDA reflected, *"Whenever I get a no on the referral form after that person asked them, I'd go on the ward- and the patient is engaging as ever, it's like, maybe you asked them in a way of, do you want to speak to someone about your smoking or quitting smoking? I've never asked that"*- Trust 3, Stage 2, Participant 3, TDA. This reinforces that PD's at the ward-level avoid restrictive or overly direct phrasing. They not only apply supportive language in the initial health assessment, but also in their own first contact with service users. Such individuals adopt a gentle and curiosity driven approach. As one TDA described, *"Having curiosity… going in with a bit of an open mind about people's experiences is always a good starting point…I think yeah, just showing a bit of interest like, you know, not jumping the gun, not going in there and just being like, right, I'm here to speak to you about smoking cessation. Let's go"*- Trust 3, Stage 2, Participant 4, TDA.

This is particularly important as many individuals are not initially ready to quit smoking upon their hospital admission. One participant explained, *"As soon…you say, I'm from the quit team, I'm here to help you support with your nicotine addiction straight away. They would turn their back. I don't want to quit smoking"*- Trust 2, Stage 2, Participant 4, TDA. This same pattern was reported across all three trusts- *"When you look at them and say I'm from the smoking team, they will give you a look as if they don't want to quit, they will let you know about it in like the first 10 seconds, no I'm not interested"*- Trust 1, Stage 2, Participant 3, TDA. Therefore, PD's distinguish themselves through the consistent use of open, non-prescriptive language and approaches that enhance engagement, reduce resistance, and align closely with the provision of exceptional smoking cessation care in inpatient mental health contexts.

As a result of these initial misconceptions that the tobacco dependency team is solely focused on smoking cessation, TDAs often find themselves having to reframe expectations of the service and correct misinformation. For example, clarifying that their role is to offer support with smoking

reduction or management, rather than enforcing immediate cessation. One participant outlined this misconception, *"When I tell people…I work for smoke free team the first thing they say is, oh I don't want to talk to you because I want to carry on smoking. I say, well…that's fine. But that's not why I'm here, you're on a ward, and you can't smoke… so I'm just checking you're OK on the ward without smoking. So, our job isn't to stop people smoking, we help people to stop smoking if they want to stop, but primarily it's making sure people are comfortable"*- Trust 3, Stage 2, Participant 5, TDA. Similarly, another TDA outlined this same common misconception *"And that is my first thing that I will always say. I'm not here to stop you smoking"*- Trust 2, Stage 2, Participant 4, TDA.

Hence, PD's actively address these misconceptions by clarifying the true scope of the service and building trust from the outset. As one participant described, *"So if I would go there and ask them and tell them, oh, I'm from the health improvement team. I'm here to help you make comfortable. How are you feeling right now? How can I help you? It's like I'm offering support. I'm trying to comfort them"*- Trust 2, Stage 2, Participant 3, TDA. By adopting this approach, they create a foundation for rapport increasing the likelihood that service users will meaningfully engage with the support available.

Theme 1, Sub theme 2: Language from introduction to engagement

Shifting this language from a directive approach to one framed through curiosity appears to improve service user's engagement and perceptions of the service. PD's are able to draw on techniques such as motivational interviewing (MI) to achieve this. Notably, MI is defined as a collaborative and goal oriented style of counselling that emphasizes evoking an individual's own motivations for change**,** rather than imposing advice. This creates an empathetic and acceptance based atmosphere to help resolve ambivalence and strengthen commitment to positive behaviour change (Miller & Rollnick, 2002b). As one PD TDA explained the impact that MI has, saying that *"The biggest tool that we've got…is motivational interviewing. And it's a very person centric, centric way of giving care and it works and it is fantastic works in most cases"*- Trust 2, Participant 7, TDA.

In practice, MI was often used by exceptional performers as a way to secure an initial engagement with the service, by turning a service user's lived experience into a starting point for connection. One participant outlined this process, *"They'll [The service user] go ohhhh ive tried to stop loads of times and its too hard for me, so you have to go oh, you've tried to stop loads of times have you? And so you have a conversation about what that was like and- you use those conversations to, you know, it's … getting your foot in the door"*- Trust 2, Stage 1, Participant 2, Smoke free lead. Hence, this approach demonstrates how PD's often integrate MI into their practice to build trust, foster openness, and facilitate engagement with the service. It also reinforces the broader point within this theme that the language used when discussing smoking and when representing the tobacco dependency treatment team can influence service users' perceptions and willingness to participate.

Theme 2: Inter-personal relationships: Humanising care through informality and rapport building

A further consistent and compelling finding within Theme 2 was the critical role of informality and rapport building in enabling exceptional smoking cessation care. In Stage 1, participants repeatedly highlighted these qualities; informality, the ability to build rapport and a person centred mindset, as central to why certain practitioners were perceived to deliver exceptional smoking cessation support. These perceptions were a key reason why those individuals were identified as PDs. In Stage 2, the PDs themselves elaborated on these same qualities, illustrating how they were actively operationalised

in practice. These PD's described routinely prioritising relationship building over formalised clinical procedures when engaging with service users. Their accounts revealed a humanising approach to care characterised by empathy, warmth, flexibility, and sustained presence. Such practices were particularly effective for supporting people with SMI, who often encounter stigma and marginalisation in healthcare. By fostering psychological safety, cultivating genuine connections, and making smoking cessation conversations approachable, these practitioners demonstrated what exceptional care looks like in action. These themes and sub-themes are outlined below in Figure 5.3.

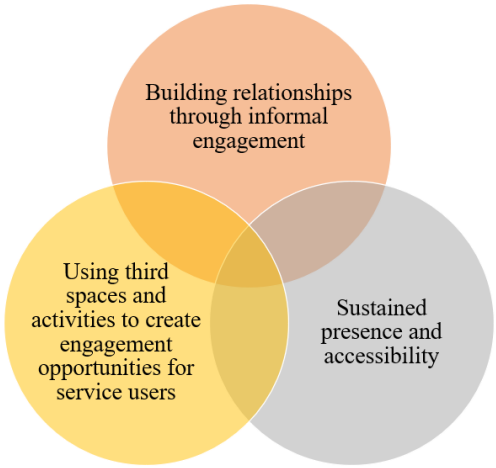


Figure 5.3: A Venn diagram outlining the three sub themes within Theme 2. These are the traits that 'positive deviant' individuals held (RQ1) which enabled them to deliver exceptional performance (RQ2).

Theme 2, Sub theme 1: Building relationships through informal engagement

Often, PD's took a more informal and relationship led approach to addressing an individuals' smoking behaviour. Notably, a key individual level behaviour repeatedly discussed in interviews was the ability of PD's to build strong and trusting relationships between themselves and other members of staff and service users. These relationships were viewed as central to effective care and were frequently cited as the reason certain individuals were recognised as exceptional. For example, the importance of building relationships with service users was highlighted throughout Stage 1, whereby it was outlined that high performance looks like; *"Understanding how smoking relates to their life…some people I think will smoke because they want to alleviate certain symptoms of their mental health"*- Trust 1, Stage 1, Participant 1, Service Lead.

Moreover, this is further outlined by two Stage 1 interviewee's, who suggested that, *"You need to build the rapport first. With SMI, you need to build that rapport first. You don't build that rapport. You don't get a result"*- Trust 2, Stage 1, Participant 3 TDA, *"The crucial aspect to everything that I've ever had any success with in mental health is when you can show a genuine curiosity and a genuine desire to know more about that person"*- Trust 2, Stage 1, Participant 2 Service Lead. Hence, this outlines the importance of building strong relationships with service users, and outlines this as perhaps how high performance may appear when delivering smoking cessation in inpatient mental health settings.

Additionally, high performers with a primary role in tobacco dependency (i.e., TDAs) often prioritised building strong relationships between themselves and those based at the ward-level. One

TDA highlighted this as essential as it is *"Respecting the boundary of the ward".* Notably, one TDA explained why this was important, stating that *"I kind of try and have an engagement with the nurses so that you're building that rapport up to try and then that they understand what I need from them"*. They further elaborate on this, explaining their rationale for doing so- *"I try and engage with them rather than, oh, have you done their smoking form… because…I think some people can rile them up because they've got 1000 other things that they need to be doing"*- Trust 2, Stage 2, Participant 4, TDA.

The importance of such is highlighted by one ward based high performer, *"I said, well, when the TDA is here next, we'll introduce you"*. Hence, such relationships go both ways, with ward staff recognising the value of supporting TDAs, whilst TDAs actively sought to engage and collaborate with ward teams. This reciprocity was described as essential for embedding smoking cessation into ward culture, ensuring that it was not perceived as an external or competing task but as a shared responsibility. By fostering mutual respect and open communication, these inter-staff relationships helped bridge the gap between the specialist tobacco dependency provision and the realities of ward practice, ultimately enabling more consistent and effective support for service users.

Theme 2, Sub theme 2: Using 'third spaces' and activities to create engagement opportunities for service users.

A particularly common method for facilitating relationship building was the use of shared or 'third spaces' to foster more natural and pressure free interactions with service users. Third spaces included games like chess or table tennis, creative activities like colouring, or group events designed to encourage rapport and community without focusing immediately on smoking cessation, such as walking groups. These informal settings provided a neutral ground where staff members could begin conversations surrounding smoking more organically. Sometimes, service users' initial engagement with the tobacco dependency service was limited, outlined by one TDA who said that, *"I run a group once a week… it's hit and miss. Sometimes we get a few people come, sometimes it's more, sometimes It's a group with one person"*- Trust 3, Stage 2, Participant 4, TDA- the sustained presence and familiarisation of the staff running these activities often (notably, this was often TDA's and Occupational Therapists), led to improved engagement and willingness to speak about smoking cessation over time.

Notably, one positive deviant outlined this, stating that *"I won't do things really formally either. Some of the best sort of interactions I've had, and most successes are built in therapeutic relationships with a service user. We've been doing, maybe some activities such as table tennis…and then somehow we casually get into the conversation of vapes"*- Trust 2, Stage 2, Participant 6, Student Nurse. A further positive deviant, from a separate mental health trust, outlined a similar pattern of approach- *"I made this smoke free activity booklet, which has…there's a quiz and a crossword and colouring, but they're smoking related. And so, I just suppose I'd like to kind of try and think of different ways to engage people in the service. Because I know from my experience…if you see a board full of information and leaflets…you're probably not going to read them… I suppose I like to just try and think of alternative ways to, to promote the service and to, to get people involved… once people are slightly interested, I think it's easier"*- Trust 1, Stage 2, Participant 4, TDA.

The third-space approach appeared to enable service users to feel seen as individuals rather than solely as patients or as people with an addiction. These informal and low pressure encounters allowed for more human connections, perhaps helping service users to feel respected and understood within

the context of their wider experience of mental illness. Staff members who were considered PD's were often those who took the time to build familiarity, check in without pressure and engage on terms that felt less clinical and more personal. For example, one identified PD outlined this rationale, by stating that *"I think just trying to get to know them as a whole person, rather than just focusing on the smoking, which is obviously like a small part of someone… it's really about kind of building that connection and just treating someone as a person rather than their addiction"*- Trust 1, Stage 2, Participant 4, TDA.

Furthermore, these activities may enable service users more time and comfort to open up to staff about their smoking habits and feel less pressured as they can engage in a more informal manner. Therefore, this suggests that positive deviance on an individual level looks like staff members- both TDA's and ward based staff members, fostering strong relationships with service users. They may do this through creating a safe space, often using a third space or activity, to create a neutral ground. Hence, this enables a lower level of pressure and stronger levels of engagement with the tobacco dependency service.

Theme 2, Sub theme 3: Sustained presence and accessibility

Another individual level factor underpinning exceptional care was the visible and ongoing presence of staff on the ward. Simply "being there" in a low pressure and accessible way created conditions in which service users could initiate contact when they were ready. This style of engagement was repeatedly mentioned as a behaviour pattern that PD's maintained. For example, within one trust, the use of a 'third space' has been utilised so that smoking cessation became a part of every day conversation, reducing the pressure of such a topic- *"We do a walking group, for people identified as smoking and, you know, that's really good… it's about doing something that's building in perhaps some other healthier activities, whilst having those discussions as well… it's not just about having a formal assessment with someone in a room…it's about having those discussions in a different environment…building that into other aspects of care rather than just being oh, so you want to smoke…making it just part of a come of an of an everyday conversation"*- Trust 3, Stage 2, Participant 5, TDA

The rationale of familiarity and persistence enabling exceptional care is outlined by a further positive deviant- *"It does mean that you know, hey, I'm available and people will say, what are you doing here? It's like I've got nowt on for three hours, so I figured I'd come and watch telly here…I'll just, you know, hang around and people will come and people will approach you having that availability and just being- yeah, I'm here. No pressure, theres nobody that I need to see, but I'm available and people will just come up- Actually. Have you got 5 minutes? Actually, yeah, this this this vape is not really cutting it. You mentioned patches. Yeah. Can we can we go and have a chat? And these are people who told me in no uncertain terms where to put it only days before"*- Trust 2, Stage 2, Participant 5,TDA.

Theme 3: Inter-professional relationships: levels of interconnected care

Positive deviants, specifically those who are external to the ward in their job role- such as TDA's, demonstrate a capability to embed themselves within ground level ward teams. This integration of interprofessional relationships bridges the perceived gap between the smoking cessation services and the wider multidisciplinary team (MDT) alongside promoting a mutual understanding of the smoking cessation service's aims. Moreover, these inter staff role connections likely contribute to the enforcement of smokefree policies and hence, facilitation of timely and coordinated delivery of smoking cessation aids such as NRT and e-cigarettes. Therefore, by fostering trust, clear communication, and practical collaboration, individual PD's create the conditions for consistent and patient focused care. These sub themes are outlined below in Figure 5.4.

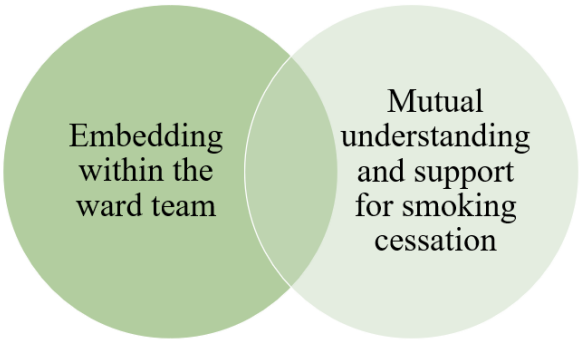


Figure 5.4: Venn diagram outlining the two sub themes within Theme 3, levels of interconnected care across professional roles.

Theme 3, Sub theme 1: Embedding within the ward team

Importantly, individuals in Stage 1 identified that strong inter professional relationships between TDA's and ward based staff members (i.e., nurses, health care assistants) were a driving factor for exceptional performance- as often there is a distinction between these categories of staff members. One participant within Stage 1 elaborated on this, stating that *"Having direct contact with the ward manager, it's like building up that relationship… So you kind of, I guess you're respecting the boundary of the ward as well. The fact that you're coming into their space. And you're working with them instead of working separately. So it's a collaborative effort between all of you instead of the service being external and sitting back in the office, you're more embedded into the team, on the ward for instance"*- Trust 1, Stage 1, Participant 1, Service lead.

Notably, these stronger relationships between TDA's and ward based staff members are often associated with those identified as PD's. As one participant outlined when recommending their staff members, *"What they do really well on is…don't just go and see the patient directly like, they drop in to the nursing office and say hi… then drop off the vapes in the certain location, you ask people, like ask the staff, is there anyone that you want me to see today?"*- Trust 1, Stage 1, Participant 1, Service lead. Thus, fostering these interprofessional relationships appear to be a critical characteristic of positively deviant staff members- alongside those interpersonal relationships outlined previously.

The emphasis on this inter-professional relationship building is key as many TDA's often report feeling disconnected from the broader care team involved with service users. One positively deviant TDA outlined this difficulty-*"We want the smoking team to be more embedded into other teams- because we feel separate. When I was at these meetings it was very nurse, doctor, physio, OT focused- but they never, they never mention smoking and I think that's what I have noticed. Not that were not*

taken seriously, but there is a disconnect between our team and the rest of the trust"- Trust 1, Stage 2, Participant 4, TDA. This difficulty is outlined by a further participant *"I think they do see smoking cessation team as, to itself almost"*- Trust 2, Stage 2, Participant 4, TDA. Hence, this supports Theme 2 in suggesting that relationships are key- whilst theme 1 indicated the importance of interpersonal relationships, theme 3 demonstrates that inter professional relationships are also an essential behaviour upheld by a PD- specifically, one external to the ward such as a TDA.

Theme 3, Sub theme 2: Mutual understanding and support for smoking cessation

Notably, these strong inter professional relationships appear to enhance the ward staff's understanding of the smokefree service and its offerings. This is particularly important, as ward based staff members, who spend extended periods of time with service users, are most frequently responsible for enforcing and upholding smokefree policies. Therefore, by fostering this mutual understanding of the service, TDA's benefit from ground level support, enabling them to deliver smoking cessation care without hindrance. As one TDA explained, *"Because they're the ones that initially there for 12 hours a day. You can we can dip in and out the wards, see assessments gone there for an hour…if you build that relationship with them and that understanding of why you're there to do it …I believe that's where you get a success. That's why I get a lot of my success from with relationship building with ward staff"* – Trust 3, Stage 2, Participant 3, TDA.

Moreover, a further participant outlined the importance of this, "*Is everybody, agreeing that this is an important thing that we need to be doing? Understanding kind of the importance of health inequalities and tackling health inequalities for people with SMI diagnosis… if we're not all on the same page, we're not all singing from the same hymn sheet, we aren't able to provide that excellent care that we are endeavouring to do, and sometimes that doesn't always happen. We don't always get that right"*- Trust 3, Stage 1, Participant, 1, Health improvement manager.

Moreover, these multi level staff relationships may also foster reciprocal engagement, as ward staff were more likely to support smoking cessation interventions when these strong inter-staff relationships were present. This is reflected in the account of another high performer *"I think it's really important the communication of the staff that the patient is dealing with, so I will talk to care coordinators about their physical health, and communicating with staff to say, can you please encourage your patients to do this or we've recognised this with your patient, can you remind them?"* - Trust 3, Stage 2, Participant 8, Nurse.

Alternatively, when this belief in the service is not present, TDA's reported that it was more difficult to deliver exceptional service, with one high performer stating that *"When you've got ward managers and consultants that are really against it, you're up against it with all of the staff"*- Trust 3, Stage 2, Participant 6, TDA and TDA lead. Thus, such interconnectedness across levels of staff members is a defining characteristic of PD individuals and aligns with the conceptualisation of TDA's as embedded members of the wider multidisciplinary team.

Not only do strong cross role relationships enhance ward staff's awareness of the smoking cessation service, they also underpin the smooth and coordinated delivery of practical interventions. These connections enabled prescriptions and nicotine replacement therapy (NRT) to be dispensed correctly and on time, ensuring consistent support for service users experiencing nicotine withdrawal. As one junior doctor explained, *"I feel like that's the most important thing actually is…actually going and seeing the patient, then having a relationship and trusting the person who's giving them advice and management on it, and then that then coming through and being communicated to us who are on the*

floor level, responsible for sorting the prescriptions, and then communication with the nursing team who are going to administer those medications. Those kind of four elements working together, makes it work, because it's all well and good having a policy and a guideline but if that never gets into the patients, then what's the point?"- Trust 1, Stage 2, Participant 9, Junior doctor.

For TDAs, such cross role relationship building was described as central to creating this kind of shared understanding, as one reflected,, *"I kind of try and have an engagement with the nurses so that you're building that rapport up … and then that they understand what I need from them... I might even take them a bag of Maltesers if I have to every now and then …I try and engage with them in other ways rather than saying have you done their smoking form"*- Trust 2, Stage 2, Participant 4, TDA.

These relationships also served as a vehicle for practical education, particularly around the correct use of cessation aids. One nurse illustrated this point- *"I found sometimes staff was just giving the vape to the patients-They just gave a vape and liquids and there wasn't any demonstration. So, what I started to do was before I gave out the vapour, I take it out the box I'd get out and show them how to turn it on. Turn it off. And charge it. And then give them the choice of liquid they could take with them"*- Trust 3, Stage 2, Participant 8, Nurse. Collectively, these accounts highlight how having cross role engagement between TDAs and ward staff facilitates the reliable and patient focused implementation of smoking cessation care. By enabling knowledge-sharing and aligning staff actions at different levels, these relationships represent a key mechanism through which PD practitioners achieve exceptional outcomes.

5.4.5 Comparators versus Positive Deviants

Within the present study, two comparators were interviewed on the basis that they were locally recognised as delivering 'good' smoking-cessation care, although they had not been identified as PDs. Prior to reporting these findings, it is important to recognise that due to this low number, it is difficult to draw solid conclusions from this. Nonetheless, one comparator demonstrated some PD-like strategies, particularly through deliberate language choices and rapport-building with service users. However, they did not note other strategies such as ward-TDA relationships, or utilisation of a 'third space'. It is worth noting that these behaviours were likely influenced by their background in substance misuse treatment, alongside prior involvement in implementing the smoke-free policy and working as a TDA. Contrastingly, the second comparator emphasised person centred care- *"once you offer them something different… they see that you're looking at them like a human, not just a patient*"- but did not describe the distinctive relational or linguistic methods as reported by PD staff. Moreover, they expressed scepticism about vaping- despite its acceptability to service users- *"I know what I'm smoking with cigarettes… with vape, nobody knows"*.

Notably, the recruitment of comparators within this study was challenging due to ward constraints, whereby staff were busy and often difficult to engage. For example, In two instances, additional comparators were identified but were unavailable for interview. Moreover, although both comparators worked within the inpatient mental health setting- they were not matched on role or experience. This underscores the methodological complexity of applying the PD approach within healthcare.

Therefore, whilst the comparator data both supports the identified PD practices of; careful use of language, work in "third spaces," and relationship-building, it underlines some methodological challenges. Additionally, they show how comparator selection and role differences can blur PD versus non-PD boundaries. Whilst recruitment difficulties limited matching within the present study, the

present PhD used triangulation across data sources (i.e., top-down versus bottom-up) to strengthen the confidence in these findings. Alongside this, three trusts were used, hence these findings are more easily generalisable to alternative NHS trusts. More broadly, this echoes the wider PD literature, that whilst comparators are rarely used, they are valuable for clarifying what is truly distinctive practice- and future research should combine role-matched comparators with methodological triangulation to sharpen the individual level PD lens.

5.4.3. Ward-Level Factors Shaping Exceptional Smoking Cessation Care

A core principle of the PD approach is that individuals succeed despite facing the same constraints as others. In this study however, differences in role demands meant that constraints were not distributed evenly, with contrasts emerging most clearly between TDAs and ward staff. Ward level findings showed that staff worked in crisis driven environments where safety and clinical needs often overshadowed smoking cessation, and cigarettes were frequently used as a quick means of behaviour management. Attitudinal differences further shaped care, with ward staff more likely to view smoking as a coping mechanism or a right, while TDAs often sought to challenge these assumptions, highlighting gaps in knowledge around tobacco dependence. Such divides are significant, as strong staff service user relationships underpin high performance, yet conflicting views risk undermining collaboration, trust, and the delivery of consistent smoke-free care. These key findings are summarised within Table 5.3.

Table 5.3: Ward-level factors shaping exceptional smoking cessation care (RQ3).

Summary of organisational and cultural influences affecting the delivery of smoking cessation care within inpatient mental health settings, highlighting how workload pressures, behaviour management practices, attitudinal divides, and gaps in education shaped the conditions under which positive deviants operated.

Factor	Explanation
Intense workload and competing priorities **Sub factor: The "Pacifier Effect" (smoking as behaviour management)**	Ward staff operate in crisis-driven, resource-stretched environments where smoking cessation is often deprioritised in favour of immediate safety and clinical needs. Cigarettes are sometimes used as a quick and familiar tool for behaviour management or de-escalation, which can unintentionally reinforce smoking habits.
Attitudinal divides between TDAs and ward staff	Divergent beliefs between TDAs and ward staff about the importance and feasibility of cessation for people with SMI shaped how consistently smokefree care was delivered. Ward staff were more likely to view smoking as a coping mechanism or "right," while TDAs consistently promoted cessation.
Education and implications for collaboration	Gaps in awareness and training around tobacco dependency contributed to misconceptions

	among ward staff. This created tension with TDAs, who often had to "myth bust." Conflicting perspectives risk undermining inter-staff collaboration, trust, and the reliability of cessation support.

Intense workload and competing priorities

Across all participating trusts, ward-based staff were described as working in extremely high pressure environments. One participant explained that wards are *"In a state of almost permanent crisis and you know, whatever gets us through the next half an hour feels like a bonus"*- Trust 2, Stage 2, Participant 5, TDA. A student nurse reflected on this cumulative strain- *"All the staff are being asked to do an awful lot with increasingly less and less, our time and our resources are more and more pushed" –* Trust 2, Stage 2, Participant 6, Student nurse. The relentlessness of these demands was echoed by a TDA- *"Staff are just trying to get by and do their job. This is stressful"*- Trust 3, Stage 2, Participant 3, TDA, and further compounded by heavy administrative workloads- "They've got paperwork coming out of everywhere, meetings and this, that and the other"- Trust 3, Stage 2, Participant 4, TDA.

Whilst TDAs did not face the same intensity of ward based demands, their working conditions were challenging in different ways. They were not permanently embedded on a single ward but worked across multiple settings, requiring them to adapt to diverse ward cultures and routines. Their sole focus on tobacco dependency care gave them the capacity to prioritise cessation work, but also required sustained effort to integrate this agenda within wards where competing clinical priorities dominated. Recognising this organisational context is essential for interpreting ward level factors (RQ3) that enable or inhibit the delivery of smoking cessation care.

The "Pacifier Effect": smoking as behaviour management

Ward culture strongly influenced how smoking was understood and used in practice. A service lead described the professions "chequered history" of cigarettes being used as rewards and for de escalation- *"It's kind of seen as something that people with mental health problems have to do"*- Trust 2, Stage 1, Participant 2, Service lead. Within this context, smoking often functioned as a rapid form of behaviour management, what one TDA described as a pacifier- *"I suppose some staff see it as a dummy…a bit like a pacifier"* - Trust 3, Stage 1, Participant 2, TDA. Another added that *"The quickest and easiest thing from their perspective is to just let them go out for a cigarette"*- Trust 1, Stage 1, Interview 2, TDA.

This practice extended to the routine granting of Section 17 leave specifically for smoking. One ward sister, who was identified as a PD, explained that *"We do try and get their leaves quite quickly because we know that they're smokers" –* Trust 1, Stage 2, Participant 6, Ward sister. TDAs however expressed concerns that such practices undermined the smokefree policies and shaped how service users perceived smoking cessation and as a result, the TDA's- *"It's like the doctors…give them section 17 leave to go out and smoke on a smokefree site" –* Trust 1, Stage 2, Interview 5, TDA. Notably, these staff often rationalised these decisions as "picking battles"- *"If somebody's acutely unwell, your biggest battle is to get medication into them…You don't want that fight to be over a cigarette in the garden"*- Trust 1, Stage 2, Participant 8, Ward sister. Conversely, others highlighted

how this reinforced problematic behaviours- *"Next time somebody wants to go out for a cigarette, well, they'll kick off and you'll take them out again"*- Trust 2, Stage 1, Participant 2, Smoke free lead.

Attitudinal divides between TDAs and ward staff

These structural and cultural dynamics contributed to a clear attitudinal divide between TDAs and ward staff, even among those identified as high performers. Many ward staff framed smoking as an essential coping mechanism during a mental health crisis, with one PD stating that "*I think when somebody's in mental health crisis…is it the right time to be thinking about giving up smoking?"* – Trust 1, Stage 2, Participant 8, Ward sister. However, PD TDAs consistently challenged this framing, describing it as a myth- *"I still do a lot of myth busting…where it's like oh it helps them manage stress"* – Trust 2, Stage 2, Participant 5, TDA.

Importantly, no TDA expressed doubt about the feasibility or value of cessation. Instead, their orientation centred on actively promoting smokefree care. As one participant reflected, *"From working with all the service users that I've worked with, I would say 99.9% have other enjoyments in their life…smoking shouldn't be the only thing"* – Trust 2, Stage 1, Participant 1, Health improvement manager. Other TDA's emphasised practical alternatives *"You're dealing with somebody who might attack you because you're telling them that they can't smoke…So we're here to deliver an alternative that's going to help them with any of that craving"* – Trust 2, Stage 2, Participant 4, TDA.

By contrast, attitudes among ward based PDs were more mixed. Whilst some echoed the perception of smoking as unavoidable, others actively challenged this. A student nurse reflected, *"If you get the right smoking support in place, you can help mitigate a lot of incidents that may be caused by that"* – Trust 2, Stage 2, Participant 6, Student Nurse. Similarly, a mental health nurse described encouraging service users to reduce intake gradually *"That's what I always encourage them, to pick up the vape first…Try and push that first cigarette as far back during the day as you can"* – Trust 3, Stage 2, Participant 8, Mental Health Nurse.

Education and implications for collaboration

This divergence in attitudes was frequently attributed to gaps in education and awareness. TDAs often described the need to "myth bust" with colleagues, even with ward based staff members who were otherwise considered high performing PD's. One noted, *"There are specific wards where…I think the smokefree support…is not really there…patients have said…the staff have told them not to let anyone force them to quit smoking"* – Trust 1, Stage 1, Participant 2, TDA. In some cases, ward based PDs expressed fixed beliefs, such as *"Some people are never going to change. They're never going to stop"* – Trust 1, Stage 2, Participant 6, Ward sister. Others reflected a broader tendency within healthcare to minimise the seriousness of tobacco dependency- "There's a lot of staff, and a general feeling through NHS that smoking…is not something that you should really be taking seriously. It gets swept under the carpet a bit" – Trust 2, Stage 1, Participant 7, TDA.

This attitudinal gap was problematic for both inter personal and inter disciplinary collaboration. Divergent views risked undermining trust between staff groups and with service users themselves. As one TDA lead explained, "*When you've got ward managers and consultants that are really against it, you're up against it with all of the staff"*- Trust 3, Stage 1, Participant 6, TDA Lead.

5.4.4 Trust-Level Factors Influencing the Delivery of Smoking Cessation Care

Service flexibility and continuity of care emerged as critical trust level factors impacting the quality of smoking cessation provision (Table 5.4). Flexibility allowed staff to move beyond the constraints of the standard 12 week quit model- in adapting timelines, methods, and intensity of support to match the fluctuating needs of people with severe mental illness. Equally, continuity of care, and maintaining tailored support across the inpatient to community transition was essential for sustaining progress and preventing relapse during the high-risk post-discharge period. Where either factor was lacking, service users were more likely to disengage or revert to smoking, underscoring their central role in delivering effective, equitable smokefree care within mental health trusts.

Table 5.4: The factors at a trust level influencing the delivery of smoking cessation care

Factor	Explanation
Service flexibility	The ability of trusts to adapt smoking cessation support beyond the rigid 12 week quit model, allowing for extended timelines, reset quit attempts, and tailored approaches that respond to the fluctuating needs and readiness of people with severe mental illness.
Continuity of care	The extent to which smoke free support is maintained consistently from inpatient admission through to post discharge, with breakdowns in tailored provision at discharge often creating a gap in care during the high-risk relapse period.

Service flexibility

A defining trust-level factor that enabled exceptional smoking cessation care at the individual level was the flexibility of service delivery, allowing staff to adapt beyond the constraints of the traditional 12-week quit model used in general population stop smoking services. Unlike standard programmes, which are "*Focused around quitting…not, you know, cutting down"*- Trust 3, Stage 2, Participant 5, TDA- service users with SMI are less likely to engage with these services. Hence, TDA's described tailoring care to the fluctuating realities of severe mental illness. This included extending support beyond the traditional 12 week window, resetting quit attempts after relapses, and trialling different cessation methods in line with a service user's readiness and stability. As one high performer explained, *"Some of our service users do need a lot more time, they do need longer engagements than the standard 12-week treatment protocol*"- Trust 2, Stage 2, Participant 5, TDA. Another reflected on the need to 'start again' after an early relapse to give individuals *"A good chance to actually have a go"* rather than allowing programme deadlines to limit progress- Trust 2, Stage 2, Participant 4, TDA. This flexibility allowed high performers to sustain engagement and foster gradual, meaningful change even when the rigid frameworks of traditional stop-smoking services would otherwise exclude or disengage service users.

Continuity of care

Continuity of care emerged as a key trust level factor influencing the quality of the smokefree service, both during admission and post discharge. While some trusts demonstrated strong internal consistency by ensuring service users saw the same TDA throughout their inpatient stay, continuity often broke down at the point of discharge. This is despite the NCSCT guideline that *"patients should have a discharge plan for supporting them with staying smokefree following discharge."* This gap is particularly concerning given that the NCSCT also emphasises that *"the risk of relapse is greatest in*

the first month after stopping smoking…when patients return to their regular routines and environments."

In practice, discharge planning frequently involved a referral to generic community stop smoking programme that, unlike tailored inpatient mental health support, often required strict attendance and adherence to a standard 12-week quit model. As discussed above, this is problematic. As one TDA noted, *"If you missed an appointment, they wouldn't see you anymore…when people leave hospital, there isn't really any way to refer them to"* -Trust 3, Stage 2, Participant 5, TDA. This lack of tailored provision created a "grey area" in care, with no guarantee of continued access to NRT that has been supporting them whilst in hospital. This difficulty was outlined by one TDA, *"They get a discharge letter to their GP, and they're given an NRT like two weeks, well, that's the ideal… it doesn't always happen…it doesn't mean that they definitely get it"*- Trust 3, Stage 2, Participant 2, TDA. Hence, highlighting the lack of continuity of care in tobacco treatment services, from inpatient to community.

Despite this, the identified high performers within Stage 2, sought to minimise this transition gap by making proactive community referrals and preparing resources in advance. For example, one participant described this process, *"I normally go to the internet and sort out a referral…they do like a free vape, and 12 weeks of free nicotine replacement therapy with six weeks of CBT type intervention. So if people say to me I do want to give up, but I don't think now's the right time, I always look at their address, work out whether theyre city or county, whichever they will have fallen into, and…I print off the leaflet and give them that. Because, you know, they might get home and they might decide. I'll give it a go. I got it in my hand. I can do it*"- Trust 1, Stage 1, Participant 2, TDA.

The importance of consistency of care lies in its ability to sustain the progress made during an inpatient admission and to bridge the high-risk transition period after discharge. As one service lead explained, ongoing contact allows service users improvements to consolidate over time- *"By the end [discharge] they're in a better place and may be able to consider having some support or making changes"*- Trust 3, Stage 1, Participant 2, Service lead. Without this continuity, the structured support, therapeutic relationships, and pharmacological interventions provided in hospital can be quickly undermined. This difficulty was discussed further- *"The products can only last [whilst they are] inpatients, but then the focus is what about their discharge? Well, they go back to smoking"*- Trust 3, Stage 2, Participant 3, TDA. Hence, this continuity of care is critical to maintaining smoke free progress, yet it often breaks down at discharge when service users are transitioned to less flexible community support. Hence, discharge from hospital often marked a breakdown in tailored support, with service users referred to generic community programmes bound by rigid protocols, thus, creating a gap in care during the high-risk post-discharge period when relapse is most likely.

5.4.5 Service User Perspectives on Smoking Cessation Support

In addition to the above, 23 service user surveys were collected, 12 from the present study (STS) (across Trust 1 and 3) and 11 from Trust 3's own tobacco dependence discharge survey (DS). This is outlined within Table 5.1 presented previously.

Survey data comprised responses from the study survey (STS) and Trust 3's's discharge survey (DS), both of which included a rating of smoking cessation support and open-ended questions on service users' experiences during their inpatient stay. Demographic information was collected for all study

survey (STS) respondents but was not available for discharge survey (DS) respondents, as these data were provided as secondary outputs. For the 12 participants with available demographic data, the majority ($N = 10$) were men. This gender distribution reflects wider national trends in SMI diagnosis and detention under the Mental Health Act, where men are more frequently represented (Office for National Statistics 2024). Participant ages ranged from 25 to 66 years, with a median age of 33.5 years. It is worthwhile noting that Trust 2 were unable to support the present study in the collection of surveys and are not represented here. Moreover, Trust 3 makes up the majority of service responses here and are hence, overrepresented.

In the STS, participants rated their experience of the smoking cessation service using a Likert scale from 1 (very bad) to 5 (exceptional). To ensure comparability, DS responses were converted to the same numerical scale. Here, "very good" responses were coded as 5, "good" as 4, "neither good nor poor" as 3, "bad" as 2, and "very bad" as 1. This conversion allowed data from the two survey types to be combined and analysed together. Analysis revealed that 14 participants (60.9%) rated their experience as 5/5 (exceptional), five participants (21.7%) gave a 4/5 rating (good), and three participants (13.1%) rated the service as 3/5 (neither good nor poor). These findings indicate that while the majority of service users were extremely satisfied with the smoking cessation support that they had received, over one-third (34.8%) provided ratings suggesting that there was still room for improvement.

Theme: Feeling understood and respected by staff

Several prominent ideas emerged from this analysis. One strong and consistent theme was service users feeling understood and respected by staff. Respondents described staff as non-judgemental and communicative, stating that "They were not forceful, they explained the negatives of smoking and not the positives"- *Trust 1, Participant 23, STS. Moreover, these interactions* were often highlighted as positive, with staff being approachable, friendly, and supportive- "Interaction was good with worker"- *Trust 3, Participant 1, DS;* "[They] were really friendly and tried to cheer me up"-*Trust 3, Participant 6, DS.* These comments align with earlier findings in this thesis, that an essential characteristic of a positive deviant- someone delivering exceptional smoking cessation care- is their ability to build a rapport and trust with service users, humanising care so that it does not feel punitive or stigmatising (RQ2.

Theme: Electronic cigarettes

Moreover, participants also frequently expressed satisfaction with the nicotine replacement therapies (NRTs) offered on the wards, particularly electronic cigarettes (referred to as vapes). Notably $N = 16$ users mentioned vapes as being helpful, stating that "The e-cigarettes were good"- *Trust 3, Participant 9, DS;* "The flavour I received helped… [my] smoking levels have reduced a lot"- *SLAM, Participant 1, DS.* Furthermore, the timeliness of vape provision was another valued feature of the smoking cessation offerings, with several participants noting they received a vape soon after arriving on the ward- "I got given an e-cigarette almost instantly"- *Trust 3, Participant 4, DS.*

However, service users' opinions on the quality of vapes were mixed. Some service users commented that they disliked the products available on the ward, while others compared them unfavourably with those available commercially- "I didn't like it, so I gave it back"- *Trust 3, Participant 6, DS;* "The ward e-cigarettes aren't as nice as ones you can buy from the shops"- *Trust 3, Participant 11, DS.*

An additional consideration was the appropriateness of vape distribution. In one case, a participant described being given a vape on arrival despite not being a smoker- "I don't smoke, I was given an e-cigarette to try to help my anxiety. I tried it but didn't want it"- *Trust 3, Participant 10, DS.* This is a concerning observation, which echoes earlier findings in this chapter, notably the "Pacifier Effect" theme, where vaping or smoking was sometimes used by ward staff as a behaviour management tool, particularly under high-pressure working conditions.

Overall, the content analysis shows that service users valued staff who treated them with respect, empathy, and understanding, as well as having timely access to smoking cessation aids, particularly e-cigarettes. These perspectives closely align with the thematic analysis findings from staff interviews whereby many of the behaviours and practices identified by colleagues as hallmarks of high performance were also recognised and appreciated by service users. For example, elements such as building strong relationships and using supportive language were indicated as important by both staff and service users. Interestingly, this alignment suggests that the characteristics of positive deviants, as perceived by staff, do translate meaningfully into the patient experience. However, the mixed views on vape quality and occasional reports of inappropriate provision highlights that there remain opportunities to strengthen the consistency, appropriateness, and perceived quality of smoking cessation support in inpatient mental health settings. A summary of these key findings is outlined within Table 5.5.

Table 5.5: Content analysis thematic summary from service user surveys.

Theme	Subcategory	Example Quote	Survey Type & Participant
Understanding Staff	Non-judgemental communication	*"The understanding of the staff is good. They were not forceful. They explained the negatives of smoking and not the positives"*	Trust 1, P23, STS
	Positive interpersonal interaction	*"Talking to the stop cessation lady… and trying to cut my vaping down"*	Trust 3, P12, STS
	Supportive staff	*"I remember speaking to [a TDA] he was really good"*	Trust 3, P10, DS
Satisfaction with Cessation Aids	Vapes perceived as helpful	*"It helps recover from nicotine addiction"*	Trust 3, P18, STS
	Flavour contributed to reduced smoking	*"The flavour I received helped, smoking levels have reduced a lot"*	Trust 3, P1, DS
	Other NRT options valued	*"Given Nicorette gum, spray, lozenges"*	Trust 1, P21, STS
Timeliness of Support	Prompt provision of vapes	*"Given it on time"*	Trust 3, P15, STS
	Immediate access on arrival	*"As soon as I went on the ward… I was given a vape within an hour"*	Trust 3, P3, DS
Quality of Cessation Products	Dislike of product	*"I didn't like the wards vape, I used it for 10 minutes then used my own"*	Trust 3, P3, DS

Theme	Subcategory	Example Quote	Survey Type & Participant
	Ward vapes inferior to shop-bought	*"The ward e-cigarettes aren't as nice as ones you can buy from the shops"*	Trust 3, P11, DS
Concerns About Appropriateness	Vapes given to non-smokers	*"I don't smoke, I was given an e-cigarette to try to help my anxiety. I tried it but didn't want it"*	Trust 3, P10, DS

5.5 Discussion

5.5.1 Summary of findings

This study identified and explored the defining characteristics of positively deviant practitioners delivering smoking cessation care in inpatient mental health settings for people with SMI (RQ1, RQ2). As outlined in Figure 5.2, reflexive thematic analysis revealed that PD's consistently demonstrated three core behaviours; using supportive and non-directive communication to engage service users, humanising care through informal rapport building, and working in an integrated way with ward teams to ensure consistent and coordinated delivery of smoking cessation support (RQ2). These behaviours enabled PD's to deliver exceptional smoking cessation care. Importantly, these individual level traits were closely linked to the ward level factors (RQ3), which were explored, notably, collaborative working relationships between TDAs and ward staff. They were also linked to trust level factors (RQ4) outlined including flexible service structures and continuity of care. Together, these findings suggest that high performance is not only defined by an individuals' approach and skill, but also by the ability to leverage a supportive ward and organisational contexts to maximise the quality and consistency of smoking cessation support.

Moreover, content analysis of service users surveys reinforced these findings, but from the service user perspective. Respondents valued interactions with staff (particularly TDA's) as these interactions reflected the relational qualities identified throughout thematic analysis, such as; approachability, friendliness, and active listening (Table 5.5), relating to RQ5. Timely access to nicotine replacement therapies, especially e-cigarettes, was also highlighted as a key strength of high-performing practice. However, mixed views on the e-cigarette quality, and instances of inappropriate provision pointed to inconsistencies in practice. This is perhaps as a result of pressing workloads.

Together, these findings demonstrate that what makes a high performer in this context is not simply knowledge of smoking cessation interventions, but the ability to embed that knowledge within relational, flexible, and context sensitive practice. High performers (PD's) can adapt their approach to individual service users and maintain therapeutic rapport even in challenging ward environments and navigate structural barriers to ensure timely and appropriate cessation support. These qualities are consistently recognised by both colleagues and service users. It remains unclear however, whether these skills are primarily acquired through training and experience or reflect inherent personal attributes, highlighting an important area for future research.

5.5.2 The Positive Deviance approach

Firstly, the present study progressed only through the initial two stages of the Bradley et al approach to conducting PD. Whilst these early stages lay important groundwork for the identification and exploration of the factors underpinning high performance- future research should expand on this. For example, by progressing through later stages 3 and 4, these identified hypotheses could be tested in larger samples, and hence, disseminated into wider healthcare settings. Whilst this is discussed in depth within Chapter 7, it is important to recognise this limitation here.

Alongside this, alternative frameworks for applying PD have been proposed ,with the most prominent alternative being the 4/6Ds model (Singhal & Dura, 2017) outlined in Chapter 3. This approach proves valuable in the context of public health and community initiatives where the focus is on bringing communities together to recognise and tackle shared problems (community mobilisation) and encouraging successful behaviours to spread naturally among peers (diffusion). However, it is less directly aligned with healthcare research- where the priority is to identify and learn from demonstrable differences in performance between services or practitioners. Contrastingly, Bradley et al.'s framework has been more widely adopted within healthcare improvement as it offers a clearer structure for examining high performance, enabling comparability across studies. Its use in the present study therefore aligns with the healthcare focus and the exploration of exceptional smoking cessation care, using an approach already recognised within health services research. Whilst the 4/6Ds remains a useful alternative for future work centred on community mobilisation and diffusion, Bradley et al.'s framework was the most relevant choice for examining smoking cessation practices in this context, though future studies may benefit from testing how different PD frameworks shape the insights generated.

5.5.3 The relation to smoking cessation policy

Interestingly, a key feature of high performance was the informality of approach, outlined above. PD's often blurred traditional professional boundaries by wearing casual clothing, engaging service users through informal conversation, or creating a "third space" by inviting them to participate in shared activities such as chess. This approach reduced the "us versus them" divide and appeared to foster trust and rapport more rapidly. Similar dynamics have been documented in other care contexts. For example, Schnitzer et al., (2022) examined rapport building behaviours among telephone based smoking cessation counsellors, and found that counsellors frequently used humour and non-smoking related discussions to strengthen client engagement. Such strategies are likely to help dismantle hierarchical barriers, encouraging open communication and collaborative working.

This is mirrored within the present studies' findings, whereby creating a relational safety net that supports service user engagement was a hallmark behaviour of PD's. This was achieved through trust building, supportive communication and language (RQ1, Theme 1), and the development of safe, informal spaces for conversation (RQ1, Theme 1, Sub theme 2). This is particularly valuable for people with SMI, who often report feeling misunderstood or stigmatised. Importantly, these behaviours align with national policy priorities such as the NHS Long Term Plan (NHS England, 2019) and NCSCT guidance (National Centre for Smoking Cessation and Training, 2024) both of which emphasise tailoring smoking cessation support to individual needs and delivering interventions in ways that account for the person's mental health and lived experience. By humanising interactions and creating space for authentic connection, PD's were able to facilitate more meaningful engagement with smoking cessation support- suggesting that relational quality may be as critical to service uptake

as the intervention content itself. This reinforces the case for embedding relational training and informal engagement strategies into staff development programmes as a complement to formal policy enforcement.

Moreover, national guidance such as NCSCT has emphasised the importance of non-judgemental and person-centred communication (Robson & Potts, 2025). The present findings build on this by providing empirical evidence that specific framings, such as curiosity driven questions or reframing the identity of tobacco dependency teams are defining features of PD practitioners. These mechanisms are shown to operate within the realities of inpatient mental health wards, where high workloads and cultural resistance often challenge engagement. In doing so, this study moves beyond policy principle to demonstrate language as an active intervention component in its own right. Therefore, these findings extend and strengthen existing policy aspirations by evidencing how they are enacted and refined in practice. These elements, and their broader implications, are explored further in the following chapter.

However, in places, the findings from this study reveal a striking disparity between the expectations set out in the national smoking cessation policy and the realities of delivering smoking cessation support in inpatient mental health settings. Even amongst the PD's identified in this study, complete adherence to all elements of smoking cessation policy was rare. Alternatively, PD's, and in particular, those at a ward level often had to negotiate the realities of ward dynamics alongside prioritising patient safety and, ensuring some level of policy compliance- rather than rigidly following policy frameworks. Notably, the difficulty of implementing smoking cessation is echoed within Huddlestone et al., (2018) who investigated adherence to smoking cessation policy before and after NICE guidance was implemented. This revealed that large variability existed in how strictly smoking cessation policies were followed, with some staff members opting to prioritise maintaining therapeutic relationships with service users over strict adherence to policy. Moreover, staff were sometimes reluctant to enforce smoking cessation, due to a misconception that this may elevate distress or aggression in service users- despite this being outlined as a misconception within NCSCT training (Robson & Potts, 2025). These findings are akin to that of the present study- whereby even staff members deemed as PD's, often prioritised relationship building over strict policy adherence. Similarly, smoking was used as a strategy for behaviour management in the present study. Hence, this this reflects a pragmatic approach in which ward based staff focus on balancing the competing demands of therapeutic relationships and operational pressures, which sometimes comes at the expense of policy purity. However, as they were still identified as PD's, this is perhaps arguably in ways that deliver better patient centred outcomes than strict policy enforcement might achieve.

Hence, due to the gap between policy adherence and practice, the findings indicate variable adherence to the principles outlined by the NCSCT, which emphasises that "People who smoke find it easier to stop where smoking is completely prohibited, where there are fewer cues, and where treatment and support is readily available" (National Centre for Smoking Cessation and Training, 2024). This lack of full adherence is problematic, because it reflects that this may inadvertently reduce the effectiveness of cessation interventions. Whilst some wards implemented certain elements effectively, such as the timely provision of NRT, other critical components of the guidance, including cue reduction and complete prohibition, were applied inconsistently. Hence, this selective adherence limits the potential to achieve the full benefits of a smoking cessation policy. Education and ongoing training for ward staff appear to enhance the quality of care and may indirectly support policy goals; however, without consistent implementation of all NCSCT recommended measures and the

undermining of these measures, the intended outcomes of national policy are unlikely to be fully achieved (C. A. Smith et al., 2019).

5.5.4 A distinction in perspectives

Interestingly, findings from reflexive TA and content analysis of service users' surveys s revealed strong alignments between staff and service user perspectives- particularly in valuing respectful, empathetic interactions and timely access to cessation aids. Despite this convergence, differences also emerged. Whilst staff emphasised the strategic aspects of their work underpinning high performance, service users were more likely to comment on the quality and appropriateness of cessation aids, especially e-cigarettes. Notably, vape quality and inappropriate provision were recurrent criticisms. This indicates that even when relational care is strong, there may be gaps in the material resources, such as the e-cigarette provision, that underpins service delivery.

One notable divergence between the professional groups identified as PD's emerged in their attitudes towards smoking as a behaviour management tool. Among PD ward based staff, smoking (or vaping) was sometimes used strategically to manage distress or challenging behaviour. Conversely, this was an approach which was almost never endorsed by TDA's or staff whose primary role was smoking cessation. As outlined in this chapters methods section, PD's were comprised of two groups: TDAs, interviewed at both Stage 1 and Stage 2, and ward based staff in Stage 2, which were identified by TDAs. Perhaps this variation in perspectives may reflect a cultural divide, with ward staff embedded in the daily realities of managing acute distress and nicotine withdrawal, and TDAs more removed from these immediate pressures and thus more able to focus on policy adherence.

5.5.5 Methodological limitations

The application of the PD approach in this study also revealed methodological considerations. Many of the identified high performing individuals were TDAs or staff in roles that inherently afforded them greater time with service users, which raises the question of whether they experienced the same constraints as ward-based staff- a key assumption underpinning the PD model used (Bradley et al., 2009). This potential confounding factor complicates direct comparisons across roles and highlights the need for more careful role based analyses in future research, echoing wider critiques of PD in complex healthcare systems (Baxter & Lawton, 2022). As discussed in Chapter 3, such challenges are well recognised within the literature. To address this within the present study, deliberate efforts were made to also identify ward-based staff members who were recognised as delivering exceptional smoking cessation care. This explicit strategy was intended to mitigate confounding role related factors and to ensure that the findings reflected not only those whose specialist positions afforded additional capacity, but also those working within the more constrained realities of the ward environment.

Additionally, the present study recruited just two comparators for delivering smoking cessation care. Hence, future research could also consider the use of observations to address another gap, the lack of comparators. The PD literature highlights the importance of examining how PDs differ from their peers; however, identifying comparators in this study proved challenging. Ethically, this study avoided approaches used in some PD research that identify "negative deviants" (i.e., staff performing poorly) (Baxter and Lawton, 2022), to prevent potential harm, stigma, or distress. Instead, comparators were approached neutrally and selected to provide contrast without labelling or

evaluating performance, which limited the ability to make direct peer comparisons but ensured ethical engagement with participants.

Service user engagement proved challenging both in the context of this research and in routine care. Although the study initially aimed to conduct interviews with service users, many were too unwell to participate for extended periods. As a result, surveys were prioritised to ensure that the patient voice was still represented, reflecting the importance placed on service user perspectives during an earlier patient involvement group (Chapter 1). Survey questions were deliberately kept brief to accommodate the busy nature of inpatient wards, alongside potential attention impairments common among people with SMI (Camelo et al., 2013; Carter et al., 2010). Despite these efforts, response rates were low, with some trusts generating only a small number of completed surveys (Trust 1) and others providing no service user feedback at all (Trust 2). This mirrors the challenges observed in Trust 3's own survey data, which showed limited responses, frequent unanswered calls, and the need for multiple contact attempts to obtain feedback. Whilst the priority of this study was to hear from as many service users as possible, and methods were taken to do so, the limited number of responses inevitably constrains the strength of the conclusions that can be drawn from this element of the research.

In conclusion, the findings outlined within Chapter 5 demonstrate that high performance at an individual level, for supporting smoking cessation in people with SMI is a complexed interplay of individual skill, ward culture, and organisational structures. While service users largely value the same qualities that colleagues identify high performers utilising, discrepancies occurred as did differences in prioritisation. Hence, these findings provide valuable insights into the mechanisms at an individual level underpinning exceptional smoking cessation care, which in turn may be utilised to bridge existing health inequalities. To strengthen the validity of conclusions drawn within this chapter and understand them within the wider context- the next chapter will triangulate these findings alongside those from within Chapter 2 (systematic review) and Chapter 4 (QUiTT study). In turn, this study can contribute to providing a comprehensive understanding of what works for smoking cessation in people with SMI.

Chapter 6: Triangulation- Synthesising Top-Down and Bottom-Up Approaches to Smoking Cessation in People with SMI

6.1 Chapter Summary

This chapter synthesises the findings from the systematic review (Chapter 2), the QUiTT collaborative study (Chapter 4), and the positive deviance study (Chapter 5) through triangulation. By comparing the top down (i.e., systematic review) evidence with bottom-up practice insights (i.e., identified via an interview study and by applying Stages 1 and 2 of the positive deviance approach), this chapter identifies areas of convergence and divergence in smoking cessation support for people with SMI. This chapter therefore aims to identify best practices within smoking cessation for people with SMI. Importantly, findings highlight novel contributions around the role of language, the acceptability of e-cigarettes, and the persistence of cultural barriers whilst reinforcing existing evidence on motivational approaches and relationships. Together, these findings provide the foundation for defining a gold standard of smoking cessation care for people with SMI, which expands the existing smoking cessation policy.

6.2 Introduction

This penultimate chapter integrates the findings from the three studies conducted within this PhD- Chapter 2 (systematic review), Chapter 4 (QUiTT exploratory study), and Chapter 5 (Positive Deviance analysis) through triangulation. Throughout this discussion, these findings are also related to key smoking cessation policies to explore their applicability to wider smoking cessation settings. This contributes to the 'top-down' perspectives within this chapter. The main two policies referred to in this chapter are the NICE (National Institute for Health and Care Excellence (NICE), 2021) and NCSCT (National Centre for Smoking Cessation and Training, 2024) guidance's. NICE guidance provides evidence-based, comprehensive recommendations for smoking cessation and harm reduction, encompassing everything from behavioural support to medications and e-cigarettes, and is applicable across primary, community, and secondary care settings. Complementing this NCSCT guidance, specifically as the Standard Treatment Plan for Inpatient Tobacco Dependence in Mental Health Hospitals, offers tailored practical tools and checklists for implementing systematic tobacco dependency treatment in clinical contexts with service users with SMI. These policies were selected because they are widely adopted frameworks for smoking cessation in England. Utilising these policies helps to ensure that the following analysis is anchored in the national evidence base, whilst also demonstrating how such guidance can be operationalised in frontline services.

In summary, Chapter 2 presented a systematic review and meta-analysis of smoking cessation interventions for people with SMI. This demonstrated the effectiveness of pharmacological and behavioural interventions, where bupropion improved quit rates at the medium and long term, varenicline showed a medium term benefit, and Nicotine replacement therapy (NRT) was effective at medium and long term. No e-cigarette trials were identified for inclusion in this review. This review did include some early tailored digital interventions. Finally, complex behavioural interventions (outlined within Chapter 2) enhanced cessation across all time points, with the strongest effects in the short term. Effective interventions combined motivational interviewing, relapse management strategies and pharmacotherapy. Interventions were delivered flexibly and tailored to individual needs, often with ongoing support from trusted practitioner. Collectively, these findings reinforce that smoking cessation interventions effective in the general population can also benefit people with SMI when tailored and embedded appropriately.

Following this, Chapter 4 employed exploratory qualitative methodology to explore the nationally established Quality Improvement in Tobacco Treatment (QUiTT) Collaborative, using interviews and a follow up focus group with the collaboratives QI coaches. Importantly as these coaches worked across multiple NHS mental health trusts, their cross organisational perspective provided a high level view of what constitutes high performance within teams for tobacco dependency care for people with SMI. Through reflexive TA (Braun & Clarke, 2006, 2019, 2021) this revealed that 'high performance' on the collaborative was characterised not by a clear outcome measure or 'cut off points', for example, the standard 12 week quit pathway in general smoking cessation services, but, rather, by the existence of aligned goals of staff members, services being able to understand and implement QUiTT's outcome measures, and empowered smoking cessation teams. Moreover, three central facilitators of such performance were identified: strong inter-disciplinary team relationships, a shared sense of importance around tobacco work and robust internal structures. However, it remained unclear how these factors translated into overall smoking cessation outcomes.

Finally, Chapter 5 applied the Bradley et al., (2009) approach to PD to identify (Stage 1) staff members delivering exceptional smoking cessation care within inpatient mental health settings, and to explore (Stage 2) the factors underpinning their success. Semi-structured interviews revealed that PD staff humanised care through informality and rapport building, used supportive and non directive language and communication with service users, and embedded themselves within wider care teams. Moreover, complementing this, surveys with service users indicated that patients particularly valued the staff's understanding of smoking cessation, alongside timely access to e-cigarettes.

Therefore, by bringing these pieces of evidence together this chapter seeks to identify points of convergence and divergence between the top-down (systematic review, policy) and bottom-up (exploratory and positive deviance) approaches through triangulation. In doing this, the aim of Chapter 6 is to develop a holistic understanding of 'best practice' in smoking cessation for people with SMI- one that is both evidence based and grounded in the realities of care delivery.

6.3 Defining triangulation and approaches to conducting triangulation

The aim of this triangulation is to explore convergence and divergence between findings within each chapter and to explore how they can be used together to develop a comprehensive understanding of best practice for smoking cessation in people with SMI.

Triangulation can be defined simply as techniques designed to combine the results of qualitative and/or quantitative studies, that can provide researchers with more knowledge than conducting separate analyses (O'Cathain et al., 2010). However, it is important to note that triangulation may have two meanings; It can be used to describe the corroboration between two sets of findings or to describe a process of studying a problem using two different methodologies, to gain a complete picture (O'Cathain et al.,2010). Several techniques have been described for triangulating findings, however all frameworks require researchers to compile their study findings into one page, and consider where findings from different studies agree (convergence), offer complementary information on the same issue (complementarity), or appear to contradict each other (dissonance). This is essential, as explicitly looking for disagreements between findings may lead to a better understanding of the data within a wider context (O'Cathain et al., 2010). The three key frameworks for triangulating findings are; following a thread (Moran-Ellis et al., 2006), the mixed methods matrix (Miles & Huberman 1994) and the 'triangulation protocol' (Farmer et al., 2006).

Following a thread is an approach to integrating often mixed methods components of research. It involves firstly identifying key themes or questions within one dataset, then tracing these across the other datasets to see how they connect, reinforce or contrast with one another. This process creates "the thread" that links different types of evidence, offering a more cohesive and nuanced understanding of the research findings (Moran-Ellis et al., 2006). However, this method has been criticised for lacking clearly defined steps on how to integrate data (O'Cathain et al., 2010)

Secondly, the mixed methods matrix is a technique that integrates qualitative and quantitative data by focusing on the same cases for which both types of data are available, such as individuals, groups, or organisations. Each 'case' is represented as a row in a matrix, and the different types of data collected are displayed in columns. This allows researchers to directly compare a participant's survey responses with their interview data or to summarise qualitative themes alongside numerical data. By examining both within and across case patterns, this highlights consistencies, contradictions, and unexpected findings, providing a structured way to explore how qualitative and quantitative evidence interact (Miles & Huberman 1994). However, this approach is not appropriate when qualitative and quantitative data are not available on the same cases, since the matrix relies on linking both types of data at the case level in order to enable meaningful integration (O'Cathain et al., 2010)

Finally, the triangulation protocol provides the most detailed description on how to carry out triangulation (Farmer et al., 2006). This is a method for integrating qualitative and quantitative findings once each has been analysed separately. Whilst these findings are being interpreted, researchers can use a 'convergence coding matrix' to display the findings from each study side by side, then examine where they show agreement, partial agreement, silence, or dissonance. This process moves researchers beyond methodology specific findings and allows the identification of broader meta-themes- ideas that cut across datasets, providing a more comprehensive understanding of the research findings (Farmer et al., 2006)

The synthesis conducted within this chapter is undertaken by applying the triangulation protocol, developed by Farmer et al. (2006). This approach is actively used and has become widely applied in health research, demonstrating its relevance and credibility in this field. For example, it has been employed to examine maternal obesity care pathways (Heslehurst et al., 2015) and to integrate findings on healthcare data linkage (Hopf et al., 2016). Following this, is regarded as the most detailed triangulation method, offering a structured and transparent process through the use of a convergence coding matrix to compare convergence, complementarity, silence, and dissonance across datasets (O'Cathain et al., 2010). Importantly unlike other integration techniques which take place during the analysis phase, the triangulation protocol is implemented at the interpretation stage, preserving the integrity of the separate analyses while allowing for the development of overarching meta-themes.

6.4 Triangulation of this thesis' findings

Findings from the individual studies within this thesis were organised to address the overarching research questions of the PhD (i.e., sorting). Key elements from each study that related to these questions (outlined above) were identified and highlighted. These findings were then compared, with the most prominent elements systematically mapped into a convergence coding matrix, discussed below. This process is displayed within Figure 6.1.

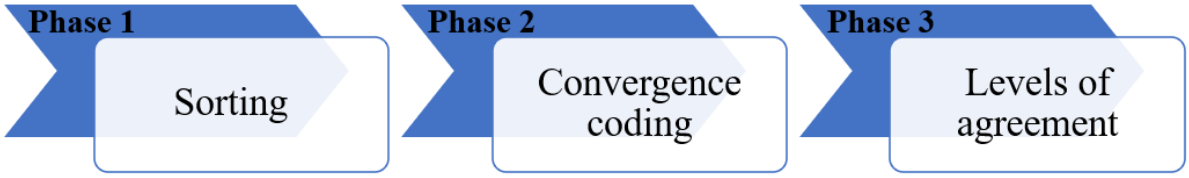


Figure 6.1: The three phases of triangulation; sorting, convergence coding, and levels of agreement as adapted from Farmer et al., (2006).

Primarily this triangulation analysis focused on five central factors**;** (1) language and the framing of support, (2) motivational interviewing and related approaches, (3) inter-personal and disciplinary relationships and communication, (4) cultural attitudes towards smoking cessation and (5) nicotine replacement therapies and e-cigarettes**.** These factors were chosen as the focus for this triangulation as, across the thesis, they emerged as underpinning high quality smoking cessation services or care for people with SMI. However, areas where research diverged or complimented one another on these factors was equally as important to this triangulation. By examining how the literature and ground level practices converge, diverge, or complement one another in these areas, this synthesis provides a holistic overview of potential improvements and offers insights into best practice for smoking cessation support in this population.

The convergence coding matrix enabled comparison of each of this PhD's main findings, alongside the most prominent smoking cessation policies. Notably, this matrix provides a column for each respective study and policy. Each studies key findings were revisited and 'coded' or categorised into where they displayed information relating to one of the five factors of interest relating to smoking cessation in people with SMI. This is repeated for the key smoking cessation policies (NCSCT and NICE), which were read and 'coded' to discern information relating to these key factors. Where findings related to one of the five factors is then summarised, and inserted into this matrix. This enabled the ability to assess areas of convergence, divergence, and complementarity within the strands of evidence**.** The convergence matrix is presented as Table 6.2.

It is important to note that this process represents an interpretive synthesis rather than further analysis of this PhD's primary data. By drawing these strands together in a transparent and structured way, the aim is to address the limitations of any single perspective and develop an account of best practice in smoking cessation that is evidence informed and grounded in the realities of mental health service delivery.

Table 6.2: A visual summary of the convergence coding matrix from triangulation, outlining the five key areas whereby the three studies and smoking cessation policies converge (agree), diverge (disagree) or complement each other.

Factors	Systematic Review (Ch2)	QUiTT Study (Ch4)	Positive Deviance (Ch5)	Policy	Triangulation Outcome
1. Language and Framing of Support	Not addressed in trials. Interventions not focused on delivery style but content.	Reframing the TDA's role improved engagement-from the *"smoking lady". N*egative language (*"stop smoking")* created resistance.	PDs avoided reductive labelling and restrictive questioning that created disengagement. PD's reframed their role as offering comfort and nicotine support by using open and curiosity driven language to build trust. This enabled engagement, even among resistant service users.	Policies emphasise person centred and non judgemental communication, with NCSCT offering example phrases. They do not specify framing tactics (i.e., reframing team identity, avoiding reductive labels) or treat language as an active mechanism of engagement.	Divergence: Absent in literature, partial in policy, but central in practice. Highlights language as overlooked mechanism of engagement.
2. Motivational interviewing (MI) and approaches	MI is part of effective interventions (Gilbody et al., 2019; Rajalu et al., 2023). Relapse planning coping strategies, follow-up support and sustained encouragement outlined as key features.	No explicit reference of MI but described approaches consistent with MI principles**.** I.e., empowering TDAs who "*don't really feel like they have any power"* and reflective problem solving *("can we do something different?"*).	PD staff explicitly identified MI as their 'biggest tool'. Used curiosity driven questions, affirmed past quit attempts, and reframed relapses as opportunities.	Policy endorses MI as 'best practice' in inpatient mental health settings. However, guidance describes MI in general terms without providing practical detail on how these principles should be operationalised within the constraints of ward environments.	Convergence: Agreement across review, PD study, and policy. QUiTT did not name MI but described similar principles. Reinforces motivational approaches as essential to exceptional smoking cessation care for SMI.
3. Inter-personal and disciplinary relationships and Communication	Trials gave little attention to relationships between staff. Engagement was reported to improve when interventions were tailored by	Emphasis on cross team collaboration between TDAs, ward staff, and senior sponsors was central to high performance-	PD's built strong interpersonal relationships with both service users and colleagues. They sustained presence on wards- *"just*	Policies emphasise "building rapport" alongside "non judgemental, empathetic" communication, and integration of tobacco support into wider mental health	Complimentary: Relationships are absent in trial reporting, lightly specified in policy, but central in practice. Effective

Factors	Systematic Review (Ch2)	QUiTT Study (Ch4)	Positive Deviance (Ch5)	Policy	Triangulation Outcome
	trusted mental health professionals, but relational detail was not described.	*"Joining of the ward team and tobacco team is really key"* Relationships described as the mechanism for embedding change ideas into ward life, and ensuring feasibility.	*being there"*. PD's created safe spaces (i.e., walking groups) that reduced pressure and encouraged engagement. PD's were embedded within ward teams to coordinate NRT provision and ensure consistency, reflecting interdisciplinary integration.	care. However, they do not provide detail on how interdisciplinary collaboration should be fostered in practice.	smoking cessation care depends on interpersonal rapport and interdisciplinary collaboration. This makes interventions feasible and acceptable in real world ward environments.
4. Culture and Attitudes	Not revealed within this review, as it explored the effectiveness of interventions as opposed to cultural or attitudinal factors that may influence how interventions are delivered.	Ward staff demonstrated resistance towards both the collaborative and overall smoking cessation. Often it was seen as a low priority, and restrictive to enforce smoking cessation.	PD's noted that other staff did not agree with the smokefree policy, or used smoking for behaviour management. PD staff challenged these norms by modelling adherence to policies, and demonstrating alternative ways of supporting patients without resorting to cigarettes.	Culture and attitudes are reflected within NCSCT guidance- which highlights the need to challenge negative staff attitudes and counter smoking myths. However this is not echoed explicitly within the NICE guidance.	Divergence: Culture and attitudes are not explicitly outlined in the systematic review, yet they are persistent across the QUiTT and PD studies and acknowledged in NCSCT guidance. This highlights a policy to practice gap, with resistance and cultural norms shaping ground level service delivery.
5. Nicotine replacement therapies and e-cigarettes	No SMI specific e-cigarette trials identified. Evidence supports bupropion, varenicline and NRT as effective. Complex interventions combining	No mention of e-cigarettes or pharmacological aids within this study.	PD staff promoted standard NRT's plus e-cigarettes, ensuring timely prescribing. PD's supported service users by teaching them the correct way to use e-cigarettes.	NICE, NCSCT and Public Health England guidance endorses pharmacotherapies, NRT alongside combination with behavioural support. They endorse e-cigarette use within smokefree settings,	Divergence: Policies and the ground level indicate a strong demand for e-cigarettes, yet there is a trial evidence gap in e-cigarettes for people with SMI.

Factors	Systematic Review (Ch2)	QUiTT Study (Ch4)	Positive Deviance (Ch5)	Policy	Triangulation Outcome
	pharmacological and behavioural support were most successful.		Service users reported a preference for e-cigarettes, though some noted a variation in quality between commercial and ward issued devices.	however NICE emphasise that they are unlicensed medicines.	

6.4.1 Factor 1: Language and the framing of support

One of the most significant and novel findings identified within PhD is the central role of language in shaping engagement with smoking cessation support. The systematic review (Chapter 2) demonstrated the effectiveness of pharmacological and behavioural interventions, but provided no insight into how the language used to communicate these is essential. This gap likely reflects the fact that within systematic reviews and RCTs, the primary focus is on the content of smoking cessation interventions, such as motivational interviewing, CBT techniques, relapse planning, and tailoring for people with SMI. Whilst these components are well evidenced as effective, reviews rarely capture the style of delivery, for example, whether support is framed in directive or curiosity driven language- meaning that subtler mechanisms of engagement are often overlooked. It is worth noting this is generally due to the restricted word counts and scope of systematic reviews rather than these factors being deemed unimportant. Moreover, since Chapter 5 focused on individual level high performance and RCTs typically examine outcomes at the population level, this difference in scope may help to explain the divergence observed.

Both the QUiTT study (Chapter 4) and the PD study (Chapter 5) highlighted that language is fundamental to engaging service users with smoking cessation support. In Chapter 4, coaches explained that the words staff used to describe the smoking cessation service often set the tone for whether patients were willing to engage. For example, one coach described that when TDAs were introduced as "the smoking lady" this created resistance and reinforced the idea that the service was only about smoking cessation. In contrast, the same coach described how through their QI project, they reframed the role of the TDA's more positively as "the vaping lady"- which immediately shifted service users' perceptions. Importantly, they explained how this change altered service users' engagement- *"All of a sudden, people wanted to talk to the vaping lady… people started engaging, which led to quits"*. Furthermore, coaches described this new language as signalling flexibility and support, alongside making it clear that the service was not solely about smoking cessation but also about offering options that patients found acceptable to reduce or temporarily abstain from smoking. Whilst the QUiTT study was not designed to explore best practice in smoking cessation, but rather to examine the functioning of the collaborative itself, the interviews nonetheless provided rich, higher-level insights into the ground level constraints and challenges faced by smoking cessation services.

These findings are echoed within the PD study which offered rich evidence into how exceptional practitioners managed their delivery of smoking cessation care. Exceptional staff expressed frustration

at being reduced to "the smoking guy" a label that implied pressure on service users to quit smoking. Instead, these staff deliberately used curiosity driven questions that opened dialogue, for example, "*Have you ever considered stopping?"*. They also clarified that their remit extended beyond immediate smoking cessation- *"I'm not here to stop you smoking… primarily it's making sure people are comfortable"*. Moreover, it was consistently reported that restrictive language used within initial introductions such as *"I'm from the quit team… do you want to stop?"* shut conversations down, because as one participant described, *"As soon as you ask… straight away they would turn their back. 'I don't want to quit smoking'"*. By contrast, the use of open and supportive language fostered trust and reduced resistance towards the service. This finding highlights how language works as a mechanism of engagement and provides context specific insights from mental health wards that the way support is framed can be just as decisive as the intervention itself.

Moreover, the content analysis of service user surveys within Chapter 5 reinforced these findings. Patients commonly valued staff who were "not forceful" and "really friendly", noting that they felt respected when advisors explained their options for support without imposing pressure. These views were not isolated, with multiple respondents echoing similar points and often describing staff as approachable, supportive, and respectful. Therefore, these reflections show that service users notice and appreciate the use of supportive language, aligning their perspectives with that of PD staff members behaviour.

As mentioned earlier, framing support around comfort, management of nicotine withdrawal or small achievable changes was consistently associated with a reported greater willingness from service users to engage with the service- alongside this being a behaviour that PD's implemented. This notion is reflected within wider psychology with research highlighting that the way we use language and chose to communicate can subsequently influence individuals' feelings and actions (Flusberg et al. 2024). Moreover, this is mirrored within evidence from other areas of healthcare. For example, Albury et al. (2023) analysed the language used within GP consultations in offering weight management referrals in obese patients. This found that when referrals were framed as 'good news'- opportunities rather than neutral or negative messaging, patients were more likely to accept, attend and achieve weight loss outcomes. These findings reinforce that framing care as a positive opportunity rather than a focus on harm can directly influence the engagement and outcomes of service users'- an effect clearly observed in the present study.

Moreover, the implications that this has on policy are important. Notably, most polices do not explicitly state the direct impact of language on engagement- with NICE guidance stating that staff should be 'sensitive to preferences and needs', without stating specific framing (National Institute for Health and Care Excellence (NICE), 2021). NCSCT guidance on very brief advice recommends person centred and non--judgemental communication, with its suggested phrasing often focusing on the more broad health harms and recovery benefits of smoking cessation, for example: *"Did you know that stopping smoking is the best thing you can do for your overall health and wellbeing and can assist with your recovery?"* (Robson, Potts, 2025) rather than framing smoking cessation or reduction as a personalised opportunity. Based on the present studies findings, adapting this language to highlight specific and tangible benefits for people with SMI- such as reduced antipsychotic medication requirements or improved ward comfort, may enhance their engagement and perception of the service more effectively. This positions language not merely as a principle of good care but as a strategic intervention tool that policy could strengthen. Therefore, whilst NCSCT policies do state that language matters, the present study evidences this as a mechanism of engagement.

This triangulation highlights language as a critical mechanism of engagement in smoking cessation for people with SMI. While trial evidence (Chapter 2) does not capture the style of delivery, and national guidance such as NCSCT has already emphasised the importance of non-judgemental, person centred communication, this PhD advances that principle in three ways. Firstly, it provides empirical evidence that specific framings such as curiosity driven questions ("have you ever considered…?") or reframing the identity of tobacco teams- directly shape whether service users express interest, or actively engage. Secondly, it situates these mechanisms within the realities of inpatient mental health wards, showing how language functions under conditions of high workload and cultural resistance. Finally, it fills a gap left by trials and higher-level policies by treating language not only as a principle of good care but as an intervention component in its own right. In this way, the findings extend and strengthen existing aspirations by evidencing how they are realised and refined in practice.

6.4.2 Factor 2: Motivational interviewing and approaches

A second core factor highlighted from within this triangulation is the role of motivational interviewing. The systematic review (Chapter 2) demonstrated that behavioural interventions were most effective when they embedded MI alongside CBT and relapse prevention planning (A. Baker et al., 2006; Gilbody et al., 2019; Rajalu et al., 2023). Rather than providing detailed accounts of how MI was utilised, these trials typically described the intervention content in broad terms (i.e., MI, CBT, coping strategies). This likely reflects the fact that MI is already a well-documented, structured approach with established manuals and training pathways, meaning there was less need to justify or describe its operationalisation in each study.

Furthermore, the QUiTT study (Chapter 4) did not explicitly reference MI, but highlighted practices consistent with its principles. Coaches described how high performing teams sustained their engagement by empowering TDA's, aligning ward and tobacco teams and using reflective problem solving to overcome barriers. For example, one coach explained how collaborative adaptation was central to progress- *"We've already tried that and it didn't work, can we do something different?"* Another reflected on the importance of staff empowerment, noting that TDAs often *"don't really feel like they have any power".* These descriptions map onto MI principles of partnership, rolling with resistance, and supporting autonomy, suggesting that even where MI is not explicitly named, its ethos shapes effective practice.

In contrast, the PD study (Chapter 5) provided direct evidence of MI informing exceptional care. One TDA identified MI as *"The biggest tool that we've got… it's a very person centric way of giving care, and it works"*.- Trust 2. described how MI helped them to turn service users' lived experiences into opportunities for engagement- *"They'll say, I've tried to stop loads of times and it's too hard. So you go, oh, you've tried loads of times? What was that like? You use those conversations to…get your foot in the door"- Trust 2*. Others used reflective feedback to foster readiness to change- *"You just don't seem you mate… What's going on? In one sentence I've said I'm listening, I'm paying attention"- Trust 2*. However, service users surveys did not explicitly reference MI.

Policy guidance also endorses MI as a key component of tobacco dependence treatment in inpatient mental health services. NICE recommends behavioural support that is sensitive to individual preferences, with repeated offers of help and relapse prevention (National Institute for Health and Care Excellence (NICE), 2021). Moreover, NCSCT training lists MI and related techniques (rapport building, relapse planning, self efficacy support) as best practice in inpatient settings (National Centre

for Smoking Cessation and Training, 2024). These recommendations remain at a high level perhaps do the nature of policies, and therefore provide limited direction on how MI should be adapted to the realities of acute ward environments.

Furthermore, this triangulation reveals that MI is consistently identified as central to effective smoking cessation support for people with SMI. The novelty of this PhD lies in showing not only that MI is effective in trials (Chapter 2) and endorsed in policy, but that it is actively enacted by exceptional practitioners in inpatient mental health settings. Specifically, persistence and reflective engagement were key features that distinguished PD's, moving MI from a trialled intervention component into a relational skill embedded in real world care. Embedding practical MI training for ward-based staff, not only tobacco dependence advisors, may therefore help to ensure consistency in its delivery.

6.4.3 Factor 3: Inter-personal and disciplinary relationships and communication

Following this, the next factor outlined from within this triangulation is the importance of both interpersonal and interdisciplinary relationships in enabling exceptional smoking cessation support. The systematic review (Chapter 2) partially supports this, by demonstrating that interventions were more effective when they were delivered by trusted mental health professionals (A. Baker et al., 2006; Gilbody et al., 2019; Rajalu et al., 2023). Moreover, service users' engagement with smoking cessation services also improved when interventions were tailored to their needs, or example, through personalised quit planning, relapse management, and the flexibility to support harm reduction rather than immediate abstinence (Gilbody et al., 2019). However, these trials did not focus explicitly on the role of relationships between members of staff (i.e., ward-based staff and TDA's), nor did they describe how these relational processes underpinned the delivery of smoking cessation support, indicating a clear literature gap.

In contrast, the QUiTT study (Chapter 4) highlighted that strong relationships between staff members at different levels of care facilitated high performance on the collaborative. This was largely because ward based staff had a detailed understanding of ward level constraints such as staffing pressures, competing priorities and daily routines, that TDA's or staff members based elsewhere may not know of. This knowledge meant that change ideas developed on the collaborative could be adapted to fit the ward constraints. Hence, coaches emphasised that collaboration between ward staff, TDAs, and senior sponsors contributed to achieving change and thus, likely improving smoking cessation outcomes. As one coach explained, *"Joining of the ward team and tobacco team is really, really key because the ward staff know their wards... that input is really, really important"*. Importantly, it was the strength of these interdisciplinary ties that enabled services to succeed on the collaborative as ward staff, who understood the daily pressures and routines, could advise QUiTT project teams on when and how new change ideas should be trialled, allowing adjustments to be introduced at appropriate times without disrupting care. Thus, cross team collaboration allowed innovations to be realistically embedded, rather than imposed, increasing their likelihood of sustained success.

The PD study (Chapter 5) contributed to this by showing how exceptional practitioners built both interpersonal trust with service users and collaborative ties with colleagues. A defining feature of how PD's build relationships with service users was their use of a "third space"- defined here an informal and non-clinical setting, such as a walking group, or to create safe environments where conversations about smoking could happen without pressure. By stepping outside the formality of ward routines, these staff humanised their interactions and reduced barriers to engagement. As one TDA reflected,

"You need to build the rapport first. With SMI, you need to build that rapport first. You don't build that rapport, you don't get a result"- Trust 2. Alongside this, PD staff who were external to the ward environment (i.e. TDA's) integrated themselves into ward teams, to coordinate NRT provision and maintain consistency of care. This dual strategy of building interpersonal rapport and embedding within teams enabled PD's to deliver exceptional smoking cessation care.

Moreover, the policy guidance makes some reference to the importance of relationships. Notably, guidance recommends rapport building, non-judgemental communication and integrating tobacco dependency work into wider mental health care. For example, NICE advises that practitioners should "build a supportive relationship" and deliver care that is "sensitive to individual needs and preferences" whilst also ensuring tobacco dependency treatment is offered alongside wider physical and mental health support (National Institute for Health and Care Excellence (NICE), 2021). Similarly, the NCSCT inpatient training standard emphasises that advisors should develop trust and rapport, using "empathetic, non confrontational communication," and work collaboratively with ward staff so that tobacco dependence treatment is embedded within routine care (National Centre for Smoking Cessation and Training, 2024). However, this has little instruction on how interdisciplinary collaboration should be implemented in practice, or how informal relational strategies, such as use of a third space, might support these relationships.

Therefore, this triangulation highlights complementarity evidence across sources. Whilst trials (Chapter 2) and policy acknowledge relationships in principle, the QUiTT and PD studies (Chapter 4, 5) show how they are enacted in practice. Service users also emphasised the value of staff being approachable and supportive (see Factor 1) further, underscoring that relationships were central to how support was experienced. In particular, the use of third spaces and sustained integration within ward teams emerge as critical mechanisms that make smoking cessation support feasible, sustainable, and acceptable in real world inpatient environments.

6.4.4 Factor 4: Culture and attitudes towards smoking cessation

Moreover, this triangulation demonstrated the impact that both cultural norms and staff attitudes may have on smoking cessation delivery. Notably, the systematic review (Chapter 2) focused on interventions and their effectiveness, meaning that it did not explore how contextual or cultural factors shaped smoking cessation outcomes. Therefore, due to the nature of this review, such relational or cultural mechanisms underpinning delivery were largely absent from trial reports.

However, culture was a key factor which influenced 'high performance' on both the QUiTT collaborative, i.e., at the ward and organisational level, and through the PD approach, at the individual level. Firstly, on the QUiTT collaborative was the general cultural attitudes held by staff members towards smoking cessation in mental health settings. Whilst it was clear that TDAs generally embraced the collaborative's aims, ward based staff members sometimes framed smoking cessation as a low clinical priority- echoing long standing cultural barriers reported in the wider literature (Knowles et al., 2016) as discussed within Chapter 1 of this thesis. Moreover, one coach described encountering this direct resistance when recalling a ward staff member saying, *"I don't really see it as a priority. I don't think it's the right time… there was a real, real resistance to mental health staff supporting people to stop smoking"*. These attitudes undermined their engagement with the collaborative, and perhaps the wider smoking cessation initiative. Hence, demonstrating that culture at ward level shaped the extent to which tobacco work was prioritised.

These findings are reinforced by the PD study (Chapter 5), which demonstrated how entrenched such cultural norms were. PDs described how some staff members (in particular, ward based staff members) actively disagreed with the policy or continued to use smoking as a tool for behaviour management, for example, by using cigarettes to calm distressed patients. Moreover, service users echoed this, with one individual stating that *"I don't smoke, I was given an e-cigarette to try to help my anxiety. I tried it but didn't want it"- Trust 3.* Hence, these practices reflect the same cultural barriers highlighted in the literature (see Chapter 1) and observed in Chapter 4. Notably, staff who were identified as PD's sought to challenge these norms by modelling adherence to policies alongside demonstrating alternative strategies for supporting patients, such as NRT's or e-cigarettes. Further illustrating the cultural impacts on tobacco use in mental health settings.

Interestingly, policy guidance recognises these cultural barriers, but does so unevenly. NCSCT guidance explicitly calls for a 'cultural transformation' in mental health services by highlighting the historic use of smoking as a ward currency and behaviour management. In addition, the NCSCT advises staff to 'win over those opposed' to smokefree policies, counter myths (such as smoking bans causing violence) and model non smoking behaviours consistently. However, by contrast, NICE guidance does not explicitly address cultural or attitudinal barriers and instead focuses on rapport building between staff and service users, alongside non-judgemental support and integration of tobacco treatment into routine care. However, cultural change, particularly that within healthcare settings, is notoriously difficult to implement within practice. For example, evidence highlights that resistance to change within nursing occurs due to a multitude of factors; individual, organisational and cultural (Cheraghi et al., 2023). Therefore, re shaping such cultural norms surrounding smoking cessation may encounter resistance, further highlighting the difficulty of implementing policy guidelines in practice.

Therefore, this reveals a slight divergence across top-down and bottom-up levels of care. Cultural and attitudinal factors are largely absent within the systematic review, and are referenced only at higher levels, such as in policy. Despite this, their impact is strongly evident in practice. Both the QUiTT and PD studies highlight that staff resistance and entrenched cultural norms remain a barrier to smoking cessation in mental health care- but also that these can be actively challenged by exceptional practitioners. Hence, this PhD contributes a novel insight by evidencing culture and attitudes not as peripheral considerations- but as central determinants of how smoking cessation interventions are delivered and sustained in real world inpatient mental health settings. Moreover, the qualitative findings from this PhD provide practical ways for organisations, teams or individuals to try to address cultural barriers that may exist within these settings.

6.4.5 Factor 5: Nicotine replacement therapies and e-cigarettes

Finally, the impact of pharmacological support and in particular, e-cigarettes, for smoking cessation is divergent across data sources. The systematic review (Chapter 2) confirmed the effectiveness of bupropion, varenicline and NRT's- with complexed interventions combining pharmacological and behavioural components being most successful (A. Baker et al., 2006, p. 200; Gilbody et al., 2019). However, no RCTs using e-cigarettes in people with SMI were identified. This is notable given the wider evidence of their acceptability. For example, O'Brien et al., (2015) found that whilst nicotine patches, nicotine e-cigarettes, and non nicotine e-cigarettes were equally effective in terms of smoking cessation at six months- e-cigarettes were rated as substantially more acceptable (83% compared with 37% for patches). Moreover, this greater acceptability contributed to an improved adherence and thus

smoking reduction- reinforcing findings from recent reviews (Hartmann-Boyce et al., 2021). Hence, this highlights a gap from the top-down level, discussed in depth within Chapter 2.

In contrast, the PD study (Chapter 5) demonstrated how exceptional staff members actively promoted pharmacological aids and particularly e-cigarettes. PDs ensured the timely prescribing of pharmacology by referring service users into smoking cessation services upon admission. Furthermore, PD staff members also taught the correct use of pharmacological aids, such as e-cigarettes and nicotine gum, which reflected an awareness that misuse could reduce their effectiveness and thus, service users' perception and perhaps smoking cessation efforts. Notably, service users expressed a clear preference for e-cigarettes over other forms of support, with one service user stating that their *"smoking levels have reduced a lot"- Trust 3.* However, service users did note a variation in the quality between e-cigarettes provided on the wards and those available commercially. It is worthwhile noting that there was no mention of e-cigarettes or NRT within Chapter 4, likely due to this not playing a factor impacting engagement on the QUiTT collaborative.

National smoking cessation policies consistently endorse pharmacological support, with more mixed messages surrounding e-cigarette provision. Firstly, NICE guidance recommends that pharmacotherapies, NRT, varenicline or bupropion are offered to inpatients alongside behavioural support. However they note that clinicians may support people who choose to use e-cigarettes- but must emphasise that they are not licensed medicines (National Institute for Health and Care Excellence (NICE), 2021). This is aligned with similar guidance, such as the NCSCT inpatient standards which also endorse pharmacology and NRT's. However, NCSCT policy explicitly advises services to support individuals who choose to utilise e-cigarettes. The support for e-cigarettes is further echoed by further evidence indicating that whilst vaping is not risk free, it poses a small fraction of the risks that smoking does (McNeil et al., 2022) and such, can improve smoking cessation outcomes. Hence, these policies demonstrate consistent support for pharmacotherapies and NRT, alongside endorsement of e-cigarettes with caution in places.

Therefore, whilst service users, PD staff and NCSCT policy (National Centre for Smoking Cessation and Training, 2024) have highlighted e-cigarettes as an acceptable and effective smoking cessation mechanism, this is not yet reflected in the trial evidence base. Notably, the systematic review revealed no SMI specific e-cigarette trials, leaving a critical gap in the literature. At the same time, frontline practice (at both individual and team level) has found alternative ways of working with e-cigarettes that appear to support staff and service users to succeed and deliver good care, yet this bottom-up innovation is not captured in NICE guidance (National Institute for Health and Care Excellence (NICE), 2021) or robust RCT research. Thus, this PhD points to the need for further high quality research on e-cigarettes for people with SMI and for improvements in the quality and consistency of vape provision within inpatient mental health settings to occur, to increase satisfaction and perhaps engagement with the smoking cessation service. Furthermore, this outlines the value of comparing top-down and bottom-up approaches to healthcare improvement.

6.5 Discussion: Integrating evidence through triangulation

Through the process of triangulation, this PhD has demonstrated the value of examining smoking cessation for people with SMI through both top-down and bottom-up lenses. Importantly, by bringing together the systematic review evidence, with the practice based insights of the QUiTT and PD studies a more nuanced and holistic account of best practice has been developed. As a result, this comparison has identified areas where the evidence base is robust, where gaps remain, and where frontline practice is innovating in ways that research and policy have not yet captured.

Notably, the most distinctive contribution of this PhD is the demonstration that language operates as a core mechanism of engagement, directly shaping if people with SMI take up cessation support and being a salient behaviour expressed by individual PD's. Small shifts such as reframing the "smoking lady" as the "vaping lady" (Chapter 4) or replacing restrictive questions like "do you want to quit?" with curiosity-driven alternatives (Chapter 5) were shown to transform service users' willingness to engage. Service users themselves reinforced this by valuing staff who were "not forceful," underscoring that how support is introduced is as important as the intervention itself. While policies such as NCSCT already emphasise empathy and non-judgemental communication, this PhD advances those principles by evidencing the specific linguistic strategies that make them effective in practice. Identifying and validating language as a mechanism of success therefore extends policy aspirations and offers a practice-grounded refinement to existing guidance.

The notion of language has been investigated within more general smoking cessation settings. Altendorf et al. (2020) explored message frame-tailoring in a digital smoking cessation program. In their trial, participants were either exposed to autonomy based supportive messages (i.e., emphasising choice, acknowledging personal preferences, using language like "you might consider…") or to controlling messages (i.e., directive instructions such as "you should…"). They found that people responded more positively to the supportive style, rating those messages as more relevant and motivating. However, this did not lead to higher quit rates overall. This finding resonates with the present study, where the style and framing of language, for example, using curiosity driven questions or reframing team identity, directly shaped whether service users engaged with support. Therefore, this indicates that whilst supportive language alone may not guarantee long term abstinence, it is a powerful tool for opening the door to engagement- something especially important as digital interventions are increasingly used in smoking cessation, as discussed in Chapter 2.

Furthermore, divergence lies in the role of e-cigarettes. No SMI specific e-cigarette trials were identified in the systematic review (Chapter 2). Yet both PD staff and service users in Chapter 5 consistently described them as the most acceptable and effective form of NRT in inpatient settings. Moreover, service users preferred vaping to other forms of support, though they criticised the poor quality of ward issued devices. This notion of acceptability is supported by the wider smoking cessation literature (Hartmann-Boyce et al., 2021; O'Brien et al., 2015). Evidence suggests that It now takes an average of 17 years for new knowledge generated by randomized controlled trails to be incorporated into practice, and even then their application is highly uneven (The Institute of Medicine, 2001). This is likely because of the lengthy and sequential nature of the research process; spanning idea development, funding, data collection, analysis, and publication, followed by the need for evidence to accumulate across multiple studies before being synthesized into guidelines, with additional time added by regulatory approval processes for drugs and devices (Munro & Savel, 2016). However, the present study suggests the opposite pattern that in the case of

e-cigarettes, frontline practice has moved ahead of both policy and research with widespread implementation occurring in SMI settings, despite the absence of significant published evidence. This highlights the need for high-quality RCTs to establish the safety and effectiveness of e-cigarettes for people with SMI, and for subsequent incorporation of these findings into clinical guidance (e.g., NICE) and policy, where it does not yet exist. These findings suggest that a best practice of smoking cessation for people with SMI should incorporate quality e-cigarette provision within inpatient settings, underpinned by robust RCT evidence. Aligning NHS provision with patient demand would not only improve engagement but also ensure that services reflect both the strongest evidence and the realities of practice.

Finally, cultural constraints remain a major source of divergence. Whilst the policy assumes that all patients will be routinely referred and supported by the tobacco dependency team- the QUiTT and PD studies highlighted that entrenched ward cultures and workload pressures often made even basic referrals 'exceptional'. QUiTT Coaches described ward staff regarding smoking cessation as a "low priority" and sometimes "immoral" restriction, echoing longstanding barriers noted in the literature (Cheraghi et al., 2023; Knowles et al., 2016, 2016). PD staff also reported that colleagues sometimes continued to use cigarettes for behaviour management. These findings are echoed within a recent ASH survey (Action on Smoking and Health (ASH), Cancer Research UK, 2025) showing that many mental health staff still view smoking as a way of managing patient behaviour, highlighting how entrenched these attitudes go. Thus, this highlights that policy assumptions of universal deliveries sit uneasily with frontline realities of care delivery.

Alongside this, several areas of convergence support the existing recommendations. Firstly, MI approaches are consistently supported across trial evidence, national policy, and practice- reinforcing them as a mechanism of support for smoking cessation in people with SMI. Similarly, the importance of relationships was evident across all sources. Crucially, this PhD has specified which relationships matter significantly- notably those between ward staff and TDAs, alongside the involvement of those at a managerial or higher level (Chapter 4). PD's demonstrated that these relationships are essential on the collaborative for embedding change ideas, but also for the enforcement of smoking cessation policies. These insights refine our understanding of how relational approaches can be operationalised.

In conclusion, these findings suggest that best practice in smoking cessation for people with SMI cannot be defined by top-down evidence alone, nor by local bottom-up innovation in isolation. Rather, it lies at the intersection where the rigour of formal trials meets the relevance of lived practice and requires support at all levels of the system: policy, organisational/team, and individual, as highlighted within the Theme 4 on cultural attitudes. The triangulation presented here therefore provides a fuller account of what works, why it works, and what remains underdeveloped.

6.6 A 'Gold Standard' for smoking cessation in people with SMI

On this basis, a 'gold standard' for smoking cessation in people with SMI would integrate the existing policy commitments and best practices with the practice based insights revealed through this PhD.

Specifically, it should include;

1. **Training on the importance of language**: Staff development should go beyond technical competence to include how support is introduced, framed, and phrased. Training should emphasise strategies such as curiosity driven questioning and reframing the identity of the

tobacco dependency team, ensuring that the language used fosters trust and engagement rather than resistance. Crucially, staff should understand why this matters, because the choice of words is not simply a matter of style, but a determinant of whether people with SMI engage with support or disengage altogether. Disseminating these approaches could also be conducted through sharing of best practice examples throughout staff training. This has been utilised throughout similar PD research such as within (Marra et al., 2011) whereby staff members who delivered exceptional hand hygiene care lead action and peer training groups to facilitate best practice, with successful outcomes.

2. **Reinforcing motivational approaches:** A wider uptake of MI training for ward based staff (not just TDA's) with practical tools such as on-ward prompts or question guides, would help embed this motivational practice into routine care and ensure this is utilised comparably across individuals.
3. **Strengthening key relationships:** Policies should explicitly recognise the importance of the relationships between ward staff and TDA's, alongside relationships with those at higher levels within the organisation, and its impact in service success. This could be facilitated by sharing best practice examples throughout peer learning groups, outlined above.
4. **Working towards cultural changes for smoking cessation in people with SMI:** Efforts to share and disseminate best practice should prioritise fostering cultural changes in attitudes towards smoking cessation. As previously mentioned, peer learning and training groups may be valuable in shifting ward cultures and normalising support towards smoking cessation in people with SMI, particularly at an individual level. Alongside this, perhaps a focus on selecting the an individual who has the ability to drive this cultural change not just at an individual staff level, but also an organisational level is essential. Additionally, future research could develop and disseminate accessible statistics that clearly communicate the positive impacts of smoking cessation for people with SMI, supporting a wider cultural change.
5. **E-cigarettes:** Given their strong acceptability among service users and frontline staff, further RCTs are needed in SMI populations. In parallel, the NHS should improve the quality and consistency of vape provision in inpatient settings to align policies with patient demand. Finally, work should be conducted to improve wider health misconceptions that vaping is more harmful than smoking. Notably in 2021, only 34% of adults who smoked accurately believed vaping was less harmful than smoking (McNeill et al., 2022).

Gold Standard Considerations

It is worthwhile noting that this gold standard recommendations prioritised qualitative findings derived from interviews and stakeholder input (Chapters 4 and 5), and as such, which is why evidence on varenicline and bupropion is not reflected in this synthesis. These pharmacological interventions were not raised by participants during interviews, potentially due to the challenges and disruptions in service delivery over the past few years (as discussed in Chapter 1). However, the absence of mention should not be interpreted as an indication that these treatments are ineffective. Rather, their omission reflects the focus of this study on factors highlighted by participants and the broader qualitative evidence base, rather than the exclusion or devaluation of established pharmacological evidence.

Additionally, it is important to acknowledge that the Gold Standard recommendations presented here are based on a relatively small workforce across three trusts, which limits the generalisability of the findings. Furthermore, this study implemented only the first two stages of the Bradley et al. (2009) positive deviance approach. For more robust conclusions, these initial findings should be tested in

larger, more representative samples (Stage 3) and subsequently disseminated and refined through professional networking and stakeholder engagement (Stage 4). It is recommended that future research consider the use of randomised controlled trials to evaluate and validate the effectiveness of these Gold Standard recommendations, thereby strengthening the evidence base and supporting wider implementation across smoking cessation services.

Summary

Through triangulation, this PhD has identified both convergence, divergence and complimentary aspects between top down and bottom up perspectives on smoking cessation for people with SMI. The most novel finding is the role of language as a mechanism of engagement, a factor absent from both trials and policy. Alongside this, the acceptability of e-cigarettes and the persistence of cultural barriers highlight critical gaps in the evidence base and policy implementation. Moreover, elements which provided complimentary perspectives were that surrounding inter-personal and disciplinary relationships and communication- which contributes to our wider understanding. By synthesising these insights, this thesis sets out a framework for a gold standard in smoking cessation for people with SMI - one that integrates robust evidence with the realities of frontline practice.

Chapter 7: General discussion

7.1 Chapter summary

Chapter 6 concluded by outlining a framework for a 'gold standard' of smoking cessation care for people with SMI, integrating policy commitment alongside the systematic review (top-down) with practice-based insights (bottom-up). This final chapter builds on that synthesis by reflecting on the methodological and conceptual limitations of the research conducted within this PhD, considering its implications for policy and practice and identifying priorities for future investigation. In doing so, it situates the proposed gold standard within the realities of study design and health service delivery, highlighting both the strengths and limitations of the present work.

7.2 Thesis overview

This PhD set out to develop a clearer understanding of 'best practice' in smoking cessation for people with SMI, with the ultimate goal of informing more effective and tailored strategies. To achieve this, four complementary aims were pursued (Table 7.1). First, a top-down perspective was applied through a systematic review (Chapter 2), synthesising existing evidence on effective smoking cessation interventions. Second, a bottom-up perspective was examined through exploratory qualitative research through capturing the lived experiences and innovative practices of the organisational and team level (Chapter 4) and frontline staff (Chapter 5). Third, these perspectives were brought together through triangulation (Chapter 6) allowing areas of convergence and divergence between research based evidence and practice derived insights to be identified. Fourth and finally, the insights generated across these strands were integrated to propose a model of 'gold standard' smoking cessation practice (Chapter 6), designed to inform both frontline delivery and national policy.

The discussion proceeds first, by considering the methodological boundaries of the study, including conceptual and practical limitations of the positive deviance approach. Second, it reflects on issues of equity and inclusion, particularly the implications of not collecting ethnicity data from staff participants. Third, it examines the practice and policy relevance of the findings, including how they refine understandings of a 'gold standard' for smoking cessation in SMI. Fourth and finally, it identifies key directions for future research.

Table 7.1: The primary aims of the present PhD study, as outlined in Chapter 1 of this thesis.

Aim 1	Aim 2	Aim 3	Aim 4
Examine **top-down** approaches by systematically reviewing and synthesising the evidence on which smoking cessation methods enable smoking cessation for people with SMI.	Investigate **bottom-up** perspectives through exploratory and participatory research to understand what works at the ground level to support people with SMI to quit smoking.	Integrate these perspectives through **triangulation,** identifying both convergences and divergences between formal evidence and lived experiences. Rather than disregarding practices not captured in systematic reviews, this approach treats them as valuable sites of insight.	Use this integrated methodology to propose a model of **'gold standard'** smoking cessation practice that can guide both frontline staff and national policy.

7.3 Methodological considerations

7.3.1 Definition of SMI and generalisability of research

It is notable that there is a range of definitions for severe mental illness (SMI), often varying from country to country (Pina et al., 2024). The present PhD adopted a pragmatic definition in line with previous systematic reviews (Peckham et al., 2017) to provide consistency across the evidence. Whilst this ensured alignment with existing literature, it also means that studies using an alternative diagnostic criteria, symptom thresholds, or service use definitions may have been excluded- resulting in potentially relevant evidence being overlooked within Chapter 2 due to differences in researchers definition of SMI. Alongside this, it was unclear how service users within Chapter 5, and how QUiTT defined SMI, raising potentials for more variation. These definitional inconsistencies also complicate comparison between the evidence base (top-down) and the empirical studies (bottom-up) presented in this thesis. Much of the trial literature reviewed in Chapter 2 drew on outpatient populations and by contrast, the QUiTT collaborative (Chapter 4) and the Positive Deviance study (Chapter 5) were situated in inpatient mental health services- whereby individuals are typically more acutely unwell. Whilst this is a challenge for the wider evidence base, it also highlights the value of Chapter 6's triangulation - by comparing ground-level insights within inpatient mental health settings to the broader literature on smoking cessation within SMI, this thesis helps to address a gap in evidence that has historically underrepresented inpatient populations.

7.3.2 Insights versus the complexities of the Positive Deviance approach

The application of the PD approach also raises conceptual limitations. Identifying 'true' high performance depends on the assumption that individuals, communities or services succeed under the same constraints as their peers, and that differences in outcomes can therefore be attributed primarily to behaviours, attitudes, or strategies (Bradley et al., 2009). However in practice, this assumption is difficult to sustain. Contextual factors such as the ward type, patient acuity, organisational funding and team culture or composition, may have contributed to the perception of someone demonstrating 'high performance' within the present PhD, rather than their individual's practices alone. This is supported by extensive early engagement with services (Chapter 5), including exploratory meetings with service leads, commissioners and frontline staff, which revealed marked variability in smoking cessation provision across England. These conversations pointed out the differences in service models, alongside structural disparities, such as some sites operating with rolling funding streams whilst others were tied to short term contracts. Such inconsistencies reinforced the challenge of assuming a level playing field when comparing performance, and further informed the decision to focus this study on identifying high performing individuals within inpatient contexts- where higher level factors were more consistent. These insights illustrate how the identification of high performance cannot be disentangled from wider organisational and structural conditions, highlighting a consideration when interpreting these findings.

Additionally, the process of identifying such individual high performers within this PhD has relied on peer nomination and managerial recommendation, as discussed within Chapter 5 - which may itself be influenced by visibility, status or structural biases within organisations. As a result, less visible forms of positive deviance may have been overlooked. Whilst this was minimised by the use of three trusts within this study, this reflects a broader methodological challenge, as Baxter & Lawton, (2022) note, PD's strength lies in its grounding in local contexts, but this very strength makes it difficult to generalise findings beyond the original setting. Whilst this study did not employ direct observations,

future research could incorporate observational methodology to verify that these nominated individuals are demonstrably performing at a high level in practice- alongside allowing for less obvious high performers to be identified. Moreover, observations would also help to generate a better understanding of the contextual factors that facilitate individual level PD's. Observations have been utilised in the wider PD literature. For example, Liberati et al., (2019) used a PD approach to explore safe practices within a high performing maternity unit. Through their use of ethnographic observations, semi structured interviews and focus groups- they were able to identify six key mechanisms underpinning safe practices on maternity wards. Thus, providing evidence that alternative methods to explore PD practices can reap success. Hence within the present study, observational methods could act as an additional source of triangulation, alongside peer nominations and managerial accounts- strengthening the credibility of identified high performers alongside mitigating any potential selection biases. Alongside this, this would provide further depth into understanding how these high performers succeed.

Furthermore, it is important to acknowledge that the present study only had scope to conduct Stage 1 and Stage 2 of the PD approach- identifying individuals and exploring their practices (Bradley et al., 2009). This approach is outlined within Chapter 3 in depth. The latter two stages of this approach; testing these practices in new contexts and disseminating them more widely, were beyond the remit of the present PhD. Future research could also consider the use of observations to address another gap, the lack of comparators. The PD literature highlights the importance of examining how PD's differ from their peers, yet identifying comparators in this study proved difficult. Observational methods may provide a valuable solution, as an external observer can capture subtle differences in how PDs and other staff deliver care, providing insights that might not otherwise be visible through self-report alone.

One way of overcoming this limitation of not being able to conduct Stages 4 and 4, is perhaps embedding the PD findings within a broader implementation science framework. For example, the Consolidated Framework for Implementation Research (CIFR) (Damschroder et al., 2009, 2022), provides a multi levelled structure for identifying the factors that influence the implementation of healthcare interventions Notably, this framework focuses on five key domains; the interventions characteristics (i.e., their advantages, complexities and costs), their external influences (i.e., resources, policies), internal influences (i.e., their organisational context, culture and readiness for improvement), the characteristics and knowledge of individuals involved within the implementation process (i.e., knowledge and beliefs) and activities that support implementation. Notably, once Stage 2 of PD is conducted and best practices are identified- CIFR could be utilised to support their wider implementation. For example, smoking cessation best practices identified within the present study could follow the above stages of the CFIR framework, assessing their characteristics, how they would fit amongst internal and external ward constraints, and cultural barriers in place, supporting their implementation Therefore, combining PD with improvement science approaches could strengthen their scalability beyond this PhD, address issues of inclusion, and ensure that innovations identified are both contextually grounded and transferable, which should be addressed in future research.

7.3.3 Ethnicity and diversity considerations

A key limitation of this study is that issues of equality, diversity, and inclusion (EDI) were not explicitly examined. In keeping with data minimisation principles (Information Commissioners Office, n.d.) and because demographic information was not required to address the primary research questions, characteristics such as ethnicity, gender, age, and socioeconomic status were not collected from PD's QUiTT coaches (Chapters 4 and 5). This means it was not possible to assess whether

biases in who was identified influenced representation. For instance, minoritized groups may have been among the PDs who were not nominated. Nevertheless, the recruitment process was inclusive in that all individuals identified as PDs were invited to participate, and all QUiTT coaches were interviewed (Chapter 4), with four of five also joining the focus group. For PDs, all 24 nominated individuals were approached, with only four unable or choosing not to participate (Chapter 5). This approach reduced the risk of researcher driven bias. Future research should build on this by embedding EDI more explicitly, for example through Equality Impact Assessments at the planning stage, to ensure that PD practices do not inadvertently exclude certain groups and to strengthen the transferability of findings (National Institute for Health and Care Research, 2025; Dooley et al., 2024).

Nevertheless, the process of PD nomination itself (Chapter 5) may have been shaped by existing systemic inequities within healthcare. There is strong evidence that staff from minority ethnic backgrounds are less likely to be recognised for leadership or innovation, are underrepresented in senior roles and face disproportionate scrutiny and disciplinary actions. For example, Archibong et al., (2019) highlight persistent ethnic disparities in NHS disciplinary processes, with staff from Black and minority ethnic groups significantly more likely than White colleagues to be subject to disciplinary investigations and formal sanctions, even after adjusting for their role and grade. Further evidence reports that minority ethnic staff are underrepresented in senior management and board level roles, despite forming a substantial proportion of the workforce (Chastney et al., 2024). Hussain et al., (2023) further demonstrated this notion, by documenting how junior doctors who are women and/or from minority ethnic backgrounds experience both overt and systemic forms of racial and gender discrimination, including microaggressions, stereotyping, and unequal treatment - that contributed to elevated psychological distress and hinderance on their progression toward leadership or innovation roles. Together, this evidence suggests that whilst every nominated individual was invited to participate, potential PDs from minority backgrounds may have been overlooked at the nomination stage (Stage 1). As a result, culturally specific approaches to smoking cessation, which are potentially important for engaging diverse patient populations, may not have been captured within the present study. Whilst this limitation does not undermine the validity of the present findings, it does constrain their representativeness of people with SMI from minorized ethnic groups not receiving support from people from similar groups, and highlights an important avenue for future research. Studies that explicitly include protected characteristic data and adopt more inclusive nomination and identification strategies for PDs will be better placed to ensure that diverse forms of PD are recognised and their contributions to practice fully understood.

7.4 Implications for smoking cessation practice and policy

A central theme to emerge throughout this PhD, is the gap between the policy and published evidence (top-down) and ground level practices (bottom-up). Notably, staff identified as PD's in delivering exceptional care were not always those who adhered most rigidly to smoking cessation policies. Instead, high performance often involved flexibility, i.e., balancing therapeutic relationships, patient safety, and ward dynamics whilst supporting core policy goals where feasible. This can be understood as a form of 'constructive non-compliance', whereby partial deviation from formal rules enables more patient centred outcomes. This resonates with Lipsky's (1980) theory of street level bureaucracy, which highlights how frontline workers such as police officers, teachers, and social workers, often adapt or bend rules in order to reconcile policy with the complex realities of service delivery. Evidence within healthcare highlights that such 'workarounds'- defined as instances whereby staff do not comply with the policies intended to mitigate risks- often allow nurses to maintain critical

workflows and systemic constraints (Halbesleben et al., 2010). More recently, a scoping review highlighted that over half of their included papers (59%) reported working around standards related to medical safety, with organisational causes being the most prominent reason for doing so (Clark et al., 2025). Therefore, whilst these workarounds are prevalent within healthcare, alongside smoking cessation, further evidence is required to inform policy makers and professionals if such workarounds are contributing towards effective care.

Moreover, in mental health contexts, ethnographic research has shown that wards are often characterised by permeability and constant negotiation, with staff and patients adapting their practices in response to social and relational dynamics (Quirk et al., 2006). Therefore, reflecting the constructive non-compliance demonstrated within this PhD, whereby staff often negotiated with patients around smoking rather than rigidly enforcing restrictions. Crucially, this should not be interpreted as advocating for non-adherence to policy, but rather as a recognition that ward level factors and relational complexities inevitably shape how policies are enacted in practice. Understanding these adaptations highlights the value of examining how frontline staff reconcile formal rules with the nuanced demands of patient care and demonstrates the importance of designing policies that are responsive to the realities of clinical settings.

Additionally, the findings of this PhD help to translate broad national commitments set out in the NHS Long Term Plan (NHS England, 2019), NICE guidance (National Institute for Health and Care Excellence (NICE), 2021) and NCSCT training standards (National Centre for Smoking Cessation and Training, 2024) into practice grounded specifications, as discussed within Chapter 1. A consistent message within this PhD was that smoking cessation support is not only about delivering evidence-based interventions, but also about how they are enacted on the ward. Particularly, language used by staff members when discussing smoking cessation with service users, emerged as a mechanism of engagement. Importantly, curiosity driven questions, reframing team identities and perceptions and avoiding reductive labels, shaped whether service users felt willing to engage with the smoking cessation service. Similarly, motivational interviewing (MI) (Miller & Rollnick, 2002a) already recommended throughout national smoking cessation policies, was shown here to be effective under inpatient constraints, by PD's using reflective questioning and affirming even small past attempts with service users. Hence, extending MI training beyond tobacco dependency specialists to ward based staff could help to embed motivational practice into routine care.

Equally, this PhD's findings show the centrality of relationships. Exceptional practice was sustained not only through rapport with service users but also through strong collaboration between ward teams and tobacco dependency advisors, highlighting that relational processes are key to consistent and effective smoking cessation support. Interestingly, the factors characterising high performers in this study align closely with those identified in the psychological literature on effective therapeutic relationships. For example, research suggests that strong therapeutic relationships are marked by mutual respect, empathy, and a non-judgmental stance (Opland & Torrico, 2024). Moreover, common factors such as empathy, warmth, and the quality of the therapeutic alliance have been shown to correlate more strongly with client outcomes than specific treatment techniques or interventions (Lambert et al., 2001). These relational qualities are similarly evident among high performers in smoking cessation services, who can engage service users effectively, tailor support to individual needs, and maintain rapport even in challenging contexts. This suggests that fostering relational skills may be as important as technical knowledge in achieving positive outcomes in smoking cessation care, highlighting a key avenue for future research and training in this population.

Finally, pharmacological aids and particularly e-cigarettes, were acceptable and valued by service users, yet concerns about the poor quality of ward issued devices suggest the need for SMI specific trial evidence. Collectively, these insights suggest that a gold standard for smoking cessation in SMI settings requires the integration of national policies principles with the realities of frontline care- recognising the role of language, motivation, relationships and high-quality pharmacological support as interdependent components of effective smoking cessation service delivery.

7.5 Future research directions

Several avenues for future research are highlighted throughout this thesis. The most pressing areas are outlined below.

Firstly, language should be regarded as an active intervention ingredient for smoking cessation interventions. Building on the observational insights presented within this PhD, experimental studies- including randomised controlled trials, could test the impact of reframing smoking cessation advice in terms of service users' autonomy and wellbeing rather than the risks that smoking poses to their health, and explore if this improves service users engagement and retention. Moreover, methodologies such as conversational analysis as used by Albury et al. (2023) may be useful for examining how subtle differences in phrasing and framing shape interactions. Alongside these controlled designs, ethnographic approaches**,** such as participant observation (Johnston et al., 2025) could provide a richer understanding of how language operates in practice. For example, this might involve detailed observation of ward interactions, fieldnotes capturing the subtleties of conversational tone and timing and interviews that situate behaviour within wider institutional and relational dynamics. In doing so, this would illuminate how language, context, and relationships combine to create openings or barriers to cessation, offering insights rarely visible in controlled trials, that could be built upon in future policy and strategies.

Secondly, further focus on equity and inclusion within future PD research. Notably, this should incorporate ethnicity and other protected characteristics to ensure that diverse approaches to smoking cessation, including culturally sensitive strategies, are recognised. This could be supported by drawing on frameworks such as the Consolidated Framework for Implementation (CFIR) (Damschroder et al., 2022) - outlined above.

Thirdly, the comparison between inpatient vs community contexts for smoking cessation should be compared within future research. As described within the earlier elements of this thesis, community services for smoking cessation within SMI are often underdeveloped or do not yet exist- hence the current PhD was not able to explore these within sufficient depth. A comparison between these two services could test whether the mechanisms of engagement identified in inpatient wards, such as relational working and motivational approaches, are transferable to community smoking cessation services.

Fourthly, the present study did not collect data on the included staff members' training history (e.g., courses or professional development activities that may have enhanced their knowledge of smoking cessation in SMI), which represents a limitation of the findings as it remains unclear whether these behaviours are learned or innate. Consequently, it is uncertain whether the skills exhibited by high performers are primarily acquired through training and experience or reflect more inherent attributes. Future research should examine the role of staff development and training in cultivating these competencies, as clarifying this potential confounding factor would enhance understanding of how

high performance emerges and inform strategies to systematically foster these skills across smoking cessation services.

Penultimately, future research should focus on the role of attitudes and wider cultural contexts in shaping smoking cessation for people with SMI. Whilst this PhD has highlighted how staff language and ward dynamics can facilitate or hinder engagement, future studies could investigate how staff perceptions of smoking in SMI populations influence their willingness to prioritise cessation, and whether stigma or perceptions of smoking as a mechanism of behaviour management undermines support. For example, intervention studies might test strategies for reshaping cultural norms, such as peer led training, the dissemination of successful smoking cessation stories, or provision of accessible data on the health and benefits of smoking cessation for people with SMI can help reframe smoking as treatable and not inevitable. By explicitly addressing these attitudinal dimensions, future research could contribute to the sustained cultural change required to normalise cessation support in SMI services.

Finally, in relation to the use of electronic cigarettes, and given their prominence in practice and acceptability among service users within this PhD, rigorous trials are needed to further support their effectiveness in people with SMI. Current evidence remains limited to small pilot and secondary analyses (Hickling et al., 2019; O'Brien et al., 2015) highlighting a clear gap between practice and trial evidence. Future studies should also address harm perceptions surrounding vaping. For example, in 2021 only 34% of adults who smoked recognised vaping as less harmful than smoking, with only 11% understanding that nicotine itself carries little risk (McNeill et al., 2022). Therefore, since these beliefs about harms shape smoking and vaping behaviours, interventions similar to those described above could be utilised to correct misperceptions, whilst avoiding misinformation that could deter smokers, should be tested alongside controlled trial outcomes.

7.6 Conclusion

This discussion has outlined the methodological boundaries of the present work, whilst highlighting its contributions within wider debates on policy and practice. By demonstrating how language functions as a mechanism of engagement, showing the ways in which policy is interpreted and adapted in everyday care and highlighting the need for greater attention to equity and inclusion- this thesis offers both practical implications and avenues for future research. Ultimately, best practice depends on practitioners' capacity to navigate ward dynamics with flexibility, build trusting relationships, and deploy language in ways that create openings for engagement. Therefore, this PhD highlights the need for continued research and practice innovation to reduce the health inequality of disproportionate smoking among people with SMI.

Finally, this thesis highlights the value of showcasing the interplay between the policy, literature, ground level practice, and lived experience in shaping smoking cessation support for people with SMI. By illuminating both the relational and linguistic dimensions of engagement, it demonstrates how best practice emerges through flexibility and responsiveness. Therefore, this work contributes to the ongoing literature covering the health inequalities existing for smoking cessation for people with SMI, whilst offering a foundation for future research that seeks to refine this support in ways that are both effective and equitable than that offered to the general population.

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Appendices

Appendix 1: Search terms used on MEDLINE, EMBASE, PsycINFO, CINAHL, and Cochrane CENTRAL.

Conditions

- Schizophrenia (variants: schizo$, Hebephrenic)
- Paranoid Disorders (variant: Paranoid disorder)
- Psychosis (variants: psychotic$, psychoses)
- Chronic or severe mental illness/disorder (search string: ((chronic$ or sever$) adj2 mental$ adj2 (ill$ or disorder$)))
- Bipolar Disorder

Interventions and Behaviours

- Smoking cessation
- Quit smoking (variants: stop smoking, cease smoking, give up smoking, quits)

Substances and Tobacco-related terms

- Tobacco use cessation (variant: Tobacco-Use-Cessation)
- Tobacco use disorder (variant: Tobacco-Use-Disorder)
- Tobacco smokeless
- Tobacco smoke pollution
- Tobacco
- Nicotine
- Electronic cigarettes (variant: Electronic Nicotine Delivery Systems)
- Smoke
- Smoking (including "/pc, th" prevention & control, therapy)

Appendix 2: Topic guide for QUiTT study, Chapter 4.

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Version 1.0 (25/5/24) Ethics number: PSCETHS-781

Study Title: Investigating smoking cessation in people with Severe Mental Illness (SMI).

Reassure: this is not a test, there are no right or wrong answers, I am just trying to understand your perspective. This topic guide is iterative and may change depending on the direction of the discussion. You are the expert!

Recap: The aim of this study is to explore what makes a service perform well at using a QI approach to improve their smoking cessation outcomes in people with SMI. The secondary aim is to explore if this is consistent with their overall smoking cessation success, and the factors allowing this success.

1. **About you**

Please can you tell me briefly a little bit about your job and professional background?

- How long have you been doing this role?
- To what extent does your role involve supporting the services implementing QUiTT?
- How many services do you support/what stage of QUiTT are these services in? (S1, 2, development)

2. **Service organisation**

Can you tell me a little bit about how the services you support;

- How large is each service?
- How long have these services been on using a QI approach/working with an advisor?
- How do these services differ from each other?
- In what way are the services that you support similar?
- Prompts for above: how do these services vary in terms of; individual level (patients or staff), team level, organisational or national level factors?
- Further prompts in regard to; variation in funding, staffing, organisation structure, delivery of patient care, if the service is a new / established service)

3. **Positive Deviance**

What do you think makes a 'good service' on QUiTT?

- How do you define a 'good' service?
- Is there consistency between 'good' services working on QUiTT & overall high performers (i.e., smoking cessation outcomes?)
- If 'good' is based on data: which data, are you using? Qualitative/quantitative?
- If 'good' is based on a gut feeling/something less tangible/interactions with staff in the service: why is this the case? Explore.
- If based on both: does this gut feeling align with the data/smoking cessation outcomes?
- Prompt: Would 'good' be staff, policy, organisation, how well they follow Model for Improvement/PDSA?

Which services (if any) within your region 'stand out'?

- Explore why is this service standing out?
- Was this a service or action?
- What do you think mediates this difference in performance/what influences or has led to/affects this difference in performance? i.e., do they follow pdsa well/better than others, have they followed the driver diagram more?
- Do you have any examples of exceptional practice/staff/actions in the services you support?

Appendix 3: Surveys provided to service users within inpatient mental health settings, discussed in Chapter 5.

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Demographic information

What is your gender? …… What is your age? ……..

Patient experience survey

1. Please rate your experience of the stop smoking services whilst in hospital

Circle the number you think is most appropriate

(Very bad) 1 2 3 4 5 (Exceptional)

2. What was the best thing about the smoking support on the ward?

……
……..

3. Did anything you were provided with stand-out at being very good at supporting you to stop smoking?

YES / NO

If yes, what was this?

……

4. Would you be interested in speaking to a researcher about your experience of stopping smoking whilst in hospital?

YES / NO

If yes has been circled, please complete the consent to contact form in this information pack, or let a staff member on the ward know.

Appendix 4: Topic guides which informed the semi-structured interviews with both Stage 1, and Stage 2 participants within Chapter 5.

Version 1.0
IRAS Reference: 340934

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Study Title: Identifying and exploring positively deviant staff members, to explore exceptional smoking cessation practice for people with Severe Mental Illness (SMI).
Version 1.0. 02/09/2024

Stage 1 interviews: recommendations for positively deviant staff members

Reassure: this is not a test, there are no right or wrong answers, I am just trying to understand your perspective. This topic guide is iterative and may change depending on the direction of the discussion.

1. **About you**

Please can you tell me briefly a little bit about your job and professional background?

Probe depending on the person:

- To what extent does your role involve overseeing smoking cessation treatments on the front line?
- To what extent have you read about the NHS Long Term Plan?

2. **Service organisation**

Exploring smoking cessation treatment within the service;

- How is smoking cessation care administered within your ward/trust?
- Defining 'usual' care

3. **Positive Deviance**

What do you think makes good smoking cessation care ?

- Define 'good' & explore definition for 'high performer'

Which staff members within your trust 'stand out'?

Note: make this clear that this can be multiple staff members.

- Explore why this is the case;
- What do these staff members do differently?
- What do you think mediates this difference in performance; comparing between the usual care defined above.

Version 1.0
IRAS Reference: 340934

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Stage 2: Interviews with positive deviant staff members (and comparators)

Reassure: this is not a test, there are no right or wrong answers, I am just trying to understand your perspective. This topic guide is iterative and may change depending on the direction of the discussion.

1. **About you**

Please can you tell me briefly a little bit about your job and professional background?

Probe depending on the person:

- How long have you been working within smoking cessation?
- To what extent does your role involve providing smoking cessation treatments on the front line?

2. **Positive Deviance**

What do you think makes good smoking cessation care?

- Define 'good' & explore definition for 'high performer'

Exploring how they deliver smoking cessation care?

This will be an open discussion and led by what the participant says in the prior question.

Prompts:

- How often do you speak to patients?
- What support do you provide to them? How effective do you believe this is?
  How do you /do you believe this differs from how other care is administered and if so why and how?

3. **What do you think could be done to improve smoking cessation support to people with SMI?**

Appendix 5: Ethical approval references.

Chapter 4: University of Leeds Ethics Committee Reference: PSCETHS-781
Chapter 5: HRA and REC: Reference: 24/WS/0111. Protocol number: 2024-NCT2.