

**Conveyance and non-conveyance to the emergency department
after self-harm: Prevalence and ambulance service staff
perspectives**

Emily Jayne Jenkins

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School of Medicine

Academic Unit of Psychiatry and Behavioural Sciences

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The candidate confirms that the work submitted is her own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

Relatively little is known about people who self-harm and are not conveyed to the emergency department, or the experiences of ambulance service staff in working with people who self-harm and the conveyance decisions that they make. This research, with two linked studies, was conducted using a sequential mixed methods design. In Study 1, quantitative data was collected about episodes of self-harm that received an ambulance crew decision following a 999 call made in the Yorkshire region. The data collected included details of the episode of self-harm, demographic information, the care provided by ambulance staff, clinical outcomes (including conveyance rates), and explanations for care and conveyance decisions. In the sample there was a proportion of conveyance of 87% and only 13% non-conveyance. Method of self-harm was related to conveyance, with people who had cut themselves significantly less likely to be conveyed than those using other methods. Non-conveyance was associated with a longer duration of ambulance visit. The findings from Study 1 informed Study 2, which was a qualitative interview-based study with staff from the ambulance service. Six ambulance service staff were interviewed about their experiences of working with people who have self-harmed and about the decision-making around non-conveyance. There were six major themes identified using thematic analysis and the themes were presented as if they were clinicians' thoughts to demonstrate the decision-making process around whether or not to convey the person who has self-harmed: *'I'll do my best to help'* but *'I worry about getting it wrong'* because *'I'm not sure what I'm doing'* and *'I'm not supported'* so *'It's more than your job's worth'*, which contributes to an overall *'conveyance culture'*. There are a number of recommendations for future research and improving clinical practice, and the results are presented in relation to existing literature.

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1 Introduction

1.1 Understanding self-harm

Self-harm is an act of “intentional self-injury or self-poisoning, irrespective of type of motivation or degree of suicidal intent” (Hawton et al., 2012, p.5). A great deal of research has focused on the understanding of self-harm. This work includes causes or contributing factors such as difficult life events, historic trauma, social or economic deprivation, or mental health difficulties (Royal College of Psychiatrists, 2010). Importantly, self-harm has been identified as a risk factor for suicide (Owens, Horrocks, & House, 2002). A quarter of the 6,000 annual suicides in the UK are preceded by a hospital visit due to non-fatal self-harm in the previous year (Department of Health, 2012); self-harm is the major identifiable risk factor for suicide. The efficacy of psychological interventions for self-harm have also been explored - for example, the use of cognitive-behavioural therapy as a cost-effective treatment for self-harm in the UK (Byford et al., 2003). The use of services by people who self-harm has also been explored including, for example, attendance at the emergency department (Bergen, Hawton, Waters, Cooper, & Kapur, 2010; Cooper et al., 2015; Lilley et al., 2008) – see section 1.2 for more details. The best available estimates suggest high levels of attendance: approximately 220,000 presentations of self-harm at emergency departments in England each year (Hawton et al., 2007); this figure was extrapolated from the overall self-harm rate recorded from three cities in the UK during a multi-centre monitoring study of self-harm.

1.1.1 Brief rationale for the study

Research interest on self-harm in emergency departments, hospitals and psychiatric services has contributed to the development of advice, guidelines and quality standards related to the care and treatment of people who self-harm (NICE, 2004; 2011; 2013; 2015a; 2015b; Royal College of Psychiatrists, 2010; WHO, 2010; 2012; 2014). The use of ambulance services following self-harm is, however, an area that has received little previous research attention (Rees, Rapport, Thomas, John, & Snooks, 2014). Whilst there has been quite a lot of research into patient experiences of emergency department services for self-harm (Taylor, Hawton, Fortune, & Kapur, 2009) we know very little about the characteristics of people who use ambulance services following self-harm nor the decisions made about their subsequent care. A small number of service audits have indicated variable and sometimes high rates of non-conveyance to hospital following self-harm (see section 1.4), but we know

very little about those who are not conveyed and what care arrangements are made for them. This thesis is about what happens to people who self-harm and dial 999 for an ambulance, including those who are not conveyed to hospital. In this chapter the background literature relevant to this thesis will be explored.

1.1.2 Methods of self-harm

Self-harm is not an illness or a condition but can be understood as an “expression of personal distress” and there are many reasons why a person might self-harm (NICE, 2004, p.6). Definitions of self-harm typically exclude behaviours that can be better classified by other means, such as starvation due to an eating disorder, or recreational drug and alcohol abuse (NICE, 2011; 2013). The most common form of self-harm may well be self-injury but those who have self-poisoned are much more likely to present to health services (NICE, 2004). Self-poisoning refers to ingestion of a substance with the intent of causing self-harm. This is mostly the ingestion of medications, but includes recreational drugs when they were taken with the intention of self-harm and non-ingestible substances (e.g. bleach). Definitions of self-poisoning exclude instances where the substance was inhaled rather than ingested or where an object was swallowed. These instances would be classified as self-injury. Self-injury refers to all other acts of self-harm including self-inflicted burns, incised wounds, interference with wound healing, hitting objects, swallowing objects, attempted hanging or drowning, traffic related injuries, and carbon monoxide poisoning (Royal College of Psychiatrists, 2010). There is little in the way of evidence concerning patterns of adult self-harm in the community but one large and carefully undertaken survey of adolescents in the English Midlands shows a clear picture (Hawton, Rodham, Evans, & Weatherall, 2002). While 7% of 15-16 year-olds reported self-harm each year, only one in eight of the episodes lead to hospital attendance – with non-attendance at hospital a feature of both self-injury and self-poisoning episodes. There are clear age variations in relation to method of self-harm, with people aged 25–39 years being more likely to present with self-injury than those in other age bands, although the type of self-harm that is mostly presented to the emergency department, irrespective of age, is self-poisoning (Horrocks, Price, House & Owens, 2003).

1.2 Self-harm in the emergency department

Self-harm is amongst the top five acute causes of hospital admissions in the UK. Emergency department attendance rates for self-harm are consistently high, with recognition that attendance rates are likely to underestimate rates in the community due to many people who self-harm not attending the emergency department (Royal College of Psychiatrists, 2010).

The monthly attendance rates at the emergency department for self-harm average 312 in Leeds, UK (Kelley & Owens, 2009). Lilley et al. (2008) completed a multi-centre study collecting clinical information on people who attended the emergency department for self-harm in six UK hospitals. They demonstrated that self-poisoning was the most common form of self-harm among hospital attendees with people who had self-harmed by cutting receiving less services from the emergency department (i.e. psychosocial assessment or general hospital admission) compared with those who had poisoned themselves.

Emergency departments are usually deemed to be the first contact for treatment of those who self-harm although local data indicate that 58% of people who were treated in the Leeds emergency department for self-harm were conveyed there by ambulance (Kelley & Owens, 2009), suggesting that contact with emergency services often begins before people arrive at the emergency department. Until recently, research into self-harm overlooks these pre-hospital contacts, focusing instead on samples drawn from emergency departments, hospital admissions or contacts with psychiatric services. As a result, little is known about the characteristics or care of people who self-harm and come into contact with emergency services but do not attend the emergency department.

1.3 Clinical decision-making: To convey or not to convey

Part of the assessment, when the ambulance crew attend a callout for self-harm, is to determine the route of referral, including whether to convey to the emergency department or another place of safety. The local Yorkshire Ambulance Service (YAS) mental health pathway advises assessment and referral processes that are to be followed for people who have self-harmed, including for people being held by the police under Section 136 of the Mental Health Act. The ambulance crew have to make the decision whether the person who has self-harmed requires conveyance to the emergency department or not.

During our discussions for the present project, the local ambulance service informed me that conveyance decision-making is a considered process that is rarely made in isolation. For example, the local ambulance service has recently made mental health nurses constantly available on the telephone in the dispatch centre so that ambulance service staff can contact them for advice regarding patients (see section 1.6.1 for further information). In reference to guidance around conveyance, it has been suggested that existing ambulance service guidelines and policies do not always align with clinical decision-making in practice (Porter et al., 2007). Porter et al. (2007) ask whether conveying is always appropriate, to whom the decision-making should fall, and whether crews are adequately trained and have sufficient support from the ambulance service to make appropriate decisions about non-conveyance. If

the patient is not conveyed then they may instead be conveyed to an alternative place of safety, if there are suitable services available. It may be that staff convey a patient to the emergency department due to a lack of alternatives (O'Hara, Irving, Johnson, & Harris, 2016).

1.4 Non-conveyance

Non-conveyance refers to the decision made not to transport a patient to hospital for treatment, or the refusal of a patient to attend hospital. Alongside refusal, there can be many reasons for non-conveyance including there being no clinical requirement and the ambulance crew referring the patient to another service (e.g. the patient's GP). There has been limited qualitative research conducted with paramedics on non-conveyance decisions (Porter et al., 2007; Porter et al., 2008) with existing studies focused on all 999 calls and not specifically on those concerning self-harm. The findings of these studies suggest that paramedics feel a need to respond cautiously due to fears of retribution. These findings might go partway to explaining high conveyance rates of people who self-harm reported by some audits (Whitfield et al., 2013). Porter et al. (2007) emphasised the importance of patient and family or carer input into decision-making, with special attention required in instances where the patient's capacity is in doubt. It has, however, been suggested that emergency service staff (including ambulance staff) lack the required knowledge to conduct capacity assessments (Evans, Warner, & Jackson, 2007).

The available data on conveyance to the emergency department following self-harm suggest a large degree of variability in conveyance rates. For instance, over a one-month period in one area, only 45% of calls to emergency services for those who self-harmed were conveyed to the emergency department (Batson, Cross, Thompson, & Hockley, 2006). Whitfield et al. (2013), on the other hand, report a much higher rate of 95% of self-harm patients conveyed to the emergency department over a one-month period. There is also a suggestion that patients are automatically conveyed unless they refuse to travel (Snooks, Kingston, Anthony, & Russell, 2013). This discrepancy in reports might be due to local guidelines or incentives relating to conveyance, the culture of individual ambulance services, or differences in the methods used in these audits. Some of the data available on non-conveyance include self-harm under the wider heading of 'mental health crisis'. For example, Prothero and Cooke (2016) worked with the East of England Ambulance Service and completed an audit of calls to both the emergency number (999) and the non-emergency number (111), which were made in relation to 'mental health crisis' across a one-week period and led to an ambulance being dispatched. They identified that 64.6% of patients

who received an ambulance for ‘mental health crisis’ were conveyed to the emergency department, with 33.7% for self-poisoning with deliberate drug use/overdose, but it is not possible from this data to identify rates of conveyance specific to calls about self-harm. As things stand, there is no clear understanding of the population or proportion of people who self-harm and are not conveyed to the emergency department.

Our lack of knowledge about conveyance rates following self-harm is important. For example, we do not know what proportion of people are not conveyed, the factors that affect conveyance decisions, or whether people who are not conveyed are being directed to other services. Adherence to guidelines around conveyance is not clear and neither is the appropriateness of the current decision-making process. We know that there are potential negative effects of not receiving appropriate psychiatric assessment and aftercare. For example, Kapur et al. (2013) investigated the relationship between methods of aftercare and clinical outcome (measured by repetition of self-harm within 12 months). They highlighted the importance of psychosocial assessment, which they found to be linked with a lower risk of repetition of self-harm in two out of the three cities included in their study.

The benefits of psychosocial assessment highlight the need to understand what care people are being directed to by ambulance services following self-harm, especially those who are not conveyed to hospital. The NICE guidelines for people who self-harm state that all patients who have self-harmed should receive an initial assessment that considers mental and physical health, including risk of further self-harm, social circumstances, and safeguarding (NICE 2013). The NICE (2015b) ambulance pathway states that the record from the scene should include consideration of the home environment, including social support, and reasons for self-harm. There are numerous guidelines that deem it necessary to insist that people who self-harm should be treated with the same respect as any other patient, perhaps given that there is evidence for disparity between mental health and physical health services. Termed Parity of Esteem, there is a call for NHS services to put mental health on a par with physical health (McShane, 2013). For example, WHO (2010) guidelines advise that staff providing care for people who have self-harmed should include consideration of the person’s physical health, emotional wellbeing (e.g. being aware of potential distress) and psychosocial support (including emotional support for carers). Adherence by ambulance staff to guidelines for self-harm is not known due to the lack of research in this area, particularly in respect of the care offered to people who are not conveyed to hospital.

1.5 Role of the ambulance service

There is a growing role for ambulance service staff in the assessment and early treatment of people who self-harm (NICE, 2004) and such care is needed frequently; for example, annual emergency call rates are approximately 10,300 for mental-health-related distress for one ambulance service in Scotland, UK (Aberton, 2011). Although the ambulance service is often the first point of contact for people who self-harm, this area of service provision is rarely researched: Rees, Rapport, & Snooks (2015) aimed to conduct a systematic review of studies exploring paramedic perspectives of people who self-harm but were unable to do so because they found no published studies.

1.5.1 Ambulance service staff training

There are consistent recommendations in the NICE guidelines (NICE 2004; 2011) for ambulance service staff to receive adequate training in the treatment of people who self-harm, including assessment of needs, risk and mental capacity. Blackwell and Palmer's (2008) survey of staff and service users from eleven UK hospitals about the care received by people who self-harm revealed that the great majority of ambulance service staff (81%) viewed the training they received about self-harm as inadequate. Most (81%) also felt unable to assess risk. Ambulance staff's self-ratings of knowledge were lower than those of any other staff group. Service users, on the other hand, reported favourably on their experiences of treatment following self-harm, with 71% rating ambulance service staff as 'excellent' or 'good'. In one ambulance service, however, interviewed staff were concerned that limited training about mental health had a negative impact on patients' care (O'Hara et al., 2016). Systematic reviews of research investigating attitudes towards self-harm held by healthcare staff working in emergency care (including ambulance service staff), demonstrated that training is often limited but staff's self-reported knowledge and attitudes improved when they did receive training (Rees et al., 2014). From the currently available evidence, it seems that confidence, training, and assessment in the care of people who self-harm may be lacking amongst ambulance service staff. These findings highlight the importance of understanding what happens to people who dial 999 following self-harm (especially those who are not conveyed) and what care they are offered and receive.

1.5.2 Defining ambulance service staff

It seems pertinent to note that during the initial stages of this project's development I used the term "paramedic" to describe ambulance service staff. It transpires, however, that this is

a term often used incorrectly to describe ambulance service staff of varying levels of experience and training. In the UK the ambulance staff who work operational shifts might include Health Care Professions Council (HCPC) registered paramedics, paramedic students, Specialist Paramedics, and non-paramedic staff of varying grades including Emergency Medical Dispatchers (EMDs), Emergency Care Assistants (ECAs) or Technicians (ECTs) who are ‘pre-paramedic’ level. In the current study the term “ambulance service staff” will be used to include all staff that are part of the resource that may be dispatched to the scene of the callout. I will use the term “paramedic” interchangeably on occasions, for example, when reporting the research of others who have used this term.

In local services paramedics may operate from cars, bicycles, motorcycles, and ambulances or an air ambulance and they may travel as single or double crew responders. They are responsible for assessment, triage and treatment, including administering medicines, defibrillation and advanced life support. There are also Emergency Care Practitioners (ECPs) in certain areas and some ECPs have training to suture so may be sent to treat a patient who has self-injured at home when the decision has been taken to treat at home rather than to convey the person to the emergency department. The role of a Specialist Paramedic, requiring the completion of additional training and qualifications, is to focus on *See and Treat* (attend the callout and provide some form of treatment to the person) and *See and Refer* (attend the callout and refer the person somewhere other than to the emergency department) calls with the intention to leave more people at home where it is safe and appropriate to do so. Specialist Paramedics carry a range of antibiotics, are trained to close wounds and work closely with other primary care services to reduce emergency department attendances.

1.6 Coding of self-harm by ambulance services

Each ambulance service call handling centre uses a national system, the Advanced Medical Priority Dispatch System (AMPDS) for coding of calls made to the emergency services (999) number (Department of Health, 2007). The AMPDS allows categorisation of calls based on a number of factors including the level of consciousness of the person who needs emergency care (who may or may not be the caller), the level of potential need, and specific indication of what the call seems to be about (e.g. code 29 ‘traffic/transport injuries’). Calls relating to mental health are typically categorised as either card category 23 (‘overdose/poisoning’) or category 25 (‘psychiatric/abnormal behaviour/suicide’). These two code categories jointly comprise 4% of all calls to YAS (O’Hara et al., 2016). From

discussions with YAS, and from reviewing their patient pathways, it appeared that self-harm is usually categorised under category code 25. Initially only those calls coded as 25 ‘psychiatric/abnormal behaviour/suicide’ were requested for the current study, but later calls coded as 23 ‘overdose/poisoning’ were also included (see section 2.3.4).

Codes are allocated at the Emergency Operations Centre when a patient, or person calling on behalf of the patient, telephones 999. The Emergency Medical Dispatchers (EMDs) triage the calls and, if they require specialist mental health knowledge or support, they can request that a mental health nurse listens in to the call. Alternatively, the EMD can transfer calls to the nurse for specialist triage. The initial assessment includes a ‘red flag assessment’ that determines whether there is an immediate clinical need (i.e. a threat to the person’s health) and, if so, an ambulance is discharged.

1.6.1 YAS Mental Health Team

Mental health nurses are employed by YAS and based at the Emergency Operations Centre as a source of support, knowledge and advice. They can be contacted twenty-four hours a day by ambulance staff who are responding to a patient and are available also to staff in the Emergency Operations Centre. The main roles and responsibilities for the mental health nurses are to complete specialist mental health triage and provide clinical advice to staff and patients, including referral pathway and conveyance decisions. They can provide advice relating to the Mental Health Act (1983 & 2007) and the Mental Capacity Act (2005) and can liaise with community teams already involved in patients’ care. YAS introduced the mental health nurses with the aim of lowering rates of *See and Treat* (ambulance dispatched) and conveyance to the emergency department and increasing rates of *Hear and Treat* (triage) and conveyance to other services (e.g. community mental health teams) for calls relating to mental health. Researchers at the University of Sheffield evaluated the first nine months of the specialist mental health triage at YAS. Their findings suggest that for Code 23 and 25, calls triaged by the mental health nurses resulted in lower rates of ambulances dispatched and for those calls where an ambulance was dispatched the patient was more likely to be conveyed to the emergency department, compared with calls that had not received the specialist triage (O’Hara et al., 2016).

1.6.1.1 Rationale for the mental health nurses in the Emergency Operations Centre

The mental health team at YAS have been in post since April 2015 in response to guidance outlined in the Mental Health Crisis Care Concordat (Department of Health, 2014), a

nationwide agreement across a number of services for access and support before, during and after a mental health crisis. The Concordat outlines the role of ambulance services in crisis care and support for people experiencing a mental health crisis. The focus of the Concordat is on how services could work together to improve access to care and treatment for people with mental health difficulties. O'Hara et al. (2014) interviewed YAS staff about their experiences of working with people with mental health difficulties and the introduction of the mental health team in the Emergency Operations Centre. The staff members who were interviewed reported the belief that YAS were offering a better service as a result of the mental health nurses and that their support to staff was invaluable, particularly in dealing with complex patients.

1.7 Staff attitudes about self-harm

In the service evaluation by O'Hara et al. (2014), front-line staff acknowledged the impact of time-consuming patient encounters on the limited resources of the ambulance service, hinting at an irritation towards some patients with mental health difficulties. Previous research has indicated that negative staff attitudes can have an impact on patient experiences (Horrocks, Hughes, Martin, House, & Owens, 2005). Past qualitative studies have suggested that some people who had self-harmed were not offered pain relief that they felt was needed for treatments in the emergency department (Blackwell & Palmer, 2008). It appears that some healthcare professionals have negative attitudes towards people who present with self-harm (Royal College of Psychiatrists, 2010). Saunders, Hawton, Fortune and Farrell (2012) conducted a systematic review of studies that investigated staff attitudes towards people who have self-harmed. They found that emergency department staff expressed frustration and feelings of hopelessness as a result of treating people who have self-harmed. They also report that people who have self-harmed tend to be judged more negatively than people who have physical illness, although their review includes findings from UK studies that report that half of all staff had sympathetic feelings for people who self-harm. The international literature on the attitudes and satisfaction with services, of people who have self-harmed has been systematically reviewed (Taylor et al., 2009). The findings indicate that many people who self-harm report negative experiences of services and staff. These negative views exist regardless of the differences in country or healthcare system and included experiences within the emergency department, but there were no studies included from pre-hospital care systems such as ambulance services.

1.8 Chapter summary

In summary, self-harm is commonly encountered by ambulance service staff but little is known about rates of conveyance to hospital following self-harm or the care provided to people who are not conveyed. In particular, we know of no published studies that investigate ambulance service staff's experiences of conveyance decision-making for people who have self-harmed. For example, one of the few sources that I found, although published in a paramedic journal and examining paramedics' attitudes towards people who self-harm, was unable to quote any research specific to ambulance staff (O'Sullivan, 2014). Previous studies indicate that training and confidence in decision-making can be lacking in ambulance staff and that there is likely to be variation in adherence to published guidelines, access to local support and training needs of ambulance staff. Further exploration of ambulance service care for people who self-harm is required to provide a greater understanding of service provision, including the characteristics and care of people who call 999 following self-harm and the experiences of the ambulance service staff who respond to these calls.

1.9 Research aims and objectives

The overarching research aim for the current study is to explore routes into self-harm services by understanding the initial contact that people have with emergency services following self-harm. The main objectives of the study are:

1. To understand the socio-demographic and clinical characteristics of people who dial 999 following self-harm;
2. To explore outcomes of 999 calls following self-harm (to include conveyance to the emergency department); and
3. To understand how staff experience the decision-making involved in providing care to someone who has self-harmed (including what support and guidance they have available and what constraints they are under).

Objectives 1 and 2 will be best answered by a quantitative approach (Study 1) and objective 3 will be best answered by a qualitative approach (Study 2). There will be some overlap between the studies in terms of what they address so a fourth objective will be to integrate the results from the two studies, demonstrating the relevance to existing literature and the clinical context. Chapter 2 will describe the methods used by each study to address these objectives.

2 Method

This chapter describes the design of the research, methodological justifications and the methods for both parts of the research. Ethical approval was granted by the School of Medicine Research and Ethics Committee (SoMREC) and YAS R&D and is set out below (section 2.4.11). The method for each study will be presented sequentially in this chapter, with the results of both studies presented in the next chapter.

2.1 Design

This research, with two linked studies, was conducted using a sequential mixed methods design. Different research methods and analyses were used to answer the varying research objectives, with Study 1 using quantitative methods and Study 2 using qualitative methods. In Study 1, quantitative data was collected about episodes of self-harm resulting in 999 calls in the Yorkshire region. The data collected included details about the episode of self-harm, demographic information, the care provided by ambulance staff, clinical outcomes (including conveyance rates), explanations for care and conveyance decisions. Descriptive and inferential statistics were used to compare conveyance rates according to various demographic and clinical variables. The results of Study 1 were used to inform the design of Study 2. Study 2 involved qualitative interviews with ambulance service staff to explore the experiences of clinicians working with people who have self-harmed, with a focus on decision-making around care and conveyance. The interviews were analysed using thematic analysis to identify common themes in the descriptions of patient management, and any factors that affected conveyance decision-making, in order to build upon the findings of Study 1.

2.2 Methodological justification

A mixed method approach was chosen to provide a comprehensive overview, which may be the best approach when little is known about an area (Halcomb & Hickman, 2015). Mixed methods research draws on the strengths of each type of data (Creswell, Klassen, Plano Clark, & Smith, 2011). It can be argued that the combination of quantitative and qualitative data allows for a deeper understanding and provides an integrated response (Halcomb & Hickman, 2015). A sequential design allowed the findings of the quantitative study to guide the qualitative study. The qualitative study offered a voice to responders from ambulance staff who are rarely included in self-harm research and allowed us to have more confidence

in our findings by providing confirmatory and explanatory data to strengthen and build upon the quantitative findings (O’Cathain, Murphy, & Nicholl, 2007). Decisions made about the different methodologies will be discussed in the separate study sub-sections.

2.2.1 Using mixed methods

Creswell et al. (2011) define mixed methods research as “employing rigorous quantitative research assessing magnitude and frequency of constructs and rigorous qualitative research exploring the meaning and understanding of constructs” (p.4). Integrating two different datasets provided an opportunity to corroborate and deepen the understandings gained about ambulance service care for people who self-harm. Using a mixture of quantitative and interview data is an example of ‘methodological triangulation’ (Duffy, 1987), where the research benefits from the strengths of each methodology (Creswell et al., 2011). Creswell et al. (2011) outline different ways of integrating the data in their summary of best practice for mixed methods including connecting and merging. Connecting the data refers to the process of analysing one dataset and using the results to inform another phase of the research, which was done in the current research by analysing the results of Study 1 and using these to inform the data collection for Study 2. Merging the data refers to the process of combining numerical (quantitative) information and text (qualitative) information. This has been achieved by bringing together the quantitative data with supporting or opposing data from the qualitative analysis (see section 4.2.1).

2.3 Detailed description of Study 1 methods

Study 1 was a quantitative study collecting data on 999 calls made following self-harm and resulting in an ambulance being dispatched.

2.3.1 Sampling

The target population for Study 1 was people who had self-harmed and been attended to by ambulance services following a 999 telephone call. Calls to the non-emergency number (111) or where an ambulance was not dispatched were not included in the sample.

The study sample was drawn from the population served by YAS in two Yorkshire cities (Leeds & Sheffield) over a one-month period. Both cities were selected to allow for the sample size to be sufficiently large to undertake the planned analyses, based on estimates provided by YAS about the average number of 999 calls received because of self-harm on a monthly basis from each city. When deciding which month of data to request, YAS advised

that the data request needed to be for a period at least 4 months prior to the request because of the time taken for their administrative processes to be completed. To achieve the largest possible data set, May 2016 was chosen because it is a month with 31 days and, although it does fall within a month where there are half-term school holiday dates, this was not expected to affect the volume of calls. Under 18's were taken out of the dataset by YAS without a request for them to do so, and this step further reduced any impact of school holidays on the dataset. Taking this one-month period was deemed to be reasonably representative of the annual pattern because previous research has indicated that there are no well-established seasonal variations in self-harm behaviour (Bickley et al., 2013).

2.3.2 Ambulance service involvement

During the early stages of designing the research we met with members of the Research and Development (R&D) team at YAS to discuss our ideas. They were interested and supportive of the research and gave conditional permission for their data to be used, subject to a fee to cover administration of data retrieval and anonymisation costs, which was paid for using my research budget. It was hoped that the anonymisation process would serve to reduce ethical barriers relating to confidentiality of YAS patients, although it is likely that information on repeat incidents were lost as a consequence.

Data sampling decisions were made jointly through discussions between the supervisory team, the ambulance service R&D staff and myself (the researcher). Guidance was also available from a research paramedic employed by YAS who remained available for advice at different stages of the project. This contact provided invaluable advice on the development of study materials and helped me to secure a placement observing and talking to staff in the Emergency Operations Centre where the 999 ambulance calls are handled. This placement allowed me to gain a greater understanding of the 999 call system and the care processes and terminology used by the ambulance service, all of which were essential to the process of data collection and analysis.

2.3.3 Ambulance service 999 call and data recording processes

Telephone calls made to 999 are coded by the call-takers at the dispatch centre using nationally issued Advanced Medical Priority Dispatch System (AMPDS) codes (DoH, 2007). These codes include two codes that indicate that self-harm may have taken place – Code 23 'overdose/poisoning' and Code 25 'psychiatric/abnormal behaviour/suicide attempt'. For calls where an ambulance is dispatched the attending first-line clinicians complete a Patient Response Form (PRF). The PRF provides a record of assessment, care

and decision-making process for patients in the care of the ambulance service and are collected by YAS for non-research purposes (Appendix A: YAS Example PRF). Data for this study were extracted from PRFs for calls coded as 23 ('overdose/poisoning') or 25 ('psychiatric/abnormal behaviour/suicide attempt'). The forms also have a free-form text section for the clinician to set out more detailed information about the scene on arrival including the patient's presentation - which was used for additional information and for clarification if standard boxes on the PRF were incomplete, for example where the box to indicate that the patient had consumed alcohol was not filled in but the text box stated that the patient was "in drink".

2.3.4 Initial data request

The initial request submitted to YAS was only for calls coded as code 25 'psychiatric/abnormal behaviour/suicide attempt'. Our decision to request only this one code was based on discussions with YAS suggesting that code 25 would capture most self-harm episodes and on their assertion that adding a second code would be costly. Upon receiving the code 25 data we found that the number of cases per month was far fewer than expected and it did not seem to correspond with multi-centre or local data about the rates and nature of emergency department presentations for self-harm - in particular there were fewer than the expected number of episodes of poisoning. Reasons for this were explored with YAS and it was deemed necessary to request additional data to increase the sample size and attempt to address the low numbers of people who had self-harmed by poisoning in the original sample.

2.3.5 Second data request

The additional data comprised the anonymised PRF data for the same month (May 2016) for ambulance call outs coded as code 23 'overdose/poisoning'. The addition of the events coded as 'overdose' was an attempt to include in the sample most people calling 999 following self-harm. In discussions with YAS we considered scrutiny of patient encounters recorded with certain other codes, for example to determine those where self-harm is likely but unclear at the time of the call, such as vehicular collisions and jumps/falls, but it seemed likely that this step would have added significant time and costs to the study whilst yielding little additional data. Also it seems unlikely that these types of injuries (vehicular collisions, jumps/falls) would result in non-conveyance - the focus of the study. Given the lack of research in this area, the data collected still provide one of the largest and most comprehensive exploratory studies in this area to date.

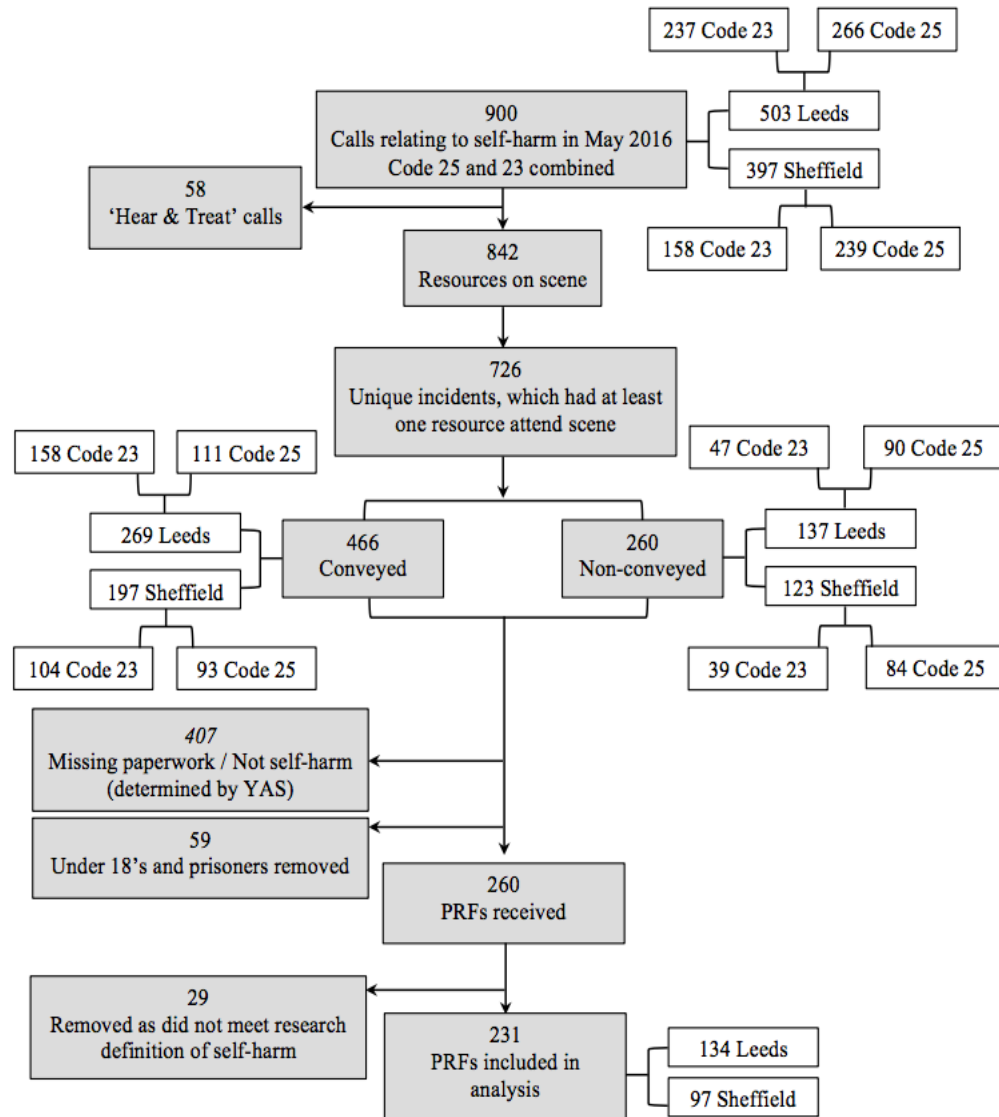
2.3.6 Procedure for identifying Study 1 sample

The current available estimates are that YAS deal with 40 mental-health related calls each day (YAS, 2016). As per our submitted data requests, YAS collected all of the PRFs for calls coded 23 and 25 for May 2016 in Leeds and Sheffield. They filtered out PRFs where the patient was under 18 years of age, a prisoner, or where the PRF paperwork was missing and then anonymised the remaining data.

The numbers in Figure 1 were provided by YAS during the data collection process except for the figure in italics for the missing data, which was calculated from the other data received. At each stage of the process the data are provided as a total number and also divided by city (Leeds and Sheffield) and call code (23 and 25). Upon receiving the anonymised data, the forms were given unique identifiers and data was extracted from the PRFs and entered onto an SPSS database. The data extracted included demographic information about each person who had self-harmed, information about the call process (including date and time of callout, length of time on scene and conveyance decision) and information relating to method of self-harm, history of self-harm, mental health history and current support, alcohol consumption and police presence at the scene were coded (Appendix B: Study 1 SPSS Variable View). These data were extracted from various sections of the PRF including standardised data boxes, sections using YAS codes and a free-text section containing further details about the person, scene and the presenting complaint (in this instance the self-harm event).

Figure 1 - Flowchart showing PRF data received from YAS

Diagram of the total calls relating to mental health at different stages ending with the PRF data received for this research.



2.3.7 Quantitative data analysis

Descriptive statistical analysis was carried out using SPSS Version 21. Demographic analysis was used to determine details about the sample and cross-tabulations were used for comparing conveyance rates according to various clinical and demographic factors such as alcohol consumption, age, city and method of self-harm. Chi Squared tests were calculated and reported for the comparison of proportions and Fisher's Exact test chosen when one or more cell size was very small (and the SPSS program suggested that the Pearson's Chi

Squared test would be inappropriate). For the comparison of continuous data, such as for time in minutes, the data were analysed using a distribution-free statistical test (the Mann-Whitney U-test) for the comparison of medians – if, as was the case, the data were non-Normally distributed.

2.3.8 Connecting Study 1 and Study 2

The findings from Study 1 were used to inform the topic guide for Study 2. The results gave us an insight into the factors that might be influencing clinicians in their decision-making on scene and pointed towards a number of factors to be included in the topic guide. The role of supporting services, including the police, as well as any patient factors that might influence decision-making (e.g. intoxication and familiarity with the patient) were considered as potentially influencing factors from Study 1. The following section sets out further details about the methods used in Study 2.

2.4 Detailed description of Study 2 methods

This was a qualitative study interviewing ambulance service staff about their experiences of working with people who self-harm with a focus on experiences of making decisions about conveyance for people who have self-harmed.

2.4.1 Sampling

Front-line ambulance service staff employed by YAS were invited to take part in a qualitative interview-based study to explore ambulance staff perspectives on treating people who self-harm and the factors that influence decision-making for non-conveyance. In discussions with the supervisory team it was decided that six in-depth interviews were practicable within the scope of the study and would provide sufficient data and a range of perspectives. YAS employs 1,592 paramedics (including Student Paramedics) and 1,183 other front-line staff, including Emergency Medical Technicians and Assistant Practitioners with varying job titles (YAS, 2016). Without taking into account any staff members on parental leave, annual leave or sick leave there was a large population of approximately 2,775 staff from which volunteers were sought to take part in the research. To be included in the research participants were required to be employees of YAS and were preferably in a role where they were working on a vehicle responding to 999 calls. There were no exclusion criteria for taking part in the study.

2.4.2 Recruitment

A recruitment advertisement (Appendix C: Study 2 Recruitment Advert) was circulated in the weekly YAS newsletter email, paper copies of which were also available at all YAS stations. Participants were asked to contact the researcher if they were interested in taking part. The advert was due to be circulated for two consecutive weeks but was removed after one week due to the volume of responses received. Replies were then sent out to those who had expressed an interest and the information sheet and consent form (Appendix D: Study 2 Information Sheet & Appendix E: Study 2 Consent Form) were attached with an invitation to ask the researcher questions before deciding whether to take part. The participant information sheet set out all relevant information to allow participants to make an informed decision about taking part and how to consent and the information made the withdrawal procedures clear.

Recruitment was initially on a first-come-first-served basis, with the first six staff members to express an interest contacted to provide further information. After the first six potential participants all other emails were replied to, informing people that they were on a waiting list and would be contacted within a week if there was any further recruitment. Of those who originally contacted me, one failed to respond and another declined to participate due to time constraints resulting in an invitation to participate being sent to someone from the waiting list. The person from the waiting list was selected based on their job role to provide variation in the sample in an attempt to have representation from both paramedic and non-paramedic roles. Those who confirmed that they would like to take part were invited to an interview, with interview dates and locations agreed to suit individual participants.

2.4.3 Participants

A total of fourteen Yorkshire Ambulance Service clinicians replied to the recruitment advertisement to express their interest in the research. Six clinicians went on to participate in the research and the interviews lasted between 40 and 65 minutes. The average interview length was 53 minutes.

2.4.3.1 Participant characteristics

A table of participant characteristics was initially developed for this thesis but was not included because it did not ensure anonymity for the participants. Instead, information about the participants have been provided in summary form to protect participant's identities, whilst providing a description of the key demographic details of the sample population.

Four males and two females were interviewed about their experiences. Participants held a range of paramedic roles including the role of specialist paramedic and student paramedic. Staff had been employed by YAS between a range of 5 years and 26 years with a median of 10.5 years. Two of the participants had worked for an ambulance service in another part of the country prior to their current role in YAS. The remaining four participants had been employed in another role within YAS before they began their current role. Four interviews were conducted via telephone and two were face-to-face interviews, as per the participants' preference. The two face-to-face interviews were requested by staff with fewer years of experience, that had both gone through the University route of paramedic training and both worked in previous ambulance services.

2.4.3.2 Participant motivations

One participant complimented the qualitative nature of the research commenting: *"I like the fact that you're asking the responders..."* (Participant 5). The participants expressed an interest in taking part for a number of reasons and two participants shared their motivations to participate during the interviews:

(1) *"...it's an interesting topic, which is why I wanted to talk to you about it, and I thought there's definitely room for improvement there."* (Participant 2)

(2) *"I mean I hope that a few people have responded to your request for info because I think if people show interest in our job it just gives us something to do and shows that what we do do vaguely influences things at times so I do try to reply when people say they're doing this or that and can you help out?"* (Participant 1)

2.4.4 Topic guide

The topic guide for Study 2 was developed and informed by the results from Study 1, from background literature and discussions with the supervisory team and by discussion with our paramedic consultant from YAS. This process suggested areas of enquiry that we thought would be pertinent to understanding clinicians' experiences when on scene and factors that might influence non-conveyance decision-making. A topic guide was then developed that included, but was not limited to, exploring these lines of enquiry whilst maintaining a focus on respondents' experiences and the areas they wanted to cover. The topic guide was semi-structured with a focus on two key areas of interest: experiences of attending self-harm calls and conveyance decision-making (Appendix F: Study 2 Topic Guide). More specific details of the conduct of the interviews are provided below.

2.4.4.1 Questions about experience

Interviewees were asked about their role and length of service within YAS and were invited to share their experiences of working with the ambulance service, particularly with patients who have self-harmed and then about their experiences relating to non-conveyance for self-harm. Recommendations for changes to current service provision were also welcomed. This included questions such as ‘What message would you like me to take away?’ and ‘What would you like to see coming out of this study?’

2.4.4.2 Questions about decision-making

Questions about conveyance decision-making included what factors influenced decision-making and whether interviewees had noticed relevant changes in practice or culture over their length of service. A prompt was made about familiarity with the patient if interviewees did not mention this, as in the PRFs for Study 1 there was evidence of prior knowledge of patients having an influence on decisions about conveyance.

2.4.4.3 Interview style

The interview style and the questions used were flexible and intended to generate conversation and to offer space for participants to share their own stories and experience. Clinical skills of rapport building encouraged the participant to be relaxed and to share their narrative (Braun & Clarke, 2013). Some of the questions were more closed or direct to follow up on interesting points that were mentioned and to provide some structure to the interviews. This structure allowed for a more targeted interview to obtain rich detail on non-conveyance events and test out some of the emerging ideas from Study 1.

2.4.5 Procedure

Participants were individually interviewed on one occasion for a duration of up to 65 minutes per participant. A range of location choices for face-to-face interviews were presented to the participants due to the diverse geographical area that the ambulance service cover. There was also the option to conduct the interview via telephone, where informed consent was to be signed electronically before the interview. Participants were given a choice on the location of interview so that they might select a location that was most convenient for them. Participants were made aware that travel costs to and from the interview could be reimbursed. The interviews were audio-recorded, using a Dictaphone for

face-to-face interviews or a recording device attached to a landline telephone for telephone interviews.

After the interview participants were given up to seven days to email the researcher with a request to withdraw their data from the study. At the suggestion of YAS, and with ethical approval, a small token of gratitude to the participants for taking part - a £10 voucher - was sent out after the interviews. Information about the voucher was included in the recruitment material and was considered to be proportionate to the amount of time that the participant would be giving up to help with the research. The YAS R&D team advised that similar tokens had been used with success in previous YAS research.

2.4.6 Transcription

During the interviews, the researcher (EJ) took notes and, following the interviews, EJ transcribed the interviews in full. Completing the transcription independently was time-consuming but helped me to familiarise closely with the data. Braun and Clarke (2006) indicate that there is no defined way of writing a transcript but an example of how data were transcribed in the current research is outlined in Table 1, which is adapted from their later publication. The transcription notation system was adapted from Braun & Clarke (2013).

Table 1 - A notation key for transcription

Feature	How it was transcribed
Identity of the speaker and turn-taking	The speaker's role (i.e. interviewer or participant) was written followed by a colon to indicate who was speaking. The speaker was given a new line each time he or she spoke in turn.
Inaudible speech	If the audio could not be understood then [incomprehensible] was written in place of the word(s) missed.
Spoken abbreviations	If the speaker used an abbreviation then this was written (e.g. YAS was written if they said YAS rather than Yorkshire Ambulance Service) but abbreviations were not written if they were not spoken.
Laughing	Laughter was written as haha or huh huh to indicate that the speaker laughed whilst speaking.
Non-verbal utterances	If during speaking the speaker used utterances like erm, um, then these were included in the transcript. If the person in the role of listener made utterances like mm, mm-hm, then these were not included so that they did not disrupt the flow of the written transcript.
Pauses	Ellipses [...] were used to indicate a pause in the data or the speaker trailing off.
Reported speech	When the speaker provided information that they or somebody else had previously spoken or thought then this was put into single inverted commas. For example, "... <i>'well I didn't ring for ya' and it's like 'noo but you've told somebody something and that's why we're here'...</i> " (Participant 1).
Identifiable information	Any place names were changed to generic non-identifiable terms in square brackets, for example [City] or [in Yorkshire]. Some of the details about patient stories were also changed because it was not necessary to the story telling and might have been recognisable.

This transcription notation system was used for writing up the interview audio data and explains how different features of the data were transcribed. It is included here so that the transcribed data can be understood. The transcription was completed orthographically (i.e. verbatim) but did not include the interviewer's verbal utterances that merely indicated listening and served to keep the conversation going, as this would have interrupted the typed data. The use of punctuation was considered so that information was not misrepresented and the meaning was not changed through careless use of punctuation (Braun & Clarke, 2013). Regional words or accents were preserved where possible in the transcripts by retaining the way that participants spoke, for example writing "y'know" if this was used not "you know". After each interview the researcher listened to the recording, transcribed and noted down the key points. This was useful for refining the interview technique and for noting interesting topics to explore further in future interviews.

2.4.7 Approach to data analysis

There are many different types of analysis available for use in qualitative research to identify patterns in datasets, varying in terms of complexity of application, degree to which the researchers employ a top-down or bottom-up approach to identification of themes and theoretical orientation. Thematic analysis is an adaptable, pragmatic method for identifying, analysing and reporting patterns (themes) within data (Braun & Clarke, 2006). Analysis of patterns in the data relies on the assumption that recurring information across a dataset is meaningful in some way. Thematic analysis was selected ahead of other methods of qualitative analysis including best-fit framework (Carroll, Booth, & Cooper, 2011; Carroll, Booth, Leaviss, & Rick, 2013) because it provided a good fit for the current research due to it being considered "accessible and theoretically flexible", the latter meaning that it can be used across epistemological or theoretical stances (Braun & Clarke, 2006, p.77). This flexibility sets thematic analysis apart from other methods of qualitative analysis and means that thematic analysis can be seen as "just a method" (Braun & Clarke, 2013, p.175). Whilst differences of opinions exist on whether or not thematic analysis is a qualitative analysis in its own right, the methods used in thematic analysis are considered "foundational" and thereby offer a good choice for a time limited, focussed study as in the present case (Braun & Clarke, 2006, p.78).

2.4.8 Thematic analysis

Braun and Clarke (2006) propose a six-stage procedure for conducting thematic analysis, from selecting patterns of meaning in the data through to reporting the themes, and this

procedure was adhered to in the current study. A description of how the process was followed is provided in the Results chapter (section 3.2.2). A theme or a pattern in the data set can be defined as capturing “something important about the data in relation to the research question” (Braun & Clarke, 2006, p.82). Thematic analysis is a recursive process that requires moving between the different stages of codes and refining or revising them, at the discretion of the researcher(s), as the analysis progresses. In an attempt to conduct a ‘good’ thematic analysis and produce methodologically sound research, the initial views and position of the researcher are outlined below.

2.4.9 Theoretical approach

Epistemology was discussed with the supervisory team and it was deemed sufficient to state that the current research can be termed realist or essentialist, in that it reports the experiences of the ambulance service staff. There were no specific theories or discourses used as a framework for analysis meaning that the method would not be termed constructionist.

2.4.10 Quality checks

Quality checks are important in qualitative analysis to ensure methodological rigor (Smith, 2015; Stiles, 1993).

2.4.10.1 Supervision

Each phase of the qualitative analysis was discussed in supervision with the research team. Supervision occurred regularly and was a reflective space for discussing each participant, my responses to the interviews, concerns about the process, initial thoughts about coding and theme generation.

2.4.10.2 Researcher reflexivity

Researcher reflexivity is important in conducting qualitative research well (Braun & Clarke, 2006; Dilley, 2000). Throughout the interviews I remained aware of my position as an employee of the NHS and a healthcare professional within mental health services. The interviews took place over a time when a general election for UK Government was announced unexpectedly and there was on-going and widespread discussion of NHS funding and service standards in the media. The political, social and financial pressures that, in my view, affect services during my clinical role were evoked during my role as a

clinician. I am aware that this may have impacted upon the types of things raised in the interview that I chose to follow up and/or the themes that I was selecting in the analysis (e.g. participants' views about funding cuts to mental health services). To monitor this, I recorded my thoughts and met the supervisory team regularly to discuss the impact of the interviews and my reflections during each stage of the analysis.

2.4.10.3 Respondent validation

A further quality check was provided through the use of respondent validation. Respondent validation is a practice in research whereby participants are asked for their opinions on the analysis to corroborate the themes identified (Smith, 2015). It was not possible to contact the participants to ask for their feedback on the themes identified in the analysis, due to time constraints of the project. Respondent validation was obtained from the paramedic advisor, an employee of YAS and expert by experience with a background in paramedic medicine. The paramedic advisor was crucial in the initial discussions about this research and was responsible for anonymising the PRFs that were analysed for study 1. The paramedic advisor was sent a copy of this results chapter and shared the following comments:

“I have found this very interesting - it sounds like the participants did too! Most of the themes that are mentioned are definitely things that I would have thought of, so I would say they are relevant.”

The comment that the results are “*relevant*” is well received, as it is indicated as a marker of quality in qualitative researcher (Elliott, Fischer & Rennie, 1999). In their guidelines for qualitative research in psychology, Elliott et al. (1999) state that qualitative research should hold resonance with readers, meaning it is judged to be accurate or have sparked interest in the reader.

2.4.11 Ethical considerations

This research was granted ethical approval by the University of Leeds School of Medicine Research Ethics Committee (SoMREC) on 05/10/2016 subject to YAS R&D permission, which was granted on 18/10/2016 (all letters of approval in Appendix G: Ethical Permissions). An amendment, to include the option of telephone interviews and provide participants with a small token of gratitude for volunteering their time, was submitted to the Ethics Committee and approval was given on 09/03/2017. This amendment was then submitted to YAS, having previously been discussed with them, and they again provided written confirmation of my permission to conduct the research on 17/03/2017.

2.4.11.1 Informed consent

Participants received an information sheet and were encouraged to ask questions about the research before signing and returning the consent form. Participants were aware of their right to withdraw from the study at any point during the interview and up to seven calendar days following their interview date, without providing a reason. If a participant withdrew from the study, they were assured that their interview data would be removed. In the event, none of the participants contacted the research team to withdraw from the study.

2.4.11.2 Data protection

The consent forms for the interview participants contained personal details and were kept in a locked filing cabinet for the duration of the research. The PRFs used in Study 1, although anonymised by YAS, were also kept in a locked filing cabinet for the duration of the study. An encrypted USB recorder was used to record the individual interviews and the interviews were transferred to the University of Leeds secure password protected drive on the same day before being deleted from the recorder. Transcription was completed sensitively in the sense that any names of people or places mentioned in the interviews were omitted.

2.4.11.3 Emotional support for participants

The nature of the interview topic meant that there was a risk that some people might find discussing their experiences upsetting, though the interviewees were all health professionals with experience of working with people in stressful situations, including with patients who self-harm. The participants were made aware of the nature of the interviews in the information sheet and all participants had consented to take part in the study. In the event that any of the participants became distressed during the interview then the researcher (a clinical psychologist in professional training) would have asked whether they wish to terminate the interview. This did not occur in the running of the interviews although some of the interview content evoked a personal emotional response from the participants and they chose to share information about their own mental health and wellbeing. An information sheet on sources of support was prepared in conjunction with YAS and was offered to participants if needed (Appendix D: Study 2 Information Sheet).

3 Results

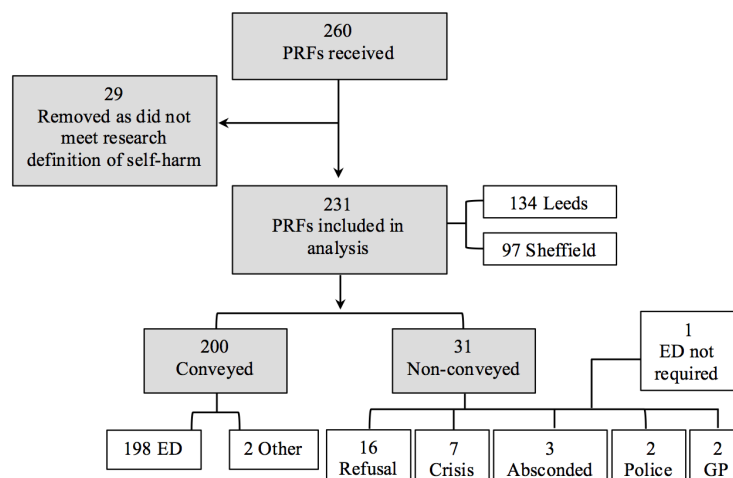
3.1 Study 1

In this chapter the results of the quantitative analysis on the PRF data are presented. The socio-demographic and clinical characteristics of the patients who received an ambulance decision for self-harm are set out, along with the relationship between each of the variables and the conveyance decision. The chapter is completed with a summary of the results of Study 1.

3.1.1 Characteristics of study participants

In May 2016, the month that the PRF forms were requested, there were 260 episodes where a person received an ambulance for self-harm in Yorkshire. Of those 29 were excluded from further analysis following discussion with the research team because the episode described was not clearly defined as self-harm (e.g. descriptions of attempted harm but where the person was prevented from harming themselves). Therefore, there were 231 episodes of clear self-harm included in the analysis (see Figure 2). This study describes the *episodes* where a person received an ambulance for self-harm, rather than people who have self-harmed because it is not possible to say, due to anonymisation, how much of the sample represent multiple attendances for the same person.

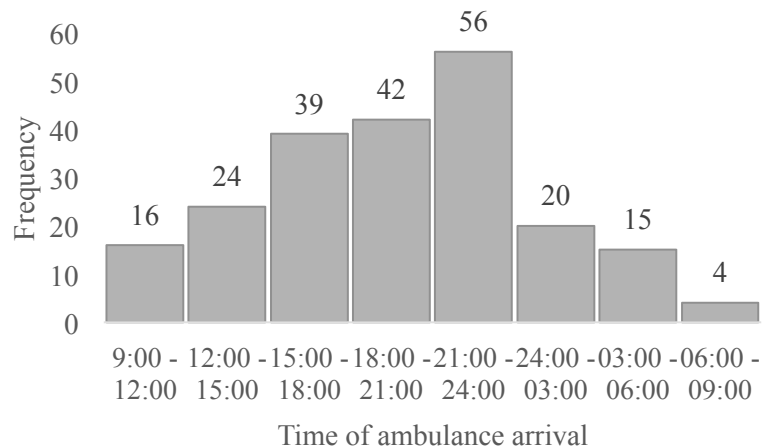
Figure 2 - Flowchart showing the PRF data included in the analysis



The forms were collected from Leeds and Sheffield with 134 (58.0%) collected for episodes of self-harm in Leeds and 97 (42.0%) collected for episodes of self-harm in Sheffield. The

sample consisted of 120 females (51.9%) and 111 males (48.1%). Those included ranged in age from 18 years to 86 years, with a median age of 35 years. Alcohol was reported to have been involved in 103 (44.6%) episodes and illicit drugs in 18 (7.8%) episodes. The situation was indicated to be ‘hostile’ in 14 (6.1%) episodes and there was police presence reported in 80 (34.6%) episodes. Time of ambulance arrival was recorded for 93.5% (216/231) of episodes and this variable was arranged into three-hour time bands to visualise the frequency of callouts around the 24-hour clock (see Figure 3). The peak time for ambulance callouts for self-harm was between 9pm and midnight, when a quarter of calls (25.9%) were made (56/216). The number of callouts increased in frequency from mid-afternoon, between 3pm and 6pm (18.0%) and the majority of all calls were between 3pm and midnight (63.4%). There was a noticeable drop in call frequency between midnight and 9am, with only 18.0% of calls made between these hours (39/216). Data for time of ambulance arrival was missing for 6.5% (15/231) of episodes.

Figure 3 - Frequency of attendances by ambulances across the day in three-hour time bands



The duration of the ambulance crew visit was calculated for episodes where the arrival and departure time for the ambulance crew was recorded (190/231). The duration of the ambulance crew visit could only be calculated for a few of the episodes that resulted in non-conveyance (7/31). Using the available data, where the patient was not conveyed the ambulance crew was with the person for longer ($p = 0.006$, Mann Whitney test); the recorded duration for non-conveyed episodes ranged from 20 minutes to 154 minutes, with a median of 52 minutes, while for conveyed patients the median was 26 minutes (the duration ranged from 2 minutes to 91 minutes).

3.1.1.1 Method of self-harm

Self-cutting was reported as the method of self-harm in 25.1% (58/231) episodes where an ambulance attended. Other self-injury methods in the sample, including attempted hanging and attempted electrocution, were seen in 4.3% of the episodes (10/231). Combining all of the episodes for which only self-injury was present comprised 29.4% (68/231) of the sample, compared with 58.4% (135/231) of the sample where only self-poisoning methods were present. This means that self-poisoning was the most common form of self-harm in the sample. Episodes where there was both self-poisoning and self-injury together made up the remaining 12.1% of the sample (28/231).

Of episodes where there was self-poisoning the substances ingested were as follows: analgesics 44.7% (73/163), overdose of insulin 2.4% (4/163), prescribed medications (including insulin) 71.7% (117/163), illegal drugs 3.6% (6/163) and other non-ingestible substances 4.9% (8/163). In the majority of episodes, 73.0%, only one substance was ingested (119/163). There were 23.3% of episodes where two types of substance were ingested and the combination of substances were as follows: analgesics and other prescribed medications 21.4% (35/163), analgesics and illegal substances 0.6% (1/163) and other prescribed medications and illegal substances 1.2% (2/163). There were only 1.8% (3/163) episodes where there were three types of substances ingested: the combination of substances were analgesics and other prescribed medications and illegal substances 1.8% (3/163). In 1.8% (3/163) of episodes the substances ingested were not reported because the patient refused to state what they had taken.

There was little difference between the method of self-harm in the episodes according to the sex of the patient. Males and females were represented fairly equally across each of the methods, including episodes where there was more than one method of self-harm used. The age of the patient did not seem to have a clear effect on the method of self-harm, with rates for methods appearing similar regardless of age. There were, however, some exceptions to this broad observation. Patients aged 25 years and under represented almost half of episodes where there was more than one method of self-harm: poisoning and injury together occurred in 42.9% (12/28) of under 25's who undertook combined-method self-harm, compared with 57.1% (16/28) of those aged over 25 years ($p = 0.07$). Older patients, aged 50 and above, were more likely to use the method of 'other injuries': 7.3% (3/41) compared with 3.7% (7/190) among under 50's ($p = 0.78$).

3.1.1.2 Additional information about the self-harm episode

The PRF has boxes on it that the ambulance crew fill in with a yes/no response to indicate that the patient has mental capacity, has given consent to treatment and whether there are Deprivation of Liberty Safeguards (DoLS). The patient was reported to have mental capacity in 70.1% (162/231) of episodes, not to have capacity in 11.7% (27/231) of episodes and this information was not completed on the form in 18.2% (42/231) of cases. In addition, the patient was reported to have consented to treatment in 70.1% (162/231) of episodes, to have refused consent in 11.3% (26/231) and this information was missing in 18.6% (43/231) of cases. When it came to examining the DoLS box on the form this was not completed in 70.6% of cases. Further information was available on the PRF in the free-text box, which I coded as 'yes' or 'no' for the presence of information about current mental health difficulties, which were reported as present for 75.5% of the episodes. Previous mental health services involvement and previous incidents of self-harm were not recorded for 50.6% and 46.3% of the episodes respectively; these variables were not included in further analyses due to a lack of consistency in reporting.

3.1.2 Conveyance and non-conveyance

The overall conveyance rate for the sample was 86.6% (200/231). When someone was conveyed by the ambulance, the location they were taken to was almost exclusively the emergency department at 99.0% (198/200) with one person taken to primary care and one person conveyed to somewhere not specified ('other' on the PRF). For non-conveyance the PRF location options are limited so information on reasons for non-conveyance were extracted from the free-text boxes on the PRF. The reasons for non-conveyance were as follows: refusal 36% (11/31), refusal plus 'safety netting' (e.g. social worker or crisis team called) 16% (5/31), crisis team called 23% (7/31), absconded 10% (3/31), left with police (e.g. under Section 136 MHA) 6% (2/31), referred to GP 6% (2/31) and emergency department not required 3% (1/31).

3.1.2.1 Age and conveyance

I made two age splits in the sample for age analyses: first I divided episodes into those where the patient was aged 25 years and under, or aged over 25; second I categorised the age data into episodes where the patient was aged under 50, or 50 years or over. There were 54 patients aged 25 and under and they were conveyed 88.9% of the time (48/54) while those aged over 25 were conveyed on 85.9% (152/177) of occasions (chi squared = 0.32, df = 1, p = 0.57). In the alternative age analysis I found that for patients aged 50 and over there

was 95.1% conveyance (39/41) compared with under 50's being conveyed only 84.7% (161/190) of the time (chi squared = 3.13, df = 1, p = 0.08).

3.1.2.2 Sex and conveyance

The sample consisted of 111 episodes involving male patients and they were conveyed 85.6% (95/111) of the time, compared with conveyance of 87.5% (105/120) for females (chi squared = 0.18, df = 1, p = 0.67).

3.1.2.3 City and conveyance

In the study period there were 231 ambulance callouts for self-harm across Leeds and Sheffield. For the episodes occurring in Leeds (134/231) there was 85.8% (115/134) conveyance compared with 87.6% (85/97) conveyance in Sheffield (chi squared = 0.16, df = 1, p = 0.69).

3.1.2.4 Consciousness and conveyance

Not unexpectedly, for the 30 episodes where the patient was recorded as having a compromised level of consciousness, as measured by a GCS of 14 or below (30/230 – with data missing for one episode), then the outcome was always conveyance. On the other hand, the patient was conveyed in only 170 of the 200 episodes (85%) where the GCS was recorded at its maximum of 15 (Fisher's exact test p = 0.02).

Conscious level is recorded in another way on the PRF – using a subjective ordinal scale with four values: 'alert', 'responds to verbal stimulation', 'responds to painful stimulation' and 'unresponsive'. In this analysis, the data concerning conscious level are again missing – for the same person as in the GCS ratings. In a similar way to the GCS findings, all 21 of those who were judged not to be alert were conveyed (21/21, 100%), while only 179/209 (85.6%) of those who were deemed alert were conveyed (Fisher's exact test = 0.09).

3.1.2.5 Alcohol and conveyance

Out of the 231 callouts in the study there were 103 episodes where alcohol was recorded as having been taken around the time of the self-harm. In those episodes, 86.4% resulted in conveyance (89/103). The pattern was almost exactly the same among episodes where the patients were not recorded as having consumed alcohol, where 86.7% (111/128) were conveyed.

3.1.2.6 Police presence and conveyance

Police support was a fairly common feature of ambulance crews' dealings with patients who had self-harmed and was recorded at 34.6% of all episodes (80/231). Of those 80 episodes, 82.5% (66/80) led to conveyance to hospital. Among the remaining episodes where there was no police presence, a slightly higher proportion of patients were conveyed (134/151, 88.7%; chi squared = 1.75, df = 1, p = 0.19).

3.1.2.7 Method of self-harm and conveyance

Patients who were attended by an ambulance crew as a consequence of an act of self-cutting were the least likely group, by method of self-harm, to be conveyed to hospital (Table 2). Amalgamating categories, people who cut themselves were significantly less likely to be conveyed to hospital (45/58, 77.6%) than were patients who had used any other methods of harm (poisoning, non-cutting injuries, or combined methods), where as many as 155/173 (89.6%) were conveyed (chi squared = 5.39, df = 1, p = 0.02).

Table 2 - Conveyance to hospital or not, according to method of self-harm used. Values are numbers of episodes (%)

Method of self-harm	Total (N=231)	Conveyed	Not conveyed
Poisoning only	135	123 (91%)	12 (9%)
Non-cutting injury	10	9 (90%)	1 (10%)
Combined poisoning and injury	28	23 (82%)	5 (18%)
Cutting only	58	45 (78%)	13 (22%)

3.1.3 Summary of results

A total of 231 episodes of self-harm were included in the analysis. There were comparable numbers of PRFs collected from Leeds and from Sheffield – with Leeds, the larger city, supplying more episodes to the study sample. A quarter of all ambulance callouts for self-harm occurred between 9pm and midnight. Self-poisoning was the most common method of self-harm, with prescribed medications being the most frequently ingested substances. Males and females were represented fairly equally in the study sample and the patients

tended to be young – with half aged 35 years or younger. There was a conveyance rate of 86.6% and patients were conveyed almost exclusively to the emergency department. An examination of the potential determinants of conveyance and non-conveyance is summarised below.

The ambulance crews in the two cities had similarly high conveyance rates. Older patients, those over 50 years, seemed more likely to be conveyed but this comparison did not show significant differences. Gender did not affect the rate of conveyance in any convincing way. Conscious level of the patients showed a clear relation to conveyance: everyone deemed to be not fully alert (or with GCS below the maximum) was conveyed, whereas a significantly lower proportion of fully alert patients were conveyed. Alcohol consumption around the time of the self-harm episode showed no relation to conveyance. Involvement of the police with the ambulance crew in the assessment showed a non-significant relation to conveyance: if police were involved, conveyance was less likely. It seemed clear that the method of self-harm was related to conveyance, with people who had cut themselves significantly less likely to be conveyed than those using other methods. Non-conveyance was associated with a longer duration of ambulance visit.

3.2 Study 2

3.2.1 Qualitative analysis

This section outlines the results of the qualitative analysis. Six ambulance service staff were interviewed about their experiences of working with patients who have self-harmed and the decision-making around non-conveyance. Thematic analysis was then used to analyse the interview responses. This chapter provides an illustration of how thematic analysis was applied and presents the findings of the qualitative analysis.

3.2.2 Using thematic analysis

Interviews were transcribed and then analysed using thematic analysis. Braun and Clarke (2006) provide a step-by-step guide for thematic analysis, which is outlined below alongside examples of how I followed their process.

3.2.2.1 Phase 1: Familiarising yourself with the data

The first phase of thematic analysis involves “reading and re-reading the data [and] noting down initial ideas.” (Braun & Clarke, 2006, p.87). In this phase I listened to all of the audio

recordings before transcribing them. After transcribing, I listened to the audio recordings for any inaccuracies. Transcribing the interviews allowed me to become more familiar with the data and following this stage I read through the transcripts again and made a note of any interesting ideas and identifiable themes in the margins. Producing a list of interesting ideas from the data allowed me to begin to notice patterns in the data, with these interesting ideas forming the beginnings of codes.

3.2.2.2 Phase 2: Generating initial codes

During the second phase I went through each transcript systematically line-by-line and coded features of the data. The list of interesting ideas from phase 1 was used as a starting point. ‘Coding’ refers to labelling chunks of data of varying length depending on features of interest within the data, and with reference to the research questions (Braun & Clarke, 2013). Coding was completed manually using different coloured pens and highlighters. Some of the data was not coded because it was not relevant to the research questions, for example participants’ sharing patient stories not relating to self-harm. An example of how I coded a sample of data is provided in Table 3 and a photograph of one page of a coded transcription is included (Appendix H: Example of Coded Transcription).

Table 3 - Example of the coding process

Sample of data taken from the transcript for participant 3 to show the coding process.

Transcript extract	Coding – level 1
<p><i>“I mean it’s a real difficult one if somebody has threatened to commit suicide to say that they have got the mental capacity to make that decision. We can access now these other care pathways, not always very easy, I know come the weekend it’s difficult and on a night it’s virtually impossible and so you do do a lot of persuasion to take them into hospital really...” (Participant 2)</i></p>	<ol style="list-style-type: none"> 1. Risk 2. Mental capacity 3. Working with other services 4. Coercion is the right thing to do 5. Wanting to help the patient

After coding the transcripts all of the data relating to each code was collected together into separate electronic Word files.

3.2.2.3 Phase 3: Searching for themes

During the third phase all of the data for each code are collated and the search for themes begins (Braun & Clarke, 2006). The collated data for each code was read through again and organised to identify potential patterns and relationships between them. Some of the codes combined and others broadened out to become themes. For example, the codes ‘limited information available from the calls’ and ‘services not communicating with each other’ were combined into one sub-theme about ‘communication’. An initial thematic map using the tentative theme names was drawn to consider the relationships between the themes and organise them hierarchically into overarching themes, major themes and sub-themes. The initial themes remained similar to the codes, demonstrating my desire to stay close to the data.

3.2.2.4 Phase 4: Reviewing themes

Phase 4 is about refining the initial themes from the previous phase (Braun & Clarke, 2006; 2013). The collated data for each initial theme were read through to check that they were coherent, indicating homogeneity within the theme. The transcripts were read again to see whether the initial themes made sense in the context of the entire dataset. The relationships between each of the themes to each of the other themes and overall thematic map was considered. The themes were reviewed as necessary until they seemed to represent discrete features of the data and reflect the depth and breadth of the interviews.

3.2.2.5 Phase 5: Defining and naming themes

A table of each theme and the definitions of each theme was produced to describe each as a separate, distinct theme. Data extracts relating to each theme, contributing participants and how the themes relate to each other were clarified in this phase. The themes were originally placed within three over-arching themes of ‘clinician’, ‘patient’ and ‘service context’ until the themes were renamed and restructured in a narrative format (Figure 4). For example, themes originally placed within the over-arching theme of ‘service context’ were instead renamed and restructured into the theme ‘I’m not supported’. Presenting the themes as if they were thought processes was considered to be a better fit for the data and the research questions, which were targeted at decision-making.

3.2.2.6 Phase 6: Producing the report

The final phase outlined by Braun and Clarke (2006) is to tell the story identified in the dataset by producing a report. This includes selecting extracts that support the story and any contradictions or exceptions to the dominant story. The following sections outlining the qualitative analysis and themes (section 3.2.4 onwards) are written to inform the reader of the shared experience of ambulance service staff when working with patients who have self-harmed.

3.2.3 Qualitative results

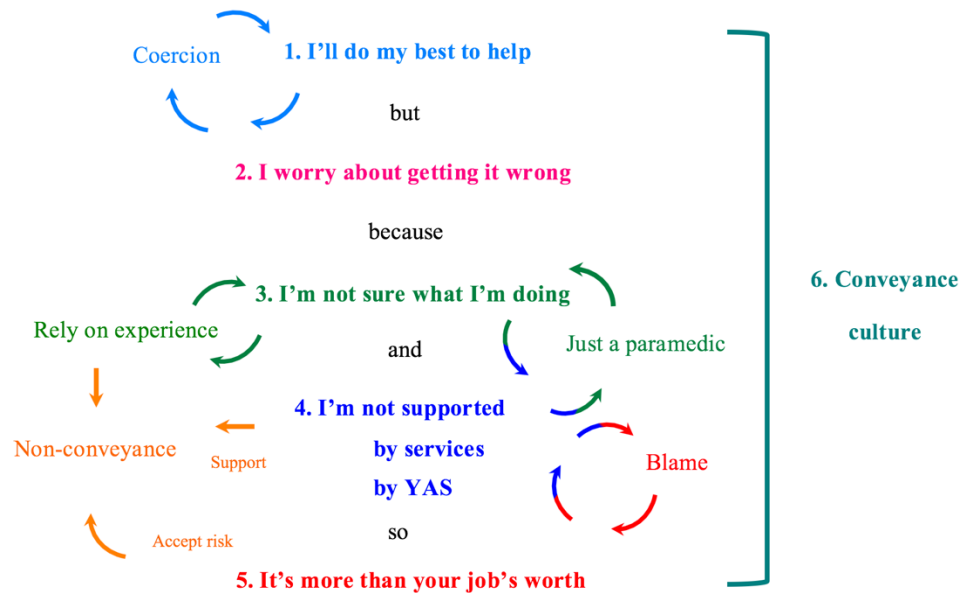
Six major themes were identified from the thematic analysis. Each of the themes and sub-themes will be described in detail in the following sections, using extracts from the dataset to illustrate each theme.

3.2.3.1 Thematic map

Figure 4 outlines the six major themes (numbered) with the key sub-themes and any identified connections between them. The figure demonstrates the major themes presented in a linear narrative format, which is suggestive of the clinicians' thought-process during conveyance decision-making.

Figure 4 - Thematic map: Diagram of the themes identified in the analysis

Map of the six major themes and key sub-themes from the qualitative analysis presented in a linear narrative, as clinicians' thoughts, to show the process of decision-making.



The bottom-left of the figure shows some of the identified processes around non-conveyance decision-making and is included to demonstrate variability in the sample i.e. that some staff accepted risk, relied on their experience or felt supported enough to choose not to convey. Braun and Clarke (2006) advise that these contradictory stories in the data are important to represent and retain. Non-conveyance is not presented as a distinct theme, but contrasting views to themes are presented and identified patterns relating to the non-conveyance decision-making process will be described in section 3.2.10 - 'summary of qualitative analysis'.

3.2.3.2 Participant contributions

Data from all participants contributed to all of the themes, meaning that the major themes were consistent with the experiences of each participant. The number of participants contributing to each of the sub-themes of the data will be written alongside each of the written sub-theme sections. There was a commonality of experience within the dataset, with participants overwhelmingly talking about similar things. The experiences presented by staff were quite similar and there were few occasions where perspectives were radically

different between the participants. When different perspectives did occur they have been emphasised within each theme (section 3.2.4 onwards).

3.2.3.3 Sub-themes

Determining discrete sub-themes was difficult because of the commonality of experience identified across the participants interviewed, resulting in some overlap between the major theme and the sub-themes within it. Table 4 outlines the major theme names and the sub-themes within them.

Table 4 - Major themes and sub-themes

Major themes	Sub-themes
1. I'll do my best to help	1.1. Coercion 1.2. Compassion vs. frustration
2. I worry about getting it wrong	2.1. Under pressure
3. I'm not sure what I'm doing	3.1. Limited knowledge
4. I'm not supported	4.1. Just a paramedic 4.2. Lack of availability 4.3. Lack of communication
5. It's more than your job's worth	5.1. Covering your back 5.2. Personal safety 5.3. Self-harm is risky 5.4. Newer staff are more pro non-conveyance
6. Conveyance culture	6.1. Transport resource 6.2. Non-conveyance takes too long

3.2.4 Major theme 1: ‘I’ll do my best to help’

All of the participants contributed to this major theme. This theme describes the ambulance staff wanting to help people who had self-harmed and to do their best for them.

“I try to reassure people that help and support is the way forward so I’ll do my best to help them access it so however they waved the flag that day to say I need help it won’t be wasted.” (Participant 1)

Ambulance staff reported using any tools or skills that they have to try to manage the situation when they are called out for self-harm, even if they don’t believe it could help, for example:

“You resort then to taking their blood pressure or this and that and it’s not the right treatment for this person. I don’t need to know their blood pressure, they just need someone to talk to... I do blood pressure because I have to write it on my form but also I don’t really know what else to do. I can’t think of anything else even though it won’t help with their mental health problems or their self-harm.” (Participant 3)

Another way that ambulance service staff may do their best to help is captured in the sub-theme of ‘coercion’, which is described below.

3.2.4.1 Sub theme 1: Coercion

Four participants contributed to this sub-theme. It refers to the efforts made by staff to persuade people who had self-harmed to be conveyed or receive help:

“I can’t particularly think of any examples at the minute where I’ve not managed to convince a person to get some sort of help through me, A&E or the crisis team.” (Participant 1)

Staff described an element of bargaining with patients, but they were unsure if this is something they are supposed to do:

“The person has to be willing to consent to a referral. I do make that a proviso and I don’t know if I’m allowed to do that, if you see what I mean but, the practice on this is a little bit vague. I will say to people I’m happy to continue to treat the injury and to leave you at home but that’s on the condition that you agree to make a referral to me passing it on to make sure that this is a safe and appropriate

decision. Which erm y'know is that the right thing to do? I don't know. If I'm asking for somebody's consent to do something and you're not supposed to coerce them in any way are ya? If you see what I mean? It's not a valid consent if you've coerced somebody in any way and I suppose you could argue that saying you need their consent in order to leave them at home could be interpreted as a form of coercion. I don't see it that way but somebody could ..." (Participant 2)

Whilst staff might not be sure whether they are allowed to be using coercion, and one participant stated that they were advised not to use it (see below), they maintain that coercion is the right thing to do. There was some suggestion (2/6) that coercion was done out of a duty of care for the person. Staff believe that they have a responsibility to look after their patients so will persuade them if this is necessary:

"So obviously we've advised to not coerce people to go to hospital if they have capacity and they're saying they don't want to go, but obviously the view of it is that we still have a duty of care even though they are capacitous and I would say that coercion is definitely something that happens all the time." (Participant 4)

3.2.4.2 Compassion vs. frustration

This sub-theme identifies the conflicting feelings that staff have towards people who have self-harmed. There was a conflicting pattern of the compassion felt by staff for the person vs. the frustrations felt by staff when they are trying to help someone who has self-harmed. When describing some of the ways in which they try to help, one participant highlighted the need to *"treat everybody the same"*:

"You try to say have you ever taken an overdose before or is there just one thing that's happened today or is it a culmination or...and they won't answer you but they've already agreed to go to hospital and you're like y'know you don't have to tell me stuff but please tell somebody because you're on your way to hospital and this isn't right, in the sense of you've got to this point. You treat everybody the same and try and work out what's got them to the point that there's a stranger in a green uniform in their house." (Participant 1)

This staff member's plea to the person to "please tell somebody" indicates the compassion and concern that staff demonstrated for people who had harmed themselves. Compassion about self-harm and mental health was identified by several staff (3/6):

“There’s probably a whole host of things going on for that individual...it’s a really complex issue.” (Participant 6)

This compassion was contradicted by the frustration that staff reported feeling in relation to mental health related calls (4/6). Participants described the frustration of people who repeatedly called an ambulance for self-harm, or “*frequent flyers*” (Participant 1):

*“You’re expected to go to it on blue lights but you know it’s not life-threatening which can be a little bit frustrating I suppose. If the name comes up, we do have our regulars, and that is a bit like *sigh*” (Participant 3)*

Although there was a suggestion from one participant that compassion acted to reduce any potential frustrations that may occur when called out to an episode of self-harm:

“I think the thing that helps me deal with that in terms of not getting frustrated is that I try and see that as a symptom rather than as a behavioural thing because with some people things are behavioural aren’t they and they will do things some of the patients we see they’ll spit, they’ll swear, whatever, because that is how they are, that’s their behaviour, they’ve not got any mental health problems they’re just nasty to professionals that they come into contact with, but the mental health patients I think in a way it’s easier to deal with because you know it’s more a symptom of their illness so it becomes less frustrating when they discharge themselves. It’s still frustrating but it’s less frustrating because you know it’s a contributing factor that they’ve got, like you know for anxiety they don’t want to be there, or they’re being told to leave, or they’re being told that they’re not safe or whatever so.”
(Participant 4)

This participant also suggested that frustration comes from not being able to do anything for patients who have self-harmed despite wanting to help them:

“I think in some ways is where the frustration comes from for ambulance staff with mental health is that we feel like there is not a lot we can do because I think that the whole reason that people get into these kind of careers is because they want to make a difference and they want to help people.” (Participant 4)

3.2.4.3 Summary of theme 1

The major theme of ‘I’ll do my best to help’ relates to the efforts and wishes of staff to do their best for the patients. The theme includes a sub-theme of ‘coercion’ and ‘compassion

vs. frustration' in relation to receiving mental health related calls. As one participant summarised "we do struggle with [self-harm] because at the end of the day all you want to do is do right by them" (Participant 4).

3.2.5 Major theme 2: 'I worry about getting it wrong'

All of the participants contributed to this theme. This theme describes the worry that staff experience about the decision-making to convey or not convey. It seemed to be that the decision to non-convey is more difficult:

"So when you leave somebody at home and nothing is in place then you always go away worrying about that person... God, have I made the right decision, is anything going to happen?" (Participant 3)

Wondering whether "anything [is] going to happen?" indicates the doubts that are experienced by the staff when a person is not conveyed to hospital:

"...So it didn't really sit too well with me to be honest, that job, but it was one of those ones where you think well you know I've done everything right, by the book, but it was just, there's just that little niggling doubt in your mind you know..." (Participant 4)

A "little niggling doubt" is caused by a fear of the potential consequences of leaving the patient at home:

"Leaving them at home is so much more difficult because you always walk away from it having that little worry about whether they are going to be ok, or whether they are going to do it again and this time are they actually going to do it properly. Every time you leave a patient at home it stays with you. You always go away, unless you're absolutely adamant that what you have put in place is safe, you walk away going 'oh god, I hope that was alright. I hope that when the doctor comes to see them later on or what have you that they aren't going to find them dead or something like that because I didn't quite get it right'." (Participant 3)

There was an acknowledgement that this is a possibility for some of the patients seen for self-harm:

"...you're always going to have that percentage that you leave and actually something worse would happen and that's what people are frightened of." (Participant 6)

In addition to the worry that participants report feeling, some staff (3/6) describe a cumulative negative effect when regularly dealing with concerns about people who have self-harmed:

“I think I’ve been perhaps a little bit ground down over the years.” (Participant 3)

There was a suggestion from one participant that these negative affects are a common experience for staff working within the ambulance service:

“I think that’s quite common in the ambulance service, certainly among people who have been working there for a long time. Stuff will start to weigh on you after a while...you fill up with it eventually.” (Participant 2)

The impact upon staff is emotional and these concerns do not necessarily go away but can be persistent:

“Well the one job that does stick in my mind for self-harm is a young lass we went to... Well it doesn’t play on my mind but it sits there.” (Participant 5)

The major theme of ‘I worry about getting it wrong’ has one sub-theme capturing the pressure staff perceive that they are under.

3.2.5.1 Sub theme 1: Under pressure.

Four participants contributed to this sub-theme. It describes two kinds of pressure felt by the participants: (1) pressure to be a “*Jack of all trades*” (Participant 1) and (2) the pressure to “*be bulletproof*” (Participant 2) and unaffected by their work. These different pressures will be outlined below. The potential effect that these pressures can produce is suggested by one participant’s observation from early on in his career. The suggestion is that the pressures of dealing with mental health callouts can contribute to negative views of mental health difficulties:

“I remember when I started to do this job which was what... eight years ago... the sort of comments you’d hear when we got a mental health related job were ‘oh god effin’ mental health urgh effin’ this effin’ that’ and it was really negative what would come across as callous and unsympathetic and as a student who was new to the job at the time I remember thinking ‘oh god that’s not a very nice thing to say’ and I couldn’t get my head around why people were that angry or that pissed off or making these unsympathetic comments... [So] these people are verbalising the effects of dealing with those jobs as that and it’s not them being unsympathetic... I

don't really hear those kind of comments anymore, I think we've got over that now..." (Participant 6)

(1) Staff report feeling a pressure to know what to do and to get it right and an expectation upon them to perform on their callouts:

"...that's the problem isn't it you're expected to be a Jack of all trades and a master of all of them and it's not possible." (Participant 1)

This sense of "it's not possible" contributes to the feeling of pressure that staff perceive:

"I feel as though I'm very put upon with stuff like this" (Participant 3)

There was an acknowledgement from staff of the need for a balance in their competency base between different areas of knowledge and skills:

"I just think in our profession we have to know a little bit about so many different things but we can't be an expert in one thing." (Participant 6)

(2) Staff describe that there is a pressure not to show the emotional strains of the work:

"You're supposed to be tough and macho and bulletproof in this job you know. Cup of tea and onto the next one but that old school mentality is slowly dying out but it's still there." (Participant 2)

There was a suggestion that stigma around staff mental health is slowly reducing:

"It's improving slowly [attitudes around mental health] and just like everything else in regards to mental health over the last few years it's started to come into the spotlight a little bit hasn't it? People are starting to talk about it a little bit more and especially emergency services themselves y'know people are starting to be a bit more aware of their own mental health and the risk to their mental health with the work that they do. It's coming into focus slowly but in terms of sort of policy and direction we've a good way to go really." (Participant 2)

3.2.5.2 Summary of theme 2

The major theme of 'I worry about getting it wrong' can be summarised as the fear that staff experience about making the wrong judgement in conveyance decision-making. Staff reported feeling a pressure to have the right answers and also to get on with the job without becoming phased by it.

3.2.6 Major theme 3: ‘I’m not sure what I’m doing’

All of the participants contributed to this theme. This theme describes a lack of confidence that they have in their skills, knowledge and abilities to assess and make decisions about people who have self-harmed. This sense of not really knowing, or “*floundering*” (Participant 2), leads to staff feeling that they are not prepared to deal with self-harm:

“I don’t think you’re very well prepared. I think most paramedics would say they feel ill prepared to deal with those sort of jobs.” (Participant 6)

One participant describes the required skills for dealing with self-harm as “*out of [their] knowledge base*”:

“I think majority of us with the ambulance service feel powerless and out of our comfort area...no not comfort area...out of our knowledge base. We simply just don’t understand and we’ve got nowhere for them to go, no pathways and things like that.” (Participant 5)

There was a perception from staff that other professionals have a greater knowledge base, or more skills and generally do a better job of working with people who have self-harmed than they do:

“I think that they are lot better at assessing... I mean if you’re a mental health nurse you’ve studied for three years and we get an hour’s lesson on the training.” (Participant 5)

Staff talk about relying on their experience (5/6): or what they have “*picked up*” (Participant 3) when working with a patient who has self-harmed:

“I think a lot of it is based on experience and a bit of a gut instinct.” (Participant 6)

“...just because we do it but we don’t particularly do it with a great deal of confidence. You’re relying a lot on your experience and particularly there’s a lot of confusion.” (Participant 1)

An example of the “*confusion*” that staff refer to is about whether the patient who has self-harmed was telling the truth or whether “*this person could say anything just to get rid of me.*” (Participant 2):

“I think the problem is, is that you don’t always really know... It’s probably a little bit... it probably doesn’t sound great to say this but the truth is that people aren’t always honest with you and you don’t know” (Participant 4)

One participant acknowledges that despite the lack of trust in people who have self-harmed, non-conveyance may not put the person at risk:

“...to simplify it, to be honest, I think that most ambulance staff who go to patients with a mental disorder probably just think ‘I can’t trust you’ or ‘I’m not confident in your ability to be able to manage that risk safely’ and they don’t trust that something bad isn’t going to happen if they leave and actually realistically probably in a lot of, or maybe even the majority of cases, there probably wouldn’t be any harm as a result of leaving that patient...” (Participant 6)

Being unsure of your skills and abilities makes working with people who have self-harmed a difficult task:

“It is hard, it’s not easy I mean I just get completely tongue tied sometimes talking around in circles.” (Participant 1)

One participant suggested that this difficulty is caused by staff not having “*the right tools*” to do the job:

“[we] just don’t have the right tools to deal with those patients so it becomes really difficult and a bit inadequate.” (Participant 6)

This idea of “*the right tools*” is explored further in the sub-theme ‘limited knowledge’.

3.2.6.1 Sub theme 1: Limited knowledge

The idea of staff feeling that they have limited knowledge is described against a backdrop of receiving more mental health-related callouts compared with what they used to receive. Staff identify that they don’t receive any specialist training in self-harm:

“...there was nothing in my training that teaches me to deal with this [self-harm].” (Participant 3)

One participant also reported that they had a limited knowledge about mental capacity, describing it as:

“...just a wishy -washy grey area that I struggle with.” (Participant 1)

Staff report that there isn't sufficient training despite a perceived increase in the number of calls relating to mental health and self-harm:

“As a technician I got an hours training and that was basically the different conditions, we have raised the point with the university to say that we do need more training because we are getting more and more mental health calls over the last five years itself.” (Participant 5)

The same participant was asked whether they could say more about this perception of an increase of calls and stated that:

“Over the last five years there's been a massive increase and there's been at least once a shift on average [a typical shift is 8-12 hours] whereas before you probably would have twice a month.” (Participant 5)

One participant suggested that a lack of understanding about self-harm was why there was such a high conveyance rate:

“That's the overarching concern for people which is probably why people go [to the emergency department] because I guess if you go to somebody who is medically unwell those symptoms either are or they aren't whereas with mental health things can change can't they and thoughts can change and often you find that there's suicidal thoughts as well.” (Participant 4)

The idea that “*things can change*” suggests a confusion around self-harm, potentially caused by the lack of training, which is described by the following participant:

“It comes down as well to a lack of understanding about self-harm as well. There's no real formal training in it and certainly no updates or er anything of that kind and it tends to be grouped into a sort of a suicidal bracket...which it isn't.” (Participant 2)

3.2.6.2 Summary of theme 3

All of the participants contributed to major theme 3 ‘I'm not sure what I'm doing’, which describes the lack of confidence and knowledge that staff feel they have when working with people who have self-harmed. They identify a lack of training and understanding of self-harm as one of the contributing factors to decisions to convey.

3.2.7 Major theme 4: 'I'm not supported'

All of the participants contributed to major theme 4. This theme describes the lack of support that staff feel they receive from services, including from YAS. A lack of practical support was a common concern:

(1) *"...you can send me as many emails as you want to tell me I'm out of date on my e-learning but they [YAS] won't take you off the road to do it." (Participant 1)*

(2) *"We can always phone a supervisor or something but again in an overstretched NHS how much time is there for people to come out and support you face to face with that decision-making. You'd have to be...I mean when I was in a supervisory position I did that on a couple of incidents because I understand the complexity of the decision-making skills but actually has everyone got the time to do that? Nope!" (Participant 6)*

Describing the NHS as an "overstretched NHS" provides context for how unsupported staff feel within the service. They feel that they are busier and need more support but they don't feel that they are receiving it:

"Our resources are stretched to the limit as it is and if they want us to deal with this kind of thing [self-harm] then they either give us more resources or give us some training." (Participant 3)

There are exceptions to feeling unsupported and all participants acknowledged that at times everything comes together and they do feel supported by services and by YAS. Whilst the mental health nurses in the Emergency Operations Centre (EOC) at YAS were described as "neither use nor ornament" by Participant 1, it was also acknowledged that they play an important role for front-line staff:

"...they have got a scheme with mental health nurses in the EOC and they triage a lot of stuff so that takes some of the workload away from us guys, I think." (Participant 6)

In addition to describing a lack of support from YAS, participants (3/6) felt that support from the police is variable with one participant describing the police as:

"...quite reluctant. Everybody has got their own agenda and they're always too busy to help." (Participant 3)

In contrast, at times staff felt supported by their emergency services colleagues in the police:

“The full time police turned up and I explained the chap didn’t have capacity and they were just like ‘ok’ and they just got him onto the vehicle, which we couldn’t do, because though we’re allowed to use reasonable force it kind of, it doesn’t always sit well with ambulance staff because we’re not trained really to do that and so the police got him onto the vehicle.” (Participant 4)

Similarly, some staff (2/6) described their difficulty in accessing the crisis team, particularly for patients who have been drinking. One participant explained:

“We’re quite limited because there’s such a miniscule [amount of] people that we can refer to the crisis team because there’s no drugs or alcohol or anything else involved...” (Participant 1)

One of the barriers identified for referring to the crisis team is the large amounts of alcohol often felt to be involved in episodes of self-harm:

“...it’s a heck of a lot.” (Participant 1)

“The vast majority of patients that we come into contact with that have self-harmed I would suggest are generally either intoxicated or have used drugs.” (Participant 4)

When patients were able to be referred to the crisis team their input was deemed to be helpful and supportive:

“The crisis team in one particular area are brilliant and they send a taxi for them... For the two times I’ve used them it’s been exactly what the patient needed.” (Participant 1)

Major theme 4 ‘I’m not supported’ has three sub themes: ‘Just a paramedic’, ‘Lack of availability’ and ‘Lack of communication’. These sub-themes are described below.

3.2.7.1 Sub theme 1: Just a paramedic

A pattern of staff (4/6) feeling disrespected, by both patients (a) and other professionals (b), was identified within the data:

(a) *“I’m not judging ya I’m trying to help you but y’know give me a tiny bit of respect and dignity while I’m trying to do me job.” (Participant 1)*

(b) *“There’s been a feeling, and not just mental health nurses, from other health care professionals that they’re very protective of their own job. So you try and call a mental health nurse that’s not affiliated with the ambulance service and try to discuss a patient’s problems but there’s the idea that you’re only a paramedic, you don’t know what you’re talking about, you have to do this. I remember one woman I tried to refer back to the unit she’d just been discharged from two days before and they basically said you don’t know what you’re talking about and you have to take her to A&E for them to assess.” (Participant 5)*

On the other hand, staff recognise that there are some things that they can do for some people who have self-harmed and so they feel as though they are playing a useful role:

“...At least if you go to somebody who has had an overdose, say they’ve taken 120 Paracetamol like a call I went to a few years ago, you can give them the charcoal and you feel like you have done something to help them and you feel like you’ve actually achieved something and although you can’t see the effect of it you still know that they will benefit from that drug.” (Participant 4)

3.2.7.2 Sub theme 2: Lack of availability

All of the participants (6/6) described a lack of availability and accessibility of services, including the crisis team and barriers to accessing services.

“The reality is that they [services] vary massively depending on where you are.” (Participant 5)

There was a sense that, despite services being available, they are either not available at the right times or they don’t quite meet the needs of patients or the referring clinicians:

“There are initiatives there, like we’ve said, you’ve got the street triage mental health nurse that works with the police a lot of the time, you’ve got the mental health nurse in the community and in our EOC when they’re there, you’ve got the community teams and things like that, but it just seems whenever you’re in that situation with that patient it always seems to be that we’re involved when those other services aren’t available which is probably why we’re there in the first place. Actually in my experience whenever I’ve tried to refer to those services when

they've been available it's still not changed the place, if that makes sense, it's not kind of been enough or those services aren't there." (Participant 6)

It was identified that something was missing for patients to receive appropriate help and support:

"...there is something...there's a bit missing in their help and support, whether it's GP-led, whether it's medication, mental health but because we're there and we're on the end of a three 9 call it's us that ends up plugging the gaps...and you can see we're totally plugging the gaps." (Participant 1)

Describing the ambulance service as “*plugging the gaps*” identifies the lack of availability of services:

"Mental health is huge at the moment and this is why the NHS and ambulance service are completely put upon because there isn't anywhere else. It's not being dealt with at the right point." (Participant 3)

Staff suggested that there needs to be better availability for services to support both clinicians and patients:

"I'd love to [be] able to ring a number and somebody is going to pick it up and follow up on it. That's what we need. The same as we would do a social services referral, or a falls referral or a stroke referral, or a diabetes referral. We just don't have a robust mental health pathway and we need one somebody on call 24 hours a day to talk through an issue and maybe even just take over the call and talk to the patient for five minutes, if that's what's necessary." (Participant 2)

One participant outlined “*the ideal scenario*” when called out to a person who has self-harmed, a scenario that highlights the importance of service availability:

"...the ideal scenario would be somebody who's got mental health sort of a self-harm episode it's within 9-5 Monday to Friday when all of the services are available, they've got a responsible person or adult with them who can look after them and then you can ring up the GP or the mental health professional if they're under a team and get them some support and then go and see somebody and then if the wound or the self-harming is minimal then you know you can either treat that yourself or potentially that can be done with a nurse at a GP surgery or something like that." (Participant 6)

There was a suggestion from some staff (3/6) that better links could be established between mental health professionals and ambulance service staff in order to provide better services for people who self-harm:

“So we need to be able to say ‘rather than taking you to closest A&E lets take you to the mental health ambulance receiving unit where you can talk to somebody who is a mental health professional who understands more about your condition than the A&E nurses and the paramedics do and can help you get out of this cycle’.”
(Participant 4)

Service availability meant that staff could feel unsupported by other services (4/6) because of long wait-times:

“So you ask for the mental health street triage team and they’re busy on another job and they’re going to take like two hours and you can’t sit at the side of the road with somebody who is unwell, who is agitated, who might be being aggressive who’s shouting, you can’t leave them there for two hours waiting for somebody, that’s just not an option.” (Participant 6)

A further issue raised by staff relating to a lack of availability of services was a lack of funding for mental health: one participant described it as “*really really massively underfunded*” (Participant 5).

3.2.7.3 Sub-theme 3: Lack of communication

When describing the perceived lack of integration between services it seemed that staff could be unclear about the roles of other services and professionals, with one participant stating “*I don’t know what they do*” (Participant 4). This suggests a lack of communication between services, an issue that was raised by five (out of six) participants:

“...sometimes the jobs just come from first response, they’re the crisis team, and they can be on the phone to the crisis team saying I’ve done something and someone else in the office will call for an ambulance so they’re not 100% clear that we’re going to arrive which can be a little bit awkward as well.” (Participant 1)

3.2.7.4 Summary of theme 4

In the major theme of ‘I’m not supported’, participants described a lack of availability from supporting services and a lack of practical support from both those services and from within

YAS. A lack of communication and understanding of the roles of other professionals appears to contribute to staff feeling unsupported. There was some variability within this theme with all staff acknowledging times when they have felt supported from other services and YAS, support which may facilitate non-conveyance. An extract from one participant offers a useful summary:

“I think the thing for paramedics is, in terms of if you’re non-transporting, we need to feel supported and we need to feel that if it does go wrong we will be supported. I think if you work within a system where you do feel supported by your organisation initially and then by the HCP and registering body, then you will find that people are willing to practice less defensively.” (Participant 4)

3.2.8 Major theme 5: ‘It’s more than your job’s worth’

All participants contributed to this theme, which describes the perception of risk involved in callouts to people who have self-harmed. Participants discussed a fear of being blamed for things going wrong and a fear of losing their jobs:

“I think that unfortunately the culture in the ambulance service is such that, at the moment anyway, is such that people feel that they are very much at risk of being blamed if something goes wrong.” (Participant 2)

“...it’ll be my registration and it’ll be me having to stand up in coroner’s court and explain why I’ve not taken more action...” (Participant 6)

There was a perception that staff are on their own with risk decision-making:

“Nobody is prepared to do that nobody is prepared to say ok I’m in a senior position and you can put my name on the form to say leave this patient at home because they’re not there.” (Participant 2)

“Nobody is prepared to do that” indicates that staff feel nobody would support them if they were to make a mistake in deciding not to convey someone:

“I think a feeling as well that the service wouldn’t back you up if there was an incident and that’s not just related to mental health, that’s pervasive throughout every type of emergency when it comes to leaving people at home.” (Participant 1)

One participant also suggested that other services, for example mental health services, are more supported in non-conveyance:

“...but those teams [mental health teams] will have more support and backing... whereas for us we don't have any of that so we have to go with the most safe option.” (Participant 6)

Feeling unsupported leads ambulance staff to exercise caution when dealing with people who have self-harmed because of the risks dealing with such patients poses to ambulance staff jobs:

“...Generally you keep at the back of your mind that that's the sort of patient that will get you sacked because one day when you respond they will actually be poorly and you've been to see them every day that week, or every couple of days, and if you slip up on one job that's what'll lose you your job.” (Participant 1)

It also leads to staff changing their practice and practicing more “defensive medicine” (Participant 4). Staff explain that they “...don't want to take any risks with anybody” (Participant 2) because it is seen as:

“...more than your job's worth to leave them behind...basically.” (Participant 2)

On the other hand, non-conveyance for self-harm does occur and staff (4/6) acknowledged that there is risk and responsibility in working with people who have self-harmed:

“...We have to accept that there is some level of responsibility to our jobs...” (Participant 4)

There was also an acceptance of the limitations of assessment and that “you just cannot predict all these things [which patients go on to complete suicide]” (Participant 6) and staff have to weigh up the risks “so you[re] kind of continually jiggling it in your head about how the conversation goes” (Participant 1).

Non-conveyance can depend on how much risk the staff member is willing to tolerate:

“Sometimes patients refuse to travel. It depends on the crews' threshold of risk as to whether or not they are prepared to accept that.” (Participant 2)

The major theme of ‘It's more than your job's worth’ has 3 sub-themes: ‘Covering your back’, ‘Personal safety’ and ‘Self-harm is risky’. They are described below.

3.2.8.1 Sub theme 1: Covering your back

Staff (4/6) talked about 'safety netting' their decision-making and conveying to the emergency department as a way of protecting themselves:

"There's one sure fire way to make sure that you don't end up in an incident review and that's to take everybody to hospital. If your default position is to take every patient to hospital, then nobody can ever turn around and say you missed something." (Participant 2)

Staff reported a sense of relief when conveying because it passed on the sense of responsibility:

"...you take them somewhere and it doesn't become, it sounds awful, but it doesn't become our problem anymore." (Participant 6)

This is supported by the idea that conveyance is "easier" and you are "handing over" (Participant 3) any potential blame:

"I would prefer to take them to hospital because I'm handing over then to somebody else that can look after them for a few hours." (Participant 3)

3.2.8.2 Sub-theme 2: Personal safety

Staff (5/6) commented on their own personal safety on scene and the potential risks to themselves from people who may be aggressive and some people may still be in possession of a knife or a sharp instrument because they have used it to harm themselves:

"If they start to get a little bit nasty then definitely I would be calling the police. I've got to be safe. I mean I will walk away, it's very rare I ever leave a scene as such, but I will walk away until help arrives because I won't put myself in danger." (Participant 3)

Staff ask questions that help to keep themselves safe as well as prevent further harm to the patient:

"...Obviously our concern is for safety as well so we ask 'have you got anything on you that could hurt you now'." (Participant 4)

There was acknowledgement that different staff view this risk differently, with some apparently being more concerned than others:

“It varies from person to person you see and some will be more of a mind to say well it’s all very well somebody else saying its safe but you don’t know that that person hasn’t been drinking or is reliable. So there are staff who won’t attend these incidents without the police, I’m not one of them, but some people are a bit more wary whenever there is a mention of a knife they won’t attend, certainly not on their own, but it depends who it is.” (Participant 2)

3.2.8.3 Sub-theme 3: Self-harm is risky

Staff (5/6) describe how they perceive people who have self-harmed to be risky. In particular, if the person had self-harmed with a stated intention to end their life then ambulance staff would convey the person to hospital:

“[Intention does affect decision] because if someone has said to us, or the police because the police sometimes do attend these calls as well, that there was an intention to end their own life then it would erm they would be less likely to do a home referral and we would have to take them somewhere to make sure that they were able to see the crisis team. Nine times out of ten we would get them to hospital if they’ve stated the intention was to end their life.” (Participant 5)

There was also, however, a suggestion that conveyance would occur regardless of stated intent:

“If you’re going to somebody who says yeah I took this drug overdose with a view to harming myself, whether that’s with suicidal intent or with a view to just harming themselves I would obviously always take them.” (Participant 4)

It seemed that “*always tak[ing] them*” related to an idea that an act of self-harm identifies the person as lacking capacity to make decisions about their treatment:

“I mean it’s a real difficult one if somebody has threatened to commit suicide to say that they have got the mental capacity to make that decision [to stay at home].” (Participant 3)

3.2.8.4 Sub-theme 4: Newer staff are more pro non-conveyance

Some staff (2/6) identified a cohort difference between (a) staff who had been trained more recently, through a university training route, and (b) ‘the older guard’ who had progressed through the ranks of the ambulance service and:

“...went on a seven-week training course that taught you how to resuscitate somebody and deal with like serious injuries and it didn’t tell you how to deal with minor health complaints and it didn’t tell you how to deal with mental health problems.” (Participant 6)

(a) *“The newer staff, like myself, are more pro-not taking people to hospital when appropriate.” (Participant 4)*

(b) *“You tend to find the older guard look at it as protecting their mortgage...that like defensive medicine kind of thing.” “...people will say ‘well, not on my mortgage. Let’s just go to hospital’.” (Participant 4)*

3.2.8.5 Summary of theme 5

The major theme ‘It’s more than your job’s worth’ describes the perceived risk to staff of being blamed for things going wrong and of losing their job. Staff feel that they are on their own with decision-making and view self-harm as not being worth taking the risk. The sub-themes include risk to personal safety and risk aversive practice of ‘covering your back’, which may be subject to cohort effects with the suggestion that newly qualified staff may be more in favour of non-conveyance.

3.2.9 Major theme 6: ‘Conveyance culture’

Six participants contributed to this theme, which relates to the perceived culture of conveyance in the ambulance service. Staff reported that it is their usual practice to convey patients who have self-harmed:

“I would say overall that there is a general feeling that anybody who has self-harmed needs to go to the hospital.” (Participant 2)

The culture of conveyance seemed to be pervasive in the ambulance service regardless of the presenting problem, although there was a suggestion that it was particularly the case for mental health related calls:

“To be honest there’s not that many that I don’t transport with self-harm because, as I said before...probably with mental health you still would find that most patients would be transported, to be fair. I’m trying to think of any other ones that I’ve not transported but I would say actually that mental health is one of the ones that, if you were to group patients into a category falls, chest pain, shortness of breath,

blah blah blah whatever it comes through as on the screen, or whatever their presenting complaint is, that is probably one of the ones that I take in the most and I think that if you probably looked at the statistics most people are transported...”
(Participant 4)

This usual practice of conveyance is described as a “*default position*”:

“I think that there is this default position to just find a way to get them onto the ambulance and get them to the A&E department.” (Participant 2)

“*Default position*” communicates the idea that there is an expectation for patients to be conveyed. This seems to be an expectation from the staff (a), as well as the service (b):

(a) *“So yeah people tend to default to basically standing in somebody’s room and insisting that they go to hospital regardless.”* (Participant 2)

(b) *“Well we’re always advised to go up [to the emergency department] I think...”*
(Participant 5)

As a result, staff reported that there are very few patients that they would not convey:

“[Non-conveyance] would be very rare, few and far between. I can’t particularly think of any examples at the minute...” (Participant 1)

In particular, staff described that they would not leave anybody at home if they were on their own:

“...we tend not to leave people alone so if there’s nobody there with them [they would be conveyed]” (Participant 5)

The idea of non-conveyance being “*very rare*” was supported by an approximation of the rates of conveyance provided by one participant:

“I would say maybe 80% of the patients probably still would go to A&E.”
(Participant 4)

All of the participants were of the opinion that the emergency department is not the right place for people who have self-harmed but that there is nowhere else to convey people to:

“That again unfortunately in most scenarios will be taking the patient to an A&E department and we know that’s not the right thing for a lot of these patients, it’s not

the right environment, in most cases it probably upsets that individual more but we don't have... there's no other option. Everyone knows this, everyone says it but nothing happens.” (Participant 6)

There were two sub-themes identified: ‘transport resource’ and ‘non-conveyance takes too long’.

3.2.9.1 Sub-theme 1: Transport resource

Some participants (2/6) described the origins of the ambulance service as a transport resource, which potentially impacts on current decision-making:

“We were traditionally a treat and transport service that was there for people when they were in cardiac arrest, had chest pain, had shortness of breath and would go fix the problem or manage the problem and take them to hospital.” (Participant 4)

“...quite a lot of years ago...if you called an ambulance then you went to hospital... whoever called an ambulance was kind of expected to go.” (Participant 3)

3.2.9.2 Sub-theme 2: Non-conveyance takes too long

Staff (4/6) identified that the time it takes to non-convey is longer compared with the time it takes to convey, which adds to a ‘culture of conveyance’:

“Here [in Yorkshire] there's much more of a culture of taking people. I think one because of the geography, it's not that far, so it takes actually longer to non-transport somebody than it does to...and also just a general culture amongst staff.” (Participant 4)

This perception that self-harm related calls take a long time compared to other types of calls may potentially impact upon conveyance decision-making resulting in more patients who self-harm being conveyed.

3.2.9.3 Summary of theme 6

The final major theme of ‘conveyance culture’ describes the standard practice of staff to convey to the emergency department. Staff indicated that the emergency department was not the right place but is “*the only option*” (Participant 1). All participants contributed to this theme and there was a suggestion that non-conveyance for self-harm takes more time than

conveyance, particularly in the area covered by this study and that the ambulance service is still considered a transport resource, which further encourages staff to convey.

3.2.10 Summary of qualitative analysis

Six ambulance service staff were interviewed about their experiences of working with people who have self-harmed and about the decision-making around non-conveyance. There were six major themes identified using thematic analysis, which was completed following published guidelines (Braun & Clarke, 2006). Each of the six themes were contributed to by each of the six participants, indicating that they are consistent with the perspectives of ambulance service staff. The themes were presented as if they were clinicians' thoughts to demonstrate the decision-making process around whether or not to convey the person who has self-harmed (Figure 4). Staff want to do their best to help people who have self-harmed, but they feel poorly equipped to manage these patients. This is a feeling that is reinforced by others' derogatory views ('just a paramedic'), which contributes to staff feeling alone because there are not enough services to refer to. Staff are aware of the risks of getting the conveyance decision-making wrong and worry about getting these decisions 'wrong' so they feel it is safer to convey. Non-conveyance was discussed in the interviews but it was considered "*rare*" (Participant 1). There was a suggestion that more newly qualified staff are more likely to make non-conveyance decisions but that non-conveyance takes longer compared to conveying to the emergency department.

4 Discussion

This chapter revisits the research aims. The results from Study 1 and Study 2 are summarised separately and then integrated together before being discussed in relation to existing literature. Methodological considerations and quality checking procedures are then presented followed by recommendations for future research and clinical implications. An overall conclusion is offered at the end.

4.1 Revisiting the study design, aims and objectives

A two-part mixed methods study was completed using a sequential design. The overarching research aim for the current study was to understand the care offered by the ambulance service to people who have self-harmed. Completing this mixed methods study has allowed these pre-hospital routes for self-harm to be explored. There were four objectives for the current study:

1. To understand the socio-demographic and clinical characteristics of people who dial 999 following self-harm;
2. To explore outcomes of 999 calls following self-harm (including conveyance to the emergency department); and
3. To understand how staff experience the decision-making involved.
4. Finally, to integrate the results from the two studies, demonstrating the relevance to existing literature and the clinical context.

Objectives 1 and 2 were achieved by the completion of Study 1, the findings of which provided an overview of the socio-demographic and clinical characteristics of people who dialled 999 following self-harm, as well as determining rates of conveyance and non-conveyance in the Yorkshire region. Objective 3 was achieved by conducting interviews with ambulance service staff, which focused on their experiences of the conveyance decision-making process following a self-harm call. The results of Study 2 offered an insight into the experiences of ambulance service staff when working with people who have self-harmed. Objective 4 is met by the presentation of data in this write-up across the results chapters and this closing discussion chapter.

4.2 Summary of findings

There has been a great deal of research examining patterns, characteristics and possible determinants of self-harm. The use of ambulance services following self-harm has, however, rarely been explored and the present research adds to that developing knowledge base. The characteristics of people who use ambulance services following self-harm and elements of the conveyance decisions that they received, have been presented in the current study. Previous service audits into clinical outcome decisions made by ambulance crews for people who have self-harmed have indicated variable and sometimes high rates of non-conveyance. The current study provides a local figure for conveyance rates for self-harm.

Study 1 provided detailed information on the socio-demographic and clinical characteristics of people who received an ambulance after dialling 999 for self-harm and the subsequent proportions of people conveyed. The characteristics are discussed below in relation to the findings from Study 2 and the background literature. In terms of the decision made by the ambulance crew, Study 1 found the overall proportion of conveyance was 87%, with conveyed patients being taken almost exclusively to the emergency department. Study 2 provided an insight into the process of making a decision about conveyance and the factors that appear to influence that decision. Six major themes were identified in the qualitative data analysis. Staff commented on the ‘culture of conveyance’ in the ambulance service and the factors that they felt made a decision to convey more likely, as well as providing information on the context in which this decision is made. These themes are discussed below in relation to the Study 1 results and the background literature.

4.2.1 Integrating the findings

The results from this mixed methods research are presented here jointly, in an attempt to demonstrate the similarities and contradictions identified and to put the findings in the context of the existing literature.

4.2.1.1 Conveyance

The Study 1 findings on conveyance rates provided an up-to-date figure for a large ambulance service in the North of England: 87% of callouts made by an ambulance crew for self-harm resulted in conveyance. Conveyance, when it occurred, was almost exclusively to the emergency department (99%), which is considerably higher than the figure reported in some other studies, such as that by Prothero and Cooke (2016), who reported a conveyance rate to the emergency department of 65%. It is important to note that there were two major

differences between the Prothero and Cooke (2016) data and that of the current study. Firstly, that their data was collected in a different region - an ambulance service in the East of England and secondly, that they included calls under the broad definition of ‘mental health crisis’ (e.g. calls relating to psychosis and dementia), many of which are more obviously better dealt with outside of the emergency department. These high rates of conveyance were corroborated in Study 2 where a theme of a ‘conveyance culture’ was identified and staff thought that there would be high levels of conveyance for people who self-harm (“*I would have to say probably the vast majority of cases end up going to hospital*” Participant 6). During the interviews one of the participants provided a very accurate estimate of conveyance rates:

“I would say maybe 80% of the patients probably still would go to A&E.”
(Participant 4)

The proportion of conveyance for self-harm in the current study can be contextualised by comparison with rates reported by other studies carried out in different ambulance services, and the high proportion of conveyance for a mental health event in the current study can also be compared with existing literature on conveyance rates for physical health.

The rates of conveyance following self-harm obtained from previous audits vary considerably from 45% (Batson et al., 2006) to 95% (Whitfield et al., 2013) making comparisons difficult. The proportion of conveyance reported by Whitfield et al. (2013) offers the closest comparison to the findings in the current study, with both reporting similarly high proportions of conveyance, indicating the possibility of a ‘conveyance culture’ in at least some other NHS trusts. Whitfield et al. (2013) reported a conveyance rate across three large ambulance services in Wales and the South East of England. Batson et al. (2006) completed a service audit on emergency department records for self-harm at a Sheffield hospital and cross-referenced these with the local ambulance trust’s records, reporting a conveyance rate of 45% - a figure which varies considerably from the present study’s findings of 87%. Batson’s research, however, was completed prior to the formation of YAS from smaller local NHS trusts so their data does not cover the same ambulance trust or areas as the current study, which may partly explain the differences in rates. In addition, Batson’s audit was completed more than a decade ago so there is the potential for changes in practice and procedures regarding self-harm conveyance since their data were collected, particularly following the revisions of the Mental Health Act in 2007 and the Mental Capacity Act in 2005. Some of the participants in Study 2 acknowledged that they had noticed changes in practice over time, but were unable to cite specific reasons why these changes may have occurred although they recalled having an update to their training in

making capacity decisions around the time that the Mental Health Act and Mental Capacity Act were revised. It is likely that ambulance services have different policies and practices and this may account for some of the variation in proportions of non-conveyance. For instance, emergency calls made within the area covered by YAS have specialist triage by the mental health nurses, and this has been shown to reduce the amount of ambulances despatched from the call centre (O'Hara et al., 2016). The high proportions of conveyance seen in the current study may in part be due to the success of this triage service, meaning that ambulances that are despatched are for those who are in greater need and are more likely to be conveyed.

National statistics for ambulance service performance indicate rates of non-conveyance (including treatment at home or conveyed to a location other than the emergency department) at 36% in 2014 and 37% in 2015 (Health and Social Care Information Centre, 2015). Similarly the rates of events treated at home were reported at 29.7% for Yorkshire in the year 2015-2016 (National Audit Office, 2017) but neither of these reports offered a breakdown of non-conveyance rates for mental health compared with physical health events. In terms of differences between ambulance responses to mental health and physical health events, again it is likely that conveyance rates for physical health will vary depending on the nature of the emergency, but one available study reports only 60% conveyance for 999 calls related to falls in the older adult population (Snooks et al., 2006). This suggests that conveyance rates may sometimes be lower for physical health compared to mental health callouts. This comparison, in addition to the staff's sense that conveyance rates for self-harm are high, implies that people who self-harm are being conveyed to the emergency department perhaps unnecessarily.

When considering reasons for conveyance, staff in Study 2 reported that they conveyed for many reasons including medical necessity (giving examples of self-poisoning), a way to provide the person who has self-harmed with access to services, a place of safety and because the person was alone. Staff also suggested that in an urban setting it is quicker to convey to the emergency department than to choose to not convey, compared with a rural setting where it takes a longer time to get to the emergency department. It may be that there are higher conveyance rates in urban areas compared to rural areas, although Yorkshire is the largest county and covers a broad geographical area, with both urban and rural areas, so is likely to remain fairly representative of the national proportions of conveyance in the United Kingdom. Gratton, Ellison, Hunt and Ma (2003) also explored reasons for emergency department conveyance, asking both paramedics and the receiving emergency department to independently assess adult patients conveyed to the emergency department on

specific criteria (including the patients' potential for self-harm). The ratings from staff suggested that up to 61% of emergency department conveyances were unnecessary, with ambulance service staff agreeing that "a significant percentage of patients did not require ambulance transport to the emergency department." (p.466). In the current study there was acknowledgement that emergency department was often felt to be the only, but not necessarily best, option:

"I think it's a bit unfair when they are told to call an ambulance, and also told to go to A&E. It's the wrong place for them. They haven't got time for them and they'll say I don't want to go to A&E because they never talk to me, they just ignore me and it's like well why did you call us because where did you think we are going to take you. We can't take you to anywhere else because there isn't anywhere else."
(Participant 3)

4.2.1.2 Time of day

Around a quarter of all visits by ambulance crews for self-harm were made out of usual working hours for mental health services, between 9pm and midnight. Lilley et al. (2008) identified a similar pattern whereby half of all visits to the emergency department for self-harm were made between the hours of 8pm and 3am. Prothero and Cooke (2016) reviewed YAS data for calls relating to 'mental health crisis' over one-month and demonstrated a similar pattern, with most of the ambulance crew visits occurring 'out of hours'. The implication is that the ambulance service is called and the emergency department may subsequently become the default destination of conveyance, because other services are not available. This is corroborated by the Study 2 theme of 'I'm not supported', which reflected the difficulty staff have in accessing alternative support to the emergency department and highlighted staff awareness of the sense that the majority of episodes are occurring 'out of hours':

"...it just seems whenever you're in that situation with that patient it always seems to be that we're involved when those other services aren't available which is probably why we're there in the first place." (Participant 6)

4.2.1.3 Patient demographics

In Study 1 a similar pattern of self-harm was identified for males and females within the sample. This is in line with the emergency department literature reporting similar rates for adult males and females presenting with self-harm (Lilley et al., 2008). In the analysis we

found that patients aged 50 and over were more likely to be conveyed (95%) than patients aged under 50 (85%). There are a variety of possible reasons for this finding, including a potential link between accompaniment and age. Gender and age did not feature much in the Study 2 findings, although staff reported that people were very likely to be conveyed if they were alone (“*We would [convey] just I think majority of times because they’re on their own*” Participant 5). It could be hypothesised that older patients are more likely to be alone and therefore more likely to be conveyed. It was not possible to explore reasons for variation in conveyance rates according to age with any reliability due to the sample size of the current study.

4.2.1.4 Police presence

In Study 1 police presence was recorded in 35% of episodes of self-harm, which is slightly higher than often reported in the literature (Prothero & Cooke, 2016). Conveyance rates were higher when police were not on scene. It could be that the police are called for support in those episodes where the person who has self-harmed is more ‘hostile’ or is refusing conveyance to hospital. In Study 2 there was an indication that this may be the case, with staff saying that they themselves call the police in a number of situations including: where there is danger or hostility (“*...if they start to get a little bit nasty then definitely I would be calling the police*” Participant 3) and where they are not sure what else to do (“*you’d say ‘get me the police’ and if they wouldn’t come you were really a bit stuffed really. Sometimes that’s your last resort now to get the police...*” Participant 3).

4.2.1.5 Alcohol

Alcohol was reported as having been consumed by almost half of the people visited for self-harm (44.5%). This is higher than reported by Prothero and Cooke (2016), who found 37% alcohol consumption across a one-week sample of YAS data. The perception of staff in Study 2, however, was that “*The vast majority of patients that we come into contact with that have self-harmed I would suggest are generally either intoxicated or have used drugs*” (Participant 4). The data from Study 1 suggests lower levels of intoxication. It may be that alcohol is perceived as a bigger problem because it is seen as a “*barrier to properly assess and treat people*” (Participant 5), or perhaps figures from Study 1 may have been lower because of inconsistencies in recording information on the PRF.

4.2.1.6 Method of self-harm

Self-poisoning was the most common method of self-harm in the sample, which is in line with self-harm methods recorded in the existing hospital-based literature - with people who have self-poisoned being particularly likely to access health services and the emergency department (Horrocks et al. 2003; NICE, 2004). Lilley et al. (2008) also demonstrated that self-poisoning was the most common form of self-harm among hospital attendances. However, by comparing people who had self-harmed by cutting with people who had self-harmed by any other method, they identified that those who self-cut receive significantly less assessment in the emergency department and they have less aftercare arranged. A similar comparison was made in Study 1 by splitting the data by self-harm method to enable a comparison of self-cutting with all other methods of self-harm. This showed that people who cut themselves were significantly less likely to be conveyed to hospital. Possible reasons for this were identified in the interviews in Study 2. Staff expressed their thoughts about patients and shared observations from their experience. For example, reporting that they perceive many callouts for self-harm to be due to cutting:

“...The classic trip would be just the cuts on the forearm I guess.” (Participant 4)

“So we turn up and we see superficial... nine times out of ten its superficial cuts to their arms and usually you would notice old scars from previous self-harming.” (Participant 5)

The perception is that these are more common than data from study 1 would suggest. Participants also revealed that self-cutting was often seen as less severe:

“I mean quite often there [is not] necessarily... any treatable injury and sometimes the wounds are very very superficial...” (Participant 2)

Paramedics are trained to deal with people who are in life-threatening situations and the above descriptions of self-cutting as lacking in severity, suggest that they may be more likely not to convey these patients and also feel that in many cases there is little for them to do. It may also be that these callouts are memorable because of the inferred lack of potency felt by the ambulance staff, so appear to be more frequent.

4.2.2 Discussion of the Study 2 results

There were six major themes identified in the interviews and the themes are discussed below in relation to existing literature. Since the start of the current study Rees, Rapport,

Snooks and Patel (2017) have published findings from interviews with ambulance staff about their experiences of working with people who have self-harmed. Their publication is a welcome addition to an area previously not researched and allows for some comparisons to be made between their findings and the current research. Rees et al. (2017) identified two overarching themes, which were termed “professional, legal, clinical and ethical tensions” and “relationships with police” (p.62). There are many areas of overlap between the Rees et al. (2017) findings and those from the current study, for example, the use of “surreptitious practices” such as coercion and that staff ultimately want what is best for the patient and a lack of confidence in staff when working with self-harm, identified in theme 1 of the current study (p.61). Rees et al. (2017) report that staff feel that they are not backed up in their decision-making, which is mirrored by theme 4 in the current study ‘I’m not supported’. Staff fear “sanctions that could be imposed on them” (Rees et al., 2017, p.62), which is mirrored by theme 5 ‘It’s more than your job’s worth’. Staff in Rees et al. (2017) also express a lack of confidence in dealing with self-harm, which is similar to theme 3 ‘I’m not sure what I’m doing’ – a linked series of concerns that echo the findings of the current study. Methodologically the two qualitative investigations share similarities in that they were both conducted with few participants and with one ambulance service. There were also differences between the studies with Rees et al. (2017) focusing on the systemic influences on paramedics whereas the current study focused more on the decision-making process and experiences of ambulance staff. The studies also used differing methods of qualitative analysis and the Rees et al. (2017) study took place in a different ambulance trust so there will likely be differences in working practices and culture. In the current study two participants had previous experience in another ambulance service and commented on the differences in cultures, with an indication that there is a particularly strong culture of conveyance in Yorkshire.

4.2.2.1 Theme 1 ‘I’ll do my best to help’

This theme identified the desire of staff to help people who had self-harmed and to do their best for them. One of the sub-themes was around frustrations felt, which stood in contrast to the desire to do something to help. If staff feel unable to help (“*there is not a lot we can do*” Participant 4) or the person who has self-harmed won’t accept help, or does not actually need emergency care (“*It’s a case of... the majority of time they don’t even need dressing, they just need a bit of a clean and the cuts generally aren’t deep enough to cause any significant damage...*” Participant 5), then this can lead to staff feeling frustrated that they are not, in fact, helping anyone. This may reflect an emphasis in the training of ambulance staff (and indeed many health staff) training on action, on problem solving and treating.

When faced with inaction, such as when dealing with people who have self-harmed who do not have a specific medical need, this might lead to frustration. In turn, this may generate negative views towards the patients, perhaps seeing them as preventing the crews from taking action elsewhere with a different patient. Existing literature acknowledges the frustrations that can occur when working with patients with mental health difficulties (O'Hara et al., 2016).

4.2.2.2 Theme 2 'I worry about getting it wrong'

In this theme staff reported their "*niggling doubt[s]*" (Participant 4) about their decision to not convey a person who has self-harmed. Their worry about a patient can have a detrimental impact on their own wellbeing "*you fill up with it eventually*" (Participant 2). It is important to note that some of the interviewees volunteered to take part because they expressed having a special interest in mental health, which may influence the generalisability of the results (e.g. because they have personal experience of mental health or feel more anxious about mental health related calls). It is possible that this special interest in mental health is not common amongst ambulance service staff, although it may make more sense that there is a growing interest in mental health based on a variety of factors (e.g. the media discourses around paramedic pressures, mental health awareness, NHS staff and 'burnout', increased callouts relating to mental health). In Study 2 staff reported that the stigma around mental health (in relation to patients and staff) had improved over time and there was a greater awareness of staff mental health needs. Porter et al. (2007) completed interviews with ambulance service staff on non-conveyance (not specific to self-harm) and staff in their sample also reported a worry about making the 'wrong' decision when leaving a patient at home.

4.2.2.3 Theme 3 'I'm not sure what I'm doing'

Staff raised their concerns about a lack of training in self-harm and mental health, reporting a lack of confidence in dealing with mental health patients as a result. A call for more self-harm training for paramedics is also supported in the existing literature (Jones & Avies-Jones, 2007; Blackwell & Palmer, 2008; Porter et al., 2007). Ambulance staff have previously reported concerns about inadequate self-harm training and the detrimental impact that this may have on patient care (O'Hara et al., 2016). Taylor et al. (2009) concluded that service users thought that increased staff training in self-harm would result in increased understanding and better service provision. In the descriptions of their own clinical work, however, staff in the current sample demonstrated considerable awareness of and

compassion for patients who self-harm. Even when they described actions which at first do not seem to be related to mental health, such as taking blood pressure, this may reflect their desire to do something constructive and may also be seen to be providing emotional regulation to the person in their care (e.g. the action of taking blood pressure providing gentle contact and caregiving that may benefit a person in distress).

4.2.2.4 Theme 4 ‘I’m not supported’

In this theme staff acknowledged times that they do feel supported by external services and by their own organisation YAS. For example, they spoke highly of ambulance and police services working together on polmed, or the police-para RRV, which is described in the extract below:

“...locally we have got a resource that the police refer to as polmed and we call it the police-para RRV, but basically it’s a rapid response vehicle where you work with two special police officers and it’s run generally on weekend nights... and they go to the kind of calls that an ambulance would stand off from... polmed is designed that you can go straight in and get the assessment done.” (Participant 4)

In general, though, staff described working with limited resources and feeling alone with their decision-making, a feeling that is supported in the Rees et al. (2017) research. Feeling unsupported in decisions about non-conveyance was also reported by ambulance staff in the research by Porter et al. (2007).

4.2.2.5 Theme 5 ‘It’s more than your job’s worth’

This theme identified staff fears of being blamed and of losing their jobs if they made a wrong decision, something which many felt which contributed to the culture of conveyance. This is supported by Porter et al. (2008) who suggested that paramedics are aware of the need to “cover their backs” due to fears of retribution (p.294). This need to respond cautiously is also demonstrated by staff behaviour when they non-convey, predominately doing so because of patient refusal to travel to the emergency department. In such an event they reported completing the refusal forms precisely in case it is questioned later:

“I use their exact words and whether there were family present and what advice we gave them.” (Participant 1)

One of the sub-themes within theme 5, ‘self-harm is risky’, captured ambulance staff perceptions that self-harm carries a high level of risk which warrants conveyance. There is

evidence for self-harm being seen as risky in terms of the high level of risk between self-harm and subsequent suicide (Owens et al., 2002). Ambulance staff in the current study acknowledged this risk and reported that it impacted upon their conveyance decision making. However, this may not be a shared view across other staff groups as one systematic review identified that there is a tendency for staff to underestimate risk (Saunders et al., 2012). Psychological theories of decision-making, such as Cognitive Dissonance Theory (Festinger, 1962), may help to explain some of these seemingly contradictory findings. Ambulance staff have a decision to make about conveyance and in the current study staff reported a motivation to ‘...do [their] best to help’ but expressed a lack confidence in working with people who self-harm (‘I’m not sure what I’m doing’). In this instance viewing self-harm as risky would create a dissonance (psychological discomfort) and when experiencing dissonance a person is motivated to try to reduce it. Thus, conveyance to the emergency department could be seen as an outcome that reduces dissonance and the staff member would return to feeling that they had done their best. To continue this example, increasing staff knowledge and confidence that they can manage potential risk and convey to alternative locations could reduce some of the discomfort in conveyance decision-making for self-harm.

4.2.2.6 Theme 6 ‘Conveyance culture’

The idea that there exists a culture of conveyance within the ambulance service was identified by staff and is supported by existing literature, which suggests that people who self-harm are automatically conveyed except in cases of refusal (Snooks et al., 2013). Data within this theme included staff comments about the possibility of a cohort difference between the ‘old guard’ and more newly qualified staff. It was not possible to explore the level of experience of the ambulance service staff in Study 1 because much of the information about the attending crew was redacted for anonymity. Staff suggested that there was a difference between the old and new staff but it is not possible to say why this difference occurs. Staff mentioned the origins of the ambulance service as a transport resource as a contributing factor to the culture of conveyance and this might also explain the possible cohort difference – presumably those seen as the ‘older guard’ would be more aligned with this view having worked in the ambulance service for many years. It is also likely that the newer staff experienced different training, reflected in some comments about the ambulance service moving to “*a BSc only profession*” (Participant 6) and this might include more teaching on mental health. Finally, there have been social and societal culture shifts that have brought mental health into the spotlight more recently and which may have influenced more recent recruits:

“...just like everything else in regards to mental health over the last few years it’s started to come into the spotlight a little bit hasn’t it?” (Participant 2)

As aforementioned there is a lack of knowledge and understanding of self-harm and mental-health amongst ambulance service staff and with an increasing number of 999 calls received for mental health there is a need for the training to reflect the demands of the job.

4.2.2.7 Overall discussion of Study 2 results

Whilst it is difficult to separate out all of the factors influencing ambulance service staff in their decision-making around conveyance, these findings might go partway to explaining high conveyance rates reported for people who self-harm.

4.3 Visit to the Emergency Operations Centre

As mentioned in the Introduction chapter, I was able to arrange a shadowing visit to the Emergency Operations Centre prior to data collection for Study 2. During my visit I shadowed a call handler and one of the mental health nurses. Being able to listen to and ask questions about the way that they work and about mental-health related calls, helped me learn about service structure and the triaging process that occurs before ambulances are dispatched. Through informal discussions with staff I learned that mental-health related calls are accompanied by a sense of dread for some of the call centre staff too. This might indicate a parallel between the ambulance crews feeling “*ill prepared*” (Participant 6) and Emergency Operations Centre staff feeling similarly uncomfortable. There was a sense in the interviews that ambulance crew staff are aware of the role that mental health nurses in the Emergency Operations Centre play in reducing some of the calls that the ambulance crew are called to:

“...they [mental health nurses in the Emergency Operations Centre] triage a lot of stuff so that takes some of the workload away from us guys, I think.” (Participant 6)

This is supported in a service audit of the introduction of mental health nurses at YAS, which showed lower levels of ambulances being dispatched because the mental health nurses were triaging calls (O’Hara et al., 2016). During my visit at the Emergency Operations Centre, I also learned that mental health nurses make call-backs and if the person who has self-harmed does not answer after three calls then an ambulance is automatically dispatched. This protocol affects resources and was also raised as a frustration by one participant in Study 2:

“...it seems like a bit frustrating to some of the healthcare professionals that when you’ve got somebody who’s got that proportion of unproved harm we still have to play it ultimately safe and at what point do you say that actually that person has become such a drain on resources that are not there for other patients that we’re still doing that, I suppose. I understand why we have to but you think there’s got to be some better way of being able to support that individual because they’ve got complex needs.” (Participant 6)

4.4 Methodological considerations

The purpose of this section is to acknowledge any problems and strengths in the current research. The reliability and generalisability of the research findings will also be considered.

4.4.1 Limitations

4.4.1.1 Data collection

One of the limitations for study 1 was the research team’s limited control over the information received from YAS. Firstly, obtaining the data in this way meant that, due to the redaction of identifiable information, any repetition of self-harm could not be captured in the sample. The criteria used by YAS for filtering out PRFs were not explicitly shared and there was a large number of PRFs removed by YAS, an estimate of 56% of PRFs from callouts relating to self-harm (407/726). This estimate was calculated from data received from YAS about the total number of ambulances dispatched for self-harm related calls and the number of PRFs that were ultimately received for the current study. Our research team removed a further 11% of the PRFs received, as we did not consider them to be self-harm. It is unclear whether the large number of PRFs removed by YAS, estimated at 407 PRFs, were removed because they were not considered by them to be self-harm, that there was missing paperwork, or some combination of the two and possibly other factors. If I were to repeat the study I would provide written information on the research definition of self-harm prior to data collection in the event that this might have been a factor. The research definition of self-harm was discussed in planning meetings and YAS received a copy of the transfer document for the write-up of this research, but perhaps not enough attention was drawn to the definition.

The lack of control over the information received from YAS resulted in a second data request being submitted to YAS, which delayed the research timeline. As described earlier,

the initial code 25 ('psychiatric/abnormal behaviour/suicide attempt') data received from YAS fell far short of rates presented in emergency department literature and from monitored data in Leeds hospitals a few years earlier (Birtwistle, Kelley, House, & Owens, 2017). This led to the second data request for calls coded as 23 ('overdose/poisoning') to address the low numbers of people who have self-poisoned in the initial data sample. The final numbers appear to support previous hospital-based literature, for example, in terms of expected proportions per method of self-harm (Kelley & Owens, 2009; Lilley et al., 2008), although the exact reasons for many cases being filtered out by YAS remain unclear. It might also be that codes 23 and 25 were insufficient to capture the majority of calls made to 999 following self-harm.

In an attempt to clarify the number of PRFs received for Study 1, YAS provided summary data on the total number of calls received, ambulances dispatched and conveyance and non-conveyance rates for calls coded as 23 and 25 in both May and June 2016. In terms of the number of ambulances dispatched the overall rates of non-conveyance for May 2016 were 46% for code 23 compared with only 23% for code 25. Given the lower rates of non-conveyance for code 25, it seems likely that those episodes where the patients were deemed to be 'psychiatric' or 'behaving strangely' were more likely to be non-conveyed and more likely to have their PRFs removed by YAS because they were not self-harm episodes. Another possibility for the lower rates of non-conveyance for code 25 in the current sample is that more of the non-conveyed paperwork was missing. The PRFs are completed on a paper form with carbon copy and returned to YAS for administrative purposes, but YAS informed me that some go missing due to human error. Although it might follow that if Study 2 findings are representative and staff are concerned about 'covering their back', then they may be more committed to ensuring that paperwork was filed for people that they have not conveyed.

4.4.1.2 Selection and responder bias

Recruitment for Study 2 was limited due to the self-selected nature of the sample. As a consequence all participants who volunteered were employed by YAS within varying forms of the paramedic role and the final sample contained no staff employed in a non-paramedic role. Most people expressing an interest in taking part in the interview study held paramedic roles, which may partly have been due to the limited time that staff had to respond to the recruitment advertisement. Since ambulance staff work in shift patterns they may have reduced accessibility to their work emails during shifts - participants in the study stated that

shift patterns reduced the available time that they had to complete other electronic tasks like ‘e-learning’.

Unfortunately, the original timescales for advertisement and recruitment could not be adhered to because of earlier delays in the ethics process, but if they had been then it is likely that more non-paramedic staff may have been included. I was still able, though, to interview staff of varying grades of paramedic role, which provides some diversity within the sample. A further possibility is that the advertisement for the study through the staff bulletin may have deterred some staff with strong opinions because the study was being advertised through their employer. However, there was diversity in the opinions expressed at interview including some that might have been considered controversial (e.g. feeling unsupported by YAS). Staff might have been willing to participate and express their feelings knowing that they would be anonymised in the write-up and that the research team were from an external organisation, or they may simply have appreciated the opportunity to talk about the pressures of the job.

As mentioned previously, there could have been a willingness to participate because of a special interest in mental health, based on a personal resonance, a reticence about dealing with mental health calls, or heightened awareness about mental health (for example, staff perception that it is a large part of their workload). I have found no published data to say exactly what proportion of ambulance service staff workload is made up of self-harm. However, inferences can be made from the wider literature as self-harm is considered to be “one of the most common presentations to general hospitals” (NICE, 2004, p.25) and almost 60% of those who had self-harmed and presented to the emergency department arrived by ambulance (Kelley & Owens, 2009). In contrast, O’Hara et al. (2016) reported that mental-health related calls are estimated to make up only 4% of all calls made to YAS. Reasons for staff perception that self-harm comprises a large part of their workload may include pressure on staff in an “*overstretched NHS*” (Participant 6) and the reported lack of confidence could have resulted in the workload seeming overwhelmingly larger than it may be in reality.

In Study 2, the sample limits the generalisability of the findings because it includes staff employed by one ambulance service in one region of the UK. It is possible that the results would have been different if the research was based in a different ambulance service. For example, participants in Study 2 reported the view that there is a lack of availability of services to support non-conveyance, but that the structure of service funding in the UK, including the role of local Clinical Commissioning Groups (Kings Fund, 2016), means that service availability probably varies by region. This could then influence the experiences and

perceptions of staff. On the other hand, the region included in the current study is a geographically diverse one with many CCGs and staff in Study 2 report that there was varying degrees of service availability within the region (e.g. crisis services responded differently in certain areas) so it may still be somewhat representative of other regions in this respect.

4.4.1.3 Telephone interviews

The majority of the interviews in Study 2 were conducted via telephone at the request of the participants. There are limitations to conducting telephone interviews such as having less control over the interview space and being unable to read visual cues when there are pauses in speech (Braun & Clarke, 2013). For instance, there were both potential and actual disruptions to the telephone interviews (e.g. waiting for a delivery and family members interrupting). During the first telephone interview conducted I found it noticeably more difficult to interpret pauses in speech because I misinterpreted a pause as the participant having finished speaking when they were pausing to think, causing me to inadvertently talk over them. This may in part have been due to interviewer nerves but it may also be because telephone interviews are more difficult to interpret by their nature. In comparison, the two participants who requested a face-to-face interview said that they did so because they felt they would be better able to express themselves face-to-face rather than on the telephone. However, comparisons between face-to-face and telephone interviews have suggested that there is little difference between them (Sturges & Hanrahan, 2004). The use of telephone interviews in the current study was seen as more convenient because they could be arranged at short notice and were a practical option when arranging interviews with staff across a large geographical area and in the event of a shortage of time before the project had to be completed.

4.4.1.4 Transcription

The transcriptions in Study 2 were completed orthographically with the interviewer's questions and the participants' responses written out verbatim. Interjections from the interviewer that indicated listening were not written in the transcripts in order to prevent any disruption to the flow of the written transcript to enable analysis. Potter and Hepburn (2005) make the suggestion, however, that removing interjections, as I did, interrupts the interaction and is in essence "deleting the interviewer" (p.299). In the current study the choice to omit these interjections was merely practical as participants were speaking for long periods of time so the written speech would often be broken up.

4.4.2 Strengths

4.4.2.1 Generalisability of PRF data

YAS provided overall summary data for May and June 2016, which included the number of 999 calls made for codes 23 and 25, the number of ambulances dispatched and the number of episodes of conveyance and non-conveyance. The ability to compare these figures means that we can see that the May 2016 data are comparable and there are not unusually high or low rates for the period included in the research.

4.4.2.2 Interviewer conduct

The dual role of the researcher as a Psychologist in Clinical Training may have helped the study in some ways. I have been regularly observed and evaluated on my clinical interviewing skills, which are transferable to research interviewing skills and are considered to be beneficial to conducting qualitative research (Dilley, 2000). Throughout the research I have maintained close links with YAS to ensure the smooth running of the project and attended visits to learn more about the service structure, for example by my visit to the Emergency Operations Centre described above.

4.4.2.3 Adding to the existing literature

There is a lack of research in this area and the data collected for the current study still provides one of the largest and most comprehensive exploratory studies in this area. The recent publication by Rees et al. (2017) points towards continuing interest in this area and the current study is timely. The current research responds to the recognised need for further research with paramedics to understand their attitudes to self-harm (NICE, 2004; Rees et al., 2014).

4.5 Quality checks

Mixed methods research is determined by some to be of high quality when there are clear, and “well-considered, justified rationales for the decisions made” (Halcomb & Hickman, 2015, p.46). I have endeavoured to provide transparent explanations for my decision-making throughout. There were specific quality checks used in this research, for example supervision and respondent validation, as well as guidelines and checklists that I have used to measure the study against, which are outlined below.

4.5.1 Checklist for ‘good’ thematic analysis

There are several checklists for assessing rigour in qualitative methods. It seems most relevant to use the one developed by Braun and Clarke (2006) to determine a ‘good’ thematic analysis because their guidelines were followed in completing the thematic analysis for the current study. As outlined previously, the phases of the Braun and Clarke (2006) step-by-step guidelines for thematic analysis were followed, which leads me to believe that I have matched the Braun and Clarke (2006) criteria. The 15 points cover the processes of transcription, coding, analysis and writing up. In particular, I have taken care to position myself in an active role in the analytic process, identifying themes rather than them ‘emerging’ from the data. In their criteria Braun and Clarke (2006) state that transcripts are checked against the audio recordings, and that all of the data items are considered in the coding process. In the current study the transcripts were completed orthographically, with inaccuracies corrected by listening back to the audio and the coding was completed line-by-line to give equal weight to the entire dataset. The write-up provided a narrative about the experiences of the ambulance staff interviewed and the analysis is completed to a sufficient level, with “thorough, inclusive and comprehensive” coding and themes (Braun & Clarke, 2006, p.96). The level of comprehensive care that I had in my approach to identifying themes has resulted in an analysis where “the themes work together to tell a story about the data” (Braun & Clarke, 2013, p.270).

4.5.2 Supervision

In qualitative research researcher reflexivity is considered to be an important part of the research process (Braun & Clarke, 2006; Dille, 2000). Researcher reflexivity allows the researcher to reflect on their experiences in interviews and adapt future interviews accordingly; for example in response to any biases that they might hold. Throughout Study 2, I was able to have regular supervision with the research team and share my reflections and experiences of the qualitative research process. Supervision helped me to maintain a sense of confidence in analysing the interviews.

4.5.3 Respondent validation

The decision to seek respondent validation from the research paramedic who was advising on the study was a strength to the research. The research paramedic had many years of experience as a paramedic working in ambulance crews and with people who have self-harmed. It would have been beneficial to contact the study participants for more accurate

participant validation, but due to time constraints this was not a design feature that was possible. The process of respondent validation allowed us to determine whether the themes identified in Study 2 resonated with people who work in ambulance services.

4.6 Future research

The current research was inevitably restricted in its data collection, and it would therefore be beneficial to repeat the method used in Study 1 with a larger sample over a longer time period and more geographical regions. The permissions for the current research were significantly delayed resulting in unavoidable haste in the quantitative data handling and subsequently with the interviewing. If I were to replicate this research I would pursue the integrity of the quantitative data more thoroughly with repeated questions back to YAS (e.g. I would have liked to include the data on Under 18's but these data were not made available to us). With added time I would have been interested in contacting YAS to see whether the redacted information on the attending ambulance crew could be provided in order to investigate the emerging ideas around a cohort difference between the 'old guard' and the more newly qualified staff. This could be explored in future research with purposive sampling of ambulance staff with different educational routes and years of experience. Rees et al. (2017) recruited staff of varying grades and educational background in their research but in a different ambulance service so it would not represent the local experience of clinicians in YAS.

4.7 Clinical implications

From the existing literature it is known that emergency department attendances due to self-harm are many and one Leeds study indicated that more than half of the people who were treated in the emergency department for self-harm had been conveyed there by ambulance (Kelley & Owens, 2009). The current research findings help to establish the pre-hospital care routes for self-harm. In Study 2 participants had their own suggestions for how to improve services, including additional tools and flowcharts available to staff to aid their decision-making. There was also a suggestion for a "*mental health ambulance receiving unit*" (Participant 4) as an alternative destination to convey people who have self-harmed, with a similar suggestion made by participants in Rees et al. (2017) study. There was a sense that staff had a lack of options for referring, stating that the emergency department was not ideal but it was the only practicable destination for conveyance. O'Hara et al. (2016) reported that staff may convey to the emergency department because of a lack of alternatives. It seems that there is a growing acknowledgment of the need for a greater

variety of referral pathways for people who have self-harmed once they have come into contact with ambulance services.

Although participants noted that they have many different training needs and need to be able to deal with a myriad of conditions and presentations on callouts, they acknowledged that there are a growing rate of mental-health related calls and they feel unprepared to manage them. As well as believing that they had a lack of knowledge around self-harm, participants expressed a lack of awareness or understanding about the roles of supporting services, for example:

“We have got a mental health street triage team as well that I forgot to mention... I don't know what they do.” (Participant 4)

In response to calls from the Mental Health Concordat (Department of Health, 2014) for services to communicate better and to provide integrated services for people in mental health crisis, a multi-agency simulation-based training programme is being piloted in North East of England. The training, titled Respond, includes agencies such as the police, mental health services and ambulance services, and a recent evaluation has been commissioned but is not yet published (Northumberland Tyne and Wear NHS Trust, 2017). If this, or similar, training were available then it may also provide staff an opportunity to experience their skills as valued by other professionals and that they are not seen as ‘just a paramedic’.

Whilst collating the ‘sources of support’ (Appendix I: Study 2 Sources of Support) document for Study 2 it seemed as though there were a lot of resources within and external to the service for staff under pressure. In Study 2, however, despite participants identifying that there had been positive shift in the views about staff mental health, participants still reported a perceived pressure to be “*bulletproof*” (Participant 2). This leads to a suggestion that ambulance services work to ensure that staff feel supported within the organisation to talk openly about the impact of the emotional work that they do, and about their own wellbeing.

4.8 Conclusions

To summarise the main points from the current study:

1. There is a gap in the existing literature about pre-hospital care routes for self-harm, the clinical outcomes for people who dial 999 following self-harm, the experiences of ambulance service staff in working with people who self-harm and the conveyance decisions that they make.
2. A mixed methods research project was completed using paperwork completed by ambulance crews for each clinical callout and interviews with ambulance service staff.
3. The clinical characteristics of people dialling 999 after self-harm were reported alongside high rates of conveyance in the local area (87%).
4. There are a number of contributing factors that influence ambulance service staff decision-making around conveyance including fear of retributions if they make a 'wrong' decision (further harm to patient, blame, loss of job), feeling unskilled in working with people who self-harm and an overall culture of conveyance within the ambulance service.
5. There are a number of recommendations for future research and improving clinical practice, including a need for self-harm training for crews and replication of results using a larger sample.

In conclusion, the first contact that people who have self-harmed often have with services is with the ambulance services that attend following a 999 call. Though this has received comparatively little attention in the literature, the crews are expected to provide immediate assistance and make what may be a crucial decision on what to do next – including conveyance to emergency department. This study revealed that conveyance to the emergency department is by far the most common outcome. As the interviews revealed, however, the crews themselves often feel unskilled in making such decisions. It is suggested that crews are better supported and receive more training in order to provide a range of conveyance options, other than the emergency department, to the patients in their care.

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7 Appendix B: Study 1 SPSS Variable View

	Name	Type	Width	Decimals	Label	Values
1	Form_ID	Numeric	8	0		None
2	City	Numeric	8	0		{1, Leeds}...
3	Date	Date	10	0		None
4	Time_arrived	Date	5	0		None
5	Time_left	Date	5	0		None
6	Duration_visit	Numeric	8	0		None
7	Sex	Numeric	8	0		{1, Male}...
8	Age	Numeric	8	0		None
9	Under_25	Numeric	8	0		{1, Yes}...
10	Over_50	Numeric	8	0		{1, Yes}...
11	Alcohol	Numeric	8	0		{1, Yes}...
12	CP	Numeric	8	0	Child Protection	{1, Yes}...
13	Hostile	Numeric	8	0		{1, Yes}...
14	Drugs	Numeric	8	0		{1, Yes}...
15	VA	Numeric	8	0	Vulnerable adult	{1, Yes}...
16	Social	Numeric	8	0	Social issue	{1, Yes}...
17	LD	Numeric	8	0	Learning disabili	{1, Yes}...
18	Safeguarding	Numeric	8	0	Safeguarding ref	{1, Yes}...
19	Mental_cap..	Numeric	8	0		{1, Yes}...
20	Consent	Numeric	8	0		{1, Yes}...
21	DoLS	Numeric	8	0		{1, Yes}...
22	GCS	Numeric	8	0	Record lowest	None
23	Consciousn...	Numeric	8	0	Record lowest	{1, A - Alert}...
24	SH	Numeric	8	0		{1, Yes}...
25	SH_method	Numeric	8	0		{1, Cutting}...
26	OD	Numeric	8	0		{1, Prescrib...
27	InjuryYN	Numeric	8	0		{1, Injury pre..
28	MH_diff	Numeric	8	0	Current	{1, Yes}...
29	MH_hx	Numeric	8	0		{1, Yes}...
30	SH_hx	Numeric	8	0		{1, Yes}...
31	Medical_trea	Numeric	8	0	Medical treatme	{1, Yes}...
32	MH_referral	Numeric	8	0		{1, Yes}...
33	Police	Numeric	8	0		{1, Yes}...
34	Conveyed	Numeric	8	0		{1, Yes}...
35	Pt_outcome	Numeric	8	0	Referral_locatio	{1, Bed bure..
36	Reason_non..	Numeric	8	0		{1, Refusal}...
37	Notes	String	22	0		None

8 Appendix C: Study 2 Recruitment Advert



UNIVERSITY OF LEEDS

RECRUITMENT INVITATION

Self-harm and non-conveyance: Ambulance service staff perspectives

Are you a front-line clinician for Yorkshire Ambulance Service? If so, I want to talk to you! My name is Emily Jenkins and I am a researcher for the University of Leeds. I would like to interview clinicians about their experiences of treating people who self-harm. If you are interested and would like some more information about taking part please contact me (umejj@leeds.ac.uk 07486851291). The interviews can be done on the telephone or face-to-face (travel costs will be reimbursed) and will last no more than one hour. You will receive a £10 Amazon voucher to thank you for taking part. The research has received support from the YAS Research & Development department and ethical clearance from the University of Leeds School of Medicine research and ethics committee. (Reference number: MREC15-140 Date of approval 09/03/2017).

9 Appendix D: Study 2 Information Sheet



UNIVERSITY OF LEEDS

PARTICIPANT INFORMATION SHEET

Research title: Self-harm and non-conveyance: Ambulance service staff perspectives

1. Invitation

You are being invited to take part in a research study run by the University of Leeds. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and ask me (umeji@leeds.ac.uk or 07486851291) if there is anything that is not clear or if you would like more information. Ethical approval has been sought from the School of Medicine Research Ethics Committee (SoMREC project number MREC15-140) and approved on 09/03/2017.

2. What is the purpose of the research?

Relatively little is known about people who self-harm and are not conveyed to the Emergency Department (ED). The University of Leeds has commissioned Yorkshire Ambulance Service (YAS) to provide anonymous data from two UK cities (Leeds and Sheffield). An understanding of the characteristics of the people who dial 999 following self-harm will be used to inform an interview-based study with staff from the ambulance service. Ambulance service staff, who are involved in dealing with 999 calls for self-harm, including first line clinicians/accident and emergency responders will be asked questions about their experiences of treating people who self-harm. We want to understand how staff experience treating people who self-harm and the decision-making involved in whether or not those people are conveyed to the ED (or elsewhere).

3. Who can take part?

You can take part if you are currently working for Yorkshire Ambulance Service (YAS) in a position where you are responding to 999 calls. Interviews will be arranged individually with you and all efforts will be made to find a location that is both suitable and convenient for you to attend. There may be a small cost in travelling to the interview but this can be reimbursed. Details for travel reimbursement will be given on the day of the interview. There is also the option to complete the interview by telephone if this is more convenient for you.

4. What will happen to me if I take part?

Before the interview: If you decide to take part please contact me (Emily Jenkins at umeji@leeds.ac.uk or on 07486851291). I will contact you to arrange a convenient date, time and location for the interview. There will be a choice of location for the interview so you that you may choose the location that is most convenient for you or complete the interview via telephone.

University of Leeds Ethics Ref No: MREC15-140

Date of Approval: 09/03/2017

Version 3

On the day of the interview: Please allow up to 60 minutes for the individual interviews. You will be asked to sign a consent form, this should take about 5 minutes to complete and if you need any help, this will be available. You will be given a copy of this information sheet and the consent form to keep. For telephone interviews these forms will be signed electronically before the interview date. You will then be interviewed by the researcher about your experiences of working with people who have self-harmed. The interview will be recorded using a Dictaphone, or a recording device attached to the telephone, to help the researcher remember what you have said. The interview will use open-ended questions, as the aim is to get your own expertise. The discussion is not intended to be distressing but as we will be talking about your clinical experiences of working with people who have self-harmed it could be upsetting. If this was the case then the interview could be stopped, and information would be given to you of available sources of support.

After the interview: The interview recording will be uploaded to a secure University of Leeds network within 24 hours of your interview. The interview will then be written up (transcribed) either by the researcher or by a person employed to transcribe data for research purposes. At the point of transcription, or of checking the transcription, the data will be anonymised. The data will remain anonymised during the analysis and in any subsequent write up. Direct quotes may be used from participants and will also be anonymised. You will be asked at the interview if you would like to be sent a copy of the research findings. Your contact details will be retained for this purpose. The researcher may contact you again to ask for your opinion on the research findings, if you are in agreement. This is a good quality assurance check to see what your thoughts are on the findings and whether there is anything that we may have missed.

Your data including audio files, transcripts and consent forms will be kept secure within the University premises until the study has been completed and then will be destroyed by the research team within 2 years (by March 2018).

5. What are the possible disadvantages of taking part?

As the interviews will be held at a variety of locations, there may be a small cost in travelling to the interview but small travel costs will be reimbursed. Details of how you can claim this back will be given on the day of the interview. Discussing your experiences of treating people who self-harm might be emotionally challenging. If at any point in the interview you find it is too difficult to continue to participate then you can withdraw. If you cease the interview or withdraw from the study after the interview then your data will also be removed. It will not be possible to withdraw your data after seven calendar days because analysis will begin. It is important for you to tell the interviewer if you feel your participation has particularly affected you and if you feel you need further support. There will be opportunity both before and at the end of the interview to ask the researcher any questions that you may have about the research. Any risk to self or to others disclosed during interview would result in the researcher needing to breach confidentiality. You would be made aware of this and it would be done with your consent, where possible.

University of Leeds Ethics Ref No: MREC15-140
Date of Approval: 09/03/2017
Version 3

6. What are the possible benefits of taking part?

After the interview date you will be a £10 Amazon voucher as a gesture of my thanks to you for giving up your time to take part in the research. It is hoped that the research findings will help to provide an understanding of front line clinician's experiences of working with people who self harm.

7. Do I have to take part?

No. It is up to you to decide whether or not to take part. If you decide to take part in the research then you will be required to sign a consent form to confirm that you understand what is involved when taking part in this project. If you decide to take part you are free to leave the project at any point before or during the interviews without giving a reason. Following the interview you will have *seven calendar days* to contact the researcher (umeji@leeds.ac.uk) to withdraw from the research. If you withdraw from the study up to *seven calendar days from your interview date* then your data will be removed from the study. After *seven calendar days* you will not be able to withdraw your data from the research because analysis will have begun.

8. Will my taking part in this research be kept confidential?

All the information that is collected about you during the course of the research will be kept confidential. Your records will only be available to members of the research team. You will not be able to be identified in any reports or publications. If you consent to take part in this research, the records obtained while you are in this study will remain strictly confidential at all times. The paper and electronic information will be held securely under the provisions of the 1998 Data Protection Act and the University of Leeds Code of Practice on Data Protection. Your data will not be passed to anyone else outside the research team.

9. What will happen to the results?

The results of the research will be written up for a thesis project that serves as part-completion of a Doctorate in Clinical Psychology. If you agreed to do so, you will be sent a copy of the research findings via email from the researcher in early 2017. Yorkshire Ambulance Service will also receive information about the findings. The completed research will be available after the completion of the research in late 2017 and will usually be published in a psychology journal and/or presented at a conference. The publication may include direct quotes but these will be anonymised and you will not be able to be identified in any report or publication.

10. What will happen if I don't want to carry on with the research?

If you decide that you do not want to continue to participate in the research then you must contact the researcher in writing (umeji@leeds.ac.uk) within *seven calendar days* to withdraw from the research. You do not have to give a reason for your withdrawal from the research. The researcher will not contact you again unless you want to receive a copy of the research findings. Withdrawing from the study will not affect your employment with Yorkshire Ambulance Service in any way.

University of Leeds Ethics Ref No: MREC15-140
Date of Approval: 09/03/2017
Version 3

11. What if there is a problem?

If you have a concern about any aspect of this research, you may contact the research team who will do their best to answer your questions, or you may contact the study sponsor (University of Leeds) using the following contact details:

Medicine and Health Faculty Research and Innovation Office, Room 9.29, Worsley Building, University of Leeds, LS2 9NL
Email: governance-ethics@leeds.ac.uk
Telephone: 0113 343 7587.

12. Research team

If you need any further information:

Lead Researcher: *Emily Jenkins (Psychologist in Clinical Training)*

Email: umejj@leeds.ac.uk

Telephone: 07486851291

Research Supervisor: *Dr David Owens (Associate Professor at University of Leeds)*

Email: d.w.owens@leeds.ac.uk

Telephone: 0113 343 2739

Research Supervisor: *Dr Gary Latchford (Joint Programme Director, Clinical Psychology Training Programme)*

Email: g.latchford@leeds.ac.uk

Telephone: 0113 343 2736

Research Supervisor: *Rachael Kelley (National Institute for Health Research (NIHR) Doctoral Research Fellow)*

Email: R.S.Kelley@leeds.ac.uk

You can have more time to think this over if you are at all unsure. Thank you for taking the time to read this information sheet and to consider this study.

University of Leeds Ethics Ref No: MREC15-140
Date of Approval: 09/03/2017
Version 3

10 Appendix E: Study 2 Consent Form

Original to be retained and 1 copy to participant



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PARTICIPANT CONSENT FORM

Research title: Self-harm and non-conveyance: Ambulance service staff perspectives

	Participant to initial
I confirm that I have read and understand the information sheet (Version 4, dated 09/03/2017) explaining the above research project and I have had the opportunity to ask questions about the project	
I understand that my participation is voluntary and that I am free to withdraw at any time before or during the interview, without giving any reason and without there being any negative consequences. If I do not want to answer any particular question(s) then I am free to decline	
I understand that if I wish to withdraw following the interview then I must do so within <i>seven calendar days</i> of my interview date by contacting the researcher on umejj@leeds.ac.uk	
I understand that my identity will remain anonymous. I give permission for research staff employed by the University of Leeds to have access to my anonymised responses.	
I understand that my direct words may be published in a journal or used in relevant future research but that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.	
I consent to the interview being audio-recorded using a Dictaphone (or device attached to the telephone for telephone interviews)	
I consent to the storage including electronic, of personal information for the purposes of this research. I understand that any information that could identify me will be kept strictly confidential and that no personal information will be included in the study report or other publication. I agree for the data collected from me to be stored and used in relevant future research in an anonymised form	
I agree to take part in the above research project	

I would like to receive a summary of the findings and I consent to be contacted to provide feedback on the findings. My email address is:

Name (PRINT) Signature Date (dd/mm/yyyy)

Name of the researcher Signature Date (dd/mm/yyyy)

Researcher: Emily Jenkins (umejj@leeds.ac.uk)
Research Supervisor: Dr David Owens (d.w.owens@leeds.ac.uk)

University of Leeds Ethics Ref No: MREC15-140
 Date of Approval: 09/03/2017
 Version 4

11 Appendix F: Study 2 Topic Guide



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TOPIC GUIDE

Warming up:

Thank you for agreeing to the interview and to being recorded. I need to confirm that we have filled in consent and have your permission to begin recording?

I want to talk to you about your experiences of working in the ambulance service and specifically working with people who have self-harmed.

Do you have any questions for me before we start?

Intro:

Role

Length of service

Experiences of call outs for self-harm:

Typical call out for self-harm (expecting? what is it like for you?)

Experiences of non-conveyance & reasons for non-conveyance

Decision-making:

What kinds of decisions need to be made? What influences you?

What helps you with this? What kinds of things make it more difficult?

Specific issues with decision-making around non-conveyance

Looking through PAF's: familiar patient – impact?

Influences changed over time (in job)? (If policies – how changed?)

Support:

Any protocols/rules for callouts where person has self-harmed

Experiences where other agencies involved (police? Mental health nurses at EOC?)

Example: x% had police involvement

Sources of support

Are there any other factors affecting decision-making or experience?

Recommendations

Ideas to make things better

Message you'd like me to take away

What would you like to see coming out of our study?

Ending:

Thank you.

Anything else you'd like to say? Questions?

Results if asked for them – before September.

Email and amazon voucher.

12 Appendix G: Ethical Permissions



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Faculty of Medicine and Health Research Office
School of Medicine Research Ethics Committee (SoMREC)

Room 9.29, level 9
Worsley Building
Clarendon Way
Leeds, LS2 9NL
United Kingdom

© +44 (0) 113 343 1642

05 October 2016

Miss Emily Jenkins
Psychologist in Clinical Training
Dept Clinical Psychology
School of Medicine
Faculty of Medicine and Health
Leeds Institute of Health Sciences
Charles Thackrah Building
101 Clarendon Road
LEEDS LS2 9LJ

Dear Emily

Ref no: **MREC15-140**

Title: **Comparing conveyance and non-conveyance to the Emergency Department for self-harm: Prevalence and ambulance service staff perspectives (Self-harm and non-conveyance: Ambulance service staff perspectives)**

Your research application has been reviewed by the School of Medicine Ethics Committee (SoMREC) and we can confirm that ethics approval is granted based on the following documentation received from you and subject to the following conditions *which must be confirmed as fulfilled prior to the study commencing*:

- **Evidence of R&D opinion or permission from Yorkshire Ambulance Service NHS Trust must be submitted**

<i>Document</i>	<i>Version</i>	<i>Date Submitted</i>
200327509 Student thesis ethics form_signed_Version 3	3.0	27/09/2016
200327509 Student thesis_Staff resources_Version 2	2.0	26/07/2016
200327509 Student thesis_participant information sheet_Version 2	2.0	07/09/2016
200327509 Student thesis_Consent form_Version 2	2.0	07/09/2016
200327509 Student thesis_Recruitment invitation_Version 1	1.0	26/07/2016
200327509 Student thesis_Risk assessment_Version 1	1.0	26/07/2016
200327509 Student thesis_Topic guide_Version 1	1.0	26/07/2016

Please notify the committee if you intend to make any amendments to the original research ethics application or documentation. All changes must receive ethics approval prior to implementation. Please contact the Faculty Research Ethics Administrator for further information (fmhuniethics@leeds.ac.uk)

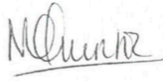
Ethics approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

We wish you every success with the project.

Yours sincerely



Co-Chair, SoMREC, University of Leeds
(Approval granted by Co-Chair Dr Naomi Quinton on behalf of committee)



Springhill 2
Brindley Way
Wakefield 41 Business Park
Wakefield
WF2 0XQ

Research & Development

18th October 2016

Tel: 07795 646475
Email: jane.shewan@yas.nhs.uk

Emily Jenkins
Leeds Institute of Health Sciences
School of Medicine
University of Leeds
Leeds
LS2 9JT

Dear Emily,

Re: Comparing conveyance and non-conveyance to the Emergency Department for self-harm: Prevalence and ambulance service staff perspectives (YASRD87)

I am happy to confirm that this study has R&D approval from the Yorkshire Ambulance Service NHS Trust. This relates to protocol version February 2016 and associated documents as approved by MREC15-140 in their letter dated 5th October 2016.

There are some conditions to this approval:

- The study may only begin after appropriate Research Ethics Committee (REC) approval has been received. I confirm receipt of approval as above.
- If the project receives REC approval of any amendment, the amendment must be submitted for our review.
- The study must be conducted in compliance with the terms and conditions of this letter, the REC approval, and the Research Governance Framework for Health & Social Care (Department of Health, 2005), or the UK Policy for Health and Social Care Research (when it supersedes RGF).
- Researchers must hold appropriate authorisation compliant with NHS Employers requirements prior to access to staff or data. The latest NHS guidance has just been issued and is available at http://www.nihr.ac.uk/systems/pages/systems_research_passports.aspx If / when you require access, please contact me in good time to arrange the issue of a letter of access / honorary research contract as appropriate.
- Annual progress reports will be required, and a copy of the final report. A copy of your report to the appropriate Research Ethics Committee will satisfy this requirement.



If you agree with these terms, please will you sign and return a copy of this letter to myself.

I would like to take this opportunity to wish you every success with your research.

Yours sincerely

Jane Shewan
Head of Research & Development

I agree with the terms of approval stipulated by the Yorkshire Ambulance Service.

Signature of Chief Investigator..... Date.....



UNIVERSITY OF LEEDS

Faculty of Medicine and Health Research Office School of Medicine Research Ethics Committee (SoMREC)

Room 9.29, Level 9
Worsley Building
Clarendon Way
Leeds, LS2 9NL
United Kingdom

© +44 (0) 113 343 1642

09 March 2017

Miss Emily Jenkins
Psychologist in Clinical Training
Dept Clinical Psychology
School of Medicine
Faculty of Medicine and Health
Leeds Institute of Health Sciences
Charles Thackrah Building
101 Clarendon Road
LEEDS LS2 9LJ

Dear Emily

Ref no: **MREC15-140 – Amendment 1**

Title: **Comparing conveyance and non-conveyance to the Emergency Department for self-harm: Prevalence and ambulance service staff perspectives (Self-harm and non-conveyance: Ambulance service staff perspectives)**

We are pleased to inform you that your amendment to your research ethics application has been reviewed by the School of Medicine Research Ethics Committee (SoMREC) and we can confirm that ethics approval is granted based on the following documents received from you:

Document	Version	Date submitted
200327509 Emily Jenkins Amendment_form	1.0	28/02/2017
200327509 Student thesis ethics form_signed_Version 5	5.0	02/03/2017
200327509 Student thesis_Consent form_Version 4	4.0	02/03/2017
200327509 Student thesis_participant information sheet_Version 3	3.0	28/02/2017
200327509 Student thesis_Recruitment invitation_Version 3	3.0	28/02/2017
200327509 Student thesis_Risk assessment_Version 1	1.0	28/02/2017
200327509 Student thesis_Staff resources_Version 3	3.0	28/02/2017
200327509 Student thesis_Topic guide_Version 1	1.0	28/02/2017

Please notify the committee if you intend to make any further amendments to the original research as submitted and approved to date. This includes recruitment methodology; all changes must receive ethical approval prior to implementation. Please contact the Faculty Research Ethics Administrator for further information (fmhuniethics@leeds.ac.uk)

Ethics approval does not infer you have the right of access to any member of staff or student or documents and the premises of the University of Leeds. Nor does it imply any right of access to the premises of any other organisation, including clinical areas. The committee takes no responsibility for you gaining access to staff, students and/or premises prior to, during or following your research activities.

Please note: You are expected to keep a record of all your approved documentation, as well as documents such as sample consent forms, and other documents relating to the study. This should be kept in your study file, which should be readily available for audit purposes. You will be given a two week notice period if your project is to be audited.

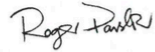
SoMREC Amendment approval letter vs2_0

September 2013

It is our policy to remind everyone that it is your responsibility to comply with Health and Safety, Data Protection and any other legal and/or professional guidelines there may be.

We wish you continued success with the project.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Roger Parslow'.

Dr Roger Parslow
Co-Chair, SoMREC, University of Leeds

(Approval granted by Dr Roger Parslow on behalf of SoMREC Co-Chairs)



Private and Confidential

Headquarters

Springhill
Brindley Way
Wakefield 41 Business Park
Wakefield
WF2 0XQ

Tel: 0845 1241241
Fax: 01924 582217
www.yas.nhs.uk

17th March 2017.

Dear Emily,

Letter of access for research

This letter confirms your right of access to conduct research through Yorkshire Ambulance Service for the purpose and on the terms and conditions set out below. This right of access commences on 17th March 2017 and ends on 30th September 2017 unless terminated earlier in accordance with the clauses below.

You have a right of access to conduct such research as confirmed in writing in the letter of permission for research from this NHS organisation. Please note that you cannot start the research until the Principal Investigator for the research project has received a letter from us giving permission to conduct the project.

The information supplied about your role in research at Yorkshire Ambulance Service has been reviewed and you do not require an honorary research contract with this NHS organisation. We are satisfied that such pre-engagement checks as we consider necessary have been carried out.

You are considered to be a legal visitor to Yorkshire Ambulance Service premises. You are not entitled to any form of payment or access to other benefits provided by this NHS organisation to employees and this letter does not give rise to any other relationship between you and this NHS organisation, in particular that of an employee.

While undertaking research through Yorkshire Ambulance Service, you will remain accountable to your employer University of Leeds but you are required to follow the reasonable instructions of myself in this NHS organisation or those given on her/his behalf in relation to the terms of this right of access.

Where any third party claim is made, whether or not legal proceedings are issued, arising out of or in connection with your right of access, you are required to co-operate fully with any investigation by this NHS organisation in connection with any such claim and to give all such assistance as may reasonably be required regarding the conduct of any legal proceedings.

You must act in accordance with Yorkshire Ambulance Service policies and procedures, which are available to you upon request, and the Research Governance Framework.

You are required to co-operate with Yorkshire Ambulance Service in discharging its duties under the Health and Safety at Work etc Act 1974 and other health and safety legislation and to take reasonable care for the health and safety of yourself and others while on Yorkshire Ambulance Service premises. You must observe the same standards of care and propriety in dealing with patients, staff, visitors, equipment and premises as is expected of any other contract holder and you must act appropriately, responsibly and professionally at all times.



An Aspirant Foundation Trust

You are required to ensure that all information regarding patients or staff remains secure and *strictly confidential* at all times. You must ensure that you understand and comply with the requirements of the NHS Confidentiality Code of Practice (<http://www.dh.gov.uk/assetRoot/04/06/92/54/04069254.pdf>) and the Data Protection Act 1998. Furthermore you should be aware that under the Act, unauthorised disclosure of information is an offence and such disclosures may lead to prosecution.

You should ensure that, where you are issued with an identity or security card, a bleep number, email or library account, keys or protective clothing, these are returned upon termination of this arrangement. Please also ensure that while on the premises you wear your ID badge at all times, or are able to prove your identity if challenged. Please note that this NHS organisation accepts no responsibility for damage to or loss of personal property.

We may terminate your right to attend at any time either by giving seven days' written notice to you or immediately without any notice if you are in breach of any of the terms or conditions described in this letter or if you commit any act that we reasonably consider to amount to serious misconduct or to be disruptive and/or prejudicial to the interests and/or business of this NHS organisation or if you are convicted of any criminal offence. Where required by law, your HEI employer will initiate your Independent Safeguarding Authority (ISA) registration, and thereafter, will continue to monitor your ISA registration status via the on-line ISA service. Should you cease to be ISA-registered, this letter of access is immediately terminated. Your employer will immediately withdraw you from undertaking this or any other regulated activity. You **MUST** stop undertaking any regulated activity.

Your substantive employer is responsible for your conduct during this research project and may in the circumstances described above instigate disciplinary action against you.

Yorkshire Ambulance Service will not indemnify you against any liability incurred as a result of any breach of confidentiality or breach of the Data Protection Act 1998. Any breach of the Data Protection Act 1998 may result in legal action against you and/or your substantive employer.

If your current role or involvement in research changes, or any of the information provided in your Research Passport changes, you must inform your employer through their normal procedures. You must also inform your nominated manager in this NHS organisation.

Yours sincerely

Richard Sherburn.

Research and Development Manager

13 Appendix H: Example of Coded Transcription

Participant 2:

42 *Yeah, ok well in the study we're interested in any non-fatal self-harm that includes self-injury like*

43 *cutting, hanging and including self-poisoning like overdoses regardless of the intent of the act. Does*

44 *that help...?*

45 *Yeah so it's hard to classify it because it's a broad subject isn't it, especially when you're talking about*

46 *overdoses on medications, as well as obviously people choosing to cut themselves or ligatures or you*

47 *name it. Now we generally don't get an awful lot of information when the call first comes in, it's*

48 *generally patient has cut themselves with a knife and then a little bit about the scene considered to be*

49 *safe, there's usually somebody else there who is willing to say that the person isn't a threat to*

50 *anybody else. If that's not the case then obviously we generally ask for police attendance because*

51 *wherever there is a mention of a knife then you have to be a little bit careful. It varies from person to*

52 *person you see and some will be more of a mind to say well it's all very well somebody else saying it's*

53 *safe but you don't know that that person hasn't been drinking or is reliable. So there are staff who*

54 *won't attend these incidents without the police, I'm not one of them, but some people are a bit more*

55 *wary whenever there is a mention of a knife they won't attend, certainly not on their own, but it*

56 *depends who it is. For me, I'm quite happy to go on my own and see what's going on before we need*

57 *an ambulance. But I would say overall that there is a general feeling that anybody who has self-*

58 *harm needs to go to the hospital. I'm not saying that's necessarily a bad thing but I'm not convinced*

59 *for most people anyway that that's entirely based on what is right for the patient. I think that*

60 *unfortunately the culture in the ambulance service is such that, at the moment anyway, is such that*

61 *people feel that they are very much at risk of being blamed if something goes wrong. So the default*

62 *position is always to take people to hospital. For fear that y'know... basically to make sure that*

63 *they're covering themselves so that nobody can come back later and say oh you shouldn't have left*

64 *this person at home.*

65 *I was going to ask where you thought that overall general feeling comes from of taking everybody to*

66 *hospital but you've answered that.*

67 *Yeah I don't know if it's the same in all ambulance services but it's certainly the case in ours that*

68 *you're only as good as your last job if you see what I mean. It doesn't matter you can do sort of 10 or*

69 *20 years of unblemished service and as soon as a complaint comes in the blame automatically falls to*

70 *the attending clinician. Erm and that's unfortunate but er it's just the way it works so yeah people tend*

71 *to default to basically standing in somebody's room and insisting that they go to hospital regardless. It*

72 *comes down as well to a lack of understanding about self-harm as well. There's no real formal*

73 *training in it and certainly no updates or er anything of that kind and it tends to be grouped into a sort*

74 *of a suicidal bracket... which it isn't.*

75 *How do you think that impacts?*

76 *That lack of understanding of er why people self-harm does contribute to the fact that yeah... which is*

77 *why they think that oh I'm going to have to take this person to hospital because if they're self-*

78 *harming then obviously they're unstable and they're obviously y'know at risk of suicide and therefore*

79 *I need to make sure they're in the hospital. Which is a safe default position y'know it's better that way*

80 *than being flippant about it and saying oh y'alright and you can stay at home. I can understand why*

81 *people feel that way about it.*

82 *What about any experiences where you have chosen to leave people at home who have self-harmed?*

83 *Well as I say we don't have any specialist training, we have a tool, you've probably seen it, it's in*

84 *JRealc and is sort of a variant on the sad person's scale. To use to assess a person's risk to themselves*

no specialist training

assess risk.

Asked to provide def. SH

don't get a lot of info en route

personal safety scene safety police back up

SH = ED

culture

self protection of staff

culture def. ult

fear of blame

your back

you're only as good as your last job

lack of understanding

SH = suicide false idea

safe default

want to help

risk or support instead?

? coercion too

fear of blame

14 Appendix I: Study 2 Sources of Support



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STAFF RESOURCES FOR SUPPORT

Research title: Self-harm and non-conveyance: Ambulance service staff perspectives

If you have a concern about any aspect of this research, you may contact the researcher (Emily Jenkins, umejj@leeds.ac.uk or on 07486 851291) who will do their best to answer your questions, or you may contact the study sponsor (University of Leeds) using the following contact details:

Medicine and Health Faculty Research and Innovation Office
Room 9.29, Worsley Building
University of Leeds
LS2 9NL

Email: FMHUniethics@leeds.ac.uk
Telephone: 0113 343 1642.

If you have a concern about your own wellbeing you could discuss this with your GP or Occupational Health for Yorkshire Ambulance Service. This support and advice is available from PAM and the PAM assist helpline. The number is 0800 882 4102.

Additionally available is the Mind Blue Light programme that offers support, guidance, advice and training to emergency services workers on their own wellbeing and mental health. You can find out more information by visiting the website (<http://www.mind.org.uk/news-campaigns/campaigns/bluelight/>) or contacting them on the details below:

The Blue Light Infoline provides independent and confidential support, advice and signposting relating to the mental health and wellbeing of yourself or someone you care about. You can call between 9am – 6pm (0300 303 5999), email (bluelightinfo@mind.org.uk), or text (84999)

Finally, The Ambulance Services Charity' (TASC) provide support for serving and retired Ambulance Service personnel and their families in times of crisis, bereavement and urgent need. An example of their services includes the offer of confidential, impartial and independent advice and access to a range of support services, including rehabilitation when recovering from illness or injury, mental health support, bereavement support, debt and welfare advice, financial grants and other support. You can also find out more by visiting the website (<http://www.theasc.org.uk/>) or contacting them on by phone 0800 103 299 or email (support@theasc.org.uk).

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