Coping Has Limits: ‘Mixed Presenters’ Emergency Department Presentations for Self-harm and Other Reasons

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Abstract

Suicide is largely preventable, in part through effective emergency department (ED) care of people at risk of self-harm. Ample research on people presenting to ED for self-harm (including suicidal ideation, deliberate self-harm, and suicide attempts) exists, yet less is known about those who present also for other reasons within a short time of their self-harm visit. This information is important because ‘other’ ED presentations might indicate heightened future self-harm risk; ED patients presenting for other reasons might also be at risk of (oftentimes undetected) self-harm; and ED staff attitude, frequently negative for patients who present for self-harm, might represent a unique mind-set toward patients with these mixed or two-type presentations.

This research investigated ‘Mixed Presenters’, people who presented to one ED at least twice within 28 days, once for self-harm and once for another reason. It sought to answer the following questions: Who are Mixed Presenters? What is the future serious self-harm risk of Mixed Presenters compared to Self-harm Only Presenters? What characterises the ED management of Mixed Presenters? This mixed method study used ED data from another study (MISP), which facilitated the identification of Mixed Presenters. The qualitative part involved semi-structured interviews with 27 Mixed Presenters from three DHBs. For the quantitative part, data from 1921 patients, 1554 (80.4%) Mixed Presenters and 377 (19.6%) Self-harm Only Presenters, from eight DHBs were linked to admission and mortality datasets and were analysed using survival analysis to compare serious self-harm risk between the groups. The findings of the qualitative and quantitative studies were reported separately and then triangulated.

Mixed Presenters reported difficult life circumstances consisting of interwoven physical, mental health, and social struggles for which they received little help. The quantitative results showed Mixed Presenters to have a 60% reduced risk of future serious self-harm compared to Self-harm Only Presenters. Yet, interviews with Mixed Presenters revealed that the vast majority had a history of prior self-harm, were easily triggered to self-harm as a consequence of their life stressors, and on discharge from ED, nearly half were still at risk of self-harm. Mixed Presenters reluctantly sought ED care but acknowledged it provided safety. Many interviewees also disliked the ‘processing plant’ style in ED, where the focus was on risk assessment instead of their needs as people, and where some encountered judgemental staff.
These findings show that it is important for ED staff to identify Mixed Presenters. Hence, integrated care is required, which is patient-centred and identifies and addresses physical and self-harm needs simultaneously, and thus ultimately lessens the need for Mixed Presenters to return to ED. Opportunities for disclosure of self-harm could be increased by introducing routine self-harm screening of ED presentations related to substance misuse, degenerative physical health conditions, chronic pain, mental health issues, and trauma. Future research needs to explore Mixed Presenters’ ‘other’ visits, examine their long-term risk of self-harm, and explore support people’s and ED staff’s views on Mixed Presenters so their ED care can be enhanced. Whilst two ED presentations for self-harm incurred a significantly higher risk for future serious self-harm compared to mixed presentations, Mixed Presenters’ often complex life circumstances, frequently linked to chronic and or/high self-harm risk, make targeted ED support for these patients nevertheless imperative.

**Keywords:** Self-harm, self-injurious behaviour, self-mutilation, suicide, suicide attempt, suicidal ideation, mental illness, physical, comorbidity, emergency department, accident and emergency, emergency room.
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I would like to acknowledge the Research Assistants on the Multi-level Intervention for Suicide Prevention study (MISP), whose work made the identification of Mixed Presenters possible. In particular, my thanks go out to Karin Bruckner who further assisted with the editing – you have amazing skills.

Thank you also to DHBs, in particular those who allowed me to interview Mixed Presenters, for permitting my use of MISP data. I was aware of the great privilege. Similarly, thank you to the Nurse Recruiters – without you I could not have encountered the Mixed Presenters.

The study was funded by the Health Research Council of New Zealand with a Clinical Research Training Fellowship. Receiving this award was an immense privilege – thank you very much.
Dedication

I dedicate this study to the Mixed Presenters who participated in this study. Thank you for your trust and generosity.

Many participants shared extremely difficult and violent life circumstances. This photo is of a small stone gifted to me by a participant. The stone had detached from a frame holding a picture of her murdered sibling. The gift reflected symbols of beauty and hope.
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<td>DHB</td>
<td>District Health Board</td>
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<td>ED</td>
<td>Emergency department</td>
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<td>MISP</td>
<td>Multi-Level Intervention for Suicide Prevention study</td>
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<td>A person who had presented to ED at least twice within 28 days, once for self-harm and once for another reason (in any order)</td>
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<td>NHI</td>
<td>National Health Index – an alphanumerical identifier uniquely identifying New Zealanders</td>
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<td>Outcome event</td>
<td>A further ED presentation occurring after the index episode, resulting in a serious self-harm admission (≥ 2 days) or death by suicide</td>
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<td>Post-traumatic stress disorder</td>
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Chapter 1

Introduction

“Being one of them showed me that professional experts usually miss the essence of human struggles by a mile, and that the true heroes are not the official healers but the wounded.”

Suicide is a significant public health concern (World Health Organization, 2012) that ended the life of 549 people (404 men) in New Zealand in 2012 (Ministry of Health, 2015b). At that time, most relevant to this study, the rate of suicide was highest in the age group 15-24 years (23.4 per 100,000 youths) and for Māori (17.8 per 100,000 Māori compared to 10.6 per 100,000 non-Māori) (Ministry of Health, 2015b). Prior to committing suicide, some of those who died had accessed health services. The emergency department (ED), often utilised as first point of contact as it provides easily accessible physical and mental health care, is an optimal setting for suicide prevention. Hence, ED patients at risk of suicide have been widely investigated worldwide (Bilén, Ponzer, Ottosson, Castrén, Owe-Larsson, et al., 2013; Keith Hawton et al., 2015; Pompili et al., 2011; Routhier, 2012) and in New Zealand (Beautrais, 2004; Hatcher et al., 2011; Hatcher, Sharon, & Collins, 2009). Despite the relationship between physical health issues and self-harm being known (Crump, Sundquist, & Winkleby, 2013), this ED patient group characteristic and the impact of non-self-harm presentations on future serious self-harm risk and on ED has remained unexplored. This thesis is about 'Mixed Presenters', people who presented twice to ED within a short timeframe for different reasons. For clarity, key concepts and definitions are provided in the first section. In the second section, background information is provided by describing the political and clinical context and summarising influential literature. Third, the aims and purpose of the study are provided, followed by a description of the theoretical framework, the research design, and my motivation to engage in this topic. The final section encompasses an overview of the remaining thesis chapters.

1.1 Key concepts and definitions

This thesis frequently uses a number of foundational terms, including ED, self-harm, ‘other’ presentation, Mixed Presenter, Self-harm Only Presenter, and serious self-harm. These terms are listed in the glossary and a conceptual definition is provided here.

The ED is a service that does not directly charge patients a fee for services; is open 24 hours a day, 365 days a year; and has a doctor available at all times. People presenting to ED following self-harm are common (Bergen & Hawton, 2007).

The term ‘self-harm’ is used as an inclusive term, incorporating suicide attempts, self-harm behaviour, and suicidal ideation. It includes self-poisoning, the “intentional self-administration of more than the prescribed dose of any drug”, poisoning with non-ingestible substances, and deliberate self-inflicted injury (Keith Hawton et al., 2003, p. 988). The difference between suicidal attempt and self-harm behaviour is in the intent: generally, people self-harm (such as cutting) to deal with stressful situations, but they do not want to die (Reece, 2005). The difficulty in knowing what can kill someone means that both suicidal attempts and self-harm behaviour can result in death. De Leo et al. (2006, p. 14) argue that people engage in non-fatal suicidal behaviour, defined as “a nonhabitual act with nonfatal outcome that the individual, expecting to, or taking the risk to die or to inflict bodily harm” because the individual wants to change an unbearable situation. The emphasis is on change, not on suicide. As suicide can be an end-product of thinking about it, suicidal ideation is included. Furthermore, health issues that are a consequence of self-neglect and inattentiveness might have been included as ‘self-harm’ in the dataset used. For consistency, and where it was not altering the meaning, the term self-harm replaces ‘suicidal behaviour’, ‘non-fatal suicidal behaviour’, ‘self-inflicted injury’, ‘non-suicidal self-injury’, and ‘self-poisoning’.

Apart from presenting to ED for self-harm, people attend for a number of different reasons, including medical issues, injuries from trauma or assault, emotional problems, and social issues. Hence, I chose ‘other’ presentation so as not to exclude certain non-self harm presentation complaints.

Self-harm and other presentations defined a ‘Mixed Presenter’. A label of Mixed Presenter, a person who presents to ED at least twice within 28 days – once for self-harm and once for another reason (any order) – was chosen so as to indicate different health issues. Whilst this broad descriptor aligns with similar labels such as ‘comorbidity’ (Levy, Barak,
Sigler, & Aizenberg, 2011), it was assigned so that the wordiness of adding ‘self-harm’ to the Mixed Presenter label was avoided. In contrast, the term ‘Self-harm Only Presenter’, a person who presents twice to ED for self-harm within a 28 day timeframe, is clearer. Whichever label was assigned to presenters, I was conscious that they were foremost individuals.

Mixed Presenters’ risk of serious self-harm was defined as death by suicide or an inpatient admission for at least two days for self-harm. The inpatient admission was chosen to indicate that substantial health resources were required for the care of this person and their risk of dying by suicide was high. Reasons for not exclusively utilising suicide as an outcome event are discussed in section 8.5.2.

1.2 Background information

Both historic triaging of soldiers during wartime and asylum care have influenced ED care. Not only has ED care adopted triage principles from these practices (Pollock, 2008), but it has also inherited their focus on trauma and physical health issues (Tooker, 2007). Meanwhile, since the closure of asylums in New Zealand, people with severe mental illness have been cared for in the community by mental health and addiction services. Given that these services report chronic funding struggles (Fair Funding, 2016; Hall, 1988), ED is likely to be utilised for unmet physical and mental health care needs, including self-harm, because often there is ‘nowhere else to go’ (Clarke, Dusome, & Hughes, 2007) in New Zealand.

New Zealand health services strive to help people to live well, stay well, and get well (Minister of Health, 2016), with a specific focus on Māori (Ministry of Health, 2014c) and Pacific health (Ministry of Health, 2014a). The services, free of charge for hospital-based care for New Zealand citizens and residents, are provided in geographical catchment areas represented by 20 District Health Boards (DHBs). DHBs are required by the government to manage most of the general and mental health care needs of their populations, including suicide prevention (Ministry of Health, 2015c). EDs provide front-line services with care standards that require patients to be either admitted or discharged within six hours of presenting to ED (Ardagh & Drew, 2015). Similarly, mental health services are bound to a short timeframe within which a person referred to mental health can be expected to be assessed (Ministry of Health, 2014d). Increased patient numbers
and limited resources has meant that meeting these targets is often difficult (Ministry of Health, 2016d).

When individuals require help for their self-harm, the decision to seek ED care has often been influenced by stigma and previous negative ED experiences (Clement et al., 2014; Long, Manktelow, & Tracey, 2015; Spence et al., 2008). Men and youth are particularly reluctant to seek help (Clement et al., 2014; A. E. Rhodes et al., 2013). People who have harmed themselves report confiding in friends (Holliday, 2012; Klimes-Dougan, Klingbeil, & Meller, 2013); family, however, are informed only by some people (Peters, Murphy, & Jackson, 2013), due to concerns about causing family worry and distress (Long et al., 2015). Support people frequently initiate help-seeking at ED (Cerel, Currier, & Conwell, 2006; Spence et al., 2008).

ED management of patients presenting with mixed physical and mental health issues is predominantly guided by the patient’s presenting complaint. General and mental health specific triage guidelines are typically used to assess how urgently patients need be seen by a doctor (Australasian College for Emergency Medicine, 2013; New Zealand Guidelines Group & Ministry of Health, 2003). Best practice guidelines assist in determining appropriate management. The focus of care for people at risk of self-harm involves assessment of the risk for suicide, establishing safety, and referral to mental health services (Ministry of Health, 2016e).

A few individuals present to ED often. These frequent ED users typically have high physical and mental health needs (K. Nelson et al., 2011), despite also being labelled as ‘inappropriate attenders’ (Hansagi, Olsson, Hussain, & Ohlen, 2008). Frequent ED users often die prematurely; for example, of 124 people who had died within 12 months of frequently attending ED, 35 (28%) died from suicide (Da Cruz et al., 2011). The research to date commonly lacks detailed information on such people and their presentation patterns.

Most studies in the literature have exclusively examined self-harm presentations to ED. From these, it is known that presenters’ histories of self-harm reflect an increased risk for repeat self-harm (Bethell, Rhodes, Bondy, Lou, & Guttmann, 2010; Bilén, Ponzer, Ottosson, Castrén, & Pettersson, 2013; Martin, Chapman, Rahman, & Graudins, 2014) and suicide (Peters et al., 2013; Zahl & Hawton, 2004). Yet retrospective studies reveal that a proportion of people who died by suicide had presented to ED for other reasons (A. E. Rhodes et al., 2013). Similarly, many people who present to ED for self-harm later die, not
because of suicide, but as a consequence of other causes (Karasouli, Owens, Abbott, Hurst, & Dennis, 2011). These findings are in line with those of my Master’s thesis, which demonstrated that ED patients who had rapidly re-presented to ED following self-harm had multiple other ED visits (Kuehl, Nelson, & Collings, 2012). Combined, these observations suggest that people who self-harm use ED for other reasons too.

The concern is that a substantial group of ED patients present with health issues that are related to an increased risk for serious self-harm, yet this risk remains undetected. Risk factors for serious self-harm include previous episodes of self-harm, suicidal intent, physical health issues, and male gender (Chan et al., 2016); serious mental illness and substance misuse (Keith Hawton & van Heeringen, 2009); and interpersonal violence and social isolation (Huey, Fthenos, & Hryniewicz, 2012). Additionally, some presentations for trauma, such as road traffic accidents, might also be related to serious self-harm. These numerous health complaints that characterise presentations to ED present an opportunity for self-harm risk detection. Screening tools exist for identifying serious self-harm risk in patients presenting to ED for other reasons (Allen et al., 2013; Houry, Kemball, Click, & Kaslow, 2007), yet in my clinical experience as an ED nurse (Section 1.6), they are not used routinely.

Numerous patients presenting to ED for self-harm, and their support people, experience unsatisfactory ED care (Cerel et al., 2006). In a study of adolescents presenting to ED for self-harm, patients reported staff did not ask them about mental health (Holliday, 2012). A lack of communication between staff and patients is likely to result in poorly addressed suicide risk (Peters et al., 2013), with non-engagement probably reflecting discriminatory and patronising staff attitudes (Farrelly et al., 2014; Long et al., 2015; McKay, 2010). Individuals’ experiences of ED care for other types of presentations when they had also presented for self-harm appear unexplored.

Many ED staff similarly struggle with refraining from judgemental attitudes when caring for patients who have self-harmed, a problem that becomes even more prominent with patients who frequently attended ED (Gibb, Beautrais, & Surgenor, 2010; Martin & Chapman, 2014). Challenging aspects include ED being viewed as an inadequate environment for handling self-harm issues (R. Chapman & Martin, 2014; Saunders, Hawton, Fortune, & Farrell, 2012) and dealing with patients’ aggression and violence (Bergmans et al., 2009; R. Chapman & Martin, 2014). Staff acknowledge they are unprepared to care for patients who present with self-harm, and express the need for
further training (McCann, Clark, McConnachie, & Harvey, 2006; McCarthy & Gijbels, 2010).

In conclusion, multiple gaps in the literature point to the importance of knowing more about Mixed Presenters. First, whilst there is ample evidence that prior self-harm heightens future serious self-harm risk, the significance of having additional other types of ED presentations is unknown. Second, when patients who had previously attended ED for self-harm present again for other reasons (referred to as ‘other’ presentations in this study), it is unknown how often they are simultaneously at risk for self-harm as this has not specifically been investigated. Third, people who present with self-harm, and their families report they experience inadequate care, whilst ED staff voice frustration over caring for this group, especially when patients present frequently or aggression results. However, little is known about the actual quality of care provided for patients who present for both self-harm and other reasons.

1.3 Aim and purpose

This study aims to contribute to the improvement of ED care for a small group of potentially complex ED patients, with the purpose of benefiting the individual, their families/support people and health services. In order to achieve this aim, this study is seeking answers to three research questions:

1. Who are Mixed Presenters?

2. What is the serious self-harm risk of Mixed Presenters compared to Self-harm Only Presenters?

3. What is the ED management of Mixed Presenters?

1.4 Theoretical influences

Several theoretical and clinical influences underpinned the study. These influences reflect three timepoints: Mixed Presenters’ experiences before presenting to ED for self-harm or other reasons; their care while in ED; and events relevant to their discharge from ED.
Following the over-arching temporal framework of 'before ED', 'within ED' and 'post ED', the potential influences of self-harm, indirect self-destructive behaviour, help-seeking, labelling, and the Interpersonal Theory of Suicide were utilised. Further factors such as gender, stigma, support people, and the type of health complaint (self-harm or other) were considered for exploring and documenting the characterisation, self-harm risk definition, and ED management of Mixed Presenters.

### 1.5 Research design

These theoretical influences contextualised the study’s pragmatic mixed method design with qualitative and quantitative components. The qualitative part consisted of face-to-face interviews with Mixed Presenters and the quantitative part included a cohort study. The two parts used separate Multi-level Intervention for Suicide Prevention (MISP) datasets. The MISP study aimed to ascertain whether multi-level suicide prevention interventions in New Zealand were effective. As part of MISP, research assistants in eight participating DHBs had examined ED data for self-harm (including deliberate self-harm, suicidal ideation, and suicide attempts) and coded eligible presentations from 1 December 2009 until 30 June 2012. The self-harm coding enabled the identification of Mixed Presenters.

The dataset was used to identify potential Mixed Presenters for interview. These Mixed Presenters were initially contacted by a Nurse Recruiter in each participating DHB, informing them about the research and asking for consent to forward their details to me. Once agreed, interviews were arranged. The interview guide included foremost questions about their self-harm and their ‘other’ ED presentations. Interviews were transcribed verbatim and analysed following interpretive description (Thorne, 2008).

For the cohort study, frequent ED users with at least one self-harm presentation were followed up for risk of subsequent self-harm. The first presentation pair (two ED presentations within 28 days) within the 30 months’ MISP timeframe determined a participant’s ‘Mixed Presenters’ or ‘Self-harm Only Presenter’ status. The second presentation of that pair was classified as the Index presentation. The MISP dataset was linked with inpatient admission data, National Health Index (NHI) data, and mortality data which enabled the follow-up of index presentations until a serious self-harm outcome, defined as an inpatient admission due to self-harm lasting for at least two days.
or death by suicide. Survival analysis was used as it allowed for differing follow-up times (Kleinbaum & Klein, 2012), comparing the serious self-harm risk between Presenter groups.

Findings from the qualitative and quantitative sides of the study were analysed separately. Then, the findings were triangulated using a convergence coding matrix where themes were identified and the findings compared for convergence (Farmer, 2006).

Most studies concerning people at risk of serious self-harm have used quantitative approaches only. Longitudinal cohort studies or case control studies have commonly assessed the risk of either later suicide or repeat self-harm, with routinely collected ED data and mortality datasets being used to describe the ED presentations (Bergen, Hawton, Waters, et al., 2012; Keith Hawton et al., 2015). Surveys have included both large samples inquiring about individuals' general health and wellbeing, and smaller samples specific to self-harm, such as inquiring about ED staff attitudes toward individuals who self-harm (Braden & Sullivan, 2008; Suominen, Suokas, & Lönnqvist, 2007). However, face-to-face interviews of patients at risk for self-harm are rare (J. Cooper et al., 2011; Hunter, Chantler, Kapur, & Cooper, 2013), possibly because of patients’ vulnerable status (Crowther & Lloyd-Williams, 2012). Similarly, mixed methods studies rarely reported on mixed health issues including self-harm (Adamson, Ben-Shlomo, Chaturvedi, & Donovan, 2009; Cleaver, 2013).

Mixed method, with its capacity for both breadth and depth (Teddlie & Yu, 2007), was chosen as the optimal design for researching Mixed Presenters. Whilst the use of mixed methods reduces the risk of biased findings (Jick, 1979), numerous researchers question the genuine integration of mixed methods (Bryman, 2007; O'Cathain, Murphy, & Nicholl, 2010), likely because of the substantial positivism and constructivism divide. On the one hand, following positivism, it would be important for me, as the researcher, to be detached and uninvolved with my data. On the other hand, however, constructivism positions me, the researcher, as the primary instrument of data collection and data analysis (Johnson & Onwuegbuzie, 2004), requiring a very different level of involvement. Furthermore, my background influenced my research method selection.
1.6 The researcher

I am a mental health and ED nurse who is passionate about improving ED care for people with mixed ED presentations including self-harm, though my mental health knowledge has matured over time. At the beginning of my ED nursing career, I observed patients presenting with self-harm from a distance. I felt frightened, especially when interactions involved aggression. Further, I was surrounded by an ED culture which allowed patients to receive insufficient care, as it was staff’s assumption that it would help patients avoid returning to ED for self-harm. Only when I trained in mental health did I appreciate how mental illness affected the individuals involved. However, physical ill health also occurred in mental health inpatient settings. I observed some inpatients with undiagnosed and untreated conditions such as arrhythmias and sepsis, which were inadequately managed. My reflection was that negative staff attitudes and inadequate systems facilitate the continuation of ineffective care.

Further along in my nursing career, I began to share my knowledge and skills. Initially, teaching student nurses in mental health was challenging because their enthusiasm was on the whole exclusively for general acute nursing. Yet, this changed once they understood the importance and privilege of engaging with people who had mental illness. Second, my role as an advisor on the Whakawhānaungatanga project (J. King, Moss, Holmes, Pipi, & Edwards, 2010), aimed at improving New Zealand’s ED care for people at risk of suicide, highlighted that although the DHBs formed teams consisting of representatives from mental health, ED, Māori health/mental health, and consumer and family advisors, these specialities had different modes of working with patients, as well as different service priorities and passions for mental health, all of which influenced the delivery of improved services for patients. Third, as an advisor on MISP (explained in section 5.2), I noticed how self-harm was inadequately documented in the ED data that was examined for the study, possibly reflecting how little attention clinicians give to this risk. As a result, I changed my own clinical practice by asking ED patients about self-harm risk, even if they were not presenting for mental health issues. I found this practice allowed new levels of communication and disclosure.

This learning from my extensive ED nursing and advisory career has resulted in an interest in people with mixed ED presentations. In my view, ED patients who frequently attend for both self-harm and other reasons (e.g., chronic pain) reflect that health services have failed to provide meaningful help and support. Also, the number of ED presentations
related to alcohol, and their associated health problems of trauma, assaults, violence, self-harm, and physical and mental health issues is disproportionate and likely to include Mixed Presenters. Further, I have encountered patients who, after receiving supportive ED care, stopped attending frequently for self-harm.

1.7 Outline of the thesis

This thesis has 10 chapters. In the next three chapters, I discuss the literature. The background chapter addresses historical, political, policy, and clinical issues for mental health and ED services. In the literature review and theoretical framework chapters, the identification of Mixed Presenters, their serious self-harm risk, and ED management are discussed. The purpose of initially broaching broad subjects that then become more focused on content relevant to the study is to alert the reader to the context surrounding the previously unknown and unidentified Mixed Presenter, and describe the challenges involved in identifying this group. The order in which first the qualitative method and findings chapters, and secondly the quantitative methods and findings chapters are presented, reflects the actual sequence of the study procedures.

Chapter 2 provides the historical, political, and clinical background of the two distinct clinical disciplines of ED and mental health services, followed by their current service provision and how they link to provide care for Mixed Presenters. The chapter finishes with an outline of a Mixed Presenter’s typical journey through ED. This outline portrays that mental health and ED services have been and currently are distinct, which has the potential to negatively influence ED care for Mixed Presenters.

Chapter 3 is the main literature review and is divided into five parts. Following an outline of the search strategy, the link between self-harm and comorbidities such as physical illness, pain, trauma, alcohol, and mental illness is discussed. Then, information on self-harm risk in regards to help-seeking, frequent ED use, and self-harm screening is presented. ED management of Mixed Presenters, including staff attitude and patients’ and support people’s experiences in ED, is discussed, followed by a summary of the literature and identified gaps.
Chapter 4 explores the theoretical underpinnings of this research. Theoretical aspects of self-harm, indirect self-destructive behaviour, help-seeking, labelling, and the Interpersonal Theory of Suicide are explained.

In Chapter 5, the mixed method research approach is described. The chapter includes a discussion of paradigms, and my choice of the pragmatist paradigm in social research and how it links to ED care for Mixed Presenters. Interpretive description is explained and linked to mixed method research. The appropriate use of various mixed methods is discussed, highlighting the need for caution. I review the general characteristics of the chosen methods of interview and cohort study, and provide a mixed method triangulation framework.

Chapters 6 and 7 report the qualitative section of the study. Chapter 6 describes the method utilised, including the processes of identification, recruitment, and interviewing of participants. Chapter 7 presents the interview findings regarding 27 Mixed Presenters.

Chapters 8 and 9 contain the quantitative section of the study. In Chapter 8, the quantitative study design, setting, participants, data sources, variables, study size, data management, and data analysis are presented. Chapter 9 reports findings from the cohort study. Firstly, socio-demographic and clinical information of 1921 Mixed Presenters and Self-harm Only Presenters are described and compared. Secondly, results of the analysis of risk of subsequent self-harm are presented. Lastly, findings on ED management are provided.

In the discussion chapter, Chapter 10, the triangulated research findings from the interviews and the cohort study are critically reviewed in relation to the research questions. Reflections on the research approach, its limitations and strengths, and ethical considerations are discussed. I relate the findings firstly to policy and clinical practice, and secondly to research, further including recommendations for research that could extend my findings, especially about Mixed Presenters.
Chapter 2
Background and Context

“The key to achieving the ‘triple aim’ of good health outcomes, good patient experience and responsible use of resources, is not to do it quickly, nor slowly, nor at great cost, nor frugally, but to do it well.”

2.1 Overview

Acute care for people at risk of self-harm is commonly shared between emergency departments and mental health services. The purpose of this chapter is to orientate the reader to key historical events that contributed to the shaping of New Zealand contemporary health services and to provide an overview of current ED practice for people who present for self-harm and other health issues (Figure 2.1). Firstly, I describe the historical background of emergency and mental health services. Secondly, the New Zealand health service structure, including the ED, mental health services, and suicide prevention initiatives are presented. Next, the separation of health services provision for comorbid physical and mental health issues is explored, along with care integration challenges. Lastly, relevant aspects of the typical journey of Mixed Presenters through ED are discussed.

This chapter was developed using historical literature, government policy guidelines, ED guidelines and protocols, and professional documents, predominantly sourced from New Zealand. Australian, United States of America (USA), Canadian, British, and Scottish policies and guidelines are included where relevant. These countries were selected because of their often-comparable health care systems to New Zealand (and to each other). In addition to these data sources, I drew on knowledge from my clinical experience to provide a lens on the complexity of health care required for Mixed Presenters.

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2.2 History

History, as well as political, social, cultural, humanistic, scientific, and financial agendas, influence health services. The dynamic nature of such contributing factors leads to ongoing opportunities for service improvements. This section commences with the discussion of battlefield medicine as a platform for ED care. This is followed by a discussion of the care of people with mental illness in asylums. Lastly, ED and de-institutionalisation are described.

2.2.1 Battlefield medicine

Battlefield deaths, particularly during the American Civil War and the Crimean War, led to the commencement of trauma care (Tooker, 2007). The lack of organised evacuation of the wounded from the battlefield, the absence of available hospitals to handle extensive casualties, and unsanitary conditions for soldiers contributed to many deaths (Blaisdell, 1988; Iserson & Moskop, 2007; Tooker, 2007; Woodham-Smith, 1950). Survivors frequently had ongoing mental health issues, with symptoms that were difficult to
distinguish between somatic illness, overall exhaustion, and psychological breakdown (Dean, 1991).

Nurses and doctors were largely untrained in these wars. Whilst nurses’ commitment to cleanliness ensured that many ill and injured soldiers survived their wounds (Gebbie & Qureshi, 2006), doctors who performed numerous surgical procedures (Blaisdell, 1988) were viewed as having little understanding of communicable diseases (Tooker, 2007). Regular reports of doctors’ activities and treatments in the Civil War provided statistical documentation of medical and surgical management (Blaisdell, 1988). Despite the likelihood that these reports contained limitations because of the intense war situations, difficulties in their distribution, a lack of resources, and recall bias, these reports contributed to expected treatment standards (Blaisdell, 1988).

Systems for managing war casualties in a timely fashion were first introduced by French navy surgeon Baron Dominique Jean Larrey under Napoleon around 1800 (Goniewicz, 2013; Nakao, Ukai, & Kotani, 2017; Slawson, 2016). Later, during the American Civil War in 1862, Letterman and McGuire introduced a similar approach to that of Larry’s, providing first aid adjacent to the battlefield, transferring the wounded to field hospitals for urgent and stabilising treatment via an organised ambulance system, and transporting some of these soldiers for longer-term treatment to general hospitals (Tooker, 2007). During World War I, a system of orderly triage of the injured and a protocol for early wound management of war injuries was introduced by Antoine De Page (Pollock, 2008). The triage process was underpinned by a system of transporting the injured to various treatment environments, and having sites available for further management of the injured. The underlying principle of triage was that, due to limited resources, the focus was to primarily treat soldiers who could return to combat duty quickly, whilst those more seriously injured were allowed to die (Iserson & Moskop, 2007). For those who required treatment, a lack of beds made the admission of wounded soldiers from the battlefield difficult (Blaisdell, 1988). Under-resourcing of health care was not limited to battlefield medicine. Asylums, established at a similar time as these early wars, equally suffered from overcrowding. These and other features are explored in the next section.

### 2.2.2 Asylums

In New Zealand, the Lunatics Ordinance in 1846 was the first legislation concerned with the safe-keeping of the mentally ill (Hunter Williams, 1987). The British and European
doctors working in New Zealand asylums were significantly influenced by their educational and employment backgrounds (Knewstubb, 2011), with superintendents in charge of the asylums having virtually a free hand in the treatment of the ‘insane’ (L. Chapman, 2003a). Nevertheless, there are reports of the cultural needs of Māori being met at Tokanui hospital (established 1915) in the Waikato. Māori staff pioneered bringing *te reo* (Māori language) into therapy sessions and the use of appropriate *mihi* (ceremonial introduction) for visitors, aiming to bring a sense of *whānaungatanga* (family cohesion) into the unit (Joseph & Kearns, 1996).

Even in the early years there is evidence that good relationships with staff made a big difference to patients. Kind staff were described as listening, treating patients as human beings, and providing information (Department of Internal Affairs, 2007). Yet overall, staff engagement with patients was mostly distant and inhumane because of the belief that to do otherwise would change the “purity of the condition” (Foudraine, 1971, p. 88). Many individuals experienced this as being cared for with indifference and a lack of respect, in addition to not infrequent callous, threatening, abusive, and/or violent care (Department of Internal Affairs, 2007). A possible difference between staff and patients engagement depending on patients being at risk of self-harm or where they experienced a physical health issue is less known.

Actual therapeutic treatment of the mentally ill in asylums was either non-existent or potentially barbaric. The use of strait jackets and chains was common until the New Zealand Constitution Act 1852 promoted moral care where padded rooms and seclusions were used instead (Hunter Williams, 1987). In the USA, between 1951 and 1965, insulin treatment was followed by different forms of shock treatments that were administered without muscle relaxant or sedatives (Harmon, 2005). Furthermore, more women than men underwent lobotomies, which was attributed to rigid social expectations regarding female personality traits, such as dependence: childlike and docile behaviour was common following the procedure (Braslow & Starks, 2005). These treatments were not restricted to people with mental illness, as the asylum admission policy was wide-ranging (Department of Internal Affairs, 2007). Aside from the mentally ill, New Zealand asylums accepted the aged and alcoholics (L. Chapman, 2003b), people with chronic pain, epilepsy, pregnancy, and intellectual disability (Hunter Williams, 1987).

Overcrowding and unsanitary conditions were common in asylums. Many patients were locked in dirty, noisy, smoke-filled day rooms; slept in large dormitories with beds being
close together; and had to use bathrooms without doors (Department of Internal Affairs, 2007). USA nurses reported the herding of patients for baths, meals, and treatments (Harmon, 2005) and abuse by fellow patients and staff was reported in New Zealand asylums (Department of Internal Affairs, 2007). Asylums’ unsatisfactory and unsafe environment likely contributed to patients experiencing mixed health issues, including self-harm. This brief description clearly portrays that asylums lacked privacy and presented health hazards in many forms.

2.2.3 Health services modernisation

The introduction of psychotropic medication in 1957 resulted in shorter lengths of stay for patients, the closure of asylums, and since the 1970s, community psychiatric outpatient care (Hall, 1988). Hall contended that the lack of coordinated policy and the historically ad hoc manner in which New Zealand tended to follow trends in psychiatric care “produced a highly fragmented and underfunded supply of community mental health services in New Zealand” (p. 56). Today, under-funding continues to threaten care quality and quantity provided by mental health and addiction services (Fair Funding, 2016), making it likely that some people of this group seek additional mental and physical health support from ED.

New Zealand ED care was introduced in the mid-twentieth century by Western-based health practitioners. EDs provided a place for injured patients to be examined and offered initial treatment (Gebbie & Qureshi, 2006). In this model, trained doctors and nurses followed established triage guidelines, adhered to infection control and increasingly administered medication for ailments. In contrast to battlefield medicine, where seriously ill soldiers were attended to last, in ED the most ill patients are made the highest priority in order to save lives.

In summary, this section briefly reviewed historical events that shaped health care for people who self-harm and who have other health issues. On the one hand, battlefield medicine composed of triage, infection control, and advanced trauma care reflects the basics of ED today. On the other hand, the care of the mentally ill in asylums historically, and now in the community, is a complex and not totally effective approach, requiring many of these patients to present to ED for health care needs. A broad view of New Zealand health services, in which this patient group and ED are situated, is discussed next.
2.3 New Zealand Health Service

This section firstly gives an overview of the New Zealand health service, followed by a description of ED and mental health services’ specific characteristics. Lastly, suicide prevention initiatives in New Zealand are presented.

2.3.1 General

From 2000 until 2016, the government’s action on health was guided by the New Zealand Health Strategy (Ministry of Health, 2000). The 13 population health objectives, potentially all relevant to Mixed Presenters, targeted the reduction in prevalence of physical health issues such as cardiovascular disease and diabetes, and mental health-related issues such as suicide and suicide attempts, alcohol and drug misuse, and interpersonal violence. However, the updated 2016 Strategy primary goals are broad: for New Zealanders to live well, stay well, and get well (Minister of Health, 2016). There are five areas of action directing focus to how health services are provided: to be people-powered, closer to home, offering value and high performance, with care provided from one team, and within a smart system (Minister of Health, 2016; Ministry of Health, 2016b). The values are broad and inclusive of factors influencing health and health services provision. Advanced technology and system thinking can potentially enable more efficient and cost-effective health services. Yet, people with comorbid health issues, and those living in socioeconomically disadvantaged areas, may be unlikely to have key elements of this approach: internet access to monitor their health, money to access health services, or resources to lead a healthy lifestyle.

Health strategies focusing specifically on Māori and Pacific people, in view of their heightened vulnerability (Ministry of Health, 2014b; Oakley Browne, Wells, & Scott, 2006), also guide New Zealand healthcare. The He Korowai Oranga: Māori Health Strategy 2014 provides a framework for the government and the health and disability sector, working towards the best outcomes for Māori (Ministry of Health, 2014c). Its overarching purpose is for pae ora (healthy futures) and includes three interconnected elements: mauri ora (healthy individuals); whānau ora (healthy families); and wai ora (healthy environments). Similarly, the Te Whare Tapa Wha model, developed by Professor Mason Durie, uses a holistic approach to health, asserting that taha tinana (physical), taha hinekaro (emotion), taha whānau (social) and taha wairua (spiritual) needs must be met for an individual to be healthy (Rochford, 2004). In practice, DHBs follow these
overarching frameworks by employing Māori representatives at both management and service levels, and also by providing distinct health and mental health services for Māori.

Similarly, the *Ala Mo‘ui: Pathways to Pacific Health and Wellbeing 2014–2018* is based on Pacific principles of respecting Pacific culture; valuing individuals, families, and communities; and providing quality and integrated health care (Ministry of Health, 2014a). Pacific peoples share some values with Māori; for these cultures, individuals are strongly linked to family. Government goals include improved access to services for Pacific peoples with severe mental illness, addiction, and physical health issues such as diabetes care. Pacific peoples would like systems and services that align with their needs, which include more services in the community and in primary care, allowing easy access. DHBs have a role in supporting the implementation of those principles.

The provision of general, Māori, and Pacific health services is influenced by funding. Taxation allows a budget for health and disability services called ‘Vote Health’. The Ministry of Health allocates more than 75% of this funding to DHBs which in turn are responsible for planning and purchasing health services. Some of the remaining money is used for national health services provision such as disability support services, screening programmes, mental health services, and Māori health (Ministry of Health, 2016a). Limited resources mean that ambulance usage and general practitioner (GP) access often incur a charge or co-payment. However, ED care and hospital-based injury management through the Accident Compensation Corporation (ACC), which classifies self-harm as an accident, are free of charge to New Zealanders.

GPs offer routine and urgent health care, aiming to provide continuity and coordination of health care (Ministry of Health, 2011a). Overall, their task is to prioritise population health by reducing inequalities and working closely with communities (A. King, 2001). GPs accessibility and broad skill base are optimal for providing physical and mental health support. Yet, likely access barriers include the required co-payment, despite reduced fees for people on limited income and those who need to access their GP often (Ministry of Social Development, n.d.), getting a timely appointment, and a lack of transport (Ministry of Health, 2014b). So, instead of or in addition to GP care, people who incur comorbid health issues, including self-harm (Mixed Presenters), sometimes consult ED (LaCalle & Rabin, 2010).
2.3.2 Emergency department

EDs serve patients with an array of physical and mental health complaints 24 hours a day, 365 days a year. Patients who require further assessment and treatment by specialists are managed in ED, inpatient or outpatient settings. The lack of a clear definition of ‘emergency’ means there is sometimes a mismatch between what patients and ED staff view as an urgent health care need (Adamson et al., 2009). Cost, timeliness of access, and location can hinder patients accessing primary health care, leading some to use ED as an alternative (Ministry of Health, 2011a). Irrespective of the health service accessed, staff are expected to provide a minimum standard of care.

Staff training and registration support the consistent provision of high quality care, irrespective of patients’ health complaints, such as self-harm or other reasons. The competence and fitness to practice of nurses, doctors and other health professionals are guided by the Health Practitioners Competence Assurance Act 2003. For nurses, this is implemented by the Nursing Council of New Zealand. Yearly recertification and regular competency evaluations are some of the measures used to protect the health and safety of the public (Nursing Council of New Zealand, 2013). As outlined in the Competencies for Registered Nurses, competence includes taking professional, legal, and ethical responsibility and being culturally safe; being able to adequately assess and manage patient care; having good interpersonal relationships that entail therapeutic communication with others; and evaluating the effectiveness of one’s care (Nursing Council of New Zealand, 2007). Similarly, doctor’s practice fitness is measured by their conduct, competence and health (Medical Council of New Zealand, 2011).

Furthermore, New Zealand law outlines patient rights. DHBs are bound by the Privacy Act 1993 in how they collect, safeguard, and share patient information. It is the Code of Rights under the Health and Disability Commissioner Act 1994 that entails the aspects of care that individuals seeking health services can expect to receive. In addition, patient rights include being treated with respect, dignity, and in a non-discriminating manner (Health and Disability Commissioner, 1996). However, the difficulty of measuring ‘attitudes’, combined with patients’ dependence on health care, can mean that patients may be disinclined to complain or alter their future use of ED/other health services. These aspects are relevant for the current study on Mixed Presenters, because staff attitude towards self-harm presentations can be negative (Gibb et al., 2010; Suominen et al., 2007).
The growing population in New Zealand and its rising life expectancy contribute to an ever-increasing number of people attending ED. In turn, ED workload for staff and waiting time for patients are expanding. Three common terms, representing interlinking issues, have been identified as key factors in this trend. Firstly, ‘overcrowding’ occurs when EDs reach an occupancy of 85% or more, secondly, the situation where patients wait eight hours or more for admission is called ‘access block’ (P. G. Jones & Olsen, 2011) and lastly, patients who, following their assessment, await inpatient admission in corridor spaces are said to be ‘boarding’ (American College of Emergency Physicians, 2011). These three aspects present a significant threat to the quality of emergency care (Forero, McCarthy, & Hillman, 2011; Harris & Sharma, 2010) and possibly impact more on psychiatric patients who, in the USA, were found to wait 3.2 times longer than non-psychiatric patients for an inpatient bed (Nicks & Manthey, 2012). In addition, the risk of increased morbidity and mortality (Forero & Hillman, 2010; Rabin et al., 2012), likely to predominantly affect people with comorbid health issues such as Mixed Presenters, makes ED overcrowding a government priority.

The Ministry of Health’s goal for better health services (Ministry of Health & National Health Board, 2010) led to the introduction of six Health Targets in 2007/08, which were to serve as a set of national performance measures specifically designed to improve performance (Ministry of Health, 2016c). The overarching objectives of the 2009 Ministry of Health’s (2011b) ‘Shorter Stays in Emergency Departments’ target were (a) to improve the quality and performance of publicly funded hospitals (Tenbensel, 2009); and (b) for patients to receive the best possible care in an acceptable timeframe. The target makes DHBs accountable for having 95% of the patients presenting to ED discharged, transferred, or admitted within six hours of their arrival; this has been easier for some DHBs to achieve than for others (Ardagh & Drew, 2015).

System innovations to help achieve this ED target vary between DHBs and include nurse-led care in the community, opening of acute admission wards to divert patients away from ED, creating alternative pathways to acute care specialists, and using multidisciplinary teams to facilitate discharge (Ministry of Health, 2011a, 2011b). Further, in some parts of New Zealand, Extended Care Paramedics assess and treat people exclusively in their homes, resulting in ambulances being used more for emergencies and patients with minor health complaints presenting less often to ED (Swain, Hoyle, & Long, 2010). Additionally, the presence of more resources for mental health in the community should result in fewer acute hospital admissions (Forero et al., 2011). The result of these various innovative
means of delegating care and treatment away from ED is that only a certain proportion of people with mixed health issues that include self-harm present to ED. Therefore, the prevalence of Mixed Presenters in ED is likely to be an underestimate of the overall number of people with mixed health issues, including self-harm in society as a whole.

Whilst the focus on timely ED care and system innovations is important, it is uncertain if such a focus has led to improvement in quality or inadvertently worsened aspects of ED care (Schull et al., 2011). Therefore, New Zealand clinical experts have developed a framework of clinical, educational/training, research, administration, and professional quality measures that reflect how EDs are functioning (National Emergency Departments Advisory Group, 2014). Data regarding these measures, which DHBs are expected to report on, are tabulated and compared to benchmarks. Whereas many measures are general to allow for the high diversity of EDs, some are specific to common presentation complaints such as pain, asthma, or trauma, or relate to potentially life-threatening presentations such as sepsis. The framework incorporates screening for family violence, substance misuse, and the discharge of vulnerable people from ED. Overall, however, it not only lacks a specific focus on mental health or self-harm, it under-acknowledges patients with mixed ED presentations, including self-harm, possibly because of the difficulty of measuring this complexity.

In summary, the adherence to ED protocols and standards, forming the basis for high quality care, is threatened by overcrowding. The implementation of government targets and quality measures is intended to support the provision of timely and safe care to ED patients. How these standards serve people who have mixed health issues, including a risk of self-harm, is less clear. In view that the care of patients who present to ED for self-harm is often shared with mental health services, these will be outlined next.

2.3.3 Mental health services

A substantial number of people use New Zealand mental health services. In the 2012/2013 financial year, 154,752 people (53.3% male) were seen by public mental health and addiction services (Ministry of Health, 2014b). However, data indicating how many people participated in mental health services does not necessarily give a good picture of the effectiveness of those services. People might have been under mental health care for a short period of time, endured unsatisfactory relationships with case managers, and/or had disappointing experiences with treatment. These factors influence adherence
to and continuity of mental health care, and outcome. Further, some people with mental illness do not seek health care. Hence, these statistics provide a guide, but are likely be an underestimate of the mental health burden of the New Zealand population. Evidence for such underestimation is the fact that 60% of people who died by suicide in 2012 were not under mental health services (Ministry of Health, 2014d).

The ease of access to mental health services possibly influences the rate of uptake. Similar to ED, mental health services are required to meet a sector-wide target that addresses the time people wait for an assessment (Ministry of Health, 2014d). This target specifies that “80 percent of people referred for non-urgent mental health or addiction services are seen within three weeks, and 95% of people are seen within eight weeks” (Ministry of Health, 2014d, p. 20). Similar to ED, where the emphasis is on getting patients through ED in a timely way, this target reflects that having sufficient available resources is an important factor (Ministry of Health, 2012b); otherwise, people need to be discharged from some services and/or moved to less acute services so as to make room for new referrals.

The timely throughput of people using mental health services is based on the principle of self-agency. People with mental illness are seen as responsible to “look after their own mental health and wellbeing” and leading their own recovery, with family and whānau playing a fundamental support role (Ministry of Health, 2012b, p. 6). This concept of self-agency is similar to people with diabetes needing to administer their insulin independently. Whilst the idea of putting the person with mental illness, along with their support people, in charge is aspirational, it is unclear when and how much actual service utilisation is ‘allowed’ under this approach. There is a risk that some people, especially those with articulate support people who know the system, receive more responsive care than those who have few advocates. Conditions such as personality disorder and substance misuse can significantly impair peoples’ abilities to communicate and connect (McAllister, 2003; Sher, 2006). These individuals are viewed by mental health services as difficult to treat because their disorders are the result of a “developmental misfortune” (Sharp & Tackett, 2014, p. vii) and there is limited treatment available (Ness et al., 2015). Nevertheless, the Ministry of Health (2012b, p. 4) promises the provision of services that “people really want”, focusing on youth, crime, substance misuse, suicide, whānau ora, and welfare reforms.

In each of the government priority areas in health care, the involvement of consumers and their support people is emphasised. In a New Zealand framework for consumer
engagement, the person with serious mental illness (in this research study, this would be the ED patient) and their support person are at the centre of the care (Health Quality & Safety Commission New Zealand, 2015). For this to happen, staff need to value consumer feedback and involvement, and use it to form a basis for shared decision-making. Consumers’ involvement in policy and governance decisions ensures an integrated system that involves and appreciates consumer representation. When involving consumers in the design and evaluation of care, an organisation/DHB ensures the patients’ and their support persons’ centrality of care (Health Quality & Safety Commission New Zealand, 2015). Establishing and maintaining authentic partnerships, working alongside individuals, families, whānau and communities, is one of the guiding principles of good mental health care (Ministry of Health, 2012b) which requires different delivery modes (shown in Figure 2.2 – based on my clinical knowledge – in relation to ED).

![Figure 2.2 Mental health services by acute and everyday management](image)

Mental health services are made available at different levels in order to meet the range of mental health needs in the population. Most directly, ED refers people at risk of self-harm to the crisis assessment and treatment team (this team is named differently in some DHBs), a psychiatric liaison nurse, or a psychiatrist on call. The choice of who to contact can depend on the time of day, the day of the week, and the DHB. These teams admit or refer to acute services such as inpatient mental health services, respite care, home-based
treatments, and day hospital care. A limited number of DHBs provide regional forensic and adolescent mental health inpatient services.

For less acute needs, patients are referred to community mental health teams (CMHT), alcohol and drug (A&D) services, eating disorder services, forensic services, and personality disorder services. Culture- and age-specific needs are often addressed with separate services, for example Māori mental health and youth mental health services. For non-acute needs, referral to GPs, GP liaisons, or school counsellors are made. Non-government organisations (NGOs) including those assisting families of people experiencing serious mental illness ('Supporting Families'), drop-in centres, peer support groups, and advocacy services are also available for people with mental illness, yet these services are increasingly affected by budget cuts (McMillan, 2016). How these acute and long-term mental health services link in with general health providers, in order to optimally care for people who are likely 'Mixed Presenters', is less well known.

However, another medium for providing general and mental health care is via phones and computers. The Healthline (0800 611 116), staffed by registered nurses, provides health advice and makes urgent referrals to ambulance, mental health crisis services, or police when required. For substance use issues, the Alcohol Drug Helpline and the Quitline (for smokers) provide support, and for age-specific support, Youthline and The Low Down exist. The Low Down is an interactive website targeted at young people who experience anxiety and/or depression. Similarly, John Kirwan (a prominent New Zealand rugby personality) shares his personal experiences on a depression website (www.depression.org.nz), which further consists of an on-line self-assessment tool, active follow-up from a health professional, and self-help recommendations.

Despite the internet’s ability to give a person control over help-seeking and disclosure (and if effective, potentially providing hope), this rather distant disclosure and support method might not work for Māori where kanohi ki te kanohi (face-to-face) is a crucial part of engagement (O’Carroll, 2013). Also, it must be acknowledged that having (a) enough resources available to access the internet and phone; (b) enough competence with technology; and (c) enough self-knowledge to identify when help is required are all potential factors influencing the uptake of online services. It seems more likely that these methods of health care provision have potential to work well for people with low-to-medium mental health needs and, apart from the Healthline, less well where a person has complex physical health needs whilst at risk of self-harm.
This section outlined the complexities of mental health service of which suicide prevention, discussed next, is a major component.

### 2.3.4 Suicide prevention

Mixed Presenters’ potential risk of suicide, in view of their (at least one) self-harm episode (Bilén et al., 2010), makes it pertinent to discuss suicide prevention initiatives in New Zealand. The *New Zealand Suicide Prevention Strategy* provides a framework for knowledge and guidance in suicide prevention. The overall purposes of this strategy are to reduce the rate, harmful effect on others, and inequalities in suicide and self-harm (Associate Minister of Health, 2006). The goals outlined in Figure 2.3 are relevant to ED, such as working to improve care for people at risk of self-harm and increase evidence about the rates, causes, and effective interventions for self-harm. But ED can also be an optimal setting for promoting mental health and wellbeing, when providing supportive and empathetic care to people at risk of self-harm, and thus contributing to the prevention of mental health problems. Furthermore, ED staff can establish close liaisons with support people.

<table>
<thead>
<tr>
<th>The seven goals of the New Zealand Suicide Prevention Strategy are to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. promote mental health and wellbeing, and prevent mental health problems</td>
</tr>
<tr>
<td>2. improve the care of people who are experiencing mental disorders associated with suicidal behaviours</td>
</tr>
<tr>
<td>3. improve the care of people who make non-fatal suicide attempts</td>
</tr>
<tr>
<td>4. reduce access to the means of suicide</td>
</tr>
<tr>
<td>5. promote the safe reporting and portrayal of suicidal behaviour by the media</td>
</tr>
<tr>
<td>6. support families/whānau, friends and others affected by a suicide or suicide attempt</td>
</tr>
<tr>
<td>7. expand the evidence about rates, causes and effective interventions.</td>
</tr>
</tbody>
</table>

*(Associate Minister of Health, 2006, p. 1)*

**Figure 2.3 Goals of the New Zealand Suicide Prevention Strategy 2006-2016**

Note. This is the most current strategy at the time of writing

Since 2014, DHBs have been responsible for the provision of multi-level, multi-faceted, and sustained suicide prevention initiatives (Ministry of Health, 2015c). The *Suicide Prevention Toolkit for DHBs* prescribes that, in accordance with the *New Zealand Suicide Prevention Strategy 2006–2016*, activities should be evidence-informed; be safe and effective; be responsive to Māori; recognise and respect diversity; reflect a coordinated multi-sectoral approach; demonstrate sustainability and long-term commitment; acknowledge that everyone has a role in suicide prevention; and have a commitment to
reduce inequalities (Ministry of Health, 2015c). Suicide prevention efforts involve, foremost, relationships within and across DHBs; knowing, analysing, and making use of local information; having a robust plan; and implementing and monitoring delivery (Ministry of Health, 2015c). However, if any of these suicide prevention initiatives specifically target people with comorbidities, such as ‘Mixed Presenters’, is unknown. Also, measuring these tasks is difficult, as the presence of a document alone does not guarantee implementation of effective initiatives. The mere existence of guidelines does little to influence practice (Gawande, 2010).

Excessive Māori suicides (rates described in Chapter 1) – in part attributable to young Māori growing up in difficult circumstances where they are predominantly disadvantaged, vulnerable, and distressed (Beautrais, 2001a) – resulted in the development of a Māori-specific suicide prevention initiative, Te Whakauruora (Ihimaera & MacDonald, 2009). Importantly, this focus reflected Treaty of Waitangi obligations of partnership, participation, and protection. The message is that Māori suicide not only impacts on whānau (family), but also hapu (clans) and iwi (tribes) (Associate Minister of Health, 2006), emphasising that concepts of hauora (wellbeing) and whānau ora (all families) are essential in addressing Māori disparities (Associate Minister of Health, 2006). This is important, as family connection reduces the self-harm risk for young Māori (Clark et al., 2011). In relation to clinical practice, DHBs are encouraged to work in partnership with whānau, hapu, iwi, and Māori communities to ensure that suicide prevention interventions are culturally appropriate and effective (Ministry of Health, 2015c). In eight DHBs (including four of those participating in the MISP study), the Kia Piki Te Ora suicide prevention programme exists. Its goal is the promotion of mental health and wellbeing for Māori, engagement with all communities, reduction of access to means of suicide, and mitigation of the impact suicide has on family/whānau (Kāhui Tautoko Consultancy, 2014).

Effective suicide prevention requires policies addressing mental illness, alcohol and drug misuse, family violence, stigma and discrimination, and unemployment, amongst others (Associate Minister of Health, 2006). Hence, the availability and quality of generic health and social services, possibly including ED, is seen as a contributory element to suicide prevention. ED is viewed as an optimal setting for developing cost-effective approaches to suicide prevention including screening, establishing suicide registers, developing brief interventions, promoting referrals, enhancing engagement, and ensuring follow-up (G. L. Larkin & Beautrais, 2010). Scott and Guo (2012), however, point out that reviews of the
effectiveness of suicide prevention interventions often exclude ED. Measuring how ED impacts on suicide prevention is difficult, especially when their emphasis is on physical health care. Given that suicide risk can be influenced by individuals’ physical and mental health, these aspects are discussed next.

2.4 Physical and mental health

Some people experience both physical and mental health problems, which represent probable characteristics of many Mixed Presenters. Research on this topic broadly distinguishes between two groups: people with serious mental illness who also experience physical health issues (S. Byrne et al., 2011; De Hert et al., 2011; Equally Well, 2015; Ministerial Advisory Committee on Mental Health, 2012; NHS Health Scotland, 2011; Te Pou o Te Whakaaro Nui, 2014) and those with long-term (physical) conditions who concurrently experience mental health issues (Naylor et al., 2012). This distinction is likely made because one health issue occurred before the other; is more severe, chronic or debilitating; and/or precipitates the other.

Social circumstances are a further important factor influencing health, especially relevant for people with mixed health problems. Naylor et al. (2012, 2016) posit that a three-way interaction exists between social conditions, mental health, and physical health. Social determinants such as poverty, social isolation, discrimination, abuse, neglect, trauma, and drug dependencies negatively influence people's physical and mental health, irrespective of which is the primary health issue. Furthermore, the interaction between comorbidities and deprivation makes a significant contribution to generating and maintaining inequalities (Naylor et al., 2012). The time of onset and the severity of people's physical and/or mental illness (Braden & Sullivan, 2008; De Hert & Peuskens, 2000) influence their education and employment opportunities, common pre-requisites for living well (McKay, 2010). The next three sub-sections cover aspects of serious mental illness and co-occurring physical health issues, people with long-term physical conditions and mental health issues, and relevant health policy.

2.4.1 Severe mental illness and co-occurring physical health issues

Co-occurring long-term physical conditions are common in people who experience serious mental illness such as schizophrenia, bipolar disorder, schizoaffective disorder,
or major depressive disorder (De Hert et al., 2011; Te Pou o Te Whakaaro Nui, 2014). Approximately 20% of the UK population are estimated to have mental health problems, of which 46% also have a long-term physical health condition (Naylor et al., 2012). Similarly, in New Zealand, “the relatively poor physical health of people with experience of mental illness and addiction is well-known, longstanding, and unacceptable” (Te Pou o Te Whakaaro Nui, 2014, p. 3). People enduring serious mental illness are not only at greater risk for a range of chronic health conditions, they also have a shorter life expectancy than the general population (Cunningham, Peterson, Sarfati, Stanley, & Collings, 2014; De Hert et al., 2011; Ministerial Advisory Committee on Mental Health, 2012; Te Pou o Te Whakaaro Nui, 2014).

Poor mental health is a major risk factor implicated in the development of cardiovascular disease, chronic lung diseases, bacterial infections, viral diseases, neoplasm, musculoskeletal diseases, urological and genital diseases, pregnancy complications, stroke, and nutritional and metabolic diseases (De Hert et al., 2011; Naylor et al., 2016). Many of these physical conditions are accompanied by chronic pain (Oakley Browne et al., 2006). Furthermore, self-harm and eating disorders can result in electrolyte imbalances (Naylor et al., 2016). So, it seems likely that the link between certain mental and physical health issues are specific to an identifiable group, such as Mixed Presenters.

According to an evidence review by Te Pou Te Whakaaro Nui (2014), three major factors influence poor physical health outcomes for people with severe mental illness. Firstly, this group often endures low socioeconomic status, reduced physical activity, and poor nutrition, and has high rates of tobacco, alcohol, and other drug use, as also reported in the New Zealand Mental Health Survey (Oakley Browne et al., 2006) and by the Australian Ministerial Advisory Committee on Mental Health (2012), portraying amongst other factors, a strong link between poor mental health, addiction, and poor physical health (Mental Health Commission, 2012).

The second point raised in the review is that commonly prescribed psychotropic medication contributes to obesity, metabolic syndrome, cardiovascular disease, and type 2 diabetes, as reported by researchers (De Hert et al., 2011; Naylor et al., 2016; Te Pou o Te Whakaaro Nui, 2014), a factor that must be considered in medication administration (Ministerial Advisory Committee on Mental Health, 2012). These medication complications are related to some of those mentioned in the previous paragraph: for example, obesity is related to reduced physical activity, and some medication side effects
include a lack of satiety and cravings for sweet foods, encouraging poor nutrition. In addition, people who experience these factors are less likely to be able to maintain work and earn income, thus producing a risk of deprivation. Medication is a common intervention by health services for people with complex and mixed health issues, including self-harm.

Thirdly, due to financial barriers, stigma, and discrimination, people with severe mental illness access quality health care less often, which can be further complicated by the separation of physical and mental health services (Te Pou o Te Whakaaro Nui, 2014). In fact, people with serious mental illness are less likely to receive standard levels of care for most physical diseases (De Hert et al., 2011). This gap is partly due to the physical health needs of this group remaining undetected (Naylor et al., 2016), health professionals interpreting physical health problems as relating to psychiatric issues (Ministerial Advisory Committee on Mental Health, 2012), and individuals’ mental health struggles contributing to poor attendance rates for medical appointments (Naylor et al., 2012).

Clinical services are attempting to address the physical health care needs of people with serious mental illness, relevant for this study as many will likely meet the criteria of ‘Mixed Presenter’. Mental health teams are required to undertake comprehensive health assessments, including lifestyle, general health, and medication side effects, for all their clients at certain time points (Ministerial Advisory Committee on Mental Health, 2012). Others promote routine screenings of cardiovascular disease, metabolic indicators, and follow-up (Equally Well, 2015). In Scotland, an evaluation of health improvement activities such as exercise, weight management, and smoking cessation showed benefits if implemented in conjunction with extra support for both the people engaged in the health improvement activities and to staff providing services (S. Byrne et al., 2011). However, the study included only small numbers of participants for most of the activities and involved mostly short-term participation, so the results are at risk for bias. Conversely, routine mental health check-ups for people with long-standing conditions is rarely reported.

### 2.4.2 Long-standing conditions and co-occurring mental health issues

Mixed Presenters’ ‘other’ presentations can be a result of these individuals living with a long-term physical condition. People with long-term conditions are more likely to experience mental disorders compared to people without physical conditions (Oakley
Browne et al., 2006). In the UK, 30% of the population are estimated to have a long-term condition, of which 30% have a co-occurring mental health problem (Naylor et al., 2012). Long-term conditions impact on peoples’ mental health: some medication for physical health issues have psychiatric side effects, hormonal imbalances can influence mental health, and people with diabetes and cardiovascular disease are at increased risk of dementia (Naylor et al., 2016).

Many long-term conditions can be managed but often not cured, including arthritis, diabetes, cardiovascular disease, asthma, chronic obstructive airways disease, many cancers, dementia, and HIV/AIDS (Mays, 2013; Naylor et al., 2012). Where comorbid mental health problems exist, people can engage in unhealthy behaviours (such as smoking), with some experiencing a reduced ability to actively manage their own physical condition and requiring a high service input for physical problems (Naylor et al., 2012). The complexity of these health issues, combined with high frequency ED use, can result in some health issues by likely ‘Mixed Presenters’ becoming obscured.

Medically unexplained symptoms – physical health complaints that lack an identifiable organic cause – often reflect long-term underlying conditions. Symptoms can include musculoskeletal pain, persistent headache, chronic tiredness, chest pain, heart palpitations, and gastric symptoms (Naylor et al., 2016). All of these health complaints are commonly reported and widely investigated in ED. Negative tests portray that no identifiable disease has been found. Ongoing progress in medicine and psychiatry means that in future, some of the current ‘unexplained’ health complaints will be assigned labels. However, until then, medically unexplained symptoms have a major impact on the people experiencing them and on the health system (Naylor et al., 2016). As discussed in the literature review (section 3.3.2), chronic pain can worsen depressive symptoms, which are a risk factor for suicide. Hence, comorbid mental health and physical health issues, estimated to be common for ‘Mixed Presenters’, should be addressed concurrently and in a timely fashion.

This brief review has focused on the impact of concurrent mental and physical health factors on people who are likely to present to ED. In consideration of the scope if this thesis, I have not discussed public health policies, those specifically targeting pregnancy/young mothers, care in residential homes, physical care in mental health inpatient facilities, or the wellbeing of carers or primary care-specific recommendations. Furthermore, social deprivation, relevant to Mixed Presenters, is mentioned but not
further discussed in view of its complexity. The focus is on EDs, and their typical management of Mixed Presenters, issues that are discussed next.

### 2.5 Emergency department management of Mixed Presenters

The final section of this chapter describes the typical journey Mixed Presenters make when presenting to ED in New Zealand (Figure 2.4). DHBs management of patients is influenced by their size and local procedures. For example, larger DHBs provide more immediate access to mental health and social services compared to smaller DHBs. Information on detailed follow-up care or interventions, outside of the scope of this dissertation, are not discussed.

![Figure 2.4 Typical patient flow through ED](image)

#### 2.5.1 Arrival

ED patients arrive either alone or with support, which most often would include family/whānau members or friends. For many, the mode of transport to ED typically involves walking, public transport, or car, and less often ambulance, police, or helicopter. Arrival mode depends on the person’s physical health status and level of consciousness; for example, patients in severe pain or heavily influenced by alcohol intoxication require transport by others. Furthermore, impairment in mental state from such conditions as psychosis, mania, depression, overall distress, and self-harm intent influence a person’s voluntary or involuntary decisions to attend ED, as well as their aforementioned mode of transport.

Whilst for most patients ED is the first choice for help, a small group of patients has prior contact with GPs, specialist services, or crisis mental health services. This group will
typically see a specialist on arrival, which means general health specialists such as
surgeons, or medical doctors assess patient’s physical health status, whilst the crisis
mental health team assess self-harm aspects. Long delays for speciality teams, acute
distress requiring immediate input, and a need for a physical examination prior to an
assessment by the crisis mental health team are deciding factors for ED doctors to assess
the individual beforehand.

On arrival, reception staff collect demographic and basic clinical information for every ED
patient. Ethnicity data ensures the availability of information about disadvantaged groups
such as Māori and Pacific peoples (Oakley Browne et al., 2006). Administration staff
match patient details with unique NHI numbers, and new NHIs are allocated to individuals
who have never accessed health services, such as tourists, and people who are
unconscious and cannot be identified. ED data is routinely reported to the Ministry of
Health, which produce a ‘hospital events’ dataset called the National Minimum Dataset
(NMDS), utilised in this study.

2.5.2 Triage

Patients are triaged shortly after arriving in ED (Australasian College for Emergency
Medicine, 2013; National Collaborating Centre for Mental Health, 2004). An immediate
response to distressed and unwell patients ensures timely intervention (Sands, 2007), but
delays occur when multiple patients arrive to ED simultaneously (Australasian College
for Emergency Medicine, 2013). In addition to patients’ communication about their
presentation complaints, collateral information from ambulance staff, police, support
people, and/or GPs assists in the assessment and treatment of patients (New Zealand
Knowledge of prior health service use is also important (Victorian Department of Health,
2010); yet, at triage patient records are not routinely accessed, so this information
remains unknown unless disclosed by the patient.

A triage code (1 to 5) represents the amount of time thought to be appropriate for each
patient waiting for assessment and treatment by an ED doctor (Australasian College for
Emergency Medicine, 2013). The lower the triage code, the more severe and life-
threatening the presenting complaint and thus the shorter the waiting time deemed safe
and acceptable (Table 2.1).
Table 2.1  Australasian Triage Scale and ED Mental Health Triage Scale comparison

<table>
<thead>
<tr>
<th>Triage code Response&lt;sup&gt;1&lt;/sup&gt; Category</th>
<th>Australasian Triage Scale</th>
<th>ED Mental Health Triage Scale&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Immediate Resuscitation</td>
<td>Conditions that are threats to life</td>
<td>Violent, possesses weapon, self-destruction in ED. Poses danger to life.</td>
</tr>
<tr>
<td>2 10 minutes Emergency</td>
<td>Imminently life-threatening Important time-critical treatment Very severe pain</td>
<td>Extreme agitation, aggressive, confused, unable to cooperate</td>
</tr>
<tr>
<td>3 30 minutes Urgent</td>
<td>Potentially life-threatening Situational urgency Relief of severe pain or distress within 30 minutes</td>
<td>Restless, intrusive, or bizarre behaviour. Confused, psychotic symptoms, ambivalent about symptoms</td>
</tr>
<tr>
<td>4 60 minutes Semi-urgent</td>
<td>Potentially serious Situational urgency Significant complexity or severity Relief of discomfort or distress within 60 minutes</td>
<td>No agitation, irritable without aggression. Cooperative, coherent history. Reports anxiety or depression</td>
</tr>
<tr>
<td>5 120 minutes Non-urgent</td>
<td>Less urgent</td>
<td>Restless, without aggression, cooperative, communicative and compliant</td>
</tr>
</tbody>
</table>


New Zealand EDs are predominantly guided by the Australian College for Emergency Medicine triage scale (ATS) in their triage decisions. The scale entails broad descriptions of ED presentation complaints that relate to each triage code. These clinical descriptions focus primarily on physical symptoms with minimal behavioural/psychiatric indicators. Mental health-specific triage scales also exist, providing guidance on what behaviours fall within the boundaries of given triage codes (Ministry of Health, 2016e; New Zealand Guidelines Group & Ministry of Health, 2003). However, there is inconsistent application of mental health triage guidelines, which means that people with mental illness are often under-served (Broadbent, Moxham, & Dwyer, 2007), making teaching, role-modelling, and regular auditing imperative for the maintenance of high quality mental health care.

Presentation complaints do not always clearly fall into the categories of distinct self-harm or ‘other’, and sometimes require triage staff to be generally alert to self-harm risk (Victorian Department of Health, 2010). The presence of comorbid health conditions means that people at risk of self-harm can present with physical health issues. Also,
alcohol intoxication, especially when frequent and severe, is strongly associated with self-harm (Chou et al., 2012), which patients disclose to varying degrees, if at all. Hence, it is important to provide a safe environment before a suicide risk assessment occurs (Ministry of Health, 2016e; New Zealand Guidelines Group & Ministry of Health, 2003). People who complain of mental health-related issues, such as poor sleep, depression, and hopelessness should also be routinely assessed for self-harm (Victorian Department of Health, 2010). Where self-harm is suspected, the triage nurse should ask the patient about self-harm and re-assess safety arrangements.

When a patient presents with co-occurring physical and behavioural problems, the appropriate triage code based on the combined presentation picture is allocated (Australasian College for Emergency Medicine, 2013); this includes assessment of physical risk and the person’s emotional and mental state (National Collaborating Centre for Mental Health, 2004). In the absence of apparent physical issues such as trauma or medical effects from an overdose, triage should assess the severity of behavioural disturbance (New Zealand Guidelines Group & Ministry of Health, 2003).

The triage process presents the first opportunity for rapport-building for staff, a process especially important when assessing anxious and/or agitated patients (Victorian Department of Health, 2010). Where staff convey a sense of warmth, non-judgemental acceptance, and a strong interest in understanding the person and the nature of their cause of pain/distress, patients are likely to trust staff, because they feel heard and understood (New Zealand Guidelines Group & Ministry of Health, 2003). However, an Australian guideline recommends that ED staff should be “professionally empathetic and persevere with their questions” (Victorian Department of Health, 2010, p. 20), implying ED engagement should be calculated, measured, and non-involved. Yet, these guidelines equally state that “the key to engagement is listening” (Victorian Department of Health, 2010, p. 5). This mix of recommendations, though potentially confusing, emphasises the importance of simultaneously gathering clinical information and relating effectively, safely, and genuinely to patients. In a New Zealand context, compassion, respect, and kindness (or manaakitanga in Māori) ensure a warm welcome, and reflect staff’ cultural competency (Ministry of Health, 2016e).

Whilst rapport is important, the focus of ED is on physical health management. Triage nurses take vital signs, such as pulse and temperature measurements, from most patients even though this is not compulsory (Australasian College for Emergency Medicine, 2013).
This information helps with appropriate allocation of triage codes. Re-triage might be required if a patient's condition changes (Australasian College for Emergency Medicine, 2013) or if a patient waits longer than recommended by the assigned triage code. However, triage nurses can commence advanced care for patients in the waiting room: they can take blood for testing, do electrocardiograms, and order x-rays. Assessing the mental health of people who are at risk but have not yet engaged in self-harm is secondary.

Primarily, people at risk of self-harm undergo a preliminary psychosocial assessment at triage (National Institute for Clinical Excellence, 2004). The assessments should determine a person's mental capacity, the possible presence of mental illness, their level of distress, and their willingness to remain in ED for further assessment (National Collaborating Centre for Mental Health, 2004). The Rapid Assessment of Patients in Distress tool (New Zealand Guidelines Group & Ministry of Health, 2003) is comprehensive and assists ED nurses with identifying questions to ask in the assessment of patient mental health. A suicide risk assessment includes questions on the duration of suicidal ideation, a history of prior self-harm, recent help-seeking behaviours, the existence of a suicide plan, and access to means to complete the plan (Victorian Department of Health, 2010). Good rapport along with a process that gradually (and gently) asks questions about past, present, and future thinking about suicide (Sands, 2007) will ensure that the person is acknowledged first, and their difficulties second. Expressed difficulties are consequently mitigated by interventions.

People at risk of self-harm require safety while in ED (Sands, 2007). The individual is asked to surrender items that could potentially be used for self-harm including medication and weapons, sometimes requiring input from security staff or the police (New Zealand Guidelines Group & Ministry of Health, 2003). A safe environment entails privacy, no access to potential injurious material, a quiet environment, and one-to-one supervision as required (New Zealand Guidelines Group & Ministry of Health, 2003). Safety measures are further crucial when patients have to wait extensively, because people are more likely to want to self-discharge as time goes on, with some becoming aggressive (Australasian College for Emergency Medicine, 2013).

Realistically, most patients are required to wait following triage. As physical health issues such as pain or concerns about physical symptoms can heighten people's anxiety during this time, the triage nurse should treat/address these issues. Furthermore, waiting in a
crowded environment can increase agitation and distress, especially for people at risk for self-harm, while those who present with alcohol and/or drugs misuse issues are more likely to respond with violence and aggression (Victorian Department of Health, 2010). Triage nurses are required to inform ED patients about waiting times (National Institute for Clinical Excellence, 2004); however, they cannot influence the extensive waiting times for psychiatric services that often cause dissatisfaction (Clarke et al., 2007; O’Regan & Ryan, 2009; Summers & Happell, 2003). ED patients with urgent triage priorities or who need to lie down are transferred to cubicles or corridors.

2.5.3 Assessment, treatment, and referral

The information gained from individuals at triage is often brief, so when taken to a cubicle that offers some privacy, patients usually undergo a more thorough assessment. In my experience, patients attending ED following a self-harm incident can be categorised into four groups:

Group 1 – Patients require immediate assessment and simultaneous treatment. They are in a physically unstable condition, such as being unconscious or having sustained severe traumatic injuries, making the input from support people vital in the assessment of these patients. Mental health issues are not addressed.

Group 2 – Patients require both physical and mental health input, but the emphasis is on physical health. Individuals will often be admitted medically/surgically and assessed by mental health services on the ward once stabilised.

Group 3 – Patient management focuses on individual’s mental health with minimal physical input. Included in this group are acutely mentally unwell people, people at acute risk of self-harm, and those requiring psychiatric admission. These individuals are ‘medically cleared’ and mental health services lead their care.

Group 4 – Includes people who frequently present to ED for self-harm, and whose care is often guided by a management plan with the aim to provide coordinated and consistent care across various health care services. Oftentimes, people in this group are treated medically and sent home with minimal mental health input in ED, but with routine mental health follow-up.

The above groupings fluctuate with the deterioration or improvement of individuals’ physical or mental state. Concurrent physical and mental health issues influence the
degree of their involvement in their care. The presence of health care assistants, security personnel, or orderlies might be necessary to assist with groups 2-4. Management is guided by minimally restricting individuals' choices (Mental Health Commission, 2012); however, in life-threatening situations, patient choices can be overridden by sectioning them under the Mental Health (Compulsory Assessment and Treatment) Act 1992 (MHA).

ED patients who are assessed as at risk of harming themselves or others, who are deemed to have incapacity to take care of themselves, or who are mentally disordered may require sectioning under the MHA. The Act is often initiated when such a patient tries to leave ED before a full mental health assessment is completed. Security staff are required to monitor the patient to ensure they stay in ED, and medication or physical restraint might be required to contain the patient and keep them safe. Legal documents are completed by numerous health professionals, each assessing that the patient is truly unable to make appropriate decisions concerning their safety and welfare.

People at risk of self-harm often require medical clearance (New Zealand Guidelines Group & Ministry of Health, 2003), which reflects the person’s readiness to be assessed by mental health services. Firstly, physical assessments aim to investigate if there are physical reasons for a patient’s poor mental health and/or self-harm risk. Medications such as antibiotics or those for Parkinson’s disease; physical health issues such as diabetes or infections; and neurological abnormalities such as brain tumours, strokes, or dementia can affect a person’s mental health status. Secondly, if self-harm has occurred, a patient might require physical treatment. For example, self-harm lacerations may need to be cleaned and sutured, and x-rays performed to exclude the presence of foreign bodies in the wound. For overdoses, observations of ‘airway, breathing, circulation, disability and environment’ (ABCDE) guide interventions such as intubation, IV cannulation, medication, or observations only. The physical health status of the patient influences referral decisions. Where patients are alert and orientated, medical clearance does not need to occur before a mental health assessment, for example when awaiting blood results following a paracetamol overdose (National Collaborating Centre for Mental Health, 2004; New Zealand Guidelines Group & Ministry of Health, 2003).

ED patients who present for non-self-harm reasons are assessed and treated as per protocols and best-practice guidelines (Dagenais, Tricco, & Haldeman, 2010). I have observed that the risk of self-harm is not routinely assessed in these patients, unless
indicated by the person’s behaviour or when physical health issues appear to be of psychiatric origin.

The ED management of people at risk of self-harm has a strong focus on the referral for assessment and follow-up by mental health services. Guidelines from Australia further assert that in addition to ED patients who present with self-harm, presentation complaints of probable self-harm-related mental health problems such as accidental overdoses, unexplained somatic complaints, repeated accidents, increased risk-taking behaviour and impulsivity, and self-harming behaviours also require referral (NSW Department of Health, 2004). Until recently, clinical practice guidelines recommended that every person attending ED with self-harm should receive a comprehensive mental health assessment (Boyce, Carter, Penrose-Wall, Wilhelm, & Goldney, 2003; National Collaborating Centre for Mental Health, 2004; New Zealand Guidelines Group & Ministry of Health, 2003). However, the most recent guidance documents acknowledge that suicide risks vary and thus advise that outpatient management for individuals with low or moderate suicide risk is possibly appropriate (Ministry of Health, 2016e; Victorian Department of Health, 2010).

There are three referral pathways from ED for people at risk of suicide (Ministry of Health, 2016e). The patient might be referred to crisis mental health services for an assessment in ED. Alternatively, the patient is discharged with follow-up arrangements (hopefully within 24 hours) by mental health services. As a third option, the patient is discharged and a GP is contacted to provide follow-up. [This patient flow strategy aligns with most other physical health complaints where some patients are seen by a specialist in ED, other patients are referred to outpatient care whilst a third group is treated in ED and discharged without specialist input (a subgroup of these are discharged under GP care)]. Mental health services have been deemed most suitable for performing a comprehensive mental health assessment (New Zealand Guidelines Group & Ministry of Health, 2003).

The main purpose of the multidisciplinary crisis mental health team (might be called differently in some DHBs and some countries), under the supervision of a psychiatrist, is to perform a comprehensive mental health assessment and develop a plan of action (New Zealand Guidelines Group & Ministry of Health, 2003). The assessment should identify all acute and chronic comorbid psychiatric conditions and establish factors and motivations for a suicide attempt or threat. Significant interpersonal problems and conflicts, and social stressors such as unemployment and illness are identified. During the assessment,
patterns of dysfunctional thinking and behaviour are also assessed, for which the routine input of support people (where possible) is most helpful. Finally, the short-term and continuing risks of suicide and deliberate self-harm are assessed (New Zealand Guidelines Group & Ministry of Health, 2003). However, clinicians have been found to rate the patients’ risk of suicidal intent as less serious compared to patients’ ratings of themselves (Hatcher & Pimentel, 2013), findings probably influenced by limited ED resources and pressures to discharge patients quickly. The timing of a suicide risk assessment, the location, and the rapport established with the clinician are factors that can influence the outcome.

Clinicians usually document ED patients’ clinical care. Yet, documentation does not always reflect what is being done by or discussed between the ED staff and the patient. Studies show that nurses document less than half of what they actually do for patients (De Marinis et al., 2010) and documentation on self-harm attendances were found overall to be incomplete and inaccurate (Horrocks, House, & Owens, 2004; Kuehl et al., 2012). The findings, while not surprising given the unpredictability and busy nature of ED where the challenges of data collection and retrieval influence data quality, are of concern.

Data management is changing. For the duration of MISP (Section 5.2), some small DHBs were still using a combination of electronic and hand-written notes, and some nurses and doctors used different modes of documentation, all of which make the sharing of notes between mental and physical health providers difficult. Electronic clinical documentation provides easy access to prior health records within and across health specialities, allowing this information to influence future health care decisions. It is hoped that such unified information will reduce diagnostic error (Schiff & Bates, 2010). A New Zealand government goal set for 2014 targeted patient health data that would be shared amongst DHBs, and also between DHB services and other health providers such as GPs (Minister of Health, 2016). Even though this initiative allows patient’s health care records to be shared across services with the aim of holistic care, I am concerned that too much information could increase the risk of negative labelling for Mixed Presenters.

2.5.4 Discharge

Mixed Presenters requiring assessment and treatment beyond that provided in ED are admitted as inpatients, typically onto surgical, medical, or psychiatric wards. Furthermore, many EDs have short-term observation wards, enabling care for those
patients who require a longer stay than six hours (e.g., patients who have taken an overdose). Short-stay mental health wards are available in Australia, such as at the Flinders Medical Centre, but the lower patient numbers makes this less feasible in New Zealand. Still, respite care is sometimes used as an alternative to inpatient admission, especially when combined with a lack of suitable support people (New Zealand Guidelines Group & Ministry of Health, 2003).

On discharge home from ED, patients receive a discharge plan outlining the management they received in ED, recommendations for self-care at home, and follow-up plans (New Zealand Guidelines Group & Ministry of Health, 2003). The discharge plan should be developed in consultation with the patient, their support person, and care providers as appropriate. Discharge plans from ED can be done by specialist services such as mental health, medical, or surgical if an inpatient admission is not required. Copies of the plan are routinely shared with the patient’s GP unless otherwise requested. The discharge plan is also electronically available in many DHBs, making it accessible to both general and mental health services. Follow-up services are provided by GPs, specialist clinics, and mental health teams as outlined in the discharge plan, and rarely involve ED.

Of note, some patients discharge themselves prior to the completion of assessment, treatment, and discharge plans (Alfandre, 2009; Rabin et al., 2012). Self-discharge can occur at various stages of the ED journey: soon after arrival, after triage, after an assessment by an ED doctor, after a specialist assessment, or during any treatment. The timing of self-discharge in part determines the possible risk to the patient’s health. The longer the patient remains in ED, the higher the chances of self-harm disclosure. If a self-harm risk is made known to staff and a patient self-discharges, decisions are made about involving the police and the crisis mental health team for help with searching for and returning the patient to ED. The greater the knowledge gap regarding the safety of the patient who self-discharges, the higher the potential risk of self-harm (Reith, Whyte, Carter, McPherson, & Carter, 2004).

A minority of patients will return to ED within a short time frame. Whilst undergoing a similar ED journey, Mixed Presenters’ early return for a different reason might result in distinct care.
2.6 Conclusion

This chapter outlined background information relevant to Mixed Presenters, highlighting the challenge of health care demand exceeding supply. Whilst EDs and mental health services follow distinct care pathways, their input into patient care is increasingly widened to take on the ‘other’ health requirement, be it a physical or a mental health issue, with both services taking responsibility for suicide prevention. Within ED, the care follows best-practice, with patients being systematically ‘processed’ from their arrival to their departure. Characteristics of ED patients who could possibly be identified as ‘Mixed Presenters’ are discussed next in the literature review.
Chapter 3
Literature Review

“There is much that is physical in the so-called mental disorders, and much mental in the so-called physical disorders.”

3.1 Introduction

This chapter presents a critical literature review of two health topics: people who are at risk of self-harm and who also have other health issues, and their management in ED. These topics are closely examined with the purpose of understanding to what extent these ‘Mixed Presenters’ are an identifiable and at-risk (of self-harm) ED patient group. This chapter is in four parts. Firstly, I explain my search strategy. Secondly, I identify groups of people who are at particular risk of self-harm and who have comorbidities. These other health issues include poor physical health, pain, injuries, mental illness, and substance misuse. People who frequently present to ED are also included. Thirdly, ED management of self-harm is examined, including help-seeking, screening, staff attitude, and ‘patient/support people’ experiences in ED. Lastly, a justification for the study is provided.

3.2 Search strategy

The literature was identified from many sources. I used OVID for a systematic search in the Medline, PsycINFO, and Ovid Nursing databases. Studies written in English and published from 2006 onwards were included because I estimated that an approximate 10-year timeframe would yield both up-to-date and sufficient material, as shown in similar studies (Anguiano, Mayer, Piven, & Rosenstein, 2012; Tang & Crane, 2006). Older studies (identified from reference lists of relevant articles) were added for context not found in later studies. I screened Google Scholar, and scanned the index of the New Zealand Medical Journal and the Emergency Medical Journal for relevant papers. I set up

OVID email alerts for the search terms used. Key words representing self-harm were ‘suicide/ or suicidal ideation/ or suicide attempt’, ‘self-injurious behaviour/ or self-mutilation’ and ‘self-harm’. Key words for ED were ‘emergency department’, ‘accident and emergency’ and ‘emergency room’. I merged the search terms ED and self-harm to find the relevant literature.

In the absence of an easily-defined literature on Mixed Presenters, I linked the following specific terms with the ED/self-harm grouping: frequent or repeat; comorbidity; pain; wounds or injuries; alcohol; domestic violence; risk or protective factors or risk assessment or risk factors; assessment or questionnaires; attitude; stigma; and qualitative and patient satisfaction/experience. I chose these terms because I wanted to examine the mixed nature of health and social issues that are commonly associated with self-harm. In particular, I explored the self-harm risk in each sub-group because this helped facilitate formal recognition and definition of Mixed Presenters. The search terms reflecting ED management and patient views were used to understand how health care was provided by staff and in turn experienced by patients and their support people. I aimed to identify possible gaps in knowledge and ED management.

Descriptions of specific mental illnesses and their risk of self-harm were included if there was an ED context. Self-harm follow-up studies were included if they also provided other health information, such as data on deaths by natural causes (meaning the death was attributed to an illness or physical malfunction). Similarly, I included studies that investigated reasons for suicide and self-harm, such as a history of chronic pain. General mental health issues were included where self-harm and other health issues were mentioned or implied. I included qualitative studies of people’s experiences in ED when presenting for self-harm and of ED staff’ views on caring for patients at risk of self-harm. Table 3.1 presents the search terms used and the number of articles yielded per database.

The exclusion criteria for the searches were based on pre-determined criteria. As not much was known about Mixed Presenters, a broad scope of terms was warranted. I excluded search terms related to specific physical health issues in relation to self-harm because a thorough review of each physical health condition would have resulted in a huge literature volume, which at this point was not required. I also excluded studies which were based solely in non-ED settings such as primary care, mental health inpatient wards, community mental health services or schools.
Table 3.1  Search terms and number of potentially relevant articles for literature review by database

<table>
<thead>
<tr>
<th>Search terms</th>
<th>Sub-search terms</th>
<th>Medline</th>
<th>PsycINFO</th>
<th>Ovid Nursing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-harm</td>
<td></td>
<td>53439</td>
<td>34634</td>
<td>4231</td>
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<tr>
<td>ED</td>
<td></td>
<td>81943</td>
<td>8128</td>
<td>7926</td>
</tr>
<tr>
<td>Self-harm AND ED</td>
<td></td>
<td>1545</td>
<td>723</td>
<td>111</td>
</tr>
<tr>
<td>Frequent</td>
<td></td>
<td>94</td>
<td>43</td>
<td>0</td>
</tr>
<tr>
<td>Repeat</td>
<td></td>
<td>138</td>
<td>96</td>
<td>4</td>
</tr>
<tr>
<td>Comorbidity</td>
<td></td>
<td>54</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Risk/protective factors</td>
<td></td>
<td>359</td>
<td>121</td>
<td>34</td>
</tr>
<tr>
<td>Risk/protective factors AND comorbidity</td>
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<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Assessment or questionnaires</td>
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<td>424</td>
<td>216</td>
<td>34</td>
</tr>
<tr>
<td>Risk/protective factors AND assessment OR questionnaires</td>
<td></td>
<td>199</td>
<td>75</td>
<td>19</td>
</tr>
<tr>
<td>Attitude of health personnel</td>
<td></td>
<td>92</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>Stigma</td>
<td></td>
<td>2</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Patient satisfaction, preference, experience, qualitative</td>
<td></td>
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<td>14</td>
<td>7</td>
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<tr>
<td>Pain</td>
<td></td>
<td>43</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Trauma OR injury</td>
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<td>34</td>
<td>8</td>
</tr>
<tr>
<td>Alcohol, comorbidity</td>
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<td>0</td>
</tr>
<tr>
<td>Screening</td>
<td></td>
<td>97</td>
<td>47</td>
<td>11</td>
</tr>
<tr>
<td>Domestic violence</td>
<td></td>
<td>34</td>
<td>4</td>
<td>10</td>
</tr>
</tbody>
</table>

Case reports, literature that focused on anatomy and physiology, case studies that described best treatment practice for certain self-harm presentations, studies that compared medications, and studies that merely described an ED population with self-harm were also excluded. Of note, some people sustain long-term physical effects following their self-harm, mostly outlined in the above-mentioned case reports. Despite this population representing possible Mixed Presenters, the quality of the literature – primarily the lack of generalisability (Zainal, 2007) – was insufficient for inclusion. Lastly, while mental illness is a common risk factor for self-harm, studies that considered mental health but did not mention self-harm were excluded. Exclusion of these studies allowed the narrowing of my search. Initial screening of the identified literature from the database searches, followed by in-depth scrutiny of the relevant and supplementary literature resulted in the inclusion of approximately 140 articles for full scrutiny.
3.3 Comorbidities and self-harm risk

In this section, I discuss literature which indicates that Mixed Presenters may be an identifiable and important subgroup of the self-harm presentation population. I present literature on self-harm in combination with physical illness, pain, trauma, and mental illness with comorbidities. Certain physical illness characteristics and diagnoses increase self-harm risk, and this is discussed first.

3.3.1 Physical illness and self-harm

Certain physical health conditions such as epilepsy have been found to increase suicide risk (Stenager & Stenager, 2002). Amongst a list of common chronic diseases, Scott et al. (2010) found epilepsy to be strongly associated with suicidal ideation and planned attempts, even when rates are adjusted for mental disorders. These cross-national findings contrast with a Canadian case control study (Kwon et al., 2011) involving 10,240 epilepsy cases identified by ICD codes from four hospitals that were each matched with four people without epilepsy by age (± 1 year) and sex. Administrative databases were examined for comorbidities for each case within the seven years of data. Further, the sample was followed up for one year for self-harm, accidents, and assaults. People with epilepsy had higher comorbidities compared to the control group, especially for alcohol abuse (12.3% vs 2.7%), drug abuse (10.6% vs 2.3%), psychosis (9.0% vs 1.8%), depression (40.2% vs 21.1%), and paralysis (7.6% vs 1.0%). Attempted or completed suicides were significantly higher in both males and females with epilepsy compared to those without epilepsy (male: 0.30% vs 0.07%, female 0.52% vs 0.12%). However, after adjusting for comorbidities, people with epilepsy were shown to be no more likely to engage in self-harm than those without epilepsy. Although a significantly increased risk of harm for people with epilepsy was assault by others, the circumstances of the assaults were unknown, and could have involved undisclosed self-harm. Limitations of this study included a short follow-up period of one year and no apparent adjustment for the severity of epilepsy.

Furthermore, diabetes represents an increased risk of self-harm. A cohort of 145 adults (mean age 49.5 years) with Type 2 diabetes completed a questionnaire about their medical, social and psychiatric history. Approximately 10% (n = 14) of the sample had a history of suicide attempts, with 12 of these 14 also having a history of depression (Myers, Grannemann, Lingvay, & Trivedi, 2013). This small study failed to explain the interaction
between diabetes and suicidal behaviour or how the severity of diabetes or the presence of social support might influence self-harm. These factors are important to consider because psychiatric disorders are not always shown to influence the association between physical health problems and self-harm (K. M. Scott et al., 2010).

Other conditions such as chronic obstructive airways disease, spine disorders, asthma, and cancer present significant risk factors for suicide and affect both men and women (Crump, Sundquist, Sundquist, et al., 2013; Stenager & Stenager, 2002). However, gender differences concerning physical health issues and self-harm events do exist. Physical illness was found more commonly in women at risk of suicide (Qin, Webb, Kapur, & Sørensen, 2013), possibly because of increased help-seeking by females. Compared to men, women with diseases related to infection and parasites; the nervous system, respiratory system, digestive system, and skin and musculoskeletal system; congenital malformations; and unspecified symptoms, signs and abnormal clinical and laboratory findings had a significantly increased suicide risk (Qin et al., 2013). However, it was men, and not women, with diabetes and ischaemic heart disease who were reported to be at modest risk for suicide (Crump, Sundquist, Sundquist, et al., 2013). Qin et al. (2013) found that having a neoplasm was associated more often with higher suicide risk in men compared to women. Similarly, a literature review of peer reviewed articles from Pubmed, CINAHL, and PsycINFO between 1999 to 2009 identified men age 65 years or older with lung, pancreatic, head and neck, or prostate cancer at particularly high risk for attempting suicide (Anguiano et al., 2012). These specific cancer types are often related to alcohol (mis)use and smoking, which have been more common in males in the past, or like prostate cancer, are gender-specific.

It is possible that men are more negatively affected by disability and poor health. In a USA population survey 356,845 people were interviewed face-to-face about chronic physical and psychiatric health issues within the previous 12 months, and the restrictions these conditions placed on their daily lives (Kaplan, McFarland, Huguet, & Newsom, 2007). The linkage of this survey with mortality data three years later showed that of the 653 people who had died by suicide, 510 (76.1%) were men. These findings align with the 2014 age-adjusted suicide rates of 20.7 per 100,000 for men and 5.8 per 100,000 for women in the USA (Curtin, Warner, & Hedegaard, 2016). However, the Cox proportional hazards model in the Kaplan et al. (2007) study showed that people who died by suicide, apart from being male, were significantly more likely to have higher income, and report poor health and functional impairment. The study failed to include common risk factors for self-harm such
as alcohol misuse or previous self-harm. Further, the time lag between the survey and suicide was up to 10 years (with the average time between survey completion and suicide not reported), by which time health concerns might have resolved or increased; or new ones surfaced and developed.

How and at which time point poor physical health occurs influences self-harm risk. Scott et al. (2010) found that physical conditions were especially predictive of suicidality if they occurred early in life. Others pinpointed the time of diagnosis as crucial; for example, high suicide risk in the first year after cancer diagnosis (Anguiano et al., 2012) or where both physical and psychiatric illness were diagnosed within a short time of each other, regardless of which came first (Qin, Hawton, Mortensen, & Webb, 2014). Crump et al. (2013) equally found that depression posed a risk of suicide, especially in the first 13 weeks after diagnosis, compared to people not diagnosed with depression. Nonetheless, these study findings do not take into account individual resilience and the circumstances surrounding new diagnoses.

How illness is perceived possibly influences self-harm risk. In a US National Comorbidity Survey based on a probabilistic sample of 5877 people aged 15-to-54, Goodwin and Marusic (2011) discovered that individuals' perceptions of poor health were significantly associated with major depression, anxiety disorder, bipolar disorder, and alcohol and substance dependence. Respondents were asked to self-rate their physical health. Of the sample, 1 in 10 people rated their health as poor or fair (‘poor health’). Perception of poor health was associated with being older (45-54), having less formal education, and earning a lower annual income compared to people who rated their physical health as adequate (including ‘good’, ‘very good’ and ‘excellent’). People who perceived their health as poor were significantly more likely to have a psychiatric disorder, experience suicidal ideation (adjusted odds ratio (AOR) = 3.38, adjusted for demographic and sociodemographic differences) and have had prior suicide attempts (AOR = 3.78). It is also likely that functional disability, where physical health issues restricted daily activities, influence the negative health perceptions (Kaplan et al., 2007) commonly experienced by older people.

Older people are generally at risk for poor physical health due to declining body functions. This decline often co-occurs with a loss of mobility, social status, and social support (Crocker, Clare, & Evans, 2006). Unfortunately, these losses are not naturally or easily reversible, and can potentially influence peoples' independence, general well-being, and sometimes the will to live. Older peoples' physical ill health was judged the precipitator
for self-harm significantly more often than in populations under 65 years (Kim et al., 2011) and self-harm repetitions were more often fatal amongst ≥ 55 year old people compared to the younger control group (aged 35 to 54) (Oude Voshaar et al., 2011). Hawton and Harriss (2006) discovered that physical health issues were experienced by nearly half \( (n = 130, 46.1\%) \) of their study’s 282 patients aged 60 years and over who reported problems preceding their self-harm. Cardiovascular health issues were reported by nearly all people with health problems (87.1%), whilst musculoskeletal (16.2%), respiratory (15.5%) and neurological (12.4%) ill health was less common in this sample. Musculoskeletal and neurological health issues are often associated with chronic or severe pain. Despite analgesia being widely available, both prescribed and over-the-counter, pain was the most frequently attributed physical contributor to suicide (Harwood, Hawton, Hope, Harriss, & Jacoby, 2006). The above studies included older people from a range of ages, starting from 55 years (Oude Voshaar et al., 2011) to 70 years and older (Wiktorsson, Runeson, Skoog, Östling, & Waern, 2010), which in addition to the often small sample sizes, meant that comparison between studies should be made cautiously.

Children and adolescents with physical health issues are also at enhanced risk of self-harm (Barnes, Eisenberg, & Resnick, 2010; Knight et al., 2014). In a US survey 136,549 school children (mean age 14.4 years) self-reported on chronic health conditions, mental or emotional health problems, suicidality and emotional wellbeing (Barnes et al., 2010). A substantial number of children \( (n = 25,405, 19\%) \) reported chronic physical \( (n = 12,554, 9.5\%) \), mental \( (n = 8752, 6.6\%) \) or both physical and mental ill health \( (n = 4099, 3.0\%) \). Children reporting both health conditions had significant increased risk of self-harm, which was only marginally higher than individuals with mental illness only (Barnes et al., 2010). However, approximately a third of eligible students did not participate, risking bias in the results from those who partook in the study. A further concern was that the survey used adult terminology to ask children as young as 10 years about emotional and mental health problems, possibly resulting in uninformed or incorrect answers.

Details on the specific physical health issues associated with self-harm in young people were investigated by Knight et al. (2014). Children age 8 years and older with systemic lupus erythematosus or mixed connective tissue disease \( (n = 50) \) were compared to a control group \( (n = 50) \). Both groups were recruited from an outpatient department. The study found a high prevalence of depression and anxiety in the cohort, with suicidal ideation being significantly more prevalent in the study group compared to the control
group (Knight et al., 2014). The low sample size and the fact that the ‘healthy’ control group was recruited from a health setting mean the results from this study need to be viewed cautiously.

This section argued that not only do certain physical health issues pose a self-harm risk, but mental illness, gender differences, age, timing, and peoples’ perception of health are all additional influencing factors. Pain, commonly associated with physical ill health, will be discussed in relation to self-harm next.

3.3.2 Pain and self-harm

Pain accompanies many physical illnesses and can be a cause of self-harm (Braden & Sullivan, 2008; Tang & Crane, 2006). This is a concern, as chronic pain is prevalent worldwide and in New Zealand (Dominick, Blyth, & Nicholas, 2011; Ilgen, Zivin, McCammon, & Valenstein, 2008). The cross sectional 2013/2014 New Zealand Health Survey showed that 19% of New Zealanders reported pain within the last 6 months (Ministry of Health, 2014b), with higher prevalence demonstrated in older age groups, in people with lower socioeconomic status, and in people who identified as European (Dominick et al., 2011).

Worldwide, studies show that pain and self-harm often occur in combination with mental health issues, in particular mood or anxiety disorders, alcohol and drug use disorders, and personality disorders (Braden & Sullivan, 2008; Ilgen et al., 2008). Certain physical health complaints appear to be associated with particular mental health issues and self-harm. For example, one in four people with chest pain were found to have panic disorders, and further, even more reported anxiety disorders, somatisation disorder, substance-related disorders, agoraphobia, dysthymia, or major depression (Fleet et al., 1996; Foldes-Busque et al., 2012). A risk of self-harm was present for 15% of 572 patients with unexplained chest pain at their ED presentation, of which 21% \( (n = 18) \) had self-harmed in the past (Foldes-Busque et al., 2012). Of the 101 patients who presented to a heart hospital with likely coronary artery disease and comorbid panic disorder, a quarter were at risk of self-harm within the last week compared to 5% \( (17/322) \) of people without a panic disorder, even when controlling for depression (Fleet et al., 1996).

Poor sleep is a likely contributor to suicidal ideation in people with chronic pain. In a US study, adult participants with pain experienced for at least six months were recruited via newspaper and pain clinic advertisements (M. T. Smith, Perlis, & Haythornthwaite, 2004).
Of the 51 participants completing the survey, 43% \((n = 22)\) regularly used opioids for pain and 24% \((n = 12)\) expressed a self-harm risk. The people at risk of self-harm had higher rates of sleep disturbance, increased pain, and were more distressed and depressed. Limitations of the study included a very small sample, using only a single item from the Beck Depression Inventory to measure suicidality, and subjective reporting on sleep and pain. Nevertheless, these findings align with an investigation of 328 patients with sickle cell disease, a genetic condition where cells obstruct blood flow due to changes in their structure, resulting in acute pain (Wallen et al., 2014). The patients completed surveys in a clinical setting on diagnosis and follow-up. Of the 315 people who completed the BDI-II survey, the majority reported sleep disturbance due to pain \((n = 223, 71\%)\), depression \((n = 65, 21\%)\), and a risk of self-harm \((n = 32, 10\%)\). Nearly all subjects reporting depression experienced poor sleep, portraying an entanglement between pain, sleep, depression and self-harm.

Certain pain complaints present a more elevated self-harm risk compared to others. Examination of community survey data from the USA \((n = 5692)\) and Canada \((n = 36,984)\) found the prevalence of chronic pain was 29% and 37%, respectively, including headache, back or neck pain, and arthritis (Ilgen et al., 2008; Ratcliffe, Enns, Belik, & Sareen, 2008). Both of these studies found that pain conditions, especially headache and 'multiple pain sites', were positively associated with self-harm, even when adjusting for mental disorders. In addition, ED patients \((n = 75)\) who presented for self-harm disclosed that back (29%), abdominal, or pelvic pain (19%) were the precipitating pain factors (Theodoulou, Harriss, Hawton, & Bass, 2005). Spiegel et al. (2007), in a systematic review, also identified chronic abdominal pain as an independent predictor of self-harm and noted this was not always associated with depression.

People who have multiple pain sites and experience high levels of pain experience poorer physical and mental health (Dominick et al., 2011) and are at increased risk of suicide (Ilgen et al., 2010). Nearly half of the 128 patients at three regional US burn centres, surveyed on discharge and at 6 and 12 months post discharge, disclosed a risk of self-harm at some time during the follow-up period, with pain severity (in the 4 weeks prior to being surveyed) being associated with an elevated likelihood of suicidal ideation (Edwards et al., 2007). Similarly, Ilgen et al. (2010) looked at pain severity within a 4-week time period, as measured by linking veterans’ survey data, electronic medical records, and mortality data. Survival analysis showed that 903 veterans \((0.35\%\) of the sample) had died by suicide. The suicide rates noticeably increased for veterans who had
previously reported severe or very severe pain levels, irrespective of mental and physical illness and health function (Hazard Ratio 1.33). Both the burn and the veteran studies described here included large numbers of men in their samples (70% and 95%, respectively), which possibly served as a confounder, making results generalizable to men only.

It is unclear if the experience of pain alone contributes to suicide risk or if the routine availability of analgesia provides a highly accessible method for suicide. Qin et al. (2014) found that of 27,262 dying by suicide, people with a physical illness died significantly more often from poisoning (38.1%) than people without a recorded physical illness (31.9%). In addition to having access to medication that is often toxic when taken in excess, certain population groups are at particular risk. For example, although patients with type 2 diabetes have access to insulin which has potent effects when used in excess (Myers et al., 2013), a person’s omission of insulin as an act of self-harm can also have severe consequences.

The studies on pain reviewed have limitations. The community surveys used cross sectional designs, which meant findings could not establish a causal relationship, only that pain coincided with self-harm over a certain timeframe. In the study by Edwards et al. (2007), self-harm as a possible reason for a burn injury had not been established as part of the eligibility criteria and could have influenced self-harm reports at a later date. Where people were surveyed, responses concerning an event in the past could have been influenced by recall bias. Low recruitment numbers, small samples, and office hour recruitment [ED presentations for self-harm commonly occur outside these hours (Arensman, Larkin, Corcoran, Reulbach, & Perry, 2014)] might have limited the generalisability of findings; as well, those who participated often experienced the outcome being studied, presenting a selection bias.

This sub-section outlined that chronic pain, often associated with poor physical health, negatively influences people’s wellbeing, sleep, and mental health. These factors present an increased risk of self-harm, further accentuated where people experience severe pain or pain in multiple sites. Patients who present to ED with injuries are also at possible risk of self-harm which could go undetected. This group, in particular males with injury presentations following road traffic accidents or interpersonal violence; and those with concurrent substance misuse, mental health, or homelessness issues, is discussed next.
3.3.3 Injury and self-harm

Some ED patients presenting for injuries from road traffic accidents are at risk of self-harm (Hernetkoski & Keskinen, 1998). An Australian study investigated the prevalence and characteristics of driver suicide plans and attempts (Murray & de Leo, 2007). Randomised telephone interviews identified 1196 people with a history of self-harm, who then completed a community survey about self-harm motives and prevalence, and help-seeking. Of the 412 people (34.3% of the subsample) with existing suicidal ideation, 61 had considered self-harm by crashing a motor vehicle. This group was more likely to be in full time work (45.9%) and live with a partner and children (47.4%), compared to people who considered different means for suicide. The car provided an accessible means of potential suicide, whilst the circumstances of the fatal accident could remain hidden from others. However, the majority of the 19 people with prior suicide attempts via road traffic accidents reported that they did not want to die (41.7% males, 85.7% females), possibly reflecting their reported burden of mental or emotional problems. Limitations of this study include the identification of only a small number of cases, reducing the generalisability of findings and also the comparability to other self-harm methods. Further, in-line with known survey limitations, the risk of recall bias meant that the respondents might have forgotten events, or they recalled their self-harm risk as higher or lower than at the time of the ideation (Borges, Angst, Nock, Ruscio, & Kessler, 2008). This study nevertheless highlights that self-harm risk can co-occur with injuries from road traffic accidents.

Likewise, self-harm in young people has been linked to road traffic accidents. In a study involving 20,822 young drivers aged 17-24 years, the majority (n = 18,871) completed an on-line survey on past self-harm and crashes (Martiniuk et al., 2009). Of the subpopulation, 4.6% (n = 871) reported self-harm within the year before the survey. This group was more likely to be female (58.7%), engage in high levels of risky behaviour, misuse substances, and experience high levels of distress compared to the rest of the sample. During the follow-up period of 2 years, 1495 (7.2%) of 20,822 young drivers had one or more crashes. Of the youngsters who had disclosed prior self-harm (n = 871), 88 (10.1%) had road traffic accidents as drivers. Thus, people with a history of self-harm had a significantly increased risk of road traffic accidents compared to those with no self-harm history [Relative Risk (RR = 1.42)], with most crashes involving multiple vehicles. The risk remained significant after adjusting for age, sex, hours of driving per week, previous crash history, psychological distress, hours of sleep, risky behaviour, substance use, remoteness
of residence, and socioeconomic status (RR = 1.37). This study included young people only, so is not generalizable to adults, and was limited to one Australian district, making out-of-district accident data from respondents unavailable. Nevertheless, this study provides evidence that some people who present to ED following a road traffic accident might also be at risk of self-harm. Undisclosed self-harm-precipitated road traffic accidents are likely go unnoticed in ED because of a) the vast numbers of people presenting with car accident injuries and b) a lack of routine screening.

Self-harm risk in ED patients experiencing interpersonal violence can also remain undetected. Interpersonal violence is physical, emotional or sexual abuse between people, where men are most often the perpetrators and women the victims (Fanslow, Kelly, & Ministry of Health, 2016). The occurrence of interpersonal violence has been attributed to some people having experienced child abuse (McCauley et al., 1995). Victims often turn to being perpetrators (Slabber, 2012; Wilson & Webber, 2014), with abuse becoming an integrated part of family living (Wilson & Webber, 2014) and affecting adulthood. The estimated prevalence of interpersonal violence within a 12-month period ranges from 5.5% to 36% (Houry, Kemball, Rhodes, & Kaslow, 2006; McCauley et al., 1995), which aligns with a New Zealand primary care study where one-third of women disclosed interpersonal violence (Fanslow & Robinson, 2004). These prevalence statistics however sometimes lack details the types and severity of interpersonal violence, requiring caution when comparing studies.

Victims of interpersonal violence often experience physical health issues. A literature review found that victims commonly reported injury, chronic pain, and gastrointestinal and gynaecological issues (J. C. Campbell, 2002). When comparing interpersonal violence victims with non-victims, women experiencing interpersonal violence reported more physical symptoms (mean = 7.3) compared to non-abused women (mean = 4.6), including vaginal discharge; diarrhoea; minor trauma (broken bones, sprains); pain in the abdomen, chest, pelvis or head; urinary symptoms; sleeping problems; shortness of breath; and constipation (McCauley et al., 1995), for which they often sought health care. Many of these health complaints were likely to be direct consequence of violence. Furthermore, the mental health consequences of interpersonal violence include depression (Houry et al., 2006), post-traumatic stress disorder (J. C. Campbell, 2002; Houry et al., 2006), anxiety (McCauley et al., 1995), and substance use disorder (B. Bergman & Brismar, 1991; McCauley et al., 1995; Wilson & Webber, 2014). In New Zealand, victims of interpersonal violence reported that the binge drinking culture and
drug use facilitated violent behaviours, which in turn contributed to interpersonal violence (Wilson & Webber, 2014). Physical health issues such as injuries and sleeping problems are likely to be the consequences of violence.

Interpersonal violence also increases the risk of self-harm (B. Bergman & Brismar, 1991; Boyle, Jones, & Lloyd, 2006; Fanslow & Robinson, 2004; McCauley et al., 1995; Soloff, Lynch, & Kelly, 2002). More frequent episodes of interpersonal violence were positively and significantly correlated with higher numbers of self-harm episodes seen at ED (Boyle et al., 2006). Fanslow and Robinson (2004) found that self-harm was three times more likely in women who had experienced moderate violence and eight times more likely for women who had experienced severe violence, compared to women who had not experienced interpersonal violence. Similarly, Houry et al. (2006) found women reporting only one type of interpersonal violence were more than twice as likely to self-harm, and women indicating three types of interpersonal violence were more than 17 times at increased risk, compared to women not experiencing interpersonal violence. Female victims of interpersonal violence accessed ED more often than women without a history of interpersonal violence (Fanslow & Robinson, 2004; McCauley et al., 1995), with presenting complaints encompassing a range of physical, mental and social aspects.

A history of mental illness has been linked to an increased risk for sustaining injuries. In a retrospective cohort study, 1709 people over 17 years of age presenting to a trauma centre for unintentional injury over a 2-year period were identified from a trauma registry. The registry was linked to medical records and outpatient mental health datasets (Wan, Morabito, Khaw, Knudson, & Dicker, 2006). The study found one in four participants had a diagnosis of mental illness, requiring significantly longer stays in hospital compared to those without a mental illness. Nevertheless, a diagnosis of mental illness is not a universal label, as it can occur in often-fluctuating mild, medium or severe forms. Equally, some individuals have symptoms that meet the diagnosis of a mental illness without having been officially diagnosed. So, diagnostic labels should be viewed cautiously. Nevertheless, the fact that people with mental illness, who as a group are at increased risk of self-harm, are more prone to injuries suggest that some of these meet the definition of a 'Mixed Presenter'.

Bernstein et al. (2014) found that a psychiatric history can be a strong predictor for suicide and self-inflicted injury. The US study investigated the correlation between substance use disorders and health care-seeking for injuries. Datasets (from 2002 until
2008) from ED, inpatient services, maternal delivery, and substance use services were linked for women age 15 to 49 years. Of the 1,748,748 women identified by the researchers, 8.5% \((n = 147,998)\) had documented substance disorders. Injuries were more common for these women (65.1%) compared to women without substance abuse disorders (44.8%). In particular, women with substance use disorders had higher incidence of injury in road traffic accidents (22.5%) and falls (26.6%) than did women without (12.5% and 11.0% respectively). There was also a considerable difference in the number of incidents of suicide/self-inflicted injuries and homicide/purposeful injuries (both 11.5%) for women with substance use disorders compared to women without (0.8% and 1.9%, respectively). Substance use disorders might have been inadequately documented because of non-disclosure by the patient or non-assessments on the part of the clinician.

Substance misuse and injuries were also common for homeless people. A US study examined homeless patients' ED visits for intentional injuries (self-inflicted and assault) and unintentional injuries (Hammig, Jozkowski, & Jones, 2014). The approximately 603,000 homeless patients, mostly men (74%), visited ED more often for injuries and self-inflicted injuries compared to 119,390,000 non-homeless patients (55% vs 34%, and 23% vs 4%, respectively). Homeless patients had double the number of visits for assault injuries than did non-homeless patients (8% vs 4%), and homeless patients presenting to ED for treatment of injuries were found to have substance misuse and a diagnosis of mental illness far more commonly than non-homeless patients presenting for the same reason (62% vs 5%, and 13% vs 3%, respectively). These stark differences might also be due to under-representation of non-homeless people to ED as some are likely to have other options for healthcare apart from ED.

The prevalence of mental disorder, substance misuse and causes of death differed between homeless men and women. In a longitudinal cohort study, data on people aged over 15 years who were listed on a homeless register were linked with mental health care datasets, including ED and mortality data (Feodor Nilsson, Hjorthoj, Erlangsen, & Nordentoft, 2013). The outcome was death by suicide or unintentional injury. In the sample of 32,010 homeless people, (70.5% male), mental illness was slightly more common in men than in women (62.5% vs 58.2%). Substance use disorder was common, but higher for men (38.6% alcohol, 24.1% drugs) compared to women (29.8% alcohol, 18.4% drugs). Homeless men had a 50% higher risk of dying from suicide (Hazard Ratio = 1.5) and an 80% higher risk of unintentional injury (Hazard Ratio = 1.8) than women.
Yet, homeless people with psychiatric disorders had a higher risk of dying by suicide (men HR = 3.1, women HR = 15.5) compared to homeless people with no recorded psychiatric history, with the difference much stronger amongst women. Substance use was a significant predictor of suicide for men. This study needs to be viewed with caution, as causality between homelessness and a psychiatric history cannot be determined. For example, current or past substance use was not differentiated and might not have contributed to ED visits or death. Both Hammig et al. (2014) and Feodor Nilsson et al. (2013) measured homeless status by one positive event over a given timeframe. Consequently, homelessness might have been either transient or lasting throughout the study period. Nevertheless, homeless peoples’ often-elevated health care needs for a mix of intentional and unintentional injuries, substance misuse, and psychiatric illness requires attention.

Men and women present differently for injuries to ED. Overall, men visit ED more often for injuries compared to women (Hughes, McHale, Wyke, Lowey, & Bellis, 2014; Kahramansoy, Gürbüz, Kurt, Erkol, & Boztas, 2013; Pallett, Sutherland, Glucksman, Tunniciliff, & Keep, 2014). Further, the most common types of injuries for men are related to assault (Kahramansoy et al., 2013), which is also more prominent for boys up to 14 years of age (n = 6,670, 70%) compared to girls (Hughes et al., 2014). In contrast, Kahramansoy et al. (2013) found that a substantial number of women also presented with assault injuries (n = 382, 47.4%). What the data fails to portray are the circumstances of an injury, such as altercation in relation to alcohol misuse, mental illness or domestic violence, aspects that can enhance self-harm risk (discussed in the current section and in sections 3.3.4 and 3.3.5), and potentially represent a Mixed Presenter’s ‘other’ visit.

Apart from the incidence of injuries differing by gender, injury severity matters because it dictates future health outcomes. Nearly three out of four knife injury presentations (n = 661, 70.5%) resulted in discharge home in a study by Pallet et al. (2014), signifying minor injuries. Looking at different genders, injuries sustained by men were most often minor (n = 2868, 53.3%) and classified as a ‘slight sign’ of injury, compared to only 30.8% (n = 248) of women (Kahramansoy et al., 2013). A strong link between being male and superficial injury was found in children’s injury data (n = 88,250), where 2.4% were admitted with sports injuries with young males age 10 to 14 years old predominating in this group of injuries (72.7%) (Hughes et al., 2014). It is possible that young males play more sports and/or engage in activities that can lead more easily to harm because they or their parents’ attitudes to risk vary by gender. Yet, in a Turkish study, involving local
patients and therefore not necessarily reflecting global trends, Kahramansoy et al. (2013) found that women were more often involved in road traffic accidents (30.4%) compared to men (19.5%), and had more head-neck injuries (37.3% vs 24.6%) and extremity injuries (26.9% vs 19.0%) compared to men. The severity of injury was reflected in the higher risk of hospital admissions for women (15.6%) compared to men (9.4%) (Kahramansoy et al., 2013). Nevertheless, the majority (n = 5379, 87%) of the study population injured were men. This vast difference in gender group size itself could have influenced the results reported here. For example, the reasons for women presenting to ED with more severe injuries compared to men may be because parents did not take their daughters so readily to ED for minor injuries or, if older, the young women used more self-help skills. This possible gender-specific help-seeking behaviour could have also been guided by Turkish culture.

Women present to ED with self-injury more commonly than men (Hughes et al., 2014; Kahramansoy et al., 2013; Pallett et al., 2014). The reported percentages of females compared to males presenting with self-harm differ widely: 72% versus 28% (Hughes et al., 2014), 2.1% versus 0.1% (Kahramansoy et al., 2013) and 53% versus 47% (Pallett et al., 2014). Hence, not all studies confirm females to be much more likely to self-injure. Pallett et al. (2014) found that men more commonly use other self-harm methods besides self-poisoning, resulting in little variation between the male/female self-harm ratio. The proportional mix of all injuries by self-harm can disguise differences. For example, if self-harm injuries occur at similar rates in males and females, whilst non-self-harm injuries are three times higher in males than females, then the proportion of injuries due to self-harm are higher for females than for males.

Gender differences exist for those sustaining and seeking help for injuries, and consequent death. In a Swedish study, 13 to 19 year olds (n = 12,812, 59% male) with injury-related ED visits completed a questionnaire (Johansson, Stenlund, Bylund, & Eriksson, 2012). Many reported sports or transportation injuries, with 9.3% of visits related to self-inflicted injuries or interpersonal violence. On examination of the mortality register at a later date, these injury-related ED presentations were associated with a 44% higher risk of premature unnatural deaths, equating to a standardised mortality ratio of 1.44 (95% CI: 1.02-1.98). These deaths of likely ‘Mixed Presenters’ were often associated with alcohol and/or drug use, and involved young males.
These studies on ED injury presentations have limitations. The term ‘injury’ was often used broadly and details were not typically provided. Often injuries were not analysed by age groups, meaning injuries for children were not distinguished from injuries of adults; a fall from a height for a child or young adult is different to a fall for an elderly person. Consequently, injuries could have been the result of a wide variety of circumstances: for example, injuries to children could have arisen in play, from impulsive behaviour by other children, or from acts by adults. It is likely that some people who had claimed accidents had actually sustained injuries following assaults or self-harm. In addition, the lack of routine screening for self-harm means that self-harm injuries could have been under-reported, similar to a lack of inquiry about intent and car accidents. Some of the studies involved small samples, making generalisations unadvisable. Finally, patient reports could have been influenced by recall bias.

This sub-section, portraying ED patients presenting with particular injuries as having an increased self-harm risk, depicted likely ‘Mixed Presenters’. In particular, ED patients attending following a road traffic accident; as a consequence of interpersonal violence; or with comorbid mental health, substance misuse, or homelessness appear to be at particular risk, though this varies between genders. The link between substance misuse and self-harm is discussed separately in the next part.

### 3.3.4 Substance misuse and self-harm

A review funded by the NZ Accident Compensation Corporation found that alcohol intoxication increased the risk of injury, including road traffic accidents and violence toward others; particularly for men (Research New Zealand, 2012). These findings coincide with an earlier study by the Alcohol Advisory Council of New Zealand (ALAC) where nearly a third of 1210 young people aged 12 to 17 years reported accidents whilst under the influence of alcohol (Research New Zealand, 2007). In a New Zealand alcohol survey of people age 18 years and older, 18 to 24 years olds were more likely to have consumed risky levels of alcohol (seven or more drinks on at least one occasion) within the past four weeks than other age groups (Health Promotion Agency, 2015). Similarly, examination of ED presentations in Canada of young people up to 25 years of age found that the oldest group (20 to 24 years) were more likely to present with alcohol and injuries, compared to all other age groups (Lea, Black, & Asbridge, 2009). When examining Korean adults 18 years or older however, those in the 25 to 44 years were more often identified as current drinkers with injuries (Chou et al., 2012). In view that the studies
included different age groups, careful comparisons are recommended. Nevertheless, some age differences are likely to reflect cultural differences influencing alcohol access, use, and misuse.

Similar to other Western countries, alcohol is the most commonly used legal recreational drug in New Zealand (Ministry of Justice, 2016). Based on the annual aggregated results from the 2005-2006 Alcohol Advisory Council survey of 1210 young people age 12-17 years, more than half \((n = 641, 53\%)\) in this age group were current drinkers, consisting of moderate \((32\%)\) and binge drinkers \((21\%)\) (Research New Zealand, 2007). A substantial sub-group of people aged 18 years and over \((n = 496, 13\%)\) had experienced at least one potentially harmful or negative experience from drinking (Health Promotion Agency, 2015).

Injury types for people under the influence of alcohol vary by gender. For example, examination of alcohol-related ED presentations in one New Zealand ED found that of 3619 screened patients 5% \((n = 182)\), referred to as ‘impact positive’, had alcohol as a contributing factor for the presentation (Stewart et al., 2014). Impact positive male patients \((65\%, n = 118)\), presented with non-interpersonal trauma \((38\%)\), interpersonal trauma \((17\%)\), alcohol excess \((16\%)\), and self-harm \((14\%)\) most often, whereas impact positive females \((n = 64)\) presented mostly for self-harm \((36\%)\), non-interpersonal trauma \((27\%)\), and interpersonal trauma \((11\%)\). Similarly, a Canadian study examined alcohol and drug-related injuries among young people below the age of 25 (Lea et al., 2009), compiling a dataset of routinely collected injury data over a 4-year period where the patient or family members and the treating clinician provided injury details. Males’ injuries tended to be violence-related whereas females had more injuries from self-harm. In addition, Chun et al. (2013) found that amongst those who were ‘impact positive’ at Korean EDs, men presented for injuries more often than women, including both self-inflicted intentional injury \((n = 22, 66.7\%)\) and intentional injury caused by others \((n = 98, 71.5\%)\). Even though these studies portray men as requiring ED assistance for injuries more than women, both genders often fit the definition of ‘Mixed Presenter’.

How alcohol is consumed possibly influences self-harm behaviour. In a US ‘Signs of Suicide’ programme, which included 225 out of 594 eligible schools, 33,889 students age 12 to 19 anonymously completed questionnaires about their general alcohol intake, their consumption when feeling down, and self-harm behaviour (Schilling, Aseltine, Glanovsky, James, & Jacobs, 2009). They found that drinking while down, and episodes of heavy
drinking (≥5 units of alcohol) were both significantly associated with suicide attempts. Drinking while down conveyed a threefold increase in the risk of self-reported self-harm among pupils not reporting suicidal ideation, indicating the questionability of the feasibility of self-harm screening without the consideration of alcohol use. The accuracy of the findings from this alcohol study is limited by: (a) the fact that only 38% of the schools returned questionnaires, so non-participant schools could have had different profiles; (b) the cross-sectional nature of the study, because causal linkage between alcohol and self-harm can only be inferred; (c) some study participants possibly having had impaired memories of their alcohol intake, resulting in over- or underestimation; and (d) fear of stigma or fear of repercussions from drinking while a minor, which could have influenced participants’ alcohol reporting.

A Korean study involving an adult ED population found similar results, namely that the amount of alcohol consumed impacted on the level of risk for injury (Chou et al., 2012). A representative sample was breathalysed and asked about their injury and alcohol intake within six hours of injury. Intentional injuries included both self-inflicted injuries and interpersonal violence. Of the 1526 patients, 76.6% were current drinkers and most (70.6%) were male. The risk of sustaining alcohol-related or intentional injury increased with the amount of alcohol consumed. In this study, conclusions could not be drawn on the particulars of the injuries, as violence and self-injury were grouped together. These aspects were examined in detail in another Korean study (Chun et al., 2013) where 1975 patients were recruited via methods similar to those of Chou et al. (2012). Most patients (n = 1805, 91.4%) incurred unintentional injuries, followed by intentional injuries by others (n = 137, 6.9%) and self-inflicted injuries (n = 33, 1.7%) (Chun et al., 2013). Of those who were injured, 43.8% (n = 60) were harmed by friends and 40.1% (n = 55) by strangers, with the perpetrator most often (n = 81, 59%) judged by the injured as intoxicated. In terms of limitations, these two Korean studies had moderate response rates of around 66%, making it possible that a third of the eligible sample had different experiences, and so risking bias results. Nevertheless, these studies identified a group of ED patients, some of whom are likely to meet the criteria of 'Mixed Presenter'.

Alcohol misuse also occurs in older age groups (Carter & Reymann, 2014; Keith Hawton & Harriss, 2006). In a UK follow-up study, people aged 60+ years who had presented to ED with self-harm were recruited over a 20-year period (1978 - 1997). At the time of their index episode for self-harm, 17.9% (n = 19) of males and 6.8% (n = 12) of females disclosed alcohol problems (Keith Hawton & Harriss, 2006). Oude Voshaar et al. (2011)
found that at patients’ first self-harm presentation to ED, the 1937 middle-aged (35-54 years) were more likely to report alcohol (34%) or substances (8%) misuse than the 374 who were 55 years and older (23% and 1%, respectively). Neither the amount of substance consumed nor the severity of misuse were described. Further, alcohol and drug intake in relation to death was not measured. Unless measured with a breathalyser or a blood test, alcohol intake is self-reported and might be misreported or underreported.

In addition to the amount of alcohol consumed, the combination of alcohol and other drugs seemed to affect injury and self-harm outcome. A Canadian survey of adult ED presentations for injuries \((n = 443)\) included patients’ substance use and circumstances of injury (Cherpitel, Martin, Macdonald, Brubacher, & Stenstrom, 2013). Of the analysed sample \((n = 436)\), 400 presentations were for unintentional injury and 36 for intentional injury, which included violence against the injured such as getting into a fight, assaults, and rapes. Self-harm was not mentioned. Males made up a higher proportion of this injured population than did females, and this was more prominent in the intentional injury group (77.8%) than in the unintentional injury group (63%). Compared to patients with unintentional injuries, patients who reported intentional injuries were significantly more likely to report alcohol use alone (30.6% vs 17.8%) or combined alcohol and other drug use (27.8% vs 3.3%). Findings need to be viewed within the context of a small intentional injury subgroup.

However, a larger study including people with mental illness confirmed the additional health risk that accompanies both alcohol and drug use. An Australian cohort study of 13,624 people who had been under mental health services for at least two years and had been admitted under mental health for psychosis were followed up for five years (Sara, Burgess, Malhi, Whiteford, & Hall, 2014). Community mental health and emergency department data were used to examine health service contact and substance use. Of the sample, 75% were male and the average age was 32.6 years, with nearly 25% reported as socially disadvantaged. More than half of the sample had substance disorders \((n = 7022)\), which included 25% with alcohol misuse. Substance use disorders predicted greater service contact, including services for self-harm and injury, infectious diseases, and cardiovascular disease. The odds of being diagnosed with self-harm, injury, or an infectious disease increased more than threefold in the group using cocaine or amphetamines, and more than fourfold when cannabis was added, compared to people not identified as using substances. Of note, this study used routinely collected administrative data which is likely to under-report substance use. Further, people with
comorbid disorders use health services and require admission often, and this is likely to occur irrespective of substance use.

This sub-section outlined substance misuse in relation to self-harm, likely relevant to ‘Mixed Presenters’. Alcohol, especially when consumed in large amounts, was associated with violence, assault, interpersonal violence, and accidents to a greater degree by men, whilst more women engaged in self-harm when intoxicated. The link between alcohol misuse, the above-mentioned harm to self and others, and mental illness is strong, and is discussed next in relation to comorbidities.

3.3.5 Mental illness, self-harm, and comorbidities

People with serious mental illness often endure a vast array of comorbidities for which they are likely to seek ED care. Mental illness – such as major depressive disorder, post-traumatic stress disorder (PTSD), schizophrenia, bipolar disorder, substance use disorder, and borderline personality disorder – is a known risk factor for self-harm (Holm & Severinsson, 2011; Holma et al., 2010; Lawrence, Hancock, & Kisely, 2013; McKay, 2010; Routhier, 2012; Sareen et al., 2007). Unique to young people, some ED presentations are for conduct or behavioural disorders (Liu, Ali, Rosychuk, & Newton, 2014; Starling, Bridgland, & Rose, 2006). These disorders are commonly linked to complex physical, mental health, and social challenges, and demonstrate increased self-harm risk. Somewhat similar, older people as a group often report depression at the time of a self-harm event (Crocker et al., 2006; Kim et al., 2011; Oude Voshaar et al., 2011; Wiktorsson et al., 2010). The multifaceted health needs of these younger and older people, their low engagement with psychiatric care (Keith Hawton & Harriss, 2006; Liu et al., 2014), particularly for men (A. E. Rhodes et al., 2013), means that if they present to ED, an opportunity for self-harm detection and support arises.

Mental illness can affect peoples’ abilities to manage daily tasks, to establish and maintain supportive relationships, and generally, to live well – all factors influencing self-harm. Sareen et al. (2007) discovered that people with PTSD reported significantly poorer general well-being, higher distress level, increased disability, a reduction in activities and significantly more suicide attempts over the previous year compared to people not diagnosed with PTSD. A lack of coping might create feelings of worthlessness, and has been strongly associated with self-harm risk in women with mental illness (McKay, 2010). A Norwegian study reported that female participants with borderline personality
disorder who were in crisis reported "thinking about death and dying most of the time" (Holm & Severinsson, 2011, p. 166). It appears likely that self-harm risk develops with the perseverance of negative thought processes.

Studies using interviews of 79 homeless women about their mental health services experiences (Huey et al., 2012) and 25 substance-using suicidal men with frequent ED presentations (Spence et al., 2008) similarly found that these individuals had difficult life circumstances, including assaults, interpersonal violence, abuse, and homelessness. Moreover, people were rarely married (64% had never married), often divorced or separated (32%), and oftentimes had children who did not live with them (Bergmans et al., 2009; Spence et al., 2008). Poor social connections were attributed by some to a lack of understanding or even the presence of discrimination by family, friends, or others (Farrelly et al., 2014; McKay, 2010). Yet others were fearful of being judged as ‘crazy’ and consequently isolated themselves (Huey et al., 2012). Feeling worthless was commonly reported as a trigger for self-harm (McKay, 2010).

A further challenge for many people diagnosed with a mental illness is poor physical health. Family carers attributed their poor physical health status to the lack of activities available to them and a consequent boredom (Van Hasselt, Oud, & Loonen, 2013). Women with mental illness confirmed to one researcher that being engaged in an occupation provided a sense of self-efficacy and a positive identity which in turn increased their independence, financial security, skills and relationships with others (McKay, 2010). A lack of activity possibly contributes to negative coping strategies such as smoking, drinking alcohol, and overeating, risking physical ill health. Canadian household interviews with 478 people revealed that respiratory disease, chronic pain, chronic fatigue, multiple chemical sensitivities, cancer, gastrointestinal disease, and cardiovascular disease were significantly more common in people diagnosed with post-traumatic stress disorder (PTSD) compared to the rest of the sample (Sareen et al., 2007). Manu et al. (2011) documented that participants with enduring mental illness, who died suddenly of medical causes, had been diagnosed previously with hypertension, dyslipidaemia, and diabetes. The link between medical and mental illness, and further between mental illness and self-harm means that these comorbidities are likely reflecting ‘Mixed Presenters’.

In fact, the literature demonstrates that many people with mental illness die prematurely of physical causes (Ajetunmobi, Taylor, Stockton, & Wood, 2013), a finding also confirmed
in a New Zealand study (Cunningham et al., 2014). Cunningham et al. (2014) found that both men and women using mental health services had nearly twice the risk of death for natural causes (SMR = 1.83) when compared to the New Zealand population. One reason why people under mental health care die young could be related to psychotropic medication. Certain psychotropic medication is associated with substantial weight gain, presenting an increased risk for developing diabetes mellitus and cardiovascular disease, which in turn increase morbidity and mortality (Newcomer, 2007). In addition, unhealthy lifestyle factors such as smoking and alcohol and/or drug misuse (discussed in section 3.3.4), are further risk factors for premature natural deaths.

Accidents pose a further risk of early death for people treated under mental health services (Cunningham et al., 2014; Lawrence et al., 2013). Crump et al. (2013) identified a sample (≥20 years) from Swedish census data and examined accidental deaths of 5933 people with mental disorders in an 8-year period. Predictor and adjustment variables included age, gender, marital status, education level, and employment status. The Cox proportional hazards regression analysis showed men had more than twice the risk of accidental death than women, a risk strongly increasing with age. One in four people who died by accident had a mental disorder, which was considerably higher compared to the general population (women 26.0% vs 10.1%; men 26.8% vs 8.7%). These findings of the increased risk of accidental death should be viewed in the context of 60% of the sample being 70 years or older, with nearly half of the people who died from falls (n = 720) having dementia. Age per se might have been a risk factor for accidental deaths because of decreasing physical ability to avoid potentially harmful situations, and declines in resilience and healing ability that come with older age. Additionally, degenerative mental health issues commonly occur with increasing age and these can compromise attentiveness to the environment and its possible dangers.

In addition to physical health issues and accidents posing risks to the health of people with mental illness, these individuals are also at increased risk for suicide (Bryngelson, Asberg, Nygren, Jensen, & Mittendorfer-Rutz, 2013). Lawrence et al. (2013) found that excess deaths [the difference between the observed number of deaths in the general Australian population between 1985 to 2005, and the expected number of deaths in people using mental health services in Western Australia (n = 292,586)], by suicide were highest for people with stress or adjustment reaction diagnoses (53.3% males, 33.5% females) and affective psychosis (46.6% males, 27.4% females). This means, for example that of the excess deaths of men with stress or adjustment reaction diagnoses, more than
half did so as a consequence of suicide. These diagnoses imply complex and enduring mental health issues, presenting a challenge for effective treatment. The excess deaths from malignant neoplasm in people with stress and adjustment reaction were also high (14.0% males, 20.9% females), portraying a likely link between physical and mental health and making the ED presentation picture comorbid.

People with mental illness die younger compared to the general population. In a Scottish population-based cohort study, psychiatric hospital discharges and death records spanning more than 25 years were examined (Ajetunmobi et al., 2013). Individuals over 14 years of age were grouped into uncomplicated (one diagnosis, \( n = 59,028 \)) or complicated (more than one diagnosis, \( n = 52,476 \)) categories. A complicated diagnosis resulted in higher numbers of admissions and longer stays. Overall, 80% more people with mental illness had died than expected, based on the general population, reflecting a standard mortality ratio (SMR) of 1.8. Not surprisingly, SMRs were higher for people with complicated diagnoses. These findings equate to people with poor mental health living 17 years less than the general population. Similarly, in an Australian study, linkage of inpatient and outpatient mental health records with mortality datasets for people over 14 years of age found that men with a mental disorder lived 15.9 years less and women 12.0 years less compared to than the general population (Lawrence et al., 2013).

The reviewed studies on mental illness, self-harm, and physical health issues need to be viewed with limitations in mind. Specifically, mental illness is not a clear-cut health condition because its beginning, ending, and severity are difficult to measure over time. Some studies included people with dementia (Crump, Sundquist, Winkleby, et al., 2013) whilst others specifically excluded this population (Lawrence et al., 2013); similar differences in inclusion and exclusion criteria were found with alcohol and drug misuse disorders. In addition, data on mental illness collected via interviews risked being affected by recall bias, possibly further influenced by the stage of a participant's illness. Psychiatric documentation, including the International Classification of Diseases (ICD) labels (discussed in section 4.3.3), could have been inaccurate or missing. Data sources were not always comparable, such as mental health inpatient discharge data and sickness benefit data. Further, caution needs to be taken regarding the fact that mentally ill people might not seek health care. This means that unless individuals in control groups are screened, the control groups might include people with mental illness. Qualitative studies were often small with self-selected samples, such that results reflected the views of a subgroup. Lastly, some authors had connections with pharmaceutical companies (Eldridge, Dawber,
& Gray, 2011; Manu et al., 2011), risking biased research findings because of their emphasis of product promotion and increased sales (Lexchin, 2012).

This section discussed how an individual’s history of mental illness can present a higher likelihood of self-harm and physical illness. People belonging to this group often lead difficult lives, including high levels of distress, and die prematurely of physical ill health, accidents, and suicides. These multiple health issues, likely endured by people like ‘Mixed Presenters’, might involve frequent ED use, discussed next.

### 3.3.6 Frequent ED use

My research is examining people who return to ED within a short timeframe. Although some people present to ED for self-harm and ‘other’ reasons only occasionally, others present multiple times. This group is examined further here because frequent ED presentations signify unresolved and probably comorbid health issues, and are often associated with mental health issues and self-harm.

The literature on people who present frequently to the ED is confusing because this group is not consistently defined in the literature. Descriptions include ‘frequent attendees’, ‘frequent users’, ‘frequent visitors’ (Sun, Burstin, & Brennan, 2003) and ‘people who present on multiple occasions to emergency departments’ (K. Nelson et al., 2011). Threshold definitions assigned for ‘ED frequency’ also differ between the US and European countries. Most commonly, people who had made four presentations or more within a 12-month period were classified as frequent ED presenters (M. Byrne et al., 2003; Hunt, Weber, Showstack, Colby, & Callaham, 2006; Sun et al., 2003). A UK study defined seven or more ED presentations within 12-months as frequent (Williams et al., 2001) whilst New Zealand and Spanish studies defined a frequent presenter as making 10 or more presentations within a year (Kennedy & Ardagh, 2004; Salazar et al., 2005). In view that characteristics of frequent presenters probably vary depending on the number of ED visits, one study grouped frequent presenters into those who had made from 7 to 17 (‘frequent’) and 18 and above (‘very frequent’) presentations (Doupe et al., 2012), while another defined frequent presenters as people who made between four and nine ED presentations within 12 months, and ‘super-frequent’ presenters as those with 10 or more visits (Vinton, Capp, Rooks, Abbott, & Ginde, 2014). These variations of definitions mean that research findings might not be comparable and combining the literature requires caution.
The timeframe used for most studies was 12 months, with the exception of one study which used 3 years (Keene & Rodriguez, 2007). A literature review (K. Nelson et al., 2011) reported on studies with follow-up times from one month to 10 years. Some studies included a person’s first ED presentation (index) in the count along with further visits, while others excluded it. In the studies that included index presentations in the total count, the number of ED presentations per person is higher by one presentation, which needs to be considered when comparing these two types of studies.

One clinical reason for investigating frequent ED use is its contribution to overcrowding in ED (Hunt et al., 2006). A systematic literature review found that frequent presenters comprised 4.5% to 8% of all ED patients, yet accounted for 21% to 28% of all visits to ED (LaCalle & Rabin, 2010). A Canadian study found that 2.3% of ED patients had presented seven or more times, and this group made 13.5% of all visits, whilst the 0.2% of people with 18+ visits made 3.6% of all visits (Doupe et al., 2012). These studies confirm that this small group of people require disproportionate amounts of health resources. The reasons for frequent ED presentations varied across studies, and commonly individuals had multiple health conditions (Kennedy & Ardagh, 2004; Williams et al., 2001), often requiring rapid re-presentations.

Investigations into re-presentations within a short timeframe have generally aimed to assess the quality of care provided. Studies investigating ‘unscheduled returns’ to ED within 72 hours often excluded patients who returned for a cause different from their index presentation (Kuan & Mahadevan, 2009; Nunez, Hexdall, & Aguirre-Jaime, 2006). An Australian study referred to these return visits as ‘early re-presentations’ and categorised them into groups by illness, patients, physicians, systems, and being unrelated to the initial visit (Robinson & Lam, 2013). A further level of classification included ‘avoidable’ and ‘unavoidable’ re-presentations. Psychiatric presentations were categorised as patient-related problems that were unavoidable. This classification presumes there are certain behaviours by people with a mental illness that cannot be influenced, ignoring the fact that mental health assessments and appropriate follow-up care could possibly positively influence return visits, a process similar to physical illness-related presentations. Only a minority (42/8.5%) of the 497 re-presentations were unrelated to the earlier visit (making them possible ‘Mixed Presenters’) and no further detail was provided on these (Robinson & Lam, 2013).
Looking at the vast numbers of ED presentations, some researchers postulated that frequent presenters used ED as the primary source of health care. A US population-based study investigated frequent ED use via a household survey (Hunt et al., 2006). Basic socio-demographic and health insurance information about each family unit was collected by telephone from 49,603 adults in 60 randomly selected communities. Findings included that most frequent ED presenters (≥7 visits in 12 months) had health insurance (84%) and a usual source of care (81%). Individuals who lacked a usual source of care were less likely to be frequent presenters. This finding is in contrast to Salazar et al. (2005), who found 85% of their small sample (n = 86) had not consulted their GP before their ED visit(s). It is possible that needing to pay for GP services, having difficulty getting to the clinic, and requiring health input after-hours might have influenced people to attend ED instead, in some cases using an ambulance for transport. Nevertheless, the majority of studies found that compared to controls, frequent presenters were also more likely to frequently access their GP (M. Byrne et al., 2003; Williams et al., 2001) and outpatient services (Hunt et al., 2006; LaCalle & Rabin, 2010).

The reasons for accessing a considerable amount of health care often involve poor physical health. Hunt et al. (2006) reported that 60% of approximately 3,500,000 frequent presenters (≥ 4 ED visits) had poor health. Asthma was found to be one of the predictors of frequent ED visits (Sun et al., 2003), and was similarly found in high prevalence in other studies (Doupe et al., 2012; K. Nelson et al., 2011; Vinton et al., 2014). Similarly, diabetes, respiratory issues, and cancer were common health concerns for frequent ED users (K. Nelson et al., 2011; Vinton et al., 2014).

In addition to poor physical health, frequent ED presenters experience high levels of psychiatric morbidity, making it likely that some people meet the criteria of ‘Mixed Presenter’. Hunt et al. (2006) reported that 50% (n = 1,700,000) of their sample reported poor mental health while other researchers reported high numbers experiencing psychological distress (Sun et al., 2003), or making more mental health care visits (Vinton et al., 2014) within a month (Madsen et al., 2009; Moore, Gerdtz, Manias, Hepworth, & Dent, 2007). Byrne et al. (2003) found that not only did 72% (n = 72) of frequent presenters have significant levels of psychiatric comorbidity, but 40% (n = 40) of controls, obtained by selecting the next presenting patient following the frequent ED user, who had the same triage code, no ‘frequent’ alert documented, and aligned in sex and age (± 10 years), did as well. The high comorbidity in the control group contrasted with their low health care utilisation in the previous year where 2% accessed psychiatric services more
than twice and 1% saw an addiction counsellor more than twice, compared to 17% and 9%, respectively, in the frequent presenter group. Similar findings of high comorbidity by frequent \( (n = 2,177) \) and highly frequent \( (n = 223) \) ED users were reported by Doupe et al. (2012). In particular, depression was common in all three groups, ranging from approximately one-third (30.4%) of the participants in the least frequent \( (<7 \text{ visits}) \) group, doubling to almost two-thirds (60.3%) in the frequent \( (7-17 \text{ visits}) \) group, and nearly 80% for the highly frequent \( (\geq 18 \text{ visits}) \) group. Of the highly frequent users, more than half experienced anxiety (57%), just under half dementia (43.9%), and one-third personality disorder (31.4%). Notably, nearly one in four people in the high frequent presenter group had schizophrenia (22.9%), compared to 8% in the frequent group and 1.9% in the least frequent group (Doupe et al., 2012).

In a UK study, ED and mental health datasets were combined to examine ED use by people with mental health issues (Keene & Rodriguez, 2007). Over a 3-year period, one in 10 people in the population had accessed ED care and of these, 10% had attended more than twice. Over the study period 3% of the population accessed mental health services, of which more than one-quarter (28.6%) accessed ED for mainly mental health complaints. Mental health patients were almost five times more likely to be frequent ED users than people who had never accessed mental health services in that timeframe.

Keene and Rodriguez (2007) developed four typologies of frequent ED users who had accessed mental health services: Firstly, young males, who presented with self-inflicted injuries and psychiatric problems. Secondly, people over 70 years of age presenting with fractures, minor head injuries and cardiac conditions. Thirdly, older patients with multiple medical conditions, who had few medical self-inflicted injuries or psychiatric problems. Fourthly, females with self-harm. Three of these typologies could represent the Mixed Presenters patient group that is the focus of this current research study, but for the fact that Keene and Rodriguez (2007) chose to define frequent ED users as those who, over a 3-year period, re-presented more than twice. Additionally, the description of how the study was conducted is brief. It is unclear if first or all ED presentations were examined and analysed, how missing data were handled, how presenting complaints or discharge diagnoses were categorised, and whether past medical histories were included. Nonetheless, this study shows that ‘frequent ED users’ who also use mental health services can include sub-groups of patients that have unique features and health care needs.
Despite the identification of sub-groups of older patients frequently using ED, older people tend to have fewer repeat self-harm episodes compared to younger people (Kim et al., 2011; Oude Voshaar et al., 2011). This reduced rate of self-harm repetition is possibly due to the often high severity of the initial event. Older people were found to make more serious self-harm attempts (Crocker et al., 2006), with many trying to avoid discovery (Oude Voshaar et al., 2011), resulting in older adults being at greater risk for not surviving the ED visit (Carter & Reymann, 2014). Older peoples' often decreased physical ability to cope with poisoning or trauma potentially exacerbated their physical vulnerability (Kim et al., 2011) and decreasing their ability for further self-harm.

Another cause for fewer repeated self-harm incidents by older people could be the higher vigilance by support or care workers following an earlier self-harm event, which might decrease future opportunity for self-harm. Alternatively, some older people received increased support following their initial self-harm which addressed the person’s previously unmet needs, making further self-harm events unnecessary (Crocker et al., 2006). In line with women seeking health care more often compared to men, older women were more likely to repeat self-harm compared to men [25.3% (98/387) vs 20.9% (48/230)] (Keith Hawton & Harriss, 2006). These often small studies included varied age ranges of ‘older person’, so comparing studies should be done with caution. It is also likely that many older people chose not to disclose previous self-harm. For example, indirect self-destructive behaviours by older people such as alcohol misuse, non-compliance with life-supporting medication, or poor food and fluid intake could have been acts of self-harm (F. L. Nelson & Farberow, 1980), highlighting the possibility of comorbidity.

Substance misuse amongst some frequent ED users was commonly reported in the literature (Doupe et al., 2012; Haw, Bergen, Casey, & Hawton, 2007; Kennedy & Ardagh, 2004). Byrne (2003) reported that alcohol and drug use was explicitly recorded for 38% of frequent presenters compared to 6% of the control sample. Yet, contrary findings were provided by a US population household survey asking about health care use and health conditions (Vinton et al., 2014). The Vinton et al. (2014) study found that 28.7% (n = 175) of super-frequent (≥10 visits during the past 12 months) ED presenters were lifetime abstainers from alcohol, which was higher than all other low presenter groups. This finding, however, implies that just under three-quarters of the sample were consuming alcohol at the time or had done so in the past. Differences between groups should be viewed with caution as details on the amounts of alcohol consumed were lacking and, due to the self-reporting nature of the study, underreporting of alcohol intake was likely.
Finally, a UK study found a high prevalence of alcohol-related disorders for both frequent and general ED presenters but alcohol disorders with psychiatric comorbidity were significantly more common amongst the frequent presenters (28.6%) than amongst general ED presenters (6%) (Williams et al., 2001).

Frequent ED use is primarily a temporary measure. Kennedy et al. (2004) explored the presenting pattern of 77 frequent ED presenters over a 4-year period in one New Zealand ED. The most common primary diagnoses included medical problems (45%), psychiatric disorders (29%), and substance use disorder (26%). The presentation pattern of the sample was not sustained over time, with a minority of people presenting more than 10 times in 12 months in the fourth year. Thus, this study indicated that intense help-seeking at ED is usually time limited. Ceasing to be a frequent presenter over time might be influenced by the use of other health care providers; moving out of the proximity of the ED; transferring into a supportive environment, such as a residential facility; or death.

Frequent ED users have a high mortality rate. In the Canadian study by Doupe et al. (2012), health records from six EDs were examined for frequent ED use. Within 180 days of the identification of an index episode, 13.6% \((n = 296)\) for frequent presenters (7-17 visits within 12 months) and 7.6% \((n = 17)\) of very high frequent presenters (≥18 visits within 12 months) had died of causes undisclosed in the article. These findings were comparable with another study that was small, descriptive, and retrospective in nature, where ED data were examined for frequent ED presenters (Salazar et al., 2005). Of the 86 participants who had more than 10 visits, 18.6% \((n = 16)\) had died within 12 months. Causes of death were attributed to medical reasons for 13 people and not stated for three.

Further, an Icelandic study found that the mortality of repeat ED users was higher than that of the general population for all causes of death for both men and women (SMR 1.81 and 1.93 for men and women, respectively) with the SMR highest for 30-64 year olds (Gunnarsdottir & Rafnsson, 2006). The 2105 deaths were mainly due to physical causes such as malignant neoplasm (32.2%), ischaemic heart disease (21.2%), and chronic lower respiratory disease (4.9%). But mortality from external injuries and poisoning (5.2%), including accidental intoxication (1.0%) and suicide/probable suicide (1.9%), were also substantial. The lack of the inclusion of discharge diagnosis information in this dataset made it impossible to determine whether or not participants died of the cause they had presented with, and how long after discharge people had died. Nevertheless, frequent health care use for any reason should alert clinicians to an increasing risk of death.
This sub-section of the literature review concerning people who frequently present to ED showed that despite differing definitions of 'frequent', this population experiences high physical and mental health morbidity and increased mortality. Nonetheless, the robustness of the studies on frequent ED use, often based on clinical data, is likely compromised because of inadequate assessment/documentation of self-harm by some clinicians and possibly non-disclosure of self-harm by patients (Gunnarsdottir & Rafnsson, 2006; Vinton et al., 2014).

### 3.3.7 Summary of comorbidities and self-harm risk

This chapter section on comorbidities and self-harm risk explored numerous aspects that could represent the characteristics of 'Mixed Presenters'. Ongoing physical ill health, often associated with pain; intentionally sustained injuries, especially for males; and interpersonal violence all pose an increased self-harm risk. Furthermore, the presence of mental illness and/or substance misuse – and their association with low socioeconomic status, poor physical health, self-harm histories, injuries, and interpersonal violence – are all factors that interact, possibly resulting in frequent ED presentations for some people, and presenting an increasing self-harm risk. Despite the volume of literature there is no distinct naming of a group Mixed Presenters. However, people with these complex health and social characteristics commonly present to ED for general health complaints without their self-harm risk being routinely established. How self-harm risk is identified and managed in ED is discussed next.

### 3.4 ED management for self-harm

This chapter section reports research on ED management of people at risk of self-harm, some of which are likely 'Mixed Presenter'. First, aspects on ED help-seeking is discussed. Although help-seeking is not strictly related to 'ED management', the influence of ED experiences on future decisions to seek care, possibly for mixed reasons that can include self-harm, makes it relevant. Secondly, issues regarding suicide screening are presented because, as discussed under Section 3.3, having comorbidities can incur an increased self-harm risk, likely to be reflected across a wide range of ED presentation complaints. Routine suicide screening might help to identify this at-risk group and offer opportunities for appropriate care. Thirdly, literature on ED staff attitude is presented, followed by patients’ and support persons’ experiences of ED care. The perspectives of staff, patients,
and support persons were included to identify multiple perspectives of self-harm management at ED. The aim of this section is to examine optimal ED care for people at risk for self-harm who experience comorbidities, possibly reflecting a group of 'Mixed Presenters'.

3.4.1 Help-seeking

Seeking help from ED was often a difficult choice for people. In a mixed method study, Adamson et al. (2009) explored GP patient views on ‘appropriate’ help-seeking from ED and GPs. It included a survey ($n = 901$), vignette, and semi-structured interviews ($n = 22$) about the help-seeking of others and self. The study found that many people rationed their health care use to ensure that resources were sufficient for all; people viewed others as using health services inappropriately, whilst they did not; and people's concerns about symptoms was generally a sufficient justification for help-seeking, even for what could appear to be trivial health concerns. Limitations of this study included a moderate response rate (60%), though this is in line with similar studies (Friedman et al., 2006; Gibb et al., 2010), and a lack of description of the sample selection process. The study nevertheless highlighted how help-seeking choices were not made lightly and that without medical knowledge and previous help-seeking experiences, people appeared to just do what they thought was best at the time.

Negative past ED experiences (Spence et al., 2008) and not wanting help from external sources (Long et al., 2015) contributed to people’s reluctance to visit ED, which was oftentimes seen as a last resort (Bergmans et al., 2009; Spence et al., 2008). In a meta-synthesis of 144 qualitative and quantitative studies, Clement et al. (2014) found that for at least one in four participants, stigmatisation negatively influenced their help-seeking for mental health issues. Similarly, results from the analysis of semi-structured interviews with 10 people who had a history of self-harm concurred that both stigmatisation and fear were barriers to help-seeking (Long et al., 2015). External barriers of stigmatisation, judgement, and misunderstanding along with internal barriers of fear, confusion, and shame were found to reinforce each other and heighten resistance to help-seeking. Participants in the study received a transcript of their interview for feedback, yet the article did not state if they had provided any feedback comments; also self-harm was not defined. The self-selected small sample and an unknown time period since the last self-harm event could influence study findings. However, the studies reviewed above acknowledge that in addition to knowing when health services are required for their
health issues, people at risk of self-harm consider the potential negative response of others, including those from staff.

Staff delivery of psychosocial assessments following self-harm and its impact on consequent help-seeking was investigated by Hunter et al. (2013). People aged between 20 and ‘early 60s’ who had attended ED for self-harm were interviewed about the circumstances of their self-harm and longer-term impacts of the event. The 13 people, seven of them male, reported that interactions with staff shaped future help-seeking. People who had received non-judgemental and empathetic care during the psychosocial assessment expressed confidence in accessing help when needed, whereas experiences of dismissive and judgemental staff contributed to help-seeking reluctance. This study had numerous limitations, including foremost, the low recruitment (6.6%) and sample size. Yet, the findings identified that positive engagement between ED patients and staff potentially reduces self-harm. Of note, people’s view on the importance of engagement or the ease with which this is done might differ by demographic groups, possibly influencing help-seeking.

Men and youth are disproportionally deterred from seeking help for mental health issues (Clement et al., 2014). These findings aligned with a Canadian study which investigated gender-specific help-seeking behaviour by young people prior to their suicide (A. E. Rhodes et al., 2013). Mortality and clinical datasets were linked and demographics verified with a national register. ED presentations were grouped by their ICD codes into self-harm, mental health, and other. Prior to their suicide, 242 boys and 93 girls aged 16-25 had accessed ED, though often for different reasons, of which a proportion were likely ‘Mixed Presenters’. Girls had presented to ED more often for self-harm compared to boys (41.9% vs 21.9%), yet boys were more likely compared to girls to use the ED for non-mental health problems (50.4% vs 33.3%). Of those who had mental health issues (boys 27.7%, girls 24.7%), nearly one-third (31.3%) of boys were diagnosed with psychosis-related issues, compared to none of the girls; yet, girls more often endured mood or affective disorders compared to boys (47.8% vs 26.9%). Study limitations included that the young people might have accessed other health care sources or informal help; and the information was limited by potentially incomplete documentation, such as if the young people left ED before being seen. This study nevertheless shows that males and females access ED differently.
Patients with severe mental illness and family carers reported that help-seeking for physical care was difficult (Van Hasselt et al., 2013). Patients disclosed high levels of stress when seeking care, often feeling inferior and finding it challenging to relate to staff. They experienced poor collaboration between GPs and mental health services staff, which also meant that family carers were unsure who to consult for health issues such as obesity. This was disappointing to patients and carers, given that they would like a more flexible approach to appointments and care, for example prompt test results to alleviate anxiety. This study included stable patients and those who participated might not reflect all people with severe mental illness. It is likely that non-participants’ challenges with health services were worse and they were reluctant, too stressed, or too unwell to voice their opinions.

Support people play a pivotal role in the lives of people at risk of self-harm. Whilst some people at risk openly discussed their self-harm with family (Peters et al., 2013), some young people reported they did not disclose their suicidal thoughts before an attempt even when directly asked (Holliday, 2012). Friends were often viewed as central to providing support (Klimes-Dougan et al., 2013), whilst family members were seen as unhelpful. Some participants felt it would be inappropriate to involve family because their emotional proximity could contribute to undue worry and distress (Long et al., 2015). Nevertheless, friends or family frequently initiated the ED visit (Cerel et al., 2006; Spence et al., 2008).

This section on help-seeking showed that many people attended ED reluctantly, especially men and youth. How these help-seeking approaches differ or align when for self-harm or other reasons remains as yet unexplored. Negative attitudes on the part of staff influenced peoples’ future help-seeking, and these attitudes appeared to occur more often when patients presented for self-harm.

### 3.4.2 Suicide screening

People’s risk for self-harm often goes unnoticed in ED, even when accompanied by presenting psychiatric complaints or actual self-harm (Ting et al., 2012). In Ting et al.’s descriptive study in the USA, each of eight participating EDs randomly selected 100 adult ED presentations to determine the frequency of documented self-harm screening, the proportion of patients at risk of self-harm, and any predictors for when screening was performed \( n = 800 \). Of the 39 people \( (4.9\%) \) screened, the majority \( n = 23/59\% \) were
at risk of self-harm. Predictors for the performance of self-harm screening included a psychiatric complaint or evidence of self-harm, and documentation of alcohol or drug misuse (all $p < 0.001$). It is likely that not all self-harm screenings were documented in ED records. Also, the attitude of ED staff inquiring about self-harm (possibly influencing the chances of disclosure) was unknown. Further, the number of people screened was small, making interpretation of findings suggestive only. However, this study portrays that self-harm is rarely investigated in the ED setting and when done, is predominantly targeted toward at-risk groups.

The types of presenting complaints most commonly associated with people screening positive for self-harm varied. Some adolescents who screened positive (9/48) were reported to have attended for medical complaints (10%), accidents (6%), and injuries by others (2%) (C. A. King, O’Mara, Hayward, & Cunningham, 2009). Adults who screened positive for self-harm commonly reported pain as the reason for seeking health care (Kemball, Gasgarth, Johnson, Patil, & Houry, 2008; Taur et al., 2012). In-line with findings from the previous paragraph, mental health issues, including depression, PTSD, substance misuse, and recent treatment for substance misuse, were commonly reported by people who screened positive for self-harm (Houry et al., 2007; Ilgen et al., 2009; Kemball et al., 2008), representing a group with comorbid health issues.

Taur et al. (2012) targeted inpatients with respiratory health issues for suicide screening. Nurses were trained in administering the Risk for Suicide scale and patients themselves completed the Multi-Attitude Suicide Tendency and Symptoms Distress scales. Of the 205 patients who completed all measures, 76 had chronic obstructive pulmonary disease (COPD) and 129 had lung cancer; they were most often male (98.7% and 91.5%, respectively), in their 70s (79.5 years and 70.0 years, respectively) and married (73.3% and 84.5%, respectively). More patients with COPD (26.3%) expressed a self-harm risk than patients with lung cancer (14.0%). Severity of symptoms and suicide risk were correlated ($r = 0.181$, $p < 0.01$). This study included low numbers, with the older age of the sample suggesting that other health issues possibly also influenced self-harm risk. Yet, the study emphasised that a substantial proportion of patients with chronic conditions are likely to simultaneously struggle to the point of considering suicide, a risk which will remain hidden unless inquired about.

Across studies, certain socio-demographic and clinical characteristics appeared to be associated with positive self-harm screenings, for example being single or living alone
(Houry et al., 2007; Ilgen et al., 2009; Kemball et al., 2008). Even when most participants were married, low social support was reported by more than half of the people identified as being at moderate or high risk of suicide (Taur et al., 2012). Unemployment or earning a low income was also associated with an increased suicide risk (Ilgen et al., 2009).

Gender differences in the suicide screening results were explored in the following three US studies. In a study by King et al. (2009) where 298 adolescents presenting to an ED for any reason were screened for suicide, females screened positively significantly more often than males (31.3% vs 10.8%). Similarly, Allen et al. (2013) reported from six diverse ED settings that two-thirds of people who screened positive for having made a prior suicide attempt were women; however, Ilgen et al. (2009) discovered only minimal differences in the rates of males (7.7%) and females (8.2%) with positive screens in an inner-city ED. This discrepancy in findings possibly reflects the many factors associated with a positive screen. Firstly, more females compared to males seek help for self-harm, suggesting more willingness to disclose. Secondly, methodologies varied from electronic data collection to face-to-face interviews, and suicide-specific screening to a broad health survey that includes some questions about self-harm risk. These inconsistencies might have produced gender-specific recruitment and disclosure.

Of concern is that people, likely ‘Mixed Presenters’, who present to ED for non-self-harm or non-psychiatric reasons might also be at risk for self-harm, even though self-harm is not an overt factor during the visit. Rafnsson and Gunnarsdottir (2013) discovered that some people who had presented to ED for other reasons subsequently died by suicide, a finding also true for adolescents (A. E. Rhodes et al., 2013). These people were either not at risk of self-harm at the time of the ED consultation, or they were at risk but simply did not disclose it. Disclosure can involve patients volunteering information about self-harm, can be the result of questions asked by a clinician and/or the patient admitting or denying self-harm risk. Routine screening of everyone might be warranted so as to provide an opportunity for disclosure.

The ideal self-harm screening tool, however, remains undetermined, possibly because risks vary by patients’ socio-demographic and health statuses. Further, ED staff also often lack confidence and training in addressing patients’ self-harm risks (Saunders et al., 2012). Hence, a broad, easy to use, validated, and short screening tool is required. Adolescent studies often used the validated and self-reported Suicidal Ideation Questionnaire (SIQ – 30 questions) for those 15 years and older, and the adapted SIQ-JR
(15 questions) for those under 15 years (Hopper, Woo, Sharwood, Babl, & Long, 2012; Horowitz et al., 2012). Yet, King et al. (2009) used SIQ-JR for their sample of 13-17 year olds in addition to the Reynolds Adolescent Depression Scale 2nd Edition (RADS-2) and the Alcohol Use Disorders Identification Test (AUDIT-3). A positive screen for elevated self-harm risk included a positive SIQ-JR, a recent suicide attempt, or a particular combination of scores for the RADS-2 and the AUDIT-3. Of the 295 participants in the study who completed all screens, 16% (n = 48) were identified as positive, of which 47 (98%) were positive because they had engaged in self-harm within the last 3 months. This study had a moderate response rate of 61%, and even though their recent self-harm history alerted clinicians that this group could be at increased risk in future, it did not mean these individuals were currently at risk and requiring intervention.

In a pre-test/post-test validation study, Houry et al. (2007) screened female victims of interpersonal violence for depression, PTSD, and suicidality. The pre-test consisted of the Beck Depression Inventory, the Post-Traumatic Stress Diagnostic Scale, and the Beck Scale for Suicide Ideation; questions contributing the most variation in scores were selected for a mental health screen, used in the post-test study. This comparison of screening tools resulted in four questions that included sadness, experience of traumatic events, wish to live, and wish to die. The positive predictive value for the mental health screen was 96% for depression, 84% for PTSD, and 54% for suicidal ideation. Hence, the tool is sub-optimal for self-harm screening.

The reason for carrying out suicidality and self-harm screenings would be to detect peoples’ undisclosed self-harm risk when presenting for physical health issues. However, it appears that positive self-harm screening does not automatically result in services input. Studies reported that between 12.5% and 36% of people identified positively for self-harm risk were assessed by mental health services (Allen et al., 2013; Ting et al., 2012), with between 41% and 76% of these people being discharged home (Kemball et al., 2008; Ting et al., 2012). These studies included small samples and limited information on participants’ clinical backgrounds, which could have influenced care decisions. Nevertheless, unless mental health, general health, and social services are interlinked and resources increased at the onset of screening initiatives, their effectiveness will be limited.

This section on suicide screening in ED described how a proportion of ED patients are at risk for suicide and self-harm, but there is a lack of agreement on the ideal screening tool,
a factor probably influencing staff to regularly omit asking people about suicide. ED staff’s pivotal role in self-harm management, in particular their attitude, is discussed next.

3.4.3 ED staff attitude

The ED experiences of people with mixed presentations, including one for self-harm, are largely dependent on the attitude of staff which they encounter. In order to investigate ED staff attitude, I reviewed studies involving nurses, doctors, and other allied health professionals. Nurses and women were most often represented in these studies (Conlon & O’Tuathail, 2012; Friedman et al., 2006; McCann, Clark, McConnachie, & Harvey, 2007; McCarthy & Gijbels, 2010; Suokas, Suominen, & Lönnqvist, 2009; Suominen et al., 2007; Timson, Priest, & Clark-Carter, 2012). In order to acknowledge ‘other’ ED presentations, I included two papers investigating attitudes toward chronic pain and alcohol intoxication because staff reported both these presentations are challenging (Gunasekara et al., 2011; McLeod & Nelson, 2013). Yet, to restrict the scope of the research, I did not critically examine all eligible literature on staff attitudes toward pain or alcohol intoxication, nor did I investigate staff attitudes to all possible ‘other’ ED presentations.

The reason why many staff choose to work in ED is because of its emphasis on physical and acute care; they can make an immediate difference with their interventions (Bergmans et al., 2009). In a small qualitative study, some doctors expressed that the expectation that they follow the medical culture with its prime focus on physical health guides them to ignore their own feelings of powerlessness when caring for people at risk of self-harm (Hadfield, Brown, Pembroke, & Hayward, 2009). ED patients at risk of self-harm create a dilemma for many ED staff whose usual care strategy will be ineffective. Of note, other presentations such as those for chronic pain or alcohol intoxication can also create negative staff reactions because of their poor fit in the acute emergency mould (Gunasekara et al., 2011; McLeod & Nelson, 2013).

Negative attitudes towards patients at risk of self-harm differ between health professionals. Suokas et al. (2008) distributed the Understanding Suicidal Patients Questionnaire to staff, where a score under 18 reflected a positive attitude and 28 or over a negative attitude. The study demonstrated that negative attitudes toward people who self-harm were significantly more prominent in ED staff \( n = 34 \) than in staff working in mental health settings \( n = 32 \) \((27.8 \text{ vs } 20.4, p < 0.001)\). This may be accounted for by mental health staff’s increased knowledge of mental health, along with possible
differences in behaviour or presentation exhibited by ED patients who have self-harmed, many of whom probably would not meet the criteria for specialised care in a mental health setting. Gibb et al. (2010) demonstrated similarly themed findings, namely that significantly more ED staff \((n = 16, 34\%)\) found repetitive self-harm behaviour difficult to manage, compared to general medical \((n = 13, 14.4\%)\) or mental health staff \((n = 11, 19\%)\) \((p < 0.03)\). When Timson et al. (2012) compared ED staff, mental health staff and teachers, mental health staff demonstrated a more positive attitude overall toward people who self-harm along with more accurate knowledge about the topic, compared to ED staff and teachers. None of these study findings (Gibb et al., 2010; Suokas et al., 2008; Timson et al., 2012) portray if attitudes of ED staff are substantially worse compared to other (health) professionals, nor if attitudes towards a patient with mixed presentations, including self-harm, remains constant across presentations.

Studies on nurses’ attitudes toward people who self-harm claim there is a tendency toward positive attitudes (Conlon & O’Tuathail, 2012; McCann et al., 2006; McCarthy & Gijbels, 2010). Martin and Chapman (2014) also found doctors and nurses have comparable levels of positive attitudes concerning patients who self-harm. The data collection tools such as the Self-harm Antipathy Scale, the Attitude Towards Deliberate Self-harm Questionnaire, and the Suicide Opinion Questionnaire (Conlon & O’Tuathail, 2012; McCann et al., 2006; McCarthy & Gijbels, 2010) seem appropriate for assessing the knowledge, beliefs, and opinions of staff. Nonetheless, I argue that responses to a questionnaire are a poor reflection of actual attitude shown to ED patients. What nurses or doctors are thinking at a particular time about a scenario or when reading a statement on self-harm cannot be compared to actually providing compassionate care. Staff indicating negative attitudes might in practice provide good care, whilst staff indicating positive attitudes might struggle with rapport building when caring for people who self-harm.

Despite the slightly positive attitudes of ED staff toward people who self-harm, ED is seen by them as an unsuitable setting for meeting the needs of these patients (R. Chapman & Martin, 2014; Conlon & O’Tuathail, 2012; Martin & Chapman, 2014; Saunders et al., 2012). This view was also voiced concerning people presenting with chronic pain (McLeod & Nelson, 2013). There are frequent mentions of the inadequacy of hospital systems hindering the ability to provide quality care for these groups (Gibb et al., 2010; McCarthy & Gijbels, 2010; McLeod & Nelson, 2013). Whilst for some staff the environment – including the lack of privacy, overcrowding, and the general lack of resources – was
viewed as inappropriate (Conlon & O’Tuathail, 2012; Martin & Chapman, 2014), others acknowledged their own lack of skill and training as well (R. Chapman & Martin, 2014). Yet, even when resources were increased for treating patients at risk of self-harm, such as introducing psychiatric liaison services, negative staff attitude was found to be unaltered (Suokas et al., 2009). One reason for this lack of change in attitude was possibly a lack of engagement between ED and liaison services, which deterred knowledge sharing about self-harm.

Frequently, ED staff viewed self-harm presentations as difficult to manage (Bergmans et al., 2009; Gibb et al., 2010), yet this care challenge also applies to other types of presentation, such as intoxicated patients (Gunasekara et al., 2011). In particular, frequent ED use and aggression were identified as the most challenging (Bergmans et al., 2009; R. Chapman & Martin, 2014; Gibb et al., 2010; Gunasekara et al., 2011; Martin & Chapman, 2014). People who presented to ED frequently were viewed as attention-seeking, ‘non-fixable’, manipulative, and wasting staff’s time (Bergmans et al., 2009; R. Chapman & Martin, 2014; Conlon & O’Tuathail, 2012; Martin & Chapman, 2014). Similarly, violence and aggression by these patients was viewed as time-consuming to deal with, taking staff away from other duties and ‘real’ emergencies (Bergmans et al., 2009; R. Chapman & Martin, 2014; Gunasekara et al., 2011). Staff reported feeling frustrated, helpless, and powerless to influence these behaviours (Bergmans et al., 2009; Friedman et al., 2006; Gibb et al., 2010; Hadfield et al., 2009). Consequently, ED staff opted for negative coping strategies such as ignoring or marginalising patients (Conlon & O’Tuathail, 2012; Hadfield et al., 2009).

Despite the expectations placed on ED staff to care for patients who present with self-harm, many reported that, unlike mental health nurses, they were untrained in this field. Commonly, staff requested this training (Conlon & O’Tuathail, 2012; Gibb et al., 2010; Martin & Chapman, 2014) because they felt unskilled and frustrated; such lack of confidence commonly contributed to their reluctance to communicate with patients about mental health (R. Chapman & Martin, 2014; Conlon & O’Tuathail, 2012; Friedman et al., 2006; Martin & Chapman, 2014). The reasons many ED staff are not trained are likely related to often-high staff turnover and shift work, both requiring that training sessions be repeated regularly to ensure that most staff are trained at any given time. Saunders et al. (2012) in a systematic review involving 74 quantitative and qualitative studies from 15 countries, also lamented the lack of a nationally agreed-upon framework or curriculum for self-harm training, especially as a significant positive relationship is

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known to exist between effectiveness and knowledge (Timson et al., 2012). These findings showed that if ED staff had more knowledge about self-harm, their attitude toward self-harming patients would likely be more positive.

On average, one in five ED staff reported receiving self-harm education in Australia and in Ireland (McCann et al., 2007; McCarthy & Gijbels, 2010), yet some UK studies showed far lower (9%) past training, especially concerning adolescent self-harm (3.9%) (Friedman et al., 2006; Timson et al., 2012). However, a different Irish study (Conlon & O’Tuathail, 2012) presented higher rates of education (68%), possibly influenced by the authors’ professional position in liaison mental health, a role usually incorporating regular teaching of mental health topics to ED nurses (Sharrock, Bryant, McNamara, Forster, & Happell, 2008). Doctors ($n = 53$) were found to have higher training rates for self-harm than nurses ($n = 133$) (77.4% vs 46.2%) (R. Chapman & Martin, 2014; Martin & Chapman, 2014), highlighting possible discrepancies in the education opportunities, budget and/or the type of training these professions have available. A history of self-harm education should be interpreted with caution because oftentimes details on the length of the training, its usefulness to clinical practice, and how often staff cared for people at risk of self-harm and hence were able to apply those learnings, remain unknown. Nevertheless, the benefits of education which included increased skills, positive attitudes, enjoyment, and satisfaction when working with people at risk of self-harm, were widely acknowledged (R. Chapman & Martin, 2014; McCarthy & Gijbels, 2010; Saunders et al., 2012). Similarly, education in chronic pain was recommended to address knowledge gaps (McLeod & Nelson, 2013).

Studies investigating ED staff attitudes toward people who self-harm had limitations. Some studies did not share their recruitment strategy (Hadfield et al., 2009) or used convenience sampling (McCarthy & Gijbels, 2010) or opportunistic sampling (Timson et al., 2012). Further, low recruitment rates (Cleaver, Meerabeau, & Maras, 2014; Suokas et al., 2008; Suominen et al., 2007) and small samples (Gunasekara et al., 2011) presented further risks for biased findings. The interview tools and surveys used to inquire about staff attitudes were often unexplained, untested, or had minimal prior utilisation (Bergmans et al., 2009; Cleaver et al., 2014; Friedman et al., 2006; Hadfield et al., 2009). These limitations might have influenced findings, making them non-generalisable to ED staff outside the study location. However, despite the limitations of these studies, the negative attitudes of ED staff are likely to persist until ED nurses are provided with self-harm knowledge and support. The reviewed literature on ED staff attitudes toward
people who self-harm lacked information about patients’ support persons, perhaps indicating that staff and/or researchers underestimate the importance of the support person’s role.

Negative attitudes toward people who present to ED with self-harm are common amongst ED staff. Staff report difficulty in dealing with the challenging behaviours of some patients, with many being poorly educated about self-harm. However, it is unknown if negative staff attitudes are uniquely directed at people presenting for self-harm, or if, when these people present for ‘other’ presentation, their attitude differs. Patients’ and support persons’ experiences of ED care often align, and are discussed next.

3.4.4 Patients’ and support persons’ experiences in ED

Despite most New Zealand adults who had been treated in ED rating the quality of care as good or very good (83%) (Ministry of Health, 2013), people at risk of self-harm frequently reported dissatisfaction. Negative experiences reported in international literature included long waiting times (Bergmans et al., 2009; Cerel et al., 2006; Long et al., 2015), which negatively influenced some patients’ ability to stay in control, ultimately contributing to negative behaviour (Spence et al., 2008). Further, how their concerns were addressed was seen as frustrating: the multiple interviews and confinement increased their loss of control, especially when ultimately they were discharged (Bergmans et al., 2009).

The focus of ED staff on physical health when caring for people at risk of self-harm was viewed as inadequate. Firstly, suicide risk was found to be poorly addressed when ED staff simply provided physical care following self-harm (Peters et al., 2013). Secondly, physical health care, viewed as better understood and generating more sympathy and acceptance by staff (McKay, 2010), was provided with a judgemental attitude at times. This was noted by patients presenting with self-harm wounds who recalled discriminatory attitudes by staff (Long et al., 2015), and patients with a history of mental illness who experienced staff attributing their physical concerns to their mental illness and related treatments (McKay, 2010), resulting in discrimination against them (Farrelly et al., 2014).

ED staff were also criticised for their self-harm risk management. Teenagers presenting to ED for self-harm reported that nurses never talked to them about their current mental state (Holliday, 2012). This failure to initiate relevant conversation was of concern
because some people at risk of self-harm struggle with identifying their feelings and needs (Spence et al., 2008). Staff were viewed as not knowing how to deal with a suicidal person, not taking the self-harm event seriously, and discharging the person at risk of self-harm very quickly (Cerel et al., 2006; Peters et al., 2013). Although some support people experienced staff saving lives with their actions (Cerel et al., 2006), staff input also failed to prevent a suicide (Peters et al., 2013).

Overall, ED patients reported both positive and negative experiences with staff. People at risk of self-harm and their support persons appreciated helpful, kind, and supportive staff (Cerel et al., 2006). Positive interactions, where patients felt they were connecting with staff as people and were not regarded as only an 'illness', were long remembered (Veysey, 2014). Yet, in other studies people with experiences of mental illness reported feeling patronised by staff and not viewed as individuals with specific needs (McKay, 2010). Many reported encountering judgemental and unprofessional staff who listened poorly (Cerel et al., 2006). Support people similarly reported that some ED staff had not listened to their prior concerns, and they felt devalued and invalidated at the time of the ED visit (Peters et al., 2013). They lamented the lack of information sharing by ED, especially on discharge (Cerel et al., 2006; Peters et al., 2013). These studies included small self-selected sample sizes, but portray how each staff interaction can be influential to later events.

Mental health services were similarly viewed as sometimes failing to provide adequate care (McKay, 2010). Homeless women reported they felt judged for their negative coping behaviours such as substance misuse, and reported that because mental health staff rarely inquired about past traumatic events, staff remained unaware of the root causes of the women’s distress (Huey et al., 2012). Similarly, nearly one-third of 202 participants with serious mental illness in a UK study reported discriminatory experiences by mental health staff (Farrelly et al., 2014). Support people reported a lack of follow-up care and input in suicide prevention strategies for families (Peters et al., 2013). These experiences reflect limited engagement between mental health staff, people at risk of self-harm, and support people. This lack of knowledge exchange decreased the likelihood of effective support and treatment interventions by mental health services. Bergmans et al. (2009) and Long et al. (2015) argued that the lack of follow-up care and community resources possibly contributed to further serious self-harm.
Both those who present to ED for self-harm and their support people were frequently dissatisfied with their ED care because the focus was on physical health issues, suicide risk was inadequately assessed, and staff were poorly engaged and appeared to negatively judge them. To my knowledge, how people (‘Mixed Presenters’) and their support people experience the distinct ED visits for self-harm and ‘other’ reasons has remained unexplored.

### 3.4.5 Summary of ED management for self-harm

Despite a large proportion of people experiencing comorbid health issues, as discussed in an earlier section of this chapter, routine suicide screening initiatives are lacking in ED. Furthermore, many ED staff display negative attitudes toward people who self-harm, and have difficulties in caring for this patient group, which they attributed to inadequate training. The recipients of the care – patients and support people – agreed that the majority of ED staff provide poor, unsafe, and sometimes cruel care to self-harming patients. As a consequence, people with prior negative experiences avoided presenting to ED, which meant that support people often initiated help-seeking.

### 3.5 Areas for further study

Though extensive in scope, this literature review revealed several areas for further studies. Firstly, a specific group with acute comorbid health issues including self-harm was not specifically named in the literature. As discussed under section 3.3, a substantial group of ED patients experience comorbid health issues that are related to self-harm. This group, which includes ED patients who present with long-term physical health issues, chronic pain, injuries following road traffic accidents, interpersonal violence, mental illness, and substance misuse, is at increased risk of self-harm. Further, frequent ED use and low socioeconomic status are added risk factors. Not recognising or labelling a group of people with mixed health and social issues, including self-harm, as ‘Mixed Presenters’ means that this group is likely to be underserved in ED.

The second literature gap is that the serious self-harm risk of Mixed Presenters has not yet been established. Mixed Presenters, who by definition have harmed themselves at least once, might incur a serious self-harm risk in the future. The seriousness of this risk in comparison to people who present to ED for self-harm twice within a short timeframe
has not been investigated to my knowledge. It is likely that self-harm and other ED presentation complaints are related, either triggered by each other or coinciding with each other. The unknown factor is the ‘other’ presentations complaint by Mixed Presenters.

Thirdly, the unique ED experiences of Mixed Presenters when presenting for these two distinct reasons have been unexplored. Whilst people who present with self-harm are often exposed to negative staff attitude (see section 3.4.3), how staff conduct themselves when caring for these patients when presenting to ED with other types of health complaints is unknown. Knowledge of ED staff attitude for these distinct presentations and their assessment of risk across these presentations are important for achieving quality care.

### 3.6 Summary

The reviewed literature clearly portrayed that people with comorbid health issues, including self-harm, currently attend ED, however, they have not been the focus of specific research. The complexity of people with mixed ED presentations, their self-harm risk and ED management and the associated research gaps of this population meant that only a mixed method study design was deemed adequate for this investigation. Mixed method design is discussed in Chapter 5. The conceptual framework informing the study design and particular methods used is presented next.
Chapter 4
Theoretical Influences

"If patients were powerful rather than powerless, if they were viewed as interesting individuals rather than diagnostic entities, if they were socially significant rather than social lepers, if their anguish truly and wholly compelled our sympathies and concerns, would we not seek contact with them, despite the availability of medication? Perhaps for the pleasure of it all?"

4.1 Overview

This chapter presents the theoretical and clinical underpinnings used for this research. The chapter structure reflects that Mixed Presenters’ illness experiences happen prior to coming to ED, as well as within ED and post ED. The influences discussed and applied in this study of Mixed Presenters include self-harm, indirect self-destructive behaviour, and help-seeking in the ‘before ED’ section; labelling in the ‘within ED’; and the Interpersonal Theory of Suicide in the ‘post ED’ section (Figure 4.1).

![Diagram showing the theoretical and clinical influences relevant to Mixed Presenters presenting to ED](image)

**Figure 4.1** Theoretical and clinical influences relevant to Mixed Presenters presenting to ED

These theories and concepts were selected because they provide contextual information concerning people with complex health experiences, including self-harm; they explore the reality that, along with the dominant medical model, other factors such as stigma equally influence labelling during ED care; and lastly, they outline the complex influences on serious self-harm risk. Based on my clinical experiences, other theories such as self-regulation (Muraven & Baumeister, 2000) and somatisation (Kellner, 1990) were considered to be possibly relevant to Mixed Presenters, but as there was no evidence in the literature that these might apply, I did not include these.

4.2 Before ED

This section on theoretical influences describes risk factors for self-harm and then examines the concept of ‘indirect self-destructive behaviour’. These two aspects are discussed because they encompass those presenting complaints likely to characterise mixed presentations to ED. Lastly, help-seeking and the influence of support people, gender, and stigma on Mixed Presenters is considered.

4.2.1 Self-harm

Self-harm behaviour precedes at least one ED visit by Mixed Presenters. Common risk factors for self-harm include mental disorders (Cheng, Chen, Chen, & Jenkins, 2000; Kaplan et al., 2007; Reith et al., 2004), past suicide attempts (Christiansen & Jensen, 2007), social isolation (Wu, Chang, Huang, Liu, & Stewart, 2013), family conflict (Choi et al., 2013) and unemployment (Joubert, Petrakis, & Cementon, 2012). Further, alcohol misuse (Ness et al., 2015; Sher, 2006), physical illness (K. M. Scott et al., 2010), and multiple and/or frequent ED presentations (Gunnarsdottir & Rafnsson, 2010; K. Nelson et al., 2011) have been associated with self-harm. How these numerous risk factors contribute to individuals’ serious self-harm risk is theorised later in section 4.4.1. First, the significance of some comorbid health issues as a result of adverse behaviour are discussed, relevant because these behaviours could represent self-harm or non-self-harm, highlighting the fuzziness of self-harm labelling and the ‘Mixed Presenter’ status.
4.2.2 Indirect self-destructive behaviour

Mixed Presenters are likely to engage in indirect self-destructive behaviours before attending ED for any reason. Indirect self-destructive behaviours are “actual or potential self-injurious acts characterised in the main by a lack of awareness or intention toward self-harm and by delayed, usually incremental, negative effects” (Gerber, Nehemkis, Farberow, & Williams, 1981, p. 31). These behaviours may be "active or passive, lethal or relatively innocuous, readily identifiable or obscure" (F. L. Nelson & Farberow, 1980, p. 949). The acts include indifference toward or abuse of one’s health, disregard for life-saving medical regimes, or taking unnecessarily high risks (Gerber et al., 1981; F. L. Nelson & Farberow, 1980), behaviours potentially portraying ‘slow’ and ‘lingering’ suicide (Tsirigotis, Gruszczynski, & Tsirigotis-Maniecka, 2015).

Indirect self-destructive behaviour is displayed in various ways. Destructive behaviour toward oneself includes alcohol or drug misuse, hyper-obesity, or self-neglect in the form of noncompliance with eating, drinking, smoking, or medication regimes (Harwood & Jacoby, 2000; Menninger, 1938; Mosqueda & Dong, 2011; F. L. Nelson & Farberow, 1980, 1982; Tsirigotis et al., 2015). Alcohol or drug misuse can also contribute to destructive behaviour toward others resulting in harm to self (i.e., victim-precipitating aggression), instigating conflict with others, impulsivity and non-adherence to hospital policy (G. E. Murphy, 2000; F. L. Nelson & Farberow, 1980, 1982). Risk-taking regarded as indirect self-destructive behaviour includes reckless driving (most often involving young men showing indifference to traffic safety) commonly under the influence of alcohol (Hernetkoski & Keskinen, 1998; F. L. Nelson & Farberow, 1980), and possibly resulting in the decision to enact suicidal intentions whilst driving intoxicated (Menninger, 1938). Tsirigotis et al. (2015) argues that substance use to the point of indirectly threatening life involves rarely a choice.

Overall, self-destruction is viewed as an attempt to activate some sort of “self-cure of emotional/psychic pain” (Menninger, 1938, p. 142). People who engage in indirect self-destructive behaviour often have physical and/or mental health issues, are socially isolated, and report dissatisfaction and unhappiness (F. L. Nelson & Farberow, 1980). Indirect self-destructive behaviours are driven by depression, hopelessness, helplessness, and anger (F. L. Nelson & Farberow, 1980). Menninger (1938) postulates that alcohol misuse provides temporary relief from deep hopelessness and despair.
Indirect self-destructive behaviour can serve as a substitute for or alternative to overt suicidal behaviour as it avoids the social stigma, self-disclosure, anxiety, and guilt associated with suicide (F. L. Nelson & Farberow, 1980). Apart from a likely link between frequent suicide attempts and indirect self-destructive behaviour (carelessness, poor health maintenance, evidence of transgression, and lack of planning), the seriousness of harm was found to likely correlate between these two modes (Tsirigotis, Gruszczynski, & Tsirigotis-Wołoszczak, 2010). However, in view that some studies, for example Nelson and Farberow’s (1980, 1982) included older people with physical and cognitive limitations, and others included people in treatment centres (Tsirigotis et al., 2010), the suicidal intent behind indirect self-destructive behaviour cannot always be determined due to people's mental state. Nevertheless, indirect self-destructive behaviour is associated with potentially premature or accelerated death (Harwood & Jacoby, 2000) that may have been avoided had the risk been identified when ED help was sought.

4.2.3 Help-seeking

Knowing when to seek help from ED is difficult. In order for people to initiate help-seeking, their health status must change from their norm to involve symptoms they perceive as severe (Yount & Gittelsohn, 2008) and worrisome. Prior experience with health problems allows people to gain knowledge and understanding about their bodies and the symptoms that possibly reflect a certain diagnosis, increasing their health literacy. However, as Mixed Presenters have more than one condition, it is not known how and if they learn from all experiences, and how it might affect their future help-seeking. Klimes-Dougan et al. (2013) argued that help-seeking is the critical link between understanding there is a problem and requesting necessary services. However, Adamson et al. (2009) found that anxiety about symptoms was the most influential factor in help-seeking.

Apart from consulting with family and friends ('support people', discussed below), many unwell individuals access the internet for health advice (Gauld & Williams, 2009). One aspect of concern regarding electronic health information is its failure to provide a link between an individual's symptoms and the need to seek help. Consequently, help-seeking depends on individuals’ interpretation of the information and how it relates to them. Limited internet access or skill disadvantages some people (Gauld & Williams, 2009). However, unless internet sites are trustworthy and research-based and the information is interpreted correctly, even internet-savvy individuals are at risk of being misinformed.
Nevertheless, internet consultation influences some individuals’ decision to subsequently present to ED (Pourmand & Sikka, 2011).

It is common for individuals to access ED because they perceive they need immediate health care (Adamson et al., 2009). Frequent help-seeking is likely to originate from ongoing and complex physical and/or psychological problems. Over time, individuals who frequently attend ED are likely to experience a range of ED care experiences (Moss et al., 2014). Negative ED experiences are more likely to result in help-seeking resistance (Long et al., 2015), since poor quality health care influences help-seeking (Yount & Gittelsohn, 2008). However, the reason for frequent ED visits despite adverse experiences appears to be desperation and powerlessness in dealing with symptoms at home (Olsson & Hansagi, 2001) and seeing ED as a last option, with visits often initiated by others (Spence et al., 2008). Furthermore, it is possible that if Mixed Presenters experience negative ED care, not only will their self-worth and self-care be affected, increasing the risk of future episodes of poor health, but also they may hesitate to go to ED when their health deteriorates.

**Support people**

Mixed Presenters, like other people, do not exist in isolation. Support people are often the first to observe a person becoming unwell, but their input in help-seeking varies. Firstly, Mixed Presenters might not disclose ill health or self-harm to support people (Andrada, 2009), or may disclose physical ill health or injuries, but not self-harm. Decisions about disclosure might be guided by shame or fear of stigma, or alternatively, by poor mental health and lack of insight or knowledge that ED care is warranted. Support people themselves might not know when or how to seek care, especially when the situation is new to them. Some support people experience a process of denial, uncertainty, and observation over time (Yarrow, Schwartz, Murphy, & Deasy, 1955). Following adjustment to unusual behaviour, a threshold is finally passed where mental illness is strongly suspected before initiating help (Yarrow et al., 1955). Hence, nondisclosure on the part of an unwell Mixed Presenter would mean that their health status must be visible or observable in order for support people to initiate help-seeking.

Secondly, a Mixed Presenter and his/her support person may engage in discussion regarding the decision to seek health care, possibly motivated by the difficulty of deciding at what time point and for what illness episode ED care is warranted. Disagreements between an unwell person and a support person might exist. On the one hand, a Mixed
Presenter might determine a need for help-seeking when the support person does not. For example, chronic physical health complaints that were denied an illness label by health services can result in support people doubting the reality of such an illness (Dumit, 2006). In contrast, support people might determine a need for ED care when the Mixed Presenter does not want to seek such care.

Thirdly, a person might be unable to initiate help; for example, following an unconscious collapse or severe alcohol and/or drug intoxication, incapacitation can preclude help-seeking. Support people or even bystanders are likely to play a crucial role in discovering the ill person and initiating ED care. Routes to ED can vary (K. Nelson et al., 2011), sometimes this can involve transporting the person themselves, getting others to transport, or contacting the police or ambulance services. It is possible that the control over help-seeking completely shifts from the Mixed Presenter to other people in these situations, to the point where ambulance services and ED initiate unconsented care. The anticipated important and diverse roles of support people in seeking ED care for Mixed Presenters may be further influenced by Mixed Presenters’ gender.

**Gender difference**

Gender differences exist in regards to help-seeking behaviours. The literature indicates that male socialisation may have an adverse effect on men’s help-seeking behaviour (Galdas, Cheater, & Marshall, 2005). Women are more likely to seek health care, and consequently are diagnosed as sick more often than men (Courtenay, 2000). Conversely, men have a low treatment rate for depression both because of clinicians’ failure to diagnose and because men are usually unwilling to seek help (Courtenay, 2000). The result is a socially constructed male invulnerability to depression (Courtenay, 2000).

Men with a history of self-harm can disclose that they have experienced high levels of emotional pain but dominant masculinity norms discourage disclosure of emotional vulnerability (Cleary, 2012). These men may use alcohol and drugs to cope, which in turn exacerbates and prolongs their distress, resulting in self-harm (Cleary, 2012). Though men might share similar masculine ideas, different men act on these ideas differently (Courtenay, 2000). Underlying a reluctant attitude toward help-seeking is likely a fear of stigmatisation, discussed next.

**Stigmatisation**

Stigmatisation influences help-seeking for mental health issues and self-harm (Long et al., 2015). In a meta-synthesis of 144 qualitative and quantitative studies, Clements et al.
(2014) portrayed in a conceptual model how stigmatisation mostly deters and rarely enables help-seeking for mental health issues. Deterrents are multi-layered, and globally, people are exposed to structural stigma via media, laws, and societal practices portraying people with mental illness negatively. Consequently, dissonance is created, where stereotypical beliefs about people with mental illness—including being weak, crazy, dangerous, different, or bad—are misaligned with how people enduring mental ill health view themselves. Non-disclosure can occur for many reasons, including the experience or anticipation of labelling; unwanted disclosure; public stigma, including judgmental and disrespectful professionals; internalised stigma, including shame and embarrassment; and stigma by association. Additionally, structural stigmatisation has produced inadequate resources for mental health, encouraging a focus on risk management and coercive treatment. In contrast, factors that enable help-seeking involve individualised strategies such as these individuals being selective about who they tell about their mental illness, normalising mental health issues, and rejecting stigmatisation. Other types of care strategies that encourage help-seeking include confidential or anonymous services, and offering forms of care that minimise stigmatisation and are provided by non-judgmental and respectful professionals (Clements 2014).

Mixed Presenters are likely to experience stigmatisation, but whether this occurs equally for these two distinct presentations is unknown. People with a history of self-harm identify guilt, shame, and stigma as motivations for keeping silent about self-harm behaviours (Andrada, 2009). Internalised stigmatisation can occur following experiences of discrimination and alienation, resulting in withdrawal from society (Sharaf, Ossman, & Lachine, 2012). The New Zealand report Fighting Shadows illustrates how feelings of hopelessness, uselessness, and being a burden to others, commonly resulted in low confidence and anxiety in people with mental illness (Peterson, Barnes, & Duncan, 2008). Furthermore, the experience of stigmatisation increases the risk for suicide (Peterson et al., 2008; Sharaf et al., 2012) because stigmatisation and labelling act as barriers to accessing health services (Andrada, 2009). The extent that stigmatisation influences help-seeking from ED for ‘other’ health problems is unknown.

In conclusion, self-harm and other health complaints (most likely inclusive of indirect self-destructive behaviour) can trigger the need to seek help from ED. The process of help-seeking from ED is multi-faceted, influenced by support people, gender, and stigma. The fear of stigmatisation in the form of labelling, discussed next, is a likely contributor to help-seeking resistance.
4.3 Within ED

Mixed Presenters are susceptible to social labelling, meaning they are at risk of being labelled negatively by ED staff. As most ED patients seek one-off care for accidental injuries or medical events with the primary intention to preserve life, patients with self-harm and frequent or multiple ED visits deviate from ‘normal’ patient behaviour. This can result in negative staff attitudes toward patients with these different presentation patterns (Suokas et al., 2008; Suominen et al., 2007). These intricately connected factors make it pertinent to explore how the labelling theory (described under 4.3.1) fits with Mixed Presenters, in particular their ‘other’ presentation.

Apart from the social construction of labelling in ED, the setting is geared for the management of medical and surgical emergencies (Innes, Morphet, O’Brien, & Munro, 2013), reflecting the domination of the medical model. Following best-practice guidelines and protocols, ED presentations are triaged on arrival, assessed, and treated by an ED doctor, to be either admitted or discharged. For patients who present with self-harm, this protocol involves a focus on their safety and thus, suicide risk assessments. Irrespective of the presenting complaint, doctors in ED decide on the diagnoses, or ‘label’, for each presentation. The complexities associated with diagnosing both physical and mental ill health are important to consider, and being the receiver of these labels is no less complex. The implications of diagnosis and the consequent labelling of patients have the potential to influence future help-seeking and impact the long-term outcomes of Mixed Presenters.

The next section explores the social, medical, and psychiatric labelling relevant to Mixed Presenters. Mixed Presenters’ complex health and social circumstances, as well as their at times frequent ED presentations, make them prone for labelling. Since labelling might have negative outcomes on these individuals, these aspects are further discussed. I firstly explain the concept of labelling in physical illness, mental illness, and deviancy. Secondly, I outline the labelling process followed by the two main medical and psychiatric labelling frameworks.

4.3.1 The labelling of illness, mental illness and deviance

Sociologists have theorised that illness is not only physical but a social construction (Roman & Trice, 1968; Rosenhan, 1973; Scheff, 1963). In this framework, being ill is a deviant behaviour that, with the assignment of a label that indicates a ‘sick role’, provides a person with a legitimate mechanism for social control (Parsons, 1951). People labelled
as sick are encouraged into the deviant role, which in turn results in people not striving toward and maintaining good health. People are seen as sick when their state of health does not fit into the norm of adequate health (Twaddle, 1973). Whilst physical illness labels most often confer a lack of personal responsibility for the occurrence, mental illness labels, in contrast, can imply that a person possibly does have control over his/her symptoms and could choose to reverse them if he/she so desired (Goldstein Jutel, 2011). Though the reverse argument, discussed later in this sub-section, is made by Szasz (1960), arguing that diagnostic labels should be avoided as they prevent personal responsibility.

Some sociologists view mental illness as a behavioural deviance. In his seminal work, Scheff (1963) argued that stereotypes of insanity are continually reaffirmed in ordinary interaction. When a person is publicly labelled as ‘deviant’, they may accept the proffered role of the insane as the only alternative (Scheff, 1963). Scheff proposed that labelling is the single most important cause of people continuing to display deviant behaviour, also termed ‘careers of residual deviance’. Roman and Trice (1968, p. 248) raised concerns that “labelling and sick role assignment creates actual pressures toward alcohol addiction rather than halting the process”. They maintained that labelling is done before an addiction has been established, meaning that subsequently, such people choose to drink alcohol because the role expectation for them is to engage in further drinking. Scheff (1963) similarly theorised that those who are labelled may be rewarded for playing the stereotyped deviant role they have been assigned, and equally punished when they attempt the return to conventional roles. Diagnostic labels assigned to minor deviations in behaviour can generate expectations that condemn the person to a ‘patient’ career (Eisenberg, 1977). Similarly, a diagnosis for a physical illness can encourage ‘sick person’ behaviour, discourage independence and affect individuals’ mental state.

As such, the usefulness of psychiatric labels has been disputed. As many Mixed Presenters might have a label of mental illness assigned, other illness labels are equally likely, yet how these labels interact with and influence each other, often guided by health professionals, is unknown. Psychiatric labels by mental health professionals have been viewed as bringing self-fulfilling prophesies upon patients and their families, where eventually diagnoses are accepted and behaviour adapted accordingly (Rosenhan, 1973). Szasz (1960, p. 117) believed that mental illness derives from behavioural deviance from certain psychosocial, ethical, or legal norms and as a consequence should be “removed from the category of illnesses and regarded as the expressions of man’s struggle with the problem of how he should live”. Because distress is a normal part of human life, occurring
when difficult life circumstances are encountered (Kinderman, Read, Moncrieff, & Bentall, 2013), people need to take responsibility for their actions instead of hiding behind a mental illness label (Szasz, 1960).

Link and Phelan (2013) explore the concept of a ‘package deal’, where labelling is viewed as both positive and negative. Positive labelling occurs where, as a consequence of this labelling, a person can receive treatment and interventions. While young people aged 12 to 25 similarly indicated that a label of mental illness facilitates getting appropriate help, the study involved vignettes. It is possible that what young people recommend others to do might differ if it affects them directly (Wright, Jorm, Harris, & McGorry, 2007). Conversely, negative labelling in the form of stigma and discrimination means a “general downward placement of a person in a status hierarchy” (Link & Phelan, 2013, p. 534), influencing people’s disclosure of mental health difficulties, such as in regards to employment (Peterson, Currey, & Collings, 2011). The ‘content’ of individual packages possibly determines how and what time points labelling improves or worsens health and quality of life. How the package deal concept applies to Mixed Presenters, who are likely to have been assigned multiple and varied labels over time, is not known.

A study comparing the phenomena of mental illness in different cultures found that mental illnesses exist independently of labels (J. M. Murphy, 1976). In the study, deviant behaviours were viewed negatively whilst mental illness itself was viewed with ambivalence. Kirk (1974) also found the label to be less important than the actual deviant behaviour. He surveyed 864 young college students with a questionnaire including one vignette that involved one of three descriptions of behaviour (severely paranoid, depressed, normal), one of three labels (mentally ill, wicked, under stress) and one of four labellers (self, family, some people, psychiatrist), producing 36 separate conditions. Each questionnaire included 15 items designed to measure how the students responded to their vignette. Questions included hiring the person or letting them look after their children. Although Kirk found that the greater the deviation of behaviour by people who were mentally ill, the greater the social rejection, both the labels and the labeller had no effect on social rejection. Kirk (1974) concluded that the students were ‘sophisticated’ and hence did not need to label mental illness. It can be speculated that students' experience with mental illness might be limited due to their age and perhaps their sheltered lifestyles. The link between mental illness and deviancy is nevertheless questioned.
Deviancy is a central concept in labelling theory. It is “the outcome of social processes which involve an interaction between the person who commits the act and those who respond to it and assign the labels” (Bean, 1979, p. 122). Both the sick role and the criminals are considered deviant, with the difference being that the criminal “wants to” be deviant and the sick person “cannot help it” (Twaddle, 1973, p. 754). A labelled person is likely to join a social group consisting of similar deviants, thus increasing the possibility of future deviant behaviour (Bernburg, Krohn, & Rivera, 2006). Applying this to the Mixed Presenter context, self-harm and frequent ED presentations might be classified as sick or deviant, depending on the lens applied. Whereas the clinical approach concentrates on the background and motives of the deviant, the labelling theory concentrates on the characteristics of the control agents, i.e., those people who define and “do something about” deviant activity (Bean, 1979, p. 122) – in this case, the staff and systems of ED.

Yet, deviant behaviour remains an unclear concept. It has been defined as a conduct “outside the boundaries of permissible as defined by the norms of the society and group in question” (Twaddle, 1973, p. 753). However, what is defined as deviant behaviour varies from society to society, and from situation to situation (Killian, 1981). The changes in societies’ expectations and the evolving nature of norms influence “deviancy” definitions. People who adhere to norms prescribed by their societies tend to be regarded as normal by them and, by implication, are “well-adjusted, healthy or good” (Killian, 1981, p. 232). This is in alignment with the ‘good patient’ who wants to please clinicians (C. Campbell et al., 2015).

Labelling theory proposes that deviant people belong to a distinct group. It does not allow for people being deviant just for a specific time period, but rather sees a person’s behaviour as a consistent element throughout life. Consequently, if Mixed Presenters were to be assigned a deviant label, it is unclear whether decreasing self-harm presentations over time (Kennedy & Ardagh, 2004) might result in a reversal of their deviant status or not. Further, the boundaries between deviancy and normality are unclear in this context, because there is no set definition of how many episodes of frequent presentation to ED would constitute ‘deviancy’. For example, how many ED presentations are required for a person to become labelled as deviant? And what type of behaviour is required for a label of ‘deviancy’ to be assigned to a frequent ED presenter? People who present after attempting to hang themselves or after committing other self-harm acts with significant potential for a fatal outcome might incur a different kind of labelling than those who present after self-harm behaviour such as superficial wrist
cutting, which implies an intention of lower lethality. Whilst the social labelling processes in ED are visible via negative staff attitudes (see 3.4.2), official ‘sick’ labelling by doctors as they diagnose ED patients could be equally disadvantageous for Mixed Presenters.

### 4.3.2 Labelling process

A doctor has the prerogative of assigning diagnoses/sick labels. The labelling executed by the physician is highly respected and rarely questioned (Benbassat, Pilpel, & Tidhar, 1998; Goldstein Jutel, 2011; Roman & Trice, 1968) despite doctors having power to deny or frame patients’ experiences (Dumit, 2006). Similarly, the psychiatrist has been “the designated trustee of those social and emotional dilemmas that can plausibly be framed as the product of disease” (Rosenberg, 2006, p. 411) and as such, represents “a legitimate, public labeller whose explanations are thought to carry great social weight” (Kirk, 1974, p. 112). These definitions fail to acknowledge that, similar to patients, doctors are not all the same. Some of the labellers are (hopefully) wise people, sympathetic of and accepted by the stigmatised (Goffman, 1991), while others are known to be biased against patients with a mental illness (Croskerry, 2002). Strict processes and frameworks mitigate this potential variance in the quality and practice of diagnosing/labelling in the medical field.

Triage is the first labelling act on arrival to ED. As part of this process, a nurse assesses how long the patient can wait for a doctor. The lower the number, the higher the severity of symptoms, and the greater the risk of patients’ potential deterioration or harm to themselves or others (described in Chapter 2). Although nurses do not apply formal diagnostic labels, based on clinical knowledge and experience, their documentation includes description and observations of the presentation complaint, many times for pain, reflecting urgent or non-urgent labels (Gerdtz & Bucknall, 2001).

Pain is a self-assigned label designated by the person experiencing it. In my clinical experience, ED treatment is influenced by how often the patient has attended ED with pain as one of their presenting symptoms, and by a person’s psychiatric and medical history, site of pain, and the demeanour and frequency with which he/she requests analgesia. This is contrary to nursing teachings which emphasise that pain levels reported by patients should be taken as truth (Pasero & McCaffery, 2001). Nurses specialising in pain management have voiced that certain characteristics negatively influence their attitude and analgesia administration (Ferrell, McCaffery, & Grant, 1991). Applied to the ED setting, this could mean that ED nurses who have less education on pain issues,
although ample exposure to people in pain, might also have negative attitudes. Some patients are feasibly labelled as ‘drug seeking’, which is likely to influence their care (McCaffery, Grimm, Pasero, Ferrell, & Uman, 2005). If ED care of Mixed Presenters in pain is further negatively influenced by their self-harm history is unknown.

The disclosure of a mental illness diagnosis, and/or the use of medication prescribed for mental illness, can also act as a label. Where mental illness or self-harm is not disclosed, prior documentation might alert ED staff to a diagnosis. Thus, Mixed Presenters attending ED for physical issues whilst having mental health records or being on medication for mental illness, could potentially become labelled as currently mentally ill.

In ED, a label of self-harm – a behaviour most visible when involving injury – might not always be disclosed by a Mixed Presenter or investigated by the doctor. The presence or absence of an overdose is challenging to ‘prove’ because firstly, the person might be unconscious and unable to provide a history of events; and secondly, only a few tests can detect specific medication ingestion. This is partly due to the fact that many common drugs such as psychotropic agents, opiates, and stimulants cannot be identified from blood samples (Olson, 2004). Overdose consequences often act as a substitute for more concrete medical tests. Thus, such symptoms as a decreasing level of consciousness, cardiac arrhythmias, or abnormal results from blood tests not associated with drug screening can all contribute to identifying a patient as having self-harmed. Where this evidence is not present, ED staff may replace the label of ‘self-harm’ with a label such as ‘attention seeking’ (R. Chapman & Martin, 2014), implying deviant behaviour.

Deviancy is often documented and easily retrievable. An electronic ‘alert’ system enables the listing of patient behaviours seen as challenging by ED staff, such as violent behaviour or suspected drug seeking. This information is highlighted by the IT system used by staff upon re-presentation of this patient. Also, electronic documentation and shared platforms in ED enable easy access to past records within ED, across health services, and across some DHBs. It is common for IT systems to provide easy access to patients’ prior ED visits and their assigned diagnoses. The electronic alert system in ED potentially labels a Mixed Presenter, even though the deviancy might be related to only one presentation complaint and never the other.

ED labels are assigned following complex assessments. Typically, the assignment of differential diagnoses, a process of considering possible causes of the patient’s complaint, is followed by a diagnosis (Sox, Blatt, Higgins, & Marton, 1988). ED staff listen to the
individual’s account, and decide if this reflects a disease process and if existing injuries align with such history. Factors are assessed, such as how pain is expressed, how pale or sweaty the person looks, and prior pain interventions. Although biases can influence this process, systematically reviewing all aspects of the patients’ presenting complaint is a safeguard against premature conclusions (Sox et al., 1988). Mixed Presenters prior ED presentations as well as time pressures are likely to influence how staff address comorbid health issues at each presentation.

Outcomes of blood tests or imaging routinely guide management of disease and consequent diagnosis (Rao, 2015). This process is likely to be undisputed where Mixed Presenters’ complaints are diagnosed and treated, reflecting that “a diagnosis provides a cultural expression of what a given society is prepared to accept as normal and what it feels should be treated” (Goldstein Jutel, 2011, p. 3). A mismatch between patient and ED clinicians’ expectations of management and diagnosis can, however, create conflict because much about health and illness remains unknown. It is assumed that certain enzymes reflect certain diseases; but in reality, they might also reflect other physical health impairments or might be only a minor component of the illness. A diagnosis involving medically unexplained symptoms leaves both the patient and the doctor uncertain about treatment.

Of note, the allocation of labels is not always based on evidence. Some patients will be treated for a disease that they do not have because “physicians must frequently choose treatment long before they know which disease is present” (Sox et al., 1988, p. ix). This form of ‘over-diagnosis’ frequently results in unnecessary surgeries, medication side effects, anxiety and increased health care costs (Welch, Schwartz, & Woloshin, 2011). Even when the illness is known, clinicians must usually select from several treatment options, and the consequences of each cannot be foretold as uncertainty is intrinsic to the practice of medicine (Sox et al., 1988). Medication regimes are influenced by current research findings that inform best-practice clinical guidelines. However, clinical guidelines require regular adjustment because medication regimes change when they are either fine-tuned with research advances or their ineffectiveness is confirmed over time (Rang, 1972). For Mixed Presenters this means that the more mixed and complex their physical and mental ill health becomes, the risk of adverse and ineffective treatment is likely to increase.
Diagnostic investigations should focus on the presenting complaint. The ED environment is “organised chaos” (Kovacs & Croskerry, 1999, p. 950) where doctors and nurses are bombarded by diagnostic and management decisions throughout a clinical shift (D. M. Chapman, Char, & Aubin, 2010; Gerdtz & Bucknall, 2001). Hence, efficient decision-making includes the collection of only that data which is seen as relevant to the presenting complaint (Sox et al., 1988), thus potentially under-recognising Mixed Presenters comorbid health issues, including the risk of self-harm. This strategy hinders many doctors from routinely inquiring about mental health or social issues, and the patient from disclosing information about relevant health and social challenges when not directly asked.

The labelling process nevertheless is underlined by the relationship between patient and clinician. For a doctor to understand the health complaint, they need to ask questions that enhance disclosure of information by the patient. The medical interview involves establishing a relationship of mutual trust with the patient, observing the patient, and excluding diseases that could potentially cause the patient’s problems but are not present in the patient (Sox et al., 1988). Patient characteristics are acknowledged by doctors, and their impact considered. For example, older people and men often choose to be passive rather than involved in their own care, and let clinicians make decisions (Stiggelbout & Kiebert, 1997). For any given ED presentation, the patient-clinician relationship can contrast or align with these common biases.

**Labelling challenges**

ED doctors might be biased toward certain patient groups. According to Croskerry (2002), ED doctors’ risk making 30 different cognitive errors, five of which are relevant to Mixed Presenters and are described in turn. A ‘fundamental attribution error’ occurs where the doctor is judgemental, lacking compassion and understanding for certain classes of patients because of an assumption that patients behave in a certain way because of stable personality traits, downplaying external or temporal circumstances. The consequence of this negative stereotyping is inappropriate or compromised care that may worsen the condition of some psychiatric patients (Croskerry, 2002). Also, a psychiatric diagnosis can lead to ‘psych-out errors’ where medical complaints are judged to be of psychiatric origin, resulting in inadequate medical stabilisation, missed medical diagnosis, and exacerbation of current conditions (Croskerry, 2002). Rosenhan (1973) proposed that attitudes toward the mentally ill are characterised by fear, hostility,
aloofness, suspicion, and dread. Some doctors believe that “psychiatric patients do not fit the ‘model’ type of patient that the ED likes to see” (Croskerry, 2002, p. 1195).

In addition, people who frequently present to ED, some of these likely Mixed Presenters, are commonly assigned a negative label based on prejudice and discriminatory comments about them, which can lead to doctors having ‘ascertainment bias’, risking inaccurate assessment and inadequate treatment (Croskerry, 2002). Most often, patients who frequently visit ED do so for one predominant reason; yet for those who have chronic health issues, co-morbidity is common (M. Byrne et al., 2003). Frequent ED visits are noticed when a patient is recognised by staff from prior visits (more likely in a small country like New Zealand), in addition to any alerts that may show up on the IT system.

Repeat ED visits can lend themselves to ‘posterior probability error’ or ‘yin-yang out strategy’ (Croskerry, 2002). These biases occur because ED doctors assume that symptoms with prior diagnostic labels or extensive work-ups do not require further assessment. Croskerry (2002) cautioned that the lack of thorough assessment during every ED visit risks perpetuation of a wrong diagnosis or ongoing failure to identify a new diagnosis. However, unnecessary investigations increase the risk of false positive results, because further testing is likely to result in findings that were not looked for, whilst a diagnosis for the presenting complaints remains unclear (Rang, 1972). Kinderman et al. (2013) expressed the opinion that clinicians are likely to be more effective if they respond to an individual’s particular difficulty rather than their diagnostic label(s). Given these influences, Mixed Presenters’ clinical characteristics and presentation patterns may present an inherent risk of erroneous labelling by ED staff.

4.3.3 Labelling frameworks

Medical labelling

On discharge from ED, Mixed Presenters are assigned a diagnosis, reflecting the “medical reading of the symptoms: interpreting and organising them according to models and patterns recognised by the profession” (Goldstein Jutel, 2011, p. 64). Every ED presentation is coded following the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10). Classification codes identify each disease with its distinguishing features (Goldstein Jutel, 2011). This framework aids the systematic recording of morbidity and mortality data (World Health Organization, 2011), and has been modified by the National Centre for Classification in Health, Australia for
New Zealand hospitals (ICD-10-AM/ACHI/ACS) (Ministry of Health, 2015a). Of the 22 disorder groupings (‘chapters’), self-harm presentations are likely to be coded with mental and behavioural disorders (F00-F99) or intentional self-harm (X60-X84). Mixed Presenters’ ‘other’ presentations may be given other codes depending on their symptoms and diagnosis.

Up to 99 diagnosis or procedure codes are assigned to each ED presentation (National Health Board, 2014). ICD codes provide a broad health view of presenters at a particular time point, but fail to include individual context. In addition, "ICD privileges the voice of the doctor and laboratory over the voice of the patient" (Bowker & Star, 1999, p. 86). The rigid structure aims to consistently measure accurate and precise health events. In practice, various influences affect coding. For example, the number and types of allocated codes will be influenced by the level of disclosure by Mixed Presenters. Disclosure is likely to be influenced by the rapport established between the clinician and the Mixed Presenter. Also, clinicians might differ in the number of tests they order; for example, inexperienced clinicians might order more tests, and clinicians in remote areas may lack access to some tests. The likelihood of finding abnormalities increases with each investigation.

ICD codes are regularly updated when views on illness classification change, and when new diseases are discovered. Technology has become increasingly important as it “frames new diagnoses and effaces others, while research agendas, commercial interests, and lay activism also help shape which diseases are recognized and which treatments are publicized and promoted” (Goldstein Jutel, 2011, p. xiii). Within the administrative network, new diseases are not labelled until a new ICD code is developed. As a result, people with emergent illnesses are viewed as suffering illegitimately and therefore they are non-suffering (Dumit, 2006).

**Psychiatric labelling**

In New Zealand, the *Diagnostic and Statistical Manual of Mental Disorders, 4th edition* (DSM-IV) (American Psychiatric Association, 2000) is predominantly used to diagnose and classify mental disorders and associated health, social, and functioning level (Table 4.1). Compared to the ICD-10, which entails illness groupings, the DSM-IV acknowledges contextual factors within a set classification frame.
Table 4.1  DSM-IV assessment framework by axis and description

<table>
<thead>
<tr>
<th>Axis</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Principal (mental health) disorder</td>
</tr>
<tr>
<td>II</td>
<td>Personality or development disorder</td>
</tr>
<tr>
<td>III</td>
<td>Medical or neurological problems</td>
</tr>
<tr>
<td>IV</td>
<td>Psychosocial stressors</td>
</tr>
<tr>
<td>V</td>
<td>Level of functioning, based on the Global Assessment of Functioning (GAF) Scale (0-100)</td>
</tr>
</tbody>
</table>

Further, the classification of self-harm remains in dispute. Van Orden (2011) reasoned that suicide risk level and the level of functioning (GAF) score are distinct indicators, calling for a separate Axis VI to capture suicide and self-harm status, so as to ensure routine suicide risk assessments. This request could align with psychiatrists’ desire for simple, reliable, and useful classification tools (Mellsop et al., 2007; Smolik, 1999). However, a danger of over-classification exists. For example, reactions to emotionally stressful events are timed and classed as ‘acute stress disorder’ if they last beyond the normally accepted timeframe. Thus, a typical reaction to distress can be labelled with a mental health diagnosis because the recovery differs from ‘normal’, despite variations in individual circumstances. Also, physical symptoms (including pain) with no identifiable physical cause are here assigned as mental health diagnoses (e.g., somatic symptom disorder, medically unexplained symptoms, and pain disorder). These diagnoses reveal little; they simply reflect that no physical explanation for a symptom can be found, and conclude that therefore it must be related to mental health. One consequence of this classification is that the symptom then can be seen as requiring little or no physical treatment.

The DSM-IV paradigm for classification of mental illness has been criticised for its attempt to gain credibility through its scientific and biological focus (Goldstein Jutel, 2011). Smolik (1999) critiqued how information is collated, arguing that the use of an algorithmic DSM-IV diagnosis is possibly in misalignment with expert psychiatric assessments that use a holistic approach. Kinderman et al. (2013, p. 2) similarly assert that “in epistemological terms, diagnoses convey the idea that people’s difficulties can be understood in the same way as bodily diseases”. These authors posited that diagnoses hinder the potential for finding meaning in people’s ‘disordered’ responses and experiences, and thus people are prevented from understanding how they might use their own resources to address their difficulties. Killian (1981) similarly argued that sociologists and psychiatrists should learn from their human subjects foremost, instead of imposing preconceived theoretical
themes they have not experienced, because only then will it benefit patients and professionals.

In conclusion, social, medical, and psychiatric labels influence ED management of patients with differing health complaints, including self-harm. A diagnosis can have long-term consequences as the assigned ICD and DSM labels are permanently documented and easily accessed by ED staff over time. Labelling frameworks attempt to measure and confirm health complaints and behaviours, both of which are at times difficult to determine. Even though labelling is an important factor for ‘Mixed Presenters’, knowing more about the trajectory of suicide is further critical in the management of serious self-harm risk.

4.4 Post ED

There is potential for Mixed Presenters to be at risk of subsequent serious self-harm on discharge from ED. In line with the numerous and complex risk factors associated with serious self-harm, outlined under 4.2.1, I chose to explore the Interpersonal Theory of Suicide (Joiner, 2009; Van Orden et al., 2010) because Mixed Presenters are likely to endure complex social, physical, and mental health needs that pose risk factors for suicide.

4.4.1 Interpersonal Theory of Suicide

This theory consists of several aspects that are viewed as essential for a lethal or near-lethal suicide attempt to occur. Broadly, these characteristics include both the desire and the capability for suicide (Van Orden et al., 2010). The capability to engage in suicidal behaviour, described later in this section, is separate from the desire to engage in suicidal behaviour (Van Orden et al., 2010). These authors postulated that suicidal desire is caused by the simultaneous presence of two interpersonal constructs: thwarted belongingness and perceived burdensomeness.

Thwarted belongingness encompasses how individuals experience their connections to others (Van Orden et al., 2010). A low sense of belongingness is "the experience that one is alienated from others, not an integral part of a family, circle of friends or other valued group" (Joiner, 2009, p. 2). The presence of loneliness and absence of reciprocal care influence the degree of aloneness experienced by an individual. Thwarted belongingness
is associated with living alone, belonging to a non-intact family unit, family conflict, childhood abuse, experience of loss through death or divorce, family violence, and social withdrawal (Van Orden et al., 2010).

Perceived burdensomeness, associated with self-hate, is the view that one's existence burdens family, friends, and/or society, and that one's death would be more beneficial to others than one's continued existence (Joiner, 2009; Van Orden et al., 2010). Common triggers for this factor include feelings of incompetence and ineffectiveness in life (Joiner, 2005), physical illness, unemployment, family conflict (Van Orden et al., 2010) and depression (Jahn, Cukrowicz, Linton, & Prabhu, 2011). Whilst Jahn et al. (2011) questioned whether there are effective interventions for people who feel themselves a burden on others, Van Orden et al. (2010, p. 584) posited that oftentimes these misperceptions are amenable to "therapeutic modifications". Thwarted belongingness and perceived burdensomeness combined are likely to result in suicidal ideation (Van Orden et al., 2010).

The other necessary factor – an acquired capability for suicide – is complex and multifactorial, but in essence consists of a person's capability to tolerate pain and overcome fear. Pain is likely to cause some degree of fear and vice versa (P. N. Smith & Cukrowicz, 2010). Individuals who acquire capability often endured maltreatment as a child, had past suicide attempts, were exposed to clustering (suicides amongst a peer group), experience suicidality, and exhibit impulsivity (Van Orden et al., 2010). Life events, specifically painful and provocative ones rather than generally negative ones, have been found to be associated with suicide attempts (P. N. Smith, Cukrowicz, Poindexter, Hobson, & Cohen, 2010). Similarly, amongst military veterans, experiencing a wide range of combat experiences was found to predict acquired capability above and beyond other risk factors for suicide including depression, post-traumatic stress disorder symptoms, and previous suicidality (Bryan, Cukrowicz, West, & Morrow, 2010). All these life events produce a lowered fear of death and elevated physical pain tolerance (Van Orden et al., 2010).

Pain plays a pivotal role in self-preservation because "dying by suicide is not only frightening, but physically painful" (Van Orden et al., 2010, p. 586). Since pain is usually experienced as unpleasant, a lack of being bothered by physical pain and indifference to the body makes it easier to aggressively turn on one's body and physical existence (Orbach, 1994). Van Orden et al. (2010) specified key factors that determine individuals' tolerance for pain. Factors included expectations about pain; the physiological
familiarisation with certain methods that result in specific physical sensations; and the
cognitive appraisals of how tolerable the expected or experienced pain is going to be.
Cognitive appraisal that the pain involved in the chosen method of suicide is tolerable
serves as a facilitator of lethal (or near lethal) suicidal behaviour (Van Orden et al., 2010).
Additionally, the co-occurrence of a high tolerance for physical pain and vulnerability to
stress is likely to increase the risk for suicidal behaviour (Orbach, 1994).

The last component of suicide capability is the absence of fear. Orbach (1994) speculated
that in order to take one’s life, an individual needed to overcome the horror of death, and
that imagining death as a peaceful, satisfying form of existence might influence suicidal
behaviour. Psychologically provocative or fear-inducing events would be required as well,
including indirectly related events such as thrill-seeking activities (e.g. skydiving),
violence, or sexual abuse, and also directly related factors such as rehearsal, dry-runs, and
mental practice of suicide (P. N. Smith, Cukrowicz, et al., 2010). Furthermore, as men are
socialised to express less fear than women, they might experience greater fearlessness
regarding suicide, and so choose more fear-inducing methods such as firearms (P. N.
Smith & Cukrowicz, 2010). Habituation to the fear also develops into competence in
suicide, adding to the acquired capability.

The Interpersonal Theory of Suicide provides a clear and precise framework for the risk
factors and trajectory of suicide. Yet, some aspects of the theory should be viewed
cautiously. Firstly, in studies by Smith, Cukrowicz et al. (2010) and Smith and Cukrowicz
(2010), fearful and painful intervention were applied to people at risk of suicide in order
to prove their consequent capability of suicide. In my opinion, this research seemed
unethical, cruel, and unsafe. If the theory is correct, it follows that these studies
heightened participants’ risk of suicide. Though feedback from some participants claimed
otherwise (P. N. Smith, Poindexter, et al., 2010), the mere activity of participating in
research, or wanting to please the researchers could have influenced the findings.
Secondly, people who have died by suicide cannot report on the factors that contributed
to their death. It seems likely that those undertaking psychological autopsies are “doing
no more (or less) than using their imaginations to ‘construct’ plausible, common-sense
theories about why people kill themselves” (Gavin & Rogers, 2006, p. 138). So, this theory
might apply differently to people who died by suicide compared to those who have made
attempts.
In conclusion, this ‘After ED’ section focused on the Interpersonal Theory of Suicide. Mixed Presenters’ potentially high risk for serious self-harm might stem from their ‘other’ health problems in addition to the self-harm for which they sought ED care. Experiences of repeated, frequent, and intense ‘other’ health issues such as chronic pain, deteriorating chronic conditions, alcohol misuse, risk taking, proneness to accidents, social hardship and mental disorders, could increase Mixed Presenters’ capability for suicide. There is potential for Mixed Presenters to increase their pain and fear tolerance through repeated symptomatic episodes and the consequent ED visits; simultaneously, some or all of these other factors might contribute to Mixed Presenters feeling a burden to others, and isolating themselves. Therefore, following the Interpersonal Theory of Suicide, Mixed Presenters potentially pose a high risk for serious self-harm.

4.5 Summary

This chapter outlined some of the theoretical influences relevant in the investigation of Mixed Presenters. The ‘Before ED’ section explored theories on help-seeking events for self-harm and other reasons, followed by the role and impact of labelling within ED. Lastly, serious self-harm risk was explored in the context of the Interpersonal Theory of Suicide after ED. Influential factors such as gender, stigma, support people, and the type of health complaint are acknowledged. This exploration of relevant theories influenced data methods adopted in the research, presented next.
Chapter 5
Methodology

“There are still few answers and many questions.”

5.1 Overview

In this chapter, I describe the overarching methodology that guided this investigation into Mixed Presenters. Firstly, I introduce the Multi-level Intervention for Suicide Prevention (MISP) study, followed by providing the rationale for choosing a mixed methodology. Thirdly, features of mixed method designs such as theoretical perspectives and typologies are discussed before advantages and challenges of mixed methods are debated. Lastly, I report on the process of selecting a triangulation protocol before outlining ethical considerations and Māori consultation for this study. The qualitative and quantitative methods are detailed in Chapter 6 and Chapter 8 respectively.

5.2 Multi-level Intervention for Suicide Prevention (MISP) study

Between 1 December 2009 and 30 June 2012, eight New Zealand DHBs (organisations responsible for providing health and disability services to populations within a defined geographical area) participated in MISP. The aim of MISP was to determine if suicide prevention interventions provided on multiple levels were effective at preventing serious self-harm and suicide. The DHBs had been selected because of their characteristics, which included suicide rates, GP numbers, population size, proportion of Māori, and rural/urban population spread. DHBs with similar characteristics were paired, and a statistician not involved in MISP and blinded to the identity of DHBs randomly allocated intervention and non-intervention status within each pair via a computer program. DHBs that bordered geographically were not paired, so as to limit the inclusion of individuals who used health services across DHBs. This lack of crossover meant that the possibility of individuals being included in both the intervention and the non-intervention sample, and as such the risk

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of selection bias (Vandenbroucke et al., 2007), was reduced. In each intervention DHB, two staff administered suicide prevention initiatives.

The 2013 census provided the following information on the population in each of the 8 DHBs, generalised to maintain confidentiality: number, gender, ethnicity, and age (Statistics New Zealand, 2014). The DHB populations ranged between approximately 100,000 and 500,000, with most falling between 150,000 and 300,000 ($n = 6$). Females outnumbered males in all DHBs by 1-2%. The size of the Māori population varied between regions from approximately 8% to nearly 30%. In three DHBs, more than 20% of the population identified as Māori; in a further three DHBs, 10%-19.9% identified as Māori; and two DHBs had less than 10% Māori-identified. The majority of DHBs had low populations (1%-8%) of Pacific people with the exception of one DHB with approximately 25%. Asian population numbers were similar to those of Pacific peoples, with over one-fifth of the population in one DHB identified as Asian. Another DHB had high numbers of Asians (approximately 10%) and all other DHBs ranged from 2-6%. The age spread in DHBs varied: one DHB had a high proportion of children and young people, whereas most had a mix of older and younger people. Together, the 8 participating DHBs in this study consisted of approximately 1.8 million people, or 43% of the New Zealand population.

Among the eight DHBs there were 11 emergency departments. EDs did not charge for services for New Zealand citizens, were open 24 hours a day, and had doctors on site. Private accident and emergency clinics charging for services, and rural nurse-led clinics were excluded because accessing their self-harm presentation data was difficult. The suicide prevention interventions were focused on communities and ED data was used to measure their effect. In each of the DHBs a research assistant examined and coded ED data for self-harm presentations. In this process, research assistants followed a data dictionary based on Horrocks et al. (2004). On completion of the MISP project, the rate of ED presentations for self-harm and deaths by suicide were compared between intervention and non-intervention DHBs.

For each ED presentation, research assistants examined presenting complaint, discharge diagnosis, triage information, discharge or outpatient letters, and/or clinical notes for self-harm. The MISP data sources and the possible information obtained from these, differed by DHBs (Appendix 1). Some research assistants used self-harm search words to locate appropriate presentations from clinical documents. Presentations were firstly coded with 'yes' or 'no' for relevance to self-harm; and secondly, if 'yes', details on the
intent or circumstances were documented for up to five variables. The variables included whether a case was a definite or queried classification. Definite classifications included completed ‘suicide’, ‘suicide attempt’, ‘self-harm’, ‘suicidal/self-harm ideation’, and ‘incidental finding of self-harm’. Probable self-harm included classifications where self-harm related presentations were queried, including injuries or suspicious behaviour that were suggestive of self-harm. ‘Sequelae of self-harm’, a follow-up visit for an earlier self-harm presentation, was used where self-harm was queried and the ED presentation was not solely a return visit following the earlier event. Research assistants did not examine presentations that met the data exclusion criteria (Appendix 2).

A senior data analyst led the overall MISP data management. She firstly set up a database for each DHB that included all the variables relevant to MISP. Secondly, she uploaded ED data from the DHBs into the appropriate database. Variables such as demographic details, and date and time of presentation were automatically populated, but availability of data varied between DHBs. For example, in two DHBs the triage notes were in paper format and hence not routinely accessed whilst research assistants in other DHBs were provided with electronic triage notes. Thirdly, the analyst updated these databases when new ED data became available. Fourthly, she checked on the quality of the DHB data and on the coding done by the research assistants. Weekly teleconferences, quarterly face-to-face meetings, and clinical supervision between the research assistants, the senior data analyst, and a senior clinician allowed discussion of coding challenges and the optimisation of data consistency across DHBs. Lastly, on completion of the MISP project, the analyst merged datasets from all eight DHBs into one MISP dataset.

5.3 Rationale for choosing mixed method

Currently, Mixed Presenters have not been identified as a group relevant to ED patient research. There has been no evidence in the literature as to whether such a group exists, what the possible prevalence of mixed presenting was, or if certain features distinguished Mixed Presenters from ED patients who solely present for self-harm. However, the potential increased risk of suicide of Mixed Presenters makes investigating this group and their ED care critically important.

In approaching this research, I considered the prioritisation of either a qualitative or quantitative method (Seifert, Goodman, King, & Baxter Magolda, 2010). The complexity
of my research questions, including inquiry into the risk of serious self-harm for Mixed Presenters and possible service improvements for ED, required both breadth (ED data) and depth (interview data). Both qualitative and quantitative methods can provide potentially rich data whilst also yielding inadequacies. The ED data selected for this study was known to be incomplete due to gaps in clinical documentation and a consequent lack of detailed information available to be documented by research assistants. Undertaking a qualitative study only would have only resulted in theoretical generalizability. Consequently, I chose to utilise a mixed method design.

Patient groups similar to Mixed Presenters have mostly been investigated in descriptive studies, follow-up studies, and autopsy studies. Generally, descriptive studies involved self-harm investigations into who presented to ED, why, and how often, with data collection usually based on retrospective record examination. Studies about mixed health complaints included studies of young people who presented to ED with behavioural problems, and who were also found to often be at risk of self-harm and other enduring physical health issues (Liu et al., 2014). Linkage of different datasets enabled the investigation of people with epilepsy, who were then compared to those without epilepsy in regards to self-harm, road traffic accidents, and assaults (Kwon et al., 2011). Also, gender differences in trauma injuries, including self-harm, were explored (Kahramansoy et al., 2013). These studies provide information on socio-demographic and clinical status of patients seeking health services, yet do not address future self-harm risk.

The risk of self-harm for people experiencing additional health issues has been investigated with both prospective and retrospective designs. The future risk of self-harm repetition or suicide was commonly examined in longitudinal studies, where people presenting to ED for self-harm were tracked over time. Some of these studies found that physical health concerns were common in people with a history of self-harm (Sinclair, Hawton, & Gray, 2010). Similarly, death for non-self-harm reasons was commonly found in people who had previously presented to ED for self-harm (Suominen et al., 2004). Conversely, retrospective autopsy studies revealed that over 60% of people who had died by suicide within 12 months of an ED presentation had previously presented for trauma or physical health issues (Gairin, House, & Owens, 2003). These findings align with research involving older people, where the majority of people who died by suicide had experienced physical health issues (Duberstein, Conwell, Conner, Eberly, & Caine, 2004; Harwood et al., 2006). However, as most older people experience physical health issues, and only a small proportion die by suicide, the evidence that physical ill health
predisposes suicide is weak. The above studies were useful in demonstrating that a small group of people who, whilst presenting to ED for non-self-harm reasons, could nevertheless be at current or future risk for hurting or killing themselves.

The methods used to investigate self-harm frequently included existing routine health data sources, which can be useful in the evaluation of best practice (Elkin et al., 2010). Yet, these datasets are often of poor quality. Mortality data often lacks evidence of suicide intention, impacting its accuracy (De Leo et al., 2010). Similarly, self-harm risk is not always disclosed in ED, nor is it routinely investigated by ED staff; this can result in incomplete information in the documentation (Horrocks et al., 2004). A New Zealand study in which self-harm data was purposefully collected claimed detection of self-harm rates far in excess of those reported in the official suicide statistics (Hatcher et al., 2009). Increased data consistency has been achieved in the UK by the establishment of long-term self-harm projects where psychiatrists routinely collect data during psychiatric assessments that follow self-harm events (Bergen, Hawton, Kapur, et al., 2012). A national self-harm registry in Ireland also shows promise for consistently collecting self-harm data (Arensman et al., 2014).

ED data from the MISP project (section 5.2) had been screened and coded for self-harm. The MISP dataset provided necessary information for the identification of Mixed Presenters and, by linking the MISP dataset to prospective admission and mortality data, could be used to establish the risk of serious self-harm for this group compared to Self-harm Only Presenters. Yet, as impactful as this finding might be, the data on its own lacked the ability to provide qualitative knowledge of the people themselves, their view of interlinking health issues that made them 'Mixed Presenters', and their experiences surrounding their ED visits.

Qualitative studies of people at risk of self-harm include their help-seeking decisions, experiences of frequent ED presentations, mental health assessments, and interventions following discharge from ED (J. Cooper et al., 2011; Hunter et al., 2013; Long et al., 2015; Olsson & Hansagi, 2001). Also, people with severe mental illness have been interviewed about the quality of physical care they had received (Van Hasselt et al., 2013), yet I was unable to locate qualitative studies involving mixed ED presentations. A qualitative study on mixed presenters could focus on service users or service providers. In previous studies, ED staff reported on their perceived confidence and knowledge when caring for mental health patients (Jelinek, Weiland, Mackinlay, Gerdzt, & Hill, 2013), and their
attitude toward and assessment of ED patients who present with self-harm (R. Chapman & Martin, 2014; Redley, 2010). What is yet lacking in the literature is how ED staff perceive and care for Mixed Presenters.

As an ED and mental health nurse, I have gained knowledge and experience of Mixed Presenters over the years, and I have also observed other ED staff caring for this group of patients. I chose to interview service users because firstly, my knowledge of the people themselves was limited and secondly, I believe improvement in care can only happen with service users’ involvement, contribution, knowledge, and expertise. Additionally, the above review of research led me to conclude that generalizable quantitative findings and qualitative accounts of ED experiences are equally important for the investigation into Mixed Presenters. I hoped that by looking through the lenses of both quantitative and qualitative methodology, I would find answers to my questions about the identity of Mixed Presenters, their serious self-harm risk, and optimal ED management of their care.

### 5.4 Features of mixed method designs

A mixed methods design is commonly used to answer clinical questions such as ‘how many’ (people/presentations) and ‘why’ in the same study, and as such it is an important and useful approach to address key questions in emergency care (S. Cooper, Porter, & Endacott, 2011). Mixed methods research typically considers multiple qualitative and quantitative viewpoints, perspectives, positions, and standpoints (Johnson, Onwuegbuzie, & Turner, 2007) where the most appropriate methods are used to answer the research questions and in the process, gain a more complete picture (O’Cathain et al., 2010). Definitions of mixed methods research include phrases such as a “third wave” (Johnson & Onwuegbuzie, 2004, p. 17), “a third methodological or research paradigm” (Johnson et al., 2007, p. 129) and “a third research community” (Teddlie & Tashakkori, 2009, p. 4). A mixed method design is inclusive, pluralistic, and complementary (Johnson & Onwuegbuzie, 2004), involving philosophical assumptions as well as distinct methods and procedures for mixing analytic approaches (Creswell, 2009).

#### 5.4.1 Theoretical perspective

All research needs a foundation for its enquiry and researchers must be aware of the implicit worldviews they bring to their studies (Creswell & Clark, 2007). Worldviews, also
termed paradigms, are “tenaciously held ways of seeing the world that simultaneously prescribe and preclude certain research questions and data collection and analysis techniques for answering them” (Sandelowski, 1995, p. 570). A paradigm represents a patterned set of assumptions concerning reality (ontology), knowledge of that reality (epistemology) and ways of investigating that reality (methodology) (Guba, 1990). Epistemology is a way of understanding and explaining how we know what we know (Crotty, 1998), seeking to answer questions to: What is the relationship between the knower and what is known; and what counts as knowledge? (Krauss, 2005). Methodology addresses how the inquirer should go about finding out knowledge (Guba, 1990). How we assess ‘truth’ depends on “how we view knowledge, what we look for, what we expect to find, and how we believe we are to go about finding and justifying ‘knowledge’” (Johnson et al., 2007, p. 113). As two main worldviews, positivism and constructivism, influence mixed method research, these and applied pragmatism are discussed next.

Positivism follows the epistemology of natural science. In this frame, knowledge, gained through the gathering of facts (inductivism), is only seen as true if conducted objectively and confirmed by the senses (Bryman, 2008). Researchers should “eliminate their bias, remain emotionally detached and uninvolved with the objects of study” (Johnson & Onwuegbuzie, 2004, p. 14). The data and its analysis are value-free and do not change with observation (Krauss, 2005). Quantitative research characteristically has a focus on deduction, confirmation, theory/hypothesis testing, explanation, prediction, standardised data collection, and statistical analysis (Johnson & Onwuegbuzie, 2004). As applied to this research, the identification and description of Mixed Presenters from the datasets and the risk analysis should produce the same results if repeated by another researcher.

Alternatively, following the constructivist (naturalist) paradigm, the knower and the known are seen as interactive and inseparable (epistemology), and reality is multiple, constructed, and holistic (ontology) (Teddlie & Tashakkori, 2009). The results of an inquiry are shaped by the interaction between what can be known and the individual who comes to know it, consequently fused into a coherent whole (Guba, 1990). The researcher is the primary ‘instrument’ of data collection and data analysis (Johnson & Onwuegbuzie, 2004). Thus, for this research, Mixed Presenters and I, as the ED nurse/researcher, constructed distinct ‘knower’ information from the interviews. In interpretive description, used for the qualitative section of the research, the clinician status of the researcher is a prerequisite for knowledge gathering (Thorne, 2008). Interviews of Mixed
Presenters by non-clinicians and/or other researchers would therefore result in different findings than did my interviews.

In mixed method research, there is a distinctive mix of epistemology, ontology, and research methods (Bryman, 2007; Harrits, 2011). This approach utilises the best of qualitative and quantitative methods and combines them (M. M. Bergman, 2008). The predominant focus is not on the researcher’s worldview, but on the issue at hand and what design works best to answer the research question (Teddlie & Tashakkori, 2009). Consequently, mixed methods research is fundamentally placed within the context of paradigm wars (Harrits, 2011) where the “paradigm warriors also too frequently ignore the presence of many intra-paradigmatic differences”, resulting in extensive fuzziness of paradigm differences (Johnson et al., 2007, p. 117). Researchers attempt to “create order where there is none” (M. M. Bergman, 2010, p. 173) amongst the “knotty paradigmatic issues” (Greene, Caracelli, & Graham, 1989, p. 270). The paradigm wars’ ‘relentless’ focus on the differences between the two orientations ignore that both quantitative and qualitative research are important and useful (Johnson & Onwuegbuzie, 2004). How qualitative and quantitative approaches are combined is informed by the researcher’s viewing/paradigm position (Sandelowski, 2000), but instead of epistemological and ontological issues, follows pragmatism (Bryman, 2007).

Pragmatism is the primary philosophy of mixed method research (Johnson et al., 2007) as it allows for research approaches to be mixed in ways that offer the best opportunities for answering the research questions (Johnson & Onwuegbuzie, 2004). The use of pragmatism represents the deliberate use of "methodological orthodoxy in favour of methodological appropriateness” (Patton, 2002, p. 72). It allows an immediate and useful philosophical and methodological middle position that offers a practical and outcome-oriented method of inquiry (Johnson & Onwuegbuzie, 2004). As pragmatism is not aligned with any system of philosophy and reality (Creswell, 2009), it generally focuses on how well each method is able to answer the research questions (Johnson & Onwuegbuzie, 2004). Pragmatism rejects a dogmatic either-or choice between constructivism and positivism (Teddlie & Tashakkori, 2009), viewing human inquiry as equivalent to experimental and scientific inquiry where findings are seen as imperfect and tentative (Johnson & Onwuegbuzie, 2004). Any features from constructivism and positivism, and their variants which include transformative and post positivism, can be used if viewed as optimal in the pragmatic research inquiry (Teddlie & Tashakkori, 2009). Researchers are
free to choose the methods, techniques, and procedures that best meet their needs and purposes (Creswell, 2009) for robustly answering their research questions.

5.4.2 Criteria for mixed method typologies

The mixing of research approaches can take many forms. Usually called ‘typologies’, these are “classification systems made up of categories that divide some aspect of the world into parts along a continuum” (Patton, 2002, p. 457). Approaches to mixing different data approaches have been inconsistently classified as ‘designs’, ‘strategies’, ‘typologies’ and ‘techniques’ (Creswell, 2009; Greene et al., 1989; O’Cathain et al., 2010; Teddlie & Tashakkori, 2009).

Teddlie and Tashakkori (2009) created a matrix portraying four typologies of research method designs. These typologies were grouped by how many methods are used within a study – either one (mono-method) or more than one (mixed method) – and by how many strands or study phases occur, including mono-strand (one-phase) or multi-strand (more than one phase). Mixed-methods mono-strand designs are ‘quasi-mixed’ because although both quantitative and qualitative methods are used within one study, the approaches remain separate at all stages. The mixed method typology includes the mixing of qualitative and quantitative methods in various multi-strand designs. These mixed designs are implemented in parallel, sequentially, converted, multi-level and fully integrated modes (Teddlie & Tashakkori, 2009).

Many of the typologies focus on methodological issues, typically on the dominance or equality of either qualitative or quantitative methods and the sequence in which they are utilised (Harrits, 2011). Similarly, Creswell’s (2009) position is that the design for mixing strategies is underpinned by timing, weighting, mixing and theorising. Greene et al. (1989) identified seven characteristics, which in addition to those already mentioned, include the similarity of methods and phenomena paradigms, as well as whether the study is viewed as one or more than one study. These main typologies are further explained below.

The ‘timing’ aspect considers how data sources are gathered, broadly dividing them into either sequential or parallel data collection (Creswell, 2009). Sequential mixed designs are used for answering exploratory and confirmatory questions in a chronological, pre-specified order (Teddlie & Tashakkori, 2009) where information from the first round of data collection, analysis, and findings is used to inform a second round. In all sequential
mixed designs, one method is completed before the next is implemented (Morse, 1991). Where quantitative data collection and analysis in the first phase is followed by a second qualitative phase, this approach is called sequential explanatory strategy, as it is typically used to explain and interpret quantitative results, with a focus on relationships between variables (Creswell, 2009). A sequential exploratory strategy, however, uses quantitative data and results to support the interpretation of previously collected and analysed qualitative findings (Creswell, 2009). Finally, in a sequential transformative strategy the sequencing of the methods is the same as mentioned above, but each process and the mixing is underpinned and guided by theoretical perspectives, conceptual frameworks, or specific ideologies (Creswell, 2009).

Conversely, in parallel mixed designs the (at least) two methods are independent and answer related aspects of the same research questions (Teddlie & Tashakkori, 2009). In this design, the methodological, analytical, and inferential stages remain separate; once the inferences are completed, they are integrated with each other, resulting in ‘meta-inferences’ (Teddlie & Tashakkori, 2009). Creswell (2009) groups parallel, or what he terms ‘concurrent’, strategies into ‘triangulation’, ‘embedded’, and ‘transformative’. With the concurrent triangulation strategy, where both methods are equally important, data collection occurs concurrently and is followed by the comparison of results in the data analysis phase. The concurrent embedded strategy applies when quantitative and qualitative methods are unequal in role, contribution, or impact, and the dominant method is supported by nested or embedded information from the non-dominant method. Lastly, in concurrent transformative strategy, the two parallel methods are underpinned by theoretical or conceptual frameworks or ideologies (Creswell, 2009).

Greene et al. (1989) argue that the ‘timing of implementation’ can also include multiple methods and multiple phases within one study, resulting in both parallel and sequential implementation at different stages of the study. In their view, implementation can be sequential, bracketed (one method implemented before and after the other), concurrent, simultaneous, and even irrelevant, where only one method is used for existing data.

As with the timing aspect, the relative weight of each research method can be equal or unequal, with either the qualitative or the quantitative method dominating. This ‘status’ should directly reflect the relative weight and influence of the qualitative and quantitative methods with respect to the number of times each method is used and their centrality to study objectives (Greene et al., 1989). The priority placed on a method is influenced by
the skill and leaning of the researcher, funding considerations, and what the researcher seeks to emphasise (Creswell, 2009). Teddlie and Tashakkori (2009) argue against using this criterion for their typology because one's priority status for each research methodology tends be determined in the final stages of the study, rarely at the methodology stage.

When and how methods are mixed are important considerations. Greene et al. (1989, p. 263) define the characteristic of “implementation: independence” as following a continuum from interactive to independent mixing, reflecting how interactively or independently the qualitative and quantitative methods are conceptualised, designed, and implemented. In other words, mixing can occur at data collection, data analysis, interpretation, or all three phases (Creswell, 2009; Johnson et al., 2007), resulting in connection, integration, or embedding of methods (Creswell, 2009) and including methodological worldviews and language (Johnson et al., 2007).

5.5 Combining qualitative and quantitative methods

Knowledge of the typologies facilitates the choice of a mixed methods design. The most popular mixed methods design appears to be triangulation (Denzin, 1970; Greene et al., 1989; Jick, 1979; Leppäkoski & Paavilainen, 2012; Morse, 1991; O’Cathain et al., 2010). Confusingly, some authors proclaim triangulation to be “the use of more than one approach to researching a question” (Heale & Forbes, 2013, p. 98), which is a definition of all mixed methods research. Heale and Forbes (2013) fail to acknowledge other mixed methods research designs. These alternative designs include complementary, development, initiation, expansion (Greene et al., 1989), ‘following a thread’, and mixed methods matrix (O’Cathain et al., 2010) – and probably others. It appears that the different definitions for merger and mixing of methods are a consequence of a lack of guidance (Bryman, 2007), which in turn results in a lack of clarity.

Alternative mixed methods designs, including complementary, development, initiation and expansion, have specific characteristics (Greene et al., 1989). A complementary design is most appropriate when results from one method are used to elaborate, enhance, or illustrate the results from the other. In contrast to triangulation, complementary design involves using qualitative and quantitative methods interactively within a single study, facilitated by a similar framework for both methods. On the other hand, development
design follows a sequential timing of the different methods. “One method is implemented first, and results are used to help select the sample, develop the instrument, or inform the analysis for the other method” (Greene et al., 1989, p. 267). Initiation design is used where the study’s main aims are to uncover paradox and contradiction using a combination of qualitative and quantitative research. Expansion design aims for scope and breadth by including multiple components, where commonly qualitative methods provide information on process and quantitative methods on outcomes. None of these designs by Greene et al. (1989) align with O’Cathain et al. (2010) design concept of ‘following a thread’, involving an iterative and cyclical approach to analysis where both quantitative and qualitative datasets are analysed to prove or disprove hypotheses. One example of this is the study by Adamson et al. (2009), where in a cyclical pattern, qualitative research findings were used to generate hypotheses for quantitative testing, and the quantitative findings were analysed with additional contextual information from qualitative data. A mixed method matrix is yet again distinct as it integrates components at the analysis stage and focuses on cases (O’Cathain et al., 2010).

5.5.1 Triangulation

Triangulation strengthens a mixed method study (Patton, 2002) by capturing a more holistic and contextual portrayal of the phenomena under study (Jick, 1979). This portrayal should lead to a multidimensional understanding of complex health issues (Farmer, 2006). Triangulation tests the degree of external validity (Jick, 1979) “when multiple methods, sources, theories, and/or investigators are employed” (Farmer, 2006, p. 377).

Denzin (1970) outlines four types of triangulation including methods, theory, data, and investigator. He distinguishes within-methods triangulation, when multiple qualitative or quantitative methods are used, from between-methods triangulation, which involves both qualitative and quantitative approaches. These differences are comparable with what Teddlie and Tashakkori (2009) described as mono-method multi-strand design and mixed methods multi-strand design. This comparison shows how research design and triangulation are used interchangeably. Within-methods triangulation is criticised by Denzin because method limitations are likely to prevail; hence, it is recommended that between-method triangulation is undertaken (Johnson et al., 2007). However, Morse (1991) cautions against the belief that multiple methods will automatically result in
robust data, proclaiming that a careless approach risks enhancement of the weakness of each method, potentially invalidating the entire study.

The triangulation protocol requires that both data sources provide rich information, with each being analysed separately before integration (O’Cathain et al., 2010). Triangulation is based on the logic of convergence, requiring quantitative and qualitative methods to be different from one another with respect to their intent, strengths, and limitations/biases, and with both methods being used to assess the same phenomenon (Greene et al., 1989). Both convergence and divergence are useful outcomes from triangulation (Jick, 1979). Whilst convergence increases the belief that these are true results, divergent findings provide an opportunity to investigate more complex explanations (Jick, 1979). Farmer (2006) further explored levels of complementation and dissonance in addition to convergence. The recommended independent implementation of the different methods is unique to triangulation (Greene et al., 1989).

5.6 Advantages and Challenges of Mixed Methods Research

In this section, some of the earlier information about validity and rigour of mixed methods are summarised into advantages and challenges.

5.6.1 Advantages

Mixing and matching design components can offer the best chance of answering research questions (Johnson & Onwuegbuzie, 2004). In the triangulation process, researchers stimulate the creation of inventive methods, uncover deviant phenomenon that lead to enriched explanation of the research problem; and can then be confident of their results (Jick, 1979). When findings are corroborated across different approaches, a greater confidence of their validity is created; alternatively, conflicting findings result in greater knowledge because researchers modify interpretations and conclusions accordingly (Johnson & Onwuegbuzie, 2004). However, conflicting findings require careful and systematic analysis. In other words, the “effectiveness of triangulation rests on the premise that the weaknesses in each single method will be compensated by the counter-balancing strengths of another” (Jick, 1979, p. 604). Mixed methods expand the scope, so analytical power improves (Sandelowski, 2000); Jick attributes this to qualitative data
and analysis, which in his view “functions as the glue that cements the interpretation of multimethod” (1979, p. 609).

The generation of both depth and breadth regarding the phenomena under study in mixed method studies (Teddlie & Yu, 2007) allows the portrayal of “a fuller description” of the findings (Sandelowski, 2000, p. 251). Results from mixed method studies are often more generalizable, producing more complete knowledge that is able to inform theory and practice (Johnson & Onwuegbuzie, 2004). Denzin (1970, p. 472) attributes the attainment of such broad knowledge to triangulation, arguing that “the greater the triangulation, the greater the confidence in the observed findings”. The possibly of uncovering unique phenomena that contributes to added insights and understanding would likely be missed with single method studies (Bryman, 2007; Jick, 1979), despite single method studies being easier to execute.

5.6.2 Challenges

Mixed methods research is challenging to implement because of its complexity. Despite earlier descriptions in this chapter about how mixed methods can be executed, the consensus amongst researchers is that currently in the field there exists minimal direction and guidance on how to blend paradigms, how to analyse data across research methods, and how to interpret conflicting findings, which creates much confusion (Bryman, 2007; Johnson & Onwuegbuzie, 2004; Sandelowski, 2000). For example, in nursing literature, triangulation and mixed method are used synonymously (Heale & Forbes, 2013; Leppäkoski & Paavilainen, 2012), probably because many mixed method problems are specific to triangulation (Farmer, 2006; Jick, 1979).

The integration of qualitative and quantitative methods risks being sub-optimal. It is likely that some qualitative and quantitative approaches are not compatible within a mixed method research design (Heale & Forbes, 2013). Even when findings align across different methods, datasets might be flawed (Heale & Forbes, 2013). The stages of mixing qualitative and quantitative research and the possible consequences of these mixing differences are often unclear, resulting in a subjective mixing of research approaches that makes replication of the triangulation strategy difficult (Jick, 1979; Johnson et al., 2007). Jick (1979, p. 609); calls for mixed methods to be used with the potential for each to discover significant findings in mind, avoiding one method acting as a “window dressing”
for the other yet, he also criticises how each approach can be weighted equally when they are not likely to be equally useful.

It has also been argued that findings from mixed methods are rarely genuinely integrated, risking the loss of insights that could otherwise have been gleaned (Bryman, 2007; O’Cathain et al., 2010). Inappropriate or incorrect mixing might also produce erroneous results. The reasons for a lack of integration can stem from factors intrinsic to the research strategies, but also from the quantitative or qualitative predispositions and preferences of researchers, disciplines, and funding agencies (Bryman, 2007; Johnson et al., 2007). O’Cathain et al. (2010) see the absence of a formal education in mixed methods research as a barrier to integration of methods.

Mixed methods research is costly in time and money. Mixed method researchers need to be competent in multiple methods and approaches, collect and analyse multiple datasets, and investigate how most appropriately to mix them—a process more time-consuming and expensive than single method studies (Creswell, 2009; Jick, 1979; Johnson & Onwuegbuzie, 2004; Patton, 2002). Parallel mixed method studies are shorter than sequential studies, but require more skill than sequential studies (Creswell, 2009).

### 5.7 Mixed method design for researching Mixed Presenters

For this study, the sequence of the data collection was a determining factor in the selection of a mixed methods design. During the MISP project’s ED data collection (explained in section 8.2), Mixed Presenters were identified from the dataset as possible participants in my study and were contacted for interviewing. While these interviews were underway, MISP researchers continued to collect data until the end of that study, at which point it was made available for my study (Table 5.1 presents an outline of the study timeline).

The senior data analyst assigned participants different ID numbers for each research approach, which meant that information for Mixed Presenters identified from the MISP data who were also interviewed could not be matched. This approach was based on ethical and data quality considerations.
Table 5.1  Consecutive outline of qualitative and quantitative data collection, analysis and triangulation

<table>
<thead>
<tr>
<th>Time</th>
<th>Method</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-harm coding of MISP data in 8 DHBs between 1 December 2009 and 30 June 2012</td>
<td>Qualitative study</td>
<td>DHB permission to examine MISP data to identify Mixed Presenters for interviews (3 DHBs)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Receipt of de-identified data of possible Mixed Presenters from senior data analyst</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Nurse Recruiters make initial contact with Mixed Presenters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Face-to-face interviews with Mixed Presenters. Questions focused on their self-harm and other ED presentations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Field notes taken following each interview</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transcription of interviews verbatim</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analysis: Broad coding, grouping, and finding associations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Write-up of results</td>
</tr>
<tr>
<td></td>
<td>Quantitative study</td>
<td>Permission from the 8 MISP DHBs to identify Mixed Presenters and Self-harm Only Presenters and analyze data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Senior data analyst provided de-identified data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Linked MISP data with NHI, NMDS (inpatient admission), and mortality datasets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Examined and described socio-demographic and clinical details of Mixed Presenters and Self-harm Only Presenters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Analyzed survival probability of Mixed Presenters when compared with Self-harm Only Presenters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Examined and described ED management and presentation pattern</td>
</tr>
<tr>
<td></td>
<td>Triangulation</td>
<td>Who are Mixed Presenters? (qualitative and quantitative results)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Serious self-harm risk of Mixed Presenters (qualitative and quantitative results)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ED management (qualitative and quantitative results)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussion and conclusion</td>
</tr>
</tbody>
</table>

The number of interviewed participants who also experienced outcome events would have likely been too small to yield useful inferential findings, which also determined my decision against focusing on individual cases. Keeping the ID numbers separate also acted as a safeguard; later, serious self-harm events could not be connected to individuals I had interviewed, protecting patient privacy. Furthermore, if Mixed Presenters who agreed to be interviewed had been asked for consent to examine their MISP data, the result could have been mistrust, and increased vulnerability.

I considered Creswell’s (2009) concurrent transformative strategy, where both qualitative and quantitative methods are underpinned by the same theoretical framework. The theoretical underpinnings from Chapter 4 were developed in alignment with the research questions. Inferences following the qualitative and quantitative analysis
could have been separately aligned with theory, both deductively (quantitative) and inductively (qualitative), but I used meta-inferences instead. As my research had a dominant clinical focus, which was nevertheless influenced by theory, I selected a parallel mixed design (Figure 5.1).

Figure 5.1  Overview of mixed method design

This design was most fitting because the conceptualisation, methodology, analysis, and inferential stages (findings) for each method were executed separately and in parallel (Teddlie & Tashakkori, 2009), whilst each method was used to answer similar aspects of the research questions. Meta-inferences from both findings chapters (qualitative and quantitative) were developed, and are presented in the discussion chapter.

Each method was planned to be equal in contribution. On the one hand, MISP data allowed a broad but shallow view of Mixed Presenters, their ED management, and their self-harm risk. Interviews, on the other hand, provided a rich description of Mixed Presenters and their ED and self-harm experiences. However, in line with Teddlie and Tashakkori (2009) who argue that the weight of each method cannot be determined at the onset, I was unaware of the exact level of detail contained in the MISP data, and could not predetermine the richness of the qualitative data at the beginning to the study.

This study consisted of distinct research methods and paradigms. Mixed Presenters, in interaction with the interviewer, revealed information about themselves and their
experiences. I analysed the findings using interpretive description which could have resulted in subjective findings. Quantitative data, collected from secondary sources, consisted of some information that was processed in a positivistic mode, for example Mixed Presenters’ (de-identified) NHI numbers and their demographic features. These documented characteristics are set and do not vary with different observers. Clinical information following tests and investigations were also positivistic in nature, but interactions and communications between clinicians and Mixed Presenters possibly influenced disclosure on the part of the Mixed Presenter, and thus were naturalistic. Furthermore, tests and investigations were probably influenced by the doctor/patient interaction, which questions the pure positivistic paradigm. The quality and quantity of documentation by clinicians might have been influenced by the pressure on ED, experience of the ED clinicians, and availability of resources. These paradigmatic issues could have influenced the documented presenting complaint, discharge diagnosis, and triage code in the MISP dataset.

The paradigms of each type of research design were at times interlinked. For my qualitative part, I also used positivistic-based tools, such as a Likert Scale to inquire about Mixed Presenters' satisfaction with the ED care encountered for each of the two ED presentations they had made; this process has been defined as “quantitising” (Sandelowski, 2000). These quantitative numbers were not generalizable but they portrayed frequency of experiences. Mixed Presenter’s realities consisted of remembered and recalled ED experiences, yet these reflected subjective states (Johnson & Onwuegbuzie, 2004). For the quantitative part, I made decisions on what aspects of MISP data to analyse, based on what was most relevant to my research questions; this exemplifies how it was not conducted in a fully objective- and value-free manner (Johnson & Onwuegbuzie, 2004). Despite the occasional overlap of paradigms within each method, a systematic approach of mixing across methods was necessary.

5.7.1 Triangulation protocol

I chose the triangulation protocol because I viewed each of the data sources as providing important information, so data were collected and analysed separately for each component to produce two sets of findings (O’Cathain et al., 2010) before integration. The triangulation of the findings was developed from a protocol that was originally used for mixing different qualitative methods (Farmer, 2006). The protocol was chosen because
of the thorough and clear framework that could be easily transferred to my study (Table 5.2).

Firstly, following the analysis and documentation of the qualitative and quantitative findings, I identified the key results, and aligned these with the three research questions (see Table 5.2 for a broad outline). Each key result, aligned with a theme, was assigned a convergence code of either ‘agreement’, ‘partial agreement’, ‘silence’, or ‘dissonance’ (Farmer, 2006). The choice of code depended on the level of convergence between qualitative and quantitative findings aligned to the theme (‘convergence code’). To be awarded an ‘agreement’ code, the two sets of results needed to fully align with each other, whereas for a ‘partial agreement’ code, some but not all components of the two sets required alignment. ‘Silence’ occurred when only one set of results covered the theme, and disagreement between the sets of results was coded as ‘dissonance’ (Farmer, 2006).

Table 5.2  Triangulation protocol

<table>
<thead>
<tr>
<th>Research questions</th>
<th>Theme</th>
<th>Quantitative results</th>
<th>Qualitative results</th>
<th>Convergence coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who are Mixed Presenters?</td>
<td>Serious self-harm risk</td>
<td>ED management</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The assignment of codes was followed by an overall assessment of convergence. This entailed a comparison of the two sets of results, highlighting both similar and unique contributions to each research question, and ultimately creating a summary (Farmer, 2006). Code assignment, and the overall assessment and summary of each research question was discussed with supervisors at each step to determine the level of agreement or convergence. Outcomes of the triangulation of qualitative and quantitative findings, along with team discussions, influenced findings are reported in Chapter 10.

5.8 Ethical considerations and Māori consultation

This study received ethical approval from the multi-region ethics committee (MEC/11/02/020) (Appendix 3). For the qualitative part of the study, the four non-
intervention DHBs from the MISP study were approached (rationale explained in section 6.3), resulting in some DHB staff expressing safety concerns, especially with Mixed Presenters’ heightened self-harm risk. One DHB declined to participate in this part of the study. They considered that ED patients had not provided consent for research when they previously presented for health issues, hence this approach seemed unethical to them. However, this view is debatable as the National Ethics Advisory Committee (2012) proposes that not allowing patients to comment on the care they had received could be seen as unethical. The three remaining DHBs participated, allowing access to MISP data and interviews with Mixed Presenters. For the quantitative study, the analysis of MISP data from only the four non-intervention seemed insufficient for yielding significant findings and therefore reflecting validity of the research. Hence, all eight DHBs were approached for permission to use their MISP data, which all approved. An amendment to the ethics approval was made (Appendix 4).

Data safety was paramount. In the MISP datasets, provided by the University of Otago’s MISP project senior data analyst, possible Mixed Presenters had been allocated random ID numbers with DHB initials for easy identification. As neither National Health Index information (‘NHI’ – a unique identifier assigned to every person accessing health services) nor names were needed for the identification of Mixed Presenters, non-identifiable information added an extra layer of privacy, confidentiality, and security as it minimised the risk of compromised safety inherent in sharing identifiable data amongst staff. Despite the key-coded MISP data being potentially re-identifiable (National Ethics Advisory Committee, 2012), the careful sharing (Section 8.7.1), handling and storage (Section 6.7) of MISP data ensured ED patients’ identity was kept secure and study findings are trustworthy.

For the qualitative study, care was taken to recruit and interview Mixed Presenters safely. Following the identification of possible Mixed Presenters from the datasets, the approach of individuals for research required a ‘relevant health practitioner’ in order to minimise potential study participants’ sense of obligation to participate, which could cause harm and distress (National Ethics Advisory Committee, 2012). Ethical principles of beneficence and non-maleficence guided the recruitment process of a Nurse Recruiter, safe data transmission between the university and DHB, and the safety of participants and the researcher during the interview process. These aspects are presented and discussed in sections 6.6, 6.7, and 10.5. Safety considerations also included that member checking,
where participants are sent their transcripts for review, was viewed as unsuitable, an issue further expained in Section 6.8.

Māori consultation was sought so as to adhere to the Treaty of Waitangi principles. I followed the University's Māori (Ngai Tahu) Research Consultation process and had Dr Nicole Coupe, Kai Tahu, Te Atiawa, Ngāti Toa, Rangitane Raukawa as my cultural advisor. Further, the approval process involved consultation with Māori health/mental health services in each DHB, especially those who consented to interviews.

5.9 Summary

In this chapter, I outlined the methodology used for this research, which included a paradigm discussion, my choice of pragmatism, and different typologies of mixed methods. I chose a parallel mixed methods design that acknowledged theoretical aspects. Triangulation was used, as both the qualitative and quantitative parts were viewed of equal weight. The quantitative method chapter is presented next.
Chapter 6
Qualitative Method

“Be sure that you’re prepared to deal with the controversies of doing qualitative research.”

6.1 Overview

In this qualitative method chapter, I describe how I proceeded to answer my research questions from the perspective of people: “Who are Mixed Presenters?”, “What is the serious self-harm risk of Mixed Presenters?” and “What is the ED management of Mixed Presenters?” I next describe interviews as a research method, the setting and the sample, followed by the development and piloting of the interview schedule, data collection, storage and analysis.

6.2 Interviews – research method

The interview method, in accordance with the parallel mixed method design (outlined in Figure 5.1), was developed separately from the quantitative part, despite both parts using data from MISP (see 5.2 for background information). Interpretive description (Thorne, 2008) guided the development of the interview schedule, data collection, and analysis. The knowledge acquired from the interpretive description approach was hoped to be applied to real human beings “caught in complex and difficult human health problems”, with the aim of enhancing their quality of life (Thorne, 2008, p. 23) by improving ED care.

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6.3 Setting

The study setting consisted of three non-intervention (control) DHBs that participated in MISP. In order to have a consistent sample, I had decided against using all eight DHBs as the suicide prevention intervention implemented in four of the eight MISP DHBs could have improved ED care compared to DHBs that had not received these initiatives. Whilst this difference could have influenced Mixed Presenter’s experiences in ED, the small sample and the fact that I did not investigate the level of ‘usual’ suicide prevention staff training in non-intervention DHBs reflected that the impact of MISP, amongst many other potential factors, was likely minimal. As noted under section 5.8, one DHB declined participation, so three DHBs, two of which were small and the third medium-size, participated. The absence of the fourth larger DHB in this study, consisting of substantial groups of Māori and Pacific peoples, could have resulted in a less ethnically diverse sample and possibly fewer culture-specific findings.

The interviews were held at a place mutually agreed. Settings included their own homes, residential facilities, or DHB-provided rooms located in acute mental health services, health care centres, or radiology service areas. Challenges included interruptions by staff members and locating keys for the interview rooms. Yet, interviews in people’s homes were equally prone to interruptions from family members or pets.

6.4 Sample

I selected a purposive sampling strategy because it allowed the identification of instances that were “representative or typical of a particular type of case” and it “achieved comparability across different types of cases” (Teddlie & Yu, 2007, p. 80). MISP data provided the opportunity to recruit Mixed Presenters, yet the limited amount of information about Mixed Presenters, both in general and within the dataset, left me unaware as to whether the selected sample was on the one hand representative or comparable, and on the other hand, special or unique (Teddlie & Yu, 2007). I further applied maximum variation (heterogeneity) sampling by selecting to interview Mixed Presenters from various age groups, genders and ethnicity. This sampling approach was intended to enable the emerging of common patterns from Mixed Presenters’ varied
accounts of their life circumstances, their self-harm risk and their ED experiences (Patton, 2002).

To qualify for this study, Mixed Presenters, identified from the MISP database, were required to be aged 18 years and older with at least two ED presentations to one of the three DHBs. These presentations, made within 28 days, had to include one for self-harm and one for another reason (in any order). In-line with ethics requirement, potential participants had to be able to give informed consent and participate in an interview of about one hour’s duration. English was the preferred language, but interpreting services for eligible non-English speaking participants were considered. Interviews were within six months of an individual’s last eligible ED presentation, which required timely recruitment processes once the person had been identified from the dataset. Where it was documented that a person had arrived to ED with prison guards for either presentation, this person was excluded from consideration for this study on the grounds of researcher safety.

I chose to interview people age 18 years and older because this study did not specifically address young Mixed Presenters. Further, I wanted to contain my study, which included avoiding complicated consenting processes with legal guardians when studying children. I decided against an upper age limit because physical impairments generally increase with age and are often associated with depression (Beekman, Deeg, Smit, & Tilburg, 1995; Geerlings, Beekman, Deeg, & Van Tilburg, 2000) and high suicide rates (Levy et al., 2011). This means that older people might tend to more readily meet the definition of ‘Mixed Presenter’. In view of trying to keep myself safe, I excluded people who had presented to ED with prison guards, but patients accompanied by police or security personnel were not excluded as this is commonplace in ED for patients with self-harm issues.

The selection of a 28-day period between two eligible presentations was based on prior research. People re-presenting to ED for the same health issue commonly do so within 72 hours (Robinson & Lam, 2013) whilst a longer than 28-days duration between ED visits could have resulted in ED presentations being mostly unrelated, making the discovery of a ‘Mixed Presenter’ group unlikely because they did not fit the definition. The 28-day timeframe between ED presentations allowed for the possibility of different health complaints, and was based on similar studies describing ED patient characteristics (Madsen et al., 2009) and patients who returned with psychiatric complaints (Moore et al., 2007).
The timeframe for recruitment following the ED presentation was chosen to be recent enough for people to remember events in ED and long enough for people to be identified from the MISP data. Initially, a timeframe of three months was set to optimize participants’ recall of the details of their ED presentations, whilst minimizing the possibility of people moving away from the DHB area before they could be interviewed. I soon realised, however, there was a substantial delay before MISP research assistants received ED data from the DHBs, followed by a significant amount of time for processing the data necessary for identification of potential participants. Also, oftentimes Nurse Recruiters required time in which to contact Mixed Presenters because their everyday schedules were frequently busy. For my part, contacting potential Mixed Presenters, setting up interviews, and planning travel was time consuming. Once I realised the sum total of the time requirements, I adjusted the timing of interviews to occur no later than six months post their last eligible ED presentation.

6.5 Development and pilot of the interview schedule

The development of the interview guide (Appendix 5) was based on several factors: the research question, the literature, my clinical experience and quality improvement knowledge, Māori consultation, and working on the MISP project.

I considered using an existing validated instrument to save time and resources (Boynton & Greenhalgh, 2004). In the literature, patient satisfaction was mostly assessed by survey-type questionnaires (Larsen, Attkisson, Hargreaves, & Nguyen, 1979; McMurtry & Hudson, 2000), some of which specifically measured satisfaction with emergency psychiatric services (O’Regan & Ryan, 2009) and patient perceptions of the attitude of clinicians (Wolf, Putnam, James, & Stiles, 1978). However, the survey questions were focused and potentially leading, such as ‘how competent and knowledgeable’ were the staff (Larsen et al., 1979). As I was planning semi-structured face-to-face interviews, my preference was for open-ended questions enabling the exploration of experiences and attitudes (Pope, van Royen, & Baker, 2002). Nevertheless, I took some of the above-mentioned categories into consideration in creating an interview guide, including factors such as ‘physical surroundings’, ‘quality of service’, and ‘general satisfaction’.

Initially I developed a broad outline of questions based on my clinical experiences. The inquiry was tailored toward exploring people’s experiences of ED when presenting for
self-harm or for ‘other’ reasons; reflections on similarities and differences between these visits; their satisfaction level; and any recommendations for care improvements. I considered further details of ‘the journey through ED’ based on the plan-do-study-act cycle promoted by the Institute for Healthcare Improvements (Langley, Nolan, Nolan, Norman, & Provost, 2012). The anticipated purpose of my study concerned ED improvements and I considered it important to have information from each step in the ED journey. I kept the language of the questions suitable for members of the general public (non-clinicians) because I wanted participants to easily understand my questions. I considered this an important part of assisting participants to feel at ease. For example, instead of inquiring about ‘assessment and treatment’, I asked “Were you able to get your issues across?”

Māori consultation with a colleague resulted in adding a question about cultural needs in the ED setting, along with a question about the presence and role of family/whānau. The colleague emphasised the importance of the collective, as described by Walker, Eketone, and Gibbs (2006, p. 334): “The idea of the collective is central in an understanding of whānau; it enables knowledge to be defined and guarded by a group”. This knowledge led me to inquire in my interviews about the presence of support people (classified into partner/spouse, family/whānau, friend/acquaintance, health professional/paid and other) during an ED visit. Further, I asked “How was that [support] for you?” and inquired if the support person had participated in the assessment at ED, hoping to elicit, from the perspective of Mixed Presenters, more information on the support person’s role.

One question from my interview guide had evolved directly from the MISP project. Research assistants often documented questions about presentations involving self-discharge, asking about its relevance to self-harm, and wondering why people would leave and what happened afterward. As “…sick patients are vulnerable to making decisions that may not reflect their best interest” (Alfandre, 2009, p. 257), it seemed opportune to explore the subject of self-discharge with Mixed Presenters as part of my interview. The question about self-discharge was strategically placed after the participant’s narrative of the first presentation and before the second presentation. This question marked the end of talking about the first presentation and allowed a short break from talking about a specific ED presentation before starting on the second.

A few questions at the start of the interview guide were general in nature and some were used to assess people’s eligibility. I made the decision not to ask for demographic
information with the view that MISP data would contain that information. In hindsight, this information would have been useful, as participants did not consent to linking demographic information with the interview. Questions were primarily asked in the order given on the interview schedule. People’s satisfaction for each ED presentation was obtained via a Likert Scale with scores of 1-5, with five indicating very satisfied and one extremely unsatisfied.

I did not routinely ask about a participant's mental health diagnosis. Consistent with the strength model, which focuses on strengths and resources of the person (Xie, 2013), I wanted to avoid disease labelling that would assume that there was something 'defective' about the participant. This stance resulted in information gaps about participants' physical and mental health, and social circumstances, yet similar to strength-based assessments in clinical practice (Rashid T & Ostermann, 2009) it is likely to have contributed to trust and the sharing of intimate and personal information. The alignment of some of the Mixed Presenters’ disclosed health and social characteristics with literature involving people who present to ED for self-harm and/or frequently suggests non-routine questioning was not a limitation.

The interview guide was piloted to ascertain that questions were relevant, safe, in a comprehensible order, and detailed enough to provide sufficient information while not being too long and cumbersome for participants. I interviewed two colleagues and a consumer advocate as part of the pilot. Colleagues included a research assistant from MISP and a mental health nurse, both with considerable experience in research. The consumer advocate had experience with self-harm and ED, and was also knowledgeable about research.

The overall feedback on the interview guide was positive. Following the consumer advocate’s suggestions, a number of changes were made: I added a strength-based question at the end of the guide – “What strategies do you have for keeping well?” – so the interview would end on a positive note (and the question also assisted in assessing risk); and to the information sheet, I added that I would contact mental health crisis services in case of safety concerns, irrespective of consent. Lastly, I was advised to give something back to participants.

When asked to add a Māori contact person to the information sheet, I considered adding a consumer advocacy person. However, I found it difficult to locate family and consumer advocacy services on the DHB websites and consequently they were not added. I felt the
contact details of local and national mental health services that were provided to interviewees would be adequate to address any needs and the addition of a consumer advocate could have offended those not engaged with the mental health system.

The final interview schedule, divided into four parts, commenced with an overview of the interview guide, followed by questions on the number of ED visits within the last 12 months, the mode of getting to ED and which ED visit they would like to talk about first. In parts two and three, circumstances around each of the participant's self-harm and other ED visit were explored, including questions about events that triggered the visit, and impressions on the arrival process and the ED environment. Further, questions included participants' experiences with ED staff, staff's inquiry about participants' prior self-harm (if applicable), their provision of culturally appropriate care, and support peoples' presence and care input. In addition, information on the outcome of the ED visit, events on arrival home and follow-up care was sought. Lastly, participants were asked to rate their satisfaction with the care received and how/if ED could improve this. The two parts only differed by one question, which concerned overlapping health care issues, such as if self-harm presentations were simultaneously accompanied by 'other' health care complaints and vice versa. Part 4 included questions on similarities and differences between these ED visits, if they would like to share anything else, strategies Mixed Presenters used for keeping well and if they would like to be contacted two days post the interview. The interview schedule remained the same throughout the study.

### 6.6 Data collection

Data collection took place through three slightly overlapping steps. First, I examined MISP data for Mixed Presenters. Second, a Nurse Recruiter made initial contact with Mixed Presenters. Third, I set up appointments and interviewed Mixed Presenters.

#### 6.6.1 Examination of MISP data

It was difficult to identify Mixed Presenters from the MISP data. In two of the DHBs, only the presenting complaint and discharge diagnosis were available. In DHB 1, unknown discharge diagnoses made it difficult to determine the presence of self-harm. Discussions with the MISP research assistants about unclear self-harm coding (they had additional information about each ED presentation) helped to ensure that eligible Mixed Presenters
were correctly identified. Examples of these unclear presenting complaints in regards to self-harm are provided in Table 6.1.

Table 6.1  ED data extract of presenting complaints and the challenges of assigning self-harm labels

<table>
<thead>
<tr>
<th>ED patient</th>
<th>Presenting complaints*</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chest pain (1)</td>
<td>Unsure if visits 2 and 5 were related to self-harm. Visit 4 could be related to self-neglect and self-harm? What does ‘unwell’ entail?</td>
</tr>
<tr>
<td></td>
<td>Self-discharge (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unwell (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hyperglycaemia (4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ingestion of foreign substance (5)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Abdominal pain (1)</td>
<td>Does a psychiatric assessment mean the person was at risk of self-harm? Were the burns related to self-harm?</td>
</tr>
<tr>
<td></td>
<td>Psych assessment, for crisis (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Burns both hands (3)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Laceration (crush injury) (1)</td>
<td>Was the laceration also related to self-harm?</td>
</tr>
<tr>
<td></td>
<td>Self-harm (2)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Back pain (1)</td>
<td>Does being stressed equal being suicidal?</td>
</tr>
<tr>
<td></td>
<td>Stress – for crisis (2)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Overdose (1)</td>
<td>Was it a deliberate overdose? Are the arm injuries related to self-harm?</td>
</tr>
<tr>
<td></td>
<td>L)arm injury (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bite L)arm (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Return-review L)arm (4)</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Collapse (1)</td>
<td>Is ‘collapse’ a consequence of an overdose?</td>
</tr>
<tr>
<td></td>
<td>Vomiting (2)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Self-harm (1)</td>
<td>What does ‘Not otherwise specified’ entail?</td>
</tr>
<tr>
<td></td>
<td>Not otherwise specified (2)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Poisoning - OD (1)</td>
<td>Notes state the person denied overdose</td>
</tr>
<tr>
<td></td>
<td>Sprain – shoulder injury (2)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>OD (1)</td>
<td>Are all presentations related to self-harm?</td>
</tr>
<tr>
<td></td>
<td>Alcohol intox - for Crisis (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Referral from psych for review (3)</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Vomiting – drinking meths (1)</td>
<td>Is drinking meths self-harm? Is coming into ED with side effects classed as overdose?</td>
</tr>
<tr>
<td></td>
<td>Vomiting – abdominal pain (2)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OD own meds and meths (3)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ingestion methylated spirits (4)</td>
<td></td>
</tr>
</tbody>
</table>

*Numbering in brackets indicates visit number

I created a recruitment list on which I initially randomised the order of identified Mixed Presenters using Microsoft Excel (2016). The aim was to provide an equal chance for Mixed Presenters to be contacted by a Nurse Recruiter, when starting at the top of the list and to avoid sampling bias in the selection of participants for interviews. However, as the lists contained only 40 possible Mixed Presenters, and a third agreed to be interviewed following recruitment by the nurse, randomisation was deemed unnecessary.

The recruitment list was originally designed with two parts (see Appendix 6). Part One contained personal information and Part Two, recruitment details such as a random ID number, three spaces for documentation about when Recruiters had contacted Mixed
Presenters and the outcome, and whether the person agreed to talk to the principal investigator. The reason for creating different lists was that I wanted to keep personal information separate from the interview outcome information. However, I found that some Nurse Recruiters only minimally documented their recruitment actions, which indicated to me that the task was unnecessarily complex for busy clinicians. Hence, I condensed the recruitment list to one sheet in the hope of increasing the chances for comprehensive documentation of the enrolments whilst emphasising the need for protecting patient privacy.

6.6.2 Nurse Recruiters

The recruitment process required a Nurse Recruiter in each DHB to make initial contact with these individuals. I had access to de-identified MISP data, yet I needed a person who could be an intermediary between the university and the DHB. Ethics requirements stipulated that Nurse Recruiters had to be employed at the participating DHB, either in ED or mental health services. ED and mental health managers assisted in the identification of a suitable staff member in each of the DHBs. Only nurses were considered because they would have permission to access the DHB’s clerical data that was required. Clinical knowledge was also required, as I hoped that information could be provided skilfully and sensitively. Mixed Presenters needed reassurance that confidential information from their ED visits would be handled safely. The task did not require medical expertise, nor could I afford a doctor’s remuneration. An invitation to volunteer for the task of Nurse Recruiter was sent to DHB managers for distribution amongst the nursing team (Appendix 7). Nurses working in ED, mental health services and quality improvement roles/ED volunteered for the role in the three DHBs.

I made face-to-face contact with each Nurse Recruiter at the beginning of the study in order to discuss the research and their role in it and developed a guideline for the Nurse Recruiters, providing step-by-step guidance regarding expectations of the role (Appendix 8). The Nurse Recruiters were asked to collate patients’ personal information for the recruitment list, make phone calls to recruit 10-15 people, and schedule interviews within a timeframe of one week (Figure 6.1). The particular week chosen depended on the availability of the Nurse Recruiter and on my availability to do the interviews shortly after people agreed to participate.
A week timeframe allowed flexibility for the Nurse Recruiter to fit this task in amongst other commitments at work and home, and it provided me with a clear and fairly short timeframe where I could plan my schedule to accommodate the interviews. The aim was to recruit participants from one DHB at a time. However, I soon discovered the uptake was less than I expected, resulting in additional recruitment phases per DHB (Table 6.2).

Table 6.2  Number of interviews by DHB, month and year

<table>
<thead>
<tr>
<th>Interview location</th>
<th>October 2011</th>
<th>November 2011</th>
<th>December 2011</th>
<th>January 2012</th>
<th>April 2012</th>
<th>June 2012</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHB 1</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>DHB 2</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>DHB 3</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>15</td>
<td></td>
<td>27</td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>4</td>
<td>9</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>27</td>
</tr>
</tbody>
</table>
As presented in Figure 6.1, Nurse Recruiters received de-identified data alongside the confidential original (non-anonymised) data from the MISP project from the University of Otago’s senior data analyst. The recruiters searched for patients’ personal information on the local ED system, phoned individuals and followed a prepared phone call transcript, and documented the outcome of each call on the recruitment list. Times for these calls were Monday to Friday during daytime and evening hours, as well as weekends, as many people were difficult to contact. Recruiters made up to three attempts to contact each person at different times of day and on different days to optimise the response rate. Systematic documentation on the recruitment list, and keeping patient information confidential, reflected safe and trustworthy research procedures.

On those occasions when a patient declined to participate, the Nurse Recruiter was asked to establish the reason. Inquiries into ‘why not’ were made sensitively; the aim was to gain information, whilst being aware of the risk of coercion. Non-participation reasons were grouped into ‘No interest’, ‘Poor health’, ‘No time’ and ‘Other’. This information was collected with the knowledge that those who participate in research are systematically different to those who do not, risking nonresponse bias (Armstrong & Overton, 1977). Thus, collecting this information provided a glimpse into some factors that characterized the non-participants and an opportunity to establish if they were different to the participants.

Nurse Recruiters followed a phone call transcript (Appendix 9) when they made contact with Mixed Presenters. The transcript, adapted from another study (Moss et al., 2014), assured that all Mixed Presenters were approached in the same structured way. Applied measures that were aimed to minimise potential participants’ harm or distress (National Ethics Advisory Committee, 2012) included Recruiters not leaving messages on answerphones because messages from hospitals could raise anxiety. If another person answered the phone, Recruiters explained they were phoning on behalf of the University of Otago and would ring back. Offering this identifying information was meant to prevent any anxiety and suspicion as to the nature of the call and the caller. The initial contact by the Nurse Recruiter was planned to be succinct, just enough to form an initial impression as to whether the person was interested in participating in the research. Brief contact also meant limited disruption to the person being called. The question “Can I pass on your contact details to the researcher?” provided clarity as to whether the response was ‘yes’ or ‘no’ to participation. Later in the study, information detailing the selection and
recruitment of Mixed Presenters was provided to Nurse Recruiters (Appendix 10), who forwarded it to participants on request (further explanation in chapter 10.5.1.)

The importance of safety also included Nurse Recruiters. I expected that some Mixed Presenters would be anxious or upset when being contacted, and that this study’s workload could impose stress on the nurse. Consequently, we had face-to-face meetings at the beginning and end of the recruitment period, allowing discussion and debrief. During the study period, I offered support via telephone and email. Meeting up with the Nurse Recruiters also provided an opportunity to show my appreciation for their valuable contributions and provide them with $30,-/hour vouchers. I hoped that good relationships with the Nurse Recruiters could facilitate the future implementation of improvements in ED.

6.6.3 Interviews

Mixed Presenters were recruited at multiple DHBs simultaneously. Following the initial contact made by the Nurse Recruiters, I contacted each potential participant in a strategic way. Firstly, the recruitment list, completed by the Nurse Recruiter, was examined for completeness of people's details and evidence that they had agreed to participate. Secondly, I ensured that the last eligible ED presentation was within the previous 6 months. Thirdly, I sent each participant a hand-written note saying that I was pleased that they had expressed interest in the study and explaining the use of the attached information sheet, consent form, and my contact details in the form of a business card. The note included a statement about when I would contact them. The reason for the hand-written note was that I wanted to give the study a personal touch, and hoped the fact that I was prepared to hand-write such a note especially for each participant created the impression that I was willing to spend time listening and interacting with each one. I was aware that the note needed to be legible, and I acknowledged that print might have been easier to read. Before the actual interview, I talked to all of the participants on the phone, addressed any concerns and arranged the interview setting and time. A day before each interview, I made contact again to confirm the interview.

Talking about self-harm and experiences in ED could have caused distress to participants, potentially triggering further episodes of self-harm. For that reason, potential participants were invited to have a support person present during the interview, which was taken up by two participants. One support person, a health professional, ‘put the
record straight’ when the participant had not mentioned important facts. The other involved a partner who prompted the participant to share other related events experienced in the health system that the participant might not have shared if interviewed alone. This input from others, although not safety related, resulted in rich data from a different type of lens and a supporting presence for participants. However, because not all participants had outside input, it could have threatened internal validity. Yet, as interviews with support people resulted in similar findings to Mixed Presenters without input from others during the interview, it was an unlikely study limitation.

Every participant signed a consent form (Appendix 11) and confirmed they had read the information sheet (Appendix 12). To recap, I informed them of the purpose of the study and reinforced that confidentiality would be maintained. I informed participants of the format and the anticipated length of the interview, and of their right to decline participation at any time. I was aware of people’s rights for privacy whilst wanting to ensure their safety. Hence, on the consent form, I asked for participants to indicate, if they wanted me to contact their GP, psychiatrist, case worker, or family/whānau member about their participation in the interview. If ‘yes’, there was a space on the consent form for contact details. I wanted to empower participants by trusting them to make an informed decision about participation. Individuals capable of consent should be allowed to consider research participation without the involvement of others (Roberts & Roberts, 1999). In all, I contacted seven GPs and community mental health providers on request.

Participants’ self-harm risk was at times clinically addressed. Five people who were agitated, cried, or ruminated about different means of self-harm during the interview were assessed for further self-harm risk. Describing a Likert Scale, with 1 being at no risk and 10 being at severe risk of further self-harm, I asked these participants where they saw themselves on the scale. Even though most participants rated themselves as a ‘2’ or below, two participants mentioned that the fairly high rating of a ‘5’ was usual for them. I was alert to signs of acute self-harm risk, such as ruminating or withdrawal, but refrained from using other risk assessment tools as, despite there being no clinical indication, I was foremost a researcher. Also, people who expressed anger or upset were not routinely asked if they wanted to discontinue the interview, as I considered these normal expressions of emotion and wanted to avoid over-concern (J. M. Atkinson, 2007). On only one occasion, where the person became agitated, did I offer for the interview to be stopped, which was declined.
One person appeared at imminent risk of self-harm. Regardless of the individual’s graphic descriptions of suicide means, I continued interviewing him because I believed that my caring empathetic response as a nurse researcher (Clancy, 2011) enabled the person’s continued safe participation in research. Following the interview, this person had consented for the researcher to inform their case worker, I immediately talked face-to-face with the health professional. Once I had met some Mixed Presenters and became aware of possible safety risks, I sought their permission to re-contact them within a few days of the interview. This initiative allowed me to inquire after their well-being and offer an opportunity for feedback.

All interviewed participants consented to the use of a digital voice recorder. The use of a recorder enabled me to concentrate on the interview and pay attention to the interviewee as well as reflect on what question would be pertinent to ask next without being distracted by writing notes (Patton, 2002). When a participant was otherwise engaged during the interview (e.g., when a participant answered their phone), the recording was stopped and then re-commenced. On one occasion, the recorder stopped halfway through the interview due to the memory being full. I had difficulty determining if it was working correctly during the remainder of that interview, and made several attempts at recording the interview. I reflected that this complication did not portray me in a competent light. The participant was sharing personal, sensitive, and vulnerable experiences to a researcher who could not even handle a recorder! I became aware that it probably influenced the outcome of the interview and from then on, I always took extra care to make sure the recorder would function appropriately.

After the interview, I offered participants resources. A DHB-specific mental health support list (Appendix 13), consisting of contact details (internet address or telephone number), of mental health and Māori mental health providers, social support agencies and age- and gender-specific support services. I also provided participants with the ‘Having Suicidal Thoughts’ brochure (http://www.health.govt.nz/publication/having-suicidal-thoughts) because it offers relevant information for them and their family/whānau. I hoped this information could assist with reflecting on past events whilst offering useful coping strategies and contact details. Koha, an acknowledgment of their contribution to the study (R. Jones, Crengle, & McCreanor, 2006) was provided in the form of a $20 voucher for either The Warehouse or a petrol station. I intentionally provided participants with a choice, while both voucher options are easily exchangeable for goods.
Soon after leaving each participant, I wrote field notes, which included observations of the environment, and reflections such as thoughts on the interview, and feelings that it brought up. Also, I informed colleagues at the University of Otago on commencement and finishing of each interview as Mixed Presenters’ sharing of struggles and hardships posed a potential risk to my own health. Outcomes of interviews and safety precautions were shared with my supervisors who provided debriefing.

6.7 Data storage and analysis

Participant information was kept securely in hard copy and electronically. Signed consent forms, acknowledgment of vouchers, transcriptions of interviews, and field notes were kept in a locked file cabinet at the University of Otago. Lists of potential participants from the Nurse Recruiters, as well as a list I created containing the dates and locations of each interview, the names and pseudonyms of the participants, and their random ID numbers and contact details were also kept in a locked file cabinet. Audio recordings of each interview were stored electronically and saved in line with ethical committee guidelines. I created electronic folders for each DHB that encompassed folders for each participant containing the audio recording, interview transcript, and field notes. Each of these files were coded with a number, a pseudonym, and type of file (e.g., ‘interview transcript’). I loaded the interviews, transcripts, and field notes described above into QSR International’s NVivo 10 qualitative data analysis Software, with all documentation containing pseudonyms only. Access to the audio tapes, transcripts, and analysis data was available only to me and my supervisors.

Correspondence involving data was handled with care. Neither the Nurse Recruiters nor the senior data analyst shared any personal identifying information about Mixed Presenters, such as names or NHI numbers, with me. All communication occurred via hospital or university email, and extra security measures were taken when sending datasets: the senior data analyst sent these datasets in a password-secured manner such that the data needed to be retrieved within a week. Patient information was kept in the DHB facility and was subject to the usual privacy agreement to which staff is obliged to adhere.

I started the analysis as soon as I had completed the first interviews. This allowed me to determine when I had reached saturation; yet when this point was reached was initially
quite difficult to know for sure (Guest, Bunce, & Johnson, 2006). However, risking that results might be unbalanced or untrustworthy with non-saturation, I used the following strategies to help reach saturation (Saumure & Given, 2008): I selected a cohesive sample of Mixed Presenters from the MISP dataset only and I had a good knowledge base of this group from clinical practice. Similar to other studies (Long et al., 2015) I found that after having completed a certain number of interviews (in this case, 20), the issues and experiences shared by subsequent individuals were all similar to those already documented. However, upon considering that this was my only opportunity to collect this kind of data and I had an available sample, a further seven interviews were performed, ensuring that data saturation was reached.

Data analysis started with transcribing each recorded interview verbatim, which I did myself. During the transcription process, after first typing up each interview, I checked each transcript against the audio recording and made amendments where required. When the interview recording was difficult to decipher, I played it over multiple times to ensure as accurate a transcription as possible. In places where I was unable to understand the person, I inserted ‘(?)’ in the written document. Transcribing each interview provided me with an in-depth knowledge of the interview data, which is in line with interpretive description (Thorne, 2008).

Interpretive description follows a grounded approach to articulating patterns and themes emerging in relation to various clinical phenomena (Thorne, Con, McGuinness, McPherson, & Harris, 2004). Even though I had made a summary from each interview and outlined the main themes contained within, when comparing the summaries and attempting to link similar themes together, I realised that this approach potentially missed out important detail. I then started to use NVivo 9 (QSR International, Doncaster, Australia) software, enabling organisation, analysis and easier finding of insights in unstructured data.

The thematic analysis followed the interview guide, which aligned with the journey through ED (reflected also by the theoretical underpinnings in Chapter 4) and my research questions. Hence, the analysis was organised into three parts: ED presentations for self-harm; ED presentations or another reason; and general information, such as similarities or differences between visits, or suggestions. I further divided each part into themes related to either health systems and ED, or to the Mixed Presenter as a person. These broad categories reflected my research questions and assisted my efforts to obtain
comprehensive visit-related information. These classifications facilitated sorting of the data especially when participants told their stories in different ways.

Themes at each point of the journey through ED were identified and interpreted. A theme was viewed as relevant if it was common amongst interviews, and also if it added to an understanding of Mixed Presenters or their reflection on ED management. The themes were identified as nodes and sometimes numerous sub-nodes. For example, under 'comparison between ED visits and general information' nodes (some detailed in Appendix 14), 'coping strategies' voiced by Mixed Presenters included 'keeping occupied'. Each description of being occupied was separately coded, allowing a theme to develop, such as the need for some Mixed Presenters to 'give back'. The linkage between themes resulted in categories.

I frequently shifted my focus from concentrating on an individual to the whole dataset, comparing themes between individuals, confirming or contrasting each other. Field notes, taken immediately following each interview, described in section 6.6.3, and memo files (listed by themes in Appendix 15), created simultaneously during the process of grouping and re-grouped my themes/categories, assisted with this process. The routine documentation of impressions by categories aided in the reflexive process, whilst enabling me to merge input from numerous participants. The memo files helped me to question “what it all might mean” (Thorne, 2008, p. 153), forming the basis for the reported findings. During this complex and immersive uncovering of clinical phenomenon (Thorne, Kirkham, & O’Flynn-Magee, 2004), I was nevertheless conscious of the danger of premature closure, misinterpreting frequency and over-inscription of self (Thorne, 2008).

6.8 Quality of the research

The quality of this research was underpinned by my aim to produce robust research, which Creswell (2009) recommends needs to consist of reliable and consistent approaches. For the qualitative part, I followed Liamputtong (2013) structure for rigour, which is separated into (i) strategies involving research design and process, and (ii) strategies involving research participants, peer researchers and outsiders. Further, the use of the consolidated criteria for reporting qualitative research (COREQ) guided the
research process and facilitated comprehensive reporting of the findings (Tong, Sainsbury, & Craig, 2007).

I chose interpretive description (Thorne, 2008) because its clinical lens was matching my own. Furthermore, my extensive ED and mental health background meant that I had a solid context in which to put the information obtained from Mixed Presenters, their self-harm risk and ED management. I applied a rich description of the research methods and processes, participants and their circumstances which were aimed to enable readers to judge the findings' transferability. Where appropriate, verbatim quotations were used to provide evidence for my interpretations. I further incorporated reflexivity, presenting critical self-reflection and possible biases, acknowledging that beliefs, experiences and personal histories of researchers might influence the research (Gerrish, 2011; Liamputtong, 2013). Trustworthiness was enhanced by the utilisation of an interview guide, which allowed asking each participant the same questions. Lastly, I adapted a triangulation protocol to merge qualitative and quantitative findings so as to confirm, dispute or accentuate findings (Farmer, 2006).

Strategies involving research participants, peer researchers and outsiders involved member checking, peer review and creating an audit trail (Liamputtong, 2013), each of which is discussed in turn. Initially, I attempted member checking by sending the first two participants their transcripts for feedback and confirmation that I could use the information, but I received minimal feedback. Consequently, I did not verify my findings with participants. On reflection and in discussion with my advisors, we decided that despite Smith et al. (2010) claiming that research can be conducted safely with participants at risk of self-harm, that there was a risk of increasing Mixed Presenters’ vulnerability by requesting further input into the research process. Mixed Presenters shared intimate, personal, and sensitive information including their struggles over abuse, rape, neglect, and family violence. Everyday coping was a struggle for many individuals and to ask them to further immerse or re-immersse themselves in their past self-harm experiences to such a degree seemed unethical.

Transcripts and interviews were reviewed by my supervisors. Review of the first interview resulted in feedback on interview style. I had asked the questions as a clinician, wanting only the most important facts within a short amount of time. The feedback helped me to ask open questions and follow-up on what people had said when doing research interviews: “Would you like to say more about...?” One supervisor also coded the next five
interviews and we compared the resulting codes. One-page summaries of each interview were reviewed during regular supervisory meetings.

I kept an audit trail including field notes and analysis memos. These field notes and analysis memos (Appendix 15) facilitated overall rigour as they enhanced recollection of events, provided confirmation on their timing and order, as well as showed the development and linking of thoughts and ideas.

6.9 Summary

This chapter described the qualitative methods used in this study. I detailed how I planned and executed the interviews with Mixed Presenters from three DHBs following interpretive description methodology. Further, I described the analysis of the data. The interview findings are presented next.
Chapter 7
Qualitative Findings on Mixed Presenters

“Doctors rather medicate it, scan it, suture it, splint it, excise it, anaesthetise it, or autopsy it than communicate with it.”

7.1 Overview

This chapter, divided into three parts, reports on the interviews with Mixed Presenters. Part one includes personal aspects of Mixed Presenters such as demographic information, mental and physical health history, social background, everyday living experiences, and how people viewed medication. Part two describes the serious self-harm risks of Mixed Presenters, including contributing factors, presentation patterns and risk on ED discharge. Part three describes ED management, and includes the help seeking mode of Mixed Presenters, along with their experience while in ED and when discharged. Lastly, an overview of Mixed Presenters’ satisfaction with ED care and suggestions for improvement is provided.

A proposed model (Figure 7.1) depicts a general overview of Mixed Presenter’s lives and their experiences in ED. Participants’ self-harm risk was a reflection of their coping limits: the risk increased where complex health and social issues increased to the point of not coping, resulting in self-harm. This risk was often present in the community, in ED and on discharge. In view of support people’s crucial roles, they are presented in bold, with arrows indicating their input into various points of Mixed Presenter’s lives and their ED journey. In contrast, mental and physical health services are on the outer side of the patient flow chart, presented in a less stark font and no arrows, indicating that despite accessing their services, Mixed Presenters perceived their impact as often limited. This chapter provides additional information on Mixed Presenters complex lives and their help-seeking experiences in ED and on discharge. It is intended that the figure will assist with navigating this chapter.

7.2 **Who are Mixed Presenters?**

In this section, I describe Mixed Presenters. Firstly, I provide demographic information, and then relate their mental and physical health history. Secondly, I describe their social background and how they cope with everyday living. Thirdly, Mixed Presenters’ views on medication are explored. Findings have to be viewed in light of the fact that the interview guide did not include set questions on people’s clinical or social history in order to avoid any emphasis on what was ‘wrong’ with participants. Instead, the focus was kept on ED experiences and coping. Therefore, I received background information from only some participants.

7.2.1 **Demographic information**

The eligible population of Mixed Presenters (n = 104) was four times higher than the number of participants interviewed (n = 27). Though more males (54%) were non-participants (Table 7.1), women (n=57) more commonly agreed initially and then were lost to follow-up. There were no age differences between the overall sample, non-
participants, and participants. However, those subsequently lost to follow-up were in a younger age range.

**Table 7.1  Demographic information of sample frame (N = 104)**

<table>
<thead>
<tr>
<th></th>
<th>Identified sample N = 104 (%)</th>
<th>Non-participants n = 65 (%)</th>
<th>Initially agreed, then lost to follow-up n = 12 (%)</th>
<th>Interviewed n = 27 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>57 (55)</td>
<td>30 (46)</td>
<td>10 (83)</td>
<td>17 (63)</td>
</tr>
<tr>
<td>Male</td>
<td>47 (45)</td>
<td>35 (54)</td>
<td>2 (17)</td>
<td>10 (37)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>18-72</td>
<td>18-72</td>
<td>18-41</td>
<td>20-65</td>
</tr>
<tr>
<td>Median</td>
<td>33</td>
<td>35</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>Mean</td>
<td>35</td>
<td>37</td>
<td>24</td>
<td>36</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NZ Māori</td>
<td>17 (16)</td>
<td>13 (20)</td>
<td>1 (8)</td>
<td>3 (11)</td>
</tr>
<tr>
<td>NZ European</td>
<td>69 (66)</td>
<td>39 (60)</td>
<td>8 (67)</td>
<td>22 (81)</td>
</tr>
<tr>
<td>Other European</td>
<td>5 (5)</td>
<td>4 (6)</td>
<td>0</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Pacific</td>
<td>1 (1)</td>
<td>1 (1)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Chinese</td>
<td>1 (1)</td>
<td>1 (1)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not stated</td>
<td>1 (1)</td>
<td>1 (1)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Others*</td>
<td>10 (10)</td>
<td>6 (9)</td>
<td>3 (25)</td>
<td>1 (4)</td>
</tr>
</tbody>
</table>

*Stated as per data

The percentage of Māori (16%) was slightly above the national population average in the identified sample, but Māori made up only 11% of those interviewed. The sole availability of demographic information of non-participants meant how their lives and ED experiences compared to those shared by participants remained unknown. Table 7.2 provides detailed demographic information on the sample interviewed, and introduces participants by pseudonym.

### 7.2.1 Mental and physical health history

Mixed Presenters commonly disclosed a range of physical and mental health problems. Mental health diagnoses included depression, post-traumatic stress disorder (PTSD), borderline personality disorder, and/or psychosis-related illnesses. The PTSD resulted from involvement in a major earthquake; witnessing the murder of a family member; and past self-harm, such as a near-fatal self-shooting. Also, enduring past assaults, child abuse, and family violence contributed to PTSD. Both male and female participants reported childhood sexual and physical abuse (n = 6), with the majority implicating family members as perpetrators (5/6). Five participants mentioned alcohol and drug use issues, though three men discontinued after experiencing mental ill health and medication
interaction, whilst two women were currently alcohol dependent, sniffing glue and smoking cannabis.

Table 7.2  Participants’ individual demographic information ($n = 27$)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Pseudonym</th>
<th>Age Group</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>Amelia</td>
<td>18-30</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Angeline</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Diane</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Felicia</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Fiona</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Gillian</td>
<td>31-45</td>
<td>Other European</td>
</tr>
<tr>
<td></td>
<td>Grace</td>
<td>31-45</td>
<td>Other</td>
</tr>
<tr>
<td></td>
<td>Iris</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Kim</td>
<td>18-30</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Maggie</td>
<td>18-30</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Marilyn</td>
<td>46-60</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Melissa</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Natalie</td>
<td>18-30</td>
<td>NZ Māori</td>
</tr>
<tr>
<td></td>
<td>Paula</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Polly</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Ruth</td>
<td>18-30</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Shirley</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td>Males</td>
<td>Derek</td>
<td>&gt;60</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Henry</td>
<td>18-30</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>John</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Marco</td>
<td>18-30</td>
<td>NZ Māori</td>
</tr>
<tr>
<td></td>
<td>Matt</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Mike</td>
<td>31-45</td>
<td>NZ Māori</td>
</tr>
<tr>
<td></td>
<td>Morris</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Nick</td>
<td>31-45</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Rory</td>
<td>18-30</td>
<td>NZ European</td>
</tr>
<tr>
<td></td>
<td>Scott</td>
<td>46-60</td>
<td>NZ European</td>
</tr>
</tbody>
</table>

Mental health issues oftentimes required Mixed Presenters to receive treatment. More than half of the participants ($n = 14$) shared their experiences of mental health admissions. Of note, those who presented frequently to the ED who reported numerous and lengthy prior mental health-related hospitalisations, were now discharged from services. Consequently, they were receiving minimal input after self-harm events. Three participants with psychosis-related symptoms had been discharged from a mental health inpatient unit within 3 days prior to their interview.

When talking about their physical presentation, 18 participants shared some of their physical health history (Table 7.3). Many experienced chronic pain, tremors/seizures,
digestive problems, arrhythmias, and diabetes-related health issues. Whilst physical health issues were often of medical origin and some were of the degenerative type, others stemmed from traumatic events that had resulted from family violence, mostly in childhood. Outcomes of such trauma included brain injuries, epilepsy, chronic pain, and hearing loss.

I had an accident when I was seven years old. I got pushed off the top of a two-storey house. And I fell face first onto a wooden peg in the ground and I’ve ripped right down the centre of my face open. And I was in a coma for about 2 or 3 weeks, but ever since then I’ve been in pain as a kid. (Mike)

Table 7.3 Past and chronic physical health issues reported by Mixed Presenters

<table>
<thead>
<tr>
<th>Past and/or chronic physical health issues reported by participants</th>
<th>n=18*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neurological:</strong> Headache, sinusitis, epilepsy, degenerative illness including curving of spine, fibromyalgia, neurofibromatosis, tremors, retinal neuropathy, peripheral neuropathy, autonomic neuropathy</td>
<td>9</td>
</tr>
<tr>
<td><strong>Cardiovascular:</strong> Congenital heart murmur, myocardial infarction, cerebral vascular accident</td>
<td>4</td>
</tr>
<tr>
<td><strong>Trauma:</strong> Below-knee amputation, deafness due to family violence, head injury and concussion</td>
<td>4</td>
</tr>
<tr>
<td><strong>Rheumatology/endocrinology:</strong> Arthritis, weak hips, diabetes</td>
<td>3</td>
</tr>
<tr>
<td><strong>Orthopaedic:</strong> Back pain</td>
<td>3</td>
</tr>
<tr>
<td><strong>Abdominal:</strong> Large bowel resection, hernia, multiple abdominal operations for chronic pain, cholecystectomy (post self-harm)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Urinary and renal:</strong> Retention, renal colic, nephrectomy (post self-harm)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Gynecological:</strong> Ovarian cyst, miscarriages</td>
<td>2</td>
</tr>
<tr>
<td><strong>Other:</strong> Chronic pain, chronic fatigue, ulcers</td>
<td>6</td>
</tr>
</tbody>
</table>

*People could have none or multiple physical health issues

7.2.2 Social background

Living arrangements differed between participants, with the majority reporting sharing with others (Table 7.4). One woman who lived in her own flat in an elderly care facility was classified as ‘alone’ and a participant in supported accommodation was ‘sharing with flatmates’. Two men owned their own houses and a small number reported recent moves. Although eight participants reported having children, only two cared for them full-time and one also had foster children. Those who had part-time care responsibilities shared this with ex-partners and one participant who had minimal contact with her children had a restraining order placed against her by her ex-husband.
Many participants’ living circumstances appeared unsettled. Legal issues voiced included past prison sentences and home detention. Two participants mentioned prosecuting family members for abusing them in childhood. As a result, they experienced exclusion from their family units and, for Angeline, living in chronic terror of threatened retributions by the perpetrators. Two women sustained severe injuries from family violence, for example, Melissa recounted how “my ex-partner had assaulted me and he’d thrown me down the stairs and he cracked three of my ribs and badly bruised the base of my back”. Abuse was also present for males, for example, Derek reported ongoing contact with an abusive sibling. At the time of the interview or around their ED presentations, three Mixed Presenters had restraining orders in place.

Table 7.4  Social background of Mixed Presenters

<table>
<thead>
<tr>
<th>Social background of participants</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Living situation</strong></td>
<td></td>
</tr>
<tr>
<td>Alone</td>
<td>10</td>
</tr>
<tr>
<td>With partner</td>
<td>7</td>
</tr>
<tr>
<td>Sharing with flatmates</td>
<td>5</td>
</tr>
<tr>
<td>With parents</td>
<td>3</td>
</tr>
<tr>
<td>Single parent</td>
<td>1</td>
</tr>
<tr>
<td>Not mentioned</td>
<td>1</td>
</tr>
<tr>
<td><strong>Children</strong></td>
<td></td>
</tr>
<tr>
<td>Full-time care responsibility</td>
<td>2</td>
</tr>
<tr>
<td>Part-time care responsibility</td>
<td>4</td>
</tr>
<tr>
<td>Limited access (no regular responsibility)</td>
<td>2</td>
</tr>
<tr>
<td>Not mentioned</td>
<td>19</td>
</tr>
<tr>
<td><strong>Legal issues</strong>*</td>
<td></td>
</tr>
<tr>
<td>Family violence</td>
<td>6</td>
</tr>
<tr>
<td>Prison sentences including home detention</td>
<td>3</td>
</tr>
<tr>
<td>Restraining orders</td>
<td>3</td>
</tr>
<tr>
<td>Prosecuted family members for child abuse</td>
<td>2</td>
</tr>
<tr>
<td>Not mentioned</td>
<td>18</td>
</tr>
</tbody>
</table>

*Participants could have multiple legal issues

A further stressor was a lack of money. Eight participants stated they had limited control over income and outgoings, with money struggles negatively affecting relationships. Control was diminished due to personal reasons such as gambling problems but was mostly attributed to other people or organisations such as partners who spent participants’ income in excess or employers who discontinued work contracts. Those dependent on income support felt they required knowledge of the system, skill, and patience in its utilisation. A history of both physical and mental ill health influenced both job opportunity and successful access to official support for people like Scott who reported “Just got to fight and fight and fight...for everything and I just can’t be bothered doing it”. Fiona, disabled by complex health issues, explained her level of income as follows:
Money also influenced help-seeking behaviour for health issues. Matt returned to work prematurely due to ACC payments he viewed as insufficient for paying bills. A lack of finances to renew his prescription for his usual medication contributed to Scott becoming mentally unwell and suicidal. A few participants decided against the use of costly ambulances, resulting in treatment delays after major overdoses and unsafe driving. For three participants, money concerns were a deterrent to seeking GP assistance.

### 7.2.3 Medication – essential yet problematic

Medication influenced many participants’ lives. For some people who experienced major mental health problems, medication facilitated stability and reduced impulsiveness. The experience of not taking medication and becoming mentally unwell affected some participants: “I realise I need to be on them” (Morris). In addition, medication was crucial for participants needing to manage chronic medical problems such as diabetes or pain. However, the ineffectiveness of medication treatment had led to frequent medication changes for some participants: “They keep changing every time I’ve gone in...mucked around with medication” (Morris). Changes in medication regimes were risky at times. An increase in medication for tremors resulted in a decrease in mood and an acute suicide risk requiring forensic admission for Morris, whilst Shirley figured that the titration of quetiapine possibly increased her impulsiveness, contributing to her self-harm. Six participants mentioned medication interactions or side effects, at times between physical and mental health medications. Side effects such as shortness of breath, increased distress, and no relief from pain contributed to self-harm. Trial and error resulted in stabilisation for some: “I’ve been on the medication for about 10 years, finally got it right” (Gillian).

Conversely, when some participants were discontinued on psychiatric medication it resulted in positive outcomes. For Polly, psychiatric medication reduced the efficacy of seizure medication leading to an increasing number of seizures. When her psychiatric medication was discontinued, her seizures stabilised. At the time of the interview, her previously frequent self-harming had decreased substantially, she had lost weight, and she was working as a care worker. For Nick, being off medication meant better general
health, a deeper sleep, no head rushes, and decreased drive to self-harm. Yet discontinuation of medication, such as certain analgesia for chronic pain taken off the market, resulted in negative effects for Mike, who consequently started alcohol and drugs use for relieving pain instead. His unresolved chronic pain led to low mood and suicidal behaviour.

Receiving medication was in the hands of the doctors with limited contribution from participants. Once medication was commenced, some doctors appeared reluctant to make changes because it was “good medication, give it time” (Marco), even after years of perceived ineffectiveness. Similarly, Angeline, enduring chronic pain, traumatic nightmares, and thoughts of suicide for decades, received little relief from medication: “What the doctor gives me, it never helps. And I keep telling them that, they just keep giving me the same things”. Equally, medication changes were disappointing for some people as doctors were viewed as “sort of just y’know playing around” (Derek). Also, Paula, experiencing intolerable side effects of newly commenced medication, which her health professional viewed as her only option, discontinued the medication after a few days - “I would rather be crazy”. Only then her medication was changed.

Mixed Presenters’ accounts of difficulties with receiving effective medication is likely a reflection of medication being only partially able to help with their complex physical and mental health issues and backgrounds of trauma. In addition, Mixed Presenters’ history of self-harm influenced how and what doctors prescribed, for example, they declined prescribing John analgesia for his chronic back pain, because of his numerous overdoses in the past. Help with medication was often in the form of support people, seen by many participants as crucial in communicating with doctors and/or psychiatrists, because they felt ineffective on their own.

7.2.4 Everyday living

Some participants shared that they had developed strategies for coping with their mental and physical health issues; these included exercise and healthy eating, playing on-line games, art, and baking. Strategies specifically addressing mental health care included putting themselves first, setting small goals, and writing. The majority of participants were caring for animals. Being active was often used as a distraction from thinking about self-harm, yet some used self-harm as a coping strategy. If they did this often, it resulted in increased knowledge of wound care and a certain level of self-help ability “I’ve tried to
explain it to a few people and they just don’t get it. The pain helps me focus on something...instead of my mind going chaotic” (Nick).

Various participants mentioned having a purpose such as study or work as a contributor to wellness. “It’s like I’ve actually got something to get up for now” (Shirley). Study provided a focus, something to do, and in the case of mental health training, contributed to understanding themselves better. For a few men, work reflected competence. Some described the immense pressure of a high workload, and the need to support others and to excel “I was quite successful...I had 3 businesses and 27 staff“ (Mike). Being a team player was hard for some participants who had plans to work independently: “work by myself...so I know I’ve done the job right” (Scott). For Grace, work signified contribution: “I do volunteer gardening to feel like I earn my benefit”. Some participants experienced their work in mental health settings as giving them purpose, despite the occasional conflict when needing admission themselves. Continuing to work whilst engaging in self-harm was difficult; for example, when working as a nurse, self-harm influenced study and work plans.

GPs also had a role in providing long-term care for 19 participants’ often complex needs, commonly accessed either before or after their ED visits. Unique to the GP setting, long-term relationships with GPs sometimes resulted in both physical and mental health needs being met: “He knows my mind and my body...for 20 years” (Felicia). For other participants, GP use was solely for physical issues because of low expectations of their self-harm knowledge. Similar to their ED experiences, these participants reported feeling judged, which influenced future help-seeking. Some participants stated they were often in a physical or mental health crisis where the GP initiated ED care. Post-ED care included follow-up on tests and adjustment of medication. GPs tried arranging access to secondary services with limited success at times. Similar to ED, some participants reported that nothing was found wrong or that the GP could not help: “I was in a lot of agony, I went to my GP, blah blah blah...he couldn’t do nothing for me, ok, and he wouldn’t give me any painkillers” (John). Many struggled with on-going self-harm risk.

In summary, Mixed Presenters were not a homogenous group. What seemed universal was that participants were leading difficult lives, many from early childhood. Numerous participants experienced mental and physical health issues, as well as social difficulties; often these were interlinked with each other. Medication regimes, critically important for
some people, were most often associated with uncertainty and a lack of choice. Over time, many Mixed Presenters had developed coping strategies that influenced their self-harm.

7.3 Serious self-harm risk

This part of the chapter examines the serious self-harm risk of Mixed Presenters. Firstly, I describe contributors to people harming themselves (which include mental, physical, and social aspects), as well as hospital experiences and medication use. Secondly, I explain the different patterns of self-harm presentations by Mixed Presenters. Lastly, I report on Mixed Presenters' self-harm risk on discharge from ED, whilst other information relevant to their departure from ED is discussed under section 7.4.5.

7.3.1 Coping has limits

Triggers for self-harm often related to social stressors including relationship discord, such as marital/partner separation (actual or threatened), access difficulties with children, and domestic violence; altercations with gang members; concern about money; threats of imprisonment; and work loss. Consequences of problematic relationships with others resulted in loneliness for many, contributing to self-harm. Past abuse and domestic violence contributed in a few cases to both self-harm and other presentations. This was in the form of experiencing chronic self-harm thoughts and physical complaints simultaneously, or when domestic violence resulted in both self-harm behaviour and physical trauma. These triggers reflected that coping with additional uncertain – and at times what appeared to be unlimited – stressors often exceeded Mixed Presenters' coping abilities, resulting in self-harm.

Commonly, participants reported a link between physical ill health and self-harm. Some participants associated their self-harm behaviour with difficulties in coping with chronic physical conditions ($n = 12$), including unrelenting and unbearable pain ($n = 7$). Angeline felt unmotivated to take showers or eat on discharge because she would rather fade away than continue suffering from headaches and nightmares. For several participants, the fear of inevitable decline in physical health and their disease's unpredictable future was seen as the cause for self-harm. For Marilyn, whose diabetes contributed to a stroke, heart attacks, and peripheral neuropathy, coping had limits: “I've always been a fighter but this particular time...I've been having so many health issues...I felt like...I wanted to end it before it
ended me”. Of note, some of the participants’ self-harm episodes had consequences, leading to more severe physical problems, such as heart conditions impacted by overdoses. For those Mixed Presenters whose self-harm and other presentations seemed to be unconnected \((n = 8)\), most nevertheless reported a history of self-harm, mental illness, illegal drug use, past abuse, contact with gang members, and/or chronic physical issues.

More than a third of the participants experienced sleeping difficulties, including half of the men. Reasons for poor sleep were sometimes both physical and mental health-related.

_Trying to shut...the thoughts off to sleep is the big thing. I get 15 minutes and then I wake up for an hour...and then I end up...getting in a position that then hurts my back and then, yeah...I focus on the pain in my back and then again you just can't sleep._ (Matt)

Some participants viewed not sleeping much as positive. Two men reported their 15 minutes-at-a-time sleeping as positive, providing more time for being successful and competent in their jobs. Yet over time, inadequate sleep patterns impacted negatively on their mental health and ultimately influenced their self-harm.

Prescribed medication provided means for self-harm. A few participants who experienced pain, anxiety, or sleeplessness were regularly taking overdoses of their medications with varying degrees of suicidal intent. Mike combined self-harm methods such as overdosing on sleeping tablets and driving a car. Matt took a friend’s antipsychotic medication to aid his sleeping, and eventually used it for self-harm. Also, participants acquired pills for overdosing by approaching new doctors or visiting different stores for over-the-counter medication. Polly, who endured chronic pain and low mood (unrecognised by ED staff), had easy access to numerous medications because “When I was in ED...I went home with – well, I had 250 tramadol, 200 panadol, 200 nurofen, and 180 codeine which is what a doctor at ED sent me home with”.

In particular participants who had blister packs had easy access to means for self-harm. Fiona’s overdose of 26 tablets was viewed as accidental by her, as she believed she had mixed up old and new blister packs. Grace found hospital procedures facilitated easy access to medication.
Collecting full blister packs from the pharmacy could be a risky time for overdosing, especially when it coincided with being in a distressed state. On a positive note, blister pack dispensing was adjusted for one participant post overdose.

Another means for self-harm was in the forms of driving a car as some Mixed Presenters, mostly men, drove cars whilst at risk of self-harm or whilst being otherwise impaired. Comorbidities contributed to some participants driving cars with reduced vision and reduced consciousness levels. Diane continued to drive despite a risk of seizures: “it’s quite concerning about other innocent people” but she also, like others, used the car as a means for self-harm. Whilst in a distressed state, she decided spontaneously to self-harm by driving off the road and “down the gorge” following discharge from ED. Mike was in an over-medicated and suicidal state whilst driving and tried to drive off the road various times, requiring his partner’s assistance to stay unharmed. He rationalised that his suicide would be disguised and classed as an accident.

Half of the participants expressed out-of-control feelings prior to self-harm. The unpredictability of their mental state included difficulties with thinking rationally and clearly. Participants reported feeling “muddled up”, “really confused”, “pretty upset about things”, and “freaked out”. Feelings of being “out of control” and loosing “the plot” aligned with Gillian’s account: “One minute I’m happy as and the next minute I’m angry for no reason…I can’t control my moods…it’s very hard to predict anything for me”. Consequently, behaviours were frequently not guided by a lucid mind, which might explain the self-harm by a number of participants who had experienced family members or friends dying by suicide. These participants expressed devastation about the suicides, yet they were undeterred from harming themselves (but neither was it mentioned as a contributing factor). For four participants hearing voices, command hallucinations and feelings of disassociation had contributed to various self-harm episodes and hospital admissions: “I was reacting to…the voices… telling me to kill myself” (Rory). Alcohol and drug use, and neurological disorders such as tremors or seizures were viewed as altering their mental state. Many did not care about the outcome of their self-harm.
Most participants wanted to die as part of their self-harm \((n = 16)\). A self-harm act without suicidal intent included those who had taken unknown amounts of random pills, somebody trying “to jump over bridge” and a participant’s “drive down the gorge” (off the road), implying that the seriousness of the act did not always align with the intent of the person. Alternatively, they might have rationalised or perhaps ‘reinterpreted’ their motivation afterwards. Three participants denied a self-harm event, despite their definite documentation in MISP data. Shirley’s other presentation could have been self-harm, however she made a clear distinction between her two overdoses. One overdose was carried out with the intent to “stop the world”, whilst the other she classified as a minor overdose with no intention of self-harm, despite the fact a concerned support person rang for help.

Many participants were long-term dependent on health services. Ill-treatment or lack of treatment by ED and other health services staff was perceived as a contributor to self-harm by 15 participants. These negative treatment experiences included inadequate analgesia; ineffectiveness in curtailing a decline in physical health; non-access to specialist services such as mental health; ineffectiveness of medication; and foremost was disrespectful, uncaring, and judgemental staff. A third of the participants reported arguments with ED staff which increased their distress and which, for five participants, led to immediate self-harm. Other participants self-harmed following numerous presentations when their coping limits were exceeded.

### 7.3.2 Self-harm patterns

In response to the question about the number of ED visits within the previous 12 months, many participants explained why they had presented, which for most \((n = 21)\) was because of previous episodes of self-harm. ED presentation patterns differed among participants.

Of the six participants with single self-harm episodes, four were men. Five participants reported one previous suicide attempt, often with a large time gap between the most recent attempt and the past one. For example, Morris who appeared recovered following years of struggling with depression and self-harm relapsed when he experienced a major earthquake; he had been stable for six to seven years. Four participants reported numerous presentations for self-harm in the past, with some resulting in inpatient admission, yet in recent months had engaged in far less frequent self-harm. These
participants were employed, had an established support network, were religious, or had
developed a more positive attitude toward ED staff. Grace was able to reduce her “cutting,
standing on bridges getting ready to jump” and instead, struggled with chronic and severe
back problems that required several ED visits, hospital admissions, and surgery.

Eight participants had self-harmed over many years to the current day and many used
self-harm as a coping strategy when everything else failed. John stated “I deal with my
problems if I can see it, if I can’t, then the only way I know how to deal with something is self-
harm”. Chronic thoughts about self-harm were common: “like, do everything to NOT do
it...all the time” (Amelia). Past self-harm increased participants’ knowledge and they were
potentially making more informed decisions about future self-harm. For example, one
participant viewed overdoses as too messy; during the interview he outlined alternative
ways of self-harm he was considering whilst not sharing whether he would act on them.

Only a third of participants mentioned self-harming without seeking help from ED. Of
these, three people stated they would attend ED between three to eight times out of every
10 self-harm episodes. Reasons for non-attendance included past negative ED
experiences. Many participants (n = 11) did not provide information on non-help-seeking.

7.3.3 Discharge – crisis not over

Many participants experienced low mood, agitation, or a wish to disengage on discharge
from ED. Some participants considered looking for further self-harm opportunities post
discharge, such as attempting to locate medication for an overdose or looking for utensils
that could be used for inflicting harm. The level of risk appeared to vary, with many being
of two minds about further self-harm. Suicidal tendencies extended for months after ED
visits for some participants: “If something went wrong, first option was to commit suicide”
(Mike).

On discharge, several participants responded with displeasure that their suicide attempts
had been unsuccessful: “I just wanted to get it over and done with” (Angeline). Having
children was mostly viewed as a protective factor. People like Matt – who experienced
separation from his family, money issues, job insecurity, drug withdrawal, fear of stigma,
and legal problems - continued to consider self-harm whilst wanting to stay alive for his
children. Of the 13 participants reporting that they felt at risk of further self-harm on
discharge, 10 had made earlier visits to ED. The risk for further self-harm was influenced
by the treatment some participants had received from clinical staff, especially the
experience of feeling dismissed by services when asking for help. Paula admitted that although ED treatment did not influence her risk on the specific occasion under discussion, she felt that “in the medium-term, it kind of contributes to more self-harm”.

For some participants, the risk of self-harm on discharge remained unknown. Fiona’s ED presentation following a substantial overdose resulted in an assessment by the crisis team and discharge home. She unyieldingly stated “I didn’t do it on purpose”, despite coping with severe physical and social challenges and reporting frequent self-harm thoughts.

The majority of participants reflected with regret on their self-harm attempt, experiencing negative emotions including feeling “down”, “bad”, “embarrassed”, “stupid”, “disappointed”, “scared” and “guilty”. Participants judged themselves negatively for their self-harm when they had experienced the impact of suicide themselves; they relapsed after a long period of non-self-harm; or it contradicted with their expectations of themselves.

I actually felt like a failure...as a husband, a father, a failure of killing myself. So pretty much just put it down to being a failure. Just disappointed in myself ‘cause I don’t like to fail. (Matt)

Some participants treated the self-harm event as a one-off that was most frightening and not to be repeated in future: “I just hit rock bottom and there is no way I want to go back” (Polly), with some trying to forget about it symbolically: “gonna get a tattoo over it” (Natalie). Others felt traumatised having put themselves into such a potentially life-threatening situation which they felt was too frightening to repeat. Mike reflected that because of the impact of self-harm on his support person, he would not consider future self-harm.

In summary, part two of the chapter demonstrates that many Mixed Presenters were chronically, though often intermittently, at risk of self-harm. An unpredictable mental state; chronic physical ailments; social hardship, including relationship breakdown; and hospital care that did not meet their needs, were reported triggers for self-harm. It was often the accumulated effects of these stressors that initiated self-harm. Prescribed medication and cars typically posed potential means for serious self-harm. The fact that 75% of participants had prior self-harm episodes within the last 12 months suggests that
Mixed Presenters might have a long-term risk of self-harm. On discharge from ED, Mixed Presenters commonly reported distress and ongoing self-harm risk.

7.4 ED management

This final and extensive part of the chapter consists of impressions and experiences of Mixed Presenters in ED. Firstly, I present the help-seeking strategy Mixed Presenters used for getting to ED. This section includes participants’ number of ED presentations within the last 12 months and reasons for attending. Secondly, I report on themes from Mixed Presenters’ experiences while in ED, which includes ‘ED staff care and attitudes’, ‘multiple roles of support people’ and ‘to stay or leave’. Lastly, the experience of leaving ED is presented.

7.4.1 Reluctant help-seeking

There was a reluctance to seek help from ED directly amongst many participants. The majority contacted family members/whānau, friends, health workers, and employers for advice concerning their physical symptoms, or to inform them implicitly or explicitly of their self-harm. This strategy might have been underpinned by uncertainty as to the need for ED care. Mixed Presenters often endured symptoms such as pain, tremors, and injuries (including neck lacerations) with the hope that they would resolve without medical intervention. Paula rationalised “I don’t make the decision to go to the emergency room lightly. So, I think that the times I do go I really feel like I do need to be there”. Grace believed physical evidence of ill health was required “I just hope there’s lots of blood and broken bones sticking out so that they can obviously see something is wrong with me”. Many called Healthline or the ambulance service for advice to establish whether they had experienced severe enough symptoms for a sufficient length of time to go to ED. Many accessed ED for safety. Most often, other people initiated help by calling ambulances or the police (the latter was involved in nine self-harm presentations).

Two participants mentioned help-seeking behaviours different from those described above. For one participant, loneliness influenced her choice to seek help from ED, despite her negative experiences with ED staff. Mike’s reluctance for attending ED was due to his fear of stigmatisation. Amidst various suicide attempts, he tried to bring himself to get
help from ED: “I’ve been there a few times, myself, but I hadn’t actually gone in, like I’d just been out in the car park and couldn’t actually go in”.

Participants reported having between 3 and 40 ED visits within the last 12 months (Figure 7.2). Most had presented between three and five times, with the majority (n = 14) presenting more than five times. A minority reported they had presented hundreds of times in the past. Unsurprisingly, participants who frequently attended ED commonly did not remember their exact number of visits.

![Figure 7.2](image)

**Figure 7.2** Mixed Presenters’ reported number of ED presentations within the previous 12 months

Participants attended ED with various forms of self-harm and physical health issues (see Table 7.5 for details). When presenting for self-harm, most participants presented with overdoses of psychiatric medication or painkillers; there were also lacerations to arms, wrists, and neck. Medical complaints included pain, seizures, urinary retention, feeling dizzy, chest pain, headache, and side effects from medication. Trauma events included a bite, eye injury, head injury, and ankle trauma. For both overdoses and seizures, participants were often unconscious on arrival to ED.
Table 7.5  Self-harm and other reasons for ED presentations by Mixed Presenters

<table>
<thead>
<tr>
<th>ED presentation complaint</th>
<th>Detail</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-harm</td>
<td>Overdose</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Laceration</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Suicidal ideation only</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Denied self-harm*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
</tr>
<tr>
<td>Other</td>
<td>Neurological, incl. seizures/tremors; head injury/headache</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Abdominal or chest pain</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Renal and urinary tract complications</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Limb trauma, eye injury</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Back/hip pain or trauma</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Medication side effects</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Diabetes-related complications and infection</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Non-intentional overdose*</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>

*Note: These participants were identified from the data to have mixed ED presentations and met inclusion criteria.

7.4.2  Staff in charge

Many participant’s ED experiences were marked by minimal input into their care. The waiting time in ED, cubicles with open curtains, the staff who cared for them, or whether they were admitted or discharged was decided for them. Many found the care impersonal: “It was like a processing plant” (Nick); “It’s just another patient, another patient, like robots” (Rory), which possibly contributed to three participants’ frustration about repeating themselves to different staff: “You’re telling the same story to five different people” (Shirley). Having ED staff deciding on care management was beneficial for participants not familiar with the system, as ED staff were taking charge when the participants themselves struggled with unknown health complaints. Following overdoses, participants often had a decreased consciousness level, increasing their vulnerability and dependency on ED staff for safety. However, participants with frequent ED visits struggled. Frequent ED visits for the same health complaint often did not result in investigations because staff decided on the legitimacy of health complaints. Participants with management plans often reported that they did not work for them, because they had little input into them, or they were outdated. Having a plan for one health concern and then presenting with something else caused disagreements between participants and staff.

Most participants could identify a small number of supportive staff who had on some occasions allocated them time and attention. Following years of unresolved chronic
health issues, a few participants had finally encountered helpful staff who listened. Staff were seen as caring when they provided practical help, such as immediate care with little waiting; privacy when being around other people produced distress; safety against violent partners; and referrals to other services. Having basic needs met with offerings such as food, a cup of tea, or a warm blanket was much appreciated.

Communication with the staff whilst receiving care was seen as positive when participants felt they were treated “like a person” (Mike, Nick) and included chatting, joking, and informal conversations. Health care support staff in particular was seen as providing supportive and empathetic care. Working in partnership with health professionals was appreciated; “the fact that the doctor actually admitted he didn’t know what to do... that’s what most of them should really do” (Nick). Good communication was also reflected in a number of participants being relieved about having received a diagnosis, hence legitimising their ED visit. “For the first time... my muscular condition was given a name. To me that validated that I was in genuine pain” (Felicia).

Perceiving staff attitude to be non-judgemental, non-patronising and compassionate contributed to participants trusting staff. Participants felt understood and listened to when ED staff communicated in language that was easily understood. Participants who judged ED care as compassionate made allowances for staff: “The nurses were lovely... if it was really urgent you knew that if you just ring your bell heaps of times that they’ll come running” (Melissa).

Many participants who had attended ED on several occasions believed that staff attitudes were negative because their presenting complaint was self-inflicted or because they had a mental illness. Making regular ED visits resulted in participants knowing staff and in return, being known by them. Many experienced negative responses: “I’ve been labelled... they’ve had enough of me going there” (Kim). Some viewed the sub-standard care for self-harm as appropriate because “there’s probably people there that deserve better care cause... they’re genuinely injured by an accident” (Melissa). For Amelia, who was enduring severe mental illness, the thought of being potentially recognised by staff resulted in her feeling ashamed and wishing she could “crawl in and crawl out” of ED. Rory, who had previously presented several times with mental-illness related issues and self-harm, was denied strong analgesia when presenting with acute appendicitis because of past cannabis use. Only once the cause of his pain was confirmed by the surgeon did he receive appropriate analgesia before his urgent transfer to theatre.
Frequent ED visits for physical health issues were equally problematic for a few participants. They described how their initial physical symptoms were dealt with expertly in ED and how over time staff attitude had become negative. Participants were most distressed when staff disbelieved their pain, especially when they were accused of drug seeking when presenting numerous times for abdominal pain, renal colic, or urinary retention.

Negative encounters with ED staff were probably contributing to a third of the participants having arguments with and/or becoming violent towards them, often requiring police and security intervention. Dealing with security staff was seen as an additional stressor leading to further violence at times. Although some participants had made official complaints about unsatisfactory treatment in ED, the process often failed to alleviate their discontentment especially as complaints against certain staff made future encounters with them anxiety producing because of fear of retribution. End results of conflicts in ED between some participants and staff was self-discharge: “After having an argument with the doctor...I did feel better to come home. I got to the point where I was... jus’ going to smack her one” (Gillian). Yet, Felicia had changed her negative attitude toward ED staff which resulted in reduced violence, discontinuing routine deployment of security staff for her, and improved treatment.

Many participants had overheard staff talking about other patients and themselves, sometimes negatively. Staff were overheard making judgemental remarks such as implicating participants as drug seekers, or stating “It’s a waste of time us helping her” (Maggie). Hearing staff talking about them openly led participants to believe that other patients could also hear and potentially judge them for their self-harming. Many participants worried that others would judge them as attention-seeking and timewasting.

Some participants’ self-harm risk was managed well. People acutely at risk of suicide, often single episodes and related to a major mental illness, expressed satisfactory care. Yet, mental health assessment procedures were criticised by a number of participants. Two participants could not recall their assessment due to the lasting effects of their overdoses. Those who frequently used ED mentioned how they were asked the standard risk assessment questions during the assessment. They missed the personal touch, the questioning for background information regarding reasons for their distress. As a consequence, participants withheld information. There was oftentimes no routine questioning about previous self-harm or about self-harm when participants presented
with physical symptoms. Polly regretted not having been asked about her mental state when she presented with physical issues. Yet, the majority of participants reckoned that self-harm was a separate issue, not relevant to presentations for physical complaints.

7.4.3 Multiple roles of support people

Support people provided a communication link between staff and the participants, especially when participants were unable to provide a history of past events or make decisions due to their poor mental and/or physical health status. However, friction arose when staff made a point of only talking to support people and excluding the participant. The support person was then an ‘emotion-stabiliser’, helping the participant contain angry and distressed emotions toward staff. For some participants who had frequent ED visits, support people served as “another voice” (Maggie) and “a witness to how I’d been treated” (Grace).

Many participants reported the need for emotional support because they felt scared, lonely, and anxious, and often these emotions were alleviated by the presence of support people. Support was provided in various ways such as just being quiet; providing care and comfort; and offering entertainment and distraction. Some support people were actively providing safety to participants, such as recruiting help for a collapse or restraining the participant to avoid harm. Yet, at the time, support persons were not always appreciated: “Couple of times...I ended up throwing things at them as well, walking out the door and getting rather nasty towards them” (Morris).

Maggie was involved in a support network where members involved in self-harm activities would support each other during a crisis; she had 20 ED presentations a year in addition to 10 visits when supporting others. Support people would often be first on the scene following self-harm, call for assistance, and safeguard the person in crisis in the ED setting.

Contacting support people was untimely on occasion: “I feel a bit friendless...when it’s three in the morning” (Felicia). Some participants had little choice as to who came to visit and expressed disappointment when visitors were not to their liking because they felt obligated to entertain or to support them. Others had certain views about family and friends’ roles as support people: “probably a bit boring” (Amelia). For Matt, it was the emotional impact of the self-harm event that made connecting with others difficult:
I wasn't really willing to talk to anyone. Family, they did come but I just shut down, didn't really talk to them. If I could've dug a hole I would have. At that stage, felt in a real dark spot. (Matt)

For the majority of participants (n = 15), support people knew about the participants’ self-harm, despite the embarrassment which contributed to participant’s reluctance regarding disclosure. Participants had to cope with other peoples’ reactions to their self-harm, viewed by Natalie as “causing devastation”. Further, Melissa used self-harm as a way of communicating her struggle with depression: “They didn't realise how sort of depressed I'd got. So that was a bit of an eye opener for them”. Participants appreciated when others did not make a big deal about the self-harm event.

Support people provided comfort, food, and company, in the main assisting participants with settling back at home. Over time, some support people adjusted the help they were able to offer participants.

With the constant self-harm and... when mum found me and things, she kind of was like, 'Enough is enough' and they kicked me out of home because...they couldn't cope with what I was doing. (Kim)

A quarter of participants were kept safe by support people. Support people removed possible means of suicide, which included the safeguarding of medication and immobilising a car planned for further self-harm. Support included keeping watch on the participant, which at times required special housing arrangements and was received by some with dislike. Others appreciated support people taking control when they felt they had little themselves. Iris received practical help when taken to an after-hours clinic. The support person ensured her safety by guiding doctors to only prescribe minimal amount of medication, and also provided financial support.

Support people played a role for both Mixed Presenters’ self-harm and other presentations. For ‘other’ presentations, their input included life-saving assistance with hypoglycaemia, waiting with the Mixed Presenter when presenting for pain complaints and arranging assistance for a seizure. Whilst it seemed that the support differed little between the types of presentation, self-harm or other, the person's connection with others, which in turn was related to the frequency of ED visits, appeared to matter.
Most participants who had visited ED frequently had only intermittent or no support people present, often figuring they had little choice in their lone existence. Whilst some reported feeling anxious being alone, others had adjusted over time: “My mum was there for a little bit and then she went, she met my sister, was having a coffee in the cafe...and got a ride home with her” (Amelia). Assistance from support people often decreased with the frequency of ED attendance.

Nine participants had no support people to confide in or did not mention supportive others. A minority \( n = 4 \) kept their self-harm behaviour secret from others which heightened their isolation. The lack of support was especially hard when participants had experienced ED care as inadequate and judgmental. On return home, these participants pretended that nothing was wrong and were even available to support others, such as children.

### 7.4.4 To stay or leave

Many participants \( n = 12 \) had self-discharged from ED in the past. For acute and serious self-harm and physical presentations, ED care was expedient; the care was perceived as excellent with no need to self-discharge. Many who continued waiting did so because of the amount of discomfort, pain, or limited mobility they were experiencing. When required to wait, engagement with ED staff about staying or leaving was often insufficient to persuade participants to stay. For some, the engagement with ED staff triggered self-discharge. Laura was angry when ED referred her to crisis mental health services when presenting for physical health issues. She had not been consulted and consequently self-discharged with neither her physical nor her mental health being attended to. Some participants felt agitated and angry when they were going to be discharged, contributing to self-discharge (before the formal discharge) and engaging in further self-harm. The consequence was that health issues were not fully attended to and for some, there was no going back because they had “not the guts to return” (Amelia). Participants' physical and mental states were often compromised at the time of self-discharge.

> I was completely covered in blood...and not feeling very well...and I just did not want to be there. And I think partially it was because of the concussion...I just wasn’t thinking quite straight. I was alone...so, I rang a taxi and left. (Iris)
Using ED frequently resulted in some participants becoming experts on their health and illness. This group would know what medical or psychiatric help was needed and at what point they could resume control over their own health issues. They made informed decisions about staying or leaving.

They wanted to admit sort of overnight…to see…whatever we’ve tried has worked…and I’ve been like ‘Na, I’m going. You’ve said it’s fine…I’ve had a dose of IV antibiotics, and I can take orals at home…I don’t want to be admitted again’. (Shirley)

When self-discharging, some participants then visited after hours facilities. However, financial constraints and the limited availability of these alternatives made ED often the only option for help.

Participants who experienced non-abating pain or mental distress on discharge were reluctant to go home. Returning to the environment where self-harm had happened was traumatising for some as it was a reminder of earlier distress and consequent harm. On returning home, relationships with others were sometimes disharmonious, and for some included restraining orders being enforced against them.

Some people continued to have health issues on discharge from ED, such as those who had presented with chronic pain. The ineffectiveness of ED input was frustrating for Kim: “Often pain is just as bad if not worse than when I went there”. As a result, a number of people returned shortly after discharge from ED. Ruth re-presented six times with a headache before a CT scan provided a diagnosis. Returning within a short timeframe meant that investigations were repeated or new ones instigated.

So I ended up going home and within a matter of four hours [of] pain I had to come straight back and still couldn’t go to the toilet…They quickly put a catheter in straight away this time…and then they started from scratch again! (Melissa)

7.4.5 What follow-up?

The number of admissions for self-harm and for physical concerns was the same – 10 for both – of which four participants were admitted for each type of visit. Due to the effects of overdoses, half of the participants presenting for self-harm were admitted medically.
for observation, including one admission to the Intensive Care Unit. In each type of presentation, one participant self-discharged. In addition, three participants with a history of frequent ED visits noted they were ‘sometimes’ admitted for physical reasons, and one participant’s account was unclear in regards to admission. Those classifying themselves as ‘frequent users’ of ED, were familiar with the non-admission policies accompanying certain mental health diagnoses. The lack of admission reflected, for some, a lack of care: “They just can't be bothered with me” (Nick). In practice, admission was at times achieved through participants and their support people convincing staff of the possible risk. Admission was seen as respite and providing safety for some participants whilst for others it included force and required the Mental Health Act.

There was a difference between participants discharged with self-harm and those with physical complaints. Even with minimal mental health input for a self-harm presentation or for patients who were frequent users of ED, it was ensured that those participants got home safely. Those who did not have their own transport arrangements almost exclusively received a ride home from mental health service staff or received a taxi chit. Participants discharged for physical issues routinely had to arrange their own transport or walk, even if still in pain.

Feeling listened to and understood by key workers and psychiatrists was crucial to participants’ satisfaction with mental health services. Trusted key workers acted as links with various services including ED, Community Alcohol and Drug Services (CADS), pain services, accommodation providers, police, and courts. Issues that were addressed ranged from assistance with bail conditions and restraining orders to protection from further familial sexual abuse, drug dependence and chronic pain. Mental health follow-up consisted of counselling, arranging for attendance at a Mental Health Day Program, and courses such as CBT and spirituality.

This course on spirituality that made the difference for me...and I'm grateful...He upstairs...still has things he wants me to do and that's what I rely on, being necessary, being needed...and that course made all the difference for me. (Marilyn)

Participants with frequent ED visits expressed that they received little assistance on discharge from ED. For example, a few had been promised outpatient referrals via the GP,
which were consequently cancelled. Some participants felt they had received poor support from their key workers.

*I've got a key worker but I don't hear from him very much....They say
‘Oh, I’ll be in contact on this day’ and you wait around...for that day
because you know that they are going to ring you and they don’t.

(Rory)

Follow-up calls by mental health services were at times ineffective because Mixed Presenters chose what they communicated. Grace was phoned in her mother’s presence. As mental health staff failed to check whether it was a convenient time for her, she refrained from talking openly about self-harm.

Many participants would have liked more mental health follow-up care, which was often a reflection of their self-harm risk on discharge from ED (as discussed under section 7.3.3). Participants who had engaged in self-harm as a reaction to stressful and potentially life-threatening situations and those whose self-harm presentation was assessed as impulsive did not receive mental health input. These participants expressed shock and confusion in their struggle to come to terms with their self-harm. A lack of follow-up contributed to Iris not being provided with her usual medication post overdose. In consequence, she started drinking alcohol again because she was too embarrassed to see her GP. Support people assisted some participants who had received no mental health follow-up to arrange for that assistance.

7.4.6 Satisfaction of ED care and recommendations

Satisfaction with ED care differed between participants. A Likert scale of 1-5 was used to assess participants’ satisfaction with ED care, with a ‘1’ indicating being very dissatisfied and ‘5’, very satisfied. Some people estimated their satisfaction score to be between two numbers, for example, ‘3.5’. Not all participants were able to rate satisfaction, similarities, or differences between ED visits. Many were unconscious due to overdoses, seizures, diabetic comas, and head injuries; hence, Figure 7.3 is based on feedback from 23 participants only, showing that for other presentations, the foremost feeling of many participants was ‘satisfied’, followed by ‘very dissatisfied’, and ‘neutral’. For self-harm presentations, participants were primarily ‘dissatisfied’, followed by ‘satisfied’, and ‘very dissatisfied’. These findings indicate that Mixed Presenters viewed the care received for self-harm presentations more negatively than presentations for other reasons.
Those with single self-harm presentations mainly reported satisfactory care in ED. For participants with frequent ED visits, details of their visits commonly merged into each other and their impression of ED staff attitudes remained primarily negative irrespective of the presentation complaint.

Figure 7.3 Participants’ rating of satisfaction with ED visits for self-harm and other concerns

Other people who had often visited ED expressed how staff cared more when they had presented with physical issues. Many times their more positive impression of ED care for physical issues was related to shorter waiting times. Felicia observed how staff had more empathy with physical issues compared to self-harm: “I think with the OD it’s ‘You’re a naughty girl!’ Whereas with chest pain, it’s y’know, ‘you’ve got a condition’”.

More negative experiences in regards to the self-harm presentations centred on attitude. Some frequent users of ED noticed staff’s eyebrows going up when they presented with
self-harm. Some self-stigmatised and reasoned that it was staff’s prerogative to be fed up with them. Paula was distressed about staff’s lack of communication:

Both times I was not listened to at all, both times the kind of immediate want is to ‘She needs a psych assessment. Maybe we can flick this one off?’...Neither time did it really turn out that I was adequately or appropriately attended to by a doctor. (Paula)

A few participants judged their self-harm visit as more satisfactory. For self-harm presentations, they were treated like a person whereas for physical complaints, they felt like a patient, which involved minimal privacy. Acute mental health crisis, often involving psychosis, was recognised by ED staff as serious. A few men experienced more timely care from mental health crisis services compared to medical health. Many participants expressed unmet needs in ED. Table 7.6 provides an overview of the difficulties identified by participants in ED along with further details and their suggestions for care improvements.

Table 7.6 Participants’ difficulties and suggestions on ED care

<table>
<thead>
<tr>
<th>Participants’ difficulties</th>
<th>Detail</th>
<th>Suggestion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long waiting time</td>
<td>A long wait means staff does not care.</td>
<td>Staff to keep patients informed of waiting time.</td>
</tr>
<tr>
<td>Lack of privacy</td>
<td>Being around others can increase anxiety and distress.</td>
<td>Increase the number of rooms in ED; Staff to allocate rooms to patients in distress.</td>
</tr>
<tr>
<td>Staff too busy</td>
<td>Staff have no time to listen.</td>
<td>Increase the number of ED staff so they have more time to engage with patients.</td>
</tr>
<tr>
<td>Mental health not a priority in ED; negative staff attitude</td>
<td>Feeling discriminated against, labelled, pre-judged, and fobbed-off. Would like to be treated like a human being, with compassion and empathy.</td>
<td>Mental health given same priority as physical health. Staff to have mental health training, including reception staff. Employ a mental health support worker in ED. Staff to listen and show genuine interest.</td>
</tr>
<tr>
<td>Management plans not followed</td>
<td>Plans help to control and predict ED care when in distress.</td>
<td>Follow management plan closely whilst engaging with the person.</td>
</tr>
<tr>
<td>Not enough help with chronic pain</td>
<td>Labelled as ‘drug seeking’.</td>
<td>Early investigation for pain could reduce repeat ED visits. Staff to believe people’s pain. Close and genuine engagement with patients in the management of pain.</td>
</tr>
<tr>
<td>Frequent self-harm presentations</td>
<td>Could manage self-harm at home with appropriate tools; not wanting to waste staff time.</td>
<td>Provide staples and glue.</td>
</tr>
<tr>
<td>Often history of abuse</td>
<td>Not feeling comfortable with male staff.</td>
<td>Routinely offer a choice of male and female staff.</td>
</tr>
</tbody>
</table>
Two overarching issues underline many of those challenges experienced by Mixed Presenters. Firstly, overcrowding influences waiting times, patient privacy, engagement between staff and patients, and admission policy (discussed in section 2.3.2). Mental health care and positive staff attitudes towards mental health are difficult to flourish in a crowded environment, making it more likely that staff perceive individuals who present numerous times as further adding to overcrowding. Secondly, ED culture pre-determines how patients are processed through ED, with mental health often not being a priority. Hence, the ED system and overcrowding allow Mixed Presenters’ complex health and social needs to remain unmet.

In summary, Mixed Presenters were hesitant about going to ED, most often because of negative past experiences. Especially participants with frequent ED presentations had experienced negative attitudes by staff, at times contributing to distress, violence and/or self-discharge. Whilst Mixed Presenters had minimal input into their care, many felt safe. Support people played a significant role in Mixed Presenters’ help-seeking, and provided emotional and practical safe-keeping support in ED and at home. Many Mixed Presenters continued to be traumatised by the self-harm event on discharge from ED, and for many the risk continued. Overall, Mixed Presenters thought they had received less judgmental care for their ‘other’ presentation. Mixed Presenters rarely viewed mental health services as supportive. Suggestions for improvements to ED care for Mixed Presenters involved, foremost, a positive attitude toward them as people.

7.5 Conclusion

This chapter described Mixed Presenters’ views on their health and social situations, self-harm, and presenting to ED for self-harm and other reasons. Most participants lived traumatic and difficult lives. Self-harm was triggered by the escalated worsening of poor physical and mental health, social issues, and experiences of unsatisfactory ED care. Most often, self-harm was executed with medication overdoses. Self-harm intent was usually serious with self-harm patterns showing a long-term risk for self-harm. Reasons for ED attendance often identified the occurrence of a further stressor, exceeding participants’ ability to cope. In ED, Mixed Presenters had limited input into their care; many felt labelled and many times the care lacked privacy, yet many felt ED was a safe place to be. Support people were crucial when gaining access to ED; while participants were in ED;
and upon discharge, especially as the input by mental health services was felt to be minimal. On return home, many Mixed Presenters continued to be distressed and at risk of self-harm, which oftentimes resulted in re-presentation to ED. How these findings compare to the quantitative investigations, which are presented in the following two chapters, is discussed in Chapter 10.
Chapter 8
Quantitative Method

“Statistics is the art of making numerical conjectures about puzzling questions.”

8.1 Introduction

This chapter outlines the method for the quantitative part of the study. Its content follows the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement (Vandenbroucke et al., 2007) that provides guidance on the required reporting details and clear structure that comprise a rigorous methodological approach. The aim of this chapter is to describe what steps were taken in presenting findings about Mixed Presenters, their serious self-harm risk, and ED management. The chapter outlines detailed information on the study's design, ethics, setting, and participants. Further, data sources and analysed variables are presented, followed by an explanation of the study sample size. Lastly, data management and statistical analyses are presented.

8.2 Study design

I used a prospective cohort design. Access to self-harm coded ED data from eight DHBs over 30 months (from the MISP project) allowed the identification of Mixed Presenters and Self-harm Only Presenters (see section 5.2 details on setting). These data were linked with inpatient, mortality, and NHI datasets to determine the number and types of admissions and deaths, and the timeframes of when these events occurred. Outcome events included a self-harm admission for at least two days or death by suicide following a participant’s index (second) presentation.

8.3 Participants

I used precise inclusion and exclusion criteria for this study. These will be outlined first, followed by their justification in the next section. Inclusion criteria were applied to participants identified by the senior data analyst from the MISP dataset. They include people age 10 years or over, who presented to one of the eight DHBs at least twice within 28 days between 1 January 2010 and 30 June 2012. At least one presentation was required to be for self-harm.

I excluded presentation pairs where the two visits occurred at different DHBs and pairs with both visits in December 2009, but I included pairs where one presentation was in December 2009 and one in January 2010. Once the exclusions had been made, the first eligible pair for a participant determined if they were a Mixed Presenter (one self-harm and one other ED presentation) or a Self-harm Only Presenter (two self-harm ED presentations).

8.3.1 Justification of participant eligibility criteria

For the quantitative part, people aged 10 years and older were included (in contrast to the qualitative part that included participants aged 18 years and older, discussed in section 6.4). This decision had been made because firstly, in the MISP dataset ED presentations of children below the age of 10 had not been coded for self-harm, secondly, it was a rare event, and thirdly, it aligned with official New Zealand self-harm reports (Ministry of Health, 2014e). As there was a lack of knowledge about Mixed Presenters and their risk of serious self-harm, no upper age limit was set. The justification for the 28-day timeframe between presentations was provided earlier (see 6.4).

I restricted eligible pairs to presentations within one DHB because I wanted to reduce the risk of measurement bias (Peat, 2001). ED presentations to non-participating DHBs were not captured in the MISP data. Consequently, further ED presentations to non-MISP DHBs, resulting in ‘mixed’ or ‘self-harm only’ statuses, were unknown. The restriction to two ED presentations at a single DHB facilitated the standardisation of presentation pairs, and avoided the risk that outcomes for people who had presented to different DHBs might have been different. Also, ED management and continuity of care across DHBs would have made it complex to capture data; hence, capturing two episodes of ED care for each individual in one DHB was considered to provide data that was more robust.
Exclusion by presentation pair and not by person enabled participants to remain in the study if they had further presentation pairs that met the eligibility criteria. I selected the first presentation pair as the index pair, and the second presentation within that pair as the index presentation. Choosing the earliest pair of presentations maximised the follow-up time, and is in line with similar prospective studies (Bilén, Ponzer, Ottosson, Castrén, & Pettersson, 2013; Gibb, Beautrais, & Fergusson, 2005).

The aim of using December 2009 as a lead-in period was to reduce selection bias (Peat, 2001). Allowing presentation pairs to overlap between January 2010 and December 2009 meant that January 2010 was similar to all other months because pairs could overlap with the months before and after. Although this approach could not be used at the end of the study, with June 2012 being the last month of the follow-up period, the use of survival analysis and its censoring process allowed for varied lengths of follow-up time.

### 8.4 Data sources

Once participants were selected from the MISP dataset (identified via paired presentations), more detailed participant and presentation information was extracted from the data available in the full MISP dataset. However, on further inspection, this information proved insufficient for answering the main research question. Participants’ admissions to hospital were inconsistently documented in the MISP dataset, and when they were included, information on the length of stay was not available. Additionally, for patients whose outcome was death, the cause or timing of death was often unavailable. Consequently, I obtained the National Health Index (NHI), the National Minimum Datasets (NMDS) with a separate diagnosis dataset, and the Mortality Collection dataset of the sample from the Ministry of Health. These datasets (Table 8.1) are described below.

Table 8.1  Number of people and number of events* reported in each data source

<table>
<thead>
<tr>
<th>Data sources</th>
<th>Number of people</th>
<th>Number of events*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MISP (Paired presentation)</td>
<td>1996</td>
<td>4096</td>
</tr>
<tr>
<td>MISP (All)</td>
<td>1996</td>
<td>17,033</td>
</tr>
<tr>
<td>NHI</td>
<td>1995</td>
<td>N/A</td>
</tr>
<tr>
<td>Admission (NMDS)</td>
<td>1767</td>
<td>16,083</td>
</tr>
<tr>
<td>Diagnosis codes</td>
<td>1767</td>
<td>72,211</td>
</tr>
<tr>
<td>Mortality</td>
<td>63</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Events were the number of presentation (pairs), admissions or diagnostic codes
In the extracted MISP dataset (Paired), each row consisted of the first and second ED presentations by one person within 28 days; at least one of these presentations was for self-harm. Broadly, variables consisted of socio-demographic and clinical information; date and times of arrival and discharge for the two ED presentation; and the self-harm coding by MISP RAs. Where a person had several paired presentations within 28 days, several rows existed. People who had several eligible presentations within a short timeframe had presentations repeated between pairs; in such a case, the second presentation in an earlier pair was also the first presentation in the following pair.

The original MISP dataset (All) consisted of all the ED presentations made by participants selected for this study's sample. Each row reflected one ED presentation for one person. For example, where one person had seven ED presentations over the study period, presentation details were provided in seven rows. The dataset consisted of socio-demographic variables identical to the extracted MISP dataset (Paired), but contained more clinical information such as presenting complaint, discharge diagnosis, and other comprehensive information collected by research assistants. For example, copied triage information, or notes made by research assistants relevant to their self-harm coding, was included.

Each person who uses New Zealand health and disability services has a unique NHI number. The NHI database is held and frequently updated by the Ministry of Health. The NHI number is linked with a person’s name, date of birth, gender, ethnicity status, domicile code, and New Zealand residency status. NHI numbers facilitate the correct merger of different health services records. For the MISP project, the MISP senior data analyst substituted NHI numbers with a unique MISP ID number for all datasets to protect participant privacy.

Information on inpatient admission was taken from the NMDS database. The NMDS includes discharge information from private and public hospitals (National Health Board, 2014). Each DHB routinely reports data which is based on documentation by clinicians and clerical staff. An ED patient who is treated and discharged within 3 hours will not be reported in NMDS, whereas a ‘short stay event’ is lodged in the NMDS data for an ED stay in excess of 3 hours. ‘Inpatient events’ are those where a person is admitted, and the event is reported to NMDS irrespective of the time spent in ED. Mental health-related inpatient admissions are the exception because of their classification as transfers (discharges). In
consequence, mental health inpatient admission following assessment and treatment in ED of less than 3 hours was not captured in NMDS.

Consultation with several experts, such as staff from the National Health Board and a researcher at the University of Otago, confirmed that some psychiatric admissions might be missed. I considered using Programme for the Integration of Mental Health Data (PRIMHD), which entails national mental health and addiction data on service activity and outcomes for service users, but the data quality was not suitable for my purposes. Another consideration was the National Non-Admitted Patients Collection (NNPAC) information, which includes ED events. But “the lack of diagnosis/treatment/referral information in NNPAC” (R. Hipkiss, analyst at the Ministry of Health, personal communication, 15.5.2014) meant that it would not be useful for ascertaining what I needed to know.

The NMDS dataset was supplemented with a separate diagnosis database, which consisted of admission-specific diagnosis codes based on the International Statistical Classification of Diseases and Related Health Problems (ICD-10). Up to 99 diagnosis and procedure ICD-10 codes had been allocated to each admission, reflecting the reason for admission, procedures performed, incidental or concurrent diseases (comorbidity), accidents, and adverse reactions (National Health Board, 2014). The standardization of ICD-10 coding allows for the systematic collection of health data which, when interpreted and compared, provides a base for national and international morbidity and mortality information (World Health Organization, 2011). The NMDS and diagnosis datasets were linked by an event ID number, allocated to each new ED arrival.

The mortality dataset provided information on participants who had died during the study period. Many deaths in the original MISP dataset were still awaiting coroner’s findings at the time of this study, so to access needed information an updated mortality dataset was requested and received at the end of 2014. The inclusion of records marked as ‘awaiting coroners’ findings’ in the original dataset would have assumed that all these deaths were suicides, but without access to coroners' files, this assumption would have been untenable. Alternatively, excluding all deaths awaiting coroner’s investigation might have resulted in non-inclusion of deaths by suicides. The updated data allowed for more accurate determination of self-harm and was available within the timeframe of this study. The dataset included ICD codes for the causes of death and the date of death. Alcohol and drug use information was mostly listed as ‘unknown’.
8.5 Variables

In this section, I present the data variables used to answer each of my three research questions. Variable types were grouped into nominal (unordered categories), ordinal (order of categories important), binary (only two categories) and continuous (infinite number of possible values).

8.5.1 Who are Mixed Presenters?

The variables representing demographic and social information were used to describe people in the Presenter groups. Self-harm and ‘other’ presentation details were central in describing the clinical picture of each group. Data on education, employment, and income would have provided further information on the Presenters, but was unavailable, incomplete or of poor quality as part of MISP data. Information from official datasets such as descriptions of ethnicity codes and domicile codes were taken from the Ministry of Health websites, and ICD-10 codes were taken from the World Health Organisation website. The demographic, social, and clinical features measured in this sample are explained below, and summarised in Table 8.2.

Table 8.2 Description of socio-demographic variables with values, data type, and data source

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Variable description</th>
<th>Values</th>
<th>Variable type</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Age at index</td>
<td>In years</td>
<td>Continuous</td>
<td>- NHI - MISP (Paired)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 year intervals</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>&lt;15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15-24</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>25-34 ...</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>until 85+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Gender</td>
<td>Female; male</td>
<td>Nominal</td>
<td>NHI</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Ethnic status</td>
<td>Māori; Pacific Peoples; Asian; Other</td>
<td>Nominal</td>
<td>NHI</td>
</tr>
<tr>
<td><strong>Social</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deprivation</td>
<td>New Zealand deprivation status</td>
<td>1-10*</td>
<td>Ordinal</td>
<td>MISP (All)</td>
</tr>
<tr>
<td>Marital</td>
<td>Marital status</td>
<td>Single; married; separated, widowed, divorced; unknown</td>
<td>Nominal</td>
<td>MISP (Paired)</td>
</tr>
<tr>
<td>Residency</td>
<td>Resident of New Zealand</td>
<td>Yes No</td>
<td>Binary</td>
<td>NHI</td>
</tr>
</tbody>
</table>

*Low numbers represent low deprivation
Demographic features

The study sample was described using age, gender, and ethnicity. Age at the index presentation was calculated as the difference between the date of birth from the NHI dataset and the ED presentation date from the MISP dataset. I organised the age of participants at the index presentation into 10 year intervals: <15, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, and 85+. I had intended to align age grouping with the Ministry of Health ‘Suicide Facts’ reports (2014e), which uses 5-year intervals, but because of the limited sample size, this would have meant that only a few people were in each of the small age spans, resulting in non-robust conclusions.

In line with the Ministry of Health ‘Suicide Facts’ report, ethnicity data was grouped into Māori, Pacific Peoples, Asian, and Other (Ministry of Health, 2014e). Census data reports on a further group of ‘Middle Eastern/Latin American/African’, whilst the ethnicity data protocols’ level 1 grouping suggests a similar grouping but for the ‘Other’ group, which is divided into ‘European’ and ‘Other’ (Ministry of Health, 2004). I chose my ethnicity grouping because Māori and Pacific people are at increased risk, and Asians are a substantial population group, making Presenter information important. However, further a grouping of this small sample could have risked the confidentiality of individuals.

Socio-demographic features

Deprivation status is positively associated with morbidity, mortality, mental illness, and suicide (Ajetunmobi et al., 2013; Bergen, Hawton, Waters, et al., 2012), but the specifics of how this applies to ‘Mixed Presenters’ is unknown. Firstly, deprivation status information provides details on one aspect of Mixed Presenters. Secondly, deprivation status can also influence serious self-harm risk; hence, it needs to be considered as a confounder in the survival analysis (section 8.5.2).

Deprivation level was established from participants’ domicile codes (based on his/her address) which were part of the NHI dataset. The New Zealand’s Deprivation Index (NZDep) provides a deprivation score for each geographical unit, called a mesh block (Salmond, Crampton, & Atkinson, 2007). Census data regarding people’s access to income, home ownership, support, employment, qualifications, living space, communication, and transport is combined in the NZDep2013 (J. Atkinson, Salmond, & Crampton, 2014). As the merging of the 2013 area unit code to the domicile code 2006 was problematic (some domicile codes had several area unit codes and consequently, several deprivation codes)
and the earlier version aligned with the MISP time span, I used the NZDep2006. The senior data analyst assured me of minimal differences between the datasets.

Marital status classifications from the MISP (Paired) dataset were grouped into ‘single’, ‘married/defacto’, ‘separated/widowed/divorced’ or ‘unknown’. Where two marital status categories were mentioned such as ‘single/de facto’ the first status was used. Marital status codes ‘not reported’, ‘unknown’ and ‘not specified’ were grouped as ‘unknown’. New Zealand residency status was noted because non-residents are potentially a transient population and more difficult to follow-up in cohort studies. A large proportion of non-residents could potentially bias the results.

**Clinical features - Self-harm presentations**

As described in section 5.2, presentations identified as self-harm had been assigned up to five values by MISP research assistants. I combined the values using a hierarchical method and created a new self-harm variable consisting of definite and probable self-harm (outlined in Table 8.3).

**Table 8.3**  MISP self-harm classifications as grouped into definite and possible self-harm

<table>
<thead>
<tr>
<th>Self-harm categories</th>
<th>No./Variable name</th>
<th>ED documentation description*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definite</td>
<td>1/Completed suicide</td>
<td>Completed suicide</td>
</tr>
<tr>
<td></td>
<td>2/Suicide attempt</td>
<td>Harm to self with intent of suicide (i.e. overdose, self-lacerations gassing by fumes, drowning and hanging attempts, incidental findings of suicide attempt)</td>
</tr>
<tr>
<td></td>
<td>3/Self-harm</td>
<td>Self-harming behaviour (i.e. cutting and overdose where the intention of harm but not suicide was documented; includes incidental findings of self-harm)</td>
</tr>
<tr>
<td></td>
<td>4/Suicidal ideation</td>
<td>Thoughts of suicide without action, includes incidental finding of suicidal ideation and self-harm ideation</td>
</tr>
<tr>
<td>Probable</td>
<td>5/Probable self-harm</td>
<td>Presentations queried to be related to a suicide attempt, self-harm, self-harm or suicidal ideation, suicidality</td>
</tr>
<tr>
<td></td>
<td>6/Self-injurious self-harm</td>
<td>Deliberate injuries such as punching glass/a wall without documentation of deliberate self-harm</td>
</tr>
<tr>
<td></td>
<td>7/Suspected self-harm</td>
<td>High risk-taking behaviour without intoxication; presentations where a decreased mental capacity could be a factor; self-harm used for sexual gratification or self-neglect</td>
</tr>
<tr>
<td></td>
<td>8/Sequelae of self-harm</td>
<td>Definite and probable follow-on presentations from an earlier self-harm presentation</td>
</tr>
</tbody>
</table>

*As coded by research assistants
The definite self-harm codes reflect a continuum of self-harm risk: thinking about self-harm comes before self-harm, often without suicidal intent; suicide attempts are acts that occur prior to completed suicide and hence are of most concern. A continuum of suicide risk has been acknowledged in the literature (Asarnow et al., 2008; Drew, Jones, Meldon, & Varley, 2006), where self-harm classifications were similarly guided by available datasets (Crandall, Fullerton-Gleason, Aguero, & LaValley, 2006).

At the top of the hierarchy were the most serious self-harm events, such as completed suicide, followed by suicide attempts, self-harm, and suicidal ideation. ‘Probable self-harm’ presentations were also grouped. Incidental findings of suicidality/self-harm/suicidal ideation involved self-harm presentations by patients whose presenting complaint was not related to self-harm. Presentations classified this way were added to the suicidality/suicide attempt/self-harm groups. Self-harm presentations coded with ‘sequelae’ referred to those where symptoms appeared to be a consequence of a previous self-harm presentation; these were added to the possible self-harm group.

Research assistants had not coded most sequelae presentations as self-harm. The grouping into ‘definite’ and ‘probable’ self-harm provided both an overview of the degree of self-harm certainty applied to the data and also facilitated future in-depth analysis by the different self-harm categories. I included both definite and probable self-harm presentations because, as part of MISP, each presentation had been carefully examined and coded, signifying a considerable likelihood that probable self-harm presentations were indeed self-harm-related.

Once the presentations were coded from 1 to 8, their allocation was checked manually and re-checked with the self-harm classifications. Care was taken that data from first and second presentations was not interchanged, and that all self-harm-relevant classifications were allocated the appropriate number.

Twenty ‘other’ presentations by Mixed Presenters had sub-categories of self-harm despite not being coded as self-harm presentations. I examined each presentation in detail to ensure that the allocation of ‘other’ was appropriate despite the recording of a self-harm sub-category code. Where there was no further information available, the ‘other’ coding remained because I assumed the research assistant doing the coding had reviewed relevant notes and made an informed decision. For all examined presentations (n = 9 for first presentations and n = 11 for second presentations) the ‘other’ classification was valid; details are provided in Appendix 16.
Clinical features - Other ED presentations

For the Mixed Presenter group, other (non-self-harm) presentations were analysed by the 'presenting complaint' variable. Information on why Mixed Presenters attended ED for non-self-harm reasons contributed to describing this group, assisted in the assessment of a possible link between their two ED presentations, and was used to analyse which presentations incurred increased self-harm risks. Carter-Storch et al. (2014) developed a framework for grouping reasons for ED presentation, which I adapted for this study (Table 8.4).

Table 8.4  ED framework used to group other presentations of Mixed Presenters

<table>
<thead>
<tr>
<th>Main category</th>
<th>Subcategory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing</td>
<td>Shortness of breath</td>
</tr>
<tr>
<td>Circulation</td>
<td>Heart-related (excluding chest pain alone)</td>
</tr>
<tr>
<td>Disability</td>
<td>Seizures/tremors, dizziness, LOC(^1)/collapse/faint, impairment (TIA(^2), CVA(^3))</td>
</tr>
<tr>
<td>Exposure</td>
<td>Poisoning</td>
</tr>
<tr>
<td></td>
<td>Fever, anaphylaxis (allergy)</td>
</tr>
<tr>
<td>Trauma</td>
<td>Multiple or unspecified sites</td>
</tr>
<tr>
<td></td>
<td>Head/face</td>
</tr>
<tr>
<td></td>
<td>Trunk/back/neck/hip</td>
</tr>
<tr>
<td></td>
<td>Upper extremities</td>
</tr>
<tr>
<td></td>
<td>Lower extremities</td>
</tr>
<tr>
<td>Skin</td>
<td>Wound, rash, swelling</td>
</tr>
<tr>
<td>Pain</td>
<td>General/multiple sites</td>
</tr>
<tr>
<td></td>
<td>Ear, nose, throat, eye, dental, jaw</td>
</tr>
<tr>
<td></td>
<td>Head</td>
</tr>
<tr>
<td></td>
<td>Chest</td>
</tr>
<tr>
<td></td>
<td>Back, hip, neck, shoulder</td>
</tr>
<tr>
<td></td>
<td>Abdominal</td>
</tr>
<tr>
<td></td>
<td>Abscess</td>
</tr>
<tr>
<td>Function</td>
<td>Constipation/PR(^4) bleed, nausea/diarrhea/vomiting</td>
</tr>
<tr>
<td></td>
<td>Urinary</td>
</tr>
<tr>
<td></td>
<td>PV(^5) bleeding or discharge</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Diabetes-related</td>
</tr>
<tr>
<td></td>
<td>Psychiatric problems</td>
</tr>
<tr>
<td></td>
<td>Review/tests, medication requests, social</td>
</tr>
<tr>
<td></td>
<td>Plaster cast issues</td>
</tr>
<tr>
<td></td>
<td>Generally unwell/multiple medical complaints</td>
</tr>
<tr>
<td></td>
<td>Unclear description of presenting complaint</td>
</tr>
<tr>
<td></td>
<td>Did not wait</td>
</tr>
</tbody>
</table>

\(^{1}\text{LOC = Loss of consciousness; 2 TIA = Transischaemic attack; 3 CVA = Cerebral Vascular Accident; 4 PR = Per rectum; 5 PV = Per vagina}\)
The use of discharge diagnoses, standardised by ICD codes in many DHBs, would have provided more robust data on presenting complaints, but this information was missing for approximately a third of presentations. Inpatient admission data also included ICD codes, assigned on patients’ discharge from hospital, but not all Mixed Presenters were admitted. Unfortunately, presenting complaints were not recorded or classified in a consistent pattern across DHBs, or sometimes even within the same DHB, which led me to form groups of general or multiple health complaints.

The framework consisted of a limited number of categories of complaints and symptoms; these were assessed as relevant for the majority of admissions and could be used to quantify the number of presentations in each category (Carter-Storch et al., 2014). The following grouping principles were applied to other presentations:

- Where alcohol-related presentations coincided with trauma, the presentation to ED was categorised under a trauma category; where it was intoxication exclusively, the presentation was placed in the poisoning group.
- Where presentation complaints were non-specific symptoms, such as hyperventilation (which could be due to either pain or anxiety), a presentation was grouped under ‘generally unwell’.
- Presenting complaints not related to a body part were grouped under ‘generally unwell’.
- Various medical symptoms that could not be included under one group—for example, ‘abdominal pain and headache’—were also grouped under ‘general health complaints’.
- Where concrete health concerns were noted, presentations were categorised under the appropriate group. For example, for ‘abdominal pain, PV bleeding’, presentations were included under ‘PV bleeding’.
- Presentations for ‘confusion’ were categorised under the ‘mental health’ group, even though the cause could have been neurological, infection, or intoxication.
8.5.2 Serious self-harm risk of Mixed Presenters

The main exposure (meaning who was at risk) was the Presenter group: Mixed or Self-harm Only (Table 8.5).

Table 8.5 Description of exposure variables with values, data type, and data source

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Values</th>
<th>Type</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presenter group</td>
<td>Differentiates whether presentation pair included one or two self-harm presentations</td>
<td>Mixed Presenter Self-harm Only Presenter</td>
<td>Nominal</td>
<td>MISP (Paired)</td>
</tr>
<tr>
<td>Self-harm status</td>
<td>Differentiates whether second presentation of Mixed Presenter was coded as self-harm</td>
<td>Yes No</td>
<td>Nominal</td>
<td>MISP (Paired)</td>
</tr>
</tbody>
</table>

Further, the status of the index (second) presentation of Mixed Presenters was included in the exposure definition in a subsequent analysis, as individuals with a self-harm index presentation might incur different outcomes compared to individuals with an ‘other’ index presentation.

The primary outcome of this study was a serious self-harm event subsequent to the index ED presentation. This outcome was defined as either a self-harm-related inpatient admission lasting at least two days, or death by suicide. The two days were measured from the day of admission until the day of discharge, and “equate[s] to midnights spent in hospital” (National Health Board, 2014, p. 144). Beautrais et al. (2001b, 2003, 2004) defined a serious self-harm event as an inpatient admission of at least 24 hours to certain specialised wards in one DHB that involved certain procedures; these characteristics indicated a patient’s high potential risk for fatality. Beautrais had extensive access to individuals’ notes, which enabled the use of this specific outcome. In contrast, the current study consists of a large sample of Presenters from eight DHBs, identified from data with a limited level of detail. Thus, alterations to the definition of ‘serious self-harm event’ were required. I considered a 24 hours’ admission to be an insufficient marker for ‘serious’, because self-harm injuries or overdoses that could be resolved within this short timeframe were more likely to include people who had a low level of intent and a low risk for serious self-harm. However, a two day inpatient admission reflected that a person is more likely to be seriously harmed or is at risk of being seriously harmed, as it requires substantive resources over a more extensive timeframe. In addition, as I did not have access to detailed clinical data, this definition was more realistically applicable.
Ultimately, it was chosen as the classification criteria for ‘serious’ as I failed to find other studies that have used a two-day admission as their outcome. The ICD codes used for classifying admissions as self-harm or as death by suicide are given in Table 8.6.

Additional ICD codes were considered and then excluded for several reasons: ICD codes relating to a history of self-harm proved not useful because all participants in this study had this history, whilst providing inconclusive information on the current self-harm admission. ICD codes reflecting injury, such as E950-E959 portrayed possible consequences of a self-harm event, yet failed to include self-harm intent, which, should have been documented separately. The outcomes of inpatient admission for self-harm or suicide were combined regardless of differences in demographic profiles. It is likely that those who died used more lethal methods compared to people admitted for self-harm, but the low number of suicides prevented the estimation of suicide risk with any precision.

Table 8.6  Description of outcome variables with values, data type, and data source

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Variable description</th>
<th>Values</th>
<th>Variable type</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient admission for self-harm</td>
<td>ICD codes representing self-harm or suicidal ideation</td>
<td>X60-X84</td>
<td>Nominal</td>
<td>NMDS</td>
</tr>
<tr>
<td>Length of stay</td>
<td>In days</td>
<td>≥2</td>
<td>Continuous</td>
<td>NMDS</td>
</tr>
<tr>
<td>Cause of death</td>
<td>ICD codes representing intentional self-harm</td>
<td>X60-X84</td>
<td>Nominal</td>
<td>Mortality</td>
</tr>
<tr>
<td>Follow-up time</td>
<td>Months from index to outcome or end of study</td>
<td>Number</td>
<td>Continuous</td>
<td>MISP (Paired) NMDS Mortality</td>
</tr>
</tbody>
</table>

Potential confounders and effect modifiers

Age, sex, ethnicity, and deprivation status were considered as potential confounders (Table 8.7). Although age groups were elsewhere divided into 10-year intervals, for the survival analysis, age was divided into 5 age bands because the limited number of participants meant that age groups needed to be larger to ensure a robust analysis. The distribution of age was bell-shaped, rising from ages 15 to 26 years and then falling until age 55 years. I set the lowest group as <15 years of age, in alignment with Ministry of Health statistics (Ministry of Health, 2014e), and the highest group as > 59 years because of the few participants in this age group. I divided the middle age range into three 15-year bands: 15 to 29, 30 to 44, and 45 to 59 years of age.
Age was treated as a potential confounder because as people age, the possibility of ill health is increased (more time to accumulate ill health), resulting in older people being more likely Mixed Presenters as opposed to Self-harm Only Presenters. Also, as mental illness is diagnosed most often in people under 65 years (Oakley Browne et al., 2006), which heightens the risk of self-harm (Keith Hawton & van Heeringen, 2009), it increases the likelihood of younger people being Self-harm Only Presenters.

Table 8.7 Description of possible confounders and effect modifiers variables with values, data type, and data source

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Variable description</th>
<th>Values</th>
<th>Variable type</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Confounder</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>In years</td>
<td>&lt;15 15-29 30-44 45-59 60+</td>
<td>Binary</td>
<td>NHI and MISP (Paired)</td>
</tr>
<tr>
<td>Gender</td>
<td>Gender</td>
<td>Female = 1 Male = 0</td>
<td>Binary</td>
<td>NHI</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Ethnic status</td>
<td>Māori = 1 All other = 0</td>
<td>Binary</td>
<td>NHI</td>
</tr>
<tr>
<td>Deprivation status</td>
<td>A low decile number indicates low deprivation</td>
<td>1-10</td>
<td>Continuous</td>
<td>MISP (All)</td>
</tr>
<tr>
<td><strong>Effect modifier</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-harm status of Mixed Presenters</td>
<td>Index presentation for self-harm or other reasons</td>
<td>Self-harm Other</td>
<td>Binary</td>
<td>MISP (Paired)</td>
</tr>
</tbody>
</table>

Gender was a potential confounder of the association between mixed presenter status and serious self-harm outcome. With their increased risk of dying by suicide, males are more likely to be admitted, and it is also likely their attempts are more serious than females, hence requiring an admission for two days or more. In contrast, women seek more healthcare (Galdas et al., 2005), a likely reason for their higher rates of mental illness, and they live longer compared to men. The combination of older age and being female are confounding factors.

Ethnicity was grouped into Māori and non-Māori in the survival analysis, a common approach used in New Zealand suicide statistics (Ministry of Health, 2014e). Other ethnicity groups were not separately analysed because the number of Presenters with an outcome was small, making it unlikely to get useable results and opening up the risk that participants would be identifiable via their ethnicity status.
The type of index presentation by Mixed Presenters could be an effect modifier. It is possible that the chance for a serious self-harm event following a self-harm presentation is higher compared to the chance after an 'other’ presentation.

### 8.5.3 Presentation pattern

The lack of knowledge about Mixed and Self-harm Only Presenters' ED use led me to examine their number and type of ED presentations (Table 8.8). Inspecting the total number of ED presentations by the codes assigned by MISP research assistants provided an overview of the presenting type by Presenter group.

**Table 8.8 Description of ED presentation pattern variables with values, data type, and data source**

<table>
<thead>
<tr>
<th>Presentation pattern variable name</th>
<th>Variable description</th>
<th>Values</th>
<th>Variable type</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total self-harm and other presentations</td>
<td>Coding, as per MISP, of all ED presentations by sample over study period</td>
<td>Self-harm: Definite; most probably; probably not Not self-harm: 'Other'</td>
<td>Nominal</td>
<td>MISP (Paired)</td>
</tr>
<tr>
<td>Number of ED presentations</td>
<td>Total number of ED presentations at index, before, and after for Mixed Presenters and Self-harm Only Presenters</td>
<td>Number</td>
<td>Continuous</td>
<td>MISP (All)</td>
</tr>
<tr>
<td>Other ED presentations</td>
<td>Comparison of Mixed Presenters’ first and second (index) other presentations</td>
<td>Breathing; circulation; exposure; trauma; skin; pain; function; miscellaneous</td>
<td>Nominal</td>
<td>MISP (All)</td>
</tr>
</tbody>
</table>

*Mixed Presenters only*

Further, a possible pattern around presentation numbers in relation to the index presentation was explored. In addition, I examined Mixed Presenters’ ‘other’ ED presentations for typical presentation complaints and scrutinised common sequences between other and self-harm presentations.

### 8.5.4 ED management

The variables for describing ED management were divided into arrival, discharge, and presentation details. Firstly, arrival variables included presentation numbers for each DHB, triage codes, and substance use. Secondly, ED discharge variables included
departure from ED, type of inpatient admission, legal status, outcomes, and mortality details. Thirdly, presentation details painted a picture of the presentation, with variables consisting of the classification of ‘other’ ED presentations, total self-harm and other presentations numbers, number of ED presentations, and time between index presentations. Each variable will now be described in more detail.

**Arrival**

I chose to include the DHB variable as examining results by DHB could have provided more localised knowledge about Mixed Presenters and Self-harm Only Presenters (Table 8.9). Yet, as few individuals presented to each DHB, only the number of index presentations by Mixed Presenters, either for self-harm or other reasons, and Self-harm Only Presenters were analysed. More in-depth analysis would have likely been invalid and very low numbers could have potentially identified DHBs and/or individuals.

Table 8.9  Description of ED arrival variables with values, data type, and data source

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Variable description</th>
<th>Values</th>
<th>Variable type</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>DHBs</td>
<td>Number of ED presentations in each DHB</td>
<td>Number</td>
<td>Nominal</td>
<td>MISP (All)</td>
</tr>
<tr>
<td>Triage code</td>
<td>Assigned number reflecting urgency for ED doctor assessment</td>
<td>1 – immediate</td>
<td>Ordinal</td>
<td>MISP (Paired)</td>
</tr>
<tr>
<td>Substance use</td>
<td>Alcohol and/or drug intoxication coding as per MISP data</td>
<td>Alcohol / drugs None</td>
<td>Nominal</td>
<td>MISP (Paired)</td>
</tr>
</tbody>
</table>

The triage code is determined by a triage nurse and reflects the urgency of the physical or mental health complaint to be assessed by a doctor (Australasian College for Emergency Medicine, 2013). Triage codes provide an overall picture of how severe, urgent, or non-urgent Mixed Presenters'- and Self-harm Only Presenters' complaints were assessed to be on arrival to ED.

I collected information on alcohol and drug use because of their strong association with self-harm, suicide, mental illness, medical problems, interpersonal violence and/or accidental injuries (Cherpitel et al., 2013; Ness et al., 2015; Research New Zealand, 2012; K. V Rhodes, Houry, & et al, 2009; Riedi et al., 2012), as all these factors are relevant to
Mixed Presenters. Of note, data coding discrepancies might have occurred at the beginning of the MISP project, because at the start of data collection, alcohol and drug use was routinely categorised as questionable self-harm. This rule resulted in vast numbers of presentations being flagged as relevant, however, until a change of protocol was issued. After that time, alcohol and drug use was only coded as relevant to self-harm when there was clear reference to it being associated with self-harm. In all, research assistants from seven DHBs coded substance use alone as questionable self-harm for one month, and one research assistant in one DHB did so for three months.

This change in coding could have created a bias, especially as some presentations related to alcohol were classified as ‘other’ if related to collapse, for example, later in the study, but they were coded as self-harm at the beginning. This could have resulted in more Presenters being identified during that timeframe, and possibly more Self-harm Only Presenters classified during that timeframe instead of Mixed Presenters. However, the examination of the 274 index presentation pairs which occurred up until 31 March 2010 showed that substance use presentations without self-harm coding had always been coded as ‘other’ presentations. At the same time, numerous presentations had been coded as self-harm and substance use, and I was unable to determine whether the self-harm code had been assigned because of substance use, or independently of it. Nevertheless, the total of 10 cumulative months (among the eight DHBs) of different coding procedure was minimal in relation to the 240 cumulative months (30 months by eight DHBs) for the project overall; it equals 4.2% of the dataset, and thus presents a minimal risk of possible bias.

**Discharge from ED**

The departure status variables presented in Table 8.10 not only provide indications of presentation severity, but also offer information on service use, and on differences or similarities between Presenter groups and presentation types (self-harm or ‘other’). I did not use the NMDS data for this analysis, because not all index presentations resulted in admission or ED stays in excess of three hours. Further, the time difference between discharge from ED and consequent admission made it difficult to establish which admission record followed which ED presentation. This was especially complex where a person had multiple ED presentations and admissions within a short timeframe.

In the MISP dataset, the information recorded in the discharge status field varied between DHBs, especially where clinicians recorded this variable as free-text, which resulted in
some unclear or missing information, oftentimes reflecting discharge destinations but not the status. A ‘discharge status’ is a description of what happens once a person leaves ED, for example admission or discharge from care, whereas ‘discharge destination’ is a place, such as a ward name or ‘home’. Of the 1921 index presentations, 1797 (94%) had departure status classifications recorded, whilst for 124 presentations, this information was missing. The 150 unique departure status classifications of the 1921 presentations were grouped into ‘admission’, ‘discharge’, ‘referral/transfer’, ‘did not wait’, ‘outpatient follow-up’, and ‘unknown’.

Table 8.10 Description of ED discharge variables with values, data type, and data source

<table>
<thead>
<tr>
<th>Variable name</th>
<th>Variable description</th>
<th>Values</th>
<th>Variable type</th>
<th>Data source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departure</td>
<td>Departure status</td>
<td>Admission, Discharge, Referral/transfer, Self-discharge, Follow-up, Unknown</td>
<td>Nominal</td>
<td>MISP (Paired)</td>
</tr>
<tr>
<td>Inpatient admission</td>
<td>Number of inpatient admission by type</td>
<td>Intended day case, Psychiatric, Non-psychiatric</td>
<td>Nominal</td>
<td>NMDS</td>
</tr>
<tr>
<td>Legal status</td>
<td>Assigned legal code of the Mental Health Act and Acts affecting special populations</td>
<td>Acute, Long-term, Special populations</td>
<td>Nominal</td>
<td>NMDS</td>
</tr>
<tr>
<td>Outcome details</td>
<td>Self-harm details on eligible admissions and deaths, and number of people alive</td>
<td>Alive, Admission, Suicide</td>
<td>Nominal</td>
<td>NMDS Mortality</td>
</tr>
<tr>
<td>Mortality</td>
<td>Suicides grouped by ICD codes X60-X84; other deaths grouped following the Reith et al. (2004) framework</td>
<td>Suicides, Early deaths, Natural death</td>
<td>Nominal</td>
<td>Mortality</td>
</tr>
</tbody>
</table>

An ‘admission’ departure status included those index episodes classified with a departure type of ‘admission’. Where it was coded with text such as ‘admitted seen by Crisis team – home with mother’, I assumed that the person was first admitted, and then seen by the crisis team who discharged the person; hence, I classified it as an admission. Discharge to a mental health unit was also classified as an admission, as was ‘discharge, returning for admission’. A name of a ward like ‘ED admission unit’, ‘IP (inpatient) admission’, ‘name of ward’ and ‘mental health unit’ were all classified as admissions.

A ‘discharge’ departure status included those stating ‘home’ and ‘discharge following triage assessment’. From clinical experience, I know these presentations are sometimes for people who did not wait, and many times for people who decide to leave following a
consultation with the triage nurse. Discharges also included presentations described as ‘transport home whilst accompanied by MH (mental health) staff’, ‘to return with x-rays’, and ‘treated, had x-ray’, as in the absence of other details I assumed that the patient was discharged home.

Presentations were coded as ‘referrals/transfers’ when people went back to their previous location, such as a ward. It included direct referral ‘other’, direct ward admissions, and transfers to rest homes. Further, it included ‘transfer other hospital’, assuming it was to another hospital, and ‘other hospital’. Some referrals such as ‘after discharge’, ‘to orthopaedic clinic’ and to (‘name of ward’) were included in this category. However, it was unknown if referrals directly followed the ED visit, if people were admitted following the transfer, or if the site of transfer was a ward. Referrals/transfers also included ‘treated and referred’, referrals to respite care, and a direct transfer to a ward from triage.

The ‘did not wait’ category included index presentations that resulted in refusal of care or self-discharge. It also included ‘left before being seen’ and absconding patients.

Presentations classified as ‘outpatient follow-up’ included people who were discharged, with or without a support person, and a follow-up arrangement was mentioned. It included community nurses and GP follow-up, and ‘clinic’ as well, as I assumed that this indicated that patients would be followed up by a clinic. Further, this group included patients with noted outpatient appointments to eye, orthopaedic, surgical, and outpatient clinics. However, this group excludes people ‘referred’ to the orthopaedic clinic, because it indicated to me (from my clinical experience in ED) that these patients, following discharge from ED, were directly going to the clinic, hence I viewed these as transfers/referrals. Further included in this category were patients with notes for: ‘review tomorrow’, ‘to be reviewed’, ‘to return for intravenous antibiotics’, ‘seen by x – follow-up appointment’, ‘keyworker follow-up’ and ‘to see psych’.

The ‘unknown’ category consisted of unclear discharge destinations. ‘Unknown’ was applied to discharge destinations that described transport issues without a discharge destination, ‘no data’, ‘other’, ‘return if necessary’, ‘admitted to ED’ and ‘review at ED’. Numerous times, ‘Seen by crisis team’ was the stated discharge destination. All these discharge destinations were unclear.
The available legal status data was thought to reflect the degree of mental health services use and was grouped by the sectioning length under the Mental Health (Compulsory Assessment and Treatment) Act 1992. People with serious mental illness who were at acute risk to self or others and unable to care for self were assigned acute (‘short’) sections, whilst serious chronic mental illness requiring compulsory treatment were categorised as ‘long-term’. As the process of sectioning includes multiple and repeat assessments by (in the majority) mental health professionals and people’s mental state often fluctuates, presenters commonly had numerous legal status codes assigned to an admission. Short sections do not always result in long-term sections. For this study, sections 8-11, 13, 14 and 15 represented ‘short’ sectioning (Part 1 of the Act - compulsory assessment and treatment). Sections 29 to 31 (Part 2 of the Act - compulsory treatment order), and section 45 (Part 4 of the Act - prison population with long-term mental illness) were classified as ‘long’, yet these are always preceded (at some time point) by compulsory assessment and treatment (Part 1 of the Act).

Self-harm admissions that lasted for at least two days were of interest. Medical admissions reflected serious self-harm events, whereas psychiatric admissions represented a person being acutely mentally unwell and requiring a safe environment. Information on the type of admission assisted in determining if differences existed between the Presenter groups. For distinguishing the types of inpatient admissions, I used the psychiatric and non-psychiatric causes from the ‘event type’ category in the NMDS data. However, time constraints and dataset linkage challenges between NMDS and its diagnosis dataset informed my decision to include only the first eligible ICD code (X60-X80) and their description assigned to each admission.

I examined causes of death via a framework adapted from Reith et al. (2004). Deaths were coded into three main categories: suicides, early deaths, and natural causes. Suicides (ICD X60-84) included injury by hanging; poisoning by medicine, chemicals, or exhaust gas; injury by jumping or other related actions; or drowning. Early deaths included accidental poisoning; alcohol-related deaths; opioid dependence; road traffic accidents; barbiturates or other dependence; accidental drowning/other; or homicide. I further included ‘accident due to anorexia’ as a cause, because this was an ‘early’ death. Deaths by natural causes were categorised into cardiac and vascular; malignancy; respiratory; neurological/renal/hepatic/gastrointestinal; or endocrine disorder.
8.6 Study size

The study’s size was pre-determined by the MISP data. I initially considered using only the four non-intervention DHBs because I was aware that suicide prevention interventions carried out in the four intervention DHBs could influence ED practice and hence influence the presenting pattern of the participants for this study. For example, in the DHBs that had been given the interventions, participants could have received better ED care from more educated staff following their visits to ED, perhaps resulting in fewer returns to ED compared to non-intervention DHBs. Thus, the potential for bias would be created, with different numbers of Mixed Presenters and Self-harm Only Presenters at intervention DHBs and control DHBs producing differing ED presentation and admission patterns. However, the results of the MISP study did not suggest that the multi-level suicide prevention interventions carried out as part of the study were effective. This led me to question if there would be any bias risk for this study. At the same time, using all eight DHBs in the present study meant the additional participants added to this study’s overall N would give more precise results. So, while I started out wanting to use only four DHBs, I ultimately decided to use all eight for reasons provided above.

At the set-up of the study it was estimated that (across both groups) approximately 6% of people presenting with self-harm would re-present within a short time frame (three months). A continuous period of cohort member identification was projected to give more than 90% power for detecting a significant difference between a 5% chance of re-presentation in the Self-harm Only group and a 10% chance of re-presentation in the Mixed Presenters group (using an alpha of 0.05; nominal power was 93.4%). Adjustment for confounders in the survival analysis were expected to yield a slightly lower nominal power for detecting a difference of the described magnitude.

8.7 Data management

Data management was guided by ethical and safety considerations. Data sharing, the process of identification of the index sample and re-coding of variables for the survival analysis are discussed in turn.
8.7.1 Data sharing

Following ethical considerations (Section 5.8), I had access to de-identified data only. The senior data analyst substituted randomly generated ID numbers for the NHI numbers, and omitted personal details from my MISP datasets. When requesting Ministry of Health datasets, the analyst sent a list of NHI number representing my sample. I in turn requested the variables I required for the analysis. The analyst received the requested datasets from the Ministry of Health, linked the NHI numbers between MISP and the Ministry of Health datasets, and then replaced the NHI numbers with the random ID numbers.

8.7.2 Process of identification of index sample

I firstly cleaned the datasets, examining the data for missing or wrong values. For example, duplications in the admission and diagnosis datasets were removed. Where NHI information was missing ($n=1$) from the MISP dataset, the person was excluded. Participants’ date of birth was cross checked between datasets and where differences existed ($n=1$), or where it was missing ($n=2$), dates from the NHI dataset were used.

The next step in the data preparation was to determine the eligible sample from the MISP dataset. On inspection of the MISP (Paired) dataset, I discovered that not all presentation pairs were eligible. I excluded presentation pairs with an ED index (second) presentation in 2009, and when the presentation pairs contained ED visits across two different DHBs. I merged the MISP (Paired) dataset with the NHI dataset by using the ID numbers, because I wanted to use the most current, and probably most accurate, socio-demographic details.

The MISP (Paired) dataset did not contain all of the variables needed to address my research questions; hence, the MISP senior data analyst supplied the MISP (All) dataset. The additional variables, including DHB code, triage code, presentation complaint, discharge diagnosis, discharge destination, and deprivation status, were linked and the needed variables were added to the first and second presentations in the MISP (Paired) dataset. Admission data were received separately from the dataset that contained diagnoses for each admission. For the purpose of this study, and to reduce the number of separate datasets involved, I selected the relevant admissions and diagnoses from the various datasets and pulled them together in one comprehensive dataset.

In the admissions dataset, admissions coded with EI (self-discharge), ER (routine discharge), or ES (Self-discharge no indemnity) represented extended ED stays ($\geq$ three
hours) and thus not inpatient admissions; these were excluded. Of the remaining admissions, I selected only those lasting two days or more. The diagnosis database was restricted to ICD codes of X60 – X80 (described in Table 8.6), all of which represent self-harm. Only the first self-harm code assigned to an admission was used. These two reduced datasets were then merged by ID number. The resultant dataset contained only relevant admissions meeting both criteria: self-harm diagnosis and a length of inpatient stay of at least two days.

I then merged the MISP and admission datasets. Where people did not have an admission, the variables representing admission date and time, type of admission and discharge date, length of stay, and ICD code were thus left blank. I then joined the mortality dataset to this dataset, and similarly, where a person had not died, the variables of date of death, cause of death, and ICD code were left blank. I linked the combined data to the MISP (Paired) dataset by their codes.

Once all datasets were combined, I compared index presentation dates with admission dates. Admissions that had occurred before or as part of the index presentation were excluded because follow-up time commenced on completion of the index episode, which meant only admissions occurring following a further ED presentation were used as outcome events. Determining from the data when the index episode had ended was complex, requiring a systematic approach. First, where the date of the index presentation or discharge from ED aligned with or was a day before the admission date, the admission was also classified as directly following the ED index presentation and hence was treated as part of the index. A one-day discrepancy is possible during presentations to ED that may have resulted in post-midnight admission. Secondly, where admissions followed an index presentation within a few days, I investigated whether the patient had been transferred. If a transfer resulted in an admission, the admission was counted as part of the index episode. Thirdly, I examined the MISP (All) database for possible further ED presentations by Presenters who had index presentations and admissions within a close timeframe. This ensured that admissions following an index episode and those following a new ED presentation were clearly identified and distinguished, as only the latter represented outcome events.

People who had died at the index episode could not be followed up. Where the date of death aligned with the date of the index presentation, ED discharge date, admission, or hospital discharge dates, death was viewed as being consequent to the events of the index
presentation, and hence not counted as an outcome. Of note, I found that MISP classifications of ‘deceased’ or ‘completed suicide’ had poor quality time/date information, and hence I used information from the mortality dataset exclusively in these cases.

Where people had the two types of outcome events, admission for at least two days for self-harm and death by suicide, the admission was counted as the first event because this event happened prior to death. For descriptive purposes, the outcome events of this group were coded as self-harm admission and suicide, self-harm admission and early death, or self-harm admission and natural death. For the primary analysis, admissions for self-harm were the only outcome events measured.

I created a variable to code the causes of death as suicide, early death, or natural death so as to describe and compare Presenter groups [as per Reith et al. (2004)]. Further, I ensured that suicides aligned with ICD codes X60-84 (see section 8.7.2 for more detail). However, in the survival analysis only suicide deaths were counted as outcome events. The process of identification of the index episode and of the presentations that later had an outcome event is presented in Figure 8.1.

![Figure 8.1 Flowchart for identification of index episodes and subsequent presentations and outcomes](image-url)
8.7.3 Re-coding of variables for the survival analysis

For the survival analysis, I created new variables and re-coded selected variables into binary data (Table 8.11). I also added a variable containing an estimation of the number of days between presentation and outcome derived from dates in the datasets. Follow-up time started on the presentation date of the index episode and ran until a self-harm admission or suicide occurred (time of event), or alternatively on 30 June 2012, the end date of the study. Participants without an outcome were censored. Censoring occurs when individuals’ survival is known to extend until at least the end date of the study, but beyond that point survival time remains unknown (Kleinbaum & Klein, 2012).

Table 8.11 Description of variables used for survival analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Variable description</th>
<th>Type of data</th>
<th>Use of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group status</td>
<td>Mixed Presenter/ Self-harm Only Presenter</td>
<td>Binary</td>
<td>Exposure</td>
</tr>
<tr>
<td></td>
<td>Mixed Presenter with self-harm index presentation/ Self-harm Only Presenter; Mixed Presenter with ‘other’ index presentation/ Self-harm Only Presenter</td>
<td>Binary</td>
<td>Exposure (secondary analysis)</td>
</tr>
<tr>
<td>Age, sex, ethnicity, deprivation status</td>
<td>See Table 8.7</td>
<td>Binary</td>
<td>Confounders</td>
</tr>
<tr>
<td>Outcome status</td>
<td>Suicide; self-harm admission</td>
<td>Nominal</td>
<td>Outcome/ censoring events</td>
</tr>
<tr>
<td>Time to event</td>
<td>Number of months from index presentation date to first event: suicide, self-harm admission, or end of study</td>
<td>Numerical</td>
<td>N/A</td>
</tr>
</tbody>
</table>

8.8 Data analysis

Data analysis was guided by Peat (2001) for descriptive analysis and Kleinbaum and Klein (2005) for survival analysis. I chose to use SAS Enterprise Guide (EG) 6.1 for the analysis of the data because, as a novice, I felt it could be easier to manage than base SAS.

The analysis included descriptive and frequency statistics, survival analysis, and summary statistics. Summary statistics reported on the number of participants who experienced a specific outcome in relation to the sample. These results ignored when these events happened following Presenters’ index episodes. Hence, survival analysis, the
most appropriate method for analysing data to answer the ‘when’ question (Haert, Emplit, & Dehon, 2011), was chosen for the investigation of risk. In this study, the ‘when’ question refers to the amount of time between the index episode and an outcome of suicide or a relevant self-harm admission. The analysis allowed for people to enter the study at different time points and for index presentations with other outcomes to remain part of the sample, but be censored.

The sensitivity analysis included the splitting of the Mixed Presenter group into two sub-groups: those who had self-harm index presentations and those who had ‘other’ index presentations. Analysing these sub-groups ensured that risk estimates of serious self-harm were assessed both between different Presenter groups and between different presentation types.

8.8.1 Who are Mixed Presenters?

I described and compared Mixed Presenters’ and Self-harm Only Presenters’ socio-demographic and clinical features. This information was important because Mixed Presenters had not previously been identified or compared to Self-harm Only Presenters. Firstly, people’s age, gender, ethnicity, deprivation status, and marital status at their index presentation were compared between Presenter groups. Secondly, clinical information included the number of Mixed Presenters and Self-harm Only Presenters identified in each of the eight self-harm categories. Lastly, Mixed Presenters’ ‘other’ index presentations were separated into categories adapted from Carter-Storch (2014) (Table 8.4).

I used summary statistics to analyse the time difference from Presenters’ index presentations until their outcome. Compared to the Kaplan-Meier method, which includes participants who did not experience a given event (they are ‘censored’), summary statistics simply summarise the spread and distribution of participant follow-up times. This information was used to determine how quickly outcomes happened for Mixed and Self-harm Only Presenters. An early outcome suggested a high self-harm risk at the time of the index presentation, and possible treatment failure.

The time between an index episode and either an outcome, the end of the study, or death from other causes was analysed by Presenter groups. It included the number of people in each outcome group, and the lower quartile, median, upper quartile, and sum of follow-up time in days. In addition to the primary outcome of self-harm admissions and suicides,
I analysed participants who had been admitted and later died by suicide, early death, or natural causes; participants who had not been admitted but died an early or natural death; and people who were alive. Comparison of the Presenter groups with these different outcomes was done to examine differences between groups.

**8.8.2 Serious self-harm risk**

I firstly estimated the survival of Mixed Presenters and Self-harm Only Presenters using the Kaplan-Meier method. This analysis defines the probability of surviving until certain time points. Variables used to assess this survival function included the survival time (time between index and outcome event, death, or end of study), information on who was censored (occurs when participants did not experience the outcome event), and type of Presenter group. The estimated survival probability of Mixed Presenters and Self-harm Only Presenters was assessed by reporting the proportion of participants who failed (experiencing the outcome event) or survived (not experiencing the outcome event) at 0, 6, 12, 18, 24, and 30 months of the study period. A formulation of 30.25 days in a month was used when converting days of follow-up to months of follow-up. A table representing a cumulative Kaplan-Meier failure graph (the opposite of a survival graph) was used to further illustrate possible differences between the Presenter groups. I chose to report outcomes in 6-month time intervals [see Steeg et al., (2012)] because this amount of time allowed for the provision of detailed information that a 12-month time interval (Keith Hawton et al., 2015) would not offer because of the relatively short follow-up time of this study. I used the Kaplan-Meier analysis to estimate whether certain triage categories, types of substance use, and departure statuses increased the risk of having a serious self-harm outcome. The number of participants who experienced such an outcome compared to the overall number was presented in 6-month intervals following the index episodes and survival rates of the Presenter groups were compared. This analysis produced detailed information on the trajectory of risk following Presenters’ index episodes.

With the log-rank test, I assessed whether there was a difference between the survival (failure) times of Mixed Presenters and Self-harm Only Presenters. This test was based on testing the null hypothesis that there was no difference between the two Presenter group survival curves. The test analysed the total number of observed and expected outcomes at each time point where an event happened, and compared these with a chi-squared distribution with one degree of freedom (Bewick, Cheek, & Ball, 2004). A p-value of < 0.05 indicated that the null hypothesis – that is, no difference between the two failure curves
should be rejected and that the Presenter groups did have significantly different failure curves.

I further used a Cox's proportional hazard model to adjust the main exposure for confounders, but also to test if other explanatory variables influenced serious self-harm. The model is based on the hazard function \( h(t) \), which is the probability of experiencing a serious self-harm event given that individuals survived up to a certain time point (Kleinbaum & Klein, 2012). Basically, results of this analysis reflect an instantaneous risk of an outcome event at an exact moment in time. Whilst the baseline hazard for each Presenter group might vary over time, the hazard ratio, representing the difference between Mixed Presenters and Self-harm Only Presenters, is assumed to be constant over the studied time period. A hazard ratio of 1 signifies equal risk between groups; a number above 1 signifies increased risk in the exposed (Mixed Presenter) group relative to unexposed; and a number below 1 signifies a decreased risk of serious self-harm in the exposed group and hence an increased risk in the reference group.

The reference groups included Self-harm Only Presenters, males, 15-29 year olds, and non-Māori. These were chosen because the study's focus on Mixed Presenters, and also because males, 15-29 year olds, and Māori have experienced higher suicide rates compared to females, all other age groups, and non-Māori respectively (Ministry of Health, 2014e). Choosing these reasonably sized reference groups also assisted with interpreting the resulting estimates. The hazard ratio was provided with its 95% confidence interval, with a \( p \)-value of < 0.05, indicating the difference between the groups is taken as statistically significant.

I constructed six models to explore other factors that could have impacted serious self-harm risk and hence, could act as confounders. The first set of three models compared Mixed Presenters and Self-harm Only Presenters’ hazard ratio, adding confounder variables that could affect the risk. The last three models compared the hazard ratio of Mixed Presenters' self-harm and ‘other’ index presentations to Self-harm Only Presenters’ index presentations. I used these numerous models because it was possible that the risk of serious self-harm was increased for self-harm index presentations irrespective of the Presenter status.

Model 1 compared the unadjusted hazard ratio between Mixed Presenters and Self-harm Only Presenters. In Model 2, gender, age, and ethnicity were added to Model 1; and in Model 3, deprivation status was added to Model 2. Deprivation was treated as a linear
covariate where hazard ratios represented the difference in hazards for a one-unit difference in the deprivation scale. I added these variables into the model because they could be potential confounders, as each could independently influence self-harm, irrespective of Presenter group status. Models 4 to 6 were similar to the earlier models, but with Mixed Presenters split into participants who, at their index presentation, had presented for self-harm and those who had presented for other reasons. These were each compared with Self-harm Only Presenters (giving a total of three groups for this categorical variable).

Lastly, I assessed the proportional hazard assumption by comparing the log-log survival curves. Approximate parallel curves would indicate that the instantaneous risk (of having a self-harm admission lasting at least two days or of death by suicide) difference between Mixed Presenters and Self-harm Only Presenters was roughly constant across time.

8.8.3 Presentation pattern

DHB-specific presentation patterns were broadly examined. The number of index presentations by Mixed Presenters for self-harm or other reasons, and Self-harm Only Presenters in each DHB were described. This prevalence calculation was viewed as informative for each DHB. I chose not to complete a survival analysis for each of the DHB groups because the small sample size for each DHB would have limited the validity of the conclusions that could be drawn and could have risked the confidentiality status of DHBs and individuals.

When investigating the type of ED presentations, I linked the combined dataset with the MISP (All) dataset and tracked the number of ED presentations in each Presenter group over the study period in the pre-defined (from MISP) self-harm categories of ‘definite’, ‘most probably’, ‘probably not’ and ‘not self-harm’ (‘other’). This information assisted in describing Mixed Presenters’ efforts to seek help from ED for their self-harm and non-self-harm issues. It also further helped determine whether and how Mixed Presenters were different from Self-harm Only Presenters. However, a few participants had very high presentation numbers, and hence this simple description needs to be viewed cautiously, as the presentation types of these outliers could have influenced the overall picture of the Presenter groups.

The number of ED presentations per person was calculated as incident rate per year, which helped identify the above-mentioned issue of high presentation numbers by
outliers. ED presentations made prior to the index visit were excluded. The time period included started at the index presentation and ended with the death of the participant or the end of the study. The calculation of the rates of ED presentations involved (a) calculating the rate for each person and (b) calculating descriptive statistics for these summary statistics. To calculate the amount of follow-up in years, I divided the number of days of follow-up by 365; the incident rate of presentations per year was calculated by dividing the number of ED presentations by the number of years of follow-up. I calculated the mean, standard deviation, min/max, lower and upper quartile, and median of this distribution across presentation groups.

I used descriptive statistics (frequency and percentage) to report on the details of Mixed Presenters’ other presentation complaints during their first and second presentations.

8.8.4 ED management

The analysis of the ED triage codes assigned to each participant involved three steps. Firstly, I examined triage codes for the index presentations of Mixed Presenters and Self-harm Only Presenters. Being aware that the type of presentation by Mixed Presenters – self-harm or ‘other’ – might influence the triage code, I compared triage codes between self-harm and ‘other’ presentations in the second step. A third step was necessary to examine whether triage codes assigned to self-harm presentations differed for Mixed or Self-harm Only Presenters, and for this I developed three groups: Mixed Presenters with self-harm presentations, Mixed Presenters with ‘other’ presentations, and Self-harm Only Presenters. I used the Kaplan-Meier analysis to ascertain whether survival probability at 6-monthly intervals was influenced by certain triage codes, index presentation types, or Presenter statuses.

I described the alcohol and drug use of Mixed Presenters and Self-harm Only Presenters who as part of MISP had alcohol or drug use documented at their index presentation. I also calculated the survival probability at 12 months follow-up for Mixed Presenters and Self-harm Only Presenters by alcohol and drug use.

In addition, I examined the departure status of Mixed Presenters with self-harm index presentations, Mixed Presenters with ‘other’ index presentations, and Self-harm Only Presenters. Using a Kaplan-Meier analysis, I calculated estimated survival rates by departure status at 6, 12, and 24 months by Mixed Presenters with self-harm or ‘other’
index presentations, and Self-harm Only Presenters. I did not report the survival rate at 18 months as it aligned with the rate at 24 months.

I used descriptive statistics (frequency and percentage) to describe Mixed Presenters with self-harm, Mixed Presenters with other presenting complaints, and Self-harm Only Presenters departure destination. Information on departure status reflected the seriousness of the ED visit.

I included the legal status code as it reflected mental illness severity at outcome events. These codes were not made part of the combined dataset because one admission could have numerous subsequent codes, making it difficult to ascertain which particular legal code was assigned at the index event. Consequently, I provided a broad overview of legal status codes by firstly linking the NMDS dataset with the combined dataset, resulting in all admissions for self-harm lasting at least two days. Secondly, I filtered out admissions that had no legal status codes or those coded as voluntary admissions. Thirdly, I used descriptive statistics to group the legal status codes of the remaining participants into acute and chronic sections under the Mental Health Act, reporting the number of people in each group.

I described the outcome events of Mixed Presenters with self-harm, Mixed Presenters with ‘other’, and Self-harm Only Presenters whose self-harm admissions lasted for at least two days, and divided them into two broad groups: psychiatric and non-psychiatric. I then further evaluated these outcome events (deaths by suicide or inpatient admissions of at least two days for self-harm) along with natural deaths, using descriptive and frequency statistics.

### 8.9 Conclusion

In this chapter, I described the cohort study design that used previously collected ED data from the MISP project to identify, describe, and compare Mixed Presenters and Self-harm Only Presenters. A subset of MISP data was linked with NHI, admission, and mortality datasets and survival analysis was used to answer the main research question: Are Mixed Presenters at increased risk of serious self-harm compared to Self-harm Only Presenters? Additionally, clinical variables were examined for information on presentation patterns and ED management. The next chapter presents these quantitative findings.
Chapter 9
Quantitative Findings on Mixed Presenters

“Life is filled with risky encounters.”

9.1 Introduction

In this chapter, I report on the quantitative findings that answered the research question, “Who are Mixed Presenters?” and described this group’s future serious self-harm risk and ED management. Firstly, I report on the participants in the study, which includes a description of the cohort by their socio-demographic, and clinical characteristics. This is accompanied by a description of follow-up time characteristics. Secondly, I present the serious self-harm risk of Mixed Presenters compared to Self-harm Only Presenters. Thirdly, I describe the ED presentation patterns by Presenter group and type of index presentation (self-harm or ‘other’) by Mixed Presenters. Lastly, information on ED management of index and outcome events (admission for two or more days or suicide) is provided.

9.2 Part one: Who are Mixed Presenters?

9.2.1 Eligibility

I examined MISP data from eight DHBs to assign presentation group status to each participant (Figure 9.1). Those patients who had, in any order, one pre-coded self-harm and another non-self-harm coded ED presentation within 28 days were considered eligible to be Mixed Presenters; those with two self-harm presentations within this timeframe were eligible as Self-harm Only Presenters. In the initial sample of 1996 people who met these criteria, there were 4096 eligible presentation pairs.

---

Figure 9.1 Flowchart depicting the identification of the index sample based on ED presentation data

*This removed 60 people who had no further eligible presentation pairs, including one person who met the exclusion criteria for having presented twice within 28 days to different DHBs and who had two ED presentations in 2009.

Of the sample, one person was excluded because there was no NHI information available. Additionally, 60 people who had presentation pairs to different DHBs and pairs of presentations solely in December 2009 were excluded, resulting in a total of 61 people being excluded. Selecting the first eligible pair of the included 1921 Presenters determined their 'mixed' or 'self-harm only' status.
The ratio of mixed and self-harm only presentation pairs to different DHBs was similar in the excluded group when compared to the index presentation pairs, but varied for presentation pairs in December 2009 (Table 9.1). Most people had single presentation pairs, but three people had 28 presentation pairs excluded between them. In total, 61 people and their 154 ED presentations were excluded, leaving 1935 people in the sample with at least one eligible pair of presentations. A further 14 people (13 Mixed Presenters) were excluded because they had died as a result of their index episodes, and thus could not be assessed at follow-up.

Table 9.1 Excluded presentation pairs to different DHBs and in December 2009, by exposure group and number of pairs

<table>
<thead>
<tr>
<th>Exclusions</th>
<th>Variable</th>
<th>Presentation pairs to different DHBs ( n = 79 ) (people)</th>
<th>Presentation pairs in December 2009 ( n = 75 ) (people)</th>
<th>Total ( N = 154 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair composition</td>
<td>Mixed</td>
<td>64</td>
<td>47</td>
<td>111</td>
</tr>
<tr>
<td></td>
<td>Self-harm Only</td>
<td>15</td>
<td>28</td>
<td>43</td>
</tr>
<tr>
<td>Number of presentation pairs (per person)</td>
<td>1</td>
<td>52 (52)</td>
<td>45 (45)</td>
<td>97 (97)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>10 (5)</td>
<td>10 (5)</td>
<td>20 (10)</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>6 (2)</td>
<td>3 (1)</td>
<td>9 (3)</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>0 (0)</td>
<td>8 (1)</td>
<td>8 (1)</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>0 (0)</td>
<td>9 (1)</td>
<td>9 (1)</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>11 (1)</td>
<td>0 (0)</td>
<td>11 (1)</td>
</tr>
</tbody>
</table>

Identification of index presentation with outcome events of serious self-harm

The outcome events (admission for at least two days for self-harm, or death by suicide) were obtained from the admission and mortality datasets, linked to the MISP data. The process for determining outcome status is shown in Figure 9.2. Of the 1921 people who had an index episode, 735 people had at least one self-harm-related admission subsequent to the index episode, with a total of 1743 self-harm-related admissions until the end of the study. Self-harm admissions before the index visit \( (n = 554) \), those occurring as a result of the index visit (i.e., immediately following the ED visit) \( (n = 370) \) and where the admission was less than one day \( (n = 463) \), were excluded. Of the remaining 356 self-harm admissions by 179 people, the first admission for each person was classified as the outcome admission; I wanted to measure how soon an outcome event occurred, and considered it an indicator of increased risk of serious self-harm.
A total of 63 people died during the study period. Excluded outcome events included one death in 2009 where an index episode had not been identified, and 14 deaths which occurred as part of the index episode. People who had an eligible admission prior to death ($n = 6$) were counted in the admission sample, as this was their (first) outcome event. The 42 people who died after their index presentations had the cause of death recorded as ‘due to suicide’ ($n = 7$), ‘accidents’ ($n = 8$) and ‘for other reasons’ ($n = 27$). Further details on the cause of death across Presenter groups are provided later in this chapter. The eligible self-harm inpatient admissions ($n = 179$) and suicides ($n = 7$) represented the serious self-harm outcome ($n = 186$) which was used in the survival analysis.

### 9.2.2 Socio-demographic, clinical, and follow-up time information

**Demographic characteristics**

Mixed Presenters were more commonly identified in this sample ($n = 1921$) than Self-harm Only Presenters (Table 9.2). There were marginally more males amongst Mixed Presenters (51.1%) whilst females outnumbered males (62.1%) in the Self-harm Only Presenters group.
Table 9.2  Socio-demographic characteristics of Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Socio-demographic</th>
<th>Mixed Presenters</th>
<th>Self-harm Only Presenters</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 1544) (%)</td>
<td>(n = 377) (%)</td>
<td>(N = 1921) (%)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>755 (48.9)</td>
<td>234 (62.1)</td>
<td>989 (51.5)</td>
</tr>
<tr>
<td>Male</td>
<td>789 (51.1)</td>
<td>143 (37.9)</td>
<td>932 (48.5)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;15</td>
<td>40 (2.6)</td>
<td>10 (2.7)</td>
<td>50 (2.6)</td>
</tr>
<tr>
<td>15-24</td>
<td>662 (42.9)</td>
<td>153 (40.6)</td>
<td>815 (42.4)</td>
</tr>
<tr>
<td>25-34</td>
<td>286 (18.5)</td>
<td>75 (19.8)</td>
<td>361 (18.8)</td>
</tr>
<tr>
<td>35-44</td>
<td>237 (15.3)</td>
<td>75 (19.9)</td>
<td>312 (16.2)</td>
</tr>
<tr>
<td>45-54</td>
<td>164 (10.6)</td>
<td>47 (12.5)</td>
<td>211 (11.0)</td>
</tr>
<tr>
<td>55-64</td>
<td>91 (5.9)</td>
<td>14 (3.7)</td>
<td>105 (5.4)</td>
</tr>
<tr>
<td>65-74</td>
<td>27 (1.7)</td>
<td>2 (0.5)</td>
<td>29 (1.5)</td>
</tr>
<tr>
<td>75-84</td>
<td>22 (1.4)</td>
<td>1 (0.3)</td>
<td>23 (1.2)</td>
</tr>
<tr>
<td>85+</td>
<td>15 (1.0)</td>
<td>0 (0.0)</td>
<td>15 (0.8)</td>
</tr>
<tr>
<td>Ethnicity(^3)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Māori</td>
<td>478 (31.0)</td>
<td>98 (26.1)</td>
<td>576 (30.0)</td>
</tr>
<tr>
<td>Pacific Peoples(^1)</td>
<td>71 (4.6)</td>
<td>14 (3.7)</td>
<td>85 (4.4)</td>
</tr>
<tr>
<td>Asian</td>
<td>13 (0.8)</td>
<td>6 (1.6)</td>
<td>19 (1.0)</td>
</tr>
<tr>
<td>European &amp; other(^2)</td>
<td>968 (62.8)</td>
<td>255 (67.8)</td>
<td>1223 (63.8)</td>
</tr>
<tr>
<td>Unidentified</td>
<td>12 (0.8)</td>
<td>3 (0.8)</td>
<td>15 (0.8)</td>
</tr>
</tbody>
</table>

\(^1\)Includes Fijian, Tongan, and other Pacific Island
\(^2\)Includes European 'not further defined', NZ European and other European, African, and Indian
\(^3\)Ethnicity status was missing for two Mixed Presenters and one Self-harm Only Presenter. Unidentified data was coded as such, whereas missing data was left blank

Mixed Presenters had an older age distribution than Self-harm Only Presenters; they were twice as likely to be age 55 or older compared to Self-harm Only Presenters. Mixed Presenters also included a slightly higher proportion of Māori compared to Self-harm Only Presenters (31.0% vs 26.1%). However, in both groups the percentage of Māori was higher than the national population at 15% Māori (Statistics New Zealand, 2014).

Socioeconomic and social information

Mixed Presenters’ and Self-harm Only Presenters’ social backgrounds appeared marginally different from each other (Table 9.3). The majority of participants in each group were permanent residents of New Zealand (97%), yet the Mixed Presenters group had a slightly higher level of deprivation. Marital status data was mostly incomplete, especially for Mixed Presenters – 29.4% as compared to 14.0% of Self-harm Only Presenters. Hence, the finding that single people were predominant in both groups and broadly aligned in their married and separated status should be viewed with caution.
Table 9.3  Socioeconomic and social background of Mixed Presenters and Self-harm Only Presenters at index presentation

<table>
<thead>
<tr>
<th>Socioeconomic and social background</th>
<th>Mixed Presenter ( n = 1554) (%)</th>
<th>Self-harm Only Presenter ( n = 377) (%)</th>
<th>Total ( N = 1921) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New Zealand deprivation status deciles 2006</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>67 (4.4)</td>
<td>20 (5.4)</td>
<td>87 (4.6)</td>
</tr>
<tr>
<td>2</td>
<td>69 (4.5)</td>
<td>18 (4.8)</td>
<td>87 (4.6)</td>
</tr>
<tr>
<td>3</td>
<td>63 (4.1)</td>
<td>18 (4.8)</td>
<td>81 (4.3)</td>
</tr>
<tr>
<td>4</td>
<td>79 (5.2)</td>
<td>19 (5.1)</td>
<td>98 (5.2)</td>
</tr>
<tr>
<td>5</td>
<td>108 (7.1)</td>
<td>36 (9.7)</td>
<td>144 (7.6)</td>
</tr>
<tr>
<td>6</td>
<td>159 (10.4)</td>
<td>46 (12.3)</td>
<td>205 (10.8)</td>
</tr>
<tr>
<td>7</td>
<td>163 (10.7)</td>
<td>25 (6.7)</td>
<td>188 (9.9)</td>
</tr>
<tr>
<td>8</td>
<td>237 (15.5)</td>
<td>59 (15.8)</td>
<td>296 (15.6)</td>
</tr>
<tr>
<td>9</td>
<td>333 (21.8)</td>
<td>91 (24.4)</td>
<td>424 (22.3)</td>
</tr>
<tr>
<td>10</td>
<td>249 (16.3)</td>
<td>41 (11.0)</td>
<td>290 (15.3)</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>729 (46.9)</td>
<td>225 (59.7)</td>
<td>954 (49.7)</td>
</tr>
<tr>
<td>Married/de facto</td>
<td>249 (16.0)</td>
<td>69 (18.3)</td>
<td>318 (16.6)</td>
</tr>
<tr>
<td>Separated&lt;sup&gt;2&lt;/sup&gt;</td>
<td>109 (7.0)</td>
<td>30 (8.0)</td>
<td>139 (7.2)</td>
</tr>
<tr>
<td>Missing&lt;sup&gt;3&lt;/sup&gt;</td>
<td>457 (29.4)</td>
<td>53 (14.0)</td>
<td>510 (26.5)</td>
</tr>
</tbody>
</table>

<sup>1</sup>Least deprived = 1, most deprived = 10; missing deprivation status information for 17 Mixed Presenters and four Self-harm Only Presenters; <sup>2</sup>Includes divorced and widowed; <sup>3</sup>Includes 'unknown' status

Clinical information

Clinical information covered details of index presentations. Self-harm and other presentations by Mixed Presenters were systematically categorised into groups. The aim was to present common presentation complaints, analyse common index (i.e., second) ‘other’ presentations as compared to first presentations, and assess which categories were more likely to result in an outcome event (self-harm admission for at least two days or suicide). These latter results are presented throughout this chapter.

Self-harm codes were categorised using a hierarchy that runs from the most serious type of presentation (completed suicide) to less serious type (suicidal ideation), defined as ‘definite self-harm codes’, followed by uncertain self-harm status codes (see section 8.5.1). Table 9.4 shows that Mixed Presenters had uncertain self-harm status codes (these include the ‘probable’, ‘self-injurious’ and ‘query’ categories) substantially more often compared to Self-harm Only Presenters (38.0% vs 29.2%).
Table 9.4  Self-harm status of Mixed Presenters’ and Self-harm Only Presenters’ index presentations

<table>
<thead>
<tr>
<th>Self-harm status at index</th>
<th>Mixed Presenters¹</th>
<th>Self-harm Only Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n = 831 ) (%)</td>
<td>( n = 377 ) (%)</td>
</tr>
<tr>
<td>Suicide</td>
<td>1 (0.1)</td>
<td>0 (0.0)</td>
</tr>
<tr>
<td>Suicide attempt</td>
<td>224 (27.0)</td>
<td>115 (30.5)</td>
</tr>
<tr>
<td>Self-harm</td>
<td>270 (32.5)</td>
<td>144 (38.2)</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>20 (2.4)</td>
<td>8 (2.1)</td>
</tr>
<tr>
<td>Probable self-harm²</td>
<td>126 (15.2)</td>
<td>31 (8.2)</td>
</tr>
<tr>
<td>Self-injurious self-harm</td>
<td>107 (12.9)</td>
<td>36 (9.6)</td>
</tr>
<tr>
<td>Query self-harm³</td>
<td>81 (9.7)</td>
<td>23 (6.1)</td>
</tr>
<tr>
<td>Sequelae of self-harm</td>
<td>2 (0.2)</td>
<td>20 (5.3)</td>
</tr>
</tbody>
</table>

¹Includes only Mixed Presenters who presented with self-harm for their index (second) presentation
²Includes probable suicide attempt, self-harm, suicidal ideation, and incidental finding of suicide attempt, self-harm, or ideation; ³Suspicious behaviour

The grouping of Mixed Presenters’ ‘other’ index presentation complaints presented in Table 9.5 followed a framework adapted from Cater-Storch et al. (2014) (see section 8.5.1).

Table 9.5  Details of Mixed Presenters’ ‘other’ index presentation complaints

<table>
<thead>
<tr>
<th>Mixed Presenters’ ‘other’ index presentation complaints</th>
<th>( N=709 ) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Main category¹</strong></td>
<td><strong>Subcategory</strong></td>
</tr>
<tr>
<td>Breathing</td>
<td>Shortness of breath</td>
</tr>
<tr>
<td>Circulation</td>
<td>Heart-related</td>
</tr>
<tr>
<td>Disability</td>
<td>Seizures/tremors, dizziness, LOC²/collapse/faint, impairment (TIA³, CVA⁴)</td>
</tr>
<tr>
<td>Exposure</td>
<td>Poisoning, fever, anaphylaxis</td>
</tr>
<tr>
<td>Trauma</td>
<td>Multiple unspecified sites: head, face, trunk, back, neck, hip, extremities</td>
</tr>
<tr>
<td>Skin</td>
<td>Wound, rash, swelling</td>
</tr>
<tr>
<td>Pain</td>
<td>General/multiple sites: ear, nose, throat, eye, dental, jaw, head, chest, back, hip, neck, shoulder, abdominal, abscess</td>
</tr>
<tr>
<td>Function</td>
<td>Constipation/PR⁵ bleed, nausea/diarrhoea/vomiting, urinary, PV⁶ bleeding or discharge</td>
</tr>
<tr>
<td>Miscellaneous⁷</td>
<td>Diabetes-related, psychiatric problems, review/tests, medication requests, social, plaster cast issues, generally unwell/multiple complaints, unclear description of complaint, did not wait</td>
</tr>
</tbody>
</table>

¹Categories adapted from Carter-Storch et al. (2014); ²Loss of consciousness; ³Transient ischaemic attack; ⁴Cerebrovascular accident; ⁵Per rectum; ⁶Per vagina; ⁷n = 4 data missing

The framework is based on ED care priorities – airway, breathing, circulation – and allowed adjustment of the categories to fit Mixed Presenters’ presentation complaints. Most of the ED presentations fell into the miscellaneous, trauma, and pain categories. In the miscellaneous group, review/tests, medications requests, and ‘social’ were the most
common reasons for attending ED along with people who had presented for psychiatric reasons (4.5%) and people who did not wait (2.4%). More than one in five ‘other’ presentations were trauma-related, with half involving the upper extremities. Pain was also a presenting complaint of one in five people, with abdominal pain being reported the most frequently.

**Follow-up time**

Follow-up time for this study (Table 9.6) referred to the amount of time, in days, between a participant's index presentation and his/her outcome event, or end of the study. Death by other causes was also noted because they could consequently not have an outcome event. Follow-up times varied by group and by outcome for the 1921 people in the sample.

**Table 9.6  Number of people, mean, standard deviation, minimum and maximum, and sum of follow-up time in days by outcome event and presentation group**

<table>
<thead>
<tr>
<th>Group</th>
<th>Status at end of follow-up</th>
<th>Number of people</th>
<th>Follow-up time in days$^1$</th>
<th>Lower quartile</th>
<th>Median</th>
<th>Upper quartile</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mixed Presenters</strong></td>
<td>Admitted</td>
<td>101</td>
<td>35.0</td>
<td>156.0</td>
<td>335.0</td>
<td>20,897.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Admitted and suicide$^2$</td>
<td>4</td>
<td>69.0</td>
<td>150.0</td>
<td>219.5</td>
<td>577.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Admitted and accidental death$^2$</td>
<td>1</td>
<td>168.0</td>
<td>168.0</td>
<td>168.0</td>
<td>168.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Admitted and other death$^2$</td>
<td>1</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suicide</td>
<td>4</td>
<td>4.0</td>
<td>10.5</td>
<td>277.0</td>
<td>562.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Death accident</td>
<td>6</td>
<td>46.0</td>
<td>264.0</td>
<td>469.0</td>
<td>1616.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Death other</td>
<td>26</td>
<td>41.0</td>
<td>80.0</td>
<td>271.0</td>
<td>4164.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No event$^3$</td>
<td>1401</td>
<td>239.0</td>
<td>496.0</td>
<td>716.0</td>
<td>671,101.0</td>
<td></td>
</tr>
<tr>
<td><strong>Self-harm Only Presenters</strong></td>
<td>Admitted</td>
<td>72</td>
<td>24.0</td>
<td>126.0</td>
<td>281.0</td>
<td>13,401.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Suicide</td>
<td>3</td>
<td>127.0</td>
<td>387.0</td>
<td>532.0</td>
<td>1046.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Death accident</td>
<td>2</td>
<td>303.0</td>
<td>393.0</td>
<td>483.0</td>
<td>786.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Death other</td>
<td>1</td>
<td>795.0</td>
<td>795.0</td>
<td>795.0</td>
<td>795.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No event$^3$</td>
<td>299</td>
<td>255.0</td>
<td>500.0</td>
<td>742.0</td>
<td>146,912.0</td>
<td></td>
</tr>
</tbody>
</table>

$^1$The density of the follow-up time decreased over time as people who entered the study late could only be followed up until the end of the study; $^2$Death at a later time; $^3$Alive and not admitted

One person was excluded from the survival analysis because their index presentation fell on the last day of the study period and hence their follow-up time (measured in days) would have been zero.
9.2.3 Summary of ‘Who are Mixed Presenters?’

The first part of this chapter described the sample. Following the cleaning of MISP data, 1921 patients with first presentation pairs were included in the sample, with the second presentation in the pair designated as the index. There were four times as many Mixed Presenters as Self-harm Only Presenters, with females making up a larger share of the Self-harm Only Presenter group. Members of both groups demonstrated similar socioeconomic and social circumstances. Self-harm presentations in the index pair were more likely to be coded as ‘definite’ self-harm for Self-harm Only Presenters than for Mixed Presenters. Mixed Presenters’ ‘other’ category contained index presentations to ED mostly for miscellaneous, trauma, and pain reasons.

9.3 Part two: Serious self-harm risk of Mixed Presenters

In this part of the chapter, Mixed Presenters’ and Self-harm Only Presenters’ risk of sustaining a serious self-harm event after their index episode is compared via survival analysis. Then, the socio-demographic and clinical characteristics of people with outcome events are examined and compared to the overall sample.

9.3.1 Estimates of serious self-harm (self-harm admission/suicide)

Kaplan-Meier estimates showed that Self-harm Only Presenters had a higher risk of future serious self-harm than did Mixed Presenters (Table 9.7, Figure 9.3). In the graph, the two lines represent the proportions of Mixed Presenters and Self-harm Only Presenters who experienced an outcome event (admission for self-harm for at least two days or suicide) after their index presentations. Time ‘0’ represents the index episode and the start of the follow-up period. Both curves, depicting the cumulative proportion of Mixed Presenters and Self-harm Only Presenters who had an outcome, increased consistently over the follow-up period. However, a difference between the lower graph, representing few Mixed Presenters who experienced the outcome event and the upper graph, representing higher numbers of Self-harm Only Presenters who had an outcome event over time, was found.

The difference in risk between the two groups is visible in the increasing gap between the lines on the graph. Within 6 months after the index episode, 4% of Mixed Presenters and
12% of Self-harm Only Presenters had experienced the outcome event, which at 12 months increased to 7% and 18%, respectively (Table 9.8).

**Figure 9.3  Kaplan-Meier plot depicting Mixed Presenters’ and Self-harm Only Presenters’ outcomes**

* At 30 months, seven Mixed Presenters were still in the risk set due to calculation of 30.25 days to one month

**9.3.2 Evaluation of differences between Presenter groups’ serious self-harm estimates**

A log-rank test was performed to compare the Kaplan-Meier curves for Mixed Presenters and Self-harm Only Presenters over the 30-month study period. Findings demonstrated a statistically significant difference, $X^2 = 54.7, 1 \text{ df}; p = <0.001$, with Self-harm Only Presenters exhibiting the higher risk.
Table 9.7  Kaplan-Meier estimates of cumulative incidence of outcome/event over time (and 95% confidence interval) for Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Presenter group</th>
<th>Time to event (months)</th>
<th>Cumulative incidence</th>
<th>Confidence interval</th>
<th>Numbers with outcome</th>
<th>Number still at risk¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Presenters²</td>
<td>0</td>
<td>0.00</td>
<td></td>
<td>0</td>
<td>1554</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>0.04</td>
<td>0.03 – 0.05</td>
<td>60</td>
<td>1204</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>0.07</td>
<td>0.06 – 0.08</td>
<td>91</td>
<td>913</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>0.08</td>
<td>0.07 – 0.10</td>
<td>102</td>
<td>632</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>0.10</td>
<td>0.08 – 0.12</td>
<td>110</td>
<td>331</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>0.10</td>
<td>0.08 – 0.12</td>
<td>111</td>
<td>0</td>
</tr>
<tr>
<td>Self-harm Only Presenters</td>
<td>0</td>
<td>0.00</td>
<td></td>
<td>0</td>
<td>377</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>0.12</td>
<td>0.09 - 0.16</td>
<td>43</td>
<td>279</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>0.18</td>
<td>0.14 - 0.22</td>
<td>60</td>
<td>207</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>0.22</td>
<td>0.18 - 0.27</td>
<td>70</td>
<td>146</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>0.24</td>
<td>0.19 - 0.30</td>
<td>73</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>0.27</td>
<td>0.21 - 0.33</td>
<td>75</td>
<td>0</td>
</tr>
</tbody>
</table>

¹At start at each period
²At 30 months, seven Mixed Presenters were still in the risk set due to calculation of 30.25 days to one month (see section 8.8.2 for more detail)

9.3.3  Presenters’ risks of a serious self-harm outcome

Cox proportional hazards regression models were used to compare outcomes by presentation group (Table 9.8). For the unadjusted analysis (model 1), results showed that Self-harm Only Presenters’ risk of serious self-harm was three times higher than that of Mixed Presenters. In other words, the hazard ratio for Mixed Presenters relative to Self-harm Only Presenters was 0.35 (95% CI 0.26-0.47, p < .0001). When adding the potentially confounding factors of gender, age, and ethnicity to the Cox model (model 2), the risk difference between Mixed and Self-harm Only Presenters was decreased, but the hazard ratio remained substantial and significant (HR 0.42, 95% CI 0.31 – 0.57, p < .0001) with Self-harm Only Presenters having more than double the risk of experiencing the outcome event.
Table 9.8  Hazard ratios and 95% confidence intervals for Cox regression models for serious self-harm in Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>Group</th>
<th>HR (95% CI)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Status</td>
<td>Mixed Presenter</td>
<td>0.35 (0.26 – 0.47)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-harm Only Presenter</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Status</td>
<td>Mixed Presenter</td>
<td>0.42 (0.31 – 0.57)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-harm Only Presenter</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>Female</td>
<td>3.53 (2.47 – 5.06)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>&lt;15</td>
<td>0.45 (0.11 – 1.83)</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15-29</td>
<td>1.27 (0.91 – 1.76)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30-44</td>
<td>1.30 (0.86 – 1.95)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45-59</td>
<td>0.85 (0.39 – 1.86)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>60+</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethnicity</td>
<td>Māori</td>
<td>0.70 (0.49 – 1.00)</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Māori</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Status</td>
<td>Mixed Presenter</td>
<td>0.43 (0.31 – 0.58)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-harm Only Presenter</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>Female</td>
<td>3.43 (2.39 – 4.92)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>&lt;15</td>
<td>0.46 (0.11 – 1.85)</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15-29</td>
<td>1.30 (0.93 – 1.81)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30-44</td>
<td>1.34 (0.89 – 2.03)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45-59</td>
<td>0.88 (0.40 – 1.92)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>60+</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethnicity</td>
<td>Māori</td>
<td>0.74 (0.51 – 1.06)</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Māori</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deprivation</td>
<td>1-10</td>
<td>0.97 (0.92 – 1.03)</td>
<td>0.34</td>
</tr>
</tbody>
</table>

*Treated as a linear covariate where hazard ratios represent a one-unit difference in the NZ deprivation scale

Confounders, especially gender, appeared related to self-harm risk, with females at 3.5 times higher risk of having an outcome event than males. Also, Model 2 (adjusted for gender, age, and ethnicity) suggested that Māori might have a decreased risk of subsequent serious self-harm compared to non-Māori (HR 0.70, 95% CI 0.49 – 1.00, p = 0.05). However, adding deprivation status (model 3) moderately shifted the hazard ratio, which meant its confidence interval then included 1, reflecting less definitive risk differences between Māori as compared to non-Māori (HR 0.74, 95% CI 0.51 – 1.06, p = 0.10). The analysis in Table 9.8 assumed that Mixed Presenters’ serious self-harm risk was the same irrespective of whether their index presentations were related to self-harm or other health complaints, and assumption that was further tested (Table 9.9).
Table 9.9  Hazard ratios and 95% confidence intervals for Cox regression models comparing (a) Mixed Presenters with index presentations for self-harm and Self-harm Only Presenters; and (b) Mixed Presenters with other presentations and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Model</th>
<th>Variable</th>
<th>Group</th>
<th>$HR$ (95% CI)</th>
<th>$p$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Status</td>
<td>Mixed Presenter (Self-harm)$^1$</td>
<td>0.40 (0.29 - 0.56)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mixed Presenter (Other)$^2$</td>
<td>0.29 (0.20 - 0.42)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-harm Only Presenter</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Status</td>
<td>Mixed Presenter (Self-harm)$^1$</td>
<td>0.47 (0.34 – 0.66)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mixed Presenter (Other)$^2$</td>
<td>0.36 (0.25 – 0.52)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-harm Only Presenter</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>Female</td>
<td>3.50 (2.45 – 5.02)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Status</td>
<td>Mixed Presenter (Self-harm)$^1$</td>
<td>0.48 (0.34 – 0.67)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mixed Presenter (Other)$^2$</td>
<td>0.36 (0.25 – 0.53)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-harm Only Presenter</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>Female</td>
<td>3.40 (2.38 – 4.88)</td>
<td>&lt;.0001</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Male</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Status</td>
<td>Mixed Presenter (Self-harm)$^1$</td>
<td>0.46 (0.11 – 1.86)</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mixed Presenter (Other)$^2$</td>
<td>1.31 (0.93 – 1.83)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Self-harm Only Presenter</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>&lt;15</td>
<td>0.46 (0.11 – 1.86)</td>
<td>0.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15-29</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30-44</td>
<td>1.34 (0.89 – 2.02)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>45-59</td>
<td>0.86 (0.39 – 1.87)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>60+</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ethnicity</td>
<td>Māori</td>
<td>0.74 (0.51 – 1.06)</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-Māori</td>
<td>Reference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deprivation</td>
<td>1-10</td>
<td>0.97 (0.92 – 1.03)</td>
<td>0.32</td>
</tr>
</tbody>
</table>

$^1$Index presentation was for self-harm; $^2$Index presentation was for ‘other’ reasons

To test this assumption, I repeated the analysis, separating the Mixed Presenter group into those whose index presentation was for self-harm and those whose index presentation was for ‘other’ reasons; each of these was contrasted with Self-harm Only Presenters. The results demonstrated that in comparison with Self-harm Only Presenters, Mixed Presenters with a self-harm index presentation were at higher risk of serious self-harm than participants with other types of index presentations (Table 9.9). Adding confounders resulted in nearly identical findings to those presented in Table 9.8.
9.3.4 Assessment of the proportional hazards assumption

The proportional hazards assumptions were evaluated with a log-log plot (see Figure 9.4). The analysis aimed to assess if consistent parallel curves, reflecting the instantaneous risk (of having a self-harm admission lasting at least two days or of death by suicide) difference between Mixed Presenters and Self-harm Only Presenters across time, existed. The results produced a graph containing continuous parallel lines with minimal fluctuation, indicating that the ratio comparing hazard levels between Mixed Presenters and Self-harm Only Presenters was approximately constant across time. Although assessing “How parallel is parallel?” (Kleinbaum & Klein, 2005, p. 147) can be problematic, the lines for the two groups in Figure 9.4 can be judged to be essentially parallel with each other.

![Log-log plot of survival probability for examining the proportional hazards assumption](image)

Figure 9.4 Log-log plot of survival probability for examining the proportional hazards assumption
9.3.5 Socio-demographic and clinical characteristics of people who had an outcome event

Comparison of sex, age groups, and ethnicity status between the Presenter groups shows that across these variables, the Self-harm Only Presenter group consistently demonstrated two to three times the risk of an outcome event compared to the Mixed Presenter group (Table 9.10). Although these findings align with those from the survival analysis, not considering the length of time in the study or the timing of outcome events makes descriptive statistics less robust. Females were considerably more likely to experience an outcome event compared to males, a difference even more marked in the Self-harm Only Presenters group. However, death by suicide in this ED-presenting cohort was a rare event (0.3% of Mixed Presenters and 0.8% Self-harm Only Presenters) and mostly involved men (6/7).

Table 9.10 Distribution of outcome events by demographic factors for Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Mixed Presenter</th>
<th>Self-harm Only Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Index presentations (n)</td>
<td>Admissions (+suicides) (n)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1544</td>
<td>107 (+4)</td>
</tr>
<tr>
<td>Sex</td>
<td>Female</td>
<td>755</td>
<td>82 (+0)</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>789</td>
<td>25 (+4)</td>
</tr>
<tr>
<td>Age</td>
<td>&lt;15</td>
<td>40</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>15-29</td>
<td>818</td>
<td>47 (+1)</td>
</tr>
<tr>
<td></td>
<td>30-44</td>
<td>367</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>45-59</td>
<td>216</td>
<td>16 (+2)</td>
</tr>
<tr>
<td></td>
<td>60+</td>
<td>103</td>
<td>5 (+1)</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Māori</td>
<td>478</td>
<td>25 (+1)</td>
</tr>
<tr>
<td></td>
<td>Non-Māori</td>
<td>1064</td>
<td>82 (+3)</td>
</tr>
</tbody>
</table>

1People who both had an eligible admission and died by suicide were counted as admissions only
2Ethnicity status was missing for two Mixed Presenters and one Self-harm Only Presenter
3Will be lower than the Kaplan-Meier estimates of outcome events by 30 months, as does not account for differing follow-up times of Presenters

The increased risk of an outcome event for Self-harm Only Presenters was similarly represented across the New Zealand deprivation deciles, with no obvious patterning of
risk across the categories (Table 9.11). Single or separated Self-harm Only Presenters were more likely to experience an outcome event (45.5%) compared to Mixed Presenters (19.7%). In view that the marital status of 20.8% of the Self-harm Only Presenters who had an outcome event was unknown, results are likely reflecting an overall higher risk in Self-harm Only Presenters rather than being unique to this particular subgroup.

Table 9.11 Distribution of outcome events by social factors for Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
<th>Mixed Presenters</th>
<th>Self-harm Only Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Index n = 1544</td>
<td>Outcome n = 111</td>
</tr>
<tr>
<td>New Zealand deprivation status 2006¹</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td></td>
<td>136</td>
<td>15</td>
</tr>
<tr>
<td>3-4</td>
<td></td>
<td>142</td>
<td>8</td>
</tr>
<tr>
<td>5-6</td>
<td></td>
<td>267</td>
<td>22</td>
</tr>
<tr>
<td>7-8</td>
<td></td>
<td>400</td>
<td>27</td>
</tr>
<tr>
<td>9-10</td>
<td></td>
<td>582</td>
<td>37</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>17</td>
<td>2</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td></td>
<td>729</td>
<td>50</td>
</tr>
<tr>
<td>Married/de facto</td>
<td></td>
<td>249</td>
<td>18</td>
</tr>
<tr>
<td>Separated²</td>
<td></td>
<td>109</td>
<td>14</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>457</td>
<td>29</td>
</tr>
</tbody>
</table>

¹Least deprived =1, most deprived =10; ²Included divorced and widowed

Participants' clinical characteristics, in regards to their index presentations and outcome events that involved self-harm admissions for at least two days or death by suicide, differed between groups. Mixed Presenters’ ‘other’ index presentations most often occurred for miscellaneous reasons, trauma, and pain. Yet, the highest percentages of outcome events occurred following index presentations for breathing problems, disability (seizures, collapse), and exposure (poisoning, fevers) (Table 9.12). The small numbers in these categories mean that firm conclusions could not be drawn, yet the finding focuses attention on the fact that certain presentation complaints are possibly more likely to be associated with serious self-harm.

Many Mixed Presenters experienced serious self-harm outcome events following their index presentation for a suicide attempt; yet far more Self-harm Only Presenters experienced an outcome event following suicide attempts, self-harm, and possible self-harm. The probability of outcome events following a ‘possible self-harm’ index
presentation differed greatly between Mixed Presenters (4%) and Self-harm Only Presenters (22.6%) (Table 9.12). Still, in view of the small numbers recorded for each category, this finding should be viewed cautiously.

Table 9.12  Prevalence of outcome events (self-harm admission ≥ 2 days or death by suicide) across self-harm and other index presentation categories for Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Categories</th>
<th>Details</th>
<th>Mixed Presenters</th>
<th>Self-harm Only Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n</td>
<td>Outcome</td>
</tr>
<tr>
<td>Other(^5)</td>
<td>Breathing</td>
<td>34</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Circulation</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Disability</td>
<td>34</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Exposure</td>
<td>26</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Trauma</td>
<td>151</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Skin</td>
<td>42</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Pain</td>
<td>144</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Function</td>
<td>42</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Miscellaneous</td>
<td>231</td>
<td>11</td>
</tr>
<tr>
<td>Self-harm</td>
<td>Completed suicide(^2)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Suicide attempt</td>
<td>224</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Self-harm</td>
<td>270</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Suicidal ideation</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Probable self-harm(^3)</td>
<td>126</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Self-injurious self-harm</td>
<td>107</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Query self-harm(^4)</td>
<td>81</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Sequelae of self-harm</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>1540</td>
<td>111</td>
</tr>
</tbody>
</table>

\(^1\)N = 4 missing; \(^2\)People’s dates of death were often unavailable to research assistants; hence, self-harm categorisation was not always timely. For example, the presentation categorised as ‘completed suicide’ occurred three days after discharge from an inpatient ward for physical reasons.

\(^3\)Includes probable suicide attempt, self-harm, suicidal ideation; and incidental finding of suicide attempt, self-harm, or ideation; \(^4\)Suspicious behaviour indicative of self-harm; \(^5\)Categories adapted from Carter-Storch (2014)

9.3.6 Summary of the serious self-harm risk of Mixed Presenters

This part of the chapter reported on the differences in serious self-harm risk levels for Mixed Presenters and Self-harm Only Presenters. A survival analysis over a 30-month’ timeframe showed that Self-harm Only Presenters were at significantly increased risk of
future serious self-harm compared to Mixed Presenters. This risk difference was consistent across demographic characteristics. Additionally, outcome events occurred more often in ‘other’ categories that applied to only a few Mixed Presenters. These findings can be viewed in the context of ED presentation patterns, described next.

9.4 Part three: ED presentation patterns

ED presentation patterns differed between the Presenter groups as well as between those with ‘other’ and self-harm index presentations within the Mixed Presenter group. Further knowledge of these unique patterns assists in the definition of Mixed Presenters. In this part of the chapter, I firstly describe presentation patterns at the eight DHBs, and secondly, I analyse the number and type of all self-harm presentations made by the Presenter groups, and describe the timeframe between Presenters’ first and second (index) presentations. Thirdly, I describe and compare ‘other’ first and second (index) presentation complaints of Mixed Presenters.

9.4.1 District Health Boards (DHBs)

ED presentation numbers differed between DHBs (Table 9.13). A third of all index presentations were to two of the eight DHBs, whereas the two smallest DHBs made up 15% of all index presentations.

Table 9.13 Index presentation type by DHB for Mixed Presenters (self-harm and ‘other’ reasons) and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>DHB</th>
<th>Mixed Presenters</th>
<th></th>
<th>Self-harm Only Presenters</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-harm n (%)</td>
<td>Other n (%)</td>
<td>Total n (%)</td>
<td>Self-harm n (%)</td>
<td>Other n (%)</td>
</tr>
<tr>
<td>A1</td>
<td>101 (12.2)</td>
<td>71 (10.0)</td>
<td>172 (11.1)</td>
<td>49 (13.0)</td>
<td>45 (10.3)</td>
</tr>
<tr>
<td>A2</td>
<td>75 (9.0)</td>
<td>73 (10.2)</td>
<td>148 (9.6)</td>
<td>28 (7.4)</td>
<td>22 (5.4)</td>
</tr>
<tr>
<td>B1</td>
<td>112 (13.5)</td>
<td>106 (14.9)</td>
<td>218 (14.1)</td>
<td>55 (14.6)</td>
<td>50 (12.3)</td>
</tr>
<tr>
<td>B2</td>
<td>157 (18.9)</td>
<td>89 (12.5)</td>
<td>246 (15.9)</td>
<td>65 (14.2)</td>
<td>45 (11.5)</td>
</tr>
<tr>
<td>C1</td>
<td>85 (10.2)</td>
<td>77 (10.8)</td>
<td>162 (10.4)</td>
<td>44 (11.7)</td>
<td>39 (10.0)</td>
</tr>
<tr>
<td>C2</td>
<td>123 (14.8)</td>
<td>131 (18.4)</td>
<td>254 (16.5)</td>
<td>29 (7.7)</td>
<td>28 (7.3)</td>
</tr>
<tr>
<td>D1</td>
<td>126 (15.2)</td>
<td>121 (17.0)</td>
<td>247 (16.0)</td>
<td>68 (18.0)</td>
<td>65 (16.4)</td>
</tr>
<tr>
<td>D2</td>
<td>52 (6.3)</td>
<td>45 (6.3)</td>
<td>97 (6.3)</td>
<td>39 (10.3)</td>
<td>37 (9.8)</td>
</tr>
<tr>
<td>Total</td>
<td>831 (100.0)</td>
<td>713 (100.0)</td>
<td>1544 (100)</td>
<td>377 (100)</td>
<td>377 (100)</td>
</tr>
</tbody>
</table>
A comparison between the Presenter groups showed that presentation numbers mostly aligned between DHBs except for DHB C2, where the percentage of Mixed Presenters was more than double that of Self-harm Only Presenters. This pattern was reversed in DHB D2, but with a smaller difference. The small sample sizes in each DHB limited further survival analysis because firstly, only limited conclusions could be drawn from the results and secondly, it could further risk identifying DHBs and individuals.

9.4.2 Type of ED presentations over study period

The sample of 1921 Mixed Presenters and Self-harm Only Presenters made 16,322 ED visits between 1 January 2010 and 30 June 2012. In these ED presentations, Self-harm Only Presenters were more likely to have definite self-harm presentations (as opposed to ‘uncertain’ such as possible/probable/query) compared to Mixed Presenters (59.5% vs 26.7% of presentations). The high number of ‘other’ presentations by Mixed Presenters suggests that their self-harm presentations were not a common occurrence. However, both Mixed Presenters and Self-harm Only Presenters appear to have complex health needs, as evidenced by high ‘other’ presentation numbers in addition to self-harm episodes (Table 9.14).

Table 9.14 Total number of ED presentations across types of self-harm by Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Self-harm description</th>
<th>Number of ED presentations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mixed Presenter n (%)</td>
</tr>
<tr>
<td>Definite self-harm</td>
<td>3490 (26.7)</td>
</tr>
<tr>
<td>Most probably self-harm</td>
<td>56 (0.4)</td>
</tr>
<tr>
<td>Probably not self-harm</td>
<td>56 (0.4)</td>
</tr>
<tr>
<td>Other (not self-harm)</td>
<td>9460 (72.4)</td>
</tr>
<tr>
<td>Total</td>
<td>13,062 (100.0)</td>
</tr>
</tbody>
</table>

Note: The senior data analyst for MISP grouped self-harm presentations into the categories shown. These are broader compared to those previously used in Table 9.12.

9.4.3 Number of ED presentations

The number of ED presentations was calculated to establish how Presenters accessed health care and whether there were differences between presentation groups. This analysis was limited to those ED presentations which occurred after the index
presentation. Of the sample of 1921 patients, only 194 (10.1%) had no further ED presentations after their index. The follow-up period ended when a patient died (n = 48 people, included deaths following an eligible admission) or at the end of the study (30 June 2012).

The two presenter groups made a total of 11,602 further ED presentations following their index presentations. Mixed Presenters had more ED presentations per year than did Self-harm Only Presenters (mean = 10.4 vs 7.5), with a higher standard deviation indicating more outliers in that group (42.5 vs 15.2) (Table 9.15). The maximum incident rates and presentation numbers portray that Mixed Presenters attended ED far more than did Self-harm Only Presenters. Yet, the median and lower/upper quartiles differed only minimally between the Presenter groups, again indicating that a few Mixed Presenters had high numbers of ED presentations. Of note, the person with most ED presentations, making on average 2.4 visits daily over a year period, had approximately 600 more yearly ED visits than the person with the second most presentations.

Table 9.15  ED presentation rate summary statistics

<table>
<thead>
<tr>
<th>Group</th>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Min/max</th>
<th>Median</th>
<th>Lower/Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed Presenters</td>
<td>Incident rate</td>
<td>10.4</td>
<td>42.5</td>
<td>0.4/956.0</td>
<td>3.1</td>
<td>1.4/7.6</td>
</tr>
<tr>
<td></td>
<td>Follow-up time (years)</td>
<td>1.3</td>
<td>0.7</td>
<td>0/2.5</td>
<td>1.4</td>
<td>0.7/2.0</td>
</tr>
<tr>
<td></td>
<td>Presentation number</td>
<td>6.7</td>
<td>26</td>
<td>1/880</td>
<td>3</td>
<td>2/6</td>
</tr>
<tr>
<td>Self-harm Only Presenters</td>
<td>Incident rate</td>
<td>7.5</td>
<td>15.2</td>
<td>0.4/182.5</td>
<td>3.5</td>
<td>1.8/6.8</td>
</tr>
<tr>
<td></td>
<td>Follow-up time (years)</td>
<td>1.5</td>
<td>0.7</td>
<td>0/2.5</td>
<td>1.6</td>
<td>0.8/2.1</td>
</tr>
<tr>
<td></td>
<td>Presentation number</td>
<td>6.8</td>
<td>8</td>
<td>1/73</td>
<td>4</td>
<td>2/8</td>
</tr>
</tbody>
</table>

1Calculated on a per-person basis; 2Number of presentations per person per year

9.4.4 Mixed Presenter’s ‘other’ presentations

This simple analysis showed that Mixed Presenters’ ‘other’ types of presentation complaints differed for first and second presentations. Mixed Presenters’ first ‘other’ presentations were most often for pain, trauma, and miscellaneous reasons, whereas second (index) presentations were made mostly for miscellaneous reasons (Table 9.16). Pain complaints were more common for first compared to second (index) presentations (29% vs 20.3%). In the miscellaneous category, the percentage of people attending for
reviews and tests was more than three times higher for second (index) presentations than for first presentations. A separate analysis for plaster cast issues revealed that 5.9% of people returned for this issue for second (index) compared to 0.4% for first presentations.

Table 9.16 ‘Other’ presenting complaints for first and index presentations of Mixed Presenters

<table>
<thead>
<tr>
<th>Main category¹</th>
<th>Subcategory</th>
<th>First ( n = 828 ) (%)</th>
<th>Second (index) ( n = 709 ) (%)</th>
<th>Total² ( N = 1537 ) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breathing</td>
<td>Shortness of breath</td>
<td>34 (4.1)</td>
<td>34 (4.8)</td>
<td>68 (4.4)</td>
</tr>
<tr>
<td>Circulation</td>
<td>Heart-related</td>
<td>9 (1.1)</td>
<td>5 (0.7)</td>
<td>14 (0.9)</td>
</tr>
<tr>
<td>Disability</td>
<td>Seizures/tremors, dizziness, LOC²/collapse</td>
<td>56 (6.8)</td>
<td>34 (4.8)</td>
<td>90 (5.9)</td>
</tr>
<tr>
<td>Exposure</td>
<td>Poisoning</td>
<td>38 (4.6)</td>
<td>19 (2.6)</td>
<td>57 (3.7)</td>
</tr>
<tr>
<td></td>
<td>Fever, allergy</td>
<td>16 (1.9)</td>
<td>7 (1.0)</td>
<td>23 (1.5)</td>
</tr>
<tr>
<td></td>
<td><strong>Total exposure</strong></td>
<td>54 (6.5)</td>
<td>26 (3.7)</td>
<td>80 (5.2)</td>
</tr>
<tr>
<td>Trauma</td>
<td>Multiple/unspecified sites</td>
<td>55 (6.6)</td>
<td>18 (2.5)</td>
<td>73 (4.7)</td>
</tr>
<tr>
<td></td>
<td>Head/face</td>
<td>21 (2.5)</td>
<td>21 (2.9)</td>
<td>42 (2.7)</td>
</tr>
<tr>
<td></td>
<td>Trunk/back/neck/hip</td>
<td>15 (1.8)</td>
<td>14 (2.0)</td>
<td>29 (1.9)</td>
</tr>
<tr>
<td></td>
<td>Upper extremities</td>
<td>67 (8.1)</td>
<td>72 (10.1)</td>
<td>139 (9.0)</td>
</tr>
<tr>
<td></td>
<td>Lower extremities</td>
<td>44 (5.3)</td>
<td>26 (3.7)</td>
<td>70 (4.6)</td>
</tr>
<tr>
<td></td>
<td><strong>Total trauma</strong></td>
<td>202 (24.4)</td>
<td>151 (21.3)</td>
<td>353 (23.0)</td>
</tr>
<tr>
<td>Skin</td>
<td>Wound, rash, swelling</td>
<td>17 (2.0)</td>
<td>42 (5.9)</td>
<td>59 (3.8)</td>
</tr>
<tr>
<td>Pain</td>
<td>General/multiple sites</td>
<td>25 (3.0)</td>
<td>8 (1.1)</td>
<td>33 (2.1)</td>
</tr>
<tr>
<td></td>
<td>Ear, nose, throat, eye, dental</td>
<td>17 (2.0)</td>
<td>9 (1.3)</td>
<td>26 (1.7)</td>
</tr>
<tr>
<td></td>
<td>Head</td>
<td>25 (3.0)</td>
<td>5 (0.7)</td>
<td>30 (2.0)</td>
</tr>
<tr>
<td></td>
<td>Chest</td>
<td>53 (6.4)</td>
<td>25 (3.5)</td>
<td>78 (5.1)</td>
</tr>
<tr>
<td></td>
<td>Back, hip, neck, shoulder</td>
<td>19 (2.3)</td>
<td>21 (2.9)</td>
<td>40 (2.6)</td>
</tr>
<tr>
<td></td>
<td>Abdominal</td>
<td>92 (11.1)</td>
<td>55 (7.7)</td>
<td>147 (9.6)</td>
</tr>
<tr>
<td></td>
<td>Abscess</td>
<td>9 (1.1)</td>
<td>21 (2.9)</td>
<td>30 (2.0)</td>
</tr>
<tr>
<td></td>
<td><strong>Total pain</strong></td>
<td>240 (29.0)</td>
<td>144 (20.3)</td>
<td>384 (25.0)</td>
</tr>
<tr>
<td>Function</td>
<td>Constipation/PR³ bleeding, diarrhoea/vomiting</td>
<td>22 (2.6)</td>
<td>29 (4.0)</td>
<td>51 (3.3)</td>
</tr>
<tr>
<td></td>
<td>Urinary</td>
<td>21 (2.5)</td>
<td>10 (1.4)</td>
<td>31 (2.0)</td>
</tr>
<tr>
<td></td>
<td>PV⁴ bleeding or discharge</td>
<td>17 (2.0)</td>
<td>3 (0.4)</td>
<td>20 (1.3)</td>
</tr>
<tr>
<td></td>
<td><strong>Total function</strong></td>
<td>60 (7.2)</td>
<td>42 (5.9)</td>
<td>102 (6.6)</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Diabetes-related</td>
<td>10 (1.2)</td>
<td>5 (0.7)</td>
<td>15 (1.0)</td>
</tr>
<tr>
<td></td>
<td>Psychiatric problems</td>
<td>44 (5.3)</td>
<td>32 (4.5)</td>
<td>76 (4.9)</td>
</tr>
<tr>
<td></td>
<td>Review/tests, medication requests, social</td>
<td>25 (3.0)</td>
<td>69 (9.7)</td>
<td>94 (6.1)</td>
</tr>
<tr>
<td></td>
<td>Plaster cast issues</td>
<td>3 (0.4)</td>
<td>42 (5.9)</td>
<td>45 (2.9)</td>
</tr>
<tr>
<td></td>
<td>Generally unwell/multiple complaints</td>
<td>42 (5.1)</td>
<td>36 (5.0)</td>
<td>78 (5.1)</td>
</tr>
<tr>
<td></td>
<td>Unclear complaint description</td>
<td>11 (1.3)</td>
<td>30 (4.2)</td>
<td>41 (2.7)</td>
</tr>
<tr>
<td></td>
<td>Did not wait</td>
<td>21 (2.5)</td>
<td>17 (2.4)</td>
<td>38 (2.5)</td>
</tr>
<tr>
<td></td>
<td><strong>Total miscellaneous</strong></td>
<td>156 (18.8)</td>
<td>231 (32.6)</td>
<td>387 (25.2)</td>
</tr>
</tbody>
</table>

¹Categories follow an integrated ED framework for emergency assessment: airway, breathing, circulation, disability, environment (ABCDE) (Thim, Krarup, Grove, Rohde, & Lofgren, 2012), adapted from Carter-Storch (2014); ²Loss of consciousness; ³Per rectum; ⁴Per vagina; ⁵Missing data for three first and four second presentations.
9.4.5 Summary of ED presentation pattern

Examination of the ED presentation pattern of this sample showed that definite self-harm presentations were more common for Self-harm Only Presenters, yet both Presenter groups had made substantial ED visits for other reasons (Table 9.14). Mixed Presenters had more ED presentations per year, but this appeared to be influenced by a few outliers with extremely high numbers of presentations. Mixed Presenters' presenting complaints fell into differently distributed categories for first and second ED presentations. What happened in ED for their index presentation will be presented next.

9.5 Part four: Emergency department management

The final part of this chapter is divided into four sections. The first section, 'In ED', describes triage codes allocated for Presenters' index presentations, provides an analysis of survival by triage code, and briefly describes substance use within the context of index presentations. The second section discusses what happened to Presenters upon 'Discharge from ED' following their index episode. The third section, 'After ED', describes the legal status under the Mental Health Act of people with an inpatient admission for self-harm of at least two days and differentiates between admissions for psychiatric and non-psychiatric reasons. Lastly, the causes of all deaths and self-harm details on these inpatient admissions are provided.

9.5.1 In ED

Triage codes

The triage codes allocated for index presentations, assigned following the Australian Triage Scale (see section 2.5.2), varied between Mixed Presenters and Self-harm Only Presenters (Table 9.17). Mixed Presenters' assessed urgency for ED care was lower than that of Self-harm Only Presenters; more Self-harm Only Presenters (68.5%) were assigned triage codes 1 – 3, compared to Mixed Presenters (52.9%). For Mixed Presenters, patterns in triage codes allocated for self-harm and 'other' presentations varied. Self-harm presentations for both groups were more likely to be coded as urgent or life threatening (code 3 or below) than were other presentations (69% vs 34%).
The distribution of triage codes for self-harm index presentations was similar in both the Mixed Presenters group and the Self-harm Only group (Table 9.17). ‘Other’ presentations had lower triage codes assigned. As an example, only two out of 692 (0.3%) Mixed Presenters with ‘other’ presentations received a code 1 (immediately life threatening), compared to 2.1% and 2.3% of self-harm presentations by Mixed Presenters and Self-harm Only Presenters, respectively.

Table 9.17 Triage codes for self-harm and ‘other’ presentations by Mixed and Self-harm Only Presenters at index episode

<table>
<thead>
<tr>
<th>Triage code</th>
<th>Timeframe to see ED doctor</th>
<th>Mixed Presenters n (%)</th>
<th>Self-harm</th>
<th>Other</th>
<th>Total</th>
<th>Self-harm Only Presenters n (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Immediately</td>
<td>17 (1.1)</td>
<td>15 (1.8)</td>
<td>2 (0.3)</td>
<td>7 (1.9)</td>
<td>24 (1.3)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>10 minutes</td>
<td>218 (14.4)</td>
<td>181 (22.1)</td>
<td>37 (5.4)</td>
<td>78 (20.9)</td>
<td>296 (15.7)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>30 minutes</td>
<td>565 (37.4)</td>
<td>367 (44.8)</td>
<td>198 (28.6)</td>
<td>171 (45.7)</td>
<td>736 (39.1)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>60 minutes</td>
<td>537 (35.5)</td>
<td>224 (27.4)</td>
<td>313 (45.2)</td>
<td>94 (25.1)</td>
<td>631 (33.5)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>120 minutes</td>
<td>174 (11.5)</td>
<td>32 (3.9)</td>
<td>142 (20.5)</td>
<td>24 (6.4)</td>
<td>198 (10.5)</td>
<td></td>
</tr>
</tbody>
</table>

In comparison to ‘other’ presentations, self-harm presentations were allocated a lower (more urgent) triage code, indicating injury that is more serious. Further, a Kaplan-Meier analysis showed that patients with self-harm index presentations and a low triage code (in other words, needing urgent care) had increased risk for serious self-harm in the future.

Self-harm Only Presenters had a higher risk (as previously described), a finding that was true even when considering the triage code assigned at index presentation (Table 9.18). For example, the probability of Self-harm Only Presenters experiencing a serious self-harm event by 30 months was 44% for those receiving a code 2 at their index visit and 27% for code 3, compared to 19% and 12%, respectively, for Mixed Presenters who attended for self-harm.

Substance use

ED documentation and subsequent MISP coding of alcohol and drug use showed that at their index presentation, Self-harm Only Presenters were twice as likely to have been either intoxicated or suspected of intoxication with alcohol (23.6%) than were Mixed Presenters (11.7%). The strong link between mental illness, self-harm and alcohol misuse
(Haukka, Suominen, Partonen, & Lönnqvist, 2008; Riedi et al., 2012) meant that (recent) alcohol use documentation was likely to be less for Mixed Presenters ‘other’ presentation, and hence influencing the prevalence difference between the Presenter groups.

### Table 9.18. Kaplan-Meier estimates of cumulative proportion with outcome event by triage code for Mixed Presenters (self-harm and other index presentations) and Self-harm Only Presenters over time

<table>
<thead>
<tr>
<th>Triage code</th>
<th>Time to event</th>
<th>Self-harm</th>
<th>Other</th>
<th>Self-harm Other Self-harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6 months</td>
<td>0.15</td>
<td>0.00</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.15</td>
<td>0.00</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.15</td>
<td>0.00</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>30 months</td>
<td>0.15</td>
<td>0.00</td>
<td>0.14</td>
</tr>
<tr>
<td>2</td>
<td>6 months</td>
<td>0.09</td>
<td>0.03</td>
<td>0.20</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.13</td>
<td>0.12</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.19</td>
<td>0.12</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>30 months</td>
<td>0.19</td>
<td>0.12</td>
<td>0.44</td>
</tr>
<tr>
<td>3</td>
<td>6 months</td>
<td>0.04</td>
<td>0.05</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.08</td>
<td>0.09</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.12</td>
<td>0.09</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>30 months</td>
<td>0.12</td>
<td>0.09</td>
<td>0.27</td>
</tr>
<tr>
<td>4</td>
<td>6 months</td>
<td>0.02</td>
<td>0.03</td>
<td>0.11</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.04</td>
<td>0.06</td>
<td>0.14</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.04</td>
<td>0.10</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>30 months</td>
<td>0.04</td>
<td>0.11</td>
<td>0.16</td>
</tr>
<tr>
<td>5</td>
<td>6 months</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.05</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.10</td>
<td>0.02</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>30 months</td>
<td>0.10</td>
<td>0.02</td>
<td>0.05</td>
</tr>
</tbody>
</table>

**Note:** Results demonstrate the proportion of participants who had experienced the outcome event (admission for self-harm for at least two days or death by suicide); given in 6-month time intervals.

Drug use was rare for both Mixed Presenters and Self-harm Only Presenters (1.0% vs 1.3%). In both groups, 15 people experienced an outcome event following intoxication in the 30 months study period. At the 12-months follow-up, 12 Mixed Presenters had experienced an outcome event compared to nine Self-harm Only Presenters (cumulative proportion with outcome event 0.07 vs 0.12 respectively). This finding indicates that Self-
harm Only Presenters were at a higher risk for a serious self-harm event following an ED presentation where they were under the influence of alcohol (minor differences in substance use coding across the study period are described in the quantitative method chapter, section 8.7.4).

9.5.2 Discharge from ED

The ED departure pattern was often similar for self-harm index presentations, irrespective of Presenter group status (Mixed or Self-harm Only) (Table 9.19). Participants from both groups who had self-harm presentations were admitted or referred/transferred more often, and were less likely to have unknown discharge destinations, compared to other presentations by Mixed Presenters. Only ‘follow-up’ care as a departure status aligned across Presenter groups irrespective of type of presentation.

Table 9.19 Departure from ED status following index presentations by Mixed Presenters, across self-harm and ‘other’ presentations, and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mixed Presenters; n (%)</th>
<th>Self-harm Only Presenters; n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Self-harm</td>
<td>Other</td>
</tr>
<tr>
<td>Admission</td>
<td>279 (33.6)</td>
<td>143 (20.1)</td>
</tr>
<tr>
<td>Discharge</td>
<td>285 (34.3)</td>
<td>291 (40.8)</td>
</tr>
<tr>
<td>Referral/transfer</td>
<td>72 (8.7)</td>
<td>37 (5.2)</td>
</tr>
<tr>
<td>Self-discharge</td>
<td>32 (3.9)</td>
<td>44 (6.2)</td>
</tr>
<tr>
<td>Follow-up</td>
<td>118 (14.2)</td>
<td>95 (13.3)</td>
</tr>
<tr>
<td>Unknown¹</td>
<td>45 (5.4)</td>
<td>103 (14.4)</td>
</tr>
<tr>
<td>Total</td>
<td>831 (100.0)</td>
<td>713 (100.0)</td>
</tr>
</tbody>
</table>

¹‘Unknown’ was used when the discharge destination was unclear or was not stated. It includes ‘parking issues’, ‘no data’, ‘other’, ‘return if necessary’, ‘review at ED’, and ‘seen by crisis team’ as well as missing data.

A Kaplan-Meier survival analysis of outcomes according to ED discharge status at the index presentation showed that Self-harm Only Presenters who (a) self-discharged, (b) were referred/transferred, or (c) were admitted were at high risk of an outcome event (Table 9.20). For example, at 24 months the cumulative proportion with an outcome event following referral/transfer was 0.35 for Self-harm Only Presenters and 0.18 for Mixed Presenters, indicating that 35% of Self-harm Only Presenters who had been referred/transferred had an outcome event, compared to 18% of Mixed Presenters in the same ED discharge category. In addition, Mixed Presenters with an index visit for self-
The cumulative proportion with an outcome event for Mixed Presenters admitted following a self-harm index presentation was 0.17 at 24 months compared to 0.07 for Mixed Presenters admitted following an ‘other’ presentation. This means that at 24 months, 17% of Mixed Presenters who had self-harm index presentations that resulted in an admission had an outcome event, compared to 7% of Mixed Presenters who had ‘other’ index presentations that resulted in admission. These estimates were equivalent at 30 months follow-up.

Table 9.20  Survival rates at 6, 12, and 24 months’ follow-up for Mixed Presenters and Self-harm Only Presenters, by ED discharge status

<table>
<thead>
<tr>
<th>ED discharge status</th>
<th>Time to event</th>
<th>Mixed Presenters</th>
<th>Self-harm Only Presenters</th>
<th>Cumulative proportion with outcome event</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Self-harm</td>
<td>Other</td>
<td>Self-harm</td>
</tr>
<tr>
<td>Admission</td>
<td>Total/outcome</td>
<td>279/34</td>
<td>143/9</td>
<td>129/28</td>
</tr>
<tr>
<td></td>
<td>6 months</td>
<td>0.08</td>
<td>0.05</td>
<td>0.17</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.12</td>
<td>0.07</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.17</td>
<td>0.07</td>
<td>0.26</td>
</tr>
<tr>
<td>Discharge</td>
<td>Total/outcome</td>
<td>285/14</td>
<td>291/19</td>
<td>117/17</td>
</tr>
<tr>
<td></td>
<td>6 months</td>
<td>0.02</td>
<td>0.03</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.05</td>
<td>0.06</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.07</td>
<td>0.09</td>
<td>0.18</td>
</tr>
<tr>
<td>Referral/transfer</td>
<td>Total/outcome</td>
<td>72/9</td>
<td>37/3</td>
<td>34/10</td>
</tr>
<tr>
<td></td>
<td>6 months</td>
<td>0.08</td>
<td>0.07</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.15</td>
<td>0.07</td>
<td>0.26</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.18</td>
<td>0.13</td>
<td>0.35</td>
</tr>
<tr>
<td>Self-discharge</td>
<td>Total/outcome</td>
<td>32/3</td>
<td>44/1</td>
<td>22/7</td>
</tr>
<tr>
<td></td>
<td>6 months</td>
<td>0.03</td>
<td>0.02</td>
<td>0.10</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.08</td>
<td>0.02</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.13</td>
<td>0.02</td>
<td>0.41</td>
</tr>
<tr>
<td>Follow-up</td>
<td>Total/outcome</td>
<td>118/6</td>
<td>95/6</td>
<td>55/7</td>
</tr>
<tr>
<td></td>
<td>6 months</td>
<td>0.04</td>
<td>0.02</td>
<td>0.06</td>
</tr>
<tr>
<td></td>
<td>12 months</td>
<td>0.04</td>
<td>0.05</td>
<td>0.08</td>
</tr>
<tr>
<td></td>
<td>24 months</td>
<td>0.06</td>
<td>0.09</td>
<td>0.17</td>
</tr>
</tbody>
</table>

9.5.3 After ED

Legal status

Sectioning is a process under the Mental Health Act that allows compulsory assessment and treatment against a person’s will. It is viewed as “an entry point to services for people
experiencing a mental illness which causes or may cause serious harm to themselves or others” (Ministry of Health, 2012a, p. 1). A ‘short’ section will always precede (at some time point) a ‘long’ section, but not all short sections will result in compulsory treatment orders (Section 8.5.4, Table 9.21).

Table 9.21 Number and type of Mental Health Act sections assigned to Mixed Presenters and Self-harm Only Presenters admitted for ≥ 2 days following an ED index presentation

<table>
<thead>
<tr>
<th>Term of duration</th>
<th>Mixed Presenters</th>
<th>Self-harm Only Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>People n (%)</td>
<td>Sections n (%)</td>
</tr>
<tr>
<td>Short(^2)</td>
<td>16 (76.2)</td>
<td>43 (81.1)</td>
</tr>
<tr>
<td>Acutely mentally unwell, requiring short-term compulsory assessment and treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long(^3) - Compulsory treatment order (CTO)</td>
<td>5 (23.8)</td>
<td>10 (18.9)</td>
</tr>
<tr>
<td>Total</td>
<td>21 (100.0)</td>
<td>53 (100.0)</td>
</tr>
</tbody>
</table>

\(^1\)Percentage of people with at least one section  
\(^2\)Includes patients on sections 8-11, 13, 14 and 15, reflecting Part 1 of the Mental Health (Compulsory Assessment and Treatment) Act 1992  
\(^3\)Includes patients on sections 29, 30 and 31 (Part 2), and 45 and 13 (Part 4 - prison population) of the Mental Health (Compulsory Assessment and Treatment) Act 1992

One out of every five of those Mixed Presenters and Self-harm Only Presenters who experienced an outcome event admission was sectioned under the Mental Health (Compulsory Assessment and Treatment) Act 1992. The rate of sectioning was similar for the Mixed Presenter and Self-harm Only Presenter groups. In all, 35 people with an outcome event admission were sectioned 94 times between them during the study period. This occurred in similar proportions for both Mixed Presenters (n = 21, 19.6%) and Self-harm Only Presenters (n = 14, 19.4%). Yet, the type of sectioning varied, with Mixed Presenters being far more likely to be sectioned for a short-term period, compared to Self-harm Only Presenters. This finding suggests that Self-harm Only Presenters more often endured severe and debilitating mental illness requiring involuntary long-term...
assessment and treatment, compared to Mixed Presenters, although the small numbers of participants in these categories must be considered.

**Outcome event: Inpatient admission**

For a group of Mixed Presenters and Self-harm Only Presenters, their index episode was immediately followed by a self-harm-related admission of at least two days. Both types of index presentations by Mixed Presenters – ‘other’ or self-harm – aligned with those of Self-harm Only Presenters, and across these three groups approximately 60% of admissions were for psychiatric reasons and 40% were for non-psychiatric reasons (Table 9.22).

**Table 9.22** Type of inpatient admission (≥ 2 days for self-harm) immediately following the index episodes by Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Code</th>
<th>Inpatient admission type</th>
<th>ED index presentations n (%)</th>
<th>Mixed Presenter</th>
<th>Self-harm Only Presenter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Self-harm</td>
<td>Other</td>
<td>Total</td>
</tr>
<tr>
<td>ID</td>
<td>Intended day case</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>0 (0.0)</td>
<td>1 (1.4)</td>
</tr>
<tr>
<td>IM</td>
<td>Psychiatric inpatient event</td>
<td>27 (42.2)</td>
<td>17 (39.5)</td>
<td>44 (41.1)</td>
<td>28 (38.9)</td>
</tr>
<tr>
<td>IP</td>
<td>Non-psychiatric inpatient event</td>
<td>37 (57.8)</td>
<td>26 (60.5)</td>
<td>63 (58.9)</td>
<td>43 (59.7)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>64 (100.0)</td>
<td>43 (100.0)</td>
<td>107 (100)</td>
<td>72 (100.0)</td>
</tr>
</tbody>
</table>

1Self-harm inpatient admission lasting at least two days

### 9.5.4 Details of deaths and self-harm (outcome) admissions

Mixed Presenters and Self-harm Only Presenters did not solely die by suicide. During the follow-up period, slightly more people died an early death (n = 8) compared to the suicide deaths (n = 7) discussed above. Early deaths, which included two Self-harm Only Presenters, were due to alcohol misuse, accidental poisoning, anorexia, fire, and other reasons. Natural deaths, particularly those due to cardiovascular problems (Table 9.23), were far more common for Mixed Presenters (n = 26, 1.7%) than for Self-harm Only Presenters (n = 1, 0.3%).
Table 9.23  Mixed Presenters’ natural death causes following their index episode

<table>
<thead>
<tr>
<th>Natural deaths</th>
<th>Mixed Presenters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>*n = 26 (100%)</td>
</tr>
<tr>
<td>Cardiac/vascular</td>
<td>9 (34.6)</td>
</tr>
<tr>
<td>Malignancy</td>
<td>5 (19.2)</td>
</tr>
<tr>
<td>Neurological/renal/hepatic/gastrointestinal</td>
<td>5 (19.2)</td>
</tr>
<tr>
<td>Respiratory</td>
<td>3 (11.5)</td>
</tr>
<tr>
<td>Endocrine disorder</td>
<td>2 (7.7)</td>
</tr>
<tr>
<td>Sepsis</td>
<td>2 (7.7)</td>
</tr>
</tbody>
</table>

Admissions occurred most often for poisoning across Presenter groups (Table 9.24). Yet, admissions following self-harm resulting from sharp or blunt objects was more common in the Self-harm Only Presenters group (28.0%) whilst hanging attempts and jumping from a height – both potentially lethal means – were more common for Mixed Presenters, though the numbers were small. Hanging was the most common method used in completed suicides (*n = 5*), and was the sole method used by Self-harm Only Presenters who completed suicide.

Table 9.24  Details of self-harm admissions ≥ 2 days and deaths by suicide by Mixed Presenters and Self-harm Only Presenters

<table>
<thead>
<tr>
<th>Outcome event</th>
<th>Self-harm detail¹</th>
<th>Mixed Presenters n (%)</th>
<th>Self-harm Only Presenters n (%)</th>
<th>Total N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission</td>
<td>Poisoning – medication</td>
<td>63 (56.8)</td>
<td>38 (50.7)</td>
<td>101 (54.3)</td>
</tr>
<tr>
<td></td>
<td>Sharp or blunt objects</td>
<td>15 (13.5)</td>
<td>21 (28.0)</td>
<td>36 (19.4)</td>
</tr>
<tr>
<td></td>
<td>Suicidal ideation</td>
<td>12 (10.8)</td>
<td>4 (5.3)</td>
<td>16 (8.6)</td>
</tr>
<tr>
<td></td>
<td>Poisoning²</td>
<td>12 (10.8)</td>
<td>7 (9.3)</td>
<td>19 (10.2)</td>
</tr>
<tr>
<td></td>
<td>Hanging; jumping (height)</td>
<td>5 (4.5)</td>
<td>2 (2.7)</td>
<td>7 (3.8)</td>
</tr>
<tr>
<td>Suicide</td>
<td>Hanging, carbon monoxide poisoning, firearm</td>
<td>4 (3.6)</td>
<td>3 (4.0)</td>
<td>7 (3.8)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>111 (100.0)</td>
<td>75 (100.0)</td>
<td>186 (100.0)</td>
</tr>
</tbody>
</table>

¹Descriptions of ICD-10 codes X60-X80; ²Narcotics, alcohol, or steam/vapors

9.5.5  Summary of ED management

On arrival to ED, Self-harm Only Presenters were triaged with low (urgent) triage codes; compared to Mixed Presenters, their survival probability following triage codes of 2 (‘emergency’) and 3 (‘urgent’) was significantly lower. When discharged directly from ED, participants with index presentations for self-harm in both Presenter groups experienced hospital admission more often than Mixed Presenters with ‘other’ presentations. Yet, Self-
harm Only Presenters’ serious self-harm risk following self-discharge, referral/transfer, or admission was significantly higher than that of Mixed Presenters. Though both groups were admitted in equal numbers to non-psychiatric and psychiatric inpatient wards, significantly more Self-harm Only Presenters were under long-term compulsory mental health treatment compared to Mixed Presenters. Poisoning and hangings were the most predominant self-harm methods used by participants in both groups who experienced an outcome event.

9.6 Conclusion

This chapter described Mixed Presenters, compared their serious self-harm risk to Self-harm Only Presenters, and reported on their presentation pattern and ED management. Four out of five people in the sample met the definition of a ‘Mixed Presenter’ who often presented for pain or injuries for their ‘other’ presentation. The survival analysis showed that Mixed Presenters had a 60% reduced instantaneous risk of serious self-harm compared to Self-harm Only Presenters, with female Self-harm Only Presenters being at particular risk. Self-harm Only Presenters with low (urgent) triage codes and those who were admitted following their index presentation were more likely to have a later serious self-harm event than were Mixed Presenters. Compulsory mental health treatment during an admission that followed an outcome event was more often short-term for Mixed Presenters and long-term for Self-harm Only Presenters. The implications of these findings will be explored in the discussion chapter.
Chapter 10
Discussion and Conclusion

We call ourselves ‘human beings’ not ‘human bodies’\(^\text{10}\)

10.1 Introduction

This research sought to answer the questions: (i) “Who are Mixed Presenters?”, (ii) “What is Mixed Presenters’ serious self-harm risk compared to Self-harm Only Presenters?”, and (iii) “What is the ED management of Mixed Presenters?” Knowing the answers to these questions revealed that whilst previous research has identified risk factors for self-harm, identified frequent ED users, and acknowledged the (at times) inadequate ED care for people who self-harm, Mixed Presenters were (until now) unidentified and subject to substantial self-harm risks. Mixed methods research was viewed as optimal for filling this substantial knowledge gap.

The study was guided by a pragmatic mixed method research methodology where theories of indirect self-destructive behaviour, labelling, and suicide were used to contextualise the problems and findings. The qualitative part of the design was informed by interpretive description (Thorne, 2008), a methodology well suited to investigating clinical problems, whilst for the quantitative dataset I applied survival analysis to compare the self-harm risks between Mixed Presenters and Self-harm Only Presenters. Additionally, utilising a triangulation framework enabled me to systematically compare and contrast qualitative and quantitative findings.

This chapter discusses the major findings of this study and is divided into five sections. Firstly, a summary of the findings is provided, followed by a discussion of the principal findings, namely that many Mixed Presenters experience severe adverse health and social circumstances resulting in long-term self-harm risk, for which they frequently receive poor ED care. In the third section, the strength and limitations of this research are

\(^{10}\)Wellington Osteopaths
assessed, and in part four, ethical concerns and safety considerations are discussed. The fifth section outlines study implications for policy and clinical practice combined, and for research. Lastly, a conclusion and recommendations are provided.

### 10.2 A summary of integrated study findings

This summary consists of merged qualitative and quantitative findings from Chapters 7 and 9, respectively. A triangulation framework adapted from Farmer et al. (2006) was used for the merger. Key results from the qualitative and quantitative findings were grouped into themes and aligned with one of the three research questions. Tables are used to outline the themes, and the convergence coding (‘agreement’, ‘partial agreement’, ‘silence’, ‘dissonance’ - detailed in section 5.7.1) for the three research questions.

The level of convergence between the qualitative and quantitative findings was high for the research question ‘Who are Mixed Presenters?’, as evidenced by the extent of ‘agreement’ and ‘partial agreement’ between the quantitative and qualitative findings. The question ‘What is the serious self-harm risk of Mixed Presenters?’ resulted in medium convergence of findings between the two methods, demonstrated by levels ranging from ‘agreement’ to ‘silence’. Themes under the ‘What is the ED management of Mixed Presenters?’ were solely from qualitative findings, hence representing no convergence. The key qualitative and quantitative findings for each research question are presented in turn below.

#### 10.2.1 Who are Mixed Presenters?

Mixed Presenters had distinct features. Foremost, they were far more common amongst those presenting to ED with self-harm than Self-harm Only Presenters (4:1). Also, the quantitative datasets reflected that compared to Self-harm Only Presenters, who were more often female (62.1%), Mixed Presenters consisted of equal numbers of men and women, (similarly reflected in the sample interviewed), with nearly a third identifying as Māori. Individuals interviewed frequently reported difficult life circumstances, interwoven physical and self-harm issues, and little perceived help from health services (Table 10.1).
Table 10.1  Convergence coding matrix¹ for ‘Who are Mixed Presenters?’

<table>
<thead>
<tr>
<th>Themes</th>
<th>Qualitative results</th>
<th>Quantitative results</th>
<th>Convergence coding²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence</td>
<td>No information</td>
<td>Mixed Presenters more common than Self-harm Only Presenters (4:1)</td>
<td>Silence</td>
</tr>
<tr>
<td>Life is a struggle</td>
<td>Extensive physical and mental health history; social hardship; loss of control</td>
<td>Mixed Presenters died more commonly from natural causes compared to Self-harm Only Presenters (1.7% vs 0.3%).</td>
<td>Agreement</td>
</tr>
<tr>
<td>Other reasons for ED presentation and link to self-harm</td>
<td>Pain and trauma were common reasons for ‘other’ presentations; pain and social stressors triggered self-harm</td>
<td>First presentations were more commonly for pain or trauma (53.4%) compared to second presentations (41.6%); 72% of total ED visits were for ‘other’ reasons</td>
<td>Agreement</td>
</tr>
<tr>
<td>Help and support</td>
<td>Limited medication effectiveness; work and study experienced as positive; support people instrumental in seeking help and providing safety at home</td>
<td>Only 16% were married or in a relationship (29.4% of data missing)</td>
<td>Partial agreement /silence</td>
</tr>
</tbody>
</table>


²Agreement, Partial agreement, Silence, Dissonance

Life was a struggle for many Mixed Presenters. Interviews revealed that Mixed Presenters’ lives were predominantly shaped by trauma, violence, poverty, physical health issues, and major mental illness. Whilst the quantitative findings revealed that only 16% of Mixed Presenters were married or in a relationship at their index episode, the qualitative findings illustrated an unsettled social background: many participants were living alone, experienced difficulties relating to and trusting others, and had poor access to their children; some disclosed participation in illegal activities. These hardships were exemplified by Mixed Presenters’ experiences of loss of control over their lives. A combination of these factors likely contributed to Mixed Presenters’ higher incidence of early death by natural causes when compared to Self-harm Only Presenters.

Adverse life experiences, especially when young, negatively influenced Mixed Presenters’ ability to feel in control of their lives. The harm encountered by many Mixed Presenters limited their decision-making and problem management. In addition to their often visible outer scarring, there appeared to be inner scarring as well. Just as scarred skin is less
flexible and more vulnerable to extreme conditions, many Mixed Presenters’ inner capabilities to problem-solve, develop resilience, trust others, and have healthy relationships was hampered, making them incapable of growth or slow to adapt, and unable to stand up to more extreme pressures and stress. Thus, negative coping strategies such as self-harm, substance misuse, and either perpetrating or becoming a victim of violence often occurred.

‘Other’ and self-harm presentations by Mixed Presenters were frequently interrelated. Firstly, most participants reported a wide range of acute physical health problems, in addition to chronic degenerative diseases and past trauma (including trauma from self-harm), which aligned with Mixed Presenters’ predominant ‘other’ ED presentations. Secondly, Mixed Presenters presented more often for pain or trauma for their first presentation, as compared to their second. Considering that participants frequently reported how pain and social stressors triggered self-harm, a likely link between self-harm and these other ED presentations existed.

Additionally, many of the interviewed Mixed Presenters experienced little help with managing their health. Medication, the mode of help most commonly used by health services, was rarely effective and also frequently caused side effects and/or adverse effects. While support people were often instrumental in seeking help for Mixed Presenters’ self-harm events, supporting the Mixed Presenter in ED and keeping them safe at home, their input often decreased with increased frequency of self-harm. Nevertheless, activities that reflected the individuals’ purpose and worth, such as working or studying (reported by very few participants), impacted positively on Mixed Presenters. The combination of multiple stressors and limited support meant that many participants were chronically at risk for self-harm. Coping had its limits.

10.2.2 Serious self-harm risk

The serious self-harm risk of Mixed Presenters was assessed by examining events or experiences before ED, in ED, and upon discharge from ED (Table 10.2). Before ED, many Mixed Presenters experienced long-term, though at times intermittent, risk of self-harm triggered by their unpredictable mental state, chronic physical health issues, social hardship, relationship issues, and inadequate ED care. Although the majority of participants reported prior self-harm events, and many of these attended ED often, they did not always seek ED care.
## Table 10.2 Convergence coding matrix\(^1\) for the serious self-harm risk of Mixed Presenters

<table>
<thead>
<tr>
<th>Risk before ED</th>
<th>Qualitative results</th>
<th>Quantitative results</th>
<th>Convergence coding(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk in ED</td>
<td>Commonly suicidal intent; waiting difficult; risk of self-discharge</td>
<td>Self-harm presentations by either Presenter group received more urgent triage codes and resulted more often in admissions compared to ‘other’ presentations by Mixed Presenters</td>
<td>Agreement/Partial agreement</td>
</tr>
<tr>
<td>Risk after ED</td>
<td>10 (37%) still at risk of self-harm or in pain on discharge; medication for physical and mental health issues provided easy access to means</td>
<td>Mixed Presenters’ risk for serious self-harm is a third of that of Self-harm Only Presenters over 30 months’ follow-up. Females have a 3.5 times higher risk compared to males</td>
<td>Partial agreement</td>
</tr>
</tbody>
</table>


\(^2\)Agreement, Partial agreement, Silence, Dissonance

When presenting to ED for self-harm, commonly associated with suicidal intent, many Mixed Presenters struggled with the long waiting times, which brought about self-discharge for six people. Self-harm presentations by both Mixed Presenters and Self-harm Only Presenters received similar urgent triage codes. Two-thirds of the self-harm index presentations were allocated an urgent triage code (waiting 30 minutes or less) and one third of the sample were admitted. Mixed Presenters’ other presentations received less urgent care: two-thirds of index presentations were allocated low triage codes (waiting 1 hour or more) and only 20% were admitted.

On discharge from ED, Mixed Presenters’ serious self-harm risk at any time within a 30-month period was 60% lower than that of Self-harm Only Presenters; women in particular were at high risk. It is likely that two self-harm presentations within 28 days reflect unresolved distress, hopelessness, and a strong determination to die, whereas Mixed Presenter’s ‘other’ health issues possibly ‘diluted’ the self-harm risk at that timepoint.

Nevertheless, a substantial number of Mixed Presenters reported an enduring risk of self-harm, a risk further accentuated by their common daily access to medication. Gender
differences in self-harm behaviour explain why women were at increased risk for serious self-harm: Women compared to men are more likely to be admitted for self-harm (1.7:1) and men are nearly three times more likely to die by suicide compared to women (Ministry of Health, 2015b). Many more patients had an outcome event of ‘inpatient admission for self-harm’ (n=179) compared to ‘death by suicide’ (n=7).

Mixed Presenters’ limited control over health and social matters likely influenced how they often (mis)used medication. Some participants reported stopping taking their medication, hoarding it, taking prescription medication provided by friends, driving while under the influence of medication, and/or taking overdoses. These choices with high chance of negative consequence stemmed from a lack of control over the management of medication, which was experienced by Mixed Presenters as ineffective, not available, or contributing to adverse side effects. The challenge for Mixed Presenters was that they frequently not only took medication for their mental illness, but also for physical problems. This overlap sometimes caused problems, with one health condition deteriorating whilst another health condition stabilised, resulting at times in increased self-harm risk.

10.2.3 ED management

This sub-section draws inferences from the qualitative findings only, as quantitative findings did not contain this information. Mixed Presenters experienced ED as being similar to a processing plant (Table 10.3). The frequency of ED visits influenced how Mixed Presenters perceived the quality of the care received (decreased satisfaction with increasing ED visits) and included the assessment of their self-harm risk by ED staff. Despite the numerous shortcomings of ED, many Mixed Presenters received some level of support.

Mixed Presenters’ common impression of ED as a “processing plant” was primarily due to most participants not being involved in care decisions. ED staff’s tendency to take over control was appreciated when Mixed Presenters were unconscious, were presenting for the first time, or were acutely unwell. However, those who were frequent ED users struggled because they themselves either perceived themselves to be experts in their care, or the ED process increased their sense of loss of control. Further, long waiting times reflected for many Mixed Presenters their insignificance compared to other patients who were seen more quickly. When presenting frequently for pain, Mixed Presenters
experienced sub-standard care, whereas presentations for self-harm were characterised by a lack of privacy that led numerous Mixed Presenters to worry about how they were judged by others. Many frequent ED users reported stigmatising staff attitudes, influencing how they shared their risk of self-harm.

Table 10.3 Convergence coding matrix\(^2\) for ED management of Mixed Presenters

<table>
<thead>
<tr>
<th>Themes</th>
<th>ED management of Mixed Presenters</th>
<th>Convergence coding(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing plant</td>
<td>Mixed Presenter not involved in care decisions; long waiting times; judgemental care; lack of privacy; repeat self-harm or chronic pain issues often poorly managed in ED</td>
<td>No information</td>
</tr>
<tr>
<td>Risk assessment</td>
<td>Risk assessment inadequate at times (self-harm in ED or shortly after discharge); poor follow-up for some Mixed Presenters</td>
<td>No information</td>
</tr>
<tr>
<td>Support</td>
<td>A few kind staff; mental health services arranged transport home on discharge following self-harm</td>
<td>No information</td>
</tr>
</tbody>
</table>


\(^2\)Agreement, Partial agreement, Silence, Dissonance

Although clinicians dictated when to assess a patient and what label would be applied, Mixed Presenters chose the level of self-harm disclosure in ED (and during the interview). For example, one participant denied having purposefully taken two to three times her usual medication amount, and another maintained that her overdose was minimal and done with the intention to sleep. This dynamic is particularly relevant when patients presenting to ED for physical problems are also at risk for self-harm. Given that only the patient gets to decide whether or not – and how much – their self-harm issues will be made known, skilled clinicians are crucial.

Predictably, the assessment of risk for further self-harm was often viewed as inadequate. On the one hand, Mixed Presenters reported that when they attended for other reasons, ED staff failed to detect their suicide risk. On the other hand, Mixed Presenters criticised mental health services because clinicians were ‘asking the same questions’ whilst not inquiring about underlying factors. Also, Mixed Presenter’s inability to remember undergoing assessment due to the after-effects of their overdoses was a cause for considerable concern. Thus, the type of assessment and how it is executed is important to these individuals. Follow-up was important, but those Mixed Presenters assessed as ‘low risk’, along with many other frequent ED users, viewed it as inadequate.
Some aspects of ED care were supportive for Mixed Presenters. All participants had encountered a few supportive and non-judgemental ED staff, to the point that inadequate ED care was deemed acceptable if staff were compassionate. Although mental health services always appeared to arrange transport home, frequent ED users often expressed disappointment with the (lack of) care they had received before being put into a taxi.

10.3 Discussion of principal findings

This section discusses the principal findings of this study, incorporating both qualitative and quantitative findings. Discussions are organised into three interrelated themes: 'Mixed Presenters', 'Coping has limits', and 'The processing plant: ED'.

The assignment of codes was followed by an overall assessment of convergence.

10.3.1 Mixed Presenters

This study yielded unique findings in identifying Mixed Presenters as a subset of ED patients. ED presentation complaints, often indicating trauma and pain, and interviews with Mixed Presenters reflected the group’s complex physical and mental health needs, as well as their social issues. In the literature, frequent ED use has been associated with people accessing mental health services (Keene & Rodriguez, 2007; Olfson, Marcus, & Bridge, 2013), misusing substances (Doupe et al., 2012; Haw et al., 2007; Kennedy & Ardagh, 2004) or suffering physical health issues (Doupe et al., 2012; K. Nelson et al., 2011; Sun et al., 2003; Vinton et al., 2014). The identification of Mixed Presenters, who often experienced a mixture of physical and mental health issues, social problems, and self-harm for which they sought various types of ED care twice within a short timeframe, is a new finding. Mixed Presenters are an important ED population, as they require holistic and careful clinical attention.

The identification of Mixed Presenters as a unique group is also crucial because many individuals in this group were Māori, a population already known for having often complex health issues. Even though ethnicity data was not examined in detail, the over-representation of Māori in Mixed Presenters aligns with reports of Māori enduring high rates of diabetes, high blood pressure, and asthma (Ministry of Health, 2014b), in addition to their high rates of smoking (Ministry of Health, 2014b), mental health disorders
(Oakley Browne et al., 2006), and suicide (Ministry of Health, 2015b). These adverse statistics are likely to be relevant for many of the 31% (n=478) Māori Mixed Presenters included in the quantitative sample, which makes it pertinent that ED caters for this group in a culturally appropriate way.

Mixed Presenters engaged in activities that risked harm and ill health, such as driving a car whilst under the influence of drugs, being very upset, or having limited vision, all factors inhibiting safe driving. In addition, Mixed Presenters were found to have sniffed glue, taken accidental overdoses, been chronically sleep deprived, and impulsively harmed themselves. These participants misused substances and experienced interpersonal violence. Further, in ED, some Mixed Presenters self-discharged when seriously injured, for example with lacerations to the neck and major head injuries. These findings align with those by Bernstein et al. (2014) who thought women’s psychiatric and substance use histories contributed to elevated rates of falls, road traffic accidents, and self-inflicted injuries. Similarly, studies investigating self-harm in relation to injuries, road traffic accidents, or interpersonal violence found that these incidents often involved people who had a mental illness and/or misused substances (Boyle et al., 2006; Fanslow & Robinson, 2004; Martiniuk et al., 2009; Murray & de Leo, 2007; Wan et al., 2006). This study uniquely found that these self-destructive behaviours define many Mixed Presenters and their ‘other’ ED presentations. The frequent fusion of self-harm and other health issues means that holistic ED care, including routine inquiry of self-harm intent for injury-related and substance misuse ED presentation, is crucial.

Whilst these activities risked or contributed to harm, it was unclear why Mixed Presenters engaged in them. Perhaps there was a failure to cognitively grasp the consequences, or there were symptoms such as depression or psychosis underlining these actions; or maybe these patients simply did not care about the possible outcomes. However, these activities align with Nelson and Farberow’s (1980) description of ‘indirect self-destructive behaviour’ – a diverse range of behaviours including substance misuse, reckless driving, and disregard or abuse of one’s health. In addition, study findings also correlate with Tsirigotis et al. (2015) who postulated that individuals rarely experience a choice over their self-destructive behaviour. The findings of my study further highlight that, just as many Mixed Presenters are at risk for engaging in both indirect and direct self-destructive behaviours, a clear distinction between self-harm and ‘other’, as used to differentiate presentation types, seems unrealistic. The ambiguity of self-harm behaviours was also reflected in some of the MISP data, as described in the qualitative
method chapter (Section 6.6.1) and quantitative method chapter (Table 8.3), further reflecting the difficulty in determining self-harm from ED presentation data.

One aspect that showed the interplay between self-harm and other health issues was the report of instances where self-harm events resulted in long-term physical impairments. These included the consequences of a self-shooting that resulted in serious multi-organ damage, and an overdose that seemed to have resulted in renal impairment and chronic pain. When people engage in serious self-harm, long-term physical health issues are not unexpected. The trauma literature describes unusual ED presentations via case studies, such as an overdose that resulted in quadriplegia because the individual had a flexed neck over a long period of time whilst unconscious (Wang, Grunch, Moreno, Bagley, & Gottfried, 2012). However, much of what happens to individuals as a consequence of these self-harm events does not appear to be reported or shared. Thus, this study highlights that every self-harm event has potential long-term implications, both for the individual and for the health system, and every effort should be taken to help and intervene. For these Mixed Presenters, self-harm consequences added further stressors.

10.3.2 Coping has limits

Mixed Presenters had complex lives. Many reported poor physical and mental health including substance misuse; social issues; experiences of abuse and violence; and difficulties with relationships. This finding is not new. In the literature, self-harm risk has been associated with a range of physical health problems such as epilepsy, respiratory problems, cancer, and diabetes (Crump, Sundquist, Sundquist, et al., 2013; Myers et al., 2013; K. M. Scott et al., 2010; Stenager & Stenager, 2002); chronic pain (Dominick et al., 2011; Ilgen et al., 2010); alcohol misuse (Chou et al., 2012; Sara et al., 2014); and mental illness, coinciding with a history of assaults and violence (Huey et al., 2012; Spence et al., 2008). What this study further established, however, was that oftentimes the self-harm and other presentations were related to, triggered by, or accentuated each other. It was common for one hardship to follow on from a previous one, such as diabetes leading to cardiac and circulatory problems as well as mental health issues; similarly, for an instance of mental illness, the use of psychotropic medication resulted in cardiac and metabolic problems, accentuating the risk for self-harm. Considering all these factors together, it is logical to conclude that ‘normal’ coping pathways were disturbed, and self-harm was a natural consequence when stressors added up. Mixed Presenters were often barely coping with their everyday life, so even minimal stressors often triggered self-harm, and
if these stressors were not resolved, could result in a further self-harm in ED or re-presentations for self-harm within a short time. These dynamics result in high risk for serious self-harm risk in the future, as found in this study.

Many Mixed Presenters were at substantial risk of self-harm. Mixed Presenters often required urgent ED care at their self-harm index presentations, indicative of serious injury, a high risk to self or others, and/or unstable vital signs (Australasian College for Emergency Medicine, 2013). In interviews, they reported they were commonly and often at risk of self-harm. While these findings are in support of other research, reporting an increased risk of serious self-harm represented by single prior self-harm events (Crandall et al., 2006) and repeat episodes (Bergen, Hawton, Kapur, et al., 2012; Haw et al., 2007; C. Larkin, Di Blasi, & Arensman, 2014), my study further extends these previous findings. Not only were Self-harm Only Presenters found to have an increased risk of future serious self-harm compared to Mixed Presenters, but Mixed Presenters reported chronic distress and long-term risk. Combined, these findings reflect that in addition to ED paying special attention to patients who present multiple times within a short time period for self-harm, self-harm risk also needs to be addressed when people with a history of self-harm present for other health issues.

The risk of adverse outcomes from Mixed Presenters’ frequent and often hazardous exposure to medication was a concern. Other studies discussed the dangers of polypharmacy for older people (Arnold, 2008) and people with schizophrenia and physical health problems (Von Hausswolff-Juhlin, Bjartveit, Lindström, & Jones, 2009), as well as noncompliance with medication (Calderón-Larrañaga et al., 2016; Ho, Bryson, & Rumsfeld, 2009). This study adds an ED view. Findings reveal the need for extra caution when providing medication for ED patients with multiple and comorbid health issues (such as Mixed Presenters) as there is a potential for added health risks, both for adverse effects and for risks of overdose. Also, polypharmacy as a consequence of accessing other healthcare providers and easy access to over-the-counter medication provide a heightened risk of medication misuse. My opinion is that a close ‘working relationship’ between clinicians and Mixed Presenters is essential to help make medication treatment effective and safe.

Mixed Presenters’ support people also had limits to their coping abilities. Support people were crucial in helping Mixed Presenters, and included saving numerous participant’s lives because of self-harm or other reasons. However, as some Mixed Presenters were
reluctant to stay alive, did not disclose their self-harm, argued with support people, and/or continued to self-harm, supporting Mixed Presenters was difficult at times. These findings align with those of Collings (2006), showing that support people's worry about their care responsibility of people with schizophrenia was having a negative impact on their lives. Equally, Peters et al. (2013) described how family members experienced the constant threat of suicide as exhausting, casting a shadow over family life. My study showed that as a consequence of support people's long-term responsibilities, their input frequently decreased over time. This decreasing support for many Mixed Presenters is an important finding as it aligns with ED staff reporting of their struggle with caring for frequent ED users (R. Chapman & Martin, 2014), which in turn was associated with decreased satisfaction with care, possibly increasing Mixed Presenter's future self-harm risk.

10.3.3 The processing plant: ED

Many participants reported avoiding presenting to ED. These Mixed Presenters commonly feared stigmatisation and had experienced detrimental ED care. Ultimately, a number of delayed ED visits resulted in further deterioration of individuals’ mental or physical states and the need for urgent care that required extensive recovery times. These findings are consistent with other studies involving suicidal men with substance use issues who similarly delayed help-seeking until compulsory treatment was needed (Bergmans et al., 2009; Spence et al., 2008), and further, were in line with evidence of individuals feeling stigmatised by ED staff, influencing future help-seeking (Cerel et al., 2006; Clement et al., 2014; Veysey, 2014). In my study, an additional finding was that some frequent ED users had adjusted their presentation complaints to a standard they thought was expected by ED staff. For some Mixed Presenters, the combination of anxiety and knowledge acquired over time about the ‘expected’ severity of pain or self-harm, plus prior negative experiences of severe and escalating distress (including self-harm in ED), produced a ‘them against us’ mentality. The avoidance of seeking help was further illustrated by individuals harming themselves in the form of medication overdoses, putting the initiative for seeking ED care onto other people. These out-of-control measures call for individuals and ED to engage and find a mutually agreeable solution that reduces individuals' distress and self-harm risk and their need to present to ED.

The commonly reported lack of engagement between Mixed Presenters and staff is also illustrated by ED being compared to a 'processing plant'. The impression held by Mixed
Presenters was reflected in an apparent mismatch between their needs and the consequent care received in ED. For many Mixed Presenters this meant limited privacy, repeated assessment questions, and waiting for the crisis team. However, the participants' language reflected their desire for connection, compassion, hope, and worth. Reasons for ED staff's reserved approach might be explained by Redley's research (2010), which showed clinicians avoided engaging with or assessing a person's reasons for taking an overdose. These clinicians feared bedside disagreements, and wanted to avoid exposure to stories of emotional and social hardships, also postulated by Hatcher and Pimentel (2013). My study further highlights that the current ED approach to care is ineffective for many Mixed Presenters, to the point of contributing to escalating health problems including self-harm, requiring further ED care.

As a consequence of this mismatch, participants in my study were rarely involved in their own care decisions. A subgroup of Mixed Presenters reported being cared for like a 'non-person': the need for privacy was waived and staff talked openly and negatively about them, demonstrating depersonalisation tendencies. Similar findings have been reported in the literature, depicting some ED patients who, whilst presenting for self-harm, felt disrespected or embarrassed due to a lack of privacy and confidentiality (Clarke, Usick, Sanderson, Giles-Smith, & Baker, 2014), recalled "they told me I just did it for attention" (Cerel et al., 2006, p. 345), and reflected that "it's an unsaid you're the patient, you have no rights" (McKay, 2010, p. 99). Staff breached both competency requirements which prescribe therapeutic communication with patients by nurses (Nursing Council of New Zealand, 2007) and doctors (Medical Council of New Zealand, 2011), and patient rights requiring respectful and non-discriminatory health care (Health and Disability Commissioner, 1996). ED overcrowding (Forero & Hillman, 2010) resulting in ED staff having decreased time for engagement is a likely contributor. Yet, this study provides further evidence that negative staff attitudes can do harm to patients. As a direct consequence of how some Mixed Presenters experienced their care in ED, their distress and anxiety escalated, resulting in violence and further self-harm for which many required further ED care.

A label of ‘frequent ED user’ was usually detrimental to Mixed Presenters’ care. Where individuals were known to ED staff, had frequent presentations, chronic pain issues, a history of mental illness, and/or had self-harmed previously, it influenced the quality of their care. Whilst these findings align with other studies reporting negative staff attitudes toward people who present to ED frequently for self-harm (Bergmans et al., 2009; Spence
et al., 2008), Chapman et al. (2014) in particular distinguished between ‘real’ suicide attempts and those made by frequent ED users, resulting in staff frustration. Uniquely, this study showed that the frequency of self-harm and other health issues, at times intertwined, as opposed to single self-harm presentations, is often a defining factor for negative ED staff attitude towards a patient. Likely, Mixed Presenters, not adhering to certain norms – seeking ED for emergencies only, and consequently sparingly – meant that staff viewed them as ill-adjusted and ‘bad’ (Killian, 1981), possibly contributing to a downward placement in a status hierarchy (Link & Phelan, 2013). Even though stigmatising can be upsetting for individuals, an additional concern is staff’s preconceived ideas that potentially produce erroneous diagnoses, and cause them to use too few or too many resources and/or harm patients (see labelling challenges 4.3.2) (Croskerry, 2002).

Many frequent ED users amongst the Mixed Presenters questioned the value of a comprehensive mental health assessment because clinicians were purely asking the ‘same’ questions, which in turn influenced some Mixed Presenters’ disclosure of self-harm. Updated New Zealand guidelines recommend the assessment of individuals’ thoughts, plans, actions, intent, and capability regarding suicide (Ministry of Health, 2016e). Including these factors aligns with Joiner’s interpersonal theory of suicide (Van Orden et al., 2010). The Ministry of Health guidance document is thorough, yet the potential problem with any structured assessment tool that focuses on risk is that it can significantly detract from keeping appropriate focus on the individual involved. Of note, Chan et al. (2016) criticised the over-reliance on risk factors such as previous self-harm and physical health issues, arguing that these provided misleading and false reassurance for professionals. In view of Mixed Presenters’ complex health and social issues, and in alignment with Chan et al., a person-focused approach to ED care is likely to benefit this group.

10.4 Strengths and limitations

This section describes the strengths and limitations inherent in this study.

10.4.1 Strengths

A number of strengths can be attributed to this study. Firstly, this study made use of extensive data already collected for another study (MISP). Research assistants had
examined ED data for self-harm, providing a unique opportunity to identify Mixed Presenters and Self-harm Only Presenters. Their adherence to a data manual ensured consistent data coding across DHBs resulting in a unique dataset. My involvement in MISP meant that I was not only familiar with the data collection process, but my close working relationship with the MISP senior data analyst facilitated smooth and safe sample identification for my study. Access to MISP allowed for a sub-sample of Mixed Presenters to be identified for interviews, whilst the whole sample was included in a longitudinal study (because of the long timeframe of MISP). Using the datasets ensured that previously allocated funds for MISP yielded further benefits for other studies, such as mine, and also that more of the data’s potential was explored and further utilised so as to learn more about certain groups of ED patients.

Secondly, the use of meticulous and careful planning, execution, and evaluation of each of the qualitative, quantitative and mixed method approaches formed a solid platform for robust results. The qualitative study followed an established nursing framework (Thorne, 2008), reached saturation, and achieved good credibility and trustworthiness. Equally, the quantitative study met both internal and external validity requirements. Together, the qualitative and quantitative findings, merged systematically with a triangulation tool (Farmer, 2006), provided firm answers to the research questions.

Thirdly, my credentials as an ED and mental health nurse positively shaped the qualitative part of the study. Initially, prior relationships with some DHB staff enabled the enlistment of Nurse Recruiters. During the interviews, my background helped to actively listen to participants, and at times provide brief counsel or physical health advice. Even though the input was informed by my ED and mental health nurse background, it was part of my research strategy to build rapport which would consequently facilitate learning about Mixed Presenters. Foremost, I was able to account for their risk of self-harm during and after interviews. Whilst some participants were debriefing their negative ED experiences, others were fearful about or unsuccessful in making complaints to DHBs. Several participants voiced how they appreciated that somebody wanted to make a difference for them. Hence, I posit that many Mixed Presenters trusted me with their personal and private information because of my clinician status.

It is also likely that my interview skills influenced information gathering. Even though initially I interviewed like a clinician, following supervisory review of the first interview I avoided leading questions and instead frequently inquired “Can you tell me a bit more
about this?" The complex health histories such as cerebrovascular accidents, Asperger’s, and severe mental illness, as well as medication side effects in all likelihood affected how people understood and responded to research questions. The ways in which research questions were asked, the level of engagement with participants, and the alertness to subtle clues were all likely to have influenced the disclosure of information. My clinical background combined with skilled interview techniques were likely reasons for being trusted with participants’ rich information.

A unique strength of the quantitative study was that ‘other’ presenting reasons of Mixed Presenters were categorised. The inconsistent documentation of presenting complaints – some were electronically pre-defined whilst others were free text records – resulted in over 500 differently presented complaints across the DHBs on the one hand, and on the other, revealed inadequate descriptions of health complaints in a significant proportion of the data. Consequently, Mixed Presenters’ ‘other’ presentation complaints were systematically grouped into categories, utilising a framework (Carter-Storch et al., 2014). In future, the use of systematically classified presenting complaints in all EDs is needed so generalised terms such as ‘unwell’ or ‘miscellaneous’ are replaced by more precise descriptors. Then, Mixed Presenters’ ‘other’ presentations can be examined in more detail.

Lastly, the theoretical underpinnings of indirect self-destructive behaviour, help-seeking, labelling, and the Interpersonal Theory of Suicide (Joiner, 2005) contributed a unique lens through which my study findings could be situated. Whilst the theories contextualised Mixed Presenters and their distinct self-harm and ‘other’ ED presentations within a short timeframe, my study findings added new perspectives. The utilisation of theory, especially when closely linked to clinical research, assisted in advancing knowledge of practice.

10.4.2 Limitations

This study also had limitations, often concerning data. The use of MISP data incurred several quality issues. Firstly, unless an intent of self-harm was documented, presentations could not be coded as ‘definite self-harm’. Although research assistants had extensive access to ED and medical data, concrete documentation of self-harm was not always available. Secondly, MISP data quality was influenced by DHB data accessibility and population sizes. In some DHBs hand-written notes were examined less thoroughly
than digital ones; also, large DHBs had vast presentation numbers which created difficulty with finding relevant information in a timely way, and thus their data could not be examined in detail equal to smaller DHBs. Moreover, research assistants followed screening exclusion criteria for certain presentations that did not need to be examined. Taken together, these processes, guided by time constraints, could have resulted in under-detection of self-harm incidents.

It is also possible that MISP research assistants were too inclusive in their self-harm coding, suspecting self-harm where there was little evidence. Of the self-harm index presentations coded ‘probable’, ‘self-injurious’, ‘query’, and ‘sequelae’ (Table 9.4) by 38% of Mixed Presenters and 29.2% of Self-harm Only Presenters, it is likely that a proportion were not related to self-harm. Inclusion of these suspected self-harm presentations would have resulted in an inflated sample. But, in view that self-harm is not always divulged and/or documented as mentioned above, and as ED records are often brief and incomplete (Gairin et al., 2003), the current sample could also have been an underestimate. As these data variations were likely to affect both Presenter groups similarly, I consider my results robust.

Additionally, the study findings that Self-harm Only Presenters were at increased risk of serious self-harm compared to Mixed Presenters were not adjusted for extraneous treatments, which included “other interventions that may have affected some but not all subjects” (Mann, 2003, p. 55). These factors influencing serious self-harm risk include having received a psychosocial assessment when presenting to ED for self-harm (Bergen, Hawton, Waters, Cooper, & Kapur, 2010), alcohol misuse (Ness et al., 2015), frequent ED use (Haw et al., 2007) and follow-up care (Bilén et al., 2014). Yet, the list of factors that can influence self-harm is endless: family support, GP input, genetics, location (rural versus urban), and the quality of ED and mental health services. Whilst my study findings are robust, adjusting for these named factors, if the sample had been larger, might have altered the results somewhat.

Outcome events (inpatient admission for self-harm for at least two days or death by suicide) were equally difficult to determine. One individual was identified as having an outcome five days after their index episode, yet extra variables accessed later in the study showed the individual had died as part of the index episode. Had this Mixed Presenter been excluded from the analysis, the risk of serious self-harm for Self-harm Only Presenters would have been further elevated by a marginal amount. This oversight
highlighted the importance of examining each presentation in detail, especially where an outcome is recorded soon after an index presentation. Yet, as the definition of index episode needed to incorporate events that happened in outpatient care, such as hospice care, it remained difficult to determine when one index episode finished and a new one began. Including the one index presentation as an outcome event offered a learning opportunity.

Overall, outcomes for the quantitative analysis might have been under-reported. Firstly, some mental health admissions for more than two days might have been missed because patients admitted there within three hours of arrival to ED were not included in the NMDS (hospital events) dataset (National Health Board, 2013). Secondly, suicides were likely to be under-reported. Accident verdicts are common where there is no evidence, because "to justify a verdict of suicide the act of self-destruction must be shown to have been the deceased’s intentional act knowing the probable consequences" (Devonport, 2013, p. 5). Thirdly, admission policies might have varied between DHBs and instead of reflecting the seriousness of self-harm, they might have represented the resourcing available in a given community for respite care, or overcrowding on inpatient wards.Fourthly, this study did not include respite care, a common intervention for people acutely at risk of suicide, as an outcome event. In all, the acknowledged under-estimation of outcome events representing serious self-harm risk, whilst affecting both Mixed Presenters and Self-harm Only Presenters, nevertheless is a significant concern.

The qualitative part of this study similarly had limitations. It is possible that recall error occurred where participants either exaggerated or understated what happened in ED. Whilst a shorter time lag between the ED visit and the interview may have improved recall accuracy, the nature of Mixed Presenters’ experiences, such as being related to self-harm or other health issues, and medication regimes causing drowsiness also potentially influenced recall.

10.5 Ethical concerns and safety

10.5.1 Ethical concerns

The recruitment of Mixed Presenters generated ethical challenges. Firstly, one identified Mixed Presenter contacted DHB management because she had not presented to ED for
self-harm and was concerned that self-harm was documented in her clinical notes. The potential upset of the complainant meant that ethical requirements of beneficence and non-maleficence (National Ethics Advisory Committee, 2012) were potentially unmet. In consequence, "We have very little information about you, hence this study might or might not relate to you" was added to the script Nurse Recruiters used when contacting Mixed Presenters. It rightly pointed out the limited information available for identification of self-harm presentations from MISP data and the consequent possibility of error.

Secondly, the means by which Mixed Presenters were recruited also held the potential for creating ethical issues. For example, one individual became upset after concluding that privacy rights and confidentiality were breached when her unlisted telephone number was used to contact her. To my knowledge, DHB clerical information does not specifically code telephone numbers with 'unlisted' and I did not consider this factor when planning the study, hence Mixed Presenters with unlisted telephone numbers were not excluded. This issue was of concern, because the study potentially failed to protect possibly vulnerable people in need of security against harm (National Ethics Advisory Committee, 2012) during the recruitment process. Although a previous study found women who experienced trauma reported minimal distress when being involved in research (Griffin, Resick, Waldrop, & Mechanic, 2003), how these study participants were recruited is possibly an equally important ethical issue.

Following this Mixed Presenter’s complaint to the DHB, I was asked by the DHB manager to contact the individual in question and explain the study. In view of the fact that the Privacy Act prescribes that only “an approved information sharing agreement may authorise an agency to share personal information” (Ministry of Justice, 1993, p. 94), I declined. Instead, my primary supervisor communicated with the manager, resulting in the Nurse Recruiter remaining the main contact person with the potential participant. As a consequence, I constructed a detailed letter as to how Mixed Presenters were identified from the MISP data (Appendix F) and provided it to all Nurse Recruiters. This information was also provided to the complainant. This incident highlighted that privacy and confidentiality aspects of studies such as this need to be considered very broadly.

The last ethical concern involved a relative of one Mixed Presenter being upset about being contacted by a Nurse Recruiter regarding participation in research because the patient had died. This situation also presented a threat to beneficence and non-maleficence (National Ethics Advisory Committee, 2012). In consequence, the Nurse
Recruiter explained the oversight, apologised, and the ‘death status’ was checked by all Nurse Recruiters for subsequent recruitment to reduce future risk of such an error.

Whilst the ethical adverse events of this study are concerning, each resulted in positive outcomes and improvements to the recruitment processes. The safety aspects of the interviews themselves, for both participants and the researcher, are discussed next in the form of a reflective account.

10.5.2 Safety of the participants

Interviews were conducted with a strong emphasis on safety. Mixed Presenters were a vulnerable group who shared experiences of self-harm, physical ailments, mental illness, and trauma. Many Mixed Presenters had been chronically suicidal for months, years, and even decades, reporting self-harm as their ‘normal’ state. Stressors of physical, mental, and social nature were present before, during, and after their interview. Furthermore, means for further self-harm were usually easily available; for example, homes contained knives and Panadol. Mixed Presenters’ participation in the interview, potentially increasing distress and leading to further self-harm, was mitigated by follow-up calls, a resource list and the offer of contacting mental health services.

My clinical and research roles intertwined at times. Participants who appeared agitated, angry, withdrawn, or distressed during the interview, along with those who ruminated about different means of suicide, were assessed for current risk. My clinical nursing background facilitated assessment as to when I should ask risk assessment questions; yet, as a researcher, hearing people’s experiences was most important. Whilst I asked risk-related questions when I wanted to assess participants’ safety, I was disciplined in their use because routine questioning to reassure myself would have been unnecessary, inappropriate, and unethical.

However, I believe that many Mixed Presenters actually benefited from study participation. Despite the study being about ED experiences, many disclosed personal, traumatic, and abusive accounts from childhood during their interview, indicating that sharing personal narrative had a therapeutic benefit. On the one hand, it is likely they wanted to provide context and explanation for their life struggles, poor health, and nonstandard health seeking. On the other hand, talking to a researcher who was looking at improving ED care might have been seen as a better option than complaining to a DHB and potentially influencing their future health care. I believe that listening to and
exploring Mixed Presenters’ experiences in a safe research environment that included clinical expertise, was optimal.

10.5.3 Safety of the researcher

Conducting these interviews with Mixed Presenters presented some risks. Interviewing 20 Mixed Presenters in their homes carried a risk of physical harm for me. Many Mixed Presenters talked about violence, criminal behaviour, and prison sentences. Male participants included those on home detention at the time of the interview, people who portrayed sexually deviant behaviour, and those recounting stories involving the assault of female ED staff. Whilst university staff knew my whereabouts at all times during this phase of the research, all interview sites were out of town and many were in remote parts. In comparison to ED, where support from fellow staff and security personal is immediate, during the interviews I was truly alone and reliant upon my maturity, instinct, communication skills, and nursing experience. These characteristics indeed assisted me to safeguard my physical safety and I completed the interviews without incident.

In addition, exposure to narratives involving emotional and physical abuse, deprivation, and neglect posed a risk for vicarious psychological harm to myself. I experienced sadness for the participants, which seemed to increase with each interview. Likewise, research assistants from MISP (explained in section 5.2) reported emotional exhaustion and a heightened awareness of the fragility of life as a consequence of examining self-harm data (Mckenzie, Li, Jenkin, & Collings, 2016). The risk of ‘vicarious traumatization’ was in the form of harmful changes to a professional’s views (Baird & Kracen, 2006) and burnout, such that professionals lose the ability to cope with daily life (Becvar, 2003). The negative impact of these stories caught me by surprise, especially as I had assumed immunity toward hearing about such adversity due to my everyday exposure to it working in ED. However, the intensity of distress and hardship shared by study participants far outweighed my professional ED encounters which are typically short and specific to a presenting complaint. When working as an ED nurse, my attention is split between a number of patients, family and support people, fellow nurses, doctors, and allied staff, and is mostly task-orientated. During my interviews with participants, however, the opposite occurred, as I was faced with the intensity of a one-to-one interaction. Ultimately, in my research role I felt emotionally under-prepared, even though resilience strategies used in ED, such as debriefing and time-out, assisted with the ‘digestion’ of this information. My
recommendation for clinical researchers doing similar studies, however, is to set up psychological support at the onset of a study.

10.6 Study implications

Here, study implications are discussed, firstly in relation policy and clinical practice – combined because they are often intertwined – and secondly to research.

10.6.1 Implication for policy and clinical practice

My study findings add to suicide prevention knowledge. Two self-harm presentations within a short timeframe, especially if made by women, were found to pose a substantial risk for serious self-harm in the future. Whilst this is important information for clinical practice, the fact that men and young people are reluctant and minimal help-seekers (Clement et al., 2014; A. E. Rhodes et al., 2013) and at high risk of suicide (Ministry of Health, 2015b; A. E. Rhodes et al., 2013) means that men and women possibly require unique ‘alerts’. Nevertheless, following the results of this study, I recommend that patients with multiple ED presentations for self-harm within a short period of time require identification by having an ‘alert’ set up. DHB suicide prevention initiatives (Ministry of Health, 2015c) need to consider this evidence and implement similar strategies to become alerted to these at-risk patients in ED. Even though this ‘alert’ informs staff of these individuals’ substantial and serious future self-harm risk, the possible stigmatising of these frequent ED users that in turn could influence adverse care (Joy, Clement, & Sisti, 2016), should be considered and pre-empted with sensitivity.

It is vital that ED staff routinely ask patients about self-harm, especially if they appear at increased risk. This study, in line with other studies (Fiske, O’Riley, & Widoe, 2008; Ratcliffe et al., 2008; Sareen et al., 2007; K. M. Scott et al., 2010), found that certain patient and ED presentation characteristics were associated with self-harm, including prior self-harm, mental illness, substance misuse, pain, certain injuries, degenerative conditions, diabetes, and neurological and respiratory problems. Despite these physical health issues posing an increased risk of self-harm, unless staff enquire about simultaneous self-harm symptoms and the patient discloses them, this risk will remain undetected. Incidentally, this approach is matched with the expectation that holistic physical health improvements be integrated into multi-disciplinary mental health care (S. Byrne et al., 2011). Screening
tools for detecting occult suicidality in ED have been effectively used (Claassen & Larkin, 2005; Ilgen et al., 2009), yet screening requires a sympathetic enquirer, a safe environment, and integrated referral pathways that can provide timely support.

More timely ED care for Mixed Presenters will reduce adverse events. Many Mixed Presenters’ long wait was likely a result of EDs’ strong focus on prioritising physical health issues over others (Shafiei, Gaynor, & Farrell, 2011), a predominant focus on the presenting complaint without acknowledging some patients’ mixed and complex health needs or, as study findings alerted to, the probability that triage codes reflect judgemental care because of frequent ED use. This study argues that the triage system that originated in wartime (Tooker, 2007), whilst adapted to ED (Australasian College for Emergency Medicine, 2013; Gebbie & Qureshi, 2006), needs to further evolve so as to better incorporate comorbid health issues of Mixed Presenters. More urgent triage codes are expected to decrease Mixed Presenters’ distress, conflict with ED staff, violence, self-harm and self-discharge, and decrease the need for re-presentation.

Health services need to holistically foster positive health outcomes for Mixed Presenters. In alignment with Naylor et al. (2016), integrated care includes physical, mental, and social issues, requiring a multidisciplinary team consisting of ED, mental health, addiction services, Māori health/mental health, primary care, and social workers to work closely together. Cognitive behavioural therapy, dialectical behavioural therapy, and motivational interviewing have the potential to strengthen a person’s ability to cope with daily life by offering different ways of approaching problems and dealing with others, and as such should be integrated into ED care. Promoting these tools might consist of referrals from ED or providing a handout with some strategies from these approaches. Further, ED should offer information on peer support groups, as well as support group information for people with chronic pain, diabetes, and other long-term conditions. Lastly, access to assistance for housing, family violence, and work, already partially available in some settings, should be made accessible through tailored social services. In line with expectations that people should be able to look after their own mental health (Ministry of Health, 2012b), the focus should be on identifying and supporting people’s strengths and wellbeing, and enabling them to maintain control over their lives. These strategies can assist with Mixed Presenters’ experiencing good physical and mental health, and social stability, ultimately resulting in reduced ED visits. Only holistic patient care can address this group’s health and social needs, which is likely to have a knock-on effect on self-harm.
Foremost, ED staff need to positively engage with Mixed Presenters each time they present. Even though suicide prevention guidelines commonly recommend staff be empathetic and compassionate, and follow the principles of manaakitanga (kindness, support) with the aim of fostering a sense of hopefulness (Ministry of Health, 2016e; New Zealand Guidelines Group & Ministry of Health, 2003), the actual in-depth guidance provided for assessing suicide risk reflects that, in reality, engagement is given a negligible part. Rather, the current focus on risk assessments results in people being ‘interrogated’ so as to establish the level of seriousness of their self-harm. The results of this inquiry then inform the level and type of help they can expect. Engagement represents a longer-term approach, where Mixed Presenters are assisted with their distress so they can better face their life challenges. Only after engagement is established, is a conversation about risk feasible. The Royal College of Psychiatrists (2013) judge engagement, as achieved through the therapeutic relationship, as being equally important in psychiatric treatment, further emphasising that in some instances, it is the only treatment. The feasibility of the implementation of ‘active’ engagement in a busy and overcrowded ED depends on environmental and human resources, and attitude.

However, ultimately staff should be encouraged to talk about self-harm, as mental illness and physical illness (including self-harm) are not unique to patients, but can also affect clinicians. Providing a safe platform for discussion should be made possible through DHB-specific suicide prevention strategies (Ministry of Health, 2015c), resulting in the inclusion of routine staff education about self-harm and mixed presentation in the ED quality framework (National Emergency Departments Advisory Group, 2014), with the aim of creating and maintaining a healthy and resilient workforce. The flow on effect would be for staff to develop empathy and understanding on the one hand, as well as skills to inquire about self-harm on the other. The utilisation of educators from mental health services in ED (and vice versa) can further enhance knowledge exchange between these health services (Naylor et al., 2016) without extravagant cost. However, overcrowding not only threatens the quality of health services (Ardagh & Drew, 2015), but threatens optimal knowledge exchange between general and mental health services, influencing patient care.

This study showed that ED management positively and negatively influenced what happened to Mixed Presenters in ED and on discharge. The role and opportunity for ED staff is to help people such as Mixed Presenters (and other patients at risk of self-harm) find a reason to live by assisting them in their recovery pathway. In my view, EDs'
emphasis on interrogation should be minimal and listening, engaging, and walking beside these individuals should be increased. Larkin and Beautrais (2010) described these ED encounters as 'teachable moments' for managing patients potentially at risk of suicide. Here, I argue for 'listening moments' by staff. Only if ED clinicians become wise people, sympathetic toward and accepted by the stigmatised (Goffman, 1991), will they be able to effectively help Mixed Presenters.

10.6.2 Implication for research

This study is a first investigation into Mixed Presenters. Even though quantitative findings showed that Mixed Presenters' risk of serious self-harm is lower than that of Self-harm Only Presenters, their higher rate of death from other causes compared to Self-harm Only Presenters is a concern. An extension of this study could examine the same identified sample of Mixed Presenters for the same duration, with 'Physical Only Presenters' as the control group and using outcome measures of an admission for at least two-days, or death – both for 'other' causes. Findings from this further analysis would provide a more complete picture of the physical status of Mixed Presenters.

Further research should investigate the opinions and experiences of ED staff and support people. This would shed light on ED staff perceptions of the care experiences of Mixed Presenters, both for self-harm presentations and for 'other' presentations. Such information might highlight any differences in staff approaches to care, and discover whether 'knowing' or 'not knowing' the Mixed Presenter exists makes a difference in care quality. Findings could possibly reveal biased attitudes, requiring staff training. In addition, interviews with support people could provide information on their perceptions of their support role for Mixed Presenters. This is important because, as this study revealed, health services underserve some Mixed Presenters, and this places support people in a position of major influence concerning Mixed Presenters' health outcomes. Knowing more about support people's input regarding Mixed Presenters' self-harm and other health problems, and whether these differ, might even require the documentation of and response to the distinct needs of support people themselves.

The quantitative study was conducted with a limited sample size/number of outcome events over a period of 30 months, yet research with larger sample sizes and longer follow-up time is needed to confirm, enhance, or contradict the finding of Mixed Presenters' lower serious self-harm risk as compared to Self-harm Only Presenters. A
larger catchment area, such as more DHBs, or a longer recruitment period with 30 months of follow-up, would likely enhance the generalisability of the findings. The MISP dataset used for this study could continue to be used for follow-up studies of 5 or 10 years, or longer, each time adding up-to-date mortality data. A longitudinal study of greater length (and thus, higher numbers) with suicide as an only outcome event would produce results that are more specific, possibly demonstrating that men are at increased risk of suicide compared to women. However, longer follow-up is likely to dilute the effect of Mixed Presenters ‘other’ health issues.

For this study, and in line with similar studies (Madsen et al., 2009; Moore et al., 2007), Mixed Presenters and Self-harm Only Presenters were defined as people who present to ED at least twice within 28 days. As the optimal pairing is yet unknown, other studies should investigate mixed presentations using different timeframes. Although earlier research indicated that even a short timeframe such as a week resulted in some people having both self-harm and other ED presentations (Kuehl et al., 2012), longer timeframes of 40 or 60 days warrant investigation.

The overlap between being a Mixed Presenter and a Self-harm Only Presenter was not investigated. The present study assumed that Mixed Presenters and Self-harm Only Presenters were distinct from each other. Yet, in all likelihood, some patients were both Mixed and Self-harm Only Presenters at some time, especially if they had attended ED frequently. Learning more about any distinct features of Mixed Presenters, Self-harm Only Presenters, and Mixed/Self-harm Presenters would enable the analysis of their distinct serious self-harm risks. This, in turn, would allow the development of clinical interventions suitable for each group.

This study only superficially classified Mixed Presenters. Future studies are needed to describe Mixed Presenters in more detail. It is likely that Mixed Presenters might fall into subgroups depending on their ‘other’ presentation; for example, those whose ‘other’ presentations were for pain, minor or major trauma, or chronic illness may differ in important ways. Counting the frequency of visits over a time period can facilitate identification of patterns in Mixed Presenters’ behaviour and provide deeper insight into their characteristics and experience. Furthermore, the gender differences for such factors as self-harm, trauma, and substance use presentations, for example, were not explored in the current study due to time limitations. Knowing more about Mixed Presenters can help health services to create more optimal care settings and systems, and foremost will
ensure that Mixed Presenters receive effective care each time they present to ED, decreasing the need for re-presentation.

10.7 Concluding Statement

This study succeeded in uniquely identifying Mixed Presenters, examining their serious self-harm risk, and scrutinising their ED management. Mixed Presenters’ lives were marked by hardship, mental and physical illness, violence, and poverty. As a consequence of these adverse life circumstances, Mixed Presenters’ coping was severely compromised, contributing to often chronic distress, and a high risk of self-harm. Even though EDs are playing an important role in the management of acute crisis, injury, or illness of Mixed Presenters, the findings of this study show that EDs can do better. Improved ED care involves therapeutic staff interaction with Mixed Presenters, multidisciplinary support, and staff satisfaction and enthusiasm in caring for this group of patients. The outcome for Mixed Presenters would include experiencing minimal distress, reduced need to re-present to ED, and decreased self-harm.
References


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### Appendix 1. MISP data sources of each of the eight DHBs

<table>
<thead>
<tr>
<th>DHB</th>
<th>Data source</th>
<th>Detail</th>
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<tbody>
<tr>
<td>1</td>
<td>Concerto</td>
<td>ED discharge information</td>
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<tr>
<td></td>
<td>PiMs</td>
<td>Residency status</td>
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<td></td>
<td>HCC</td>
<td>Mental health records</td>
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<tr>
<td>2</td>
<td>Alpha</td>
<td>Demographic data, presenting problems, ED times</td>
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<tr>
<td></td>
<td>i-health</td>
<td>Discharge summary, lab results, radiology and theatre notes, ICD coding</td>
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<tr>
<td></td>
<td>Jade</td>
<td>Mental health records</td>
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<td></td>
<td>Hard files</td>
<td>Triage and ED notes</td>
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<tr>
<td>3</td>
<td>iSOFT</td>
<td>Discharge summaries, diagnosis, follow-up</td>
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<td></td>
<td>WebPAS</td>
<td>Residency status</td>
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<td></td>
<td></td>
<td>Referral status, eg mental health services</td>
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<td></td>
<td>Hard files</td>
<td>Medical and mental health hard files</td>
</tr>
<tr>
<td>4</td>
<td>ECA, Citrix</td>
<td>Discharge summary, clerical and medical records</td>
</tr>
<tr>
<td>5</td>
<td>IBA</td>
<td>ED presentations, discharge summaries, past ED presentations, outpatient referrals</td>
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<tr>
<td>6</td>
<td>PIMS</td>
<td>Electronic documentation by ED doctors</td>
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<tr>
<td>7</td>
<td>Hard files</td>
<td>Nurses documentation, separate medical and mental health files (different process of ordering files for viewing), printed discharge summary</td>
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<tr>
<td>8</td>
<td>Citrix</td>
<td>ED notes, discharge summaries, clinic letters, past ED presentations</td>
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<tr>
<td>9</td>
<td>Citrix</td>
<td>Daily presentations, electronic patient files, triage notes, clinical notes, prior ED visits</td>
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<tr>
<td></td>
<td>HASED/EDIS</td>
<td>Daily presentations, electronic patient files, triage notes, clinical notes, prior ED visits</td>
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<td></td>
<td>iSoft</td>
<td>Discharge summaries, clinical letters</td>
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### Appendix 2. ED presentations excluded from examination*


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<td>Abscess</td>
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<td>Allergy/Dermatitis type presentations</td>
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<td>Appendicitis</td>
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<td>Arthritis</td>
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<td>Asthma</td>
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<td>Biliary Colic</td>
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<td>Bronchitis</td>
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<td>Cholecystitis</td>
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<tr>
<td>Cold/Flu</td>
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<tr>
<td>Conjunctivitis</td>
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<tr>
<td>Constipation</td>
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<tr>
<td>DVT (deep vein thrombosis)</td>
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<tr>
<td>Food poisoning e.g. <em>campylobacteria</em></td>
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<tr>
<td>Gall stones or Cholelithias</td>
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<tr>
<td>Gout</td>
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<tr>
<td>Haemorrhoids</td>
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<tr>
<td>Hernia (and complications such as strangulated hernia)</td>
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<tr>
<td>IDC (Indwelling Catheter)</td>
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<td>IV Replacement or PEG Replacement</td>
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<tr>
<td>Laryngitis</td>
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<tr>
<td>Otitis (externa/interna) or Ear Infection</td>
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<tr>
<td>Ovarian Cyst</td>
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<tr>
<td>Pharyngitis</td>
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<tr>
<td>PID (Pelvic Inflammatory Disease)</td>
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<td>Pneumonia</td>
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<tr>
<td>POP (Plaster of Paris), i.e. problems related to plaster cast or review/removal</td>
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<tr>
<td>Post-op Complications</td>
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<tr>
<td>Post-op Review and other standard procedures such as ROS (removal of sutures)</td>
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<tr>
<td>Pyelonephritis (kidney infection)</td>
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<td>Renal Calculi (kidney stones)</td>
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<tr>
<td>Renal Colic</td>
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<tr>
<td>RTIs (Respiratory Tract Infections) – lower and upper RTIs</td>
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<tr>
<td>Sporting injuries</td>
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<td>Teeth/Dental</td>
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<tr>
<td>TIA (Transient Ischaemic Attack)</td>
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<td>Tonsillitis</td>
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<tr>
<td>Unstable Angina</td>
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<tr>
<td>Urinary Retention</td>
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<tr>
<td>UTIs (Urinary Tract Infections) or Painful Micturition (Urination)</td>
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<tr>
<td>Varicose Veins</td>
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</tbody>
</table>

*As part of MISP - if presentations complaint aligned with discharge diagnosis
Appendix 3.  Multi Region Ethics Committee Approval
11-20-020

26 August 2011

Ms Silke Kuehl
University of Otago
115 Pinehaven Road
Upper Hutt
Wellington

Dear Ms Kuehl -

Re: Ethics ref: MEC/11/02/020 (please quote in all correspondence)
Study title: The suicide and serious self-harm risk of ‘Mixed Presenters to emergency departments
Investigators: Ms Silke Kuehl
Approved Sites: xxx DHB, xxx DHB

This study was given ethical approval by the Multi-region Ethics Committee on 26th August 2011.

Our files show that two administrative errors were made by us in relation to the approval of this study. The first error involved our mistakenly sending you a letter, dated 7 June 2011, confirming approval for the study as a whole. This letter should have confirmed receipt and approval for two specific study documents only.

Secondly, we note that you did not receive the conditions to which the Committee approved this study in a timely way. This appears to have resulted from errors in the transcription of your contact details.

We apologise for both of these errors, and note that you are likely to have commenced this study following receipt of our letter of 7 June 2011.

Approved Documents
This approval is valid until 30th May 2016, provided that Annual Progress Reports are submitted (see below).

Matters of comment, information or advice
The Committee also forwards the following comments, information and advice, which do not affect the application’s ethical approval status.

· Please alter the consent form to include the standard text book (available on the ethics committee website) regarding the request for an interpreter.

Amendments and Protocol Deviations
All significant amendments to this proposal must receive prior approval from the Committee. Significant amendments include (but are not limited to) changes to:

  o the researcher responsible for the conduct of the study at a study site
  o the addition of an extra study site
  o the design or duration of the study
  o the method of recruitment
  o information sheets and informed consent procedures.

Significant deviations from the approved protocol must be reported to the Committee as soon as possible.

Annual Progress Reports and Final Reports
The first Annual Progress Report for this study is due to the Committee by 26th August 2012. The Annual Report Form that should be used is available at www.ethicscommittees.health.govt.nz. Please note that if you do not provide a progress report by this date, ethical approval may be withdrawn.

A Final Report is also required at the conclusion of the study. The Final Report Form is also available at www.ethicscommittees.health.govt.nz.
Statement of compliance

The committee is constituted in accordance with its Terms of Reference. It complies with the *Operational Standard for Ethics Committees* and the principles of international good clinical practice.

The committee is approved by the Health Research Council’s Ethics Committee for the purposes of section 25(1)(c) of the *Health Research Council Act 1990*.

We wish you all the best with your study.

Yours sincerely

Laura Jayne Burlison
Administrator
Multi-Region Ethics Committee
Email: Multiregion_ethicscommittee@moh.govt.nz
05 February 2014

Ms Silke Kuehl
23A Mein Street
Newtown
Wellington 6242

Dear Ms Kuehl

<table>
<thead>
<tr>
<th>Re:</th>
<th>Ethics ref:</th>
<th>MEC/11/02/020/AM02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study title:</td>
<td>The suicide and serious self-harm risk of ‘Mixed Presenters’ to emergency departments</td>
<td></td>
</tr>
</tbody>
</table>

I am pleased to advise that this amendment has been approved by the Central Health and Disability Ethics Committee. This decision was made through the HDEC Expedited Review pathway.

Please don’t hesitate to contact the HDEC secretariat for further information. We wish you all the best for your study.

Yours sincerely,

Mrs Helen Walker
Chairperson
Central Health and Disability Ethics Committee

Encl: appendix A: documents submitted
      appendix B: statement of compliance and list of members
Appendix 5. Interview Guide

The health care experiences of people who visit emergency departments for self-harm and other causes

Thank you for agreeing to talk to me about your experiences in the emergency department.

This interview has 3 parts:

1. Questions about the self-harm visit to ED

2. Questions about the 'other' visit to ED. Other visits are for physical problems such as pain or an injury, but also include occasions when you might have come to ED with money or housing problems

3. Questions about what was different or the same

Before I start asking you about particular visits to the emergency department, could you tell me how many times you have visited the emergency department within the last 12 months?

Number of ED visits: ________________

How do you usually get to the emergency department?

Which ED visit would you like to talk about first?
# Self-harm Presentation

1. **What happened before you came to the emergency department?**
   
   Hints: trigger; how long between incident and coming to ED; who decided for you to come to ED; how did you get to ED

2. **What happened when you got to the emergency department?**
   
   Consider: talking to ED staff, assessment and treatment, waiting time. What was it like for you?

3. **Tell me about the ED environment during the time of your visit.**
   
   Consider: Overcrowding, privacy, time to discuss issues

4. **Was this visit also related to physical or social concerns? These concerns can include complaints of pain, injury, or housing issues that you might have gone to ED for.**
   
   *If yes, please explain*

5. **If you had previous ED visits for self-harm, was this talked about with you or taken into consideration by ED staff?**

6. **Were your cultural needs met in ED?**
   
   For example, was help from Maori, Pacific or Asian Services offered to you? Did staff ask if you needed an interpreter?

7. **What was your experience with ED staff?**
   
   Health concern identified? How was this done? Were you informed about the waiting time and plans about your treatment? What was your relationship with staff?
8. Was family/whānau or friends present during this ED visit?

   Yes __  If yes, who:  
   Partner/spouse ___
   Family/whānau ___
   Friend/acquaintance ___
   Health Professional/paid ___
   Other ___

   No __

   How was it for you? What was their role in the assessment?

9. What was the outcome of your emergency department visit?

   For example, referral to mental health or other services, admission to hospital, plan on discharge, prescription for medication, etc. Where you satisfied with the outcome? Please explain.

   If you were admitted to hospital, what happened?

   Care by specialist team, length of admission, how person views the whole process. How did you feel about being admitted?

10. Tell me about what happened when you went home.

    Consider: Physical health status, mood, aspects that made life difficult or easy

    To what extent, if at all, did you feel at risk of self-harm when you left ED? Tell me more about this.

11. Could you talk a bit about the follow-up care you received once you left the emergency department?

12. What, if anything, did you appreciate or like about your ED visit? On a scale of 1 to 5, how satisfied were you? (1 not being satisfied and 5 extremely satisfied)

13. How, if at all, could the ED have improved its care for you, i.e. how could it provide a better service?
‘Other’ Presentation

14. You have shared your experiences about your ED visit for self-harm. Before I ask about your ED visit for your physical or social complaint, I was wondering if you left ED without being seen by a nurse or doctor for any of these two visits. If so, could you tell me what made you decide to leave? What happened about your health concern once you had left ED?

15. We are now starting Part 2 of the interview. The following questions are similar to the ones I just asked for the visit for self-harm. Can I continue? I am interested to hear about your ED visit for physical or social reasons. What happened before you came to the emergency department?
   
   Hints: trigger; how long between incident and coming to ED; who decided for you to come to ED; how did you get to ED

16. What happened when you got to the emergency department?
   
   Consider: talking to ED staff, assessment and treatment, waiting time. What was it like for you?

17. Tell me about the ED environment during the time of your visit.
   
   Consider: overcrowding, privacy, time to discuss issues

18. Was this visit also related to self-harm? If yes, please explain. Did you tell staff? Did staff ask about self-harm?

19. If you had previous ED visits for self-harm, was this talked about with you or taken into consideration by ED staff?

20. Were your cultural needs met in ED?
   
   For example, was help from Maori, Pacific or Asian Services offered to you? Did staff ask if you needed an interpreter?
21. What was your experience with ED staff?
   Health concern identified? How was this done? Were you informed about the waiting time and plans about your treatment? What was your relationship with staff?

22. Was family/whānau or friends present during this ED visit?
   Yes __
   If yes, who:
   Partner/spouse ___
   Family/whānau ___
   Friend/acquaintance ___
   Health Professional/paid ___
   Other ___
   No __

   How was it for you? What was their role in the assessment?

23. What was the outcome of your emergency department visit?
   For example, referral to mental health or other services, admission to hospital, plan on discharge, prescription for medication, etc. Where you satisfied with the outcome? Please explain.

   If you were admitted to hospital, what happened?
   Consider referral process, wait, length of admission, how person views the whole process. How did you feel about being admitted?

24. Tell me about what happened when you went home.
   Consider: Physical health status, mood, self-harm or suicidal thoughts, aspects that made life difficult or easy

   To what extent, if at all, did you feel at risk of self-harm when you left ED? Tell me more about this. What happened then?

25. Could you talk a bit about the follow-up care you received once you left the emergency department?
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>26. What, if anything, did you appreciate or like about your ED visit?</td>
<td>On a scale of 1 to 5, how satisfied were you? (1 being not satisfied and 5 extremely satisfied)</td>
</tr>
<tr>
<td>27. How, if at all, could the ED have improved its care for you, ie how could it provide a better service?</td>
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</tbody>
</table>

Finally, I would like to ask you a couple of questions about both visits to ED

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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</thead>
<tbody>
<tr>
<td>28. Tell me about what was different, if anything, between these two visits to the emergency department?</td>
<td>Consider assessment, treatment, staff attitudes, and wait.</td>
</tr>
<tr>
<td>29. What was similar in both visits?</td>
<td></td>
</tr>
<tr>
<td>30. Is there anything else that you would like to share about your ED visits?</td>
<td></td>
</tr>
<tr>
<td>31. Last question: What strategies to you use for keeping well?</td>
<td></td>
</tr>
<tr>
<td>32. Interviews like this can be hard. Would you like me to ring you in a couple of days?</td>
<td></td>
</tr>
</tbody>
</table>

Thank you for participating in the interview. It is very much appreciated.
Appendix 6. Recruitment List

(Please note that the format of the recruitment list has been changed so as to fit the formatting requirements for this PhD document)

Thank you for agreeing to recruit for this study – it is very much appreciated.

This Recruitment List consists of two parts: Part 1 is for personal details and Part 2 is for recruitment outcome details. Please read the Recruiter Guidelines and follow the Phone Call Transcript. Contact Silke if you have any concerns or questions: Mobile 021 477 247; 04 806 1498; silke.kuehl@otago.ac.nz

Part 1

<table>
<thead>
<tr>
<th>No</th>
<th>Random ID number</th>
<th>Month of last eligible presentation</th>
<th>NHI</th>
<th>Name</th>
<th>Address</th>
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<tr>
<td>No</td>
<td>Random ID number</td>
<td>Date/Time 1st phone call</td>
<td>Date/Time 2nd phone call</td>
<td>Date/Time 3rd phone call</td>
<td>Agreed to participate Y/N</td>
<td>If 'Yes' – date when details forwarded to Silke</td>
<td>Interview Date and Time</td>
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Appendix 7.  Flyer for Recruiting a Nurse

I am looking for an ED nurse to assist with the recruitment of participants for a research project:

The health care experience of people who visit emergency departments for self-harm and other causes

About the researcher: I am an ED and mental health nurse, currently working at Wellington ED. I am also involved in the Multi-level Intervention for Suicide Prevention (MISP) research which MidCentral DHB is participating in

The study: In April 2011 I started my PhD looking at the risk of suicide and serious self-harm of those people who present to ED with self-harm and other causes (Mixed Presenters). I would like to interview Mixed Presenters to find out what brought them to ED and their experiences with ED and mental health care. I want to explore if there are opportunities to reduce Mixed Presenter’s future risk and improve their overall health status

Your job: To match up ED presentation ID’s with name and contact details on your IT system; phone people up following a phone script; and if they are interested to forward details to the researcher

Time involved: Approximately 2 - 4 hours. It will vary depending how many attempts it takes to reach people. You will get reimbursed, so this would be ideal for part-time nursing staff

What’s in it for you: Lots - the opportunity to be part of a national research study; potential progression on the PDRP; and reimbursement with vouchers at $25/hour

Ethics: The study has been approved by the Multi Region Ethics Committee (MEC/11/02/020)

I am looking forward to hearing from you.

Silke Kuehl

Tel 04 806 1485; Mob 021 477 247
silke.kuehl@otago.ac.nz
Appendix 8. Recruiter Guidelines

The health care experiences of people who visit emergency departments for self-harm and other causes

Thank you for your assistance with recruitment – it is very much appreciated. The study is completely reliant on the support of people taking on this role, because we cannot approach potential participants directly. Please read through the information carefully and contact the researcher (Silke) if you have any questions or concerns:

Silke Kuehl, Tel. 04 806 1498, Mob 021 477 247, silke.kuehl@otago.ac.nz

Please liaise with Silke when it suits you to recruit participants. The timeframe of recruitment is one week, which means you should contact Mixed Presenters within one week after the agreed starting date. The aim is to recruit 10 – 15 people. Please inform the researcher of delays.

How to do the recruitment:

1) Please read the Patient Information Sheet and Consent Form carefully so you can answer inquiries about the study.

2) The Senior Data Analyst (June Atkinson) from the University of Otago in Wellington will send you a list of NHI numbers with allocated random ID numbers of Mixed Presenters from your DHB. Silke has no access to NHI numbers.

3) For security reasons your DHB email address will be used for data correspondence.

4) Silke will send you a Recruitment List. The list contains the random ID numbers of Mixed Presenters who had their last presentation within the previous 5 months.

5) Do not share these lists with anybody and keep them in a locked cupboard or drawer.

6) Once you have received these two lists you will need to add people’s NHI number to the Recruitment List: scan down the Recruitment List, locate the NHI number that fits the random ID number from the Recruitment list, add the NHI to the Recruitment List.

7) Armed with the NHI, look up details of Mixed Presenters on your ED information technology (IT) system. Details include name, address and telephone number. Add the details to the Recruitment list (Part 1).
8) Once you are ready to phone people up, follow the Phone Call Transcript and start with No 1 on the Recruitment List and go down the list in order. Indicate in Part 2 who has been contacted and what happened.

9) Phone people during the week (day or evening is acceptable) and from hospital premises. Patient information is not to leave the hospital. If phone calls require reimbursement, let Silke know.

10) If the person agrees to participate and wants to arrange an interview time, please inform the person of the dates and times that Silke is planning for interviews. Let Silke know and document the arrangement on the Recruitment List.

11) If the person says 'Yes', forward the details (name and phone number) to Silke via email as soon as possible, so interview dates can be arranged. In Part 2 of the Recruitment List, in the row that aligns with the appropriate random ID number, document the date and time of the phone call, agreement of participation, the date when the information was forwarded to Silke and the interview date and time (as appropriate).

12) If the person says 'No', try and get a sense as to why not (i.e. 'no time', 'no interest', 'poor health', 'other'). However, if people are resistant to talking, do not persevere. Please document in Part 2 of the Recruitment List. Note: People who participate in research tend to belong to a different group compared to those who do not. It would be of value to learn a bit about people who prefer not to get involved in the study.

13) Please make up to three attempts to contact each person. Attempts should be made on different days of the week and at different times. Document the times and days of the phone calls on the Recruitment List.

**Once the recruitment has finished**

Silke will meet up with you to provide an opportunity for a debriefing. Your recruitment time will be reimbursed at $25,-/hour via vouchers.

Please scan or send Part 2 of the Recruitment List to:
Silke Kuehl
Social Psychiatry and Population Mental Health Research Unit
University of Otago Wellington
23A Mein Street
Newtown
Wellington 6242

Please keep Part 1 and the NHI list in a locked cupboard until Silke informs you that they can be destroyed. Thank you!
Appendix 9. Phone Call Transcript

1. “Hello, could I speak to....” (ask for person by name)

2. If the person is not available, continue to say “My name is ..... I am phoning on behalf of the University of Otago. When would ..... be available? I will try and ring again on...at ...”

3. When the person is on-line, give your name and the ED you are connected with.

4. Ask the person: “Do you have time to briefly discuss your possible involvement in a research study?”

5. If the person says ‘Yes’, continue to explain that “The study is looking at the role of the emergency department in health. We are contacting people like you who have been to the emergency department. However, we don’t know if you fit the criteria to take part in the research so please let me know. The researcher is interviewing people who visited the emergency department for self-harm and also for another reason within one month. Did you have such visits? ...”

6. “The research is being led by a nurse, Silke Kuehl. If you agree to participate, it will involve a one hour interview. In the interview, you will be asked a series of questions about your experience in the emergency department and your health care generally.”

7. “The only decision you need to make right now is whether I can pass on your contact details to Silke Kuehl so that she can send you more information about the study. Once you have read this information you can make a decision about participating.”

8. “Can I pass on your contact details to the researcher?” YES NO

9. If YES – “What name & address can I send the information to?”

Name and address: _________________________________________________

10. “Can the researcher contact you by phone?” YES NO

11. If ‘YES’, “What is your phone number?” __________________________

12. If NO (to research) – “Thank you very much for your time. I hope you have a good day.”
Appendix 10. MISP and Recruitment Information

The ‘Mixed Presenter’ research is an extension of the Multi-level Intervention for Suicide Prevention (MISP) study. From December 2009 until June 2012, eight DHBs are participating in MISP. Four of those DHBs are receiving suicide prevention intervention while the other four DHBs have practice as usual. In order to find out if these interventions are working, local research assistants are employed to examine emergency department data for self-harm presentations. A data manager from each DHB forwards information to the research assistant and a Senior Data Analyst at the University of Otago. Also research assistants send examined data to the Senior Data Analyst.

I (Silke Kuehl, Principal Investigator) receive ED data from the Senior Data Analyst. Each presentation has a random ID number attached to it, instead of names or NHI numbers. I look through the data and determine if two presentations were made by one person within a 28 day period: one for self-harm, another one for physical reasons. I create a list and send this list to a recruiter.

A recruiter is a nurse who works in the DHB and has volunteered to assist with this research. The nurse receives my list, but also a list from the Senior Data Analyst which has random ID numbers and their respective NHI numbers. Having these two lists enables the recruiter to match up NHI numbers to the identified random ID numbers. The recruiter is then able to look up personal details that align with the NHI number.

The recruiter is phoning people up to ask if they would be interested to talk about their experiences in ED. If a person agrees to take part, the recruiter will forward personal information to me. I usually make contact, introduce myself and send further information about the study before interview times are arranged. People that originally say ‘yes’ can change their mind at any time. The recruiter does not forward personal information of people who declined to take part.

The care provided in hospitals is audited regularly. Hospitals have a duty to provide care that is proven to be effective and that patients are satisfied with. Contacting people for feedback of their experience in ED can provide an opportunity to contribute to improvement in services.
Appendix 11. Consent Form

The health care experiences of people who visit emergency departments for self-harm and other causes

I have read and I understand the information sheet dated 22/08/11 for volunteers taking part in the study designed to improve the care of people who use emergency departments.

Please indicate below if you require an interpreter:

<table>
<thead>
<tr>
<th>Language</th>
<th>Request</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>I wish to have an interpreter</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Deaf</td>
<td>I wish to have a NZ sign language interpreter</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Māori</td>
<td>E hiahia ana ahau ki tetahi kaiwhaka Māori/kaiwhaka pakeha korero</td>
<td>Ae</td>
<td>Kao</td>
</tr>
<tr>
<td>Cook Island Māori</td>
<td>Ka inangaro au i tetai tangata uri reo</td>
<td>Ae</td>
<td>Kare</td>
</tr>
<tr>
<td>Fijian</td>
<td>Au gadreva me dua e vakadewa vosa vei au</td>
<td>Io</td>
<td>Seg a</td>
</tr>
<tr>
<td>Niuean</td>
<td>Fia manako au ke fakaaoga e taha tagata fakahokohoko kupu</td>
<td>E</td>
<td>Nak a i</td>
</tr>
<tr>
<td>Sāmoan</td>
<td>Ou te mana'o ia i ai se fa'amatala upu</td>
<td>Ioe</td>
<td>Leai</td>
</tr>
<tr>
<td>Tokelaun</td>
<td>Ko au e fofou ki he tino ke fakaliliu te gagana Peletania ki na gagana o na motu o te Pahefika</td>
<td>Ioe</td>
<td>Leai</td>
</tr>
<tr>
<td>Tongan</td>
<td>Oku ou fiema’u ha fakatonulea</td>
<td>Io</td>
<td>Ikai</td>
</tr>
<tr>
<td>Other languages to be added following consultation with relevant communities.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I have had the opportunity to use whānau support or a friend to help me ask questions and understand the study. I understand that taking part in this study is voluntary (my choice), and that I may withdraw from the study at any time, and this will in no way affect my future health care. My data will be removed from the study and destroyed if I decide to withdraw.
I understand that my participation in this study is confidential and that no material that could identify me will be used in any reports on this study.

I have had time to consider whether to take part in the study.

I consent to my interview being audio taped. Yes □ No □

I wish to receive a copy of the results. Yes □ No □

I would like the researcher to inform my GP, my case manager, family/whānau support or friend of my participation in this study. Yes □ No □

If yes, please provide details: ___________________________________________

I, __________________________ hereby consent to take part in this study

Date: __________________________

Signature: ______________________

Please feel free to contact Silke Kuehl (Principal Investigator) or Professor Sunny Collings (Primary Supervisor) if you have any questions about the study.

Silke Kuehl Sunny Collings
04 385 5541, ext 4485 04 385 5541, ext 6045
Email: silke.kuehl@otago.ac.nz Email: sunny.collings@otago.ac.nz
Appendix 12. Participant Information Sheet

The health care experiences of people who visit emergency departments for self-harm and other causes

Thank you for showing an interest in this study. Please read this information sheet carefully before deciding whether or not to participate. If you decide to participate we thank you. Please contact us within 10 days. If you decide not to take part, this will not affect any future care or treatment and we thank you for considering this request.

Introduction
You are invited to take part in a study about people who present to emergency departments with self-harm and also for other causes. Other causes include physical complaints (for example a headache or a sprained ankle) or social reasons, such as housing problems. The purpose of the study is to learn about the care that is provided in emergency departments for people such as yourself, who have used the emergency department for both self-harm and physical or social issues.

Who will interview me?
Silke Kuehl will be conducting the interview as part of her PhD study. She is an experienced mental health and emergency nurse, currently working at Wellington emergency department.

What is the aim of the study?
We want to find out how the care in emergency departments can be improved.

What types of participants are being sought?
The study involves interviews of 40 people across 4 DHBs between 2011 and 2012. We would like you to take part in the study if:

- You are 18 years old or older
- You visited ED at least twice, once with self-harm and once for another reason
- These two visits were within 28 days. It does not matter which visit came first
- The last visit will be within the last 6 months of the study interview.
**What will participants be asked to do?**
Should you agree to take part in this study, we would like to interview you for approximately 1 hour at a place that suits you. Interview questions will be about your experiences in the emergency department during those two visits.

**How will the interview be done?**
Interviews will be recorded with a tape recorder. The answers you give will be kept confidential and stored securely in line with current New Zealand Privacy Legislation. A copy of this interview (audiotape) can be provided to you. No material that could personally identify you will be used in any reports on this study. You do not have to answer all the questions, and you may stop the interview at any time.

**Why is it important to interview me?**
We do not know a lot about people’s experiences of presenting to emergency departments with complaints of self-harm and other reasons. The information you share with us will help to improve services in the emergency department.

**What are the risks and benefits for the participant?**
Risk: It is possible that talking about your experiences at the emergency department could be upsetting. What we do about the risk: We encourage you to seek support from family, whānau and friends, or other support agencies, as you need it. You are welcome to bring a family/whānau member/friend along to the interview. In discussion with you, we might make contact with you after the interview. If during the interview serious concerns for your safety are raised, the researcher will contact mental health services and her supervisor, so support can be provided to you. Decisions about safety will be discussed with you.

Benefits: Many people appreciate the opportunity to talk and share their experiences.

We will provide a Warehouse or petrol voucher of $20 as a token of our appreciation.

**Can participants change their mind and withdraw from the study?**
If you do agree to take part in the study, you are free to change your mind and withdraw from the study up until one month after the interview. Your data will be removed from the study if you decide to withdraw. You do not have to give a reason, and this will in no way affect your future health care.
Statement of approval
This study has received ethical approval from the Multi Region Ethics Committee: MEC/11/02/020

Information and Support
If you have any questions or concerns about your rights as a participant in this research study, you can contact an independent health and disability advocate. This is a free service provided under the Health and Disability Commissioners Act.

Telephone, NZ wide: 0800 555 050
Free Fax, NZ wide: 0800 2787 7678 (0800 2 SUPPORT)
Email: advocacy@hdc.org.nz

If you would like to talk to somebody about aspects relating to Māori, please contact Dr Nicole Coupe (Kai Tahu, Te Atiawa) Nicole_Coupe@moh.govt.nz, (09) 580 9247; Mobile: 021 2430016 who is the Cultural Advisor for this research.

Can I find out about the results of the study?
With your agreement, a copy of the results of this research will be sent to you by 2015.

Please feel free to contact Silke Kuehl (Principal Investigator) or Professor Sunny Collings (Supervisor) if you have any questions about the study.

Silke Kuehl (Student) Sunny Collings (Supervisor)
Social Psychiatry and Population Director, Social Psychiatry & Population
Mental Health Research Unit Mental Health Research Unit
University of Otago, Wellington University of Otago, Wellington
Email: silke.kuehl@otago.ac.nz Email: sunny.collings@otago.ac.nz
Phone: 04 385 5541, ext 4485 Phone: 04 385 5541, ext 4437

Other supervisors involved in this research:
Dr James Stanley (Senior Research Fellow & Biostatistician, University of Otago, Wellington)
Dr Katherine Nelson (Senior Lecturer in Nursing, Victoria University, Wellington)
Appendix 13. General and DHB-specific Support Services Resource

xxx DHB

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crisis Assessment &amp; Treatment Team</td>
<td>xxx</td>
</tr>
<tr>
<td>Māori Health Services</td>
<td>xxx</td>
</tr>
</tbody>
</table>

General

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Drug Helpline</td>
<td>0800 787 797</td>
</tr>
<tr>
<td>Birthright NZ Inc – Support for one-parent families</td>
<td>0800 457 146</td>
</tr>
<tr>
<td>Child, Youth and Family</td>
<td>0508 326 459</td>
</tr>
<tr>
<td>Citizen Advice Bureau</td>
<td>0800 367 222</td>
</tr>
<tr>
<td>Depression Helpline</td>
<td>0800 111 757</td>
</tr>
<tr>
<td>Gambling Helpline</td>
<td>0800 654 655</td>
</tr>
<tr>
<td>Lifeline NZ – 24 hours counselling</td>
<td>0800 543 354</td>
</tr>
<tr>
<td>Relationship Services</td>
<td>0800 735 283</td>
</tr>
<tr>
<td>Samaritans</td>
<td>0800 726 666</td>
</tr>
<tr>
<td>Skylight – trauma, loss and grief support</td>
<td>04 939 6767</td>
</tr>
<tr>
<td>Victim Support</td>
<td>0800 842 846</td>
</tr>
<tr>
<td>Women’s Refuge</td>
<td>0800 733 843</td>
</tr>
<tr>
<td>Work and Income (WINZ)</td>
<td>0800 559 009</td>
</tr>
</tbody>
</table>

Websites

<table>
<thead>
<tr>
<th>Service</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression Information</td>
<td><a href="http://www.depression.org.nz">www.depression.org.nz</a></td>
</tr>
<tr>
<td>The Lowdown (for youth)</td>
<td><a href="http://www.thelowdown.co.nz">www.thelowdown.co.nz</a></td>
</tr>
</tbody>
</table>

If you or someone you know needs urgent help, call 111
## Appendix 14. Example Nodes

<table>
<thead>
<tr>
<th><strong>Main node</strong></th>
<th><strong>Sub-node</strong></th>
<th><strong>Sub-node</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Family whānau</td>
<td>Childhood trauma</td>
<td>Exclusion from family</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Experienced family violence as a child</td>
</tr>
<tr>
<td></td>
<td></td>
<td>History of sexual abuse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Similar upbringing to children</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Standing up to abusers</td>
</tr>
<tr>
<td>Family whānau</td>
<td>Children</td>
<td>Poor access to children</td>
</tr>
<tr>
<td></td>
<td>Family disharmony</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Loss of spouse</td>
<td>Depression worse</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Holding on</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ongoing spirits</td>
</tr>
<tr>
<td></td>
<td>Relationship with others affected by mental illness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Struggling to sort family issues</td>
<td>Trespass order</td>
</tr>
<tr>
<td>Mental State</td>
<td>Doing a lot better</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Don’t ask for help</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Easily confused</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hx of little sleep</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not in a good space</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Poor memory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Receiving messages</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sometimes get really down</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Trying to remain positive</td>
<td></td>
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<tr>
<td></td>
<td>Unsure of needs</td>
<td></td>
</tr>
<tr>
<td>MP Coping Strategies</td>
<td>Accepted mental illness</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Baking</td>
<td></td>
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<tr>
<td></td>
<td>Calm down a bit</td>
<td></td>
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<tr>
<td></td>
<td>Deal with the now</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eclectic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enjoy smaller things</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Input from MH</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Involved with others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Isolation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Keeping occupied</td>
<td>Driving</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Helping others</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Joined gym</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Looking out for others</td>
</tr>
<tr>
<td></td>
<td>On-line play</td>
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<tr>
<td></td>
<td>Self-inflicted pain</td>
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</tr>
<tr>
<td></td>
<td>Self-reliant</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Small goals</td>
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</tr>
<tr>
<td></td>
<td>Smoking</td>
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<tr>
<td></td>
<td>Spirituality</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Support network</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Take on less responsibility</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Taking responsibility for health</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 15. Memos created in NVivo

- Children
- Close to death
- Communication
- Community Support
- Difference between visits
- Domestic Violence
- Driving a car
- Drug seeking
- ED visit valid if something wrong
- Effect of interview
- External locus of control
- Family/whānau
- Input from mental health
- Internal locus of control
- Listened to
- Lucky to be alive
- Many treatments
- Medication
- Mental and physical health overlap
- Need for clarity and simplicity
- Not believing information
- Pain
- Passive versus active participant in care
- Privacy
- Reason for self-harm
- Receiving services
- Safety
- Satisfaction scales for the 2 visits
- Self-discharge
- Serious disability
- Sleep
- Staff
- Stigma
- Support people
- System issues
- Taking care of others
- Taking control
- Them and me
- Unpredictability
- Use of multiple self-harm methods
- Violence
- Waiting time
### Appendix 16. ‘Other’ Presentations with Self-harm

**Sub-classifications**

<table>
<thead>
<tr>
<th>First other ED presentations</th>
<th>MISP coding</th>
<th>Details from MISP data</th>
</tr>
</thead>
<tbody>
<tr>
<td>?Self-harm</td>
<td>Slipped and sustained laceration. Self-harm status not documented</td>
<td></td>
</tr>
<tr>
<td>?Self-harm</td>
<td>Stating strangling assault</td>
<td></td>
</tr>
<tr>
<td>?Self-harm</td>
<td>Accidental overdose of recreational drugs</td>
<td></td>
</tr>
<tr>
<td>?Self-harm</td>
<td>Seizure</td>
<td></td>
</tr>
<tr>
<td>?Self-harm</td>
<td>Abnormal test results, history of anorexia</td>
<td></td>
</tr>
<tr>
<td>?Self-harm</td>
<td>Accidental laceration to finger with knife</td>
<td></td>
</tr>
<tr>
<td>?Incidental Finding of Suicidality</td>
<td>Stepped in front of bus. Conflicting information if intentional or not</td>
<td></td>
</tr>
<tr>
<td>?Probable Self-harm ?Query DSH</td>
<td>Laceration to hand, did not wait</td>
<td></td>
</tr>
<tr>
<td>Query DSH</td>
<td>Presented for pain, history of multiple medical issues and self-harm</td>
<td></td>
</tr>
</tbody>
</table>

| Second other ED presentations | | |
|------------------------------|-----------------------------------------------------------|
| Self-harm                    | Alcohol addiction/intoxication                             |
| Sequelae of self-harm        | Social and wound issues (post self-harm), nil self-harm    |
| Sequelae of self-harm        | Tripped and fell. Hand wound                              |
| Sequelae of self-harm        | Presented with hand lac in previous presentation being intoxicated. Now back for lac review |
| ?Sequelae of self-harm       | Present for cast issues post boxer's fracture 3 weeks ago  |
| Query DSH                    | No data                                                   |
| Query DSH                    | Unintentional overdose                                     |
| Probable self-harm           | Treatment for hand infection post punching a wall          |
| Probable self-harm           | Cut to hand, punching injury for earlier presentation      |
| Probable self-harm           | Removed dressing from wound                               |
| Query DSH                    | Drugs and alcohol                                         |