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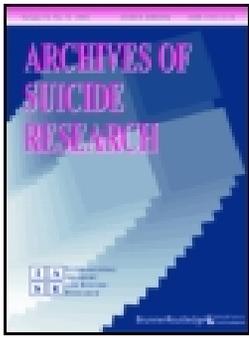
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# Factors Influencing Emergency Department Staff Decision-Making for People Attending in Suicidal Crisis: A Systematic Review

Molly McCarthy, Jason McIntyre, Rajan Nathan, and Pooja Saini

## ABSTRACT

**Background:** Emergency department (ED) staff are often the first point of contact for individuals in suicidal crisis. Despite this, there is no published research systematically examining the factors influencing decision-making for this patient group.

**Methods:** MedLine, CINAHL, PsycINFO, Web of Science and Cochrane Library databases were searched for three key concepts: (1) suicide, (2) accident and emergency department and (3) decision-making. Three reviewers screened titles, abstracts and full papers independently against the eligibility criteria. Data synthesis was achieved by extracting and analyzing study characteristics and findings. The Mixed Methods Appraisal Tool (MMAT) was used to assess the quality of included studies.

**Results:** Seventeen studies met the eligibility criteria and were included in this systematic review. Studies were published from 2004 to 2020 and were of good methodological quality. A number of patient (method of self-harm, age, gender), contextual (availability of services and staff) and staff-related factors (attitudes, training, knowledge) were reported to influence decision-making for patients in suicidal crisis presenting to EDs.

**Conclusion:** Decision-making in the ED is complex and is influenced by patient, contextual and staff-related factors. These decisions can have an impact on the future care and clinical pathways of patients in suicidal crisis. Additional training is needed for ED staff specifically related to suicide prevention.

## KEYWORDS

Decision-making;  
emergency department;  
suicidal crisis

## INTRODUCTION

Suicide is a major public health issue (World Health Organisation, 2019). A total of 5,224 deaths by suicide were registered in England and Wales in 2020 (Office of National Statistics, 2021). Suicidal thoughts and self-harm are associated with greater distress and are strong risk factors for death by suicide; indeed, individuals in crisis often need rapid care to minimize potential harm (Kienhorst, 1995). The prevalence of self-harm has been shown to have increased from 2.4% in 2000 to 6.4% in 2014 (McManus et al., 2019). This increasing prevalence of suicide-related thoughts and behaviors are a significant burden on the National Health Service (NHS) (Naghavi, 2019; Vigo, Kestel, Pendakur, Thornicroft, & Atun, 2019).

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The rates of suicidal presentations to EDs are rising and there has been a general increase in self-harm presentations between 2009 and 2018 (Stapelberg, Svetlicic, Hughes, & Turner, 2020). An estimated 150,000 people experiencing self-harm present to EDs annually, accounting for 220,000 presentations (Hawton et al., 2007), with this figure expected to be much higher due to inconsistencies in coding (McCarthy, Saini, Nathan, & McIntyre, 2021). EDs are therefore a key setting for suicide prevention (Miller et al., 2017; Siry et al., 2021).

ED staff are often the first point of contact for individuals experiencing suicide-related distress (Ceniti, Heinecke, & McInerney, 2020; Perera et al., 2018). Despite this, staff receive minimal psychiatric training and few opportunities for additional education on the care of patients presenting for suicidal emergencies (Knorr et al., 2020; Zun, 2012). The National Institute for Health and Care Excellence (NICE) guidelines highlight the important role EDs have in the treatment, support and management of patients who self-harm (Carr et al., 2016; Morgan et al., 2018). However, there are no recommendations for the management of suicidal ideation within EDs (National Institute for Health and Care Excellence (NICE), 2004).

Previous research suggests that several factors impact the decision-making and treatment for patients presenting in suicidal crisis. Most notable are factors related to a person's suicidal presentation (i.e., intent) and history (i.e., prior suicide attempt) (Miret et al., 2011; So et al., 2021; Unick et al., 2011). Staff-related factors have also been reported frequently in the literature. Specifically, a clinician's attitude toward self-harm, training and knowledge have been shown to influence patient experience and subsequent care (Owens, Hansford, Sharkey, & Ford, 2016; Saunders, Hawton, Fortune, & Farrell, 2012). The majority of research, however, is based in psychiatric hospital units which often reflect more severe and complex cases. There are a large cohort of patients who experience suicide-related thoughts and behaviors who are therefore not captured in this research.

Although research emphasizes the importance of appropriate treatment plans and care pathways for patients in suicidal crisis, both internal and external factors may hinder the care of such patients. There is no synthesized evidence regarding the factors that affect decision-making of ED staff involved in the management of this group. The aim of this systematic review is to examine patient, contextual and staff factors influencing ED decision-making and how these specific factors can affect clinical pathways for patients presenting in suicidal crisis, with self-injury and/or following a suicide attempt.

## **METHOD**

### ***Protocol***

The protocol was registered with PROSPERO (CRD42022303429). Available from: [https://www.crd.york.ac.uk/prospero/display\\_record.php?RecordID=303429](https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=303429)

### ***Search Strategy***

A comprehensive search for relevant studies was conducted on five electronic databases (MedLine, CINAHL, PsycINFO, Web of Science and Cochrane Library) for three key

concepts: (1) suicide, (2) accident and emergency department and (3) decision-making. Search terms were revised after the initial searches revealed new terms. MeSH terms were run in combination with free-text searches of titles and abstracts. A supplementary search was conducted to include the term “disposition” following review of the included papers.

### **Eligibility Criteria**

Studies were included if they reported factors affecting the decision-making of ED staff, including medical (e.g., triage nurses, ED doctors) and mental health staff (e.g., mental health nurses, consultant liaison psychiatrists). Studies were included if theory or past research hypothesized the factor would be related to decision-making. Studies were included regardless of whether they found significant effects related to clinical pathways or decision-making. Outcome variables were identified using relevant literature and included medical admission, self-discharge, psychiatric admission and psychosocial assessment. The study eligibility criteria are outlined in [Table 1](#).

### **Study Screening and Selection**

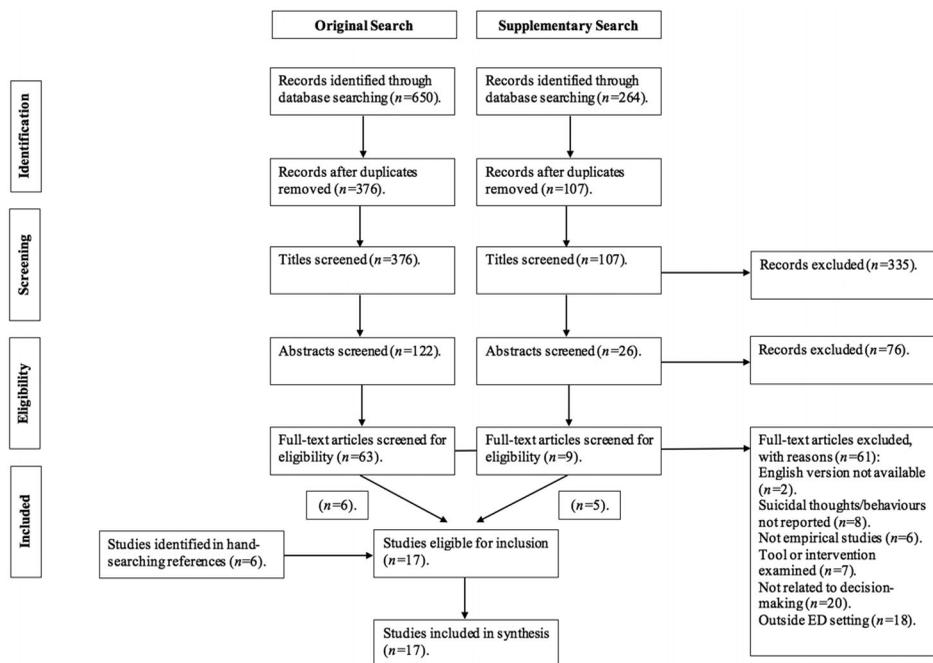
Three authors independently reviewed titles, abstracts and full texts against the eligibility criteria. Discrepancies were resolved through discussion. There was high agreement between authors (85%).

### **Data Extraction and Quality Assessment**

Eligible full texts were subjected to data extraction and quality assessment by the primary author. Data were extracted on the study aims, design, location, sample size and demographic information. Detailed data relating to the factors influencing decision-making were also extracted.

**TABLE 1.** Inclusion and exclusion criteria.

|   |  |
|---|--|
| Inclusion criteria                      | Population(s): ED doctors, triage nurses, mental health nurses, psychiatrists/psychiatry residents, medical record coders, ED managers.                                      |
| Population(s) and condition of interest | Condition of interest: suicidal ideation, self-harm, suicide attempt.  |
| Intervention(s)/Exposure                | People who have attended an ED for suicidal behavior and/or thoughts.  |
| Comparators                             | None.  |
| Outcome                                 | Factors influencing ED staff decision-making on patient clinical pathways. Outcomes included: admission to hospital, self-discharge, referral to psychiatric inpatient unit. |
| Setting                                 | Accident and emergency departments.  |
| Study designs                           | Qualitative, mixed methods, randomized controlled trial, non-randomized quantitative studies.  |
| Exclusion criteria                      | Non-English language studies where translation could not be obtained.  |
|   | Studies only reporting on mental health, with no mention of suicide.   |
|   | Studies outside of the ED, e.g., psychiatric emergency units, GP setting.  |
|   | Studies examining patient decision-making.   |
|   | Exclude: protocols, chapters, case studies.  |



**FIGURE 1.** PRISMA flow diagram indicating the steps taken to retrieve relevant articles for systematic review.

The Mixed Methods Appraisal Tool (MMAT) was used to assess methodological quality of included studies (Pace et al., 2012; Pluye, Gagnon, Griffiths, & Johnson-Lafleur, 2009). All studies found in the review were included in data synthesis, regardless of risk of bias/quality assessment.

### Data Synthesis

Narrative synthesis using the framework developed by Popay et al. (2006) was conducted. Using synthesis tables, the sample characteristics and factors(s) influencing decision-making were reported. The relationship within and across studies were explored by examining the similarities and differences between them (see supplementary Table 1 for further information).

## RESULTS

The search yielded 650 records from which 376 citations were screened. Sixty-one full texts were reviewed for eligibility. A supplementary search revealed an additional nine full texts to review. Seventeen studies were included in the final synthesis. Figure 1 outlines the flow of studies within the review.

### Study Characteristics

Included studies involved a range of ED staff (ED doctors, nurses, psychiatrists/psychiatry residents, medical record coders, ED managers) from Europe ( $n=8$ ), USA ( $n=6$ ),

Australia ( $n=2$ ) and Asia ( $n=1$ ). The mean age of included participants was 34.84, with the majority of studies ( $n=14$ ) including more female than male participants. The majority of studies ( $n=11$ ) utilized hospital data sets as a means for data collection. Study characteristics and details are reported in [Table 2](#).

### **Quality Assessment**

The MMAT was used in this review. MMAT includes two screening questions followed by a series of additional questions dependent on the study design. These criteria are scored on a nominal scale (Yes/No/Can't tell) and allow for the assessment of five main type of studies. Studies were rated as low (0–40%), medium (40–60%) or high quality (60%+). The majority of included studies ( $n=12$ ) scored high. Reasons for lower quality ratings were low response rate ( $n=3$ ), incomplete individual dataset ( $n=1$ ) and limited statistical analysis ( $n=1$ ). See [supplementary Table 2](#) for further information on MMAT scores and the reasons for the assigned score.

### **Factors Influencing Decision-Making**

The following section reports the primary outcomes of the systematic review: patient, contextual and staff factors that influence ED decision-making for individuals in suicidal crisis.

#### **Patient**

Patient-related factors were reported most frequently ( $n=13$ ). Method of self-harm was cited most commonly insofar as patients using more lethal means were more likely to be hospitalized (Arensman et al., 2018; Baca-García et al., 2004; Griffin, Gunnell, & Corcoran, 2020; Hepp, Moergeli, Trier, Milos, & Schnyder, 2004; Jimenez-Trevino et al. 2015; Phillips, Gerdtz, Elsom, Weiland, & Castle, 2015). One study reported ED visits for self-harm with suicidal ideation were most likely to result in hospitalization (94.7%), compared to suicidal ideation (84.0%) or self-harm alone (73.1%) (Schmutte, Olfson, Xie, & Marcus, 2019b). Similar findings were reported by Schmutte, Olfson, Xie, and Marcus (2020), presentations for suicide attempts or suicidal ideation were less likely to be discharged than self-harm.

Age was shown as a key factor across included studies (Arensman et al., 2018; Griffin et al., 2020; Hepp et al., 2004; Jimenez-Trevino et al. 2015). Older patients were most commonly hospitalized, whereas younger patients were more likely to self-discharge (Griffin et al., 2020). One study, however, reported age to not be associated with hospitalization (Faris et al., 2019). Variation was reported in relation to gender; for example, Griffin et al. (2020) found that males were more likely to self-discharge and be admitted into a psychiatric facility, whereas Faris et al. (2019) reported increased hospital admission for females. Ethnicity was noted in one study which reported patients of an African American ethnicity were less likely to be hospitalized (Schmutte, Olfson, Xie, & Marcus, 2019a). Other patient factors, i.e., previous hospitalizations and axis I diagnosis (“mood disorder”) were also found to influence decision-making (Hepp et al., 2004; Jimenez-Trevino et al. 2015; Schmutte et al., 2019a, 2019b). Social support was noted in one study; Kroll et al. (2018) reported 25% of patients who had been hospitalized could

TABLE 2. Studies included in this review.

| Author(s)                      | Study design               | Participants   | Setting  | Relevant findings  |
|--------------------------------|----------------------------|--|--|--|
| Arensman et al. (2018).        | Cross-sectional            | 101,904 Presentations, involving 63,457 self-harm attendances (2004–2012).   | Ireland.   | Male gender, older age, method of self-harm, time of attendance and residence of patient were identified as influencing care. Lethal methods of self-harm associated with psychiatric admission.   |
| Baca-García et al. (2004).     | Cross-sectional            | Staff: on-call psychiatry residents. 509 Patients following a suicide attempt (1996–1998).   | Madrid, Spain.   | Patient factors (intent, lethality, previous psychiatric hospitalization and suicide attempt in past year) increased odds of hospitalization.  |
| Betz et al. (2013)             | Questionnaire              | 631 ED staff. 48% were nurses and half were attending (22%) or resident (30%) physicians.  | Eight EDs, USA.  | Confidence among clinicians was higher for suicidal ideation screening (81–90%) than creating safety plans (23–40%). Screening for suicidal ideation associated with confidence, feeling that suicidal patient care was a top ED priority and 5+ postgraduate years of experience.   |
| Drew et al. (2006).            | Cross-sectional            | Hospital A: medical record coders. Hospital B and C: psychiatric residents. 163 Presentations with suicidal ideation ( $n = 110$ ) or behavior ( $n = 53$ ) over 1-month period. | Three EDs, Northeast Ohio, USA.                              | Regardless of a patient's level of suicidality, decision-making was cautious. Most patients admitted to psychiatric inpatient units (34.4%) or transferred to another facility (36.8%). Of the 19% discharged home, 6% referred to mental health services or addiction treatment programmes.   |
| Egan et al. (2012)             | Questionnaire              | 125 Medical staff (28 doctors and 97 nurses).  | Five EDs, Ireland.   | Staff knowledge and confidence in managing self-harm influenced decision-making. The majority of staff felt 'somewhat confident' in responding to self-harm (74%). 63.2% reported a 'somewhat negative' attitude toward self-harming patients.   |
| Faris et al. (2019).           | Retrospective case review. | 195 Patients requiring psychiatric consultation (July–December 2016)   | Beirut, Lebanon.   | Hospital admission was associated with being female (OR = 3.042), family history of psychiatric disease (OR = 2.040) and suicidal ideation (OR = 12.949). Living alone, age and employment status were not associated with hospitalization. Patient factors were primarily associated with: <ol style="list-style-type: none"> <li>1. Self-discharge: male, younger age, alcohol involvement.</li> <li>2. Medical admission: older age, drug overdose as sole method, ambulance presentations.</li> <li>3. Psychiatric admission: male, lethal methods and older age.</li> </ol> |
| Griffin et al. (2020).         | Cross-sectional            | 14,555 Self-harm presentations (January 2017–December 2018).   | ED, Ireland.   | Variation in psychiatric admissions and psychosocial assessments was due to hospital factors (availability of psychiatric inpatient facilities and mental health staff).   |
| Hepp et al. (2004).            | Cross-sectional            | Staff: psychiatric residents. 324 Presentations following a suicide attempt (1996–1998).   | Zurich, Switzerland  | Older patients more likely to be hospitalized. Outpatient treatment was received more by women. Lethal methods, history of psychiatric inpatient treatment, and psychotic disorders were associated with inpatient treatment. Outpatient treatment was linked to adjustment and neurotic disorders.  |
| Jimenez-Trevino et al. (2015). | Cross-sectional            | 2,281 Suicidal presentations.  | Three EDs. Madrid, Oviedo and Santa Cruz de Tenerife, Spain. | Intent was the most important factor impacting hospitalization. Older age, living alone, self-harm method, history of suicidal   |

|  |   |   |   |   |   |  |  |   |   |   |  |   |
|--|---|---|---|---|---|--|--|---|---|---|--|---|
| <p>behaviors, and psychiatric diagnosis of schizophrenia, mood, or personality disorder were independently associated with being admitted.</p> | <p>25% Of the patients could have been discharged had social support become available. Clinical severity was the only driver to admission decision.</p> | <p>Most nurses had no educational preparation or training to support self-harm. Over 20% had either no practice guidelines for self-harm or they did not know of their existence. One-third of those who were aware of their existence had not read them.</p> | <p>Overall, nurses had sympathetic attitudes toward self-harm and did not discriminate in their triage or care decisions.</p> | <p>High level of variation in outcomes; despite agreement about the intent of self-harm. Agreement was often reached regarding intent, but not for imminent risk. Little agreement about whether to admit a patient with self-harm to hospital or treat in the community.</p> | <p>Admissions varied substantially between hospitals; one hospital was two and a half times more likely to admit than another. This was not altered by patient demographics, deprivation or self-harm method.</p> | <p>Service availability, outpatient alternatives, staffing, busyness, time of day and the 4-hour waiting time target influenced decision to admit rather than discharge.</p> | <p>ED culture (staff attitudes, motivation and relationships) had a strong influence (negatively or positively) on the decision to admit patients.</p> | <p>Hospitalization associated with recent depression and psychiatric inpatient care. People of African American ethnicity less likely to be hospitalized.</p> | <p>56.4% Of community discharges received an ED medical disorder diagnosis and 39.0% received 30-day follow-up outpatient mental health care.</p> | <p>Self-harm with suicidal ideation attendances were most likely to result in hospitalization (94.7%), compared to ideation (84.0%) or self-harm alone (73.1%).</p> | <p>Hospital admission associated with current diagnosis of depression, bipolar, anxiety or personality disorder and severity of current medical comorbidity.</p> | <p>Suicide attempt and ideation presentations were less likely to be discharged to the community than self-harm. These encounters were more likely to be diagnosed with a mental disorder in the ED and were also more likely to receive follow-up mental health care compared self-harm presentations.</p> |
| <p>Kroll et al. (2018).</p>  | <p>Questionnaire</p>  | <p>40 Adults requiring inpatient psychiatric care due to suicide risk.</p>  | <p>USA.</p>   | <p>USA.</p>   | <p>43 ED Nurses.</p>  | <p>40 Adults requiring inpatient psychiatric care due to suicide risk.</p>   | <p>USA.</p>  | <p>USA.</p>   | <p>USA.</p>   | <p>USA.</p>   | <p>USA.</p>  | <p>USA.</p>   |
| <p>McCann et al. (2007).</p>   | <p>Questionnaire</p>  | <p>43 ED Nurses.</p>  | <p>Australia.</p>   | <p>Australia.</p>   | <p>43 ED Nurses.</p>  | <p>Australia.</p>  | <p>Australia.</p>  | <p>Australia.</p>   | <p>Australia.</p>   | <p>Australia.</p>   | <p>Australia.</p>  | <p>Australia.</p>   |
| <p>Phillips et al. (2015).</p>   | <p>Cross-sectional questionnaire</p>  | <p>211 Mental health nurses.</p>  | <p>Australia.</p>   | <p>Australia.</p>   | <p>211 Mental health nurses.</p>  | <p>Australia.</p>  | <p>Australia.</p>  | <p>Australia.</p>   | <p>Australia.</p>   | <p>Australia.</p>   | <p>Australia.</p>  | <p>Australia.</p>   |
| <p>Polling et al. (2019).</p>  | <p>Cross-sectional</p>  | <p>20,750 Self-harm attendances (2009–2016).</p>  | <p>Four EDs, Southeast London, UK.</p>  | <p>Four EDs, Southeast London, UK.</p>  | <p>20,750 Self-harm attendances (2009–2016).</p>  | <p>Four EDs, Southeast London, UK.</p>   | <p>Four EDs, Southeast London, UK.</p>   | <p>Four EDs, Southeast London, UK.</p>  | <p>Four EDs, Southeast London, UK.</p>  | <p>Four EDs, Southeast London, UK.</p>  | <p>Four EDs, Southeast London, UK.</p>   | <p>Four EDs, Southeast London, UK.</p>  |
| <p>Pope et al. (2017).</p>   | <p>Semi-structured interviews</p>   | <p>11 ED doctors, 3 ED nurses, 3 managers and 4 inpatient doctors.</p>  | <p>Three EDs, London, UK.</p>   | <p>Three EDs, London, UK.</p>   | <p>11 ED doctors, 3 ED nurses, 3 managers and 4 inpatient doctors.</p>  | <p>Three EDs, London, UK.</p>  | <p>Three EDs, London, UK.</p>  | <p>Three EDs, London, UK.</p>   | <p>Three EDs, London, UK.</p>   | <p>Three EDs, London, UK.</p>   | <p>Three EDs, London, UK.</p>  | <p>Three EDs, London, UK.</p>   |
| <p>Schmutte et al. (2019a).</p>  | <p>Retrospective cohort analysis.</p>   | <p>16,495 Adults ≥65 years deliberate self-harm attendances.</p>  | <p>USA.</p>   | <p>USA.</p>   | <p>16,495 Adults ≥65 years deliberate self-harm attendances.</p>  | <p>USA.</p>  | <p>USA.</p>  | <p>USA.</p>   | <p>USA.</p>   | <p>USA.</p>   | <p>USA.</p>  | <p>USA.</p>   |
| <p>Schmutte et al. (2019b).</p>  | <p>Retrospective cohort analysis.</p>   | <p>50,472 Suicidal ideation or self-harm presentations in 2015.</p>   | <p>USA.</p>   | <p>USA.</p>   | <p>50,472 Suicidal ideation or self-harm presentations in 2015.</p>   | <p>USA.</p>  | <p>USA.</p>  | <p>USA.</p>   | <p>USA.</p>   | <p>USA.</p>   | <p>USA.</p>  | <p>USA.</p>   |
| <p>Schmutte et al. (2020).</p>   | <p>Retrospective cohort analysis.</p>   | <p>52,383 Suicide-related Medicare claims for adults ≥65 years (2015).</p>  | <p>USA.</p>   | <p>USA.</p>   | <p>52,383 Suicide-related Medicare claims for adults ≥65 years (2015).</p>  | <p>USA.</p>  | <p>USA.</p>  | <p>USA.</p>   | <p>USA.</p>   | <p>USA.</p>   | <p>USA.</p>  | <p>USA.</p>   |

have been discharged had social support become available. Living alone and employment status was not associated with hospitalization (Faris et al., 2019). One study, however, reported that clinical pathways were not influenced by patient demographics, socioeconomic status and type of self-harm (Polling, Bakolis, Hotopf, & Hatch, 2019).

### **Contextual**

Three studies noted contextual factors that affect ED decision-making. The availability of services and staff were reported across two studies (Griffin et al., 2020; Pope, Burn, Ismail, Harris, & McCoy, 2017). Hospital location affected future care of patients presenting with self-harm (Arensman et al., 2018). For example, there was a reduced risk of self-discharge if presentations were made outside of Dublin city, Ireland (Griffin et al., 2020). Hospital facilities (e.g., onsite psychiatric in-patient facilities) also increased the likelihood of patients being admitted to a psychiatric ward compared to hospitals where the facilities were located offsite (Griffin et al., 2020). Other contextual factors reported were busyness, time of the day and the 4-hour wait target in EDs. Specifically, ED doctors, inpatient doctors and nurses were more likely to admit a patient rather than discharge if these factors were present (Pope et al., 2017). Hospital-related factors (location, availability of services and/or staff) explained the variation in care pathways for patients attending EDs in suicidal crisis (Arensman et al., 2018; Griffin et al., 2020). Arensman et al. (2018) reported regional variation in recommended next care; for example, general admission ranged from 11.2% in Dublin North East Hospital compared to 61.0% in the South Eastern Hospital Group. Admission to a psychiatric ward was also lowest in North Eastern Hospital Group (3.7%) and highest in the South Hospital Group (19.3%).

### **Staff**

Some ED staff held negative attitudes toward patients in suicidal crisis. One study reported 63.2% of staff had “somewhat negative” feelings toward self-harm (Egan, Sarma & O’Neill, 2012). Another study, however, indicated overall positive attitudes as evidenced by high levels of disagreement with several negatively worded questionnaire items, i.e., “individuals who attempted suicide in prominent places were primarily interested in seeking attention” (McCann, Clark, McConnachie, & Harvey, 2007). The culture of the ED was acknowledged in one study (Pope et al., 2017). Many participants felt that departmental culture (staff attitudes, motivation and relationships) had significant influences on admission practices for individuals in suicidal crisis.

Further, confidence and knowledge were reported to impact decision-making (Egan et al., 2012; Betz et al., 2013). One study stated staff felt more confidence screening suicide than creating safety plans (Betz et al., 2013). Egan et al. (2012) reported 82% of staff had a good knowledge of self-harm and 74% expressed that they felt “somewhat confident” managing self-harm. One study, however, reported most nurses had no educational preparation or training to support patients with self-harm and over 20% of EDs had either no practice guidelines or staff did not know of their existence (McCann et al., 2007).

### **Clinical Pathways**

Variation in clinical pathways were reported within and between EDs. The most commonly noted pathway was psychiatric inpatient unit admission, which was reported in 11 studies (Arensman et al., 2018; Baca-García et al., 2004; Drew, Jones, Meldon, & Varley, 2006; Griffin et al., 2020; Jimenez-Trevino et al. 2015; Faris et al., 2019; Hepp et al. 2004; Kroll et al., 2018; Schmutte et al., 2019a, 2019b; Schmutte et al., 2020). The majority of ED presentations in Schmutte et al. (2019b) study resulted in hospital admission (81.9%), with most being admitted to an inpatient psychiatric unit (62.8%). Large variation was also reported by Griffin et al. (2020). Their findings showed self-harm presentations resulting in self-discharge ranged from 4.7 to 17.8%; medical admission 8.2–53.0% and psychiatric admission 0.3 and 28.3%. Follow-up care was reported in Schmutte et al. (2019a) who reported 39.0% of community discharged patient received 30-day follow-up outpatient mental health care. Similarly, those who attended EDs following suicide attempts or suicidal ideation were more likely to receive follow-up mental health support compared to those attending for self-harm (Schmutte et al., 2020).

### **DISCUSSION**

The aim of this review was to examine factors that influence ED decision-making for patients presenting in suicidal crisis, following self-harm and/or a suicide attempt. Three groups of factors were identified: patient, contextual and staff.

Patient factors were most commonly reported to affect care pathways (Arensman et al., 2018; Faris et al., 2019; Griffin et al., 2020; Hepp et al., 2004; Kroll et al., 2018; Schmutte et al., 2019a, 2019b, 2020). Notably, older age was associated with hospitalization, whereas younger age groups were more likely to self-discharge (Griffin et al., 2020). Self-harm methods associated with greater lethality (e.g., attempted hanging or drowning) were associated with hospitalization (Baca-García et al., 2004; Griffin et al., 2020; Schmutte et al., 2019b). Inconsistent findings were reported in relation to gender (e.g., Faris et al., 2019; Griffin et al., 2020). Staff attitudes, knowledge and confidence were also shown to influence decision-making within EDs (Egan et al., 2012; McCann et al., 2007; Pope et al., 2017). Staff felt more confident at earlier stages of the clinical pathway, i.e., screening risk compared to creating safety plans (Betz et al., 2013). Contextual factors, including service and staff availability, were examined much less, yet were still reported to affect decision-making (i.e., Griffin et al., 2020; Pope et al., 2017). Hospital facilities (i.e., onsite psychiatric in-patient facilities) increased the likelihood of patients being admitted to psychiatric wards compared to hospitals where these facilities were located offsite (Griffin et al., 2020).

Prominent across the existing literature is the finding that patient-related factors (e.g., severity of psychiatric symptoms, suicide risk) significantly affects care pathways (So et al., 2021; Unick et al., 2011). This systematic review reported similar findings. Importantly, age, gender and self-harm method were reported in many of the included studies. Contextual factors (i.e., service and staff availability), however, have been reported less frequently in the literature. Despite the low number of studies, contextual factors were still shown to influence decision-making for patients presenting with self-

harm. In contrast, George, Durbin, Sheldon, and Goering (2002) reported site and bed availability were not associated with decision-making. Their study, however, was conducted across two emergency psychiatric services; thus, it is possible that the differences in presentations to EDs and psychiatric services explain the divergent effects.

A study conducted by Zun (2012) reported that EDs may not be the most effective setting to support individuals in suicidal crisis. Rutto, Chepchirchir, and Odera (2012) reported one third of nurses felt uncomfortable and nervous when attending to patients who had attempted suicide and more than half expressed frustration. This is consistent with the present review as confidence and attitudes toward self-harm were identified to influence care pathways. Contradictory findings, however, were reported; McCann et al. (2007) indicated positive attitudes across ED nurses, whereas Egan et al. (2012) noted negative feelings toward self-harm across ED nurses and doctors. Inconsistent findings could be a result of the difficulty in examining and measuring attitudes toward self-harm, particularly among medical staff (Egan et al., 2012; Patterson, Whittington, & Bogg, 2007).

### ***Strengths and Limitations***

This is the first systematic review to examine ED decision-making for patients in suicidal crisis. The review methodology was consistent with established standards (PRISMA guidelines) for study selection, data extraction and quality assessment.

The primary limitation of this systematic review relates to the small number of included studies; although, this is reflective of the lack of research into this patient group within an ED setting. It is notable that few studies have investigated contextual (service/staff availability) and staff-related factors in EDs. Studies were also only included if they were published in the English language, or where an English translation was available. This may explain the paucity of non-Western countries explored. Cultural variation in clinician attitudes toward self-harm may also be relevant (e.g., Ramon & Breyter, 1978). Furthermore, study data was extracted by the primary author, thus, limiting the validity and reliability of findings. The validity and reliability of reported findings would have been increased if more than one person extracted data from the included studies (Xu et al., 2022). Finally, the majority of included studies utilized hospital data sets as the primary means of data collection. This may limit current findings due to the underestimation of suicidal presentations to EDs. Research has reported self-harm presentations may be underrepresented by as much as 60% (Clements et al., 2016). Lack of coding for suicidal ideation may result in some presentations being missed, limiting the ability to draw accurate conclusions. Better coding practices and reporting of suicidal crisis among EDs would enable more accurate exploration into clinical pathways.

### ***Implications for Clinical Practice***

This review highlights the lack of research into the factors that influence ED decision-making. Particularly evident was the lack of studies examining contextual factors. The COVID-19 pandemic has exacerbated staffing pressures, with an increase in ED wait

time and staff burnout due to the pandemic (Gemine et al., 2021; Mahase, 2022). Poor service availability can have detrimental effects on patient distress and delays in treatment can increase the number of patients needing emergency care. Future research is needed to further explore the impact of contextual factors on ED decision-making for patients in suicidal crisis.

This review also identifies an urgent need for mandatory and ongoing training for ED staff to improve knowledge and confidence in managing suicide-related presentations. Clinicians being cautious in their decision-making may be due to staff feeling unsupported and fearful of future adverse outcomes; the attribution of fault and personal consequences can lead staff to be risk adverse (Nathan et al., 2021). Related to this is the possibility that staff do not have a framework by which to understand suicidal thoughts. Empirical studies can help staff better understand suicidal thoughts that in turn can lead to better approaches toward such patients. Evidence suggests that there is no gold standard for assessing and managing suicidal crisis (Harmer et al. 2021; Bernert, Hom, & Roberts, 2014). Future research would therefore benefit from developing, testing and implementing a measurement to examine ED training and confidence specifically for people attending in suicidal crisis. Integrating research and practice will be beneficial to support patients in suicidal crisis.

A patient's experience and journey through the ED can be affected by staff attitudes. Negative attitudes can be conveyed through the way clinicians interact with patients, i.e., invalidating comments, which may be subtle or overt. The assessment approach can also impact patient outcomes (e.g., reduce feelings of hopelessness and in turn suicidal thoughts/behaviors) (Kapur et al., 2013). Equally, some clinicians adopt counter-therapeutic stances which may increase the likelihood of suicidal thoughts (Dunster-Page, Haddock, Wainwright, & Berry, 2017). Staff attitudes are therefore crucial to future help-seeking behavior. Patients attending EDs in suicidal crisis also encounter a wide range of staff including receptionists, triage nurses and liaison psychiatrists. Prior research, however, mainly recruits nurses to explore attitudes toward self-harm. There is a need for a specific tool to measure a wide range of ED staff attitudes for treating and managing patients in suicidal crisis.

This review highlights substantial variation in the decision-making and subsequent care pathways for patients attending EDs in suicidal crisis. For EDs to assess, treat and support patients in suicidal crisis more effectively a better understanding of why there are differences between and within EDs is needed. This review is an initial step in exploring variation; however, there are still gaps in the current evidence base to be explored further. More research is needed on staff-based factors (i.e., clinicians' conceptualizations of self-harm and uncertainty management) and contextual factors (e.g., the pressure to both manage limited resources whilst not "missing" someone who goes on to seriously harm themselves). Finally, it will be important to explore the impact of different decision-influencing factors identified in this review on patient outcomes.

## **AUTHOR NOTES**

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