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Suicide Risk Assessment in the Emergency Department: An Investigation of Current **Practice in Scotland**

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Suicide Risk Assessment in the Emergency Department: An Investigation of Current Practice in Scotland

Background: Suicide is a global public health issue. Approximately one third of individuals who complete suicide have attended an emergency department in the year preceding their death. The aim of this study was to investigate current suicide risk assessment practices across emergency department clinicians in Scotland.

Methods: A mixed-methods design was employed. A total of 112 surveys for emergency department clinicians were posted to 23 emergency departments in Scotland between March and September 2016. Follow-up semi-structured interviews were also conducted exploring clinician's experiences of suicide risk assessment. Interviews were analysed using thematic analysis.

Results: Fifty-one emergency department clinicians across 17 emergency departments completed the survey. Thirty-five (68.6%) participants were currently using a suicide risk assessment tool; with most using locally developed tools and proformas (n = 20, 62.5%) or the SAD PERSONS scale (n = 13, 40.6%). Remaining participants (n = 16, 31.4%) did not use suicide risk assessment tools during assessment. Variation in practice was found both across and within emergency departments. Six clinicians participated in follow-up interviews, which identified four major themes: Clinician Experiences of Suicide Risk Assessment; Components of Suicide Risk Assessment; Clinical Decision-Making; and Supporting Clinicians.

Conclusions: There is substantial variation in current practice, with around two-thirds of clinicians using a variety of empirically and locally developed tools, and a third using their judgement alone. Clinicians find suicide risk assessment a challenging part of their role and discuss the need for increased training, and appropriate and helpful guidelines to improve practice.

What is already known about this topic?

- Suicide is a global public health issue, and approximately one third of individuals who
 die by suicide have attended an emergency department in the year prior to their death.
- Limited research evidence currently exists exploring current suicide assessment practices in the emergency department, with no previous research having been identified which qualitatively explores clinicians' experiences of suicide assessment.

What does this article add?

- To the author's best knowledge, this is the first study investigating clinician's suicide risk assessment practices in emergency departments using a mixed-method approach.
- Variation in current suicide risk assessment practice was found, and the study highlights
 the challenges that clinicians experience in assessing for suicide risk.
- Implications for clinical practice are discussed within the study, and include further development of suicide risk assessment guidelines and tools, and the need for further training.

Background

Suicide is a global public health issue. Approximately 800,000 people die by suicide every year, and it is the second leading cause of death among 15-29 year olds globally[1]. Approximately one third of individuals who go on to complete suicide have attended an emergency department at least once in the year prior to their death[2, 3]. Emergency department records in Scotland between 2010 and 2015 show that 27% of those who died by suicide had attended an emergency department within three months of their death[4]. Given the global public health issue of suicide,[1] the appropriate use of screening, assessment and prevention measures are imperative to reduce suicide rates.

Limited research exists which has investigated suicide risk assessment procedures in UK emergency departments. Previous research examining 25 self-harm admission medical notes in UK emergency departments found that a previous attempt of self-harm was only documented in approximately half of admissions, suicidal ideation was documented in less than half, and suicide risk factors, suicidal intent, and mental state examination was also poorly documented[5]. A study in England found that only 17 out of 32 (53.1%) hospitals had staff guidelines in emergency departments for assessing suicide risk[6]. However, it did not explore what the guidelines at each hospital were, what assessment practices were in place at each site, and the study was not exclusively surveying emergency department staff, as psychiatric staff also were included.

A more detailed study found that in 28 of 32 (87.5%) hospitals in England, there was a protocol or guideline available for the immediate assessment of suicide risk for patients who presented with self-harm in the emergency department[7]. The study found that the most common means of assessing suicide risk following self-harm was the use of locally developed, structured proformas (40.6%) or the SAD PERSONS scale (28.1%)[7]. However, this contradicts recommendations which suggest that locally developed risk assessment tools that lack an evidence base should be abandoned[8]. Furthermore, recent findings show that the SAD PERSONS scale is not statistically reliable, and should not be used in its present form[9].

Although the findings of the previous studies show that variation of suicide risk assessment practices in hospitals is widespread[6, 7], the studies were investigating presentations of self-harm, and did not discuss the assessment of suicidal ideation admissions alone. In addition, only key emergency and psychiatric staff were questioned during these studies, which may not provide an accurate representation of suicide risk assessment practices of all staff. It should also be noted that, to the author's knowledge, no study has yet taken place in the UK investigating clinicians' experiences of suicide risk assessment in practice. Therefore, the aim

of the current study is to investigate clinician suicide risk assessment practices in emergency departments, and to explore clinician's experiences of suicide risk assessment. To our knowledge, this is the first study investigating clinicians' suicide risk assessment practices in emergency departments in Scotland, and the first study exploring clinician's experiences of suicide risk assessment in the UK.

Methods

A mixed-methods design was employed to investigate current suicide risk assessment practices in emergency departments across Scotland. A Scotland-wide study was chosen, rather than UK-wide, as NHS Scotland is managed separately from the NHS elsewhere in the UK. Prior to the commencement of this study, ethical approval was granted from each participating NHS health board (n = 13). All NHS emergency departments in Scotland (n = 29) were eligible to participate in this study. Participants were recruited using purposeful sampling. To be included in the study, participants had to be employed as an emergency department clinician (either as a nurse practitioner or doctor), and have experience of assessing patients presenting with suicidal thoughts, ideation, or behaviours in these settings. Participants were excluded if they had no experience of assessing suicidal patients in the emergency department.

A local contact for each emergency department was identified and each contact was posted a survey pack (containing information sheets, consent forms, surveys, debrief sheets, and prepaid return envelopes). Five surveys were sent to each participating emergency department between March and September 2016 to allow multiple clinicians in one department to complete the survey. The survey was developed based on prior research[7] and examined: demographic information; whether participants currently use a suicide risk assessment tool in their workplace, and to list them if applicable; whether this was a requirement in their workplace; and whether they would assess a child or adolescent differently to an adult.

Follow-up semi-structured interviews were conducted with clinicians who had expressed interest during the survey, by a female researcher (KM) who was unknown to the participants. The interview schedule was developed in-line with the questionnaire, to allow for expansion of any answers from the survey and to explore in-depth, clinician experiences and views of suicide risk assessment, training in risk assessment, and risk and protective factors. Interviews took place between August and November 2016. Questionnaire survey data were analysed using descriptive statistics in SPSS V.20, and qualitative interviews were audio-recorded, organised using QSR NVivo 11, and analysed using inductive thematic analysis following the Braun and Clarke[10] guidelines.

Results

A total of 112 surveys were sent to 23 of the 29 (79%) emergency departments, as six emergency departments did not respond. Survey participant demographics can be found in Table 1. In total, 51 emergency department clinicians across 17 emergency departments completed surveys. The majority of the sample were registered doctors (n = 45; 90%), 32 characterised themselves as doctors, 10 as consultants, two as GP trainees, and one as a GP. In addition, four nurses and one Physician Associate in Emergency Medicine completed surveys. The majority of the sample were female (n = 27; 54%). One participant did not fill out the demographic questions. Of the 17 emergency departments who participated, 15 included more than one respondent (range = 2-5), and two had only one respondent. Emergency department locations covered both urban and rural areas.

Table 1

Participant Demographics

Characteristics	n	%
Gender		
Female	27	54
Male	23	46
Profession		
Consultant	10	20
Doctor	32	64
Nurse	4	8
Physician Associate	1	2
GP Trainee	2	4
GP	1	2

Quantitative Results

Of the total included survey sample (n = 51), 35 (68.6%) participants stated that they currently use a suicide risk assessment tool in their workplace. The remaining participants (n = 16, 31.4%) did not. Of those who use suicide risk assessment tools, 18 (51.4%) stated that it is a requirement in their workplace, 13 (37.1%) indicated it was not a requirement, and the remainder did not know (n = 4, 11.4%). Seven emergency departments had clinicians who disagreed as to whether using a tool was a requirement in their hospital, indicating variation within the same emergency department.

Of the 35 emergency department clinicians that used a tool to assess for suicide risk, 32 participants named the tools that they currently use (Table 2). Three of these participants named more than one tool. Locally developed tools and proformas (n = 20, 62.5%) were the most commonly reported means of assessing for risk. A total of eight different locally developed tools and proformas were used by the sample. The SAD PERSONS scale was also frequently

used (n = 13, 40.6%). Of the 15 emergency departments that had more than one respondent, nine (60%) had clinicians who were using different suicide risk assessment tools in the same emergency department.

Table 2
Risk Assessment Measures Currently in use

	Frequency
Published Risk Scales	
SAD PERSONS	13
Manchester Self-Harm Rule	1
Other Risk Assessment Tools in Use	
Locally developed tools and proformas	20
The College of Emergency Medicine Assessment	1

Clinicians were asked whether they would assess a child or adolescent differently to an adult. A total of 37 (72.5%) participants stated that they would assess a child or adolescent differently from an adult, and 11 (21.6%) stated that they would not. Three participants stated that they would not assess a child or adolescent for risk of suicide. In an optional open response question asking clinicians how they would assess a child or adolescent differently, 15 participants explained that they would have a lower threshold for admission; with some stating they would always admit the patient to Child and Adolescent Mental Health Services (CAMHS).

Qualitative Results

A total of six participants completed follow-up interviews. All interview participants were emergency department doctors employed in different hospitals across four NHS health boards. Two were female and four were male. Four of the participants were consultants, one was a Speciality Doctor, and the remaining participant was a Speciality Trainee. The thematic analysis identified four major themes (Table 3). Each of the major themes contained subthemes which are outlined in their respective reported theme.

Table 3
Thematic Analysis Identified Themes

Theme	Sub-themes	
Clinician Experiences of Suicide Risk Assessment	t Seen Frequently	
	Challenging	
	Time Consuming	
	Current Training	
	Suicide Risk Assessment Tools	
	Children & Adolescents	
Components of Suicide Risk Assessment	Patient Demeanour	
	Risk Factors	
	Protective Factors	
Clinical Decision-Making	Clinical Experience	
	Clinical Judgment	
Supporting Clinicians	Training Recommendations	
	Suicide Risk Assessment Tool Recommendations	

Clinician Experiences of Suicide Risk Assessment

Seen Frequently

Participants in the study discussed how suicidal patients are seen frequently, being at least a daily occurrence.

"I would say most days that you are on clinical duty you have to make some form of assessment of somebody who is at risk of suicide." (Participant 4, Consultant, Male).

Challenging

Participants find suicide risk assessment a challenging part of their role, and it is most challenging when new to emergency medicine. Clinicians were worried that individuals who are discharged from the emergency department may complete suicide, and felt pressure, responsibility and potential accountability for this. Limited out of hours support was also an issue for participants.

Time Consuming

Three of the participants discussed the current time consuming nature of completing a suicide risk assessment in the emergency department.

"Yeah, so this is the difficultly is that erm, you know to do all that even if you are quite fluid at it, you know that will easily take me 15, 20 minutes by the time you get someone warmed up and get them talking or whatever and if the psychiatrics come with their booklet they will take an hour." (Participant 2, Consultant, Male).

Current Training

Training was discussed at length by participants. It appears that there is limited mental health training, and little or no training in suicide risk assessment itself, other than what is completed during medical school.

"Although I've done my foundation training I certainly feel like probably this is my least comfortable area of medicine for me." (Participant 3, Speciality Trainee, Female).

Suicide Risk Assessment Tools

Participants described using a suicide risk assessment tool as an 'aide-memoire', with some discussing that they would not use the scoring system of assessment tools.

"I'll kind of be guided by some of the scoring, but to be honest, I wouldn't probably tally up the scores." (Participant 3, Speciality Trainee, Female).

Participants are aware of the literature suggesting that tools lack validity, and they feel that no robust tool has yet been developed. Participants also discussed how a tool can act as evidence

of their clinical decision-making; in particular, if a patient absconds or goes on to complete suicide.

"So, if people were able to say well that unfortunate thing happened but you know the best thing we know to do in a situation is this, here's the evidence that I did this thing, then I think that would make people comfortable to do their job." (Participant 2, Consultant, Male).

Children & Adolescents

Clinicians discussed that children and adolescents would always be referred on for further assessment.

Components of Suicide Risk Assessment

Patient Demeanour

All participants discussed patient demeanour, such as interaction and behavioural cues they consider when assessing patients for future suicide risk. Most frequently mentioned behavioural characteristics that are assessed include lack of patient engagement, distraction, confusion, and lack of eye contact. Participants also discussed patient attire and whether the patient appears 'dishevelled'.

"I am much more interested in how the patient interacts with me and how they have come to be there than necessarily anything else." (Participant 1, Speciality Doctor, Female).

Risk Factors

Commonly reported important risk factors were suicide methods; mental illness; substance misuse; and home environment. Patients who have made a serious attempt, or have access to lethal means were considered to be high risk.

"...if they were trying to hang themselves, again that's a big sign that this is a serious attempt." (Participant 3, Speciality Trainee, Female).

Protective Factors

Protective factors included future planning and having support. Participants felt more comfortable to discharge a patient if they had sufficient support at home, and were not living alone.

Clinical Decision-Making

Clinical Experience

Participants felt that having clinical experience is beneficial in deciding whether to refer a patient to psychiatry. Participants felt that junior doctors find this work difficult due to the lack of acquired experience. As junior doctors, participants felt that they would 'err on the side of caution' and refer patients to have them seen by psychiatry. Participants also discussed how the use of suicide risk assessment tools and departmental proformas can be beneficial in developing clinical experience.

Clinical Judgement

Participants felt that in the absence of a robust suicide risk assessment tool, that clinical judgement is the best means of making a decision regarding patient outcome.

"So my personal concern is that whilst guidelines, protocols, etc. are helpful, they should not replace clinical decision-making. There is a great need for recognition of a clinicians' experience, training, and also knowledge of the patient is paramount in making a valid assessment." (Participant 5, Consultant, Male).

Supporting Clinicians

Training Recommendations

Clinicians made recommendations for suicide risk assessment training such as a need for tailored and focused training, particularly for those who are new to emergency departments.

"Junior doctors or less experienced doctors have difficulty with this, I suspect that the answer is not in a tool, but perhaps more training, a module or course or specific training package that was delivered, would probably help address that...there is very little in a way for acute mental health in the emergency department for trainees." (Participant 4, Consultant, Male).

Suicide Risk Assessment Tool Recommendations

Participants felt that suicide risk assessment needs to be brief as they are time restricted, and speeding up the process, if safe to do so, would be the ideal. Participants discussed the need for outcome guidance on assessment tools e.g. a score or risk identification that correlated with a treatment plan. Participants also felt that any future developed tool would need to be robust and validated for use in emergency departments.

Discussion

In this Scotland-wide study across 17 emergency departments, variation in current suicide risk assessment practice was found. Although two-thirds of clinicians surveyed are using suicide risk assessment tools to assess for risk, there is a wide variation in the type of tools being used. This concurs with prior research that found little consistency in suicide risk assessment practice following-self harm in hospitals in England[7]. Of the emergency departments sampled in the current research that had more than one respondent within the same department, almost half disagreed as to whether the use of a suicide risk assessment tool was a requirement or not. This

again echoes prior research that found variation in suicide risk assessment guidelines for emergency departments[6]. This shows that there is little consistency in practice, not only across emergency departments but also within them.

The majority of tools identified as being used in the current research were locally developed risk assessment tools and proformas, which are not recommended for use by best practice guidelines[8]. The SAD PERSONS scale was the most commonly used published risk scale in this study. A recent systematic review concluded that the SAD PERSONS scale has very low sensitivity (15%) when assessing psychiatric emergency care patients for suicide attempts, as most people who make future suicidal acts are not identified[9]. Despite the recent body of evidence to suggest its lack of usefulness in assessment, the current study shows that SAD PERSONS is still widely used within practice, which agrees with prior findings that SAD PERSONS is still in use in UK emergency departments[11]. However, previous research has suggested that the SAD PERSONS scale can be a useful aide-memoire for assessing suicide risk[12]. This coincides with the follow-up qualitative interview findings of the current study, as participants described using suicide risk assessment tools as an aide-memoire. This indicates perhaps that although the majority of the sample use assessment tools, they may not be using the tool scoring systems. This may suggest that clinicians are using a form of Structured Professional Judgement[13] to assess patient suicide risk, by using actuarial tools augmented with clinical judgement (also labelled in some literature as an 'Adjusted Actuarial Approach'[14]).

According to the survey, approximately one third of participants did not use a suicide risk assessment tool, and used clinical judgement alone. Interview participants expressed that having clinical experience is beneficial in assessing patients' risk of suicide, which are consistent with findings that clinical decisions are based from experience [15], and that clinical

experience increases confidence in decision-making[16]. Participants also felt that as junior doctors, that they found this work difficult due to the lack of acquired experience, and found that tools can be useful to gain experience. Clinicians recommended the need for tailored and focused training, particularly for those who are new to emergency departments. This in turn may increase clinician confidence during assessment.

A novel finding of the participant interviews is that clinicians use patient demeanour as an important assessment method. For example, assessing whether a patient is engaged with the clinical interview; whether the patient is making eye contact; or whether the patient is distracted. Previous research has found that non-verbal cues are considered important when psychiatrists assess for suicide risk[17]. Patient behaviours and non-verbal cues are briefly mentioned in the BMJ Best Practice suicide risk management guidelines[18]. The guideline suggests that if the patient does not directly answer questions, that 'acquiring collateral information' e.g., an inability to develop a rapport or make eye contact, should be considered in the assessment of suicide risk. However, the current study found that the SAD PERSONS scale was widely used, which does not assess for these characteristics. This suggests that consideration for patient demeanour should be considered for inclusion in the development stages of future suicide risk assessment measures, and, given the lack of data existing on this aspect of assessment, further research on its clinical utility within suicide risk assessment would be valuable to the field and practice.

Implications for Clinical Practice

The findings of the current study suggest that the variation of suicide risk assessment practices both across and within emergency departments should be addressed. Further development of suicide risk assessment tools and approaches are needed, in particular to incorporate a Structured Professional Judgement or Adjusted Actuarial Approach that clinicians are utilising

in current practice to assess patients. Furthermore, suicide risk assessment tools should include patient interaction and behavioural cues (e.g., patients being withdrawn, distraction, confusion, and eye contact), as clinicians find this beneficial to consider during assessment, and this is currently missing from assessment tools. Future development of tools should also consider the use of outcome guidance e.g., a score or risk identification that correlates with a treatment plan. Finally, clinicians would welcome further training in this area. Emergency department clinicians highlight an ongoing need for further training in suicide risk assessment, particularly for newly qualified staff, who may lack the acquired clinical experience to confidently assess for suicide risk. Training should also develop clinical experience by increasing communication and conversational experience with suicidal patients, and improve clinical decision-making skills.

Limitations

Six emergency departments in Scotland did not participate despite multiple contact attempts. However, there was an adequate geographical distribution of participating emergency departments, which strengthens results. Furthermore, participation in the survey and follow-up interviews was optional, which may have accounted for the response rate equating to around half, although this is similar to prior surveys conducted in emergency departments[19]. Another limitation is that clinicians self-selected, and it may be that those with an interest in emergency psychiatry, suicide risk assessment, or unique experiences of suicide were more likely to have participated. Although, given the similarity to findings of prior studies,[6, 7] this may not be the case. A further limitation is that only six emergency department clinicians participated in follow-up interviews. However, prior research exploring thematic analysis using a homogenous sample has found that data saturation can be present as early as six interviews[20]. The current sample was homogenous (emergency department clinicians who have previously

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assessed for suicide risk) and data saturation was reached, as evidenced by the lack of new

17

themes extracted from the data by the final interview. As with the survey, there was an adequate

geographical spread of interview participants, with a mixture form both urban and rural

hospitals, which again may strengthen results. Finally, due to the study being conducted

exclusively in Scotland, this may limit generalisability, particularly to emergency healthcare

settings elsewhere in the UK or in other countries.

Conclusions

To the author's best knowledge, this is the first study investigating clinician's suicide risk

assessment practices in emergency departments using a mixed-method approach. The current

study found substantial variation in emergency department suicide risk assessment practices in

Scotland, and that clinician's find suicide risk assessment a challenging part of their role. The

study highlights the need for standardised practices, and further development of tools and

training. Further research should be conducted to develop evidence-based guidelines,

assessment methods, and training packages.

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