Assessment of suicide risk in mental health practice: Shifting from prediction to therapeutic assessment, formulation and risk management

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Abstract

Suicide prevention in psychiatric practice has been dominated by efforts to predict risk of suicide in individual patients. However, traditional risk prediction measures have been shown repeatedly in studies from high income countries to be ineffective. Several factors may contribute to clinicians' preoccupation with risk prediction, which can have negative effects on patient care and also on clinicians where prediction is seen as failing. The model of therapeutic risk assessment, formulation and management we outline in this article regards all patients with mental health problems as at increased risk of suicide. It is aimed at reducing risk through use of a person-centred approach. We describe how a move towards therapeutic risk assessment, formulation and risk management, including collaborative safety planning, could help clinicians develop a more tailored approach to managing risk for all patients, incorporating potentially therapeutic effects as well as helping to identify other risk reduction interventions. Such an approach could lead to enhanced patient safety and quality of care, which is more acceptable to patients.

Introduction

Clinical practice and research on suicide and its prevention in patients with psychiatric disorders have long been dominated by attempts to predict who is at risk of suicide and to implement measures to reduce this[1,2]. However, risk prediction has been shown repeatedly to be ineffective due to the poor positive predictive ability of instruments or approaches used[3]. Despite the limitations of the science, a heavy emphasis on risk prediction persists[2]. A perceived failure to predict suicide can lead to blaming of clinicians involved in the care of patients who die by suicide. Furthermore, current unreasonable expectations of risk prediction can amplify clinicians' sense of responsibility.

In this Personal View, we consider what perpetuates reliance on risk prediction, the evidence that it is ineffective, and why the current state of the science is flawed. We then present a more comprehensive and therapeutic approach to assessing, formulating, and managing risk. The approach we propose is aimed at reducing suicide in patients with psychiatric disorders as a group [4].

Drivers of the continuing preoccupation with suicide risk prediction

The pressure on mental health clinicians to identify which of their patients may be at greatest risk of suicide and then to try and prevent that outcome is understandable, especially as some studies indicate that at least 90% of individuals who die by suicide have mental disorders[5]. However, the focus on risk prediction has seemingly grown at the expense of attention to efforts to prevent suicide or to build therapeutic alliance. An important factor driving this focus is pressure from hospital organisations to ensure that a risk assessment is documented in patients' notes, including stratification of risk (e.g. low, medium, and high). One view is that this pressure arises because hospital organisations hope to protect themselves from criticism or legal action, should an adverse outcome occur; however, such static statements of risk do not reflect the highly changeable nature of risk. Also, interpretations of the low, medium, or high terminology will vary for different populations, such as psychiatric hospital inpatients versus community psychiatric patients[6], and between clinicians.

Moreover, it has been posited that reliance of both clinicians and organisations on risk prediction and stratification processes arises from uncertainty about which interventions have the best chance of preventing suicide, providing a semblance of control that (thinly) disguises anxiety and dysregulation[7]. This reliance could be reinforced by pressure or expectations of external regulatory agencies (and coroners). Here, we summarise the evidence that this emphasis on risk prediction is misplaced and potentially dangerous.

Evidence that suicide risk prediction is ineffective

There is increasing evidence that suicide risk prediction, whether using clinical judgement or risk prediction tools, is ineffective. In the UK, an estimated 25-30% of individuals who die by suicide had been in contact with psychiatric services within the year before their deaths[8]. In approximately half of this group, the last service contact was in the week before the death. Yet, when mental health clinicians were asked to estimate immediate risk at the last service contact, the vast majority (85%) judged this immediate risk to be low or absent. This low risk paradox was also observed when the clinicians were asked to assess long-term risk, where the majority (59%) also viewed risk in this patient group as low or negligible[9].

In a US study of 132 psychiatric patients who died by suicide after being evaluated for suicidal ideation within 30 days before their death, 67% had denied having thoughts of suicide, half of whom died within 2 days of this assessment[10]. Many other international studies have demonstrated that a high proportion of psychiatric patients who die by suicide denied having suicidal thoughts when last asked by clinicians before their deaths[11–13]. Potential explanations include a fear of being judged negatively by clinicians, not fully understanding the question, being asked in a leading manner presupposing a negative response, fear of triggering more restrictive psychiatric management, and determination not to be thwarted in an attempt. One probablly explanation, given that patients often describe episodes of suicidal thoughts as very brief [14] or fluctuating, or both, is that patients were not suicidal at the time of being asked. In studies of patients who had attempted suicide nearly half said they had only thought about the act for 10 mins or less beforehand [15] and suicidal ideation and associated factors (e.g. hopelessness, burdensomeness and loneliness) varied dramatically within single days[16]. Suicidal ideation is usually a weak predictor of future suicidal behaviour[17,18]. Furthermore, suicidal ideation is complex (involving, for example, varying degrees of intent, motivation, imagery and planning), but is often poorly defined, which undermines its potential value as an indicator of suicide risk[19].

The problems of predicting suicidal behaviour

Risk prediction measures

Numerous studies have shown that standardised risk scales are not predictive of risk [1,17–19], with low positive predictive values and sensitivity [23,24]. Studies using large datasets and machine learning approaches fare no better[25]. Although patients scoring as high risk on a prediction scale will usually have a greater risk of suicide, the majority of suicides occur among those classed as low or medium risk[26]. The same applies to predicting risk of self-harm repetition[27]. Consequently, the UK National Institute of Clinical Excellence in its Self-harm Guideline recommends against the use of risk scales, whether to predict risk of self-harm repetition or suicide, or to make decisions about aftercare[28].

Patients' experience of risk assessment

The little research done into patients' experience of suicide risk assessment suggests that patients do not mind being asked about suicide, but find formulaic, scripted questions unhelpful and inauthentic[29–32]. Patients consistently report that genuine listening and validation within a therapeutic conversation with clinicians who demonstrate warmth and thoughtful curiosity facilitate a milieu of trust within which true disclosures of suicidal thinking and behaviour are more likely to be made[30–32]. This approach can enable patients to make sense of past experiences, gain new perspectives, and consider therapeutic risk management strategies collaboratively[31,33]. These qualitative accounts convey the scope for patients to gain a sense of enhanced connection and hope through the assessment, both within the therapeutic relationship and through encouraging involvement of friends and family in supporting them.

Clinicians' experience of risk assessment

Assessment of suicide risk can be very anxiety-provoking for clinicians, and this discomfort can promote avoidance of in-depth exploration of suicidal thoughts and behaviour [34]. A study of clinicians' assessments of suicidal ideation showed that many clinicians asked questions in ways that invited a negative response, usually followed by a change of topic[35]. This experience mgiht contribute to the high frequency of those denying suicidal ideation in patients who soon afterwards die by suicide[10]. Biased styles of questioning, however unconscious, may arise where clinicians' fear the questioning might contribute to a patient having suicidal thoughts, despite evidence to the contrary[36,37], or are anxious about the implications for their responsibility should the patient report suicidal thinking[38]. Pressure from hospital management to stratify risk, perceived messaging that any death by suicide is a service failure, and clinicians' distress related to previous experiences of suicide could be added factors[6].

Given the poor predictive value of stratified and scale-based approaches to clinical risk assessment (and their negative reception from patients[39]) there is a clear need for a different approach to risk assessment, with more emphasis on collaborative risk formulation and therapeutic risk management in improving patient care and safety[40]. Assessment and risk formulation should take into account the overall increased risk of suicide in patients with mental health problems and the dynamic nature of their risk over time. Clinical management needs to include a standard approach to maintaining safety, which is adapted to each individual patient's characteristics, circumstances and needs.

Therapeutic risk assessment and formulation

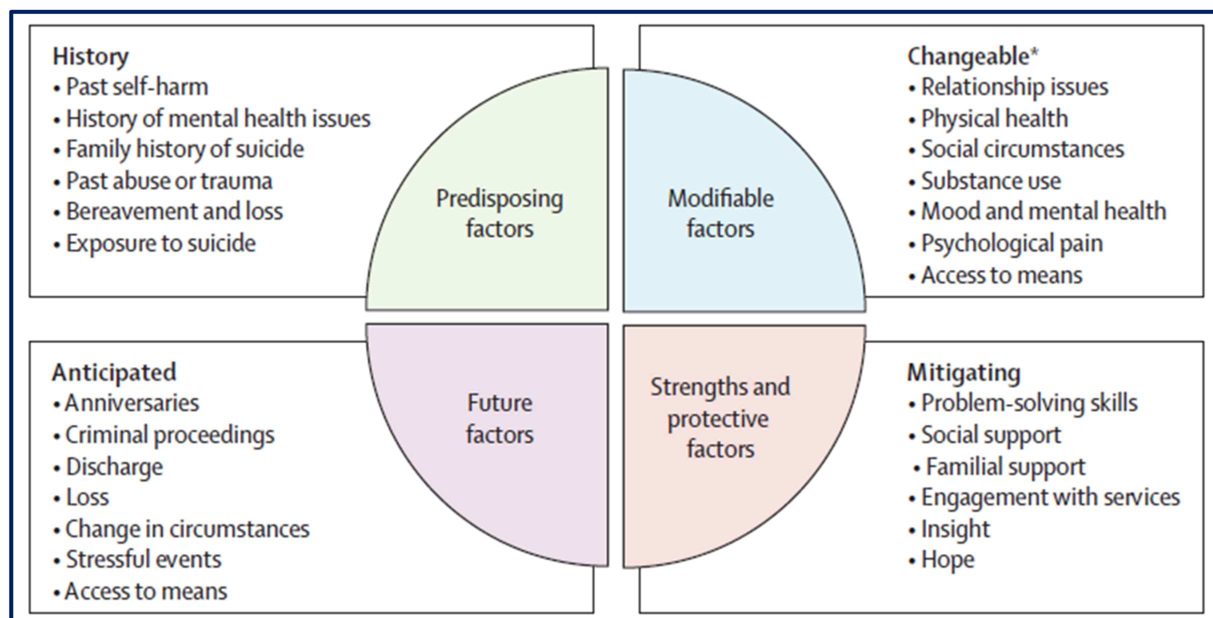
We propose the formalisation of an approach that many clinicians have used for years, yet is not described explicitly in training programmes [41]. This approach relies on investing time in gaining therapeutic alliance rather than ticking boxes, leveraging this alliance to uncover unmet needs and identify modifiable risk factors, and building a collaborative care plan as the therapeutic assessment unfolds. A thoughtful patient-centred assessment will take time and elicit substantial information, which can become unwieldly if not well organised. Strategies to assist with assimilation of this information are therefore useful. For example, Bouch and Marshall [42] advised categorising information into static (historic), stable (enduring but not necessarily static), dynamic (changeable or modifiable), future (anticipated),

and protective (mitigating) factors to enable a comprehensive formulation of risk, from which collaborative treatment plans can be devised. Similarly, Pisani and colleagues [6] advocated a model of collecting information about the patient's risk status relative to others in the same population (e.g., people in contact with mental health services), the patient's current risk state (e.g., compared with a previous assessment), and considering available protective resources and foreseeable changes that could increase or decrease risk.

How factors elicited throughout the assessment might be organised to arrive at a balanced risk formulation (that can also help identify appropriate interventions) is shown in the figure.

Figure: Interactive components of risk assessment that can inform risk formulation and therapeutic management

**Acute exacerbation of any of these factors may constitute warning signs.*



Establishing a therapeutic and empathetic rapport between clinician and patient is fundamental to collaborative risk assessment and formulation because of the potential to shift cognitions during this process. Creating this rapport relies on a genuine and thoughtful bond in which the clinician is mindful of the effect a therapeutic and empathetic human encounter can have on the patient's experience, engagement and recovery. The clinician can achieve this rapport by taking time to set the scene, conveying concern and care, acknowledging the potential for uncomfortable questions, and using positive non-verbal communication, open questions, and active listening skills[43] throughout the assessment to encourage the patient to tell their story[44]. The emphasis should be on developing a shared understanding of the patient's needs and strengths (often referred to as protective factors).

Interactions with the patient should include emphasis on personal aptitudes and internal resources that can be drawn upon to help overcome problems. Interest in the patient's achievements, aspirations, and pastimes, perhaps through curious and reflective exploration of how they have overcome or managed difficult times in their life, may assist with later safety planning.

In an assessment, the patient should be encouraged to start in the here and now before recounting the past, and then be guided backwards and forwards as necessary for the clinician to understand their usual level of functioning and past, current and potential future vulnerabilities and strengths[45]. This approach allows the clinician to understand the dynamic factors that may be relevant to the patient's current state, such as deterioration in mood, interpersonal conflicts, financial difficulties or addiction problems.

Exploring more distal factors provides opportunities to consider how past experiences might contribute to the individual's current circumstances. For example, past self-harm or suicide attempts are strongly associated with risk of future acts[46–48]. Factors such as parental mental illness or familial suicide may indicate a transgenerational component to the person's presentation[49,50]. Adverse childhood experiences, such as sexual, physical or emotional abuse, are correlated with both self-harm and suicide[45,46], as is the suicide of a parent[53]. Clinicians should ask about past abuse and trauma if justified in helping them to better understand what has happened to the person, although the level of detail requested may vary. In the case of suicide bereavement, for example, it will be important to understand details of kinship (friend or relative), the quality of their relationship, at what point in the life course the bereavement occurred, the method used, and the patient's perspective on the suicide, including how it might have influenced their own suicidal thoughts. However, it is not necessary or desirable to seek full and intimate detail about past sexual abuse at a first assessment. Instead, the focus should be on validation, eliciting the patient's perspective as to whether any past abuse might have influenced their current difficulties, checking current safety, and offering support[54].

The clinician should gently and progressively, but candidly, explore suicidal ideation, motivation, intent, capability, and volition [55,56], attending to recent and past suicidal behaviour, as well as current suicidal thoughts and behaviour[57]. This might involve direct questioning about the patient's perspectives on suicide, reasons for living, and reasons for dying[58]. Acknowledging how common suicidal ideation is in the general population[59] gives the patient permission to disclose something they could feel ashamed to share. Investment in rapport-building permits the clinician to gently challenge the patient, reflecting any contradictions between what the patient is saying and what the clinician is gleaning through observation and non-verbal communication. Resolving these disconnects[60] helps provide a more accurate understanding of individual risk.

Identifying warning signs that the patient might be considering a suicidal act, such as dramatic mood changes, researching suicide methods, fixation with suicide as an escape or solution, or believing nobody cares[61,62], is an essential component of risk assessment and formulation. Such signs may be apparent on observation (e.g., agitation, evasiveness, or anger), behavioural questioning (e.g., describing insomnia, suicidal assertions or behaviour, recklessness, or social withdrawal) and cognitive questioning (e.g., describing shame, self-loathing, or hopelessness). Warning signs may fluctuate; for example, a calm presentation and level mood following a period of

depression and anxiety might indicate that the patient has reached a decision about suicide[63]. Assessment should therefore include questioning about how the patient's mood, thoughts and feelings might have oscillated in the days or weeks prior to assessment.

Potential strengths should be identified throughout the assessment, although it is important to avoid complacency given the lack of empirical evidence for the mitigating effect of protective factors in assessment of near-term suicide risk[64]. Some of these factors will be easily recognised by the patient (e.g., relationship with a family member or friend), whereas others may need uncovering through curious and collaborative dialogue (e.g., problem-solving ability, particular things the patient would miss, such as certain friends and favourite interests). A shared understanding of what constitutes a strength or protective factor is important. Specific faiths, for example, could be assumed to be protective, but a patient's own interpretation of doctrine requires confirmation. Furthermore, like risk factors, protective factors are dynamic, and should be revisited throughout an episode of care. For example, the relocation or death of a friend might remove a previously important source of support or even trigger feelings of abandonment or loneliness.

Finally, to provide a rounded picture, anticipated events should be explored. If a person is facing loss (for example, of their mobility, job or role, financial security, a confidant or confidante, pet or home), the consequent anticipatory anxiety could contribute to their presentation, potentially elevating their risk. Similarly, impending significant events such as court cases, discharge from clinical care, anniversaries or exams, may add to existing stress.

While respecting confidentiality, collateral information from family, friends or other professionals should be obtained wherever possible to qualify the patient's narrative [65]. The potential for sharing information with family or carers should be discussed with the patient at the beginning of the assessment and, if necessary, later, including consideration of the potential advantages[66] to gauge their attitude towards such sharing. Patients might refuse disclosure of confidential information to family members or carers; however, this does not prohibit the clinician from listening to the family's views and concerns.

By organising information obtained from a patient's self-report, collateral sources and clinical observation, detailed information about suicidal ideation and behaviour, risk factors, and warning signs can be synthesised to formulate an individual's risk dynamically. This formulation should provide a distilled understanding of personality factors, seriousness and nearness of risk, and circumstances that might elevate or mitigate risk.

Risk assessment and formulation is a fluid, continuous and interactive process. New information should be incorporated as it arises, and reflected in documentation to provide clear detail of clinical judgement and reasoning for actions considered and taken[67].

Therapeutic risk management

Engaging a patient in therapeutic risk management involves attending to the factors that matter to them, to increase their safety and reduce their current and future risk. In the short-term this risk management might include means restriction [68], treatment of insomnia [69], pain management [70], engaging social support,

safeguarding interventions, and optimisation of psychiatric treatment. In the long-term it might include psychological therapy[71], therapeutic risk taking [72] and providing support with social integration.

An important aspect of risk management is working with the patient and, where possible, their family member/s or carer to understand patterns of events and behaviours that lead to and in some cases maintain suicidal crises. An example of such a pattern might be pressure at work leading to increased stress, impaired sleep, and low of mood, resulting in irritability, interpersonal conflict and invalidation at home, following which the patient tends to drink more alcohol. Increased alcohol intake intensifies the patient's negative thinking and beliefs about not belonging and being unworthy, and decreases the ability and motivation to regulate emotions, at which point suicidal ideation becomes amplified and experienced as reasonable way to end psychological pain. Once these patterns associated with suicidal crises are identified, strategies to interrupt the trajectory by more effectively recognising and managing warning signs and regulating emotions can be considered[73], including plans for testing and evaluating.

Safety planning

Safety planning is a collaborative intervention involving six sequential steps (panel), which aims to enable a clinician to work jointly with a patient to identify tailored options to self-manage future vulnerable episodes and possible suicidal crises, and plan how to implement them [74,75]. It complements the process of therapeutic risk assessment and formulation because it draws on the patient's identified problem-solving abilities or practised coping tactics. Moreover, the human connection established during assessment is likely to optimise engagement and enable the honest dialogue necessary for effective safety planning. Emerging evidence suggests that safety planning is potentially of benefit to psychiatric patients as a tool to help them prepare for difficult times in the future when they could be at risk, and that it can help reduce repetition of self-harm[75]. When embarking on a safety planning intervention, clinicians should ask themselves how they can use their skills to create a shared sense of hope with a patient, with a plan that acknowledges both the challenges and possibilities specific to that individual.

A safety plan should be seen as an ongoing and dynamic process, which requires regular review as circumstances change (e.g., if a supportive contact is no longer available or new risk factors or warning signs develop), if new strategies are discovered, or if existing strategies cease to be effective. The patient should receive a paper or digital copy each time a new version is created, which can itself remind them of a therapeutic clinical encounter.

Because therapeutic risk management, together with safety planning, will differ from traditional risk assessment and intervention for many clinicians, specific training will be necessary. This should provide a comprehensive overview of best practice in risk assessment, formulation, and management, including the problems with traditional modes of assessment identified earlier. It should also provide clinicians with opportunities to practise their skills and receive feedback, particularly from service users and carers wherever possible, so that their lived experience perspective emphasises the importance of collaboration and the therapeutic relationship.

Conclusions

Clinicians are tasked with assessing potentially suicidal patients to make clinically informed (and evidence-based) decisions about keeping them safe and preventing future self-harm. Traditional risk prediction scales and similar measures are ineffective. Models that purport to predict suicidal behaviours over the next 6-12 months (or beyond) have little utility. In recognition that mental health patients as a group are at elevated risk of suicide, and that risk can change rapidly, clinicians need to identify what risk factors they can modify over the next few hours, days, and weeks to secure their patient's safety as far as possible. Confidence in safety planning is enhanced by emerging evidence of its effectiveness in prevention of suicidal behaviour in patients with suicidal ideation or prior suicide attempts.

Conducting a therapeutic risk assessment and formulation, including past and current information, potential future influences, and patients' needs, strengths and protective factors, can assist more thoughtful identification of individualised and implementable therapeutic risk management, reinforced by a safety plan. This shift in approach, which is applicable and adaptable for patients in different age groups and settings, can greatly improve patient care, with probable benefits for suicide prevention.

Contributors

KH and KL had the initial idea for this Personal View. All authors contributed to the planning, drafting and revising of the manuscript. KL was responsible for preparation of the figure and, following discussion with the other authors, subsequent revisions.

Declaration of interest

KH is a member of the National Suicide Prevention for England Advisory Group. KL is a member of the National Institute for Health and Care Excellence Self harm: assessment, management and preventing recurrence (update) guideline advisory committee. The other authors declared no conflicts of interest.

Panel: Six steps involved in Safety Planning

Step one: warning signs

Patients will not always be aware of their warning signs, but by reflecting on previous episodes the clinician and patient can together identify thoughts, feelings (both emotional and physiological) and circumstances that might mean a potential suicidal crisis is developing.

Step two: coping strategies

The clinician can support the patient to imagine what they might use for distraction and self-management in the event that they are alone and experiencing warning signs. Strategies should be individualised and congruent with the emotions identified in step one.

Step three: enabling distraction by connecting with people or settings

Implicit in safety planning is the reality that not all strategies work all of the time. The clinician can assist the patient to think about who or what they can connect with if step two does not ease their suicidal thoughts or urges. The emphasis is again on distraction, rather than talking about suicidal thoughts, and the clinician must remain mindful that not all patients have people they can readily be with, so other means of achieving a sense of connection should be considered. It might be useful at this point to help the patient think about how they can form meaningful relationships when their mental health is more stable, perhaps by joining third sector organisation therapeutic and peer support groups. This could, in time, make it easier for them to engage with others when they are feeling vulnerable. Strategies to aid distraction in this step might include going for a walk, playing a game with a friend, or going to a favourite place or somewhere other people go to for a common reason, such as a coffee shop or cinema. For patients who are socially isolated and find it difficult to leave the home environment, digital means of connection can be explored (e.g..online mental health peer support forums, streamed TV series or podcasts, or ready-made playlists).

Step four: engaging support by approaching social contacts

The patient should be encouraged to identify personal contacts they can approach for support if the steps above are not sufficient to help them feel safe. They should be advised to consider what they might need from their support person or persons and whether they think the individual or individuals will be able to provide the support they need. If the patient finds it difficult to communicate their feelings, the clinician and patient can together consider ways for the patient to access support, such as use of code words or emojis.

Wherever possible the identified supportive contacts should be involved in or made aware of the safety plan to ensure they understand and accept what is expected of them. If a patient is reluctant to share their plan the clinician should

seek to understand their reasoning and reflect that, in order for a safety plan to be effective, it has to be feasible.

A contingency dialogue is important throughout the whole safety planning intervention, but particularly in this step to prepare the patient for the possibility that their supportive contact may not be available, consider possible reasons for this, explore and rationalise potential reactions of the patient, and plan the next step.

Step five: approaching professional contacts

If the above self-management steps do not help the patient resolve a crisis, they are advised to call identified professional teams, whether mental health, primary care or voluntary sector services, or out of hours and emergency services. As with step four, the patient should be guided to think about what response they might need from professionals and helped to think about how they might express their needs.

Step six: making the environment safe

The clinician should remind the patient how to ensure their safety by removing potentially harmful means. A clinician might, for example, prompt a patient to dispose of medication, or walk away from dangerous environments such as busy roads or high places.

When discussing these six steps, the patient or clinician should record in writing the agreed plan.

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