

An audit of risk assessments for suicide and attempted suicide in ED: a retrospective review of quality

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ABSTRACT

AIM: The primary aim of this audit was to determine the quality of psychiatric risk assessments conducted by Mental Health & Addiction Services clinicians for patients presenting to the emergency department, Waikato Hospital, Hamilton, New Zealand following an attempted suicide.

METHOD: A retrospective, randomised audit of 376 files of patients who had presented to the ED over a 12-month period from 1 July 2015 to 30 June 2016 was conducted, following the standards outlined in the present New Zealand Ministry of Health Clinical Practice Guideline for Deliberate Self Harm (DSH).

RESULTS: It was found that clinicians routinely focused on the historical features of the suicide attempt presentation while failing to record judgements about future suicidal behaviours. Interactions with family members were recorded in less than half of the cases. The guideline most poorly adhered to was checking whether Māori patients wanted culturally appropriate services during the assessment and treatment planning, with this recorded in less than 10% of the clinical records.

CONCLUSIONS: To improve the quality of the suicide risk assessments, and to better align with Clinical Practice Guidelines, the authors propose redevelopment of clinician training, including focus on cultural competence, and training in confidentiality and privacy relating to an attempted suicide episode.

Suicide, the act of intentionally killing oneself (as determined by coronial ruling), is rare but remains a significant cause of mortality in 34 of the Organisation for Economic Co-operation and Development (OECD) affiliated countries.¹ In 2014, 504 people died by suicide in New Zealand (ie, 10.7 per 100,000 population).² In contrast, the number of intentional self-harm hospitalisation events in 2013 (including short stays in the emergency department) was 7,267 (ie, 176.7 per 100,000 population).² In 2009, New Zealand had the highest rate of suicide in the OECD.³

Self-harm includes broader classes of behaviours that includes non-suicidal self-injury (NSSI) where the intent to die is absent. Attempted suicide is a deliberate self-harm (DSH) event with the purpose of ending one's life but does not lead to death.⁴⁻⁵

Assessments following suicide attempts can be challenging evaluative exercises. However, society expects that it will be completed with some degree of accuracy.⁶ The strongest predictive factor for future suicide is a history of previous suicide attempts, especially if this occurred recently.⁷ Stressful life events or psychological distress (eg, relationships and financial difficulties) are frequent precipitating factors.⁸⁻⁹ Multiple psychiatric disorders (depression, anxiety, substance abuse disorders, personality disorders, etc.) have been associated with an increase in attempted suicide risk.¹⁰ In 2006, depression and anxiety were ranked as the second leading cause of health loss in children, adolescent and middle-aged people.¹¹ As the population ages, the presence of social isolation, lack of connectedness and chronic

medical conditions also contribute as risk factors for suicide.^{12–13}

When patients present to the hospital's emergency department (ED) following a suicide attempt, the psychiatric assessment typically occurs once clinicians have confirmed medical stability, and the patient is sufficiently alert to participate in an interview. Mental health clinicians conduct a comprehensive, individualised psychiatric assessment to help identify the high-risk group for repeat suicide attempts.⁷ Recent studies showed that between 1.6–2% of hospital-treated people, following an attempted suicide episode, will die by suicide in the next 12 months.^{14–15}

The focus of this audit was to determine the quality of the psychiatric risk assessments conducted by mental health clinicians. This would help indicate which components of the psychiatric risk assessment, recommended in the Ministry of Health's (MOH) Clinical Practice Guideline (CPGs), are routinely and satisfactorily completed, and which are neglected or do not adhere to CPG recommendations.

Methodology

This was a descriptive study. A retrospective review of the electronic medical records was performed for patients who had presented to Waikato Hospital ED with either active suicidal thoughts or a suicide attempt over a 12-month period (1 July 2015 to 30 June 2016). An additional inclusion criterion was a subsequent assessment by a mental health clinician.

Using the outlined criteria and relevant coding for the various DSH methodologies, over 900 medical records were obtained. The original pool of medical records was randomised (by way of using a random number generator formula process in Excel), and the first 376 files were reviewed.

The Royal Australian and New Zealand College of Psychiatrists (RANZCP) has published CPGs for the management of DSH; the most recent in 2016.¹⁴ The authors, however, selected the 2003 MOH CPG, "Assessment and Management of People at Risk of Suicide" as the 'gold standard' for risk assessment, as this was the standard against which ED and Mental Health Services in New Zealand are audited.¹⁶

Although the MOH has more recently published "Preventing Suicide; Guidance for emergency departments", it does not directly address the psychiatric risk assessment.¹⁷ The authors were not aware of any pre-existent key performance indicators in the Waikato region for psychiatric risk assessments for community DSH. While clinical practice guidelines exist, international reporting suggests that adherence to them is consistently poor.^{18–19}

A 10-item checklist of measurable, ED-based activities conducted by clinicians was developed from the MOH 2003 CPG (Table 1). Standards such as staff training in suicide, and the recommendation for staff to receive regular supervision identified in the CPG, were excluded. An additional 16-item risk assessment checklist was developed to address item 5, "Mental Health Staff conducted a comprehensive suicide assessment" (Table 2). This incorporated the central tenets of a standard psychiatric risk assessment as outlined in a standard psychiatry text.

In addition to collating de-identified sociodemographic data, three researchers systematically reviewed patient records and benchmarked MH&AS assessments against the two checklists. Statistical analysis was performed using SPSS and Excel. Ethics was sought from the New Zealand MOH's Health and Disability Ethics Committee (HDEC), but was deemed unnecessary for the audit process or publication of the results.

Results

During the 12-month audited period, 233 females (112.6 per 100,000—figures taken from the New Zealand Census population data 2013)²⁰ and 143 males (72.6 per 100,000) presented to ED (ratio 1.6:1). Patient age ranged from 12 to 84 years (M=30.8, SD 15.3). The highest rate of attempted suicide presentation occurred among 15–24-year-olds, with 179 individuals presented to ED (324.7 per 100,000). Māori had the highest rate of attempted suicide presentation (n=112; 126.7 per 100,000) followed by New Zealand European (n=238; 76.2 per 100,000). People from urban settings were twice as likely to present with attempted suicide as those from rural settings (rates 139.8 per 100,000, and 67.9 per 100,000 respectively).

Table 1: Ten-item checklist assessed by MH&AS clinicians at ED.

<p>Ten-item checklist (adapted from the 2003 MOH publication, “Assessment and Management of People at Risk of Suicide.”(New Zealand Guidelines Group (NZGG) and Ministry of Health, 2003)</p> <ol style="list-style-type: none"> 1. The family were involved in the assessment or contacted at some point. 2. Patients who self-identified as Māori were asked whether they wanted to include culturally appropriate services in their assessment. 3. Additional attempts to verify DSH information (eg, family, GP, previous notes) were attempted, eg, under-reporting of overdose. 4. Intoxicated or sedated patients were observed in a safe environment until they were sober or could appropriately participate in an assessment. 5. MHS staff conducted a comprehensive suicide assessment. 6. When a patient was not admitted to the inpatient setting, outpatient/community follow-up occurred within the first 72 hours. 7. Evidence existed that the patient (including whanau and important others) were included in treatment planning. 8. A written copy with information about medication, treatment plans and key contacts, eg, CAHT to call (if needed) was provided. 9. The patient’s general practitioner (GP) received a full copy of the discharge plan including any medication recommendations, ie, evidence from Clinical Results Viewer (CRV) report of correspondence sent to GP. 10. The potential for further/future overdose risk was considered in prescribing medications, ie, treatment plans indicated that medications were prescribed and dispensed in dosages and quantities that are less likely to be lethal in overdose or in combination with other drugs or alcohol, ie, close control prescribing.

Table 2: Sixteen-item risk assessment checklist.

<p>Comprehensive suicide assessment:</p> <ol style="list-style-type: none"> 1. The description of suicide attempt existed. 2. The association with alcohol intoxication/dependence history was asked about (and recorded). 3. Duration and sophistication of prior planning (including presence of a farewell letter) was recorded. 4. Access to further methods for DSH was explored, eg, access to medications, firearms, etc. 5. Psychosocial stresses (ie, Predisposing, Precipitating and Perpetuating factors) that are believed to have contributed to DSH attempt identified. 6. Attitude to surviving DSH recorded. 7. Attitude to current and immediate future personal safety documented. 8. Presence of protective factors explored and documented. 9. Presence of depressive features explored and documented. 10. Presence of another Axis I psychiatric condition, especially alcohol dependence and sleep disorder, explored and documented. 11. Medical history recorded (especially chronic medical conditions). 12. Psychosocial status and existing support; support available during recovery phase documented. 13. Access to and willingness to access professional services documented. 14. Family/caregiver concerns identified and documented. 15. Family’s/caregiver’s predicted future DSH risk of the patient documented, ie, notes indicated that family were asked about their concerns about their relative’s immediate safety and their ability to assist in keeping safe. 16. Immediate risk judgement identified or described, ie, no risk, mild-low, moderate, severe, very high (extreme).

Table 3: Level of achievement of checklist items.

Item (n=376)	Standard achieved (%)	Standard NOT achieved (%)
<i>Description of suicide attempt</i>	356 (94.7%)	20 (5.3%)
<i>Association with alcohol intoxication/dependence history obtained</i>	301 (80.1%)	75 (19.9%)
<i>Duration and sophistication of prior planning recorded</i>	242 (64.4%)	134 (35.6%)
<i>Access to further methods of DSH explored</i>	91 (24.2%)	285 (75.8%)
<i>Psychological stresses identified</i>	309 (82.2%)	67 (17.8%)
<i>Attitude to surviving DSH recorded</i>	193 (51.3%)	183 (48.7%)
<i>Attitude to current and immediate future personal safety recorded</i>	69 (18.4%)	307 (81.6%)
<i>Presence of protective factors explored</i>	198 (52.7%)	178 (47.3%)
<i>Presence of depressive features explored</i>	210 (55.9%)	166 (44.1%)
<i>Presence of another Axis I psychiatric condition explored</i>	296 (78.7%)	80 (21.3%)
<i>Medical history recorded</i>	310 (82.4%)	66 (17.6%)
<i>Support available during recovery phase recorded</i>	224 (59.6%)	152 (40.4%)
<i>Access to and willingness to access professional services documented</i>	248 (66.0%)	128 (34.0%)
<i>Family/caregiver concerns identified</i>	137 (36.4%)	239 (63.6%)
<i>Family asked about concerns for patient's safety and their ability to assist in keeping safe</i>	105 (27.9%)	271 (72.1%)
<i>Immediate risk judgement identified or described</i>	194 (51.6%)	182 (48.4%)

Table 4: Level of achievement of Clinical Practice Guidelines.

Item	Achieved (%)	Not achieved (%)
<i>Family/caregiver involved in assessment or contacted (n=376)</i>	194 (51.7%)	174 (47.5%)
<i>Patients identifying as Māori asked if they want to include culturally appropriate services in assessment (n=112)</i>	8 (7.1%)	95 (84.8%)
<i>Additional attempts to verify DSH info attempted (n=376)</i>	190 (50.5%)	184 (48.9%)
<i>When patient not admitted, follow up (scheduled to have) occurred within 72h (n=275)</i>	251 (91.3%)	15 (5.5%)
<i>Patient was included in treatment planning (n=275)</i>	188 (68.3%)	81 (29.1%)
<i>Written copy of medication, treatment, key contacts provided (n=275)</i>	71 (25.8%)	194 (70.5%)
<i>Patient's GP received full copy of discharge plan and medication recommendations (n=275)</i>	216 (78.5%)	51 (18.5%)
<i>Close control prescribing incorporated (n=376)*</i>	51 (13.6%)	57 (17.8%)

*68.4% of patients were either admitted or were not on medications requiring close control prescribing.
Note: All n listed above include patients with missing data (ie, not recorded on the assessment checklist).

Results for adherence by MH&AS clinicians to the psychiatric assessment standards are outlined in Tables 3 and 4. The levels of adherence (recorded as either 'achieved' or 'not achieved') indicate the percentage of clinicians that adhered to the checklist items. ED clinicians cannot refer patients who are sedated or intoxicated (Item 4, Table 1) for the psychiatric assessment, therefore this item was excluded.

Discussion

The face-to-face interview has traditionally remained an important assessment to help prevent repeat attempted suicide.²¹ The highest risk factors identified during the clinical assessment are suicide intent and the degree of planning involved in the attempt, including availability and ease of access to suicide means.

While the clinical assessment helps identify high risk factors and provide appropriate, targeted interventions, based on the synthesis of interview and collateral information, systematic literature reviews have failed to identify the positive predictive validity of the psychiatric risk assessment.¹⁴ The traditional use of categorical labels, ie, high, moderate and low risks, have to date held poor predictive validity and low inter-rater reliability.²² The psychiatric assessment has also frequently been augmented by other diagnostic tools and rating scales designed to predict short-term suicidal behaviour following a suicide attempt. Likewise, the predictive validity of these various tools in predicting short-term suicidal risk remains poor.²³⁻²⁵ In his study, Horowitz calls for more meticulous exploration of risk; the psychiatric assessment offers this opportunity.²⁵

This study relied solely on recorded information and this limits discussion on the findings and recommendations. The authors acknowledge that discrepancies are likely to exist between actual clinical practices and what was documented in the electronic medical records. However, retrospective formal analysis, as part of a critical review process following a sentinel event (such as suicide) can be aided by contemporaneous documentation, as clinicians' memories can be fallible.²⁶

Regarding the recorded risk assessment, the clinicians' practices appeared to have

focused on the historical facts of the event: recording details of the attempted suicide episode and determining the presence of other psychiatric conditions. Those areas where clinicians adhered to CPG recommendations appeared to coincide with electronic note categories. The format and requirements of the electronic note record has, and could play a further quality improvement role in CPG adherence.

Clinicians tended not to record extrapolations or judgements about future suicidal behaviours and outcomes. For example, attitude to current and immediate future safety was often missing, as was information about access to further potential DSH methods. Clinicians recorded their interactions with family members (ie, identifying specific concerns or checking their ability to assist in keeping the patient safe) in less than 50% of the cases reviewed. The poorest result observed was the low percentage (recorded in less than 10% of clinical records) of documented invitation for provision of culturally appropriate services for Māori patients as part of their assessment.

More than 75% of patients who were discharged from the ED were referred for outpatient review to occur within a week of the incident with community services. This study did not assess whether this goal for re-assessment was achieved. Standard practice ensured that all general practitioners (GPs) received an automatically generated letter about the risk assessment.

Based on the above findings, we recommend that the psychiatric risk assessment and adherence to an identified CPG requires further additional work. An Australian study into completed suicide found that of the suicides that could have been prevented, 59% had incomplete or poor assessment of suicide risk; suicide risk was not adequately determined and given due consideration.²⁷ The authors would suggest the development of educational workshops to include the following topics:

- a) Psychiatric risk assessment for clinicians working in acute mental healthcare settings. Clinicians should be aware of the recommended standards when it comes to suicide risk assessment.

- b) Clinicians must comply with medico-legal requirements for documentation in clinical records. Aligning electronic clinical notes with CPG recommendations could improve adherence.
- c) The importance of the individualised suicide risk assessment. A diagnostic statement or risk category is insufficient and staff should be encouraged to provide a psychiatric formulation. This should include the judgement of immediate risk for future harm by weighing up the interactions of the multiple identified (dynamic and static) risk factors (for suicide) against the protective and resilience factors. Isolated and even combinations of risk factors indicate little about immediate risk—hence the need for a comprehensive formulation.²⁸
- d) Addressing privacy and confidentiality aspects of the clinical assessment especially pertaining to risk. The risk exists that clinicians may be opting for non-disclosure and non-involvement with family and caregivers as the norm rather than exploring how much, and when to safely share information with relatives. It is important for services to balance the need to engage family and caregivers in the assessment and care of patients with suicidal behaviours while ensuring appropriate patient confidentiality.
- e) Cultural competency training. Organisations need to ensure that their clinicians have had adequate training in addressing cultural needs of their patients. Many large hospitals in New Zealand employ cultural workers, therefore it is essential that clinicians know how to access these staff members.

The authors of this study concluded that adherence to CPG was moderate to poor. (It remained uncertain whether clinicians performed the CPG activities but had failed to record these in the patients' clinical records). Despite uncertainties existing about the predictive validity of the comprehensive psychiatric assessment, a comprehensive and individualised assessment remains the cornerstone of clinical assessment and guides the treatment and intervention plans.

Competing interests:

Nil.

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REFERENCES:

1. Ministry of Health. Suicide Prevention Toolkit for District Health Boards. Wellington: Ministry of Health 2015. Retrieved from <http://www.health.govt.nz/publication/suicide-prevention-toolkit-district-health-boards>
2. Ministry of Health. Suicide Facts; 2014 data. 21st December 2016. Accessed at: <http://www.health.govt.nz/publication/suicide-facts-2014-data> on the 31st May 2017.
3. OECD. Doing Better for Children. New Zealand Country Highlights. 2009. Retrieved from <http://www.oecd.org/newzealand/43589854.pdf>
4. Ministry of Health. Understanding Suicide in New Zealand. Ministry of Health website: Ministry of Health 2016a. Retrieved from <http://www.health.govt.nz/our-work/mental-health-and-addictions/working-prevent-suicide/understanding-suicide-new-zealand>
5. Jaiswal SV, Faye AD, Gore SP, Shah HR, Kamath RM. Stressful life events, hopelessness, and suicidal intent in patients admitted with attempted suicide in a tertiary care general hospital. *J Postgrad Med.* 2016 Apr–Jun;62(2):102–4.
6. Bongar B, Sullivan G. The suicidal patient: clinical and legal standards of care (3rd ed.). Washington, DC: American Psychological Association. 2013.
7. Chu C, Klein K, Buchman-Schmitt J, Hom M, Hagan C, Joiner T. Routinized Assessment of Suicide Risk in Clinical Practice: An Empirically Informed Update. *J Clin Psychol;* 2015; 71(12):1186–1200.
8. Cupina D. Life events, gender and suicidal behaviours in the acute community setting. *Australas Psychiatry;* 2009; 17(3):233–236.
9. Foster T. Adverse life events proximal to adult suicide: a synthesis of findings from psychological autopsy studies. *Arch Suicide Res;* 2011; 15(1):1–15.
10. Chesney E, Goodwin G, Fazel S. Risks of all-cause and suicide mortality in mental disorders: a meta-review. *World Psychiatry;* 2014; 13(2):153–160.
11. Ministry of Health. Health Loss in New Zealand: A report from the New Zealand Burden of Diseases, Injuries and Risk Factors Study 2006–2016. Retrieved from <http://www.health.govt.nz/publication/health-loss-new-zealand-report-new-zealand-burden-diseases-injuries-and-risk-factors-study-2006-2016>
12. Fässberg M, Cheung G, Canetto S, Erlangsen A, Lapierre S, Lindner R, . . . Wærn, M. A systematic review of physical illness, functional disability, and suicidal behaviour among older adults. *Aging Ment Health;* 2016; 20(2):166–194.
13. Scott K, Hwang I, Chiu W, Kessler R, Sampson N, Angermeyer M, . . . Nock M. Chronic physical conditions and their association with first onset of suicidal behavior in the world mental health surveys. *Psychosom Med;* 2010; 72(7):712–719.
14. Carter G, Page A, Large M, Hetrick S, Milner AJ, Bendit N, Walton C, Draper B, Hazell P, Fortune S, Burns J, Patton G, Lawrence M, Dadd L, Robinson J, Christensen H. Royal Australian and New Zealand College of Psychiatrists clinical practice guideline for the management of deliberate self-harm. *Aust N Z J Psychiatry.* 2016 Oct; 50(10):939–1000.
15. Carroll R, Metcalfe C, Gunnell D. (2014) Hospital presenting self-harm and risk of fatal and non-fatal repetition: Systematic review and meta-analysis. *PLoS ONE* 9: e89944.
16. New Zealand Guidelines Group (NZGG) and Ministry of Health. The Assessment and Management of People at Risk of Suicide: For Emergency Departments and Mental Health Service Acute Assessment Settings. Best Practice Evidence-based Guideline. 2003. Retrieved from <http://www.health.govt.nz/publication/assessment-and-management-people-risk-suicide>
17. Ministry of Health. Preventing suicide: Guidance for emergency departments. Wellington: Ministry of Health. 2016b.
18. Hickey L, Hawton K, Fagg J, Weitzel H. Deliberate self harm in patients who leave the accident and emergency department without psychiatric assessment: A neglected population at risk of suicide. *Journal of Psychosomatic Research;* 2001; 50(2):87–93.
19. Mahal S, Chee C, Lee J, Nguyen T, Woo B. Improving the quality of suicide risk assessments in the psychiatric emergency setting: Physician documentation of process indicators. *The Journal of the American Osteopathic Association;* 2009; 109(7):354–358.
20. Statistics New Zealand. 2013 census of population and dwelling. Retrieved from www.stats.govt.nz/ website: <http://www.stats.govt.nz/Census/2013-census.aspx>
21. Mulder R, Newton-Howes G, Coid J. The futility of risk prediction in psychiatry. *Br J Psychiatry;* 2016; 209(4):271–272.

22. Pisani AR, Murrie DC, Silverman MM. Reformulating Suicide Risk Formulation: From Prediction to Prevention. *Acad Psychiatry*. 2016 Aug; 40(4):623–9.
23. Hawes M, Yaseen Z, Briggs J, Galynker I. The Modular Assessment of Risk for Imminent Suicide (MARIS): A proof of concept for a multi-informant tool for evaluation of short-term suicide risk. *Compr Psychiatry*. 2017 Jan; 72:88–96.
24. Galynker I, Yaseen ZS, Cohen A, Benhamou O, Hawes M, Briggs J. Prediction of suicidal behavior in high risk psychiatric patients using an assessment of acute suicidal state: The suicide crisis inventory. *Depress Anxiety*. 2017 Feb; 34(2):147–158.
25. Horwitz AG, Czyz EK, King CA. Predicting Future Suicide Attempts Among Adolescent and Emerging Adult Psychiatric Emergency Patients. *J Clin Child Adolesc Psychol*. 2015; 44(5):751–61.
26. de Beurs DP, de Groot MH, de Keijser J, van Duijn E, de Winter RF, Kerkhof AJ. Evaluation of benefit to patients of training mental health professionals in suicide guidelines: cluster randomised trial. *British Journal of Psychiatry*; 2016; 208(5):477–483.
27. Burgess P, Pirkis J, Morton J, Croke E. Lessons from a comprehensive clinical audit of users of psychiatric services who committed suicide. *Psychiatr Serv*, 2000; 51(12):1555–1560.
28. Rudd M, Berman A, Jr TJ, Nock M, Silverman M, Mandrusiak M, . . . Witte T. Warning signs for suicide: theory, research, and clinical applications. *Suicide and Life-Threatening Behavior*; 2006; 36(3):255–262.