Treatment priority given to ED presentations for suicide ideation, communication and behaviour: Insights from a major Australian Hospital

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Background and Objectives
A large number of persons who have died or attempted suicide sought help from hospital Emergency Departments (EDs). Many of these persons have attended an ED more than once, often for various reasons including further self-harm, mental disorders, and other complaints (Colman et al., 2004). Thus, hospital EDs could play an important role in identifying those at acute risk of suicide.

Despite the frequency of attendance, few countries in the world have established reporting systems for recording non-fatal suicidal behaviours (NFSB) in EDs. The lack of regular surveillance of NFSB means that there is limited opportunity to gain insights into important topics such the length of time before suicidal persons receive treatment in EDs.

The present study is based on the monitoring component of the WHO/START Study in Australia (De Leo & Milner, 2010). The main aims are to compare (1) differences in the demographic characteristics and reason for presentation (either suicide ideation and communication or NFSB) for persons prioritised as needing treatment in an ED; (2) the differences in treatment priority based on the specific method of suicidal behaviour.

Methodology

Data source
The Emergency Department Information System (EDIS) of the Gold Coast Hospital was the primary source of information. EDIS is an electronic database completed by administrative staff, treating doctors and nurses, it includes: record number, name, age, gender and date/time of presentation, triage score, reason for presentation, a description of the reason and a final diagnosis.

Definition of suicidal behaviour, suicide ideation and communication
Following past recommendations of WHO collaborating studies, we used the term “non-fatal suicidal behaviour” (NFSB) to refer to all cases where “the individual, expecting to, or taking the risk to die or to inflict bodily harm, initiated and carried out with the purpose of bringing about wanted changes” (De Leo et al., 2006).

The nature of the EDIS database makes it impossible to conduct a reliable analysis of suicide intent. So broad approach to classification based on earlier work by Silverman et al. (2007) was taken. This classification aims to capture information on all suicide-related ideations and communications (SIC), inclusive of both threats and plans.

Case retrieval and classification
Records of presentations for SIC or NFSB were obtained through a daily key word search of EDIS utilising a wide array of terms, such as self-harm, suicide, etc and descriptions of methods of intentional self-harm (X60-X84) such as laceration, cutting, self-poisoning, ingestion etc. Cases were independently checked and coded by two researchers. Cases presenting with the overdose of alcohol and/or illicit drugs were not considered as NFSB unless SIC was stated. The ICD-10 codes were used to classify methods.

The triage scores on the Australasian Triage Scale (ATS) was used to gain understanding of treatment prioritisation. The five-tiered system used in the ATS is:
• Immediate (cases judged to be immediately life-threatening);
• Assessment and treatment to start within 10 minutes;
• Assessment and treatment to start within 30 minutes;
• Assessment and treatment to start within 60 minutes;
• Assessment and treatment to start within 120 minutes.

Ethical clearance for the study was granted by the Human Research Ethics Committee of Griffith University and the Gold Coast Health Service District.

Results

Over the period 2005 to 2010, 2,229 males attended the ED for NFSB and 2,349 attended for SIC. There were 3,602 female presentations for NFSB and 2,231 for SIC. Most presentations were by those aged between 15 and 44 years. However, a significant greater proportion of males presented with SIC rather than NFSB between the ages of 15-24 years ($x^2$=10.8, p<0.001). The majority of female presentations between 15-24 years were for NFSB rather than SIC ($x^2$=29.6, p<0.001) and there was a greater proportion of presentations for SIC than NFSB among females aged 35-44 years ($x^2$=31.3, p<0.001).

The multinomial logistic regression demonstrates a number of significant differences in the characteristics of persons triaged for treatment either: a) within 10 minutes; or b) between 60-120 minutes, compared to those persons who received treatment between 60-120 minutes (reference category; Table 1). After controlling for factors related to the presentation, those seen within 10 minutes had significantly greater odds of being male and being of older age. Those who were prioritised for treatment within 10 minutes had 14 times the odds of presenting after NFSB, rather than SIC. They also had greater odds of receiving past treatment present after using multiple methods of NFSB.

Although the differences were less obvious, there were still noticeable factors related to those who were triaged as least urgent (i.e., the reference category) compared those who were triaged within 10-60 minutes. The latter in fact had more often of older age, presented after engaging in a behaviour act of NFSB rather than SIC and had used multiple methods compared to those who received treatment within 60-120 minutes.

Table 1. Factors associated with receiving a) immediate treatment, or b) treatment within 60 minutes compared with the base outcome of treatment in 60 minutes or over across years

Conclusions

The establishment of a system to record cases of non-fatal suicidal behaviour in an Australian ED is an important step in developing evidence-based suicide intervention and prevention. This study presented a database specifically developed for this purpose and found substantial differences in the treatment priority and management given to persons seeking help for suicidal behaviours, communication and ideations. This is not the first research to shed light on this topic, as several papers have highlighted issues in the management of persons with mental health concerns in the ED (e.g. Broadbent et al., 2010). However, none of these specifically focused on presentations of suicidality. While we agree with past recommendations that the overall management of NFSB in EDs needs to be improved, our research suggests that particular attention is needed for females, younger persons and those presenting with SIC or after engaging in self-cutting. This may indicate the need for investment into alternate treatments to reduce the burden of these presentations on the ED, such as the development of collaborative relationships between providers such as GPs, hospital teams, psychiatrists, psychologists and outpatient services.

De Leo et al., 2006. Definitions of suicidal behaviour: Lessons learned from the WHO/EURO Multicentre Study, Crisis, 27, 4-15.
Silversma et al., 2007. Rebuilding the tower of babel: a revised nomenclature for the study of suicide and suicidal behaviour part 2: suicide-related ideations, communications, and behaviours. STBR, 37, 264-277.

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