



Viewpoint

Suicide prevention: Towards integrative, innovative and individualized brief contact interventions[☆]

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1. Suicide prevention challenges

Suicide prevention research faces specific challenges related to characteristics of suicide attempts and attempters [1]. Firstly, suicide is a rare event, which makes the design of powerful studies especially challenging. Furthermore, suicide attempters have been described as poorly adhering to intensive treatment over time, and delivery of interventions in the emergency department can be difficult, where psychiatric staff availability is often limited or absent. While approximately one third of those who attempt suicide seek treatment for their injuries from hospital emergency department, a previous SA is a strong precursor of suicide-related premature death [2]. The post-discharge period constitutes a critical challenge for emergency and mental health care services both in the short- and long-terms [3], and the risk of suicide is especially high in the two weeks after discharge from hospital [4]. Given these issues, there has been growing interest in assessing the efficacy of interventions that focus on maintaining post-discharge contact and offering re-engagement with health care services to suicide attempters [5].

2. Brief contact interventions

Brief contact interventions (BCIs) are low resource, non-intrusive interventions seeking to maintain long-term contact with patients after a suicide attempt. BCIs follow a structured schedule and remain operational over a sustained period of time. They commonly use

emergency “green” cards, phone calls, letters, postcards or text messages to keep in contact with participants, without the provision of additional therapies [5,6]. BCIs have been mostly used with clinical populations following presentation to an emergency department (ED) for self-harm, self-injury, self-poisoning or suicide attempt. The content of BCIs differs between studies, but generally involves a short sentence expressing concern for the patient and emphasizing the availability of help should it be needed. BCIs have shown mixed or non-conclusive results, but show trends toward preventive effects in specific at-risk subgroups (e.g., first suicide attempters, females, young suicide attempters) depending on the BCI employed. Riblet et al.’s recent meta-analysis showed that the World Health Organization (WHO) BCI was associated with significantly lower odds of suicide (OR = 0.20, 95% CI: 0.09–0.42). Thus, BCI are definitely recommended for widespread clinical implementation [7].

3. Combining brief contact interventions

In order to target BCIs to the most suitable populations, we conducted the ALGOS study [8], which provided crisis cards to first attempters, and telephone follow-up to repeat attempters, with additional postcards sent to non-responders. To address the paucity of randomized controlled trials (RCTs) in the evaluation of preventive interventions for suicide prevention [9], we designed a RCT to evaluate the effectiveness of ALGOS in reducing fatal and non-fatal suicide reattempts during a six-month period, compared to a control group receiving treatment-as-usual. While we observed positive effects of ALGOS reducing loss to follow-up ($P = 0.04$), the reduction in fatal and non-fatal repeat attempts did not reach significance ($P = 0.06$). Interestingly, this study revealed that the decision-making should also integrate interventional aspects, especially in the case of a patient presenting suicide ideation during the monitoring phone call. Recent reviews argued that suicide risk could not be predicted [10]. A BCI, however, is an opportunity of repeated assessment after discharge, giving a chance of rescuing patient facing a suicidal crisis.

4. Brief contact intervention and the perspective of the e-health era

According to previous works, ecological assessment of level of suicidal ideation during telephone contact is feasible, as well as of great interest [11]. Recent reviews indicate that “ecological momentary assessment” (EMA) can also be performed from smartphones or any wireless device [12,13]. Internet features have increased

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networking possibilities of connecting with outpatients, and offering new options for patient monitoring. Integration of these tools into medical practice has heralded the electronic-health (e-health) era, integrating new technologies into routine clinical practice. We recently proposed assessing this approach's efficacy in reducing suicide reattempts in a population of suicide attempters using mobile phones [14]. Mobile phones are generally kept on at all times and carried everywhere, making them an ideal platform for the broad implementation of EMA technology. EMA involves repeated sampling of subjects' behaviors and experiences in real time, in their natural environment. EMA has been successfully used for real time self-reporting of symptoms and behaviour. For example, Husky et al. showed the utility and feasibility of using EMA to study suicidal ideation [15]. Overall, these strategies could lead to dynamic monitoring of the risk assessment, leading to a momentary and personalized intervention.

5. Towards comprehensive suicide prevention strategies

The research settings of BCI experimentations may partially explain the lack of efficiency at reducing suicidality. Many of them did not include the possibility of initiating an emergency response for patients who were identified at risk during monitoring phone calls or apps, excluding the component of a comprehensive medical decision-making process. Actual BCIs also omit technological advances that may definitely increase linkage with patient. This may partially explain the fact that most BCIs lacked a significant reduction in suicide reattempt. If "connectedness" strategies [16] only target maintaining contact with patients after discharge, we may actually disconnect these strategies from existing health care services, specially in the approaching e-health era [17]. Furthermore, most studies have focused their efforts on the first weeks after discharge, which are at high-risk of fatal and non-fatal suicide reattempts (3). Recent naturalistic observations showing that suicide attempters remain at risk many years after their initial attempt [2], and may encourage clinicians to schedule BCIs over long-term interventions, as recommended by the WHO [18]. A range of factors can contribute to suicide, which means that a multifactorial approach to suicide prevention is necessary [19]. Overall, we believe that the preventative effect of BCIs may be reinforced by integrating these systems into multimodal approaches and long-term follow-up strategies: we are currently assessing a multimodal suicide prevention program including long-term BCIs, medical decision-making support and professional training (dispositifvigilans.org) and is sustained by a national network of 70 centers. As recommended by the suicide prevention taskforce in Europe [20], these strategies rely on evidence based strategies. To fill frequent methodological issues of most suicide prevention research programs, this study is conducted in the urban and rural areas with higher suicide rates of eastern Europe (25 per 100,000). As advocated by Wasserman et al. [21], we believe that only comprehensive "continuum" of care can change the emergence of a suicidal thought or actions.

Disclosure of interest

The authors declare that they have no competing interest.

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S. Berrouiguet MD^{a,*}, P. Courtet MD^b, M.E. Larsen DPhl^c, M. Walter^a,
G. Vaiva MD, PhD^{d,e}

^aDepartment of Psychiatry, University Hospital of Brest, Lab-STICC - CNRS
UMR 6285, EA 7479 SPURBO, UBO, 29200 Brest, France

^bDepartment of Emergency Psychiatry and Post-Acute Care, Inserm
U1061, University of Montpellier, 34090 Montpellier, France

^cBlack Dog Institute, University of New South Wales, Sydney, Randwick
NSW 2031, Australia

^dDepartment of Psychiatry, University Hospital of Lille, Universités de
Lille, 59037 Lille, France

^eSCA Lab CNRS, UMR 9193, Lille, France

*Corresponding author. Hôpital de la Cavale-Blanche, Urgences
psychiatriques, CHRU de Brest, Brest, France
E-mail address: sofan.berrouiguet@chu-brest.fr (S. Berrouiguet).

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