

# Online mental health programs

## Promising tools for suicide prevention

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**Web-based self-help programs targeting depression are showing promise in reducing suicidal behaviour. Although these might be used at a community level, they have potential as complements to care within general practice.**

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**S**uicidal behaviour is a significant global public health concern, and is associated with high levels of distress, disability and burden on the health system.<sup>1,2</sup> In Australia, suicide was the 15th most common cause of death in 2011, and the leading cause of mortality for those aged 18 to 44 years.<sup>3</sup> A total of 2273 people in Australia took their own lives in 2011, with males accounting for three-quarters of these.<sup>3</sup> Recent US data show that suicide rates are increasing, most substantially in middle-aged adults, and suggest this trend may be linked to economic downturn.<sup>4</sup> More than 90% of suicides are associated with psychiatric disorder.<sup>5</sup> However, nonclinical risk factors are also important, including divorce, unemployment, financial problems and indigenous status.<sup>6,7</sup>

Many people with suicidal ideation and behaviour are reluctant to seek help, remain untreated and do not disclose their thoughts to either their families or health professionals. Possible reasons include stigma, shame and fear of prejudice from health professionals.<sup>8</sup> The internet may be a possible way to make contact with suicidal individuals. Indeed, online psychological interventions provide an innovative strategy to overcome barriers to help-seeking. There is now strong evidence that anxiety and depression can be effectively treated through internet-delivered guided self-help programs.<sup>9,10</sup> The effect of these interventions on suicide is now being assessed, and new programs are being developed to specifically target suicidal behaviours.

This article summarises the benefits of online psychological intervention programs and reviews the research examining the effects of web interventions for anxiety and depression on suicide outcomes. It then reviews recent internet applications specifically designed to target suicide ideation and address risk factors, and finally outlines potential ways in which these programs might be used as adjuncts in general practice. Notwithstanding the low rates of mental healthcare services use and help-seeking, GPs remain a crucial point of contact for individuals at risk of suicide, and can facilitate early identification of mental health problems and suicidal

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behaviour. In a 2009 analysis of the Australian 2007 National Survey of Mental Health and Wellbeing, Burgess and colleagues noted that: 'Often, a general practitioner was the only provider from whom mental health care was sought. Around one-tenth of those with any 12-month mental disorder ... visited a general practitioner for mental health problems but did not receive care from any other provider'.<sup>11</sup>

For the purpose of this article, suicide behaviour includes suicide ideation, suicide attempts and completed suicides. However, the results of the studies described below only report changes in suicide ideation; although there is a clear link between suicide ideation and suicide attempts and completion, it is important to recognise that the studies are not large enough to demonstrate effects on relatively low incidence behaviours such as attempts or completions. Moreover, although online suicide prevention interventions have been used in the past decade, only recently have randomised controlled trials of such programs been completed.

### **BENEFITS OF ONLINE PROGRAMS FOR THOSE AT RISK OF SUICIDE**

The potential benefits of online web-based psychological intervention programs have been elaborated. They can overcome barriers to help-seeking and lack of access to health providers by providing an anonymous, easily accessible evidence-based treatment over the internet. Patients can undertake these online self-help programs in privacy when it is convenient for them, in an interactive time-limited format. These interventions are cost-effective, require minimal clinical resources and are scalable, with the potential for global dissemination.<sup>12,13,18</sup>

The benefits of these online programs may be particularly relevant for those at risk of suicide. Reasons for this include the following:

- being web-based, online programs may reach individuals who are socially isolated or without access to face-to-face services (e.g. rural and regional populations)<sup>14</sup>
- they have been found to be used by those less likely to seek help and those with suicide ideation who report an

unmet need for help, and to be preferred for their anonymity<sup>15,16</sup>

- younger individuals and those experiencing more severe symptoms are more likely to adhere to these online programs.<sup>17</sup>

These benefits extend to those people already accessing treatment and to older age groups. Although older people have been traditionally viewed as resistant to the uptake of new technologies, recent research clearly shows this not to be the case. A recent US study showed primary care patients over 65 years of age were receptive to web-based medical and mental health resources, with nearly three-quarters already regularly using the internet.<sup>18</sup> Further research showed US Medicare beneficiaries over the age of 65 years with chronic medical conditions or anxiety symptoms were more likely to use the internet for health-related tasks than those without such conditions.<sup>19</sup> Choi reported older-adult users of general health services in the USA were more likely to use health-related information technology than nonusers of general health services, with previous contact with a general practitioner increasing the likelihood health-related technology use.<sup>20</sup>

Mewton and colleagues at the Clinical Research Unit for Anxiety Disorders (CRUFAD) at St Vincent's Hospital, Sydney, and the University of New South Wales recently investigated online cognitive behavioural therapy (CBT) for psychiatric disorders in adults seeking treatment in general practice in Australia.<sup>21</sup> Results showed online CBT to be effective and acceptable among older individuals (over 60 years), with the older cohort more likely to complete the full program than younger age groups.

The authors recognise that internet-delivered mental health programs may not be of value or interest to all individuals, and should not replace face-to-face management in people experiencing poor mental health or suicide ideation. However, for such individuals, online programs could serve to enhance and complement treatment by a general practitioner or mental health specialist, particularly for those reluctant or

## **1. MENTAL HEALTH INTERNET RESOURCES**

### **For general practitioners and patients**

- Beacon (portal to online applications for mental and physical disorders) – [www.beacon.anu.edu.au](http://www.beacon.anu.edu.au)
- Black Dog Institute (information and treatment of depressive disorders) – [www.blackdoginstitute.org.au](http://www.blackdoginstitute.org.au)
- CRUFAD (Clinical Research Unit for Anxiety and Depression) – [www.crufad.org](http://www.crufad.org)
- MyCompass (an interactive self-help service that aims to promote resilience and wellbeing for Australians aged 18 years and over) – [www.mycompass.org.au](http://www.mycompass.org.au)

### **For patients**

- Kids Helpline – 1800 55 1800 and [www.kidshelp.com.au](http://www.kidshelp.com.au)
- Lifeline – 13 11 14 and [www.lifeline.org.au](http://www.lifeline.org.au)
- MoodGYM – <https://moodgym.anu.edu.au>
- Suicide Call Back Service – 1300 659 467 and [www.suicidecallbackservice.org.au](http://www.suicidecallbackservice.org.au)

unable to access care.

A list of mental health internet resources for general practitioners and patients is provided in Box 1.

### **ONLINE PROGRAMS FOR DEPRESSION AND ANXIETY**

Recent Australian research has begun to examine the effect on suicide behaviour of web-based programs that were originally designed to treat anxiety and depression.

CRUFAD offers numerous e-health programs to youths, adults and mental health professionals directly via their website ([www.crufad.org](http://www.crufad.org)). Researchers at CRUFAD examined the effects of a web-based program for depression on suicide ideation in 299 primary care patients prescribed a six-session course of online CBT for depression.<sup>22</sup> The primary outcome was suicide ideation assessed by Item 9 on the Patient Health Questionnaire (PHQ-9), and suicide ideation was found to have reduced

## 2. MAJOR ROLES OF ONLINE MENTAL HEALTH PROGRAMS

- Adjuncts to the treatment of suicide ideation through the provision of evidence-based treatments (e.g. cognitive behavioural therapy) to patients with psychiatric disorders without the need to devote time to face-to-face psychotherapy
- First-line treatments for those in rural or regional areas without access to services, or those reluctant to seek help
- Tools to provide 24/7 support for patients out of hours along with other services such as Lifeline

considerably, from 54% pre-treatment to 30% post-treatment. This finding is important as it shows suicide ideation could potentially be reduced with very little clinician contact, using an intervention that does not specifically target suicide ideation. However, the research trial did not include a control group, and the effect of the reduction in suicide ideation may have been due to other factors over the passage of time.

Another study, performed by the Centre for Mental Health Research at the Australian National University in association with Lifeline, examined the effects of online CBT for depression in callers to the Lifeline helpline.<sup>23,24</sup> Web-based CBT was found to be more effective than 'usual care' (in this case access to the Lifeline helpline) in reducing depression. Changes in suicide ideation, measured by four items from the 28-item General Health Questionnaire (GHQ-28,) were also examined in this study.<sup>25</sup> The results here were different to those in the previously mentioned CRUFAD study in that the participants' suicide ideation reduced considerably in response to the online CBT program and also to usual care – i.e. the web-based program had a differential effect on suicide ideation and depression symptoms.<sup>25</sup> Suicide ideation thus may follow a different course to changes in depression.

The results of these studies demonstrate that web interventions were associated with a decline in symptoms of both depression

and suicide ideation. The finding that suicide ideation responded to usual treatment suggests that suicide ideation may have a different trajectory to that of depression, and may respond to the 'passage of time'. Although there has been some reluctance by ethics committees to approve investigation of online interventions for suicide ideation, the findings show that suicide ideation is not a sufficient reason to exclude individuals from utilising these websites. The intriguing finding that depression and suicide ideation were not directly tethered suggests the possibility that online programs specifically targeting suicide ideation, rather than depression symptoms, hold great potential to help those at-risk of suicide.

## ONLINE PROGRAMS FOR SUICIDE IDEATION

An online program developed by researchers at VU University Amsterdam is targeted specifically at suicide risk and ideation. The online self-help intervention is based on CBT and aims to decrease the frequency and intensity of suicide ideation. A recent randomised controlled trial comparing the intervention plus usual treatment to usual treatment alone demonstrated positive results in Dutch users, with 35% of the intervention group demonstrating significant reductions in suicidal thoughts at the post-test assessment, compared with 21% in the control group.<sup>8,26</sup> Moreover, cost-effectiveness analyses indicated cost savings (€34,727; about A\$53,000) relative to usual treatment for each clinically improved participant. However, the study was not designed to detect differences in suicide attempts or completions.

It is important to note, particularly in the context of general practice, that this program was not intended to replace face-to-face care but instead targeted individuals reluctant to seek such care. Because in-person care by a mental health professional for individuals experiencing thoughts of suicide is highly recommended, the intervention assessed here may also serve to complement face-to-face treatment. Although replication with longer follow up is required, this study suggests that online

self-help for suicidal thoughts might hold promise in tackling suicide ideation.

## ONLINE MENTAL HEALTH PROGRAMS FOR INDIGENOUS YOUTH

With the use of mobile devices and mobile applications ('apps') on the rise among young people, an Australian consortium that includes the Black Dog Institute in Sydney has developed a suicide prevention app designed especially for use by Indigenous Australians. The program targets emotional regulation and the app is currently being trialled in Western Australia (The Kimberley).

## FUTURE OF ONLINE PROGRAMS

Online programs targeting depression and suicide ideation are likely to have multiple uses but their major use will probably be as a mental health resource for at-risk individuals who would not consider face-to-face treatment or cannot access services (Box 2). Although future research is required, these online programs may facilitate effective emotional regulation and self-help strategies and may help manage suicidal thoughts. Furthermore, these programs could assist an individual to understand how treatment might be helpful, and thus serve as a conduit to professional help.

These programs may also be used by practitioners as an adjunct to treatment for individuals experiencing, or suspected of having, suicidal thoughts in general practice or clinical psychological settings.

## CONCLUSION

Web-based programs for suicide prevention have considerable value for use in general practice as adjuncts to effectively treat depression, anxiety and promisingly, suicidal ideation. MT

## REFERENCES

A list of references is included in the website version ([www.medicinetoday.com.au](http://www.medicinetoday.com.au)) and the iPad app version of this article.

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