Do chatbots have a role to play in suicide prevention?

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Credit: AI-generated image (disclaimer)

Australia's first suicide prevention chatbot for the family and friends of those in crisis was launched last week by Lifeline, a nonprofit organisation dedicated to crisis support and suicide prevention.

The chatbot, developed in partnership with Twitter, is called

#BeALifeline Direct Message (DM) Chatbot. It seeks to help the family and friends of those at risk to quickly and easily start a conversation about suicide.

Users must have a Twitter account to converse with the chatbot, which directs people to Lifeline resources, including contact details for telephone or online support, advice and information.

This is a big shift in the way Lifeline provides support to young people in need. It raises the question of what role, if any, chatbots and other conversational agents should play in suicide prevention.

Suicide among young people is increasing

Some 3,128 Australians lost their lives to suicide in 2017. That's an increase of 9% from 2016. Young people aged between 15 and 24 years accounted for 13% of these deaths.

The suicide rate among young people has increased at an alarming rate over the past ten years. Suicide rates in young men have increased by 34%, and in young women by 76%.

Given these numbers, there is clearly a need for innovative and youth-friendly approaches to suicide prevention that can meet the needs of those at risk – whether they are looking for information or direct support.

The ubiquitous presence of social media in young people's lives offers an unprecedented opportunity to potentially revolutionise suicide prevention. And as a sector, we have begun to seize these opportunities.

Meeting young people where they are

Globally, young people are avid users of social media and digital technologies. They use these platforms for a range of purposes – including for communicating about suicide.

Dr. Dan Reidenberg, of US-based nonprofit Suicide Awareness Voices of Education (SAVE), believes social media chatbots can be used in several ways to aid suicide prevention – including to help identify people at risk early on, to provide people with options for seeking help, and potentially even to provide direct support.

Others we have spoken to in the digital media sector agree, stating that bots are definitely a part of the future – especially for people seeking help, or for those who want to help others, but who don't necessarily have the skills or confidence to do so.

Young people are asking for chatbots

Our own work has shown that young people want chatbots. We have received funding from the Commonwealth government to develop guidelines, called #chatsafe, to facilitate safe peer-to-peer communication about suicide online.

We conducted a series of workshops with 85 young people across Australia, seeking their views on the guidelines and how to bring them to life online. Participants have repeatedly told us that they want to be able to talk safely online about suicide, but that they need help to do so. They see chatbots as a key tool to facilitate this process.

They want chatbots that can identify when a conversation about suicide is underway, and offer assistance to:

- help people talk about their own experiences with suicide
- reach out to a friend

- manage closed groups and suicide memorial pages.

This work is in its infancy, but young people have identified that if a chatbot had the capacity to initiate a conversation that they may not otherwise be able to start, it could help them help each other, and direct them to professional resources when necessary.

There is limited research in this field

Researchers have started to look at the use of chatbots in suicide prevention, but little empirical evidence exists to date.

To our knowledge, only one paper specifically discussed the use of chatbots in suicide prevention. A 2017 paper reviewed six studies examining how conversational agents (think Siri on your iPhone) could be used to deliver support. Researchers developed conversational agents that acted both as virtual counsellors for people in need, and as virtual patients for people being trained in responding to people in need.

Another paper reviewed multiple studies that examined the use of conversational agents in health care – including mental health care – more generally. It found that task-oriented agents that help the user perform a specific activity, such as conducting a diagnostic assessment, were the most common. Users generally reported high levels of satisfaction. One of the studies reviewed reported a decrease in depressive symptoms.

But patient safety was rarely evaluated in these studies – a critical factor if this type of technology is to be applied to suicide prevention.

Our own work in this area has shown social media generally to be an acceptable tool in suicide prevention. Young people, academics and organisational stakeholders all cite advantages such as the ability to reach

more at-risk people, the familiarity of the medium, and the fact that is accessible.

The limitations of chatbots

While the conversational abilities of chatbots are rapidly improving, they can't yet provide sufficiently empathetic responses, or adequately handle natural human dialogue. This could lead to inappropriate responses to those seeking help.

Work is underway to advance the capacity of chatbots, and artificial intelligence systems generally. But accurately predicting risk is a challenge even for experienced clinicians, meaning that suicide risk could be underestimated. There are also complex issues relating to privacy, trust and data security that need to be addressed.

These crucial questions require careful consideration before intelligent systems, such as chatbots become fully integrated into health care and suicide prevention. One would also hope that they would never fully replace good clinical care.

But with suicide rates rising, particularly among young people, new approaches are required. Conversational agents, such as chatbots, have the potential to provide at least part of a solution.

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