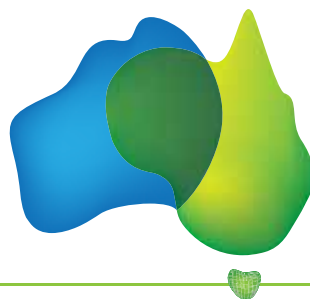# Volume 2: Exploring the Suicide Prevention Research Continuum

Suicide Prevention Australia

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**Any enquiries about or comments on this publication should be directed to Suicide
Prevention Australia www.suicidepreventionaust.org.**

**This report was prepared on behalf of Suicide Prevention Australia by
Susan Carrick and Associates.**

**Photography kindly supplied by Solaradt Bungbrakearti following the
2015 National Suicide Prevention Conference.**

About Suicide Prevention Australia

Suicide Prevention Australia Limited (SPA) is the national body for the suicide prevention sector. SPA is a not for profit organisation representing a broad-based membership of organisations and individuals with a commitment to suicide prevention. SPA works to prevent suicide by supporting its members to build a stronger suicide prevention sector; developing collaborative partnerships to raise awareness and undertake public education; and advocating for a better policy and funding environment.

Vision

A world without suicide

Mission

Suicide Prevention Australia delivers national leadership for the meaningful reduction of suicide in Australia.

Our commitment

Suicide Prevention Australia remembers those we have lost to suicide and acknowledges the suffering suicide brings when it touches our lives. We are brought together by experience and unified by hope.

Suicide Prevention Australia acknowledges the traditional owners of country throughout Australia, and their continuing connections to land, sea and community. We pay our respects to them and their cultures, and to elders both past and present.

Contents

Introduction

There is scant understanding of the breadth and depth of suicide research. However there is strong agreement that to reduce the suicide burden in Australia the design and implementation of programs and services needs to be determined by the knowledge that comes from research. There is also agreement that greater emphasis needs to be given to supporting research that assesses the impact of program implementation.

This second volume of the National Research Action Plan introduces a series of essays that explores the research continuum. Designed to stimulate discussion, each essay offers insights into the status of current research and the possibilities for future directions of research across the suicide research continuum, both nationally and internationally. In writing the essay each author sought to provide:

- A brief overview of current research and knowledge in the area;

- The strengths and weaknesses of Australia's research capacity in this area; and

- Evidence gaps in research that need to be addressed and for which Australia has the capacity to resolve.

The inclusion of the essays is designed to give context to the depth and breadth of the challenges faced by those who are seeking to draw on research to deliver high quality, evidence based services to a diverse and geographically dispersed population. The list of research areas is not exhaustive, and as the implementation of this Research Action Plan evolves it is proposed over time to add further essays including areas such as:

- Data methodological challenges

- Neuroscience

- Genetics and epigenetics

- Bereavement

- Research capacity building.

The starting point is to understand the opportunities and challenges for enhancing the research environment.

This then needs to be supported through the formation of effective partnerships that support the eight actions in the Plan. To be successful these partnerships will have to be formed on the basis of a shared understanding and acceptance of the importance of a coordinated and collaborative approach to planning, funding, implementing and monitoring suicide prevention research.

Involving lived experience in suicide research

Dr Mic Eales

Introduction

To more fully understand and research how to reduce and prevent people taking their own lives we must first understand why and how individuals get to a point where they feel that suicide is their final and only option.

The World Health Organisation (WHO) defines suicide as being 'the act of deliberately killing oneself'. The experience of suicide, as it is lived however, indicates a complexity far beyond this concept. There is no other human health or philosophical issue as complex. The intense psychological pain and trauma associated with the act of suicide has lasting effects upon all who are affected. Few other issues are surrounded by as many myths, misconceptions, prejudice and discrimination as suicide. The cultural and socio-cultural intricacies of suicide only add to the mystery of how researchers are best able to investigate and decipher this multi-multifaceted traumatising issue.

The voices of lived experience

People with a lived experience of suicide (SPA's broad definition) have unique insights that to date have been under utilised by researchers. It is the voice of lived experience that challenges what researchers think they know. Much insight can be gained by listening to and engaging with those with a lived experience of suicide, not as patients or consumers but as individuals with a unique experience (a certain expertise if you like) of the issue. The utter complexity of suicide, particularly for those who have never experienced a suicidal crisis, can be extremely difficult and perplexing to comprehend, however by developing empathetic and compassionate relationships with individuals, researchers will help to enable the voices that have long remained silent. Speaking about suicide, from whatever lived experience perspective is not easy and requires, from researcher/s, much patience, respect and the establishment of a trusting relationship.

Ethics and research

The ethics procedure for researchers is a demanding, rigorous and challenging process. It can also be an invaluable experience that helps in the examining of the methodological underpinnings of any research and can bring to light issues that the researcher/s may have overlooked. That said, ethics committees too are subject to their own misconceptions and prejudices around the issue of suicide. It is for this reason that it would be helpful if ethics committees (and researchers) had access to some form of guidance when reviewing research applications relating to suicide. This could take the form of an advisory panel (a panel which would include researchers alongside individuals with a lived experience of suicide) that could respond to issues or concerns raised by ethics committees.

Recommendations for re-thinking

It is essential that researchers and suicidologists re-conceptualise how we think about suicide and view the suicidal urge as a crisis of the self, rather than due to some notional, mental illness or mental health issue. The medicalisation of suicide fails to look more deeply into other causal possibilities for any particular individual.

To fully engage with suicide survivor's first-person perspectives, narrative methods will need to play an essential role. This applies in both the research and clinical realms.

Recognition of a possible spiritual dimension to the suicidal crisis needs to be embraced by researchers and suicidologists. This also applies to acknowledging that significant cultural and socio-cultural factors may also be involved but remain hidden because of a lack of knowledge or understanding by researchers, (eg. the gap between the Indigenous and non-Indigenous communication is frequently occupied by misunderstanding, mistrust and disappointment).

Mental health laws require re-examination and a proper human rights analysis as to whether they help or hinder suicide prevention.

Attitude and treatment responses carried out by first responders and/or whilst being treated in emergency departments require careful examination to determine how these affect an individual's recovery process. Researchers too need to be mindful of their own fears, judgements and prejudices around the issue of suicide.

Engagement with those who have attempted suicide is essential in discovering what provides them with a hopeful future, what support networks and strategies have they established. Rather than focusing on an individual's suicidality there are lessons to be learnt about their ongoing recovery process.

Researchers need to explore alternative research opportunities and be willing to step outside of conventional or more traditional research and academic structures in order to more fully explore and represent the complex realities and emotional pain of the suicide phenomena. To understand and appreciate the trauma associated with suicide a multi- and, ideally, inter-disciplinary research approach is required. Only by fully appreciating the depth of pain in any suicidal experience can real understanding begin.

Collaborative partnerships need to be established between researchers and individuals/groups with a lived experience of suicide. By providing a sense of ownership of the research, those with a lived experience of suicide may be more willing to participate. Research done in conjunction with individuals has far more chance of success and with real and meaningful outcomes than research conducted on them. Varying degrees of support will be required for those with a lived experience of suicide who decide to participate or indeed undertake their own research project.

Collaborative partnerships also need to be established between researchers and mental health professionals and frontline workers to address the current disconnection between these sectors.

Research projects ideally need to be reviewed by committees made up individuals (from varying backgrounds, experiences, genders and ages) with a lived experience of suicide. The CRESP consumer advisory committee is an example of what is possible.

Technological advances are being developed at a ferocious rate. Immediate and ongoing research needs to be carried out regarding the pros and cons of the array of apps that are currently available alongside the development of new apps. The crucial role that social media platforms can and do play in our understanding of suicide and its prevention also requires immediate attention by researchers.

Conclusion

The traumatising nature for anyone affected by suicide or suicide attempt is profoundly complex. The difficulty in understanding and researching the issue of suicide cannot be overstated.

Research obviously needs to be of the highest quality and based on the best evidence available, but what are the criteria for what constitutes meaningful evidence of research? The validity and use of any research into the issue of suicide will always be compromised unless we confront the prejudice and discrimination that exists against suicide and suicidal people. Only through healthy, open and honest community conversations on suicide will a healing conversation take place. These conversations begin through encouraging and promoting constructive dialogues between researchers and the voices of lived experience.

Community mental health promotion

Professor Robert J Donovan

An overview

Although mental health promotion (usually followed by 'prevention and early intervention') is talked about more than a few decades ago, and there are a number of documents setting out 'frameworks' for mental health promotion (e.g., the WHO's Promoting Mental Health: Concepts, Emerging Evidence, Practice, Herrman et al, 2005; England's 'No health without mental health: implementation framework', HM Government, 2012), the reality is that the Act-Belong-Commit campaign that originated in Western Australia is the only currently known comprehensive, community-wide mental health promotion campaign. Most existing mental health programmes target only specific groups or settings for primary or secondary prevention, or, if community-wide, are concerned with stigma reduction or encouraging (early) help-seeking rather than enhancing positive mental health. Hence it is unsurprising that there is little available research on community-wide mental health promotion.

At the same time, most community-wide suicide prevention interventions have tended to emphasise components for secondary or tertiary prevention, including targeting depression as a major risk factor for suicide[1], rather than building positive mental health[2,3]. Nevertheless, the US Air Force intervention did include efforts to improve overall mental health within the broader US Air Force community, and this is considered to have contributed to the intervention's success[4], and an intensive community-based intervention across six towns in Japan adopted a health promotion approach that included positive mental health components within the intervention[5]. This intervention successfully reduced suicide in the intervention towns[6] but, as in the USAF case, there was no evaluation of the relative contributions to this reduction of the various components. However, as an example of increasing attention to positive mental health as an integral component of suicide prevention, the latest Irish guide to suicide prevention in the Community[7] includes a substantial section on promoting positive mental health.

Overall, although there are clear indications that increased mental health, and hence reductions in mental illness via prevention, would yield substantial social and economic returns, including suicide reduction[8], there is not only little research into community mental health promotion in general, but even less on the impact of promoting positive mental health on suicide prevention. However, various research findings emerging from ongoing evaluation of the Act-Belong-Commit campaign suggest that research in this area would yield valuable directions for reducing the social and economic burden of mental illness and suicide.

The Act-Belong-Commit campaign (actbelongcommit.org.au)

The Act-Belong-Commit Campaign is designed to build population mental health and prevent mental illness. The campaign targets individuals to engage in mentally healthy activities, while at the same time supporting and encouraging organisations

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[1] Hegerl et al, 2006

[2] Knox et al, 2003; 2010

[3] Motohashi et al, 2004

[4] Knox et al, 2004,

[5] Motohashi et al, 2004

[6] Motohashi et al, 2007

[7] O'Sullivan et al, 2011,

[8] Knapp et al, 2011

that offer mentally healthy activities to promote and increase participation in their activities. The campaign utilises a mass media umbrella and social franchising strategy to reach and influence the population at large, and selected target groups, via partnerships with health services, local governments, schools, workplaces, community organisations, and sporting and recreational clubs[9].

The origins of and rationale for the campaign are described in Donovan et al (2006). The three verbs 'act', 'belong', and 'commit' not only provide a colloquial "'A-B-C' for mental health", but also represent the three major behavioural domains that both the literature and people in general consider contribute to good mental health[10]. They are articulated as follows:

Act: Keep alert and engaged by keeping mentally, socially, spiritually, and physically active.

Belong: Develop a strong sense of belonging by keeping up friendships, joining groups, and participating in community activities.

Commit: Do things that provide meaning and purpose in life like taking up challenges, supporting causes, and helping others.

Overall, the Act-Belong-Commit programme encourages people to be physically, spiritually, socially and mentally active, particularly in ways that increase their sense of belonging to the communities in which they live, work, play and recover, and that involve commitments to causes or challenges that provide meaning and purpose in their lives. The campaign is diffusing throughout Australia and internationally [see Koushede[11] re launching the campaign in Denmark].

The Act-Belong-Commit campaign and Suicide Prevention

In a general sense, by building mental health, resilience and agency, the Act-Belong-Commit framework has clear implications for suicide prevention at a primary prevention level. However, the implications are quite explicit in the context of Joiner's[12] theory of suicide and the motivational moderators in O'Connor's[13] model of suicide. In both of these models, the desire or motivation to suicide is driven by two major factors: low or 'thwarted'

belongingness and perceived burdensomeness. The former refers to feelings of 'social isolation, alienation, and disconnection from valued social networks', while the latter to 'a belief that the self is so incompetent as to be a burden or liability on others'[14].

Given that Belong is about building and maintaining connections with others, including community and civic organisations and institutions, and that Commit involves doing things that provide meaning and purpose in life and feelings of efficacy, via taking up causes and volunteering that helps society and other individuals, the Act-Belong-Commit campaign clearly builds and strengthens protective factors that reduce the risk of suicide. Interestingly, the Japanese intervention included components to eliminate the sense of psychological isolation and promote a sense of purpose amongst the elderly[15].

Act-Belong-Commit campaign evaluation

Population-wide surveys are conducted annually to assess campaign impact. Although the campaign was originally conceived as a primary prevention campaign, many individuals currently or previously experiencing a mental illness have reported that they have been inspired by the campaign to take up activities they would not otherwise have done, that have assisted their recovery or enhanced their quality of life. To quantify this anecdotal evidence, general population campaign impact survey results for 2013 and 2014 were analysed by experience of mental illness (i.e., whether the respondent had ever been diagnosed with a mental illness or had sought professional help for a mental health problem in the past 12 months).

In brief[16], these data showed that those with a direct experience of mental illness were twice as likely as the rest of the sample to have tried to do something for their mental health as a result of their exposure to the campaign, with actions consistent with the Act-Belong-Commit message. A slightly greater proportion of those with mental illness experience also reported having talked about the campaign and mental health with family or friends. With respect to prompted reasons for doing something for their mental health, it is noteworthy that just under half of

[9] Donovan & Anwar-McHenry, 2015

[10] Donovan et al, 2003, 2007; Donovan & Anwar-McHenry, 2014

[11] Koushede 2015

[12] Joiner's T.E., 2005, Ribero & Joiner, 2011

[13] O'Connor, RC. 2011

[14] Ribero & Joiner, 2011, p 171

[15] Motohashi et al, 2007

[16] see Donovan et al, under review

those with a mental illness experience reported that they had tried to do something because they were 'a bit depressed and felt that the action they took could help'. Of note is that in informal discussions with campaign personnel, individuals with a mental illness indicated that one of the major factors facilitating their involvement with the campaign was that it did not target only people with a mental illness, but rather "it's a campaign for everyone". That is, they can get involved with the campaign without their involvement being defined by their mental illness.

Other results of note are that substantial majorities of both those reporting a mental illness experience and the rest of the sample believe that the campaign has reduced stigma and made people more open about mental illness. Given the current high reported prevalence of depression around the globe and its relationship to suicide[17], and given that stigmatisation inhibits early help-seeking[18], the above data suggest that community mental health promotion campaigns can potentially have a major impact on suicide prevention.

Implications for suicide prevention research

Given these encouraging results from evaluation of the impact of the Act-Belong-Commit mental health promotion campaign on suicide risk and protective factors, it is likely a systematic research programme into the following would have substantial social and economic benefits:

- What factors facilitate and what factors inhibit the extent to which community-wide mental health promotion campaigns not only enhance people's quality of life, but build resilience and provide a strong protective effect against vulnerability to suicide?

- What factors have a positive impact on the population at large versus specific sub-groups – and especially those with mental health problems or are at risk of suicide?

- How can recreation, sporting and arts organisations become more involved in building mental health and resilience, and hence contributing to suicide prevention?

- How can community-wide mental health promotion campaigns best complement clinical interventions with those at risk of - or recovering from - a mental illness or suicide attempt?

- How can community mental health promotion programmes be strengthened to further impact on stigma reduction and increased openness in the community with respect to talking about mental illness and about suicide?

- How can the universal principles of the Act-Belong-Commit campaign and other mental health promotion frameworks be further embedded into health professional training and clinical practice, school, worksite, hospital and aged-care settings?

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[17] Nock et al, 2008

[18] Corrigan, 2004; Sartorius, 2007

Human engagement

Professor Beverley Raphael

Overview

A great many valuable strategies to prevent suicide have been developed in efforts both in Australia and internationally. Nevertheless, the numbers of suicide deaths remain high, and occur in many different groups in the population. Some, such as the experiences of Aboriginal and Torres Strait Islander people, are at a very concerning level. And there is growing concern about such deaths of young people, adolescents and even younger children as evidenced by the 2015 annual report from the Australian Human Rights Commission Children's Commissioner.

The depth and extent of research in this field contributes both opportunities for prevention, and intervention when the person is near to intent. Much research has focused of mental health problems associated with heightened risk, for instance severe depression, but there have not been adequate studies of large numbers (population data) to answer some of these questions systematically and over time. While mental illnesses and mental health problems are frequently implicated, it is often difficult to confirm that the act is directly linked to the diagnosis except, perhaps, when a person with psychotic illness acts on the "voices" or other delusional beliefs.

Another complex issue is the relationship to self-harming behaviours, particularly those repetitive patterns in adolescents in which repetitive "cutting" may indicate non-fatal self-harm, rather than suicide, is the primary intention.

Patterns of attempted suicide by children reflect the emptiness and despair of their lives.

In attempting to address "suicide" and its prevention, numerous excellent initiatives have undoubtedly been helpful for some. These include Lifeline support programme and capacity for those at risk (to call and talk to an understanding person in ways that can shift them from such intent). Actions of engagement, as at "the Gap" in Sydney, talking people out of their intent, strategies such as "LiFE", "ACT", Act-Belong-Commit, R U OK? and many others all add to positive engagement.

A critical issue in all of the above, including the long-standing models such as Lifeline, is the human engagement and its associated strength and support, including for those who are vulnerable. These themes need to also address the concept of resilience: the strengths that can be mobilised in the face of adversity which can also contribute to the capacity to endure.

It is suggested in this brief paper that the core elements we need to assess and work with should include:

- Human engagement in any assessment process

- Building a relationship with those vulnerable

- Exploring their "family", relationships and the degree of "emptiness" in their lives

- The sense of worth, of being valued, having an identity as a person

- The capacity for "agency", to act with "success" or some positive achievement

- "Love" actually – The need for love, affectional bonds

- The experiences of loss & grief, as an inevitable component of human experience

Dark times, dark places, dark actions

Assessing someone's vulnerabilities to suicide with other negative elements requires an assessment of their current perception of their lives, what is problematic, what has happened, and what do they see for the future, as they view it. The loss of one's capacity for hope, any sense of worthlessness and of not being wanted are clearly "dark" experiences. They may be brief, but if continuing, are likely to breed other negative trajectories, including suicidal thoughts and actions. Shame related to perceived or real actions can lead to self-degradation and a wish to die, the more so if "no one cares". Anger and impulsive action can also drive suicidal intent – "I'll show them – they'll be sorry" – "if I kill myself".

The meaning and reality of death is also a component of vulnerability. While it is assumed that adults will fully comprehend this reality of death and its finality, it is often hard to envisage "not being here". Many people may still hold the sense of continuity, and this may also occur for those who would take their ow n lives, perhaps with intent to "join" a deceased loved one. Adolescents have also often contemplated such acts as almost consistent with living. Debate about children's capacity to understand the reality and finality of death leads to a view that they cannot "know" death, but the despair, desperation and attempts make it clear that they have a "level of reality" in their intent and action.

Ultimately, perhaps the darkest of affects is profound despair, and if suicide is to be prevented this affect must be assessed, understood and managed as an element of risk.

"Living is For Everyone" is a valuable model, but when people feel it is not for them, the clinical challenge is understanding why, and then what they may be able to do to deal with this and what assistance others can give, so they may be able to accept life and living.

Direction for research

Progressing this field is critical to bring together all the evidence of what has been effective: which strategies, and how, or which people (and the short and longer term outcomes). "Big data" on multifaceted and large scale studies can potentially assist.

I would suggest however that the human engagement, the understanding of, and caring for, those who are in "dark", distressing and despairing states of being, need assessment and care. This may or may not relate to mental health problems or mental illness. It may occur at almost any age, and the concerned family, clinician, friend or other, may need to help with the steps to regain a hold on life and living and to become engaged in the complex, rewarding, difficulties and challenges of these human engagements.

Vulnerable populations

Overview

It is well recognised that many vulnerable groups experience significant barriers to care, including a lack of culturally safe and effective services, exacerbating their risk of suicidal behaviour. These groups include:

- Aboriginal and Torres Strait Islander people

- Lesbian, gay, bisexual, transgender and intersex (LGBTI) people

- Men

- Older Australians

- Culturally and linguistically diverse populations

- Refugees and asylum seekers

- Rural and remote populations

Available data is inadequate for the accurate assessment of both how many individuals fall into some vulnerable groups, and how much suicidal behaviour happens among these populations. For example, national data is not centrally or routinely collected on who identify as lesbian, gay, bisexual, transgender, intersex or other sexuality and gender diverse people (LGBTI).[1]

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[1] ABS 2014

Aboriginal and Torres Strait Islander suicide

**Professor Pat Dudgeon
And Dr Tom Calma AO[2]**

Overview

Suicide among Aboriginal and Torres Strait Islander peoples occurs at double the rate of other Australians. Self-harm rates are also much higher.[3] Because of this, Aboriginal and Torres Strait Islander peoples are a priority group for suicide prevention research efforts.

Among Aboriginal and Torres Strait Islander children and young people, the rate of suicide over 2001 -2010 was six times as high as the national average.[4] Males between 25 and 29 years of age, and female 20 to 24 years olds were at the highest risk of suicide.[5] The 2004 Western Australian Aboriginal Child Health Survey reported that about 15 per cent of Aboriginal 12 – 17 years old in the survey had seriously thought about suicide in the 12-months. About 6.5 per cent had attempted suicide. [6]

There are also communities that are at particular risk of suicide and suicide clusters. In small Aboriginal and Torres Strait Islander communities where many people are related, and where many people face similar histories and challenges, the impact of suicide clusters is widespread and severe.[25]

Aboriginal and Torres Strait Islander suicide has been described as 'different' to that of other Australians because there are specific cultural, historical, and political considerations that contribute to its higher prevalence, and that require the rethinking of conventional models and assumptions[26].

The most common risk-factors for suicide reported in data-based, analytical descriptive studies specific to Aboriginal and Torres Strait Islander populations were mental illness, alcohol abuse and a prior history of self-harm[10].

But these risk factors are themselves likely to be symptomatic of deeper problems. Overall, Aboriginal and Torres Strait Islander peoples report such life stressors at 1.4 times the rate of non-Indigenous people.[11] These flow from the cumulative effects of exposure to negative historical determinants flowing from colonisation, negative social determinants, and deep and entrenched poverty. This is compounded by racism and exposure to violence.

Trauma and psychological distress is reported at high levels as a result. In national health surveys, high or very high psychological distress levels in Aboriginal and Torres Strait Islander peoples are reported at three times the non-Indigenous rate.[12] Research is needed into the prevalence of trauma among Aboriginal and Torres Strait Islander peoples. What studies exist suggest it is high.[13]

[2]   Co-Chairs of the Commonwealth's Aboriginal and Torres Strait Islander Mental Health and Suicide Prevention Advisory Group (ATSIMHSPAG)
[3]   Steering Committee for the Review of Government Service Provision 2011, Overcoming Indigenous Disadvantage: Key Indicators 2011, Productivity Commission, Canberra, p.7.62
[4]   Australian Bureau of Statistics, Suicides, Australia, 2010, ABS cat. no. 3309.0, 24/07/12, www.abs.gov.au/ausstats/abs@.nsf/Products/3309.0~2010~Chapter~Aboriginal+and+Torres+Strait+Islander+suicide+deaths?OpenDocument [Verified 15/7/14].
[5]   Australian Bureau of Statistics, Suicides, Australia, 2010, ABS cat. no. 3309.0, 24/07/12, http://www.abs.gov.au/ausstats/abs@.nsf/Products/3309.0~2010~Chapter~Aboriginal+and+Torres+Strait+Islander+suicide+deaths?OpenDocument (10/1/14).
[6]   Zubrick SR, Silburn SR, Lawrence DM, Mitrou FG, Dalby RB, Blair EM et al. (2005). The Western Australian Aboriginal Child Health Survey. Volume 2: The social and emotional wellbeing of Aboriginal children and young people. Perth: Curtin University of Technology and Telethon Institute for Child Health Research.
[7]   Georgatos G, 'More confirmation of what everyone knows – WA's suicide prevention inadequate', The Stringer, 8/5/14, http://thestringer.com.au/more-confirmation-of-what-everyone-knows-was-suicide-prevention-inadequate/
[8]   Tatz C, Aboriginal Suicide is Different: Aboriginal Youth Suicide in New South Wales, the Australian Capital Territory and New Zealand: Towards a Model of Explanation and Alleviation, A Report to the Criminology Research Council on CRC Project 25/96–7, Sydney 1999
[9]   Clifford et al. 2014
[10]   Ibid
[11]   Australian Bureau of Statistics, 'Family stressors' Australian Aboriginal and Torres Strait Islander Health Survey: First Results, Australia, 2012-13, ABS cat. no. 4727.0.55.001, 27/11/13, www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/C0E1AC36B1E28917CA257C2F001456E3?opendocument.
[12]   Australian Bureau of Statistics, 'Psychological Distress' Australian Aboriginal and Torres Strait Islander Health Survey, First Results, 2012, ABS cat. no. 4727.0.55.001, 13, 27/11/13, www.abs.gov.au/ausstats/abs@.nsf/Lookup/9F3C9BDE98B3C5F1CA257C2F00145721?opendocument [Verified 15/7/14]
[13]   Heffernen E, Andersen K, Dev A, et al., Prevalence of mental illness among Aboriginal and Torres Strait Islander people in Queensland prisons. Med J Aust 2012; 197 (1): 37-41.

The greater burden of stress and trauma is compounded by generally lower access to health services and mental health services than in the general population, particularly in remote areas. And also lower access to culturally safe and competent services where services otherwise might exist.

When asked, Aboriginal and Torres Strait Islander mental health leaders, experts and stakeholders recommend that a broad preventative approach is required in addition to interventions for people who are self-harming or at risk of suicide. In particular, they support strengthening social and emotional wellbeing and culturally-based approaches as a way of strengthening Indigenous identity and building resilience against the impact of life stressors.

Aboriginal and Torres Strait Islander concepts of social and emotional wellbeing include physical and mental health, and an individual's relationships to family, community, land, waters and ancestors, as well as acknowledging the importance of employment, housing and education to wellbeing.[14]

The effectiveness of culturally based approaches to suicide prevention is a particularly promising line of research. Studies among Canada's Indigenous peoples suggest the importance of cultural continuity as a suicide prevention measure.[15] And work in Australia by the National Empowerment Project has highlighted the high level of demand in communities for culturally appropriate, locally based and relevant programs that strengthen social and emotional wellbeing.[16] Such approaches require engagement and partnerships with communities. Cultural healers and healing methods and working with Elders have also proved important in community-generated approaches to suicide to date. [17]

Also important are prevention strategies to address the needs of high-risk groups within the Aboriginal and Torres Strait Islander population and particularly young people. [18]

For those at immediate risk of suicide, culturally safe, non triggering management, treatment and support is particularly important. Training Aboriginal and Torres Strait Islander people to provide such services is one way to achieve this; ensuring non-Indigenous workers are culturally competent is

another. Services should be delivered through Aboriginal Community Controlled Health Services where possible.[19]

For the family and community members of people who suicide, culturally safe and competent postvention and support services can also play a critical role in preventing further suicide.

Evidence gaps

The findings from a recent rapid evidence review found there is a lack of evidence from published studies on the most effective intervention strategies for preventing suicide in Aboriginal and Torres Strait Islander people, but community prevention programmes currently have the most evidence for reducing actual rates of suicide or suicide behaviours among Aboriginal and Torres Strait Islander people[20]

Poor understanding of Aboriginal and Torres Strait Islander social and emotional wellbeing and how it relates to mental health and suicide prevention has posed problems to policy-makers.[21] A dedicated Aboriginal and Torres Strait Islander suicide prevention research agenda must build on a broader one - focused on developing the evidence base for social and emotional wellbeing and culturally based interventions.

From a clinical and service model perspective, many questions require research: What are the best service models in the health and mental health sector and for Aboriginal and Torres Strait Islander family and youth support services to prevent suicide? What are the workforce needs? What is the role of schools, family support services, and other services? How effective are existing clinical diagnostic models to gauge suicide risk among Aboriginal and Torres Strait Islander peoples? What is the appropriate role of cultural and clinical approaches, and how should cultural healers and culturally based methods of healing be incorporated into programs and services?

Research

There is a need for further research in Aboriginal and Torres Strait Islander suicide prevention and Aboriginal and Torres Strait Islander people should lead this. The Aboriginal and Torres Strait Islander

14   Gee G, Dudgeon P, Schultz C, Hart A, and Kelly K, 'Social and Emotional Wellbeing and Mental Health: An Aboriginal Perspective'. Chapter 4, In Dudgeon, Milroy and Walker (eds.) Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice – Revised Edition, Commonwealth of Australia, Canberra, 2014, pp.62-63.
15   Chandler, M. J. & Lalonde, C. E. (2008). Cultural Continuity as a Protective Factor against Suicide in First Nations Youth. Horizons --A Special Issue on Aboriginal Youth, Hope or Heartbreak: Aboriginal Youth and Canada's Future. 10(1), 68-72.
16   Chandler, M. J. & Lalonde, C. E. (1998). Cultural continuity as a hedge against suicide in Canada's First Nations. Transcultural Psychiatry, 35, 191-219.
17   Dudgeon P, Cox A, Kelly K, et al., Voices of the Peoples: The National Empowerment Project, Summary Report 2014 (in print).
18   See, for example, Culture is Life Campaign, The Elders' Report into Preventing Indigenous Self-harm & Youth Suicide, 2015. Available online at: http://www.cultureislife.org/#!elders-speak/cw9.
19   Ibid
20   See for example: Department of Health and Ageing, Operational Guidelines for the Access to Allied Psychological Services Aboriginal and Torres Strait Islander Suicide Prevention Services (unpublished) Canberra, DOHA, 2012.
21   Clifford et al. 2014

Suicide Prevention Evaluation Project is an important example of such leadership in action. Launched in 2014, it will be the first formal evaluation of Aboriginal and Torres Strait Islander suicide prevention programmes and services nationwide. In particular, it promises to inform the implementation of the National Aboriginal and Torres Strait Islander Suicide Prevention Strategy in 2015.

Participatory action research (PAR) should be promoted among researchers working in Aboriginal and Torres Strait Islander communities. This proceeds through repeated cycles, in which researchers and communities start with the identification of priority issues, originate action, learn about this action and proceed to a new "research and action cycle". This process is a continuous one that empowers Aboriginal and Torres Strait Islander perspectives. Participants in PAR projects continuously reflect on their learning from the actions and proceed to initiate new actions on the spot – potentially bringing immediate benefit.[22]

There are also established ethical guidelines for research in Aboriginal and Torres Strait Islander communities that researchers must observe. [23]

Overall, there is a need for dedicated national Aboriginal and Torres Strait Islander suicide prevention research agenda, led by Aboriginal and Torres Strait islander people, and that is able to work with the differences between them and other Australians that shape both suicide and suicide prevention. Building on cultural strengths to prevent suicide is a particularly promising line of enquiry.

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[22]   Gee G, Dudgeon P, Schultz C, Hart A, and Kelly K, 'Social and Emotional Wellbeing and Mental Health: An Aboriginal Perspective'. Chapter 4, In Dudgeon, Milroy and Walker (eds) Working Together: Aboriginal and Torres Strait Islander Mental Health and Wellbeing Principles and Practice – Revised Edition, Commonwealth of Australia, Canberra, 2014, pp.56-57.
[23]   See National Medical and Health Research Council, Values and Ethics: Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research, 2003, Commonwealth of Australia, Canberra, 2003.

Pictured: Tracy McCown and Julie Turner

People of LGBTI experience and suicide

Mr Atari Metcalf

Overview of current research and knowledge in the area

The prevalence of suicidal behaviours amongst lesbian, gay, bisexual, transgender and intersex (LGBTI) people in Australia is disproportionately higher than observed amongst non-LGBTI people. The lifetime prevalence of attempted suicide amongst Australians identifying as homosexual or bisexual is two and seven times higher, respectively, than heterosexual identified Australians (Appendix 1), while 50% of transgender Australians have attempted suicide at least once in their lives[26]. There is a lack of Australian data on suicide in intersex people but there is growing international evidence indicating that intersex people also experience disproportionately high rates of suicidal ideation and attempts. Despite these disparities, there has been a dearth of policy attention, research focus and resourcing of preventive interventions targeting these LGBTI populations to date.

Australian and international studies consistently report an association between experiences of homophobic and transphobic discrimination, harassment and violence, and suicidal behaviours in LGBTI populations. Paradoxically, LGBTI people exhibit high levels of resiliency in community health surveys[27]. This observation suggests that while important, the promotion of resiliency in isolation of addressing wider social determinants of mental health may be insufficient for preventing suicide in LGBTI populations. Moreover, it reinforces that suicide is a multidimensional and complex public health problem that demands an equally multidisciplinary research response in order to effectively develop and target appropriate preventive interventions.

Encouragingly, there is emerging evidence for the protective role of school-based policies and practices that recognise sexual and gender diversity in reducing suicidal ideation and attempts in young people. Furthermore, same-sex attracted and gender diverse (SSAGD) young people show reduced rates of suicidal behaviour when they are supported by their families, compared to those with experiences of family rejection[28].

Strengths and weaknesses of Australia's research capacity in this area

In Australia, the majority of data on the health and wellbeing of LGBTI populations comes from LGBTI community surveys that are limited by selective sampling techniques. Furthermore, few LGBTI community surveys have included questions on intersex status, while collection (or public reporting) of LGBTI data in national representative population surveys has also been limited.[29] Estimating reliable suicide mortality statistics for LGBTI populations also remains challenging as sexual orientation, intersex status and gender diversity, unlike other characteristics, are not necessarily publicly known, or readily identifiable through existing coronial processes. Accordingly, much of the Australian research to date has focused on non-fatal suicidal

Evidence gaps

The gaps in current data leave us with many unanswered questions about suicide risk for these communities. In particular, there is relatively little research into how other population characteristics, such as Aboriginality, religious beliefs, geographic isolation, socioeconomic status and cultural

[26] Couch et al. 2007
[27] Leonard et al., 2012
[28] Hillier et al., 2010
[29] Irlam, 2013

background might intersect with being same sex attracted, intersex and/or transgender, and the subsequent influence these may have on suicide risk. More nuanced examination of suicidal behaviours within and between different LGBTI populations is therefore needed, along with exploring how discrimination and other established risk/protective factors may interact or moderate one another to increase or reduce suicide risk.

Additionally, there are few published intervention studies focusing on LGBTI populations to date, resulting in limited evidence to guide prevention policy and practice. This is compounded by the lack of regular and consistent monitoring of both suicide deaths and non-fatal suicidal behaviours, making it impossible to track progress towards reducing suicide in LGBTI populations. Notwithstanding the paucity in LGBTI suicide mortality data, studies conducted in countries where same sex relationships are legally recognised have leveraged relationship registry data in order to compare suicide death rates among individuals in same-sex relationships with those in heterosexual relationships (for example, see Mathy 2011[30]). As such registries and associated data become available in Australia, opportunities may arise to adapt similar approaches.

[30] Mathy et al., 2011

Overview

People living in regional, rural and remote areas of Australia make up 30 per cent of the population, but do not receive anywhere near 30 per cent of funding and services for mental health[31].

In general, people in regional, rural and remote areas face higher levels of socio-economic, environmental, behavioural and physical health risks associated with suicide and mental ill-health than those who live in major cities. While there is no clear evidence that the prevalence or severity of mental illness is any greater in regional and rural areas, or that geography alone affects a perceived need for specific types of mental health services by people with a lifetime mental health disorder, this data may be unreliable[32]. A high prevalence of suicide and mental illness and suicide has been identified, however, as a key challenge for these areas, in addition to concerns about stigma and anonymity acting as barriers to seeking help for mental health problems[33].

- Outer regional areas record the highest prevalence of persistent and deep exclusion in Australia, and rural and remote areas often have poorer education, literacy, income, employment and housing opportunities[34] than the general population.

- The National Rural Health Alliance suggests these areas also are often affected more severely by natural disasters; these areas may also be more socially isolated[35].

- Regional and remote Australians, particularly men (excluding very remote areas and discrete Aboriginal and Torres Strait Islander

communities), are more likely than their urban counterparts to engage in risky health behaviours, including consuming alcohol at levels that place them at risk of harm over their lifetime (24% and 21% compared with the general population 19%)[36].

- These factors can lead to depression and may contribute to the higher levels of suicide in rural and remote areas of Australia. At higher risk are males, young people, Aboriginal and Torres Strait Islander people and farmers[37].

Interactions between area of residence, social and other factors, and health outcomes, are known to be complex and that there is no single stereotypical community experience of mental health in regional, rural or remote Australia[38]. Research suggests, however, that Australians living in rural areas generally have higher levels of social cohesiveness—for example, higher rates of participation in volunteer work and feelings of safety in their community[39].

Evidence gaps

The Review concluded there are high levels of unmet mental health needs in rural Australia[40], noting that the availability of specialised mental health care in hospitals and health services is significantly worse in more remote areas of Australia than in major cities[41]. Fewer mental health specialists are available when people need to access assistance for any mental health concerns, and people generally need to travel over greater distances to deliver or receive care[42]. As a result, promotion, prevention, early diagnosis and intervention services that could address suicide and

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[31] NMHCR 2014 p97
[32] NMHCR 2014 p95
[33] Ibid
[34] Ibid
[35] Ibid
[36] ABS. Australian Health Survey (AHS), 2012
[37] NMHCR 2014
[38] AIHW 2014, NMHCR 2014
[39] AIHW 2014
[40] NMHCR 2014
[41] Ibid

mental illness are hampered and delayed, which can result in serious crises.

There are already a number of suicide prevention activities and interventions for populations living in rural areas of Australia, although Kõlves et al[43] identified that few had an evaluation of their outcomes. Overall, the authors found that:

- More activities are based in the provision of recommendations than active interventions for suicide prevention for rural populations;

- The majority of programmes address the issue of suicide prevention indirectly (e.g. via strengthening community networks);

- Indirect suicide prevention approaches in rural areas often address variables on a collective level, such as community attitudes towards help-seeking or farmers' attitudes towards health;

- Only a few programmes report on any results of their activities; and,

- There are very few programmes where an evaluation of outcomes is available. Further, most evaluations are not conducted in parallel with a 'control group', which makes it difficult to account for other possible environmental or individual factors that brought about the noted changes.

The authors conclude that these factors make it difficult to assess whether interventions in rural areas actually made a difference in terms of a reduction in suicide.

Recommendations for research

There is a need to conduct further research:

- on the determinants of mental health in regional, rural and remote Australia and effective service delivery models[44]

- into the past and continuing impacts of natural disasters, such as droughts and floods[45];

- to better understand the relationship between access to appropriate and high-quality physical and mental healthcare within the rural help-seeking paradigm[46]; and

- better evaluate existing rural suicide prevention strategies in order to ensure their efficacy and validity, as well as to ensure there are no regions or groups overlooked.[47]

[42] Ibid
[43] Kõlves et a. 2012
[44] NMHCR 2014
[45] Kõlves et al. 2012
[46] Ibid

Other vulnerable population groups

Men

Men are three times more likely to die by suicide than women, but are less likely to seek help for depression or anxiety. Linkage of Medicare Benefits Schedule (MBS) and Census data for 2011 shows that during that year, 8.7 per cent of Australian females accessed any MBS-subsidised mental health-related service, compared with 5.6 per cent of men[48]. We know that men living in rural and remote areas are both particularly likely to take their own life and unlikely to seek professional help. Barriers to help-seeking among men have been identified as being partly related to the perceived role of men in Australian society. Services targeted at men, such as The Older Men's Network in Queensland, use men's interests and contributions to the community as vehicles for talking about mental health and making use of peer support[49].

Women

Despite there being higher numbers of men who suicide each year research consistently demonstrates that women have higher rates of suicidal behaviour, i.e. ideation, planning and suicide attempts compared to men. Gender plays a significant role in suicide and suicidal behaviours. Gender differences have been reported in relation to suicide methods, risk and protective factors, causal factors, the very nature of suicidal behaviour and how it is manifested. However, our knowledge of these differences remains incomplete, particularly so for reported gender differences in those who attempt suicide, and also within different age groups.

Research has not contributed much to our understanding of suicide and suicidal behaviour in women nor consciously informed prevention of suicide in this population. There is also very

limited research on suicidal behaviour among women of trans experience, women with intersex characteristics, feminine spectrum people who do not identify as women or men, and those with culturally specific genders beyond the woman/man binary.

Given the large swing in the size of the health burden towards women when suicide mortality and morbidity are combined it would seem both reasonable and sensible to focus also on understanding and preventing women's suicidal behavior.[50] Taken together, the numbers of women who think about suicide, plan their suicide, attempt suicide and die by suicide is considerable and has a large impact on public health in Australia and internationally.

For more in-depth discussion on this topic see SPA discussion paper: *Suicide and Suicidal Behaviour in Women – Issues and Prevention. A Discussion Paper.*[51]

Older Australians

A life course approach to mental health is not just about early intervention for young people, but also relates to an early intervention ethos for health and wellbeing needs at all stages of life. Older people face particular difficulties with mental health related to age discrimination, bereavement, social isolation, increasing susceptibility to chronic disease and the transition from work to retirement. The fact that a person grows older is not sufficient reason to accept that mental ill-health is a necessary consequence of old age. Nor should it be acceptable that admission to a residential aged care facility is reason enough to use chemical restraints to manage older people's behaviours[52].

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[48] NMHCR 2014
[49] NMHCR 2014
[50] Chaudron & Caine 2004
[51] Suicide Prevention Australia 2015

Refugees and asylum seekers

Refugees and asylum seekers are often highly vulnerable to suicidal behaviour, having both experienced trauma and having had their social support networks disabled. There is clear evidence that detention in closed environments for longer than six months has a significant, negative impact on mental health[53]. However, data needs to be made available to allow a clear and accurate picture of the extent of suicidal behaviours occurring among those in detention and to determine, based on evidence if available, what interventions are likely to be effective [54].

Culturally and linguistically diverse communities

People who have an experience of immigration to Australia (even without having fled traumatic home circumstances as refugees) have specific mental health experiences and needs which must be accounted for if support is to be effective. Not only do experiences of migration often create or exacerbate mental distress, but people can find the response of Australian mental health supports inappropriate to their needs. They can also face problems of seclusion and restraint in the mental health system because of issues such as language barriers and culturally different approaches to mental health and wellbeing[55].

[52] NMHCR 2014 p 107
[53] Commonwealth Ombudsman (2013)
[54] NMHCR 2014 p 107
[55] NMHCR 2014 p 107

Overview

There are three main forms of suicidal behaviour that are relevant to a clinical trials approach. In a clinical trials context, these should be thought of as clinical endpoints of the trial, with the specification of primary and secondary outcomes as appropriate to the specific circumstances of a given trial.

These three suicidal behaviours are:

1. Suicide death
2. Non-fatal suicidal behaviour – variously called deliberate self-harm (DSH), self-harm (SH), suicide attempt (SA), parasuicide, etc.
3. Suicidal ideation

Suicide death

There are multiple and serious limitations that need to considered if suicide death is a clinical endpoint of interest.

Suicide is a low prevalence outcome, even in high risk populations (hospital treated DSH and recently discharged psychiatric inpatients), which has several implications for clinical trials.

1. Sample sizes need to be very large and would usually require multi-site trials in order to be adequately powered.
2. Trial duration, including treatment and follow-up phase, would need to be very long to maximise the prevalence of this outcome.
3. Long duration of treatment phase can be costly.
4. Long duration of follow-up, after the completion of the treatment phase, has implications for interpretation of the trial as to plausibility of a sustained long term benefit after treatment concludes.

5. In Australia, clinical endpoints would rely on ABS and coronial data, which has a 2-3 year lag time to provide the primary outcome data.

Example

As an example, consider a high risk population like hospital treated DSH, which after 1 year has a suicide rate of 1% and after 10 years has a suicide rate of 7%[56]. We have used the Pocock formula of: $n = f(Đ/2, Đ) \times [p_1 \times (100 - p_1) + p_2 \times (100 - p_2)] / (p_2 - p_1)^2$

(https://www.sealedenvelope.com/power/binary-superiority/) to calculate simple sample sizes for a significance level (alpha) of .05 and power (1-beta) of .90, in the examples below.

To test an intervention that "worked" over 1 year to try to demonstrate a reduction from 1% to say 0.5% suicides (a 50% relative risk reduction), would require 619 per group (1238 total).

To test an intervention that "worked" over 10 years (say 1 year treatment and 9 years follow-up) to try to demonstrate a reduction from 7% to 3.5% suicides (a 50% relative risk reduction), would require 849 per group (1698 total).

Of course a 50% relative risk reduction is not very realistic in the world of medicine for a binary outcome. Taking the 10 year example and anticipating a more realistic 10% relative risk reduction from 7% to 6.3% suicides after 10 years, would require 26627 per group (53254 in total).

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[56] Carroll et al 2014

There are other limitations, including an absence of any strong candidate therapies for psychological or pharmacological intervention to evaluate. There is a greater possibility that service organisation interventions might have more likelihood of success, and this possibility has been demonstrated in an observational study in the UK[57]. These service-based interventions could be usefully evaluated using a stepped wedge design[58] (a special form of randomised controlled trial), which has not previously been used in suicide prevention studies. There is a lack of familiarity with this study design amongst suicide researchers and the related ethics committees. These deficits can be overcome by training and trial supervision by a bio-statistician familiar with the study design and its analysis.

Non-fatal suicidal behaviours

Hospital treated deliberate self-harm (DSH) or suicide attempt (SA) is perhaps the best recognised and most studied form of non-fatal suicidal behaviour. DSH is common and costly with one-year repetition rates of 15% and a strong association with later suicidal death[59] This form of suicidal behaviour has been the subject of multiple intervention studies and remains an important focus for suicide prevention research activities. However, there are several strengths and limitations that need to be considered.

There has been considerable success in the development of interventions to reduce repetition of DSH for sub-populations, especially for Borderline Personality Disorder populations, although there have been much fewer successful trials of unselected DSH populations, using either pharmacological or psychological interventions[60]. There are a number of other candidate interventions including psychological, pharmacological and brief contact interventions that are worthy of evaluation.

There have been serious quality problems with the design and analysis of existing randomised clinical trials RCT studies of DSH and these limitations have already been clearly articulated: "investigators should perform power calculations to determine the number of subjects necessary to detect clinically important effects, provide information on method of randomisation and interventions, use standard measures of outcome, and focus on homogeneous subgroups of patients. Improving the methodology of future studies in this field will be essential if sound evidence is to be obtained which can inform effective service provision for deliberate self-harm patients"[61].

Selecting the correct or appropriate metric (or combination) for studying repetition of DSH is also an issue that has not been adequately resolved. The traditional approach has been to use the binary outcome of any DSH event, which may be appropriate but difficult because of the short time between repeat events for some patients and the long history of events for others. For other chronic and relapsing conditions (e.g. headache), other metrics have been used, like a reduction in number or severity of events or a reduction, which may be worth consideration in non-fatal suicidal behaviours. This approach has been used in studies of non-fatal suicidal behaviours[62]. For chronic relapsing conditions, it is sometimes suitable to use a survival analysis with time to next episode as the appropriate metric. This has been occasionally used for non-fatal suicidal behaviours.

Using institutional data for the measurement of hospital treated DSH or SA is an accepted way to measure repeated DSH or SA as an outcome, however these institutional data are known to be serious underestimates. This occurs for several reasons, including only recording admitted patients, and inaccurate coding of the reason for admission by administration staff. As an alternative approach, direct contact with trial participants during follow-up, to obtain direct patient report for the occurrence of non-fatal suicidal behaviours, is difficult but possible. Where this method is used to determine these clinical endpoints, it is important to either account for missing data in an intention-to-treat analysis or to provide a sensitivity analysis to allow for study dropouts[63].

Suicidal ideation

There is considerable disagreement about the appropriate use of suicidal ideation as an outcome, and the appropriate metric to use for non-fatal suicidal behaviours: occurrence, frequency or severity of ideation, or time to next episode of suicidal ideation. Perhaps the greatest value of using suicidal ideation as a clinical endpoint would be in restricting use to particular clinical populations of relevance, e.g. depression and borderline personality disorder.

There has been a recent systematic review of instruments to measure this clinical endpoint[64] which will be useful in organising future studies to use an agreed common outcome measure so that comparisons across studies can be more easily made and so that meta-analyses of pooled data is more valid.

57   While et al 1917
58   Brown C, Lilford R 2006
59   Carroll et al 2014
60   Hawton et al 2000
61   Arensman et al 2001
62   Carter et al 2005
63   Hassanian-Moghaddam 2011
64   Christensen et al 2014

Technology and suicide prevention

Associate Professor Jane Burns, Ms Emma Birrell, Dr Michelle Blanchard

Overview

In 1995, youth suicide was a leading cause of death in young people second only to motor vehicle accident[65]. This national tragedy provoked a crisis workshop in Canberra, at which 70 suicide prevention specialists coalesced in a show of national solidarity to determine gaps in evidence and make recommendations to address those gaps. This workshop was jointly supported by NHMRC and the Department of Health[66] and explicitly made the point of ensuring that 'Here for Life', the youth suicide prevention strategy, was informed by the evidence.

Since that review almost 20 years ago, suicide is now the leading cause of death in young people and young men continue to be at greater risk of suicide than their female peers[67]. While we have seen a lot of activity in Australia during the intervening years, and some positive steps taken, much of the commentary in that NHMRC review remains relevant today.

In 2014, WHO released a report on suicide prevention efforts worldwide, showing a significant increase across the globe by Governments that are committed to an agenda of decreasing suicide rates[68]. Despite this concerted effort, with 28 countries worldwide known to have national suicide prevention strategies, we are yet to see an ongoing and sustained reduction in suicide rates. Significantly, the WHO report fails to include any discussion at all about the role of technologies as a setting in which people engage, interact and spend time. It fails to speculate on either the positive potential of technologies or the negative risk of contagion, other than to make a passing mention of the potential risk of cyber bullying.

On the positive side, mental health and its importance in Australia as a significant public health concern has gained traction due to the work of organisations like beyondblue: The National Depression Initiative. We have the foundations for a strong evidence-based youth mental health system with the roll-out of Headspace and the Orygen EPPIC model. Australia is the world leader in the use of innovative e-health platforms to promote wellbeing and deliver mental health services[69], with (growing) evidence that technologies can be used to improve mental health and wellbeing[70].

Strengths and weaknesses – where Australia is now

The role of technology in the lives of Australians

Technology continues to cement its place in the lives of Australians, and has had a dramatic impact on how we learn, work and play. Australian statistics indicate that almost all home internet connections are broadband, and as of May 2014, 12.07 million people used a smart phone[71]. The rapid development of internet-enabled devices, such as smart phones and tablets, also saw 68% of Australians accessing the internet via three or more devices in the six months preceding May 2014[72].

Young people, technology and suicide prevention

Suicide is recognised as a substantial public health problem, with adolescence identified as a period when the risk of suicide is heightened[73]. While Australia has seen significant mental health reform, it is a stark reality that traditional modes of service delivery are failing to reach young people; one study

65 ABS, 1997
66 Patton and Burns, 1999
67 Burns et al., 2013
68 WHO, 2014
69 Christensen and Petrie, 2013, Griffiths, 2013, Proudfoot, 2013
70 Cuijpers et al., 2008, Griffiths et al., 2010, Burns et al., 2010, Burns and Birrell, 2014
71 Australian Communications and Media Authority, 2014
72 Ibid

suggests that as many as 80% of young people still do not seek help for their mental health difficulties[74].

An integral part of suicide prevention is the development and uptake of mental health promotion, prevention and early intervention services, however young people face numerous barriers to receiving care, for example: a lack of youth friendly services [75], geographical location and isolation[76], stigma associated with mental illness[77], and complex state and federal funding models[78].

Young people are engaging with technologies more than ever before, which can be attributed to the proliferation of mobile devices, improved accessibility and faster internet speeds[79]. The online space is an environment where young people feel safe, secure, and in control. Service providers, mental health professionals and policy makers have grappled, however, with the way young people use social media and social networking services (SNS) like Facebook. As a result, they have failed to capitalise on new and emerging technologies as a valuable tool[80]. The use of SNS by young people has been shown to improve social connectedness, assist in delivering educational goals, provide support in identity formation and foster a sense of belonging[81], in contrast to the negative discourse often perpetuated by traditional media[82].

Social media is evolving quickly, often faster than the research that might help us understand its role in suicide prevention. A 2014 study outlined the increased use of social media by individuals and organisations that are active in the suicide prevention space, and the benefits that come from this practice[83] In the study, individuals expressed positive sentiment about being able to share their experiences with others in a safe and supportive environment[84]. Organisations were found to be using social media primarily as a tool for promotion and networking.[85] With this wide uptake of social media, the Young and Well Cooperative Research Centre (Young and Well CRC) is the driving collaboration between young people, researchers and technology-focused companies like Google, Twitter and Facebook to work alongside each other to fast track the research that will help us understand more about its role in suicide prevention.

The increased engagement of mental health professionals with social media would see this online space serve as a meaningful adjunct to traditional care; allowing young users a flexible and accessible source of support that does not compromise the therapeutic relationship[86]. The service gaps left by traditional modes of information, care and treatment delivery can be filled by e-mental health platforms [87], that place the power back in the hands of the young people using the service and enable them to access the care they need at a time and place that suits them. Technology also allows for customised support services to be provided to groups that are typically difficult to engage, such as young men[88].

With internet usage almost at saturation point amongst young people[89], the online setting serves as an ideal mechanism to "rapidly engage young people"[90]. Furthermore, it has demonstrated the capacity to engage young people who may not otherwise seek help via traditional means . The online space is ideally placed to play an integral role in the provision of mental health care and support, particularly as the utilisation of Internet, as a source of reliable health information, continues to escalate[92].

Online platforms for mental health information provision and service delivery allow young people (and those that care for them) to educate themselves, and establish support connections, to be accessed online or offline; the two spheres can coexist[93]. There is a substantial opportunity for the sector to capitalise on the high technological literacy of young people, to invest in and create services that are designed to appeal to this digitally aware generation.

Evidence gaps

The most common rationale for online support has been an economic justification: it is cheaper to deliver services online. This paper argues for a reframing of that rationale and purports that an integrated service is optimal for mental health outcomes. While there will always be a need for face-to-face services for those who are severely unwell and those with complex needs, best practice would dictate this approach is supplemented by around-the-clock support provided through technologies. While technology can be used as an adjunct to clinical care, it is becoming clear that there are a number of conditions that can be effectively self-managed, and that technology provides a low-cost vehicle to achieve this. In addition, because of its reach, the incremental cost per person of receiving this care reduces.

73 De Silva et al., 2013, Harrington et al., 1996
74 Burgess et al., 2009
75 Australian Youth Affairs Coalition, 2010
76 Medibank Health Solutions and Nous Group, 2013
77 Ibid
78 Ibid
79 Burns and Birrell, 2014
80 Blanchard et al., 2012
81 Collin et al., 2011
82 Third et al., 2011

This paper argues for a greater focus on the following:

- United efforts across promotion, prevention, early intervention, treatment and relapse prevention: In other areas of health, such as cancer, or cardiovascular disease, there is little or no debate about the significant role of promotion, prevention, early intervention, treatment and relapse prevention. Across the preventive interventions framework, each component is seen as a critical element to comprehensively address the complexity of illness. Indeed, back in 1994, the Institute of Medicine wrote a seminal piece on how this framework could be used in mental disorders. The document has been the backbone to much of the mental health policy that has shaped organisations like beyondblue. Despite this, the message that the elements that make up the spectrum are bigger than the sum of their parts, has been lost. In cancer care, people expect to receive the best possible evidence-based treatment available and there is little or no argument about the role that smoking cessation, diet and exercise play. In cancer care, health professionals urge the community to look for early warning signs and they act immediately to intervene. As a result, there has been a substantial drop in morbidity and death associated with certain cancers. However, this is not the case for mental health. As the sector becomes more sophisticated, it is clear that thought leaders must unite in one common voice – we can no longer argue that one approach is better than the other. In youth mental health, we still fail to provide support to over 70% of young people. This is due in part to the inadequacy of federal/state service models and a lack of support in certain communities, particularly regional, rural and remote communities. It also reflects fragmentation and the challenges facing a sector that has been driven by competitive grant funding and attempts to secure a piece of the pie that is simply too small to begin with.

- Integrated service offering: Rather than being viewed as a cheaper option, the role of new and emerging technologies in driving system reform should be viewed as an important enhancement of interventions promoting wellness, as well as the prevention of disorder, the delivery of online mental health services, and as an adjunct to support face-to-face services for those who require professional care. Technologies cannot simply replace therapy, particularly for young people with complex, severe and enduring mental health problems such as major depression, drug and alcohol addictions, eating disorders, psychosis and personality

disorders. Notwithstanding, if technologies are used effectively as part of a comprehensive and integrated mental health system, they have the potential to reach a large number of people to treat high prevalence disorders like anxiety and depression at lower cost, thereby freeing up professionals and services to focus on those with more complex needs. The current offering online has evolved in parallel with the offline service offering and there is little or no integration across or between services. This is a missed opportunity and one that should be addressed immediately.

- Addressing disparities in access: Bridging the gap in disparities to access to care, specifically for young men, young people who are indigenous, and young people who live with a chronic illness or disability is still one of our greatest challenges, despite 20 years of investment. Technologies have been lauded as our greatest opportunity but despite a plethora of online offerings, the reality is that these services are predominately accessed by women. Some online services report ratios of 70:30 but most are sitting at around 80:20. This challenge was identified in the Young and Well CRC's report Game On: Exploring the Impact of Technologies on Young Men's Mental Health and Wellbeing, with clear recommendations made about how services might adapt technologies to provide an offering more closely aligned to the needs of young men (Burns et al., 2013).

- Measuring impact: In 2000, a paper in the Australian New Zealand Journal of Psychiatry was published with the following quote: 'Economic evaluation of both clinical services and preventive interventions remains a complex and largely unexplored area. An important consideration is that the costs and consequences of intervention (or failure to intervene) are borne not simply by mental health services, but by other government (e.g. education and social services) and non-government sectors. Accurate cost–benefit evaluations require long-term follow up, and, in relation to youth suicide specifically, continued tracing through the period of high risk in young adulthood (Burns and Patton, 2000).' Strong leadership will ensure that measuring impact is a core element of every service, whether online or offline. This leadership must come from the Boards and Executives of all service providers and, critically, they must be held accountable. An external evaluation is not good enough. Government must seriously invest in determining the effectiveness of services both on their own and as part of a complex system. Effectiveness in mental health service delivery needs to move beyond – 'did

the person like the service? do they trust it? and would they recommend it to a friend?' Evidence of impact is the following – 'did this person get the right treatment? at the right time? and did they recover?' If not, why not, and how is their illness being managed? Our current system is not set up to follow people over time. As a result, they fall through the cracks, repeat their stories multiple times, and service delivery is inefficient. We simply must get better at providing a coordinated, wraparound system. The only way to do that is to get agreement from service providers to collectively unite in a common goal, and build standards that allow that to happen without the organisations involved losing their brand integrity. Prior to the 2013 election, the Coalition committed to invest in Project Synergy, a technological solution that allows data to be captured and stored across multiple services, led by the Young and Well CRC. A consultation with the sector is currently underway to determine the next steps for this initiative. An ongoing challenge is uncertainty and concern that a solution like this will take away from service autonomy. This is being addressed.

These recommendations merge contemporary understanding of how innovative technologies may be used to promote mental health, outlined in the "National Mental Health Commission's Review of Mental Health Services and Programmes" (http://www.mentalhealthcommission.gov.au/our-reports/review-of-mental-health-programmes-and-services.aspx), with the proposed benefits of such methods as illustrated in Young and Well CRC's "Advice on Innovative Technologies in e-Mental Health" (http://www.youngandwellcrc.org.au/knowledge-hub/publications/advice-on-innovative-technologies-in-e-mental-health/). With particular attention on reducing suicide rates and attempts and promoting mental health and wellbeing, engaging online affords a unique avenue for service delivery and timely and effective intervention.

TeleWeb support services

Mr Alan Woodward

Key points

- TeleWeb Support services provide accessible, immediate and private forms of connection with people seeking help and they play an important role in suicide prevention, with emerging research findings suggesting that these services can engage people who otherwise would not contact conventional service systems, and that reductions in suicidal states can occur through these support services. This is increasingly being recognised in Australia and internationally.

- However, neither research on the effectiveness of TeleWeb Support services nor the general establishment of evidence-based standards and features to define quality in service have kept pace with the propagation of these services. Greater investment in research on TeleWeb Support services may help unlock the key factors in their effectiveness and guide strategic development of the services and the operational standards for their success.

- In particular, research needs to find innovative yet ethical ways to engage with the consumers of these services and ensure the lived experience perspective is factored into the design, evaluation and ongoing performance monitoring of these services.

Suicide crisis intervention and TeleWeb support services

Various research studies on telephone crisis lines in USA and Canada[94,95,96] and Australia[97] have established that up to one third of callers to a telephone crisis line and up to half of the visitors to a chat service may be suicidal at the time of contact[98]. These findings have been replicated in the operational data of many Australian TeleWeb Support services.

TeleWeb Support services provide an opportunity to directly and immediately engage with a person experiencing suicidal crisis and interrupt the state of crisis so that immediate safety and wellbeing can be secured. This process of engagement with a person may be seen as a first step towards a de-escalation of the state of crisis. This is explored by authors such as Slaikeu (1983) and Kalafat (2002)[99]. Australian research on TeleWeb Support service impact has also shown effectiveness in reducing the suicidal state of contacts during a service session.[100] Further, a theme emerging from authors such as Kalafat, Baldwin and Brockopp is that a collaborative approach with a caller in crisis - which includes active problem solving and mobilisation of internal and external resources - is necessary to take advantage of the opportunity for growth and change presented by crises.

Crisis intervention is identified as one of ten key suicide prevention strategies in the World Health Organisation Report on Suicide 2014. Many national suicide prevention strategies highlight crisis intervention services as integral to their approach in reducing lives lost to suicide. TeleWeb Support services, operating out of normal hours, and using immediate, low cost and private means of service contact (telephone and online) play a valuable contribution as a 'safety net' service to provide crisis intervention when the person in crisis needs it most.

94   Litman, R.E. (1970, 1995).
95   Sudak, H.S., Hall, S.R. & Sawyer, J.B. (1970, 1995).
96   Mishara et al 2007
97   Perkins D. and Fanaian, M. (2004)
98   Lifeline Australia and Net Balance (2014)
99   Kalafat, J. (2002a).
100 King, R., Nurcombe, B., Bickman, L., Hides, L & Reid, W. (2003).

Continuity of care and follow-up using TeleWeb support services

Follow up support for suicidal persons – and their carers and families – can also be provided effectively through TeleWeb means and several services in Australia perform follow up support, ranging from non-clinical emotional support to more structured therapeutic services.

The rationale for follow up using TeleWeb Support services has several facets:

- Reach people who do not access professional services following a suicide attempt or suicidal crisis, but continue to have suicidal thoughts and intentions. TeleWeb Support services may be able to attract and follow up contact with suicidal persons – and provide accessible support for their carers – in ways that conventional services cannot.

- Enable greater use of safety and action plans following initial contact to a crisis intervention service. A follow-up service might encourage these individuals to follow through with the action plan that was established or help them develop a more suitable one.

- Provide greater support for those individuals at high risk of re-attempting suicide, namely those who are discharged from hospital or acute care facilities. As there can be delays in getting an appointment with community mental health services, contact with a TeleWeb Support service may be a more rapid form of community follow-up.

- Address emotional support and psycho-social needs for people who have experienced suicidal crisis or attempted suicide. TeleWeb Support services which utilise non-clinical crisis support processes are able to directly address this need.

Australians are particularly astute, as a population, in the adoption of technology and it seems highly congruent to consider TeleWeb Support services as potentially highly effective outlets for enhanced continuity of care and outreach for suicide prevention in this country, as is occurring in Europe, UK and the USA.

Mental health promotion and TeleWeb support services

Research on the profile of callers to telephone helplines reveals many have underlying mental health issues. One Australian study found anxiety and depression over-represented in the profile of callers[101]. Closer studies of the callers have established that many are experiencing levels of psychological distress that are sufficiently high at the time of the call to warrant clinical diagnosis if they were to visit a mental health specialist.[102] The operational data of many TeleWeb Support services confirms high proportions – perhaps 35% of their callers – self report diagnosed mental health issues.

There is a direct link between the contribution of TeleWeb Support services on mental health promotion and prevention and suicide prevention: mental health and suicide prevention are inter-related. TeleWeb Support services assist in providing those who contact them with increased awareness of mental health issues and information about mental health professional services that they can access. A few research studies in US and Australia have generated encouraging results showing more than half of those who receive referrals to mental health services actually take action on these referrals after the call to the crisis lines. [103, 104,105]

Research priorities

Despite the proliferation of TeleWeb Support services in Australia and internationally, there has been remarkably little research related to their purpose or effectiveness. This has started to change, with several research studies and evaluations of the effectiveness of telephone helplines and online or mobile services emerging in the past decade.

Research priorities in Australia include the following:

Consumer expectations and preferences

To a large extent it remains a mystery why suicidal persons contact TeleWeb Support services – despite the research evidence which shows that they do. It is often suggested that TeleWeb Support services attract suicidal persons because of the ease of contact, their relative privacy and the safety of

[101] Burgess, N et al (2008) Mental Health Profile of Callers to a Telephone Counselling Service. Journal of Telemedicine and Telecare; No. 14 pp 42–47

[102] Perkins, D., Fanaian, M. (2004). Who calls Lifeline: Baseline study of callers and their needs. CEPHRIS: Centre for Equity and Primary Health Care Research in the Illawarra and Shoalhaven, University of New South Wales.

[103] Turley, B., Zubrick, S., Silburn, S, Rolf, A, Thomas, & Pullen, L. (2000a) Lifeline Australia Youth Suicide Prevention Project. Final Evaluation Report.

[104] Gould, M.S.; Munfakh, J; Kleinman, M; & Lake, A (2012). National Suicide Prevention Lifeline: Enhancing Mental Health Care for Suicidal Individuals and Other People in Crisis. Suicide and Life-threatening Behavior, 42 (1),22-35.

[105] Lifeline Australia and Net Balance (2014) Social Return on Investment study of Lifeline Online Crisis Support Chat Service

the confidential environment in which to disclose suicidality without fear of negative responses. There do not seem to be any published research studies to confirm these reasons, especially from the consumer's perspective.

Are crisis oriented TeleWeb support services really accessible?

A core feature of crisis-oriented TeleWeb Support services is that they are accessible, usually through low cost telephone or online contact, and often available when other services are not, i.e. weekends, after hours. Accessibility, however, goes further than cheap phone calls and easy to remember contact details.

Operational performance of in terms of call/contact answer rate and queue waiting times are measures of accessibility for consumers. There appears to be, however, no research published on the required levels of performance – and on the impact on consumers where deficient operating performance results in poor access.

The promotion of a TeleWeb Support service in the community is another facet of access. This can influence the extent to which it is regarded as welcoming for all people, regardless of background, culture, religious belief and socio-economic status. While some services specialise in their appeal for particular groups, those that present themselves as generalist services need to ensure that they are actually regarded as such by the communities that they seek to serve. Those that are targeting particular groups need to know if they are actually reaching those groups. Few studies have addressed this for TeleWeb Support services in Australia.

Promotion of TeleWeb support services

There is some research evidence to show that active promotion of TeleWeb Support services generates contact activity. Operational data from several Australian services suggests contextual factors such as a high profile suicide reported in the media, or deliberate marketing and promotional campaigns, can generate increased contacts.

A recent Australian study by Melbourne University involving four major TeleWeb Support services found that male call patterns have increased in recent years, along with specific findings regarding increased contacts when the services are promoted alongside positive stories on mental health recovery. What is not clear, however, in Australia is whether or not consumers prefer particular 'brands' or types of TeleWeb Support services, despite the service providers maintaining such an emphasis on brand promotion and product distinction.

What value – befriending?

The befriending processes of listening and support offered by some TeleWeb Support services may be seen to offer a vulnerable individual a sense of compassion and (re)-engagement with others that in itself presents options of a more hopeful future. The application of recent models to TeleWeb Support services offers the opportunity to reinterpret the importance of non-clinical emotional support as a means of engaging with vulnerable individuals and challenging the trajectories of their psychological experiences with a view to increasing the protective factors at play and decreasing the influence of negative and destructive thoughts and perceptions. However, very little research has been conducted in Australia or internationally using these theoretical paradigms to test the efficacy of crisis lines.

While there appear to be positive impacts for those contacting TeleWeb Support services in terms of their continued help-seeking and immediate relief from distress, this aspect of non-clinical befriending style services deserves much closer attention. Such research may also build the case for closer formal interaction between non-clinical support services and professional health and community services.

Frequent callers to crisis lines

It is the case that some contacts to TeleWeb Support services make use of the service on a continuing or frequent basis. An additional perspective into the social support role performed by TeleWeb Support services, is that of chronic support needs and chronic suicidality which may exist for a group of callers. However, questions arise regarding whether or not unlimited and unregulated access to TeleWeb Support services prompts dependent behaviours or possibly avoidance of engagement with professional treatments.

Within the broader mental health system, the frequent contacts to TeleWeb Support services appear to have unmet needs which are being partially, and perhaps not effectively, met through frequent contact to a telephone or online service. There is also potential for the TeleWeb Support services to contribute to a more 'joined up' model of mental health service and care for these individuals. Research trials on improved models of coordinated or integrated service are warranted.

Links to hospital and health services

It is sobering to note that there are no known research studies on the impact of crisis intervention through TeleWeb Support services initiating emergency interventions with police and hospitals for suicidal persons who are identified as being in life threatening states or situations. It is not

established whether or not these individuals expect, or benefit from, such interventional referral to hospital and mental health services. Impacts on families and carers are also unknown.

The limits and nature of crisis intervention for TeleWeb Support remains a difficult and complicated issue. In particular, while some research on suicide safety planning has been undertaken by Stanley and others, there has not been in Australia any common approach established or service standards relevant to safety planning.

It is likely that the ability of TeleWeb Support services to address the issue entirely themselves will be lessened as research in this field further prompts reviews of existing practices and the intersection of the hospital and health system with suicide crisis intervention services. Trials of models of service between TeleWeb Support services and hospital and health systems may offer insights into how crisis intervention can be viewed in a more collaborative way.

TeleWeb Support service worker techniques

In 2007, research by Brian Mishara and others revealed that, from a study involving listening to more than 1,000 calls to a US helpline, there were great variations in the service delivery to callers across individual crisis line workers as well as across different crisis centres[106]. The variations did not appear to reflect the policy or practice orientations of the crisis centres. Critically, the crisis line workers failed to identify suicidal callers on numerous occasions and, on some occasions, even when correctly identifying suicidality, failed to implement crisis intervention actions to secure the safety of the caller.

This study placed a spotlight on the adequacy of quality assurance and supervision controls in TeleWeb Support services. There are, however, no worldwide standards on quality assurance in TeleWeb Support services and most Australian services operate internal review systems rather than externally conducted or validated measures of process integrity and quality assurance. In particular, there are limited studies – although some are now emerging in Australia and overseas – on the critical factors in worker performance that should be measured and monitored for service effectiveness.

TeleWeb support and theories on suicidal behaviour

A challenge for TeleWeb Support services is to establish and measure the outcomes that they generate for their consumers and the impact overall that they achieve towards suicide prevention.

Traditional principles around befriending and emotional support have tended to dominate practice knowledge, based on the values of 'unconditional positive regard' for the help seeker and the provision of a non-judgemental and empathic response to their situation. Although this form of support continues to constitute the bulk of what many TeleWeb Support services provide to their callers, there has not been a lot of in depth research to build the evidence for it, to determine what the 'process' or model of support consists of, what 'difference this makes' or 'outcomes' this creates for callers, or its effectiveness in achieving its primary aim of reducing suicide.

Future research studies on the outcomes and impacts of TeleWeb Support services could usefully align to the emerging theories on suicidal behaviour such as the Interpersonal Theory on Suicidal Behaviour by Thomas Joiner and others, or the Motivational-Volitional Theory by Rory O'Connor and others, to provide a more theory-based framework through which evaluation of this aspect of TeleWeb Support services could occur. These theories offer a bridge between the operational and process considerations of the services and the achievement of intended positive outcomes for consumers.

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[106] Mishara 2007

Does treating and intervening with psychiatric disorders prevent suicide?

Dr Michael Dudley

Overview

Notwithstanding controversy about this issue, there is a strong connection between mental disorders and suicidal behaviours, both fatal and non-fatal.

In Western settings and high-income countries, where most research historically has been focused, mental disorders are said to be present in up to 90% of people who die by suicide, and in the other 10% without distinct diagnoses, their mental health indicators are similar to others dying by suicide.[107] The relationship between mental illness and suicide is historically durable. [108]

However, most people suffering high prevalence disorders such as depression, substance use disorders and antisocial behaviours will not display suicidal behaviour. In recent years, re-examinations of the relationship have raised questions about, for example, the reliability of the psychological autopsy method on which many estimates depend,[109] and frequencies of mental disorders have been noted to be lower in non-Western and Aboriginal and Torres Strait Islander settings. Socio-cultural research and political debate has turned on the importance of sociocultural aspects of suicide, the objection of some key service user organisations to the emphasis on psychiatric illness, the dominance of what are seen as medical approaches to suicide prevention, and the exclusion of the voices of those with lived experience.[110]

These latter important observations and arguments require different responses, but do not remove the important connection of psychiatric illness for suicide and suicide attempt in a very sizeable proportion of cases. Suicide and suicide attempts have particularly strong relationships with certain psychiatric disorders which carry far greater risks than the general population (e.g. affective disorders, substance abuse disorders, bipolar disorder and schizophrenia) and are also more strongly associated with multiple psychiatric disorders. [111]

A previous review of suicide research priorities highlighted the dearth of focus on interventions.[112] Disparate research across several domains has confirmed that various interventions and strategies can prevent suicide. [113]

Within the field of effective interventions to prevent suicide, there is a question regarding whether treating or intervening with psychiatric disorders affects suicide and/or suicide attempt. This question is of major importance when considering the impacts and costs of psychiatric disorders, the benefits of treating psychiatric disorders, and when marshalling evidence for comprehensive approaches and national programmes to prevent suicide. However to our knowledge, there is less research regarding the extent to which treatments and interventions for psychiatric disorders may contribute to suicide prevention and no systematic review of this topic.

Suicide Prevention Australia has assembled a National Coalition for Suicide Prevention, which aims to reduce suicide in Australia by 50% in 10 years. In the context of mounting such a national strategy to reduce suicide and suicide attempts, it was decided to undertake an exploratory survey to identify strengths and limitations of research in this area, to outline questions needing answers, and to specifically outline Australia's research capacity with regard to this area.

This preliminary survey addressed the question of treatment and interventions in relation to suicide-related outcomes. It was principally concerned with identifying treatments and interventions where these were the principal focus of the study and the focus was on their effectiveness (see below, in Results).

107 World Suicide Report, 2014, p40
108 Goldney, 2007
109 Hjelmeland et al, 2012
110 Webb, 2013
111 World Suicide Report, 2014, p40
112 Robinson et al, 2008
113 Mann et al, 2005; Christensen et al, 2015

The survey focussed on self-harm, suicidal behaviours and suicide, not (at this stage) on suicidal ideation. It also did not encompass the question of whether health promotion or preventing psychiatric disorders demonstrably prevents suicide.

Methods

Medline and PubMed searches were conducted from 1/1/2008-31/12/2015 as follows:

1. (suicide or 'suicide attempt' or 'self*harm').m_titl.

2. (treatment or intervention or management).m_titl.

3. (depressi* or anxi* or substance or drug or alcohol or cannabis or hallucinogen or stimulant or sedative or hypnotic or opi* or inhalant or tobacco or smok* or schizophren* or bipolar or psychosis or psychotic or neurodevelopment* or autis* or attention or neurocognitive or dementia or Alzheimer or personality or trauma or eating or anorexia or bulimia or disruptive or impulse or conduct).m_titl.

4. 1 and 2 and 3

In this preliminary survey, titles and abstracts of articles from these two databases only were reviewed.

Results

83 studies were located.

Nine were discarded because there was no treatment / intervention component or it was incidental to the study's primary purpose (which was not intervention-focussed).[114] Defining whether studies were part of an intervention was sometimes difficult. For example, Mrnak-Meyer et al studied predictors of suicide-related hospitalisation among U.S. veterans receiving treatment for comorbid depression and substance dependence, finding that negative mood regulation expectancies were the only significant predictor of hospitalisation during 6-months of outpatient treatment, and that history of a suicide attempt was the only significant predictor of hospitalisation during the one-year follow-up period.[115] It was decided to exclude this because it considered the predictors rather than effectiveness of an intervention. The criterion used was as noted above (treatments and interventions were the principal focus of the study and the focus was on

their effectiveness).

Three were excluded because they were in other languages.[116] One (Leor et al, 2013) was excluded because it referred to suicide bombings. There are also case reports that were discarded[117].

At this stage, seven studies that considered suicidal ideation alone were excluded. Garlow studied the impact of fluoxetine on suicide ideations in outpatients with minor depressive disorder.[118] The ascertainment of suicidal ideation using validated questionnaires in primary care settings where psychiatric case review, psychotropic medications, and specialty mental health referral are also available, can help facilitate discussions about suicidality, flag psychiatric complexity and treatment-resistance, and prompt assertive follow-up and treatment.[119] Isotretinoin therapy for acne contrary to product warnings results in improvement of depression and was not associated with suicidal ideation.[120] Also Diamond had a mixed focus on ideation and attempts and Mewton and Andrews addressed the impact of CBT for depression on suicidal ideation.[121] Christensen studied whether web-based Cognitive Behaviour Therapy (iCBT) with and without telephone support reduces suicide ideation in callers to a helpline compared with treatment as usual (TAU).[122] They found that though suicide ideation declines over 12 months with and without intervention, and higher baseline suicidal behaviour decreased the odds of suicidal ideation remitting post-intervention, that change in depression over the course of the interventions was associated with improvement in suicide ideation. Watts found that suicidal ideation was common (54%) among primary care patients prescribed iCBT treatment for depression but dropped to 30% post-treatment despite minimal clinician contact and the absence of an intervention focused on suicidal ideation.[123] This reduction in suicidal ideation was evident regardless of sex and age.

The remaining reports (after these foregoing were eliminated) concerned a number of different psychiatric disorders. These included clinical depression and treatment-resistant depression, substance misuse, borderline personality disorder, bipolar disorder, and first episode psychosis, early psychosis and schizophrenia. There were also studies of sexual trauma, and severe, chronic and complex psychiatric illness.

No studies were located that focussed on the impacts on self-harm and suicidal behaviours

[114] Mrnak-Meyer et al 2011
[114] Munizza et al, 2010; Schneider et al, 2011; Cho, 2012
[114] Sloan et al, 2014; Fabregas et al 2009
[114] Garlow et al 2013
[114] Bauer et al, 2013
[114] Nevorolova and Dvorokova 2013
[114] Diamond et al 2013 and Mewton and Andrews 2015
[114] Christensen et al 2013
[114] Watts et al (2012)

on treatments or interventions with disorders of neurodevelopment, attention, neurocognition, personality, trauma, eating, disruptive behaviours, impulsivity or conduct.

The remaining reports studied a number of interventions. These included education and training, screening, treatments of psychiatric disorders (broadly considered), hospitalisation, psychotherapies (e.g. CBT, dialectical behaviour therapy and supportive psychotherapy informed by collaborative assessment and management of suicidality), medications (new generation antidepressants, lithium, other mood stabilisers, antipsychotic drugs, and sedative-hypnotics), management protocols and quality of care and/ or adherence to treatment standards, community-based interventions. One study considered the impact of smoking cessation.

Nearly all studies had concerns that overlapped in a number of these areas.

Different populations were the subjects of the research, notably veterans, older people, youth and those treated for substance use disorders or participating in specialised early psychosis (EP) treatment programmes. Among professional groups, substance disorder treatment providers and primary care physicians were the focus of treatment.

Several studies reported on the design phase of research.

Five studies among the 83 involved Australian research groups. They addressed the treatment of substance use with comorbid suicide risk using CBT [124]; the impact of a specialised early psychosis (EP) treatment programme for younger people on risk of suicide[125]; the characteristics of suicide attempts during treatment for first episode psychosis (FEP)[126] and the quality of care in bipolar suicide cases.[127]

There was approximately equal attention to suicide attempts, suicide and both.

There was a preponderance of specific biological interventions (9 studies) over psychotherapeutic studies (5). There was almost no attention to the social and cultural components of effective psychiatric treatment or intervention to prevent suicide.

Discussion

The present review begins with the presumption of a strong connection of psychiatric disorders to suicide and suicide attempts, a strong need to address suicidal vulnerability in people with psychiatric disorders, and a research priority for suicide intervention research compared with further research on areas of suicide risk that have been well-traversed.

The limitations of this preliminary survey are several. The survey only considered title and abstract, and for last seven years: broadening the search to include the whole article and over a longer period may have elicited more material. It limited the number of databases to two key ones. It did not consider unpublished or grey literature.

The survey at this point did not consider suicidal ideation, only suicidal behaviours or self-harm: it is possible that more studies would be identified were suicidal ideation included.

The review did not study the extent to which studies of the treatment of psychiatric disorders review the status of suicidal thinking and behaviours. To address this would entail surveying the broader field of research on the treatment of psychiatric disorders (especially disorders where risks are reliably identified as high such as affective disorders, substance abuse disorders, personality disorders and conduct disorders) and considering the status of suicidal thinking and behaviours in those studies.

However the review confirms the possibility of identifying and implementing effective strategies (treatments and interventions) to prevent suicide among those with psychiatric disorders.

It is of interest that much of the research appears to retrospectively investigate the relationship between psychiatric treatments and inadvertent suicide-related outcomes. Much less research constitutes tests of treatments or interventions with psychiatric disorders as potential avenues of suicide prevention, with suicidal behaviours as primary outcomes of the research.

The review found that the identified studies encompassed various treatments and interventions including education and training, screening, treatments of psychiatric disorders (broadly considered), hospitalisation, psychotherapies, medications, management protocols and quality of care and/or adherence to treatment standards, and

[124] Morley et al, 2013
[125] Harris et al, 2008
[126] Fedyszyn et al, 2011
[127] 2012; Keks et al, 2009
[128] Robinson et al, 2008

community-based interventions. There is a relative dearth of material about psychotherapies, and particularly about community-based treatments or interventions with psychiatric disorders.

They have targetted a range of psychiatric disorders, including depression, substance abuse, psychosis, and bipolar disorder, but also have not included impacts on self-harm and suicidal behaviours on treatments or interventions with disorders of neurodevelopment, attention, neurocognition, personality, trauma, eating, disruptive behaviours, impulsivity or conduct.

There was a fairly even weighting between studies considering suicide and suicide attempt.

Few studies considered psychotherapies and other questioned aspects of some well-accepted treatments (e.g. distress tolerance), for example with borderline personality disorder.[129]

There is some diversity of focus in the populations that have been considered – e.g. veterans[130], older people,[130] youth.[132] There is a dearth of material about the treatment of psychiatric disorders as a suicide prevention measure in a range of other populations (e.g. Aboriginal and Torres Strait Islander, refugee/asylum-seeker, migrant, forensic/custodial).

There was a preponderance of biological interventions (9 studies) over psychotherapeutic studies (5). The review found very little attention to the social and cultural components of effective psychiatric treatment / intervention to prevent suicide.

As already noted, the need for treatment and intervention research in psychiatric disorders to consider suicidal behaviour and self-harm as outcomes is important when considering the impacts, costs and benefits of treating psychiatric disorders, and when accruing evidence for comprehensive approaches and national programs to prevent suicide. The coverage of this domain is patchy, with some notable gaps. A plan for how this area can be systematically researched needs to be devised.

A fuller literature review should undertake this task of also including suicidal ideation, a longer timeframe and also for sake of completeness to include other relevant databases (e.g. Embase, Cinahl, Cochrane, Google Scholar, Scopus, Web of Science). In addition, the brief was not taken to be the potential of health promotion and prevention of psychiatric disorders as preventative of suicidal behaviours: this seems a potential separate subject for future research.

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[129] Marchand, 2014
[130] Webster et al, 2012, Smith et al, 2011, Valenstein et al, 2012, Pfeiffer et al, 2013
[131] Oyama et al, 2008
[132] Henry et al, 2012; Diamond et al, 2012; Ramchand et al 2008, Vitiello et al, 2009

Key points

- Suicide is a major health and social issue in which the knowledge and evidence base is not what it could be in Australia. Evaluation of services, interventions and programmes is necessary to broaden the knowledge and evidence base beyond epidemiological data or clinical measures to discover more about what works and why – and where investments by governments, private and community parties should be prioritised, informing strategy and policy as well as improvements in actual service and programme effectiveness.

- Evaluation of suicide prevention strategies and programmes is fraught with complexity and challenge. However, some approaches to evaluation will support better conduct and use of evaluation in suicide prevention. In particular, the creation of an evaluation framework at a national level, including outcomes statements and measures, will enable alignment of evaluation activities at programme and services level.

- Australian expertise in evaluation is highly regarded internationally, but is not generally harnessed in the development of evaluation methods for suicide prevention. Impact measurement is a growing field that is highly relevant to effectiveness and outcomes evaluation for suicide prevention – a strategic link with impact measurement experts should be fostered in Australia.

Current situation

The current knowledge of what works in suicide prevention is quite limited. Or to speak in terms of evidence, a 2005 review by Mann et al of research and evaluation on suicide prevention published in the Journal of the American Medical Association found that there were:

"…only two prevention strategies where there was evidence of effectiveness: educating physicians to detect, diagnose and manage depression and restricting access to lethal methods of suicide."

A Senate Inquiry into Suicide in Australia in 2010 identified deficiencies in the evaluation of past activity and programmes:

New research should focus on the efficacy of suicide prevention interventions and results should be widely available to practitioners and others.

Commentary to the Inquiry included:

Professor Jane Pirkis from the University of Melbourne outlined research undertaken which reviewed the 156 projects funded under the original NSPS. While the organisations which received funding for these projects were contractually obligated to evaluate '…in practice the evaluations were methodologically too weak to contribute much to the evidence base regarding what works and what doesn't work in suicide prevention'.8

Similarly the Australian Institute for Suicide Research and Prevention highlighted that despite a broad range of programmes funded by the Commonwealth and States only 60 per cent included an effectiveness evaluation component and none of those evaluated the impact of the interventions on the actual suicide rate.

The Senate Inquiry therefore addressed both the need for evaluation and the utilisation of evaluation. It focused particularly on the need for evaluation of specific interventions for the prevention of suicide, i.e. building knowledge on 'what works'.

In recommendations 35, 38 and 39, the Inquiry identified three levels at which evaluation of suicide prevention can occur:

i. Policy evaluation – how effective are the policy priorities in the National Suicide Prevention Strategy?

ii. Programme evaluation – what works and what doesn't in projects designed to impact on suicide prevention?

iii. Intervention evaluation – what clinical and non-clinical interventions are efficacious?

The Federal Government's response to the Senate Inquiry in 2010 included a commitment to evaluation of the National Suicide Prevention Strategy. In 2014, the Evaluation Report on the National Suicide Prevention Programme was released publicly and recorded difficulties in obtaining data on the effectiveness of the 47 projects funded under the programme, and in many cases, limited data on cost efficiencies.

Another issue in Australia has been that evaluation reports prepared on projects on suicide prevention have not been widely available; a few Non-Government Organisations have released publicly evaluation findings for their services and programmes, e.g. StandBy Economic Evaluation, Mates in Construction, LivingWorks and Lifeline Online Crisis Chat service. However, evaluations are not universally made public, there is no single and coordinated repository of these evaluation reports, and there is no nationally structured action to synthesise and share the knowledge obtained.

In USA, evaluation findings on suicide prevention strategies and programmes is available through the Suicide Prevention Resource Centre, a federally funded body with the purpose of supporting community and state government suicide prevention. Evaluation reports have also been made available in Europe through the EU mechanisms for coordinated suicide prevention. In the UK, evaluations of the Scottish and English suicide prevention strategies have been made available publically.

Challenges and impediments - the complexity of suicide

"*Every suicide is a different story; every suicide is unique.*"

David Knesper, University of Michigan Depression Centre

Increasingly, it is being recognised that suicidal behaviour and deaths by suicide may be fuelled by a multitude of inter-relating factors including:

- Biological – family risk, brain chemistry, gender, physiological problems

- Predisposing – psychiatric disorders, substance abuse, personality profile, severe illness

- Proximal – experiences of hopelessness, aloneness, impulsiveness

- Immediate Triggers – public humiliation, access to weapons or means of death, severe defeat, major loss.

Socio-economic factors also apply, e. g: greater suicide rate during economic downturn and race/ethnicity (Goldsmith et al 2002); women experiencing domestic violence are 4.5 times more likely to engage in suicidal behaviour (WHO 2013).

A major difficulty therefore in the evaluation of what works and what does not for suicide prevention is that the links between particular interventions and a reduction in lives lost are hard to establish clearly. Several factors come into play:

- the link between Programme and service activity to saving lives is hard to establish – so many factors are involved in a person's suicidality and actions to take their life

- Programme and services may have clear objectives, but it is difficult to measure beyond outputs and immediate impact

- data gathering is complicated – suicidal persons are highly vulnerable and ethical considerations apply when collecting data and feedback for evaluation

Deaths by suicide remain a relatively uncommon and infrequent phenomena, from a population health perspective, so it is difficult to identify significant changes in suicide rates or numbers of deaths to generate findings on the effectiveness of suicide prevention strategies. Similarly, it is hard to apply measures of impact and change that can be reliably attributed to particular suicide prevention programmes or services on a large scale basis.

The 'evaluation' of particular interventions, or clinical treatments for suicidal behaviour cannot easily be established through Randomised Controlled Trials – suicide is such a complicated behaviour it is difficult to establish a control group that is not affected by multiple factors in the individuals concerned, and it is often difficult to recruit sufficient numbers to conduct these research methods.

Finally, it can be difficult to engage suicidal persons in research – there are practical safety issues as well as ethical issues. This does not mean it is impossible, nor that the lived experience of individuals, families, carers and communities should not be sought, but for conventional research methods and ethics processes there have been challenges in the past. Accordingly, most of the research on suicide prevention has been undertaken without direct data from those who may access the various programmes or services being considered – third party interpretations of consumer satisfaction, engagement and outcomes are often presented only.

Evaluation theory and practice – what can it offer?

Evaluation is concerned with forming judgements and assigning value to particular actions or programmes – against pre-established statements of purpose and intended results. Typically evaluation questions are either process oriented – did the activity operate as intended, or outcome oriented – what happened to those affected and did anything change as a result of the activity? More attention in recent times has been devoted to impact evaluation – what difference did the activity make, and for whom?

Evaluation is a key tool to guide policy makers, programme managers, donors and financial supporters of suicide prevention in identifying priorities, likely 'best buy's and to review the success of particular strategies and suicide prevention measures.

Programme design and programme evaluation

For suicide prevention, a programme conceptualisation of strategies, activities and services using logic tools can assist greatly in clarifying the purpose, processes and intended results – or impact – of particular activities. Programme logic frameworks support mapping of the complex inter-linkages between various

activities; this approach is well suited to the design of evaluations for suicide prevention which by definition is complicated and operating across various services, organisations, contexts and people.

Outcomes hierarchies are very useful for mapping the relationships between intended high level and population-based results to programme activities and services, and their utilisation by target audiences. Outcome hierarchies enable clarity and the opportunity to test the 'logic' of particular assumptions and linkages across a programme. Data collection and measurement can then be applied at various levels of the outcomes hierarchy.

The Bennett's Hierarchy for example helps break down the complexity and the linkages between elements of a programme.

An example of the use of programme logic mapping for the evaluation of suicide prevention gatekeeper training has been prepared by US Evaluator Phil Rogers, showing the basic structure of a programme evaluation framework for gatekeeper training.

The process components include the inputs or resources required to conduct the training, the actual delivery of the training to required standards and in ways that meet content and pedagogical design specifications, and then a clearly identified output: persons trained satisfactorily. The outcomes components include short, intermediate and long
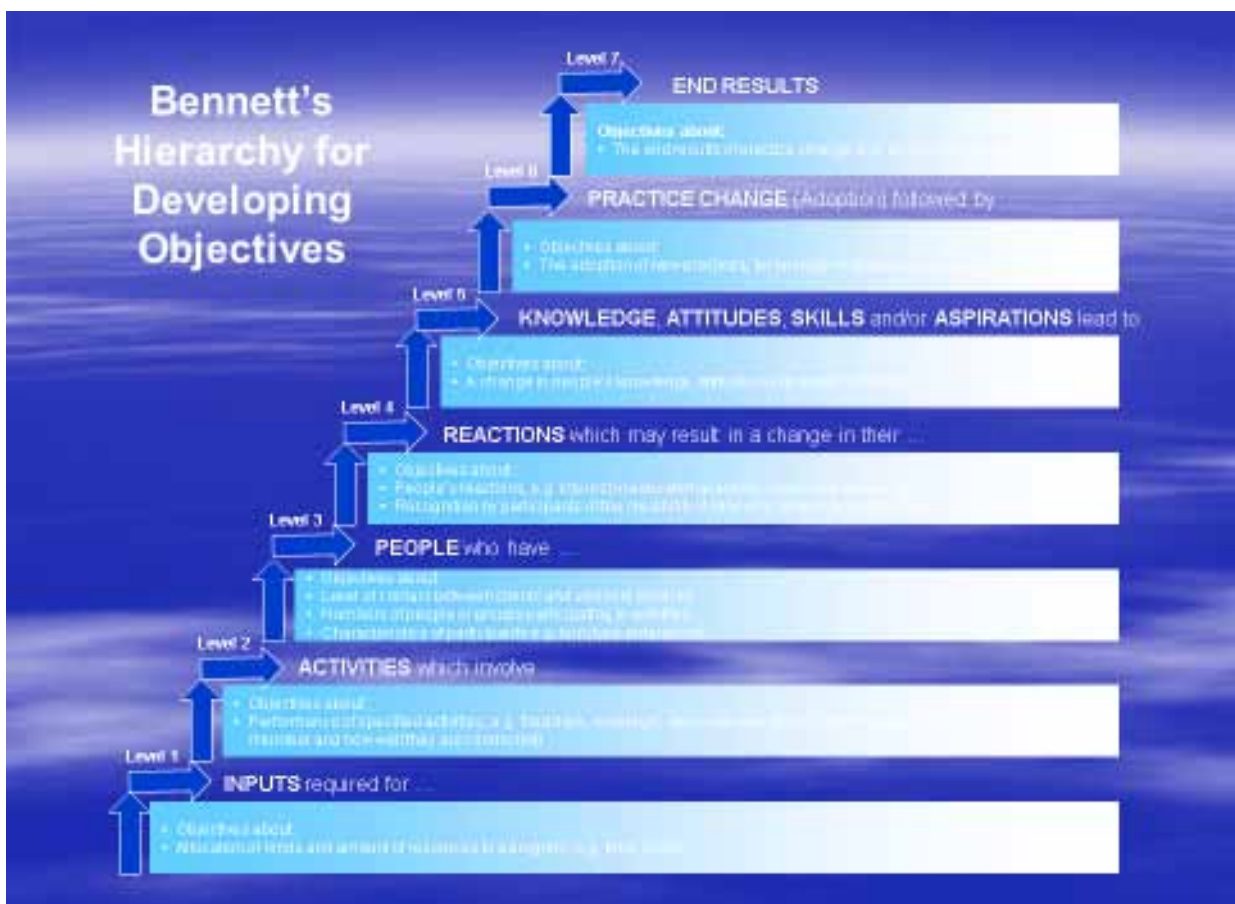
term outcomes that can have measures attached to them. This recognises that some outcomes are identifiable immediately at the time of the gatekeeper training, such as the knowledge gained, skills developed and attitude changes of the participants. More far reaching outcomes, especially those relating to behaviour change, are identified in the intermediate and long term classifications. Together, this mapping of the 'logic' between inputs, activities, outputs and outcomes can inform the design of evaluation and the collection of data related to evaluation questions for this programme.

What is needed, at a national level, is an overall programme framework that establishes high level outcomes across priority areas for suicide prevention that can be used to align individual programme and service evaluations and assess their contribution to policy level strategic plans. An example of this is found in the US Rand Corporation Suicide Prevention Framework, which guides organisations, programme managers and service providers in the construction of programme logic maps to support evaluation of suicide prevention activities. In Australia, no formally distributed national evaluation framework for the National Suicide Prevention Strategy has yet been available.

Mixed methods

In 2009 a group of commentators including Niner, Pirkis, Dudley and others published in the Australian eJournal for the Advancement of Mental Health:

Many felt that evaluation efforts should employ mixed methods, should be multidisciplinary and should be relevant to the Australian context. They also argued that there was scope for increasing the utility of research findings by communicating them in a manner that would enable them to be utilised by policy-makers, planners and practitioners.

Qualitative information has great relevance to the evaluation of suicide prevention programmes as it captures the attributes of people engaged in programmes – target audiences – and allows for greater data collection on the immediate impact of the intervention services. Evaluators have to become better at qualitative data capture and analysis and this has a place – mixed method data collection in suicide prevention.

One approach that would have application for suicide prevention is known as Most Significant Change, a method which brings forward the qualitative experiences and perspectives of those for whom a programme is offered, or targeted. Drawing on evaluation insights gained from international development programmes, Most Significant Change focuses on what happened, to whom and why rather than data against predetermined clinical or

service delivery measures. It provides a useful way of capturing 'real life' translations of programme objectives on the ground and is ideally suited to complex programme environments where the potential for implementation gaps in delivery is a major consideration in evaluations.

Social context and evaluation

Pawson and Tilley's seminal work, Realistic Evaluation (1997), suggests an approach grounded working towards a closer understanding of what causes change – within participants and more broadly in a social context. Key assumptions of Realistic Evaluation include:

• Social programmes are an attempt to address an existing social problem – that is, to create some level of social change

• Programmes 'work' by enabling participants to make different choices

• Making and sustaining different choices requires a change in participants' reasoning and/or the resources they have available to them. This is known as a programme 'mechanism'

• Programmes 'work' in different ways for different people

• The contexts in which programmes operate make a difference to the outcomes they achieve

• Context + Mechanism = Outcome

• Good understandings about 'what works for whom, in what contexts, and how' are portable

Realist evaluation offers suicide prevention a method to analyse the contextual factors across communities or different target groups for particular programmes or interventions. It enables analysis to address the individual or social factors that may affect the

fidelity with which programmes are delivered, or the variations in service provision from the recipient's perspective that may result in different outcomes for different people at different times.

The various evaluation methods and application of evaluation theory to programme logic, evaluation design and the conduct of evaluations including

data collection and analysis, have much to offer Australian suicide prevention. A harnessing of the body of knowledge from evaluation experts and applying this to the challenges of evaluation for suicide prevention programmes, services and community activities, may provide a means through which greater conduct and utilisation of evaluation can occur.

What to do? – directions for evaluation and suicide prevention

1. Useful and appropriate evaluation requires those commissioning and conducting evaluations to possess a level of skill to know what method relates to what evaluation purpose and context. Invest in evaluation education and training. Produce a guide on what evaluation methods work for what purpose.

2. Set outcome measures nationally that relate to strategy and priority. These measures should then support a logic mapping to key programme such as education / training, mental health services, crisis intervention, psychiatric early intervention, removal of access to means, etc. The National Research Action Plan should then be aligned to the evaluation framework nationally so that knowledge and evidence gaps are addressed, i.e. so evaluation requirements inform data collection and research priorities.

3. Policy level evaluation of the National Suicide Prevention Strategy needs to be established with the whole sector - not just an evaluation framework for the National Suicide Prevention Programme (NSPP) The evaluation purpose, priorities and appropriate methods will flow from this. At one level, reduced deaths by suicide is the intended outcome measure. This could become more sophisticated by checking for reduced deaths in particular population cohorts. Also, greater attention to reduced suicide attempts and re-attempts will place a focus on decreasing suicidal behaviour and improving early detection and prevention. Moreover, the effectiveness of the NSPP is contingent on more than it can control (economic downturns) so a set of evaluation measures needs to be agreed on that will examine the choice of strategies and the relative mix of strategies, within a public health framework that assesses the current

drivers and risks nationally. Economic analysis on cost-benefit returns of particular strategies, and social return on investment methods should be incorporated into policy level evaluation.

4. Consumer informed evaluation is a necessary change in direction. The experience of being suicidal, and of caring for suicidal persons, must change in Australia for the National Strategy to be seen as effective. This reflects the reality that suicide attempts are individually-generated through a mix of complicated factors. The 'system' of response accordingly needs to be flexible and workable to adapt to the individual and intervene to prevent further development of suicidal activity. The system also needs to respond to the social dimension of suicide – friends / family members, social groups, sub cultures, people in similar locations – so that targeted suicide prevention is engaging with those who are surrounded by suicidal people. The attention on mental health service provision in suicide prevention is well justified; as with the broader reform of mental health, so too with the health services evaluation should there be attention to consumer experiences of the services, consumer preferences for how these services are offered / provided, and monitoring of the utilisation and adherence to programmes and treatments relevant to mental health and suicide prevention.

5. Social change factors in evaluation will generate knowledge on the extent to which social determinants of suicide are being addressed adequately. Suicide is not evenly spread in Australia: particular social groups are more vulnerable, e.g. Aboriginal and Torres Strait Islander populations especially those in remote areas, farmers and rural residents, Lesbian, Gay, Bisexual, Transgender and Intersex people, people experiencing domestic violence. The case for participatory evaluation with those affected by a social order in suicide prevention is that the solutions to suicide may be generated collaboratively - and that they are unlikely to be generated without the involvement of those experiencing the social dislocation that is to be addressed. Community-based suicide prevention in particular could be focused more on the social determinants of suicide prevention and action to achieve social change at a community level, rather than having community networks attempting to replicate the existing community and health system or take up a 'vigilante' outlook on suicide prevention in an attempt to stop deaths.

6. Social Impact Measurement should feature in the evaluation approach to suicide prevention. These methods combine traditional research data with

evaluation methods and economic appraisal of value. Most importantly, social impact measurement is concerned with social change and development - measuring what difference is made in a programme or service. This is critical for policy stakeholders to make informed choices on suicide prevention strategies and programmes, but also for funding bodies who will be interested in 'return on investment'.

7. Utilise the existing expertise in evaluation. Australia has some of the leading evaluation experts in the world, yet these individuals are not engaged in advising on the evaluation of suicide prevention strategies or programmes. There needs to be a deliberate process of engagement and utilisation of experts within Australia to develop and provide support for evaluation methods that are relevant to suicide prevention. Similarly, the potential to educate and build skills in evaluation through the relevant professional body, the Australasian Evaluation Society should be explored.

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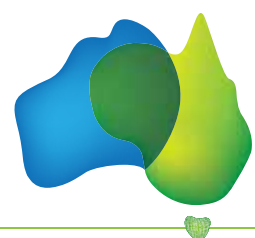
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