

Evidence Check

Suicide postvention services

An **Evidence Check** rapid review brokered by the Sax Institute for NSW Ministry of Health.
September 2019.

This report was prepared by:

Karl Andriessen, Karolina Kryszinska, Kairi Kõlves, Nicola Reavley.

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Contents

List of tables.....	5
Executive summary.....	6
Background.....	6
Review questions.....	6
Summary of methods.....	6
Evidence grading.....	6
Key findings.....	7
Gaps in the evidence	7
Discussion of key findings.....	8
Applicability.....	8
Conclusion	8
Background	9
Magnitude of the problem.....	9
Policy response	10
Postvention services.....	10
Research Questions	12
Question 1.....	12
Question 2.....	12
Methods	13
Peer review literature.....	13
Grey literature.....	15
Findings.....	18
Study characteristics	18
Evidence grading.....	27
Guidelines characteristics.....	31
Question 1.....	41
Question 2.....	46
Gaps in the evidence	49
Discussion	50
Applicability.....	52
Conclusion	53
Appendix	54
References	56

List of tables

Table 1: Summary of included studies	19
Table 2: NHMRC Levels of evidence	27
Table 3: NHMRC matrix to summarize the evidence base	27
Table 4: Summary of study quality	28
Table 5: Summary of guidelines	32
Table 6: Postvention service delivery according to level of impact of suicide	48

Appendix

Table 7: NHMRC Levels of evidence	54
Table 8: NHMRC matrix to summarize the evidence base	55

Executive summary

Background

Suicide is a major public and mental health problem in Australia¹ and worldwide.² Over the last ten years Australia has witnessed a 33% increase of the annual number of suicides, from 2,341 in 2008 to 3,128 in 2017.¹ The increased suicide mortality has also increased the concern for the many bereaved family members, friends and community members.³ Indeed, experiencing bereavement by suicide can be a major stressor, increasing the risks of social, physical and mental health problems (for example, complicated grief, depression, posttraumatic stress), and suicidal behaviour in the bereaved individuals.^{4,5} The impact of suicide on society can be far-reaching. On average, five immediate family members and up to 135 individuals can be exposed to the impact of an individual's suicide.^{6,7} Approximately one in 20 people (4.3%) are impacted by a suicide in any one year, and one in five (21.8%) during their lifetime.⁸

Postvention comprises a concerted response to, and provision of care for, people bereaved by suicide, including those impacted by the suicide of a family member, friend, or a person in their social network such as a colleague or student.^{3,25-27} The Commonwealth and States and Territories suicide prevention policies and documents in Australia recognise the importance of postvention in the overall suicide prevention efforts.^{3,25} Currently, various forms of postvention services are available, such as group support, grief counselling, outreach by agencies and online support.²⁸ However, there is a tension between the need for psychosocial services for people bereaved by suicide^{45,46} and what is known about their effectiveness.^{47-49,53} Despite the devastating and lasting effects a suicide can have on the bereaved and the number of people affected, little is known of what helps bereaved individuals.

Review questions

This Evidence Check review was commissioned by the Sax Institute for the New South Wales Ministry of Health, Australia. This review was designed to answer the following two research questions.

Question 1:

Which suicide postvention service models have been shown to be effective to reduce distress in family, friends and communities following a suicide?

Question 2:

From the models identified in Question 1, what components of suicide postvention services have been determined to contribute to effectiveness?

Summary of methods

We conducted systematic searches of the peer-reviewed and grey literature, including guidelines, published since 2014. Eight research studies⁶³⁻⁷⁰ and 12 guidelines⁷¹⁻⁸² met the inclusion criteria. We assessed the quality of the included studies with two instruments: the National Health and Medical Research Council (NHMRC) Levels of Evidence⁵⁶ and the Quality Assessment Tool for Quantitative Studies.⁵⁷ The guidelines were analysed based on the criteria provided in the Appraisal of Guidelines for Research and Evaluation II (AGREE) Instrument.⁵⁸

Evidence grading

Based on NHMRC Level of evidence⁵⁶, there were two level II studies, two level III-3 studies, and four level IV studies. Three components (evidence-base, consistency and clinical impact) were rated as 'poor', and two components (generalisability and applicability) were rated as 'satisfactory'. The overall study quality was

'weak'.⁵⁷ The evidence base described in ten guidelines^{71,72,74-78,80-82} comprised a combination of literature and an expert advisory group or a consensus procedure.

Key findings

Question 1:

Research studies have found little evidence of effectiveness of interventions. Only five studies reported a positive outcome of their intervention.^{64-66,68,69} A school-based intervention⁶⁹ and two intensive grief psychotherapy programs^{65,66} found improvement in grief scores, including complicated grief.⁶⁶ A school-based intervention⁶⁹ and an online support forum⁶⁸ reported an improvement in mental health scores. A community-based crisis intervention program and an intensive grief therapy program reported decreases in suicidality.⁶⁴⁻⁶⁶ In contrast, other measures in these studies, as well as the measures in the other studies^{63,67,70}, including one Randomised Controlled Trial (RCT)⁶⁷ yielded mixed results regarding grief, mental health or suicidality. Hence, this review found little evidence of effective models of postvention service delivery.

Most guidelines (n = 7) focused on postvention activities in schools or colleges.^{71-74,78,79,81} School postvention guidelines can play an important role in service provision and collaborations with counsellors or mental health services. There were notable differences in their depth. Some covered a wide range of topics and included practical resources, such as templates.^{72,78,79} Three^{76,80,82} of the remaining five guidelines^{75-77,80,82} focused on postvention service delivery: *Support after a suicide: A guide to providing local services*⁸² (UK); *Postvention Australia guidelines*⁸⁰; and the *US National Guidelines*.⁷⁶ Only these three guidelines adopted a theoretical model of postvention service delivery, based on a public health approach.^{76,80,82}

Question 2:

Based on the limited evidence identified in this review, some potentially effective components surfaced, for example: providing a level of support according to impact of the loss, involvement of trained volunteer/peer supporters, and focusing the interventions on grief. These components and the interventions can be understood within a public health approach to postvention.

Gaps in the evidence

Evidence presented in this rapid review is based on research literature⁶³⁻⁷⁰ and guidelines⁷¹⁻⁸², published since 2014, the time window determined by the commissioning agency. There are important gaps regarding effectiveness of interventions for different age and gender groups of people bereaved by suicide. Only one study targeted young people⁶⁹, no study specifically focused on older adults, and men were underrepresented in almost all studies.^{63-68,70} No study addressed Indigenous populations.

Only one study concerned help offered through the Internet⁶⁸. Given the omnipresence of Internet and social media, more research in this area could identify effective postvention interventions and their components. Also, only one study addressed early outreach⁶⁴ and the effect of this approach on suicide bereavement remains unclear. Further, while two psychotherapy studies reported positive findings^{65,66}, one psychotherapy RCT failed to find evidence of effectiveness in comparison to the control group.⁶⁷ Due to lack of control groups, little is known of the effectiveness of potentially effective components such as psychoeducation, sharing experiences, and receiving/providing peer support. While suicide bereavement support groups are widely available, no study in this review examined their effectiveness.

The reviewed guidelines have great potential to inform, support, and complement existing services. Nevertheless, there is a need to increase the evidence-base and implementation of postvention guidelines. Inclusion of target groups and service providers in guideline development should ensure their feasibility and acceptability. Adopting a theoretical model of postvention (for example, public health), training of service providers and scientific evaluation of guidelines (which is currently lacking), should maximise their impact and efficacy.

Discussion of key findings

Five interventions in this review resulted in positive outcomes regarding grief^{65,66,69}, mental health^{68,69}, and suicidality.^{64,66} Considering additional evidence from earlier publications, it seems that social support provided in the community⁹¹, and a professionally led (with involvement of trained volunteers) support group or therapy group program for adults⁸⁶ and for children⁹⁰ may also help people bereaved by suicide.

The components proposed to contribute to positive effects of interventions were concerned with different levels of grief or distress experienced by the person bereaved by suicide, which is in line with public health models of postvention service delivery. For example, informal social support could be beneficial for all people bereaved by suicide.⁷⁰ Those who are affected by suicide without symptoms of posttraumatic stress could benefit from an educational approach.⁶⁹ Peer support, mutual recognition and sharing grief experiences might be helpful for those mildly affected⁶⁸, while those who are highly distressed or at-risk of disordered grief or mental ill health might benefit from specialised psychotherapy.⁶⁵

Additionally, the involvement of trained volunteers who serve as positive role models and peer supporters working alongside mental health professionals might contribute to the effectiveness of support or therapy groups.⁸⁶ Psychoeducation of parents might contribute to the effect of an intervention for bereaved children, enabling them to better support their children.⁹⁰ Similarly, involvement of the wider community might contribute to intervention effectiveness.⁹¹ Also, it seems beneficial to deliver interventions over time (for instance, over eight to ten weeks)^{86,90} or to use manuals or guidelines for interventions.^{66,89,90} Overall, grief specific interventions seem to yield stronger effects than interventions targeting other outcomes.⁵³

Most guidelines, especially school-based guidelines^{71-74,78,79,81} are based on a crisis intervention approach. Nonetheless, an isolated school crisis intervention after a suicide might result in iatrogenic effects, such as increased distress and suicidal behavior in students.⁹² Student suicide has a strong impact on school staff, who often feel ill-equipped to deal with it.⁹³ Hence, it is recommended that school interventions are embedded in a whole-school approach, including suicide prevention and postvention training^{94,95}, and collaboration with specialised community mental health services.⁹⁶

Postvention is considered an important aspect of suicide prevention in Australia^{3,25} and internationally.²⁴ Hence, it is advisable to apply the same public health models to suicide postvention and prevention alike.⁹⁷

Applicability

Although the evidence of effectiveness found in this review is weak, mainly due to a shortage of research, the review identified potentially effective components of postvention. Within the limits of the review, the evidence suggests that postvention can be effective for people bereaved by suicide in New South Wales and Australia. The evidence also suggests that it could be beneficial to frame postvention within a suicide prevention context and a public health approach.

Conclusion

This rapid review found limited evidence of effectiveness of postvention interventions and service delivery, mainly due to a shortage of research, particularly high-quality studies involving control groups. The review included eight research studies reporting on a variety of individual and group interventions⁶³⁻⁷⁰, and twelve guidelines.⁷¹⁻⁸² While this review found substantial knowledge gaps, it also identified potentially effective components of postvention. Adopting a public health framework for postvention service delivery offers the opportunity to tailor support to bereaved individuals according to the impact of suicide on their lives. This can range from information and awareness raising targeting all people bereaved by suicide to specialised psychotherapy for those who experience high levels of grief and symptoms of poor mental health. Such a framework might also align postvention with suicide prevention and mental health programs.

Background

Magnitude of the problem

Suicide is a major public and mental health problem in Australia and New South Wales. Over the last ten years the country has witnessed a 33% increase of the annual number of suicides, from 2,341 in 2008 to 3,128 in 2017.¹ The age-standardised suicide rate (per 100,000 persons) increased from 10.9 in 2008, to 12.6 in 2017¹, which is higher than the global age-standardized suicide rate of 10.5/100,000 persons.² Over the same period, suicide mortality in New South Wales increased from 620 deaths in 2008 to 880 deaths in 2017, representing a rise in the age-standardised suicide rate from 8.8 to 10.9 per 100,000 persons.¹ While the increasing suicide mortality has fuelled calls for evidence-based suicide prevention, concern has also increased for the many bereaved family members, friends and community members.³ Indeed, experiencing bereavement by suicide can be a major stressor, increasing the risks of social, physical, and mental health problems, and suicidal behaviour in the bereaved individuals.^{4,5} The impact of suicide on society can be far-reaching. Studies have shown that an average of five immediate family members, and up to 135 individuals can be exposed to the impact of an individual's suicide.^{6,7} A recent meta-analysis determined that approximately one in 20 people (4.3%) are impacted by a suicide in any one year, and one in five (21.8%) during their lifetime.⁸

Grief is the natural reaction to the loss of a close person such as a family member or a friend.⁹ As with grief due to other causes, grief after suicide can include diverse psychological, physical, and behavioural responses to the death.⁹ Feelings of sadness, yearning, guilt and anger, and physical reactions such as crying, are common grief reactions.⁹ People exposed to a suicide death can be affected to varying degrees. Those who were psychologically close to the person who has died are likely to be more strongly affected than those whose relationships were more distant. Cerel et al.¹⁰ proposed a theoretical continuum of suicide survivorship ranging from those who are merely exposed to a suicide without experiencing an impact on their life, to those who feel affected or distressed, to those who experience intense short or long-term grief reactions.

The course and duration of the grief process after a suicide death may seem similar to grief processes after other causes of death.^{11,12} However, people bereaved by suicide may experience greater shock or trauma related to the unexpected or violent nature of the death¹¹, and more feelings of abandonment, rejection, shame, and struggles with meaning-making and 'why'-questions.¹² They may also experience less social support compared to other forms of bereavement, which may be due both to limited help-seeking or sharing by the bereaved individuals and the inability of the social network to support them.^{4,13}

Suicide bereavement is a risk factor for complicated or prolonged grief.¹⁴ This is expressed through persisting characteristics of acute grief, such as intense longing and ruminative thoughts about the deceased, avoidance of situations related to the loss, and difficulty finding meaning in life.¹⁵⁻¹⁷ Compared with the general population, people bereaved by suicide have a higher risk of suicidal behaviour, and psychiatric problems, such as depression, anxiety, posttraumatic stress disorder, and substance abuse.^{4,18} Having a personal or family history of mental health or suicidal behaviour increases the risks of these problems.^{5,19} People bereaved by suicide are also susceptible to physical illnesses, possibly due to the levels of stress or an unhealthy lifestyle (for example, poor diet or smoking).¹⁹⁻²¹

Recent research has also started to shed light on the phenomenon of personal (or posttraumatic) growth in suicide bereavement.²² This has been defined as the positive psychological changes experienced by an individual as the result of inner struggles after a traumatic experience.²³ While the research into positive

personal transformations in the context of suicide bereavement is still new, it reveals that the aftermath of suicide is not always simply deleterious, and personal growth is possible.

In summary, loss by suicide can have serious and lasting psychosocial effects on the bereaved individuals and communities. Their needs are complex and variegated, necessitating a concerted provision of support.

Policy response

The Commonwealth and states and territories suicide prevention policies and documents in Australia recognise the importance of postvention in the overall suicide prevention efforts and the involvement of the bereaved in shaping these actions. According to the *Fifth National Mental Health and Suicide Prevention Plan*³, suicide prevention efforts call for a broad approach involving a range of sectors, and targeting various settings, populations and risk groups. Postvention, that is, an improved response to and caring for people affected by suicide, is an element of a systems-based approach informing the Fifth Plan³, originally based on the World Health Organization's seminal *Preventing suicide: a global imperative report*.²⁴ The Fifth Plan promises that "there will be improved postvention support for carers, families and communities affected by suicide" (p. 25).³

The voices of people bereaved by suicide have been included in the development of the *Strategic Framework for Suicide Prevention in NSW 2018–2023*.²⁵ Postvention programs and services which are "co-designed, inclusive, coordinated and integrated" (p. 11)²⁵ are included under one of the five goals of the Framework, along with suicide prevention and intervention initiatives. The Framework's Priority Area 2 involves strengthening the community response to suicide and points to the needs of communities to be able to respond to bereaved people. People bereaved by suicide may be at increased risk of suicide themselves and require timely and effective support, such as grief counselling and advice on how to find relevant services. Promotion of "community-based postvention support, tools and resources for families and communities" (p. 26)²⁵ after a suicide is one of the important actions that require immediate attention of the NSW Government. Further, the NSW Framework recognises the potential of a professionalised suicide prevention peer workforce, comprising people bereaved by suicide, to reduce the number of suicides.²⁵

Postvention services

It has long been recognised that people bereaved by suicide have diverse psychosocial and health needs²⁶ and that effective postvention, that is, suicide bereavement support, is a major public and mental health challenge. Andriessen defined postvention as "those activities developed by, with, or for suicide survivors, in order to facilitate recovery after suicide, and to prevent adverse outcomes including suicidal behaviour" (p. 43).²⁷

Since the 1960s, various forms of postvention services and support programs have been developed. These include group support, grief counselling, outreach by agencies and online support.²⁸ Some postvention programs are focused on specific settings such as schools²⁹, workplaces³⁰ and faith communities³¹, while other initiatives aim to provide support to the broader community.³² Historically, most postvention services were initiated by the bereaved people themselves, followed by involvement of professionals.³³ Originally scarce, in recent years progress has been made regarding the availability of postvention services both internationally and in Australia (<https://postventionaustralia.org/finding-support/>; <http://www.supportaftersuicide.org.au/find-related-organisations>).²⁸

Suicide bereavement support groups are the most widely available postvention services. Frequently initiated by people bereaved by suicide, they are often based on the principles of sharing experiences and offering mutual assistance, thereby reducing distress and risk of mental and emotional problems.³⁴ Support groups can be facilitated by survivors, mental health professionals, or a combination of both.³⁴ While 'open' groups are ongoing and accept new members, 'closed' groups meet for a predetermined number of times with the same participants.^{33,34}

Some people bereaved by suicide experience emotional (e.g. shame) or physical barriers (e.g. limited availability of services) to contacting a support group. Anticipating such barriers, some organisations have developed an outreach approach²⁸ in which the service contacts the bereaved person after being notified of a suicide by the police or the coroner's office.³⁵ Such a proactive approach has a potential to improve the collaboration between first-responders such as police and suicide bereavement services. It may also decrease the time elapsed between the suicide and the start of support being received, though the effect of the outreach approach on the grief process remains unknown.^{36,37}

The Internet has become a major source of suicide bereavement information and support provided via websites, discussion forums, social media and online memorials.³⁸ Compared to face-to-face support, users of online services may have more control over the process and content of the interventions, which may be particularly important for people who feel stigmatized or are reluctant to access other forms of support. However, dropout rates tend to be higher online relative to interventions provided face-to-face.³⁹ As in face-to-face support groups, participants in online forums or groups can share personal stories, which may help to normalize their grief experiences.³⁸ They can also find and provide empathy, mutual support and hope through the exchange of resources or advice.⁴⁰

In some countries, support groups and other suicide bereavement services have created national networks or associations, such as the Suicide Loss Division of the American Association of Suicidology in the USA (<https://www.suicidology.org/>), the Support After Suicide Partnership in the UK⁴¹ (<http://supportaftersuicide.org.uk/>), and Postvention Australia⁴² (<https://postventionaustralia.org/>). There is also increasing international collaboration, for example, through the Special Interest Group on Suicide Bereavement and Postvention of the International Association for Suicide Prevention (<https://www.iasp.info/>). Some of these organizations have developed guidelines on how to facilitate a support group⁴³, or national guidelines for suicide bereavement support.⁴⁴

Overall, there is a tension between the need for psychosocial services for people bereaved by suicide^{45,46} and what is known about their effectiveness.⁴⁷⁻⁴⁹ Indeed, despite the devastating and lasting effects a suicide can have on people bereaved by suicide and the number of people affected, little is known about what services and supports are effective. Postvention has been recognized as an important suicide prevention strategy in Australia^{3,25} and world-wide.²⁴ Still, most research has been focused on the characteristics of suicide bereavement rather than on effectiveness of interventions.⁵⁰⁻⁵² Our recent systematic review of grief and psychosocial interventions for people bereaved through suicide, which included only controlled studies, found mixed evidence of effectiveness of interventions.⁵³ Clearly, further examination of the quality of postvention research, levels of evidence, and potentially effective postvention components, is needed.

Research Questions

This Evidence Check review was commissioned by the Sax Institute for the NSW Ministry of Health, Australia. Evidence Check reviews are rapid reviews designed to answer specific policy or program questions and are reported in a policy friendly format. This review was designed to answer the following two research questions.

Question 1

Which suicide postvention service models have been shown to be effective to reduce distress in family, friends and communities following a suicide?

Question 2

From the models identified in Question 1, what components of suicide postvention services have been determined to contribute to effectiveness?

In line with the information provided by the commissioning agency, we defined a “suicide postvention service model” as a “coordinated approach to providing support to people impacted by the death of a family member, friend or person in a network (such as a school, nursing home, workplace) through suicide”.

Methods

Peer review literature

Search strategy

We developed the search strategy of this rapid review based on experiences of our team in conducting rapid and systematic reviews (Andriessen et al.⁵³; Krysinaka et al.⁵⁴). We trialed different search words and databases before deciding on the best constellation of search words and databases. In line with the PRISMA guidelines⁵⁵ (<http://www.prisma-statement.org/>), we conducted systematic searches of the following databases: Medline, PsycINFO, Embase and EBM Reviews, which includes ACP Journal Club (ACP), Cochrane Central Register of Controlled Trials (formerly Cochrane Controlled Trials Register-CCTR) (CENTRAL), Cochrane Database of Systematic Reviews (CDSR) and Database of Abstracts of Reviews of Effects (DARE). All databases were accessed through Ovid. The search string in Medline comprised a combination of MeSH and keywords:

(bereavement/ OR bereavement.mp OR grief/ OR grief.mp OR mourning.mp) AND (family/ OR friends/ OR friends.mp OR acquaintance.mp OR students/ OR student.mp OR schools/ OR school.mp OR survivor.mp OR suicide survivor.mp) AND (counseling/ OR counseling.mp OR intervention.mp OR postvention.mp OR psychotherapy/ OR psychotherapy.mp OR support group.mp OR self-help groups/ OR social media/ OR social media.mp OR internet/ OR internet.mp) AND (suicide/ OR suicide.mp OR suicide cluster.mp).

We applied the same search string in the other databases using subject headings and keywords.

The search was undertaken in April 2019, was not limited by language, and comprised the years 2014 to 2019. Two researchers (KA, KKr) independently assessed titles and abstracts for eligibility. We resolved any disagreement through discussion. Potentially relevant studies were examined against the inclusion and exclusion criteria. The references of retrieved papers and existing reviews were hand searched to identify additional studies. Figure 1 presents the search and selection process.

Inclusion and exclusion criteria

Original studies published in peer-reviewed journals were included if: (1) the study population consisted of people bereaved by suicide, (2) the study applied quantitative, qualitative or mixed-methods, and (3) the study reported data regarding effects of interventions or service delivery on the study population. The review excluded studies: (1) not on suicide bereavement, (2) not providing original data (such as review papers), (3) not reporting on suicide postvention services, and (4) where full-text materials were not available (such as conference abstracts).

Data extraction

Two researchers (KA, KKr) independently extracted the following data from the selected studies: study reference including author, year and location (country), study design, assessments, sample size, participants' age and sex distribution, participants' relationship to the deceased and time since the bereavement, type (individual, family, group), characteristics and setting of the intervention, outcome measures and names of the instruments used, main outcomes of the study and study limitations. Any disagreement was resolved through discussion.

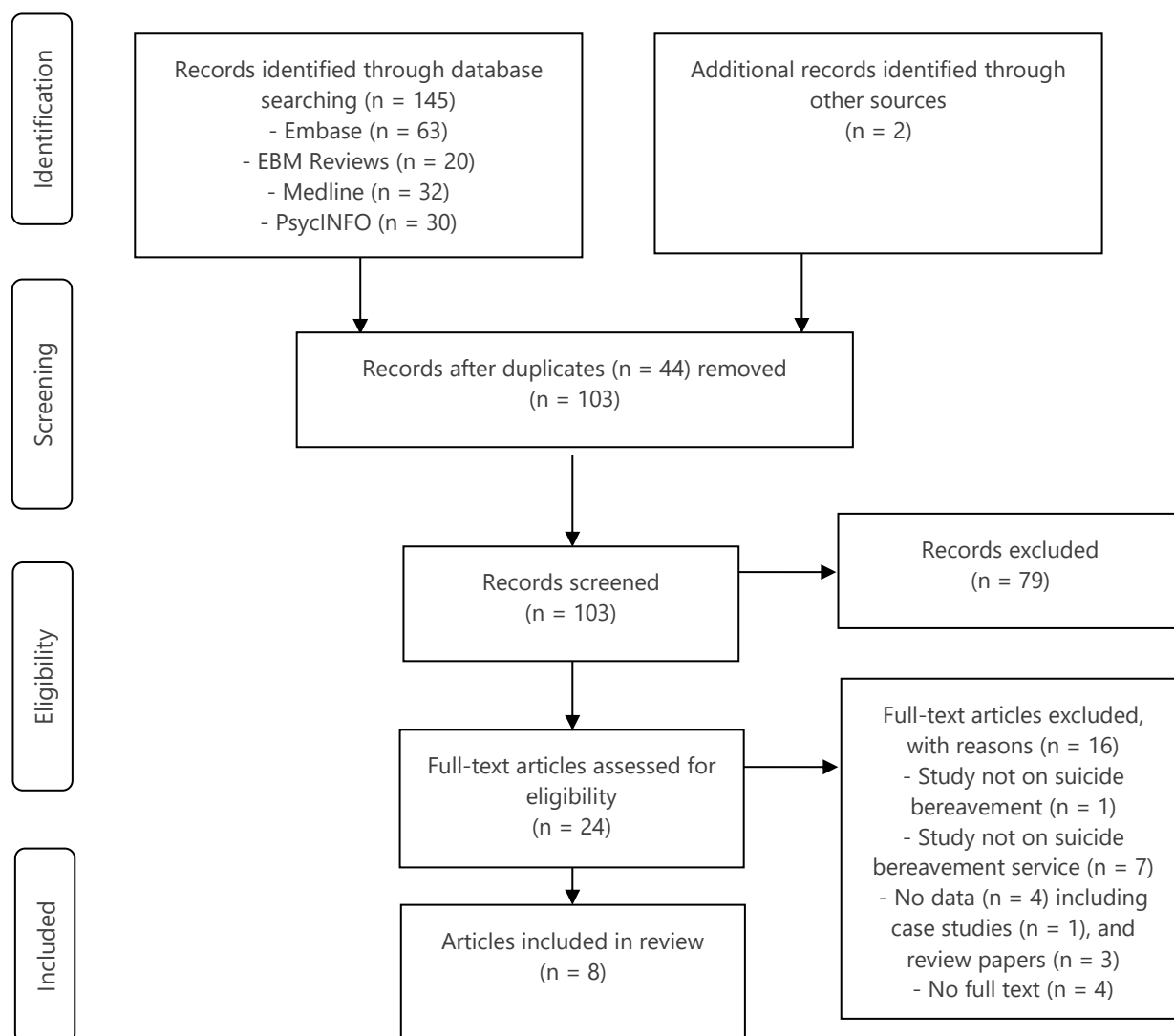


Figure 1: PRISMA Flow Diagram

Evidence grading

We assessed the quality of the included studies using two instruments: the National Health and Medical Research Council (NHMRC) Levels of Evidence⁵⁶ and the Quality Assessment Tool for Quantitative Studies.⁵⁷

The NHMRC Levels of Evidence comprises six levels of evidence based on the design of the study (Appendix 1, Table 7). Systematic reviews of randomized controlled trials (RCTs) are considered the highest level of evidence (Level I). Case series, with post-test or pre- and post-test outcomes are at the bottom of the evidence hierarchy (Level IV). The NHMRC instrument also requires a summary of the body of evidence of five components: evidence-base (e.g., number and quality of the studies), consistency of findings across studies, clinical impact, generalizability of findings, and applicability in the Australian or local context (Appendix 1, Table 8). Two researchers (NR, KA) independently assessed the levels of evidence, and settled any disagreement through discussion.

The Quality Assessment Tool for Quantitative Studies⁵⁷ comprises six components (selection bias, study design, confounders, blinding, data collection methods, and withdrawals and dropouts) which are scored as 'strong', 'moderate' or 'weak'. Complying with the instructions of the instrument, the total rating of a study was strong if none of its components were rated weak. We rated a study as moderate if only one of its

components was rated as weak and rated a study as weak if two or more of its components were rated as weak.⁵⁷ In addition, the instrument assesses the integrity of the intervention and analyses (for example, analysis by intention to treat status). Two researchers (KKr, KA) independently assessed the quality of the included studies and settled any disagreement through discussion.

Grey literature

Search strategy

In consultation with the commissioning agency it was decided to include searches for guidelines for postvention service delivery in the grey literature searches. Guidelines are usually defined as information on how something should be done.⁵⁸ More specifically, clinical practice guidelines are defined as “systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances”.⁵⁸ As such, guidelines differ from general advice or a list of resources.

We developed a search strategy based on previous experiences of our team^{54,59} and indications from the literature.⁶⁰⁻⁶² The searches were conducted in April 2019 in Google Chrome. For each search term we opened a new page using Guest Mode to avoid the problem that browser histories affected the results. We used the following search terms:

‘suicide bereavement support’, ‘suicide loss support’, ‘suicide survivor support’, ‘effective suicide bereavement support’, ‘effective suicide loss support’, ‘effective suicide survivor support’, ‘suicide bereavement service’, ‘suicide loss service’, ‘suicide survivor service’, ‘effective suicide bereavement service’, ‘effective suicide loss service’, ‘effective suicide survivor service’, ‘postvention support’, ‘postvention service’, ‘effective postvention support’, ‘effective postvention service’, ‘support after suicide’, ‘help after suicide’, ‘effective support after suicide’, ‘effective help after suicide’, ‘postvention guidelines’, ‘suicide loss guidelines’ and ‘suicide bereavement guidelines’.

Research regarding how people search for health-related information on the Internet shows that most people only access links provided on the first page^{60,61}, and that the proportion of people viewing the first page only has increased over the years.⁶² To capture the research on services and guidelines that are readily available to the public, and to be thorough in the grey literature searches, we retained the results of the first two pages per search term. As such, the searches aimed to identify as many research publications and best-practice guidelines as possible, while confining the leads to a manageable number.

In addition to the Google Chrome searches, we consulted the national repositories of suicide prevention resources in the English-speaking countries. We used the country list provided by the commissioning agency in the research proposal as a guide and focused on these as the review concerns English language studies and guidelines only. We searched the following repositories:

- The Suicide Prevention Hub, Australia (<https://suicidepreventionhub.org.au/>)
- National Office for Suicide Prevention, Ireland (<https://www.hse.ie/eng/services/list/4/mental-health-services/nosp/>)
- Support After Suicide Partnership, UK (<http://supportaftersuicide.org.uk/>)
- Suicide Prevention Resource Center, USA (<https://www.sprc.org/resources-programs>)
- Centre for Suicide Prevention, Canada (<https://www.suicideinfo.ca/>)
- Mental Health Foundation, New Zealand (<https://www.mentalhealth.org.nz/>).

Two researchers (KKo, KA) independently assessed the leads for eligibility. Any disagreement was resolved through discussion or the involvement of a third researcher (KKr). Figure 2 summarizes the search and selection process for the grey literature.

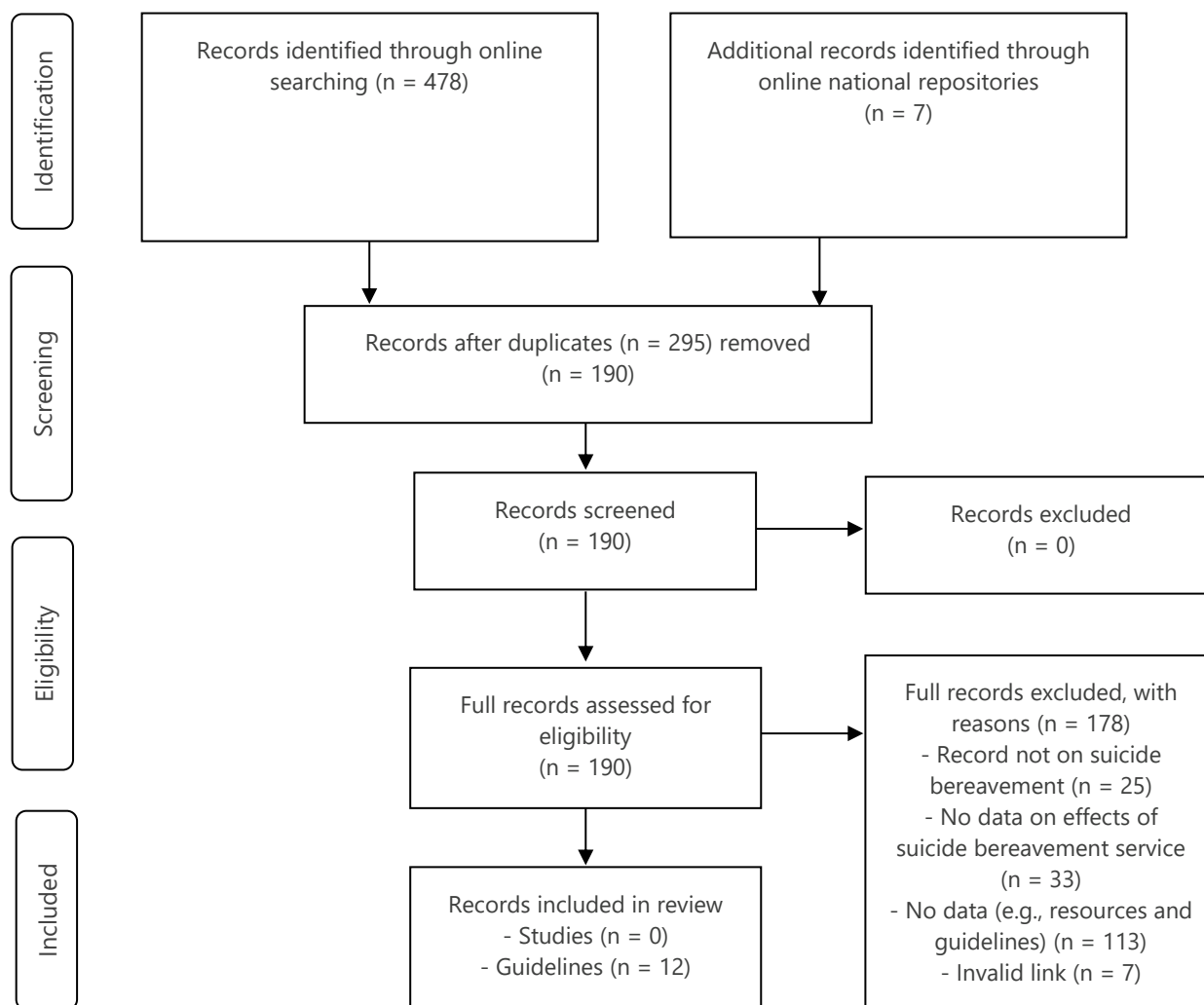


Figure 2: PRISMA Flow Diagram: Grey literature

Inclusion and exclusion criteria

We adapted the inclusion and exclusion criteria of the peer-reviewed literature (above) to the search of the grey literature. Studies in webpages were included if: (1) they reported on a study population consisting of people bereaved by suicide, (2) the study applied quantitative, qualitative or mixed-methods, and (3) reported data regarding effects of interventions or service delivery on the study population. The review excluded studies: (1) not on suicide bereavement, (2) not providing original data of effects of interventions (for example, presenting case histories or description of services), (3) not reporting on suicide postvention services (for example, webpages limited to written resources, links, or referral addresses), and (4) invalid links.

The grey literature review included guidelines published since 2014 if: (1) they self-identified as 'guidelines' and/or (2) comprised a structured set of statements on how an organization or a service can provide help to individuals bereaved by suicide. The review excluded documents (1) comprising a collection of resources, and (2) providing general advice on how to support a person bereaved by suicide or self-care information for the bereaved.

Data extraction

The grey literature search did not identify any studies not previously identified through the peer-review literature searches. Based on the criteria provided in the 'Appraisal of Guidelines for Research and Evaluation

II' (AGREE) Instrument⁵⁸, two researchers (KA, KKr) independently extracted the following data from guidelines included in the review: reference including title, author, year and location (country), target users, target population, whether objectives and methods of development were described, if target users were involved in the development, whether the evidence-base of the guidelines and the theoretical model of postvention were described, and whether key recommendations or sample material, such as templates, were included. We resolved any disagreement through discussion.

Findings

Study characteristics

Eight papers published since 2014 met the inclusion criteria and were included in the review (Table 1).⁶³⁻⁷⁰ Two studies were conducted in Australia^{63,64}, two in the USA^{65,66}, two in Belgium⁶⁷ (including one⁶⁸ also conducted in the Netherlands), and one each in Korea⁶⁹ and Italy.⁷⁰ There were two RCTs^{66,67}, two pre- and post-designs without control group^{68,70}, two prospective designs without control groups^{65,69}, and two retrospective descriptive, cross-sectional studies.^{63,64}

Seven studies^{63-68,70} focused on adult populations and one on young people (high school students).⁶⁹ While some studies (see Supiano et al.⁶⁵; Zisook et al.⁶⁶) included older adults, no study specifically focused on them. Apart from the study of Cha et al.⁶⁹, female participants outnumbered male participants, with the proportion of female participants ranging from 80% to 91%. The study populations consisted mainly of first-degree family members^{63,64,66-68,70}, though most studies also included other relatives and non-relatives.^{64,66-70} Time since loss in study participants varied considerably between studies, ranging from one week⁶⁹ to between 3 months and 30 years.⁷⁰ Reported mean time since loss ranged from M = 9.8 months (SD 5.7)⁶⁷ to M = 5.96 years (SD 3.7).⁶³

The interventions were conducted in a variety of settings: clinical⁶⁵⁻⁶⁷, community-based^{63,64}, residential⁷⁰, school⁶⁹ and online.⁶⁸ Three studies involved a group intervention^{63,65,67}, three studies involved an individual intervention^{64,66,68} and two studies involved a combination of group and individual interventions.^{69,70} Two interventions were described as manualized.^{65,66} Three interventions targeted individuals early in the grief process.^{64,67,69} Duration of intervention and the timing of participant assessment varied considerably between studies, ranging from assessment shortly after the intervention (for instance, Peters et al.⁶³; Scocco et al.⁷⁰) to assessment at 12-months follow-up.⁶⁸

Studies differed regarding outcomes measured and instruments used. Most studies applied mental health measures, three studies^{64,66,68} measured suicidality and three studies did not assess grief.^{63,64,70} No single measure was used in more than one study.

Table 1: Summary of included studies

Study reference, Location	Study design, assessment	Level of evidence (NHMRC grade)	Sample Intervention / control N = ... Age: M (SD) or range Sex: F/M: n/n (%/%)	Intervention, Setting	Outcome measures	Main outcomes	Limitations
<p>Cha et al. (2018)⁶⁹. Five months follow-up study of school-based crisis intervention for Korean high school students who experienced a peer suicide. <i>Journal of Korean Medical Science</i>, 33(28), e192</p> <p>Korea</p>	<p>Prospective cohort study</p> <p>Assessment: -Baseline: 1 week after suicide -Follow-up at 5 months</p>	III-3	<p>N = 956 F/M: 506/450 (53%/47%)</p> <p>Trauma-symptom group (CROPS \geq 19) N = 83</p> <p>Age: M = 17.1 (SD 0.8)</p> <p>F/M: 57/26 (69%/31%)</p> <p>Non-trauma group (CROPS < 19) N= 873</p> <p>Age: M = 16.9 (SD 0.8)</p> <p>F/M: 449/424 (51%/49%)</p>	<p>A school-based crisis intervention program conducted one week after a peer suicide. Program included screenings, educational sessions, and further interview with psychiatric specialists for the trauma-symptom group.</p> <p>Setting: School</p>	<p>Posttraumatic stress symptoms: -Child Report of Posttraumatic Symptoms (CROPS) -The University of California at Los Angeles posttraumatic stress disorder (PTSD) reaction index (UCLA-PTSD-RI)</p> <p>Anxiety symptoms: Korean-Beck Anxiety Inventory (K-BAI)</p> <p>Depressive symptoms: Korean-Beck Depression Inventory-II (K-BDI-II)</p> <p>Complicated grief: Inventory of Complicated Grief (ICG)</p>	<p>Significant differences in CROPS, UCLA-PTSD-RI, K-BAI, K-BDI-II, and ICG scores between baseline and follow-up in both groups. Scores of the 'trauma' group dropped more compared to the non-trauma group</p> <p>At follow-up 2.9% of students were in the 'trauma' group vs 8.6% at baseline</p> <p>A higher proportion of female students showed posttraumatic stress symptoms than male students</p>	<p>Timing of follow-up determined by school circumstances</p> <p>Various psychosocial factors not examined, such as level of psychological closeness between the deceased and the students, social support, family functioning, or pre-existing psychopathology</p> <p>No unexposed control group</p>

Study reference, Location	Study design, assessment	Level of evidence (NHMRC grade)	Sample Intervention / control N = ... Age: M (SD) or range Sex: F/M: n/n (%/%)	Intervention, Setting	Outcome measures	Main outcomes	Limitations
Kramer et al. (2015) ⁶⁸ . The mental health of visitors of web-based support forums for bereaved by suicide. <i>Crisis</i> , 36(1), 38-45 Belgium, and The Netherlands	Pre-/post study Mixed methods: self-reported measures and interviews Assessment: -Baseline -Follow-up at 6 and 12 months -Interviews with selected sample after 12 months	IV	N = 270 Age: M = 42.9 (SD 12.4) F/M: 238/32 (87%/13%) Interview subgroup: n = 29 Age: M = 45.3 (SD 10.8) F/M: 26/3 (90%/10%)	Two government-funded web-based peer support forums for the bereaved by suicide. Site visitors can read and/or post messages about a specific topic The two forums were similar in terms of layout, structure, and most of the predefined sub-forums Setting: Online	Well-being: WHO-Five Well-being Index (WHO-5) Symptoms of depression: Center for Epidemiological Studies Depression Scale (CES-D) Complicated grief: Inventory of Traumatic Grief (ITG) Suicide risk: subscale of the MINI-International Neuropsychiatric Interview (MINI-Plus) Semi-structured interview about experiences with forum	Significant improvement in well-being and depressive symptoms (both $p < .001$). Small to medium pre-post effect sizes for well-being (6 months: $d = 0.24$, 12 months: $d = 0.36$), and small for depressive symptoms (6 months: $d = 0.18$, 12 months: $d = 0.28$) No change in grief symptoms ($p = .08$, 6 months: $d = 0.05$, 12 months: $d = 0.12$) No change in suicide risk (baseline: 20.8%. 12 months: 17.2%) Main reasons for visiting online fora: sharing with peers, finding recognition	Sample: online help-seeking, self-selected, mostly female Self-report measures subject to recollection bias High drop-out rate (43%) Dutch forum was launched 1 month before recruitment started, was not yet at its full capacity No control group

Study reference, Location	Study design, assessment	Level of evidence (NHMRC grade)	Sample Intervention / control N = ... Age: M (SD) or range Sex: F/M: n/n (%/%)	Intervention, Setting	Outcome measures	Main outcomes	Limitations
Peters et al. (2015) ⁶³ . The Lifekeeper Memory Quilt: evaluation of a suicide postvention program. Death Studies, 39(6), 353-359 Australia	Retrospective study Mixed-methods: self-reported measures (online or hard copy) and interviews Assessment: shortly after intervention	IV	N = 82 Age: 75% over age 45 F/M: 75/7 (91%/9%) Interview subgroup: n = 30	The Lifekeeper Memory Quilt Project, implemented by the Suicide Prevention-Bereavement Support Services of the Salvation Army in 2008 to provide support for the bereaved by suicide and to create greater public awareness of suicide Setting: Community-based	Participants' Evaluation of Quilt (PEQ-16): 16-item scale developed for the study to measure participant satisfaction Semi-structured interview about participants' experiences with project	High participant satisfaction (M 69.6; SD 9.1) According to 48%, one year after the loss was the best time for participating Approx. 92% rated the Quilt project as helpful or extremely helpful Qualitative analysis of the interviews found four themes: healing, creating opportunity for dialogue, reclaiming the real person, and raising public awareness	Sample: mostly female, self-selected (55% response rate) People who participate in Quilt projects not necessarily representative Grief was not assessed Descriptive study No control group
Scocco et al. (2019) ⁷⁰ . Mindfulness-based weekend retreats for people bereaved by	Pre-/post study Assessment:	IV	N = 61 Age: M = 49.5 (SD 11.0) F/M: 49/12 (80%/20%)	A support program of mindfulness-based residential weekend retreats, including	Mindfulness experiences: -Five-Facet Mindfulness Questionnaire (FFMQ) -Self-Compassion Scale (SCS)	Significant improvement over time in almost all dimensions of the POMS (mood states).	Sample: mostly female, help-seeking, self-selected participants

Study reference, Location	Study design, assessment	Level of evidence (NHMRC grade)	Sample Intervention / control N = ... Age: M (SD) or range Sex: F/M: n/n (%/%)	Intervention, Setting	Outcome measures	Main outcomes	Limitations
suicide (Panta Rhei): A pilot feasibility study. <i>Psychology and Psychotherapy</i> , 92(1), 39-56 Italy	-Baseline: 4–6 days before intervention -Post: 4–6 days after			emotion- and grief-oriented exercises Setting: Residential, group	Dimensions of affect: Profile of Mood States (POMS)	No change in the dimensions of the SCS and FFMQ Compared with first-time participants, the multiple-participation group showed significant improvements over time on the Self-kindness subscale of the SCS and Non-judging subscale of the FFMQ	Preferable, participants had attended self-help group/ counseling Unclear if observed effects were related to intervention or group effects Grief was not assessed No follow-up data No control group
Supiano et al. (2017) ⁶⁵ . The transformation of the meaning of death in complicated grief group therapy for	Prospective, observational study Analysis of the process of individual	IV	N = 21 Age: M = 53 (range 34–73) F/M: 15/6 (71%/29%)	Complicated grief group therapy (CGGT): a multimodal, manualised group psychotherapy,	Meaning reconstruction in grief: -Meaning of Loss Codebook (MLC) -Grief and Meaning Reconstruction Inventory (GMRI)	Therapy facilitated resolution of complicated grief symptoms and integrated memory of the deceased	Sample: small and mostly female Sample limited to people bereaved by suicide with complicated grief

Study reference, Location	Study design, assessment	Level of evidence (NHMRC grade)	Sample Intervention / control N = ... Age: M (SD) or range Sex: F/M: n/n (%/%)	Intervention, Setting	Outcome measures	Main outcomes	Limitations
<p>survivors of suicide: A treatment process analysis using the meaning of loss codebook. <i>Death Studies</i>, 41(9), 553-561</p> <p>USA</p>	<p>participant change in three complicated grief therapy groups</p>			<p>with 2-hours sessions over 16 weeks</p> <p>Setting: Clinical, group</p>		<p>The MLC codes captured most of the statements of participants, helped articulating the therapeutic process, and showed that CGGT facilitated grief</p> <p>Some participants continued to experience physical distress, depression or anxiety, even with improved self-care</p>	<p>Findings may only be generalizable to persons seeking intensive psychotherapy</p> <p>No control group</p>
<p>Visser et al. (2014)⁶⁴. Evaluation of the effectiveness of a community-based crisis intervention program for people bereaved by suicide. <i>Journal of Community Psychology</i>, 42(1), 19-28</p>	<p>Retrospective cross-sectional study</p> <p>Assessment: after intervention (unspecified)</p>	III-3	<p>Intervention: N = 90</p> <p>Age: M = 45.7 (SD 15.8)</p> <p>F/M: 73/17 (82%/18%)</p> <p>Control: N = 360</p> <p>Age: M = 40.1 (SD 13.4)</p> <p>F/M: 311/49</p>	<p>Face-to-face outreach and telephone support provided by a professional crisis response team. The service then develops a customized plan, referring clients to other community</p>	<p>Quality of life: -EQ-5D™ -ICECAP index of capability</p> <p>Psychological distress: Kessler Psychological Distress Scale (K6)</p> <p>Suicidality: Suicidal Behaviors</p>	<p>Standby clients scored better on levels of suicidality (p = .006)</p> <p>No significant differences on other scales or health care usage</p>	<p>Sample: self-selected, mostly female</p> <p>Low response rate of clients (23%)</p> <p>Significant sociodemographic differences between the two groups</p>

Study reference, Location	Study design, assessment	Level of evidence (NHMRC grade)	Sample Intervention / control N = ... Age: M (SD) or range Sex: F/M: n/n (%/%)	Intervention, Setting	Outcome measures	Main outcomes	Limitations
Australia			(88%/11%)	services matched to their needs. The service is provided only to people who request it Setting: Community-based	Questionnaire-Revised (SBQ-R) Work performance: World Health Organization Health and Work Performance Questionnaire (HPQ) Health care usage questions		Grief was not assessed Observational design, no control of confounding variables such as age of bereaved, time since death, and other treatments sought by participants
Wittouck et al. (2014) ⁶⁷ . A CBT-based psychoeducational intervention for suicide survivors: a cluster RCT. <i>Crisis</i> , 35(3), 193-201 Belgium	Cluster RCT Assessment: -Baseline -8 months after study entrance	II	Intervention: N = 47 Age: M = 49.3 (SD 13.8) F/M: 38/9 (81%/19%) Control/No treatment: N = 36 Age: M = 47.6 (SD 12.8)	Cognitive-behavioral therapy-based psychoeducational intervention, facilitated by clinical psychologists at participants' home	Complicated grief: Inventory of Traumatic Grief, Dutch version (ITG) Depressive symptoms: Beck Depression Inventory (BDI-II-NL) Hopelessness: Beck Hopelessness Scale (BHS)	No significant effect on the development of complicated grief reactions, depression, and suicide risk factors Secondary outcomes: Decrease in intensity of grief, depression, passive coping style, social support seeking and behavioural expression of	Sample: small, mostly female sample, possibly subject to selection bias Findings may only be generalizable to bereaved persons at-risk of complicated grief

Study reference, Location	Study design, assessment	Level of evidence (NHMRC grade)	Sample Intervention / control N = ... Age: M (SD) or range Sex: F/M: n/n (%/%)	Intervention, Setting	Outcome measures	Main outcomes	Limitations
			F/M: 25/11 (69%/31%)	2 hr sessions, 4 sessions, frequency not reported Setting: Clinical, group/family	Secondary outcomes: -Grief Cognitions Questionnaire (CGQ) -Utrecht Coping List (UCL)	negative feelings in intervention group only (all p < .05)	and/or seeking psychotherapy
Zisook et al. (2018) ⁶⁶ . Treatment of complicated grief in survivors of suicide loss: A HEAL report. <i>Journal of Clinical Psychiatry</i> , 79, 17m11592 USA	RCT Assessment: -Baseline -Monthly -At week 20	II	Total: N = 395 -Suicide bereaved (SB): n = 58 -Accident/ homicide (AH): n = 74 -Natural causes (NC): n = 263 Randomized in 4 groups: medication, placebo, CGT + medication, CGT + placebo Age: SB: M = 47.2 (SD 14.1) AH: M = 51.6 (SD 14.8) NC: M = 54.6 (SD 14.2) F/M: SB: 48/10 (82%/17%)	Manual-based structured Complicated Grief Therapy (CGT), facilitated by social workers, psychiatrists, psychologists Antidepressant medication (citalopram) with individual follow-up CGT: 16 sessions over 20 weeks Medication: 12-week with 2–4	Psychiatric symptoms: Structured Clinical Interview for DSM-IV-TR Axis 1 (SCID-1) Complicated grief: -Complicated Grief Clinical Global Impressions Scale-Improvement (CG-CGI-I) -Inventory of Complicated Grief (ICG) -Structured Clinical Interview for Complicated Grief (SCI-CG) -Grief-Related Avoidance Questionnaire (GRAQ)	CGT was effective in all bereaved groups regarding CG symptom severity, suicidal ideation, grief-related functional impairment, avoidance and maladaptive beliefs Lower improvement on clinician-rated CG-CGI-I in SB vs AH and NC groups (p < 0.5) CGT seemed acceptable treatment in all groups Low acceptability of medication-only treatment	Sample: Underpowered to examine cause of death as a moderator and other possible interactions, for example related to socio-demographic variables High dropout rate in medication only subgroup Heterogeneity within cause of death subgroups

Study reference, Location	Study design, assessment	Level of evidence (NHMRC grade)	Sample Intervention / control N = ... Age: M (SD) or range Sex: F/M: n/n (%/%)	Intervention, Setting	Outcome measures	Main outcomes	Limitations
			AH: 56/18 (76%/24%) NC: 204/59 (78%/22%)	weekly visits until week 20 Setting: Clinical, individual	Suicidality: Columbia Suicide Severity Rating Scale-Revisited (C-SSRS-R) Impaired relationships: Work and Social Adjustment Scale (WSAS) Cognitions: Typical Beliefs Questionnaire (TBQ)		No no-treatment control group

Evidence grading

Tables 2 and 3 summarise the rating of the reviewed studies according to the NHMRC levels of evidence.⁵⁶ There were two level II studies, two level III-3 studies and four level IV studies (Table 2). Looking at the five components in detail, three were rated as 'poor' (evidence-base, consistency, and clinical impact), and two were rated as 'satisfactory' (generalisability and applicability) (Table 3).

Table 2: NHMRC Levels of evidence

Study	NHMRC Level of evidence
Cha et al., 2018 ⁶⁹	III-3
Kramer et al., 2015 ⁶⁸	IV
Peters et al., 2015 ⁶³	IV
Scocco et al., 2019 ⁷⁰	IV
Supiano et al., 2017 ⁶⁵	IV
Visser et al., 2014 ⁶⁴	III-3
Wittouck et al., 2014 ⁶⁷	II
Zisook et al., 2018 ⁶⁶	II

Table 3: NHMRC matrix to summarize the evidence base

Component	Rating
Evidence base	D (Poor)
Consistency	D (Poor)
Clinical impact	D (Poor)
Generalisability	C (Satisfactory)
Applicability	C (Satisfactory)

Table 4 summarizes the study quality according to the six components of the Quality Assessment Tool for Quantitative Studies.⁵⁷ The overall study quality was weak. One study received a rating of 'strong' on four components⁶⁷, one study on three components⁶⁶, and one study on two components.⁶⁵ The other studies were rated 'strong' on only one component.^{63,64,68-70} Selection bias, blinding, and withdrawals and dropouts were the weakest components across studies. Two studies used randomized designs^{66,67}; however, no studies reported the use of an intention-to-treat analysis. All studies appeared to have used valid and reliable measures. However, it is unknown if studies measured consistency of intervention (except for Supiano et al.⁶⁵ and Zisook et al.⁶⁶) or controlled for effects of other treatments (for example, by a family doctor) which participants might have been receiving.

Table 4: Summary of study quality

Quality criteria ⁵⁷	Cha et al. (2018) ⁶⁹	Kramer et al. (2015) ⁶⁸	Peters et al. (2015) ⁶³	Scocco et al. (2019) ⁷⁰	Supiano et al. (2017) ⁶⁵	Visser et al. (2014) ⁶⁴	Wittouck et al. (2014) ⁶⁷	Zisook et al. (2018) ⁶⁶
A. Selection bias								
Representativeness	Somewhat likely	Not likely	Not likely	Not likely	Not likely	Not likely	Not likely	Not likely
Percentage agreed	Can't tell	Can't tell	< 60%	Can't tell	Can't tell	< 60%	80-100%	Can't tell
Rating	Moderate	Weak	Weak	Weak	Weak	Weak	Weak	Weak
B. Study design								
Study design type	Cohort	Cohort	Other	Cohort	Other	Other	RCT	RCT
Described as randomized?	No	No	No	No	N.a.	No	Yes	Yes
Method of randomization described?	N.a.	N.a.	N.a.	N.a.	N.a.	N.a.	Yes	Yes
Method appropriate?	N.a.	N.a.	N.a.	N.a.	N.a.	N.a.	Yes	Yes
Rating	Moderate	Moderate	Weak	Moderate	Weak	Weak	Strong	Strong
C. Confounders								
Pre-intervention differences?	Yes	N.a.	N.a.	N.a.	N.a.	Yes	Yes	Yes

Quality criteria ⁵⁷	Cha et al. (2018) ⁶⁹	Kramer et al. (2015) ⁶⁸	Peters et al. (2015) ⁶³	Scocco et al. (2019) ⁷⁰	Supiano et al. (2017) ⁶⁵	Visser et al. (2014) ⁶⁴	Wittouck et al. (2014) ⁶⁷	Zisook et al. (2018) ⁶⁶
Percentage confounders controlled for	< 60% (few or none)	N.a.	N.a.	N.a.	N.a.	< 60% (few or none)	80-100%	< 60% (few or none)
Rating	Weak	N.a.	N.a.	N.a.	N.a.	Weak	Strong	Weak
D. Blinding								
Outcome assessors were blinded?	No	No	No	No	Can't tell	No	No	Yes
Participants were blinded?	Can't tell	Can't tell	Can't tell	Can't tell	Can't tell	Can't tell	Can't tell	Yes
Rating	Weak	Weak	Weak	Weak	Weak	Weak	Weak	Strong
E. Data collection methods								
Valid measures?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Reliable measures?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rating	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
F. Withdrawals and dropouts								
Numbers and reasons reported per group?	No	No	N.a.	No	Yes	N.a.	Yes	No
Percentage completing study?	80-100%	< 60%	N.a.	80-100%	80-100%	N.a.	80-100%	< 60%
Rating	Weak	Weak	N.a.	Weak	Strong	N.a.	Strong	Weak
Total A-F:	WEAK	WEAK	WEAK	WEAK	WEAK	WEAK	WEAK	WEAK

[illegible]

Guidelines characteristics

The grey literature searches identified 12 guidelines published since 2014 (Table 5).⁷¹⁻⁸² Seven were published in the USA⁷¹⁻⁷⁷, three in Australia⁷⁸⁻⁸⁰, one in Canada⁸¹, and one in the UK.⁸² Seven guidelines were targeted at schools^{71-73,78,79,81} or colleges and universities⁷⁴, four guidelines^{75,76,80,82} aimed to assist (community) organizations and/or professionals helping all those bereaved by suicide, and one guideline specifically focused on a workplace environment (firefighters).⁷⁷ All guidelines described their objectives. Seven guidelines described the methods of their development^{72,74-78,80}, and the users were involved in the development of eight guidelines.^{72,74-78,80,82} The evidence-base, described in ten guidelines^{71,72,74-78,80-82}, mostly comprised a combination of references to literature and an expert advisory group or a consensus procedure, such as a Delphi study. Three guidelines described their theoretical model of postvention, that is, a public health model.^{76,80,82} While three guidelines^{71,75,79} provided key recommendations, six provided sample material such as templates of letters.^{71-75,79}

Table 5: Summary of guidelines¹ (n = 12)

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence-base described	Theory of postvention described	Key recommendations included	Sample material included	Source
<i>After a campus suicide: A postvention guide for student-led responses</i> Active Minds USA, 2017 ⁷¹	Students leading a campus-wide response to suicide	Schools after a student suicide	Yes	No	Unknown	Yes (Literature)	No	Yes	Yes (Social media postings)	https://www.activeminds.org/programs/after-a-campus-suicide-postvention-guide/
<i>After a suicide: A Toolkit for schools, 2nd Ed.</i> American Foundation for Suicide Prevention, Suicide	School administrators, staff, parents, communities	Schools after a suicide in the school community	Yes	Yes	Yes	Yes (Consensus procedure and Literature; Ref to NSSP)	No	No	Yes (Various letters, meeting agendas)	http://www.sprc.org/sites/default/files/resource-program/AfteraSuicideToolkitforSchools.pdf

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence-base described	Theory of postvention described	Key recommendations included	Sample material included	Source
Prevention Resource Center, Education Development Center USA, 2018 ⁷²										
<i>After rural suicide: A guide for coordinated community postvention response</i> California Mental Health Services Authority USA, 2016 ⁷⁵	Local public health, law enforcement, suicide prevention coalitions	Local community after a suicide	Yes	Yes	Yes	Yes (Consensus procedure and Literature; Ref to NSSP)	No	Yes	Yes (Various checklist, letters, flyers)	https://www.cibhs.org/sites/main/files/file_attachments/after_rural suicide guide 2016 rev.docx
<i>A suicide prevention toolkit: After</i>	Schools	Schools after a	Yes	No	Unknown	Yes (Literature)	No	No	No (link to AFSP 2018	https://www.suicideinfo.ca/wp-

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence-base described	Theory of postvention described	Key recommendations included	Sample material included	Source
<i>a student suicide</i> Centre for Suicide Prevention, a branch of the Canadian Mental Health Association Canada, 2019 (update from 2016) ⁸¹		student suicide							guidelines, above)	content/uploads/2016/03/After a student suicide web.pdf
<i>Guidelines for schools responding to a death by suicide</i> National Center for School Crisis	School administrators, teachers, and crisis team members	Schools after a suicide in the school community	Yes	No	Unknown	No	No	No	Yes (Various letters via link)	https://www.schoolcrisiscenter.org/wp-content/uploads/2018/02/guidelines-death-by-suicide.pdf

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence-base described	Theory of postvention described	Key recommendations included	Sample material included	Source
and Bereavement, USC Suzanne Dworak-Peck School of Social Work USA, 2017 ⁷³										
<i>Guidelines for suicide postvention in fire service (Standard Operating Procedure)</i> New York City Fire Department USA, 2016 ⁷⁷	Firefighters peer support	Firefighters affected by suicide	Yes	Yes	Yes	Yes (Expert and Focus Groups consensus study)	No	No	No	https://www.tandfonline.com/doi/pdf/10.1080/07481187.2015.1077357?needAccess=true
<i>Postvention: A Guide for response to</i>	Colleges, universities	Campuses after a	Yes	Yes	Yes	Yes (Literature,	No	No	Yes (One sample letter)	https://adaa.org/sites/default/files/postve

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence-base described	Theory of postvention described	Key recommendations included	Sample material included	Source
<i>suicide on college campuses</i> Higher Education Mental Health Alliance USA, 2014 ⁷⁴		death by suicide				Expert review)				ntion guide-suicide-college.pdf
<i>Postvention Australia guidelines: A resource for organisations and individuals providing services to people bereaved by suicide</i> Australian Institute for	Organisations and individuals providing services	People bereaved by suicide	Yes	Yes	Yes	Yes (Literature, Focus Groups, and expert review)	Yes	No	No	https://www.griiffith.edu.au/_data/assets/pdf_file/0038/359696/Postvention WEB.pdf

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence- base described	Theory of postvention described	Key recommend- ations included	Sample material included	Source
Suicide Research and Prevention, and Postvention Australia Australia, 2017 ⁸⁰										
<i>Responding to grief, trauma, and distress after a suicide: U.S. national guidelines</i> Survivors of Suicide Loss Task Force, National Action Alliance for Suicide Prevention	All professionals and peers wishing to help those impacted by suicide loss	People bereaved by suicide	Yes	Yes	Yes	Yes (literature, Taskforce, Expert Group review, Ref to NSSP)	Yes	No	No	https://theactionalliance.org/sites/default/files/inline-files/NationalGuidelines.pdf

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence-base described	Theory of postvention described	Key recommendations included	Sample material included	Source
USA, 2015 ⁷⁶										
<i>Responding to suicide in secondary schools: A Delphi Study</i> headspace School Support Australia, 2015 ⁷⁸	School communities	Schools after a student suicide	Yes	Yes	Yes	Yes (Literature and Delphi consensus study)	No	No	No	https://headspace.org.au/assets/School-Support/hSS-Delphi-Study-web.pdf
<i>Suicide postvention guidelines: A framework to assist staff in supporting their school communities in responding to suspected,</i>	Schools	Suspected, attempted, and suicide death	Yes	No	Unknown	No	No	Yes	Yes (Various letters and scripts)	https://www.education.sa.gov.au/sites/g/files/net691/f/suicide-postvention-guidelines.pdf

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence- base described	Theory of postvention described	Key recommend- ations included	Sample material included	Source
<i>attempted or suicide death</i> Department for Education and Child Developme nt, Catholic Education SA Association of Independen t Schools of SA, Child and Adolescent Mental Health Services SA Australia, 2016 ⁷⁹										

Title, Author, Country, Year	Target users	Target population	Objectives described	Development methods described	Target users included in development	Evidence-base described	Theory of postvention described	Key recommendations included	Sample material included	Source
<i>Support after a suicide: A guide to providing local services: A practice resource</i> Public Health England, and National Suicide Prevention Alliance UK, 2016 ⁸²	Commissioners, local health and wellbeing boards, others	People bereaved by suicide	Yes	No	Yes	Yes (Literature, Advisory group, Ref to national suicide prevention strategy)	Yes	No	No	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/590838/support_after_a_suicide.pdf

¹ Based on the criteria of the "Appraisal of Guidelines for Research and Evaluation II" (AGREE Next steps Consortium, 2017)⁵⁸

Question 1: Which suicide postvention service models have been shown to be effective to reduce distress in family, friends and communities following a suicide?

First, we present the main characteristics and results of each research study (N = 8)⁶³⁻⁷⁰, followed by a summary of their evidence. Next, we describe and summarize the guidelines (N = 12).⁷¹⁻⁸²

Included research studies (N = 8)

There were two Australian community-based interventions.^{63,64} In a mixed-methods study Peters et al.⁶³ evaluated the Lifekeeper Memory Quilt Project, implemented by the Suicide Prevention-Bereavement Support Services of the Salvation Army. This project aimed to provide a sensitive and appropriate space where people bereaved by suicide could memorialise their loved ones and celebrate their lives. At the same time, it aimed to raise awareness of the impact of suicide and to support suicide prevention efforts. The Lifekeeper Memory Quilt was created from photos and short, 25-word narratives about the person who had died by suicide, which were submitted by the bereaved family members. The quantitative component of the evaluation study (n = 82) showed high levels of satisfaction among the bereaved; nine in ten respondents found the Quilt Project to be helpful or extremely helpful. Qualitative data (n = 30) revealed four themes: healing ("It's given me my power back"), creating opportunity for dialogue ("It's a good way to open a conversation"), reclaiming the real person ("The opportunity to remember them in a more revered way"), and raising public awareness ("Instead of just numbers these are people").

Visser et al.⁶⁴ evaluated the effectiveness of an Australian suicide bereavement support service, the StandBy Response Service. The service provides face-to-face outreach, telephone support and referral to people bereaved by suicide. The study compared clients of the service (n = 90) and people bereaved by suicide who had not had contact with it (n = 360). The study showed that the clients had statistically significantly lower levels of suicidality. The authors also reported a trend towards lower psychological distress and lower usage of medical and health care services, and towards higher quality of life and higher work productivity in this group, though this was not significant. Neither Peters et al.⁶³ nor Visser et al.⁶⁴ assessed the level of grief in participants.

In a school-based study in Korea, Cha et al.⁶⁹ looked at the baseline and five-month follow up data of the effects of a crisis intervention following a student's suicide. The intervention comprised educational sessions on grief reaction and coping for students, as well as psychological support and education for teachers and parents. At baseline, one week after the suicide, students were screened for symptoms of posttraumatic stress, anxiety, depression and complicated grief reactions. Students showing symptoms of mental ill-health were interviewed by mental health professionals and referred to relevant services, as needed. There was a statistically significant decline in posttraumatic stress symptoms, anxiety, depression, and complicated grief between baseline and the five-month follow-up for both student groups who showed symptoms of trauma at baseline ('trauma group', n = 83) and those without trauma symptoms ('non-trauma group', n = 873). This decline was sharper in the trauma group than in the non-trauma group. At the five months follow-up assessment, 2.9% (n = 28) of the students remained in the trauma group, which still showed higher scores than the non-trauma group.

Kramer et al.⁶⁸ examined changes in well-being, depressive symptoms, suicide risk and complicated grief in people bereaved by suicide (n = 270) who visited two online support forums: one in Belgium and one in The Netherlands. Semi-structured interviews (n = 29) were conducted regarding participants' expectations, their use of forums and forum activities, and the positive and negative aspects of engagement in this online activity. The study found significant (small to medium-sized) improvements in well-being and depressive symptoms, and no significant change in grief and suicide risk between baseline and at 6- and 12-months' follow-up. Despite the positive changes, at 12 months there was a subgroup who struggled with depression (61%), low levels of well-being (57%), complicated grief (27%) and high suicide risk (6.5%). The interviewees stated that the main reasons for visiting the forum were seeking others in a similar situation, gaining

recognition, and finding peers to share experiences. Nearly all interviewees mentioned positive aspects of the forum, such as finding recognition and support, having a place to go to when in need, anonymity, and a supportive atmosphere. Nonetheless, some visitors criticised the forum for evoking depressive feelings, lack of structure, unsatisfactory pace of response, and a relative lack of positive and hopeful messages.

The four remaining studies involved various psychotherapeutic interventions.^{65-67,70} In a mixed-methods pilot study in Italy, Scocco et al.⁷⁰ tested feasibility and psychological outcomes of a programme of mindfulness-based residential weekend retreats (Panta Rhei) for people bereaved by suicide (n = 61). The program included mindfulness meditation, grief-oriented meditation, soothing practices, reading poetry and listening to music, mindful yoga, and grief-related emotion-centred practices. Participants of the retreat reported a statistically significant decline in scores of tension/anxiety, depression/dejection, anger/hostility, fatigue/inertia and confusion/bewilderment. In general, no significant pre-retreat versus post-retreat changes were found either in the mindfulness or self-compassion scores. The exceptions were higher scores on the 'describing' component of mindfulness and lower scores on 'over-identification', that is, rumination about one's own limitations, which is a component of self-compassion. The study did not assess the level of grief in participants.

In a study in the USA, Supiano et al.⁶⁵ examined the therapeutic process of grief change in people bereaved by suicide, who participated in complicated grief group therapy (CGGT). CGGT is a multimodal group psychotherapy, which includes psychoeducation, motivational interviewing, and elements of cognitive behavioural and prolonged exposure therapy. It aims to restore normal grieving in people experiencing complicated grief. Over the course of the therapy, participants (n = 21) went through significant transition points associated with reconstruction of meaning of their loss. They were more able to reframe the suicide within a context of mental illness, changed their self-perception as being causally related to the death, and shifted focus towards more positive memories of the deceased. They also became more accepting of the death and more capable of reclaiming self-worth in their role as family member. Participants moved from shame and guilt, to regret, and finally, to greater acceptance. Nonetheless, not all participants reported a reduction in symptoms, such as intrusive and disturbing dreams, physical distress, and expressions of depression and anxiety.

In a Randomized Controlled Trial (RCT) in Belgium, Wittouck et al.⁶⁷ evaluated the effects of a psychoeducational intervention for people bereaved by suicide based on a Cognitive-Behavioural Therapy (CBT) model. The study compared participants (n = 47) in the CBT intervention, which comprised psychoeducation regarding suicide, bereavement and coping with the loss, with a no-treatment control group (n = 36). The intervention did not result in a statistically significant improvement on measures of traumatic grief, depression, hopelessness, grief-related cognitions and coping in participating suicide survivors. Nonetheless, the intensity of depressive and grief symptoms was significantly reduced in the intervention group. Further, people in the intervention group reported a significant reduction in the use of a passive coping style (such as worrying and rumination) and in their behavioural expression of negative feelings. There was also a significant decrease in social support seeking following the CBT intervention, which could be related to the experience of emotional support provided by the intervention itself.

In the Healing Emotions After Loss (HEAL) RCT in the USA, Zisook et al.⁶⁶ reported on the effectiveness and acceptability of citalopram antidepressant medication and complicated grief therapy (CGT) for people bereaved by suicide with symptoms of complicated grief. The CGT is a manualised therapy aiming at resolving grief complications and facilitating adjustment to the loss. In the medication only group, people bereaved by suicide had statistically significantly lower completion rates (n = 58; 36%) than people bereaved by accident or homicide (n = 74; 54%) and natural causes (n = 263; 68%). Antidepressant medication completion rates were significantly higher for people bereaved by suicide who received the CGT than for the suicide-bereaved in the medication-only group. CGT completion rates were similar in the three groups of

the bereaved (suicide 74%, accident/homicide 64%, natural causes 77%). People bereaved by suicide in the CGT had substantial reductions in complicated grief scores, which nonetheless were significantly lower than complicated grief score reductions found in the other bereaved groups. Also, suicide bereaved participants reported changes from baseline in all other study outcomes, including suicidal ideation, severity and number of grief symptoms, and grief-related impairment, comparable to the other study groups.

Research studies - summary

Research studies have found little evidence of effectiveness of interventions. Only five studies reported a positive outcome of their intervention.^{64-66,68,69} A school-based intervention⁶⁹ and two intensive grief psychotherapy programs^{65,66} found improvement in grief scores, including complicated grief.⁶⁶ A school-based intervention⁶⁹ and an online support forum⁶⁸ reported an improvement in mental health scores. A community-based crisis intervention program and an intensive grief therapy program reported decreases in suicidality.^{64,66} In contrast, other measures in these studies, as well as the measures in the other studies^{63,67,70}, including one RCT⁶⁷ yielded mixed results regarding grief, mental health or suicidality. Hence, while some evidence is emerging, based on the current review there is little evidence to identify effective models of postvention service delivery.

Included guidelines (N = 12)

Schools and colleges

Active Minds, a non-profit organization supporting mental health awareness and education for students in the USA, developed *After a campus suicide: A postvention guide for student-led responses*.⁷¹ These guidelines specifically address students who play an active role in a postvention response in the educational setting. They explain what students can do after a suicide, including recommendations for safe communication about suicide among friends, on social media, and at public and campus venues, and stress the importance of self-care. The document offers guidance about how to participate in or initiate a response to a student's suicide at a school campus and how to connect with university administrators in this task. The document also contains examples of safe communications about suicide and a case study of a successful students' mental health advocacy campaign.

The guideline *After a suicide: a toolkit for schools*⁷² was developed to address Objective 10.1 of the US National Strategy for Suicide Prevention (NSSP)⁸³, that is, to "develop guidelines for effective comprehensive support programs for individuals bereaved by suicide and promote the full implementation of these guidelines at the state/territorial, tribal, and community levels" (page v).⁸³ The document was designed primarily for staff and administrators in middle and high schools; however, it can also be used by other communities and parents in the aftermath of a student's suicide. This comprehensive document comprises nine sections: crisis response, helping students cope, working with the community outside the school, working with the media, memorialization, social media, suicide contagion, bringing in outside help, and going forward, that is, implementing a comprehensive suicide prevention plan. The toolkit included templates such as procedures and letters, and references to other relevant material.

*Guidelines for schools responding to a death by suicide*⁷³ developed by the USA's National Center for School Crisis and Bereavement were designed to help school administrators, staff and members of the crisis team after a suicide of a student and when a student has lost a family member to suicide. The document covers a postvention response commencing with activation of the school crisis team and notifying school personnel and students about the death, through psychoeducation on links between mental health problems and suicide, to identifying students who may need additional support, and memorialization. The guidelines also provide links to online template letters informing students, staff and parents about a suicide.

*Postvention: a guide for response to suicide on college campuses*⁷⁴ created by the Higher Education Mental Health Alliance USA, is intended for use by colleges and universities affected by a suicide death or other

crises and/or want to be prepared for such emergencies. These guidelines cover topics, such as planning a postvention response (for example, forming a multidisciplinary committee and developing a protocol) and its implementation (communication with the media, contact with clinical services, and managing suicide contagion/clusters). It also addresses campus murder-suicides, and provides exercises and links to additional online resources.

*A suicide prevention toolkit: after a student suicide*⁸¹ developed by the Centre for Suicide Prevention in Canada provides practical information to schools in the aftermath of a suicide by a student. It provides guidelines on what to do immediately after a suicide (such as contacting the deceased student's family, informing students and school staff), and in the days and weeks after the death (grief management, preventing suicide contagion, memorialisation and suicide awareness education). An online appendix provides details on the crisis management response and a communications plan, including social media.

In Australia, headspace School Support developed the *Responding to suicide in secondary schools* guidelines.⁷⁸ These guidelines aim to advise secondary schools and education systems on an effective response to the suicide of a student and can be used to inform and review existing postvention plans and procedures. The document covers 20 sequential key components of a school Emergency Response (ER) Plan and Team. The initial steps include developing, forming and activating an ER Plan/Team, managing a suspected suicide that occurs on school grounds, liaising with the deceased student's family, informing staff, students, parents and guardians, and the wider community of the suicide. The next steps are identifying and supporting high-risk students, providing ongoing support of students and staff, and dealing with the media, Internet and social media. The other components are taking care of the deceased student's belongings, funeral and memorial, and continued monitoring of students and staff. The school should document all postvention actions taken and conduct a critical incident review once the school is operating as usual. There should be an annual review of the ER Plan and planning for future suicide prevention activities. The guidelines include an appendix with guidance for holding a parent meeting in the aftermath of a suicide.

The South Australian (SA) Department for Education and Child Development, the Catholic Education SA Association of Independent Schools of SA and the Child and Adolescent Mental Health Services SA developed *Suicide postvention guidelines: a framework to assist staff in supporting their school communities in responding to suspected, attempted or suicide death*.⁷⁹ These guidelines aim to assist schools in responding to a suicide-related incident, including recognising and responding to the risk of contagion, and to support communities in grief. The guidelines provide a checklist of the immediate and long-term responses to suicide death, attempted and suspected suicide. The checklist is structured around five sequential sections: a) immediate response, b) first 24 hours, c) 48–72 hours after the incident, d) during the first month, and e) in the longer term. The document also provides sample letters and handouts for use with students, their parents, school staff, and additional resources.

Services and communities

*After rural suicide: a guide for coordinated community postvention response*⁷⁵ was developed by the California Mental Health Services Authority in the USA. The document aims to support rural counties to develop a formal, locally-controlled and coordinated response to a suicide in the community. It addresses Objective 10.1 of the US National Strategy for Suicide Prevention.⁸³ The guidelines comprise two sections: a) developing the postvention plan (for instance, identifying the core team and key stakeholders) and b) a six-step community response process (notifying the core team, offering support, gathering more information, mobilizing others as needed, offering support, reviewing and learning). The document includes experiences and lessons learned by communities and practical tools, such as a checklist for a community response plan, an example of a coroner's condolence letter and a community meeting agenda template.

The Survivors of Suicide Loss Task Force of the National Action Alliance for Suicide Prevention developed the *Responding to Grief, Trauma, and Distress After a Suicide: US National Guidelines*.⁷⁶ The National

Guidelines “call for the creation and sustainment of the resources, infrastructure, services, and systems necessary to effectively respond to any incidence of suicide in the United States” (p. 1).⁷⁶ The document is intended for all groups and individuals involved in a postvention response. These include first responders, (mental) health professionals and services, faith organisations, funeral services, (suicide) bereavement support organizations, schools and colleges, and the military. The four Strategic Directions of the National Guidelines include: a) healthy and empowered individuals, families and communities, b) clinical and community preventive services, c) treatment and support services, and d) surveillance, research, and evaluation. The document provides three Appendices: a) principles of suicide postvention programs, b) examples of concrete action steps, and c) resources for supporting the suicide bereaved.

Postvention Australia’s guidelines are a resource for organisations and individuals providing services to people bereaved by suicide.⁸⁰ They aim to offer general guidance to a broad range of stakeholders in contact with the bereaved individuals, including social workers, health care professionals, funeral directors and volunteers. The guidelines encompass postvention service provision (such as responding to the individual needs of bereaved individuals and provision of culturally sensitive and appropriate services), building capacity within the organisation (such as development and implementation of postvention practices, research and evaluation), and awareness and promotion of suicide postvention services more widely (such as enhancing the resilience of individuals, families and communities to respond to suicide, and raising awareness). The guidelines are based on a postvention service provision model which comprises: a) those bereaved by suicide, b) an organisational framework, c) service provision, and d) impact on workers.

Public Health England and National Suicide Prevention Alliance (NSPA) in the UK created *Support after a suicide: A guide to providing local services: A practice resource*.⁸² The resource provides guidance on commissioning and delivering postvention support, and its intended audience includes commissioners, and health and wellbeing boards. Two other NSPA resources, *Support after a suicide: Developing and delivering local bereavement support services*⁸⁴ and *Support after a suicide: Evaluating local bereavement support services*⁸⁵ complement the guide. The postvention guidelines provide information on how to provide effective postvention support, present examples of the current UK postvention practice, and offer guidance around evaluating outcomes. The document also includes information on additional resources and presents the Police Service of Northern Ireland SD1 form 34 as an appendix.

Workplaces

Recognising that suicide is a serious problem in fire services in the USA, the New York City Fire Department developed a standard operating procedure (SOP) for suicide postvention in the workplace.⁷⁷ This SOP is based on principles of peer support and is a ‘how-to’ document listing suicide postvention steps, such as notification procedure, determining parties involved in the response (including physicians, police and counsellors) and responding to the family and department members. The SOP is complemented by an educational document with ‘do’s and don’ts’, suicide myths and additional online resources.

Guidelines - summary

Most guidelines (n = 7) focused on postvention activities in school or college.^{71-74,78,79,81} School postvention guidelines can play an important role in service provision considering that students bereaved by suicide might be at-risk of contagion. Furthermore, schools might be able to link at-risk students with counsellors or mental health services. While most school guidelines were based on research literature, there were notable differences in their depth. Most guidelines covered the immediate period after death, including crisis response; others focused more widely, from preparations for potential suicides to ongoing support and monitoring. Also considered were the importance of social media and use of language. The most comprehensive examples would include *After a suicide: A toolkit for Schools* (USA)⁷², *Responding to suicide in secondary schools: A Delphi Study* from headspace⁷⁸, and *Suicide postvention guidelines* from the South Australian Department of Education and Child Development, which includes practical additional resources.⁷⁹

The remaining five guidelines^{75-77,80,82} were diverse, with four focusing on postvention in the wider community (such as *After rural suicide*, USA)⁷⁵ and one targeting a specific workplace (firefighters).⁷⁷ Three guidelines focused mainly on postvention service delivery: *Support after a suicide: A guide to providing local services*⁸² from the UK provided a general overview; *Postvention Australia guidelines*⁸⁰ concentrated on principles of postvention service provision for different organisations; and the *US National Guidelines*⁷⁶ provided an extensive literature review and a set of strategic directions. These three guidelines adopted a theoretical model of postvention service delivery based on a public health approach.^{76,80,82}

Question 2: From the models identified in Question 1, what components of suicide postvention services have been determined to contribute to effectiveness?

Given the limited evidence found in the research studies included in this review, one must be cautious in identifying components that may have contributed to effectiveness of interventions. However, some potentially effective components are highlighted here. These can be understood in the context of a public health approach to postvention, as described in some of the guidelines.^{76,80,82}

Level of support

In studies showing evidence of effectiveness there is a distinction between help offered to all individuals bereaved by suicide and help for those with higher levels of grief or mental health symptoms. Cha et al.⁶⁹ distinguished between educational support for all bereaved students and a psychotherapeutic approach to those with high bereavement-related symptoms. Visser et al.⁶⁴ distinguished between face-to-face early outreach to all suicide bereaved individuals and referral to treatment as needed, and Supiano et al.⁶⁵ and Zisook et al.⁶⁶ offered manualised intensive grief therapy to individuals with high levels of grief symptoms.

Peer support and involvement

Qualitative data reported by participants in online discussion forums⁶⁸ and a community-based program⁶³ pointed to the importance of finding recognition of one's grief, sharing experiences, and providing and receiving peer-support. Also, the positive effects found in a residential treatment program might be attributed, at least partly, to the social support experienced during the residential stay.⁷⁰

Grief focus

Another common factor of the effective interventions is a focus on the grief of the individuals bereaved by suicide. While this seems obvious, three studies did not measure grief in participants.^{63,64,70}

Three guidelines adopted a public health model of postvention^{76,80,82}, taking into consideration the notion of a continuum of survivorship in which the needs of the bereaved individuals differ depending on the experienced level of impact of the suicide (Table 6). The US national postvention guidelines⁷⁶ were based on the framework used by the US National Strategy for Suicide Prevention⁸³, comprising universal, selective and

indicated strategies, and research and evaluation. The UK *Support after a Suicide* guidelines⁸² referred to the model developed by the UK national suicide prevention strategy. It differentiates four levels of help offered to: all the bereaved by suicide, those in need of social support, those who are strongly affected, and those who need specialised psychotherapy. The Postvention Australia guidelines⁸⁰ adopted a similar four-level model of service delivery. It is understood that the number of bereaved people is largest in the lowest level (universal interventions) and smallest in the top level (indicated interventions). Together these guidelines also stress the need for training of service providers and rigorous surveillance, research and evaluation of interventions and service delivery.

Of note, the guidelines that did not refer to a theoretical model of postvention, such as the school-oriented guidelines^{71-74,78,79,81}, seem mostly based on a crisis intervention model, including immediate response after a suicide, follow-up and referral of at-risk students, and links with external services. Such crisis intervention approaches can be incorporated within a larger public health approach.

Table 6: Postvention service delivery according to level of impact of suicide

Level of postventive intervention	<i>Responding to grief, trauma, and distress after a suicide: U.S. national guidelines</i> Survivors of Suicide Loss Task Force, National Action Alliance for Suicide Prevention USA, 2015 ⁷⁶	<i>Support after a suicide: A guide to providing local services: A practice resource</i> Public Health England, and National Suicide Prevention Alliance UK, 2016 ⁸²	<i>Postvention Australia guidelines: A resource for organisations and individuals providing services to people bereaved by suicide</i> Australian Institute for Suicide Research and Prevention, and Postvention Australia Australia, 2017 ⁸⁰	
Indicated interventions for people with mental health problems and disordered grief	Indicated interventions: evidence-based treatments, communication between service providers	In-depth therapy, one-to-one psychological help provided by qualified practitioners	Psychotherapy	Surveillance, research and evaluation
Selective intervention for people with severe grief reactions, strongly impacted	Implementation of guidelines, training of service providers, availability of services	Therapeutic/ psychoeducational, one-to-one support, and facilitated 'closed' groups provided by qualified practitioners and trained facilitators	Counselling	
Selective interventions for people with moderate grief reactions, mildly impacted		Self-help, peer support, 'open' groups, and remembrance events organized by voluntary and peer groups	Support services, support groups, self-help groups, helplines, community and educational support	
Universal interventions for people with low levels of grief, little impact of suicide	Information and awareness of postvention in general public, professionals and organizations	Information on grief and bereavement by suicide and signposting to sources of support by local or national organizations	Information including leaflets, books, booklets, factsheets, posters and online information	

Gaps in the evidence

Evidence presented in this rapid review is based on research literature⁶³⁻⁷⁰ and guidelines⁷¹⁻⁸², the latter identified through a grey literature search of publications since 2014, the time window determined by the commissioning agency. In the evidence from research, important gaps exist regarding effectiveness of interventions for different age and gender groups of the bereaved individuals. Only one study targeted young people⁶⁹, no study specifically focused on older adults, and men are underrepresented in almost all studies.^{63-68,70} No study addressed Indigenous populations.

Only one study evaluated the effectiveness of help offered through the Internet.⁶⁸ Given the omnipresence of the Internet and social media, more research in this area could identify potentially effective postvention interventions and their components. Also, only one study addressed early outreach⁶⁴ and the effect of this approach on suicide bereavement remains unclear. Further, while two psychotherapy studies reported positive findings^{65,66}, one psychotherapy RCT failed to find evidence of effectiveness in comparison to the control group.⁶⁷

Due to the lack of control groups, little is known of the effectiveness of potentially effective components such as psychoeducation, finding recognition of one's grief, sharing experiences, and receiving and providing peer support. While suicide bereavement support groups are widely available, no study in this review examined their effectiveness.

All the reviewed guidelines have great potential to inform, support and complement existing services. Nevertheless, there is a need to evaluate their implementation and effectiveness. Inclusion of target groups and service providers in guideline development should ensure the feasibility and acceptability of guidelines. Adopting a theoretical model of postvention (such as public health), training service providers, and scientific evaluation of guidelines should maximize their impact and efficacy.

Discussion

This review was concerned with support for people bereaved by suicide and addressed the following two questions: (1) Which suicide postvention service models have been shown to be effective to reduce distress in family, friends and communities following a suicide? (2) From the models identified in question 1, what components of suicide postvention services have been determined to contribute to effectiveness?

A thorough search of the peer-reviewed and grey literature identified eight studies⁶³⁻⁷⁰ and twelve guidelines⁷¹⁻⁸² published since 2014. Overall, the studies included in this review involved diverse populations, settings, interventions, and measures, limiting the comparability of the findings. Most studies lacked a control group^{63-65,68-70}, and overall study quality was weak. Still, five interventions resulted in positive outcomes regarding grief^{65,66,69}, mental health^{68,69}, and suicidality.^{64,66} The reviewed guidelines hold promise to inform and support suicide postvention services. However, except for three guidelines^{76,80,82}, all documents lacked a theoretical background, and no evaluations have been reported.

As this rapid review was limited to publications since 2014 it is useful to consider additional evidence from earlier publications. A recent systematic review of effectiveness of controlled studies of interventions for people bereaved by suicide identified 11 studies published between 1984 and 2018.⁵³ That review found some evidence of effectiveness on grief outcomes of an eight-week support group program facilitated by a mental health professional and a trained volunteer.⁸⁶ A study comparing effects of a professionally led group psychotherapy and a social group program for widows bereaved through suicide found that grief symptoms were reduced in the therapy group⁸⁷, although effects did not differ in a larger replication study.⁸⁸ A study comparing the effects of a death-related writing task intervention with a neutral writing task control condition yielded a significant reduction in grief levels in both groups, but more in the intervention group than in the control group.⁸⁹

Regarding psychosocial outcomes, the previous review⁵³ found that a 10-week psychologist-facilitated group therapy program for children reduced anxiety and depression but not posttraumatic stress of social adjustment at 12-weeks follow-up.⁹⁰ A psychoeducational component for parents may have contributed to the positive effects. A study of a series of three church-based support meetings following a suicide in the community found modest positive effects in the intervention group in terms of greater self-efficacy, social acceptance and job competency, up to two months after the intervention.⁹¹ Together these studies suggest that social support in the community⁹¹ and a professionally-led (with involvement of trained volunteers) support group or therapy group program for adults⁸⁶ and for children⁹⁰ might be helpful.

The components that might have contributed to positive effects of interventions in this review, were concerned with the different levels of grief or distress experienced by the bereaved, in line with public health models of postvention service delivery (Table 6). For example, informal social support could be beneficial for all bereaved.⁷⁰ Those who are affected by suicide without symptoms of posttraumatic stress could benefit from an educational approach.⁶⁹ Peer support, mutual recognition and sharing might be helpful for those mildly affected⁶⁸, while those highly distressed or at-risk of disordered grief or ill mental health might benefit from specialised psychotherapy.^{65,66}

The recent systematic review identified additional potentially effective ingredients.⁵³ The involvement of trained volunteers who serve as positive role models and peer supporters along with mental health professional might contribute to the effectiveness of support or of therapy group effectiveness.⁸⁶ Pfeffer et al.⁹⁰ suggested that psychoeducation of parents contributed to the effectiveness of the intervention for bereaved children, as it enabled them to better support their children. Similarly, involvement of the wider

community might contribute to the effectiveness of an intervention.⁹¹ Also, it seems beneficial to deliver interventions over considered time periods (for example, over eight to ten weeks)^{86,90} or to use manuals or guidelines for the intervention.^{65,66,89,90} Overall, grief specific interventions seem to yield stronger effects than interventions targeting other outcomes.⁵³

Most guidelines, especially school-based guidelines^{71-74,78,79,81} are based on a crisis intervention approach. Callahan⁹² reported that an isolated school crisis intervention after a suicide might result in iatrogenic effects, such as increased distress and attempted suicide in students. Also, student suicide has a strong impact on school staff, who often feel ill-equipped to deal with it.⁹³ Hence, it is recommended that school interventions are embedded in a whole-school approach, including suicide prevention and postvention training^{94,95}, and collaboration with specialised community mental health services.⁹⁶

Given that postvention is considered an important aspect of suicide prevention in Australia^{3,25} and internationally²⁴, it seems logical to apply the same public health models to suicide postvention and prevention alike.^{97,98} For example, the stepped-care model incorporated in the Fifth National Mental Health and Suicide Prevention Plan³ fits well with the postvention models presented in the guidelines (Table 6).^{76,80,82}

Applicability

This rapid review examined the evidence of the effectiveness of postvention interventions and service delivery based on peer-reviewed literature⁶³⁻⁷⁰ and guidelines⁷¹⁻⁸² published since 2014. The searches found both Australian and international research and guidelines. Although the evidence of effectiveness is weak, mainly due to a shortage of research, the review identified potentially effective components of postvention. Within the limits of the review, the evidence suggests that postvention could be effective for people bereaved by suicide in New South Wales and Australia. The evidence also suggest that it would be beneficial to frame postvention in New South Wales within a suicide prevention context and a public health approach (Table 6).

Conclusion

This rapid review found limited evidence of effectiveness of postvention interventions and service delivery, mainly due to a relative shortage of research, particularly of high-quality research involving control groups. Systematic searches of the peer-reviewed and grey literature identified eight research studies reporting on a variety of individual and group interventions⁶³⁻⁷⁰, and twelve guidelines targeted at schools or the wider community.⁷¹⁻⁸² While this review identified serious gaps in the knowledge, it also identified a number of potentially effective components of postvention, such as the involvement of trained volunteers in support and therapy groups.

Adopting a public health framework for postvention service delivery offers the opportunity to tailor support to bereaved individuals according to the impact of suicide on their lives. This can range from information and awareness raising targeting all people bereaved by suicide to specialised psychotherapy for those bereaved who have experienced high levels of grief and symptoms of poor mental health. Such a framework might also align postvention with suicide prevention and mental health programs.

Appendix

Table 7: NHMRC Levels of evidence

Level of evidence	Study design
I	A systematic review of Level II studies.
II	A randomized controlled trial.
III-1	A pseudo-randomized controlled trial (i.e., alternate allocation or some other method).
III-2	A comparative study with concurrent controls (i.e., non-randomized experimental trials, cohort studies, case-control studies, interrupted time series studies with a control group).
III-3	A comparative study without concurrent controls (i.e., historical control study, two or more single arm studies, interrupted time series studies without a parallel control group).
IV	Case series with either post-test or pre-test/post-test outcomes.

Table 8: NHMRC matrix to summarize the evidence base

Component	A Excellent	B Good	C Satisfactory	D Poor
Evidence base ^A	Several level I or II studies with low risk of bias	One or two level II studies with low risk of bias or a systematic review or multiple level III studies with low risk of bias	Level III studies with low risk of bias, or level I or II studies with moderate risk of bias	Level IV studies, or level I to III studies with high risk of bias
Consistency ^B	All studies consistent	Most studies consistent and inconsistency may be explained	Some inconsistency reflecting genuine uncertainty around clinical questions	Evidence is inconsistent
Clinical impact	Very large	Substantial	Moderate	Slight or restricted
Generalisability	Population/s studied in body of evidence are the same as the target population in question	Population/s studied in the body of evidence are similar to the target population in question	Population/s studied in body of evidence differ to target population in question, but it is clinically sensible to apply this evidence to target population	Population/s studied in body of evidence differ to target population and hard to judge whether it is sensible to generalise to target population
Applicability	Directly applicable to Australian context	Applicable to Australian context with few caveats	Probably applicable to Australian context with some caveats	Not applicable to Australian context

^A Level of evidence determined from the NHMRC evidence hierarchy as in Table 1 (above).

^B If there is only one study, rank this component as 'not applicable'. National Health and Medical Research Council (2009) NHMRC levels of evidence and grades for recommendations for guideline developers. Canberra: National Health and Medical Research Council.

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