

Evidence Check

Suicide Aftercare Services

An Evidence Check rapid review brokered by the Sax Institute
for the Commonwealth Department of Health and Aged Care —
July 2023



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Glossary of terms

Brief intervention:	Time-limited support following a suicide attempt. Typically involve less than six brief sessions of around 10-20 minutes. Content varies, may include a focus on risk assessment, provide a degree of encouragement to engage in treatment, or short-term therapeutic strategies, but tend not to include case management.
Brief contact intervention:	Supportive messages that are sent via postcard, text message, or letter that provide supportive encouragement, and at times service information. Contacts do not offer therapy, and most do not offer education.
Comprehensive aftercare:	Coordinated aftercare support services provided immediately following a suicide attempt. Typically involving assertive follow-up, case management, and motivation support to facilitate engagement with community services.
Continuity of care:	Consistency in the provision of care, typically by the same health care provider or team of providers.
Therapeutic alliance:	The prioritisation of collaboration and mutual respect between healthcare provider and client.
Treatment as usual:	The treatment that people would normally receive if they were not involved in a research trial.

Abbreviations

ACCESS	Postcard and problem-solving therapy intervention
ACTION-J	Assertive case management program in Japan
AID	Assertive Intervention for Deliberate self-harm
ALGOS	A French aftercare program utilising an algorithm to allocate levels of care
ARSUIC	Suicide Risk Attention Program implemented by Community of Madrid Health Council
ASSIP	Attempted Suicide Short Intervention Program
BCC	Body Contact Care
BIC	Brief Intervention and Contact program

CALD	Culturally and Linguistically Diverse
CAMS	Collaborative Assessment and Management of Suicidality
ED	Emergency department
ED-SAFE	Emergency Department Safety Assessment and Follow-up Evaluation
GP	General practitioner
HOME	Home-Based Mental Health Evaluation
HOPE	Hospital Outreach Post-suicide Engagement service
ICM	Intensive Case Management
LCSP	Lifeline Suicide Crisis Support Program
MIT	Mobile Intervention Team
OPAC	Outreach, Problem-solving, Adherence, and Continuity program
PAUSE	Peer, Acceptance, Support, Understanding, and Empathy program
PHN	Primary Health Network
RAFT	Reconnecting AFTer Self-Harm (RAFT) program
RCT	Randomised controlled trial
SA	Suicide Attempt
SEWB	Social and emotional wellbeing
SUPRE-MISS	Suicide-PREvention Multisite Intervention Study on Suicidal Behaviours
TAU	Treatment as usual
TWBSS	The Way Back Support Services
VigilanS	Updated ALGOS program

Executive Summary

Background

Discharge from hospital following a suicidal crisis is a crucial time for the provision of high-quality aftercare. Providing aftercare services has been demonstrated to reduce the risk of further suicide attempts, deaths, and to increase the likelihood that people will seek professional support when experiencing suicidal thoughts. Aftercare programs typically provide coordinated support services to help an individual engage in treatment. In this way, aftercare programs help bridge the gap between hospital-based care during an acute crisis, and the establishment of ongoing support in the community. Aftercare programs usually include the following four key elements at a minimum: (i) rapid and assertive follow-up of people after they are discharged, (ii) continuous risk assessment and planning, (iii) encouragement and motivation to follow the treatment plan, and (iv) the provision of counselling with a problem-solving or solution-focused approach.

Aftercare programs may be classified within three categories: comprehensive aftercare, brief interventions, and brief contact interventions. In Australia, a range of dedicated and comprehensive aftercare services have been implemented, with variability in the service model and treatment components. While many Australian hospitals use a brief contact or brief intervention approach to providing aftercare, this Evidence Check focuses on comprehensive aftercare services being provided in Australia.

The need for a Universal Aftercare system has been recognised by both the Final Advice National Suicide Prevention Advisor and the Productivity Commission Inquiry into Mental Health. Following these recommendations, State, Territory, and Commonwealth Governments have subsequently committed to implementing a Universal Aftercare system through bilateral funding schedules of the National Agreement on Mental Health and Suicide Prevention.

It is against this background that this Evidence Check has been commissioned by the Commonwealth Department of Health and Aged Care to provide a review of the evidence for suicide aftercare services and effective characteristics of these services. Following on from the 2019 Evidence Check, this Evidence Check aimed to:

1. Provide an update on findings from the peer-reviewed literature and an overview of the models of suicide aftercare and specific programs that have been found effective.
2. Identify the characteristics common to effective programs and acknowledge gaps.
3. Provide an overview of the aftercare services that exist in Australia. It set out to identify which models of aftercare are in practice; if any of these are specific to certain cohorts or targeted to particular populations, such as adolescents or veterans; what the eligibility requirements and referral pathways include, and if there are any gaps in this process; where in Australia these models are in place, when they were implemented, and if they are currently operating.
4. Identify aftercare programs that have been tailored for priority populations such as adolescents or veterans, and to describe the ways in which these programs have been amended to meet the

needs of those groups of people. This review focused on Australian programs where available, but international literature was consulted where there was inadequate knowledge from Australian programs.

5. Evaluate the extent to which existing services align with the needs of the Australian population, and to describe important gaps and opportunities for improvement.

Methods

We conducted a review of the scientific literature and the grey literature, brief consultations, and a survey of all Primary Health Networks (PHNs). The research was guided by an academic advisory group and a lived experience advisory group. The scientific literature review used a systematic approach to identify relevant studies conducted since the 2019 Evidence Check, resulting in 53 articles from which data were extracted. The most common aftercare models represented in these articles were brief intervention (33), comprehensive aftercare (12), and brief contact interventions (8).

The outcomes evaluated in these studies varied considerably, including:

1. suicide-related outcomes such as deaths, reattempts, or ideation
2. engagement with referred services e.g., mental health programs
3. acceptability or feasibility of intervention
4. symptoms of various mental disorders including anxiety or depression
5. measures of wellbeing or quality of life
6. hospitalisation data including frequency of presentations or days admitted.

Data from this Evidence Check was compiled with data from the 2019 Evidence Check to facilitate evaluation of the status of evidence for each aftercare model. Given the variability in outcomes evaluated, we focused the scope of this review on those that evaluated suicide-related outcomes.

A desktop search was conducted in February 2023 for relevant grey literature. We used three processes to identify relevant literature: a Google search using the search terms 'suicide' and 'aftercare', restricted to Australian web pages; a search of the websites of relevant health and suicide prevention agencies for relevant reports and documents; and direct communication with key suicide prevention and mental health organisations, as well as key researchers undertaking evaluations and reviews of aftercare services in Australia.

Publicly available information regarding Australian aftercare programs was limited, and the grey literature search above did not provide a comprehensive overview of services. To address this gap, an online survey regarding available aftercare services was distributed to each PHN via individual email. We received information regarding 27 of the 31 PHNs.

Findings

Scientific literature

Most studies found that comprehensive aftercare programs and brief intervention programs are effective (63% and 70% of studies respectively). Support for brief contact interventions was somewhat lower at 50% of the published evaluations.

Brief contact interventions

A review of several meta-analyses indicates that brief contact interventions may reduce the re-occurrence of suicide attempts in the 12-18 months post-suicide attempt, with a combination of contact types (i.e. face-to-face followed by brief contacts) likely to be most effective. Thus, although brief contact interventions may be helpful for some people, they should not comprise a standalone aftercare intervention. If used, they should be packaged within a more comprehensive aftercare program that includes a broader suite of interventions that may be differentially acceptable or effective for subgroups of people.

Common components

Effective brief contact interventions programs tended to include:

- More frequent contact in the first 4-6 weeks.
- Both information regarding available services as well as expressions of concern.
- Some form of integration with the treating hospital, such as being signed by emergency department (ED) staff or the inclusion of ED contact details.

Comprehensive aftercare

We identified a range of evaluations of comprehensive aftercare programs. These evaluations took place in a variety of cultural contexts by distinct clinical and research teams. Although there were some exceptions, the overall majority of these studies provided support for the effectiveness of comprehensive aftercare in reducing rates of reattempt. However, several evaluations found that the effects of interventions tended to fade over time, with the specific estimates of effect duration varying between six months and three years across studies.

Furthermore, additional research is required to understand the varying needs and potentially differential effectiveness of aftercare for various subgroups within the broader population.

Common components

The comprehensive aftercare programs that demonstrated reductions in suicide-related outcomes tended to:

- Be well-integrated with broader service models and were often co-located. The aftercare programs were not a substitute for clinical care, but offered support and facilitated engagement with broader service models that appeared to be well-resourced and able to offer clinical services in a timely manner.

-
- Begin care with initial contact while the patient was still in hospital to offer education, with several also offering support for family members at this time.
 - Be clinically staffed. Several also included support for aftercare staff such as regular case conferences or supervision with mental health professionals e.g. psychiatrists.
 - Offer assertive or persistent follow-up that is initiated rapidly (if not initiated in-hospital, then typically within 24-48 hours of discharge).
 - Explicitly reference flexible implementation in response to the needs of people accessing the program, with the frequency and duration modifiable.
 - Couple case management intervention with brief contacts or informative websites offering education and therapeutic resources.
 - Offer a higher intensity of care early in the program that gradually decreases. Several described weekly contact in the initial four weeks, then monthly contact until around six months, at which point it may have ceased or decreased to quarterly or biannual contact. Notably, the effectiveness of programs often decreased around the time that the intensity of intervention tapered.
 - Address a broader scope of biopsychosocial needs that a person who has attempted suicide may have via broader case management and problem-solving assistance, rather than narrow focus on adherence to a treatment plan made at discharge.

Brief interventions

We identified several controlled studies of a wide range of brief intervention programs. The intervention elements included in these programs varied considerably, including telephone follow-ups, education sessions, various brief therapies, and massage therapy. Many of these evaluations found evidence for a significant reduction in reattempts, some found evidence for reductions in suicide deaths, and some found evidence for increased service use among people who received the intervention. A small number of studies found evidence for improvements on other outcomes including a reduction in unresolved stressors, reduced dysfunctional coping, increased problem-focused coping. Two studies found evidence for therapeutic alliance as an important moderator of intervention effect. Two studies found brief interventions to be cost-effective.

Single-component interventions providing only telephone follow-up tended not to be effective, whereas multicomponent interventions that included multiple elements of care were more likely to be effective.

Common components

Despite the wide variation in the components of effective brief interventions programs tended to:

- Include multiple intervention components beyond phone call follow-up alone e.g., education sessions, therapy, safety planning, brief contact letters/postcards.
- Include safety planning.
- Provide continued risk assessment and management.
- Be well-integrated with broader clinical services and able to facilitate crisis response in situations of elevated risk.
- Provide ongoing assessment and dialogue about engagement with treatment and provide encouragement or support to bolster engagement.
- Be administered by clinical staff or, in the case of programs for priority populations, be administered by members of that population.

-
- Explicitly focus on relationship factors such as therapeutic alliance and continuity of care, with therapeutic alliance demonstrated to be a moderator of outcome.

Several programs:

- Also incorporated support or education for family or significant support people.
- Began care while the person was still in the hospital emergency department.

What contributes to effective aftercare?

There have been no comprehensive dismantling studies published which evaluate the effectiveness of individual components or characteristics of suicide aftercare programs. However, we have identified components and characteristics that were common to programs that effectively reduced suicide-related outcomes such as reattempts.

Multiple components

The overwhelming majority of programs identified as effective in this review included multiple intervention components, e.g., coupling case management with brief contacts, or telephone follow-ups with a time-limited therapy or education. Less than 15% of the effective programs included a single intervention, while 60% of the non-effective programs included only a single intervention.

Conceptually, the inclusion of multiple components may also allow for the possibility of broader coverage if some components are unacceptable or ineffective for subgroups of the population.

Broad scope case management

All of the comprehensive aftercare programs included case management, and about a quarter of the brief intervention programs also referred to case management within their intervention description. Around 60% of the comprehensive aftercare programs also described a scope of case management that encompasses a broad range of biopsychosocial needs beyond mental-health related services alone.

The notion of ensuring a broad scope of aftercare is consistent with evidence that the precipitating factors and causes for suicidal crisis are diverse, and not always attributable to an underlying mental-health disorder.

Safety planning

Although only 20% and 40% of the comprehensive aftercare and brief intervention programs explicitly referenced the inclusion of safety plans, we have opted to include safety planning in the list of components. A number of the programs included in this review were implemented prior to the development of safety planning interventions in 2012¹ or its rise to widespread use in the late 2010's. However, the level of evidence for safety planning is strong, with demonstrated reductions in suicidal ideation, behaviour, and hospitalisations² and the intervention has been recommended for inclusion in suicide prevention programs³. Safety planning has also been included as a core component of

several Australian aftercare programs including The Way Back Support Service (TWBSS) and the Hospital Outreach Post-suicide Engagement service (HOPE). Notably, none of the programs that failed to find an effect when comparing to a non-active control included safety planning.

Ongoing risk monitoring

All of the effective comprehensive aftercare programs and 87% of the effective brief intervention programs included ongoing risk assessment. However, note that this was paired with broader services to respond to situations of elevated risk (described below).

Focus on engagement with treatment

All of the effective comprehensive aftercare programs and around a third of the effective brief interventions explicitly stated a focus on encouraging or motivating participants to engage in ongoing supports or to adhere to their treatment plan that was prepared at discharge. This goal is consistent with the model of aftercare as a bridging intervention after hospital-based care to facilitate ongoing supports within the community.

Integration with broader services

Most effective aftercare programs described some degree of formal integration with broader support services. Many explicitly acknowledged that the aftercare programs were not a substitute for healthcare provided by broader services such as clinical teams, and some were co-located within the hospital to assist with this. Effective integration was noted for the purposes of facilitating both crisis responses in situations of elevated risk as well as outbound referral to clinical care or ongoing treatment where required.

Person-centred care

The 2019 Evidence Check identified the importance of person-centred care in suicide aftercare, noting particular importance in facilitating service engagement. A review of TWBSS in the Australian Capital Territory was described which identified key elements as contributors to engagement. In this Evidence Check, several of these factors were identified across multiple effective programs.

Continuity of care was prioritised in many of the effective programs evaluated. Several referred to a form of continuity of care wherein there was ongoing contact with a provider who first made contact prior to discharge, while others referred to a form of continuity of care where the treating practitioner/care provider may not have made contact during hospital care but was otherwise consistent throughout the intervention.

The 2019 Evidence Check identified therapeutic alliance as an important person-centred care factor. This Evidence Check also identified a study confirming that stronger patient-rated therapeutic alliance predicted lower suicidal ideation scores 24 months later.

Clinical or specialist staff

Almost all of the aftercare programs that have been shown to be effective in controlled trials explicitly noted that the interventions were delivered by clinically trained staff, including psychiatrists, psychologists, social workers, and/or nurses.

Rapid initiation of care

Rapid initiation of care was a common theme among effective programs, with many commencing care while the patient was still in hospital. Sixty percent of the effective comprehensive aftercare programs reported initiation within 24 hours, 80% within 72 hours, and 100% within one week.

Higher frequency of contact in the early weeks

Most of the effective programs identified described an intervention schedule that was more frequent early in treatment before tapering off later in treatment. Notably, for some of the programs the intervention effect decreased around the time that the intensity of the intervention tapered.

Program duration

The duration of effective programs varied between comprehensive aftercare and brief intervention programs. The median duration of effective comprehensive aftercare services was 12 months, while the median duration of brief intervention programs was six months.

Assertive follow-up

Many of the effective programs identified referred to the provision of assertive follow-up, wherein the burden of maintaining contact rests with the care provider, and multiple attempts at contact are made when clients do not respond. Of the effective comprehensive aftercare programs we identified, 80% explicitly referred to assertive or persistent follow-up.

Engaging people at the first attempt

As noted in the 2019 Evidence Check, some studies have suggested that aftercare may be more effective when delivered to people after their first suicide attempt, rather than after a reattempt. This may have implications for referral pathways and the need to ensure comprehensive coverage so that people are well-supported after an initial attempt.

Lived experience involvement

Notably, none of the ineffective programs referred to lived experience consultation or service co-design. In comparison, three of the effective programs referred to lived experience involvement that resembled co-design, while another three referred to lived experience consultation or input.

Components with emerging evidence

Involvement of a support person (e.g., family, carer)

The inclusion of a support person has become more common, with 40% of the effective comprehensive aftercare programs and 32% of the effective brief intervention programs reporting doing so. Support for the support person was identified as an important gap in existing aftercare services by our Lived Experience Advisors.

Services and programs delivered in Australia

Our review of the Australia aftercare service landscape identified that almost all Australian services use an assertive, coordinated aftercare model, ranging from eight weeks to six months, with a three-month program being most common. Most offer rapid, assertive follow-up after a suicidal crisis, case management and care coordination to address psychosocial needs, and safety planning.

Gaps in services

At least nine PHNs referenced inequities in access to services for people living in outer metro, rural, or geographically isolated areas. Several referenced a lack of access to appropriate and safe services for people within priority populations. This aligns with our review of the scientific and grey literature.

During consultations with PHNs, existing services were described as overly westernised and not adequately addressing the needs of the substantial proportion of Australians from culturally and linguistically diverse (CALD) backgrounds. A lack of aftercare services for children and young people was also identified. The top five priority populations identified were Aboriginal and Torres Strait Islander people, young people, people who live rurally or are geographically isolated, the LGBTQIA+ community, and the CALD community.

PHNs acknowledged the limited scope of existing referral pathways for most of the major multisite aftercare programs, which typically only allow for referrals from hospital emergency departments, and often only for those who have already made a suicide attempt, either because of current eligibility criteria or because of resource limitations. Resource limitations also impact on the duration of care provided. While in theory the service model of some aftercare programs stipulates that service care can be extended based on clients' needs, the reality of limited resources and understaffing mean that care cannot be extended beyond 12 weeks or outside of regular business hours despite demand.

Inadequate staffing impacts on services' ability to provide in-service training or ensure that all staff attend minimally required cultural competency training, much less additional upskilling. A notable driver of this was staff turnover in the context of program funding insecurity.

In line with the findings of the peer-reviewed literature, several PHNs acknowledged the importance of good integration between services to facilitate both inbound referrals from the emergency department to aftercare, and outbound referrals from aftercare to ongoing care options in the community. However, numerous regions reported that the implementation of effective integration between services requires further improvement in their region. Several regions also reported poor

communication or strained relationships between the hospitals and the aftercare service, which have negatively impacted referral and patient handover.

Recommendations

We make recommendations in two areas. First, based on findings from the scientific and grey literature, we outline a broad set of principles to underpin aftercare services in Australia. Second, based on consultations and input from Primary Health Networks, we identify gaps and priority areas for resourcing.

Principles for Universal Aftercare

Principle 1

Aftercare services, whether comprehensive or brief intervention, should combine multiple components, e.g., coupling case management with brief contacts, or telephone follow-ups with a time-limited therapy or education. Conceptually, the inclusion of multiple components may allow for the possibility of broader coverage if some components are unacceptable or ineffective for subgroups of the population.

Principle 2

Comprehensive aftercare programs should include case management that encompasses a broad range of biopsychosocial needs beyond mental-health related services alone. The notion of ensuring a broad scope of aftercare is consistent with evidence that the precipitating factors and causes for suicidal crisis are diverse, and not always attributable to an underlying mental-health disorder.

Principle 3

Aftercare should involve a collaborative and flexible approach to developing a safety plan with the person at-risk, supported by a skilled and compassionate health professional who can respond effectively to peoples' readiness to plan for their safety. Safety planning reviews can be incorporated into ongoing risk monitoring and response. The level of evidence for safety planning is strong, with demonstrated reductions in suicidal ideation, behaviour, and hospitalisations. Safety planning has also been included as a core component of several Australian aftercare programs including TWBSS and HOPE. All of the effective comprehensive aftercare programs included ongoing risk monitoring, paired with effective response to elevated risk.

Principle 4

Engagement with aftercare programs and linkages with other service should be explicitly prioritised but balanced with person-centred care principles described below in Principle 5. All the effective comprehensive aftercare programs explicitly stated a focus on encouraging or motivating participants to engage in ongoing supports or to adhere to their treatment plan that was prepared at discharge. This goal is consistent with the model of aftercare as a bridging intervention after hospital-based care to facilitate ongoing supports within the community.

Principle 5

To support recommendation 4, aftercare services should focus on providing person-centred care as described in detail in this Evidence Check. Briefly, this includes flexible program delivery in collaboration with service-users and the prioritisation of therapeutic alliance. Continuity of care with the same support person should be a goal. This will require using co-design with lived experience advisors to ensure services are meeting the needs, effective supervisory structures, and a focus on organisational culture that supports excellent clinical practice.

Principle 6

To support engagement with other services, formalised integration and/or agreements with other support services should be pursued by aftercare services, and these relationships fostered through the placement of a liaison officer in key referral services such as hospitals. This was also recommended by TWBSS evaluation from Nous. Most effective aftercare programs described some degree of formal integration with broader support services. Effective integration was noted for the purposes of facilitating both crisis responses in situations of elevated risk as well as referral to clinical care or ongoing support and treatment where required.

Principle 7

Services should consider the inclusion of peer support, alongside clinical and specialist staff, as part of the person's support team. This is now occurring more commonly in Australian services and there are good models of training, supervision, role definitions, and team structure that can be adapted and adopted.

Principle 8

We recommend the maintenance and improvement of the rapid initiation of care that exists in current Australian aftercare services. Rapid initiation of care remains a common theme among effective programs, with many commencing care while the person is still in hospital.

Principle 9

Higher frequency of contact should occur in the early weeks following suicidal crisis, as agreed on collaboratively with the person at-risk. Most of the effective programs identified in this review described an intervention schedule that was more frequent early in treatment before tapering off later in treatment.

Principle 10

We recommend assertive follow-up where the responsibility to make and maintain contact rests with the service provider. Many of the effective programs identified in this review referred to the provision of assertive follow-up, where multiple attempts at contact are made when clients do not respond.

Principle 11

We recommend an ongoing focus on ensuring people are referred to aftercare support the first time they present with a suicidal crisis. This may mean broadening referral pathways and inclusion criteria given many people will present to primary care or community services rather than to the emergency department, and may present with suicidal distress rather than suicide attempt. As noted in the 2019

Evidence Check, some studies have suggested that aftercare may be more effective when delivered to people after their first suicide attempt, rather than after a reattempt. This has implications for referral pathways and the need to ensure comprehensive coverage so that people are well-supported after an initial attempt.

Principle 12

We recommend, with the agreement of the person at-risk and consideration of the potential benefits and harms, that services engage support person/s in the assessment, planning and care process. Support for the support person was also identified as an important gap in existing aftercare services by Lived Experience Advisors.

Recommendations to address gaps and resourcing

Recommendation 1

Broaden referral pathways and eligibility criteria and ensure adequate staffing to meet increased demand. Some services have already taken these steps and should be used as models to ensure referrals remain appropriate and manageable.

Recommendation 2

Improve funding security and simplify agreements for services. This will help to reduce staff turnover that occurs within the context of funding insecurity.

Recommendation 3

Maintain a focus on developing the skills of the workforce and providing career pathways for health professionals and peer workers. This recommendation aims to address the dual and related purposes to improve quality of care and reduce staff turnover.

Recommendation 4

While development of specific services for priority groups is important, so is the provision of care within all aftercare services for Australia's diverse community. Population-specific services cannot meet all of the need, given the wide geographic spread in Australia. We recommend that providers of mainstream service models (1) ensure diversity of their support staff, (2) engage with community and peak bodies to co-design principles of service provision for priority populations in their region, and (3) ensure these principles reflect the intersectionality that exists in the community.

Background

Over 3,000 Australians die by suicide each year, a rate which is around the middle of Organisation for Economic Co-operation and Development (OECD) countries⁴. One of the strongest risk factors for suicide is a history of previous self-harm or suicide attempts⁵. It is estimated that 43%⁶ of people who reattempt suicide do so within a month of discharge from hospital for treatment for previous self-harm. Around 15 to 20%⁷ of these deaths occur on the same day that the person is discharged from hospital care. When discharged from hospital-based care, many people do not yet have the skills and community supports needed for sustained recovery. Furthermore, many people are still experiencing distress and the stressors which precipitated the suicide crisis often remain unresolved.

Discharge from hospital care therefore presents a crucial timepoint for aftercare interventions, which should be coupled with broader systems that include suicide prevention services. The effective provision of such aftercare services has been demonstrated to reduce the risk of further suicide attempts⁸⁻¹⁰, deaths¹¹⁻¹³, and to increase the likelihood that people will seek professional support when experiencing suicidal thoughts¹⁴. Economic evaluation data has also suggested that effective aftercare programs will be associated with substantial cost-savings, with one study finding an estimated cost-savings of \$8,502 USD per averted suicide attempt, leading to an estimated \$840 million cost-saving annually in the American context¹².

Aftercare programs aim to prevent suicide behaviours by improving access to and engagement with care and supports. They typically provide coordinated support services to help an individual engage in the treatment that was planned at discharge. In this way, aftercare programs help bridge the gap between hospital-based care during an acute crisis, and the establishment of ongoing support in the community. It is important to note emerging support for broadened referral pathways to allow referrals to occur outside of the hospital system (e.g., referrals from general practitioners). There is also support for expanding inclusion criteria to provide access to aftercare services earlier in a person's journey, either following a first attempt or in response to suicidal ideation and prior to an attempt. Although these ideas are gaining traction (several of the Australian state and territory bilateral agreements discussed below have made provisions to trial expanded referral pathways), they have not yet been widely adopted and so have limited representation in existing literature. The majority of published evaluations described hospital-facilitated referral to aftercare programs. Thus, although broader referral pathways and inclusion criteria may be beneficial, the findings of this review are primarily relevant to this context of hospital-based referrals and narrower eligibility. The transition to broader referral pathways and eligibility criteria will require careful consideration and planning to forecast and address potential implementation challenges and service capacity issues beyond the scope of this review.

Aftercare programs usually include the following four key elements at a minimum: (i) rapid and assertive follow-up of people after they are discharged, (ii) continuous risk assessment and planning, (iii) encouragement and motivation to follow the treatment plan, and (iv) the provision of counselling

with a problem solving or solution-focused approach¹⁵. Staff-related factors including continuity of care and therapeutic alliance have also been emphasised as crucial features of effective aftercare¹⁰.

However, a diverse range of aftercare services have been implemented, with variability in the service model and treatment components. The majority of aftercare programs may be classified within three categories: comprehensive aftercare, brief interventions, and brief contact interventions.

comprehensive aftercare programs are characterised by the rapid provision of coordinated support services to people immediately following hospital discharge, with the goals of improving engagement with services and preventing suicidal behaviours. In these programs, the responsibility for contact is held by service staff rather than service users, and staff assertively attempt to engage people with a number of follow-up attempts. These programs provide case management and motivational support to facilitate engagement. Early programs included a local health service in Baerum, Norway¹⁶ and the Outreach, Problem-solving, Adherence, and Continuity (OPAC) adaptation of this model in Denmark⁸. More recently, a similar case management program called ACTION-J was implemented in Japan⁹. Several smaller case management programs have also been evaluated, but not at the randomised controlled trial (RCT) level.

In contrast, brief interventions are more time-limited – typically offering no more than six short sessions of around 10-20 minutes each. Brief interventions tend not to include case management, and most do not involve therapy. Contact often occurs by phone, although the content of the contact varies between programs. Some focus primarily on risk monitoring, while others offer motivational support and encouragement to engage in treatment. Others offer more clinically focused brief intervention strategies such as psychoeducation, narrative reviews, problem-solving counselling, strengths-based solution-focused counselling, or motivational interviewing. However, where these interventions are offered, they are distinctly brief and time-limited, generally with a pre-determined number of sessions at pre-determined timepoints. Several of these programs also include brief contact follow-ups as described below. Programs considered to offer brief interventions include the Attempted Suicide Short Intervention Program (ASSIP)¹⁰, ALGOS^{17, 18}, the Suicide-PREvention Multisite Intervention Study on Suicidal Behaviours (SUPRE-MISS) Brief Intervention and Contact program¹³, and Te Ira Tangata¹⁹.

Brief contact interventions present a third category of aftercare intervention. These programs consist of supportive messages that are sent via postcard, text message, or letter. These interventions do not offer therapy and typically do not offer education. Instead, the content of these messages focuses on supportive encouragement, and they are often signed by staff at the emergency department where the person was initially treated. A number of programs have adopted this model including Caring Contacts²⁰, Postcards from the Edge²¹, and the Reconnecting AFTer Self-Harm (RAFT) program²².

Despite the common themes within each of these aftercare models, there is a high degree of variability in the programs that have been implemented and the intervention components that they offer. For example, some programs offer case management while others do not. Within those that do, some focus exclusively on engagement with mental health services or adherence to the discharge treatment plan, while others offer case management to address a broader range of biopsychosocial supports. Some programs offer support for less than a month, while others support people for 12-18 months. There is further variability in whether services offer clinical treatments, are integrated with broader support services, the timeliness of follow-up, whether services offer formal safety planning, hold the responsibility for assertive follow-up, are staffed by clinical vs non-clinical teams, incorporate outreach beyond the service office, and whether they engage with family or community.

Given the broader ethical and pragmatic challenges of conducting research in the suicide prevention space, it is unsurprising that no comprehensive dismantling studies evaluating individual components of aftercare programs have been published to date. Although a handful of systematic reviews and meta-analyses have been published, these have tended to focus on overarching aftercare models rather than individual program components. As a result, it is less clear which components of these programs are responsible for producing therapeutic effects and constitute essential elements for effective aftercare. As an initial step towards addressing this gap, this report will compile existing evaluations of aftercare programs to identify common components observed across studies.

However, it is important to note that the key components of effective aftercare are unlikely to be universally applicable. Tailored care and services will be critical in meeting the needs of people with varying needs. Different groups of people or, 'priority populations' at higher risk of suicide, or with varying support needs, are likely to have different requirements for effective aftercare. For example, the needs are likely to differ between Aboriginal or Torres Strait Islander peoples compared to LGBTQIA+ people compared to children and young people. Thus, the key components of effective aftercare are likely to differ for each of these groups. This Evidence Check describes aftercare services that have been designed or adapted to suit the needs of various priority populations, with the goal of identifying variations to essential components that are required to ensure that aftercare is universally accessible.

Aftercare services in the Australian context

Within the Australian context, a range of suicide aftercare services have been implemented at various sites across the country. Prominent programs servicing the broader population include TWBSS, HOPE, and Next Steps. There also exist a handful of programs for various priority populations. Both the HOPE and TWBSS models of service have been adapted to provide aftercare for children and young people through the Orygen HOPE and i.am programs respectively. For LGBTQIA+ people Mind Australia provide a dedicated service in North West Melbourne that was originally funded by the Commonwealth Government as part of the National Suicide Prevention Trial. Although not a dedicated service, HOPE have also trialled a training program that delivers education regarding LGBTQIA+ culturally inclusive care to frontline health professionals working in existing HOPE sites. An aftercare service for Aboriginal and Torres Strait Islander peoples was also funded in the National Suicide Prevention Trials and delivered through the Pika Wiya Aboriginal Health Service in South Australia.

The majority of Australian aftercare programs have adopted comprehensive models of care. However, there is considerable variability in the specific components offered by each program, and few have been subject to rigorous evaluation. An overview of evaluations is provided in the *Current Australian aftercare service landscape* section of this review, and a table detailing each program is provided in Appendix D.

However, it is important to note that existing services are not universally accessible. An overview of service distribution across Australia is available in the *Evaluation of existing Australian aftercare landscape* section of this review alongside findings from a survey of PHN staff regarding gaps in currently available services. Several PHNs have reported that available services do not adequately meet needs and targeted programs for priority populations are sparse.

Furthermore, these findings present only a fraction of the picture when considering the potential scope of need for suicide aftercare. Many of the people treated for physical injuries that occur due to a suicide attempt at hospital don't receive follow-up treatment. Many more don't receive medical care in the first place, so are not referred for follow-up support. It is therefore clear that effective suicide aftercare services are not universally available to all Australians who have experienced a suicide crisis, which presents a substantial untapped opportunity for effective suicide prevention. There is a need for a systems approach to suicide aftercare with greater coordination between services and broader referral pathways to ensure that evidence-informed suicide aftercare services are universally available and appropriate for service users.

Current policy context

The need for a Universal Aftercare system has been recognised by both the Final Advice National Suicide Prevention Advisor and the Productivity Commission Inquiry into Mental Health. Following these recommendations, State, Territory, and Commonwealth Governments have subsequently committed to implementing a Universal Aftercare system as part of the National Agreement on Mental Health and Suicide Prevention. The National Agreement outlines the common objective of State, Territory, and Commonwealth governments to collaboratively enhance mental health and suicide prevention systems across Australia to reduce the rate of suicides in Australia towards zero. In bilateral agreements the states and territories have committed funds totalling more than \$300 million to collaboratively finance a Universal Aftercare system to provide support to individuals following a suicide attempt and/or crisis. The agreement acknowledges the system context of suicide aftercare and the need for collaboration across services and jurisdictions – a theme that will be reinforced throughout this review as we acknowledge the placement of aftercare services within a broader network of services. The bilateral agreements also commit to expanded referral pathways to make aftercare available to people who have not received medical treatment for physical injuries relating to their suicide attempt at a hospital.

However, the agreements allow for place-based flexibility in the specific models of aftercare implemented at each site, with some referencing the TWBSS model without committing to this ongoing, whereas Victoria has committed to ongoing provision of aftercare utilising the HOPE model. There is also variability in the degree of funding and number of sites committed to within each state/territory. As a result of these differences, commitments have been made by all states to fund suicide aftercare services (with the exception of South Australia, though negotiations have been re-opened), however, there are likely to remain jurisdictional differences in the reach and nature of aftercare services.

Scope and aims

In this context, this Evidence Check has been commissioned by the Commonwealth Department of Health to provide a review of the available evidence for suicide aftercare services and effective components of said services. Following on from the 2019 Evidence Check, this Evidence Check aimed to provide an update on findings from the peer-reviewed literature. It aimed to provide an overview of the models of suicide aftercare and specific programs that have been evaluated as effective. This review also aimed to identify the components and characteristics that are common to effective programs and acknowledge gaps.

The third aim of this review was to provide an overview of the aftercare services that exist in Australia through a review of the grey literature and through a survey of Primary Health Networks (PHNs). It set out to identify which models of aftercare are in practice; if any of these are specific to certain cohorts or targeted to particular audiences, such as adolescents or veterans; what the eligibility requirements and referral pathways include, and if there are any gaps in this process; where in Australia these models are in place, when they were implemented, and if they are currently operating.

The fourth aim was to identify aftercare programs that have been tailored for priority populations such as adolescents or veterans, and to describe the ways in which these programs have been amended to meet the needs of those groups of people. This review focused on Australian programs where they were available, but international literature was consulted where there was inadequate knowledge from Australian programs.

The fifth aim of the report was to evaluate the extent to which existing services align with the needs of the Australian population, and to describe important gaps and opportunities for improvement. This information was derived from surveys completed by representatives of Primary Health Networks (PHNs) across Australia.

Methods

Advisory Groups

Two advisory groups were formed to contribute to the report.

- An Academic Advisory Group was formed to provide feedback regarding methods and synthesis themes. Members included Dr Katherine McGill, Mr Bernard Leckning, Dr Dzenana Kartal, and Dr Nicole Hill.
- A Lived Experience Advisory Group was formed to primarily provide feedback regarding the methods of the report, although key sections of the findings have also been reviewed. These include the Components and Characteristics of Effective Programs, Evaluation of Existing Aftercare Landscape, and Other Themes. Members included Hayley Purdon and Santi Ledesma.

Peer-reviewed literature

Search and screening

In February 2023 an electronic search was conducted to collate peer-reviewed literature on aftercare interventions for those who have made a suicide attempt. To select search terms, we conducted an initial environment scan, consulted with a research librarian, and completed a word frequency evaluation of studies included in the 2019 Evidence Check using the SR-accelerator tool. This search spanned MEDLINE, PsycInfo, Cochrane Central and EMBASE. Database-specific search terms were used as the subject heading thesauruses varied between databases. Variations of the following keywords were searched in keywords/phrases, titles and abstracts, and subject headings: [suicide* or self-harm or self harm or self injur* or self-injur* or self poison* or self-poison*] AND [after care or aftercare or community team or continuity of care or chain of care or brief contact or follow-up or follow up or followup or discharge* or case manag* or outpatient* or emergency]. Searches were limited to publications in the English language from 2019 onwards, had to be relevant to suicide aftercare interventions, and include information on relevant outcomes. Note that the definition of aftercare was specific to post-suicide attempt and did not include studies of aftercare programs that facilitated transition from general hospital or mental health services to community. We did not place any restrictions on study design except to exclude protocols, commentary pieces and conference abstracts.

In total, 8,458 abstracts were identified from these searches and imported into Covidence. After duplicates were removed, 5,293 titles and abstracts were screened by two reviewers. Of these, 5,139 were excluded because they were deemed to be irrelevant to the topic of suicide aftercare interventions. This left 154 full text articles to be reviewed for eligibility. Each full text was assessed by two reviewers for inclusion, and any discrepancies in decisions were referred to a third researcher to determine. A flowchart of the literature search process can be found in Appendix A. Fifty-three papers met inclusion for criteria in the review.

Data extraction

A data extraction template was prepared based on fields used in the 2019 Evidence Check, although additional fields were added to address the aims of the current review. These included more detailed coverage of specific program components. The data extraction fields were reviewed by both the Academic and Lived Experience Advisory Groups and modifications made accordingly e.g. more detailed regarding the degree of lived experience consultation or the inclusion of peer support workers. Data extraction was completed using Covidence.

We extracted data from a total of 53 new peer-reviewed articles describing evaluations of suicide aftercare services that have been published since the 2019 Evidence Check. The most common aftercare models represented were brief intervention (33), comprehensive aftercare (12), and brief contact interventions (8). It is important to note that a number of these articles evaluated datasets from other publications and did not constitute original studies. The studies described in these articles varied substantially in design, from rigorous randomised-controlled trials to cohort studies or qualitative evaluations. Although articles describing trials protocols were excluded, a number described feasibility pilots rather than fully powered outcome evaluations. The outcomes evaluated in these studies varied considerably, including:

- suicide-related outcomes such as deaths, reattempts, or ideation
- engagement with referred services e.g., mental health programs
- acceptability or feasibility of intervention
- symptoms of various mental disorders including anxiety or depression
- measures of wellbeing or quality of life
- hospitalisation data including frequency of presentations or days admitted

Compiling data across current and 2019 Evidence Check

Data from the present review was compiled with data from the 2019 Evidence Check to facilitate evaluation of the status of evidence for each aftercare model. Given the variability in outcomes evaluated, we focused the scope of the present review on those that evaluated suicide-related outcomes. Firstly, three studies where the design did not allow for conclusions regarding effectiveness were excluded, such as feasibility pilot or underpowered studies. The remaining studies were then categorised according to whether the programs were deemed to be effective, not effective, or potentially harmful. Studies were then further categorised according to the NHMRC levels of evidence. Where multiple articles evaluated the same study (e.g. initial findings vs. extended follow-up vs. economic evaluations), these articles were compiled and treated as a single evaluation. For the purposes of identifying effective programs and components, only controlled studies (evidence level III

or above) were considered to provide a minimum standard of evidence and only these have been described in the findings of this review. However, a table describing all identified studies may be found in Appendix B.

The number of aftercare programs within each category is displayed below in Table 1. Note that these numbers count original studies only. The number of controlled evaluations was low, with even fewer RCTs (level II evidence). Given these numbers, the findings of this review collapsed evaluations across all controlled trials regardless of randomisation status (i.e. across level II and III evidence).

Table 1—Levels of evidence for comprehensive aftercare programs, brief contact interventions, and brief interventions.

Aftercare Model	Evidence Level	Finding			
		Design Precludes Conclusions (pilot or underpowered)	Effective	Not Effective	Harmful
Comprehensive Aftercare	II	0	2	1	0
	III	0	3	2	0
	IV	0	4	0	0
Brief Contact Interventions	II	1	2	0	1
	III	0	0	1	0
	IV	0	1	0	0
Brief Interventions	II	2	10	4	0
	III	0	6	3	0
	IV	0	6	0	0

Grey literature search

A desktop search was conducted in February 2023 for relevant grey literature. We used three processes to identify relevant literature:

1. A Google search using the search terms “suicide” and “aftercare” with searches restricted to Australian web pages. The first 10 pages were searched for relevant information on Australian aftercare services. This process identified information on the following aftercare services that were not provided to us by PHN surveys: Wesley LifeForce Aftercare, Care Connect by Social Futures, First Nations Aftercare Support Service by Thirrili in conjunction by ACT Government, Anglicare Attempted Suicide Aftercare Program (ASAP), and YOUTH Aftercare left by New Horizons.
2. We searched the websites of the following health and suicide prevention agencies for relevant reports and documents:
 - Every State and Territory Health Department
 - Every Primary Health Network
 - Suicide Prevention Australia
 - Beyond Blue
 - Lifeline Australia
3. We emailed a number of sources, many of whom we also briefly interviewed:
 - Key suicide prevention organisations, several of which have recently completed relevant reports regarding key principles of suicide aftercare services and outcome monitoring, the findings of which they discussed. Organisations contacted include:
 - Suicide Prevention Australia
 - Beyond Blue
 - National Aboriginal Community Controlled Health Organisation.
 - Key researchers undertaking evaluations and reviews of aftercare services in Australia.
 - Services and programs identified during PHN survey or grey literature search where additional information regarding program components and referral pathways required. Examples include:
 - Several individual Aboriginal Community Controlled Health Organisations with identified aftercare services or components e.g. Kurbingui
 - North-west Melbourne PHN who have been involved in an evaluation of LGBTQIA+ cultural competency training for HOPE aftercare services
 - Victorian Department of Health regarding the broader HOPE model
 - Orygen for information regarding the youth HOPE program
 - Holyoake After Care Coordinator Service (ACCS)
 - We also attended a presentation of the findings of the Nous evaluation of The Way Back Support Service.
 - Several services advised that they are commencing or undertaking evaluations but were unable to provide documentation or evaluations at this stage, including:

-
- Further evaluations of the Adult HOPE expansion to 22 sites across Victoria and the four Child and Youth HOPE services. We are unable to share any documentation from these evaluations at this stage.
 - Next steps evaluation underway: 12-month follow-up of a small non-RCT.

PHN Survey

Publicly available information regarding Australian aftercare programs was limited, and the grey literature search above did not provide a comprehensive overview of services. To address this gap, an online survey regarding available aftercare services was distributed to each PHN via individual email. Where responses were not received, two additional reminder emails were sent at least one week apart. For PHNs where there was no acknowledgement of receipt, a member of the research team also telephoned the PHN to follow-up.

We received responses regarding 27 PHNs, noting that for some regions that are managed centrally we received a single response e.g., we received one response reflecting Perth North, Perth South, and Country Western Australia. We did not receive a response from four PHNs despite multiple contact attempts, and these were considered lost to follow-up.

To address the review questions regarding the alignment of services with population needs, the survey additionally asked respondents to answer open-ended questions regarding the alignment of services with population needs, gaps in services, areas for improvement, and barriers to access. These responses were thematically analysed by two members of the research team, the results of which are reported later in this review.

Findings

1. Effective aftercare models and services

Evidence from meta-analyses and systematic reviews

In the present review period, we identified two recent meta-analyses, one evaluating Caring Contacts interventions¹²³ and one evaluating brief contact interventions more broadly²⁴. Skopp and colleagues²³ evaluated outcomes from six RCTs which assessed Caring Contacts in patients recently discharged from care after a suicide attempt. The meta-analysis was not able to identify strong evidence in support of Caring Contacts in reducing suicide mortality, or in reducing emergency department presentations or hospitalisation. However, there was a protective, but imprecise, effect of the interventions associated with suicide attempts one-year post-randomisation (RR= 0.57, 95% CI 0.40.-0.80). While the results therefore lack support for Caring Contacts, the small number of RCTs included, and the fact that suicidal ideation was not assessed, could be impacting the integrity of this interpretation.

Tay and Li²⁴ conducted a meta-analysis on brief contact interventions, which includes Caring Contacts amongst other intervention formats, such as telephone calls, in-person visits, and crisis cards. They also assessed suicidal ideation amongst suicide mortality and suicide attempts across 23 studies. Broadly, Tay and Li concluded that there was significant evidence for intervention effects on suicide attempts within 12-14 months (OR = 0.87, 95% CI 0.76-0.99, p = 0.03). This was not the case within six months, or between 18-24 months. A sub-group analysis determined that the only intervention type to yield significant results were those which combined a number of elements (e.g. postcards as well as in-person visits). This is an important finding, as it is a unique determination on intervention components. There was also considerable evidence that interventions significantly reduced suicidal ideation within 12 months (OR = 0.60, 95% CI 0.50-0.71, p < 0.001), but not within six months.

One scoping review was identified in the literature search exploring interventions for attempted suicide generally²⁵, which noted that brief contact, safety planning and outreach interventions appear to have more robust evidence compared to pharmacological and psychological approaches. This review also acknowledged that most of the evidence suggests digital interventions are promising, at least in the short-term.

A recent National Institute for Health and Care Excellence (N.I.C.E) guideline²⁶ reviewed the evidence and concluded that discharge protocols including enhanced aftercare were important to increase engagement with treatment and reduce rates of self-harm. However, the review noted limitations to

¹ Caring contacts are a specific type of Brief Contact Intervention, most often used with veteran populations.

available evidence and concluded that there was insufficient evidence to provide recommendations on the specific components of aftercare.

In the 2019 Evidence Check, six systematic reviews were identified, arguing that aftercare is effective in reducing the number of people who will have a subsequent suicide attempt. The results from these reviews were broadly consistent with the aforementioned. Specifically, Inagaki and colleagues²⁷ demonstrated that nine aftercare trials were effective in preventing repeat suicide attempts within a 12 month period, but lacked sufficient data to determine an effect at 24 months, even with the addition of additional studies in an updated publication²⁸. Another meta-analysis reviewed in the 2019 Evidence Check suggested that although the odd ratios were lower for repeat self-harm or repeat suicide attempts compared to control groups, these effects were non-significant²⁹. In contrast, another systematic review found that amongst several kinds of brief contact interventions there appeared to be a significant effect of the intervention compared to controls, or at least a trend towards a preventative effect³⁰. Two other reviews demonstrated that brief contact interventions appeared to decrease the risk of suicide reattempts post-discharge^{31, 32}.

A cautious interpretation of the above meta-analyses and reviews suggests that brief contact interventions may reduce the risk of suicide attempts, with a more sophisticated analysis²⁴ suggesting that a combination of contact types (i.e. face-to-face followed by brief contacts) is likely to be most effective.

Evaluations of individual programs

Consistent with the 2019 Evidence Check, most studies included within this Evidence Check may be considered within the three broad categories of brief contact interventions, comprehensive aftercare, and brief interventions. The number of controlled evaluations of each aftercare model and the percentage providing support for effectiveness are summarised below in Table 2. The majority of studies found that comprehensive aftercare programs and brief intervention programs are effective (63% and 70% of studies respectively). Support for brief contact interventions was somewhat lower at 50% of the published evaluations. It is important to note that we identified only four published controlled evaluations of brief contact interventions across the two review periods and of these, one study unexpectedly found that the incidence of suicide reattempts was *higher* among those who received the intervention³³. As displayed in Table 3, when non-controlled studies (e.g. pre-post evaluations) were included, the pattern of results remained similar in providing support for aftercare interventions, particularly coordinated aftercare and brief interventions.

Table 2—Findings of controlled evaluations (NHMRC Level III or higher) by aftercare model.

Aftercare Model	Finding			
		Effective	Not Effective	Harmful
Comprehensive Aftercare	N	5	3	0

	%	62.5	37.5	0
Brief Contact Interventions	N	2	1	1
	%	50	25	25
Brief Interventions	N	16	7	0
	%	69.6	30.4	0

Table 3—Findings of all intervention evaluations (NHMRC Level IV or higher) by aftercare model.

Aftercare Model	Finding			
		Effective	Not Effective	Harmful
Comprehensive Aftercare	N	9	3	0
	%	75	25	0
Brief Contact Interventions	N	3	1	1
	%	60	20	20
Brief Interventions	N	22	7	0
	%	75.9	24.1	0

Although a handful of studies did not find evidence to support the effectiveness of particular aftercare programs, additional factors should be taken into account when considering these findings. At least one sample was later reanalysed, and the intervention found to be effective when administered after a first suicide attempt (ALGOS). At least three studies compared the intervention to an active control containing multiple components of effective aftercare services (e.g. case management controls^{34, 35}). We describe the evidence for each of the three main models of suicide aftercare in more detail below.

Brief contact interventions

Brief contact interventions have generated considerable interest due to the broad reach and low cost of the intervention, coupled with an early study demonstrating a reduction in suicide deaths³⁶. A range of mechanisms have been hypothesised to drive the effect, including a felt sense of connectedness, feeling that someone cares, and facilitating service use. One meta-analysis suggested that broad mechanisms of effect include social support and greater understanding of suicide prevention²⁹. These

interventions have been prominent in dedicated services for veterans, and details of these programs have been discussed further in the Priority Population section of this review. Two studies have also completed feasibility studies incorporating qualitative methods to explore the acceptability of a brief contact interventions for young people as well as preferences for content and frequency etc. These studies have also been discussed further in the Priority population section of this review.

The 2019 Evidence Check described three evaluations of brief contact interventions that were published during that time period. An RCT evaluating the *Caring Contacts* intervention for military personnel³⁷ is described in more detail in the Priority population section of this review. Briefly, periodic text messages were sent at higher intensity in the first month then monthly thereafter, and led to a 44% reduction in suicidal ideation (odds ratio 0.56, 95% CI 0.33-0.95, $p = .03$). Another RCT evaluated the Australian *Postcards from the Edge* program in which people treated for self-poisoning were sent eight postcards over 12 months after discharge³⁸. Although there was no reduction in the *proportion* of patients re-presenting for self-poisoning, the *number* of re-presentations to ED for self-poisoning significantly reduced by about half (IRR = 0.54, 95%CI 0.37-0.81), and the number of bed days similarly reduced by about half. Subgroup analyses suggested that the intervention was effective for females not males, and only for people with history of self-poisoning prior to the index event.

It is important to note that the third RCT from this period evaluated the *Messages from Manchester* program and found an increase in suicidality on some measures³³. In this program patients were mailed a service list leaflet as soon as possible after consenting to participate, then received two telephone calls from clinical researchers in the first two weeks. The calls were semi-structured and aimed to facilitate treatment access (e.g., ensuring that patients were able to contact their general practitioner (GP) or Mental Health Clinician) but did not reference support or motivation. Participants then received contact letters expressing caring concern for the patient at 1, 2, 4, 6, 8, and 12 months. Note that this is on the lower end of contact frequency particularly early in the project, with several other trials including more frequent contact, particularly in the first month. After adjusting for baseline clinical factors, the odds ratio for reattempts was not significant, but the incidence ratio for reattempts was significantly elevated (adjusted IRR = 7.16, 95% CI 1.6-32.8, $p=0.011$). Note that these outcomes were derived from records of hospital presentations, which may differ from self-reported reattempts (e.g., within a single study Comtois and colleagues found intervention effects for self-reported reattempts but not from hospital-reported reattempts³⁷). This allows for the possibility that the actual number of reattempts may not be elevated, but rather the incidence of help-seeking is elevated – a plausible hypothesis given that the intervention encouraged patients to do so. However, the study does not exclude the possibility of elevated attempts following intervention, highlighting the need for ongoing evaluation of what combination of treatment outcomes are most informative and careful recording of any adverse outcomes.

Another study identified in the current review period was consistent with the above hypothesis regarding a dissociation between reattempt rates vs. help-seeking³⁹. This quasi-RCT evaluated the use of phone calls and postcard as an adjunct to treatment as usual (TAU). The study did not find a difference between groups in the incidence of suicide plans or reattempts. However, patients who received the intervention did attend the psychiatric hospital more frequently after discharge, which the authors suggested may be attributable to increased help-seeking in this group.

Although the current review period did not identify any additional controlled evaluations beyond the study described above, there has been an increase in studies incorporating qualitative methods to evaluate treatment acceptability and to refine the content, delivery method, and frequency of the

interventions, particularly in evaluations of programs tailored for priority populations. One such study included a pre-post evaluation of the Australian *Reconnecting AFTER Self-Harm (RAFT) program*, in which periodic text messages (initially weekly for six weeks then monthly) include links to an informative website containing therapeutic material²². In qualitative interviews with participants, common themes included comfort in feeling cared for, and the helpfulness of reminders to focus on mental health coupled with resources to do so. The study also evaluated acceptability of the intervention, with most endorsing text message as a preferable mode of delivery. Although a pilot study with a small sample size, the outcome results are also promising. There was a significant reduction in self-reported self-harm episodes in the 12 months post baseline compared to the 12 months prior, as well as a significant reduction in suicidal ideation from baseline to follow-up.

We also identified another feasibility study of an adapted brief contact intervention for young people⁴⁰, which is described in the Priority populations section of the report. Briefly, the intervention was deemed feasible and acceptable to young people, with most participants endorsing statements that the intervention was beneficial for their mental health (78%), reduced their suicidal ideation (67%) and helped prevent suicidal behaviour (74%). Further research investigating these promising interventions should emerge within coming years.

Brief contact interventions – summary

As noted above, meta-analytic reviews have yielded mixed findings. Tay and Li²⁴ found support for brief contact interventions in reducing reattempts, while Skopp and colleagues²³ did not find conclusive evidence for Caring Contacts resulting in reduced suicide deaths or hospitalisations. However, it is important to note that there is variability in the observation of treatment effects depending upon which outcomes were evaluated. Several of the studies found a clear dissociation between hospital-recorded reattempts, self-reported re-attempts, and treatment seeking. Several authors hypothesised that brief contact interventions may lead to an increase in help-seeking and service utilisation, as per their stated aims. It may be helpful for future studies to include a range of outcome measures encompassing both hospital-recorded and self-reported reattempts, as well as service utilisation or help-seeking.

It is also important to note that some authors have acknowledged that the reach of brief contact interventions may be limited or contraindicated for some people including those experiencing paranoia or housing instability and/or homelessness²⁰. Thus, although brief contact interventions may be helpful for some people, they should not comprise a standalone aftercare intervention. If used, they should be packaged within a broader suite of aftercare components that offer a more comprehensive range of interventions that may be differentially appropriate for different people.

Brief contact interventions – common components

Effective brief contact intervention programs tended to include:

- More frequent contact in the first 4-6 weeks
- Both information regarding available services as well as expressions of concern
- Some form of integration with the treating hospital, such as being signed by ED staff or the inclusion of ED contact details.

Comprehensive aftercare

The 2019 Evidence Check described a number of comprehensive aftercare programs (previously described as Assertive Aftercare and Case Management), with overall findings supporting the effectiveness of these programs. Notable programs included OPAC in Denmark and ACTION-J in Japan. The 2019 Evidence Check described one study which did not find an effect⁴¹, but this was effectively a non-inferiority trial in which a case-management program (assertive intervention for deliberate self-harm; AID) was compared to another active control, namely the Collaborative Assessment and Management of Suicidality model (CAMS).

Despite an increase in published articles about comprehensive aftercare programs, very few of these studies were controlled evaluations. In the current review period, we identified only one new article describing a RCT⁴², and this was a reanalysis of a previously described sample who received the ACTION-J program⁹. We also identified two additional non-randomised controlled evaluations of comprehensive aftercare programs published during this period. Overall, these studies supported the effectiveness of comprehensive aftercare programs in reducing suicide-related outcomes. We did also identify an evaluation of the Australian program TWBSS which did not find an effect⁴³; this study is described in the Australian aftercare services section of this review. Below we describe the available evidence for the OPAC and ACTION-J programs in more detail and summarise evaluations of two additional programs.

Foundational Framework: The Baerum Model

One of the earliest programs described in the literature is the Baerum Model, named after the service that has offered coordinated support services to people who have attempted suicide in Baerum, Norway, since 1983. In this model care begins in hospital, where a hospital-based suicide prevention team provide crisis intervention, psychosocial assessment, suicide risk assessment, and facilitated referral to a community-based team (a public health nurse and psychologist) where indicated. In this model, the nurse contacts people preferably on the day that they are discharged from hospital, and acts as an advocate to ensure that they are linked in with a variety of necessary services within an appropriate timeframe, acting as a support for up to 12 months. Although the service includes problem-solving counselling, it is important to note that the service is not a stand-alone model or substitute for healthcare. Rather, it offers a complement to existing services to help facilitate engagement and offer support.

Although an observational study of this program did not find evidence for a reduction in reattempts¹⁶, this program was influential in shaping the conceptual framework for comprehensive aftercare programs and was adapted for implementation in Denmark via the OPAC program described below.

The Outreach, Problem-solving, Adherence, and Continuity (OPAC) Program

The principles of the Baerum model were used to subsequently design a suicide aftercare program for people living in Amager, an island district in Copenhagen. This adapted program was renamed OPAC (Outreach, Problem solving, Adherence, Continuity) and offered similar care to the Baerum program, but only for a duration of up to six months. In this program primary contact is made by a nurse while people are in hospital, and followed by home visits after discharge and a series of brief contacts via calls, letters, texts, and emails. The program is characterised by flexible but persistent follow-up.

An initial quasi-experiment found that the adapted program effectively reduced the rate of reattempts from 34% to 14% at one year follow-up compared to a historical control period prior to the intervention⁴⁴. A subsequent RCT also found evidence for reduced suicide reattempts among people who received the intervention (8.7%) compared to a control group (21.9%⁸). A follow-up to the RCT further found that the intervention effects wear off until it is no longer sustainable after 3-4 years⁴⁵.

ACTION-J

The ACTION-J program is another comprehensive aftercare program that was implemented and evaluated at 17 hospitals in Japan. In this program, while the patient is still in hospital, initial contact and assessment is coupled with psychoeducation for family. Following discharge, people were interviewed by case-managers at set time points (initially at 1, 2, 3, and 6 months after discharge) but later every six months for the duration of the study (at least 18 months and up to five years depending on when participants entered the study). The sessions focused upon encouraging people to engage with treatment, coordination of treatment appointments, and referrals to external support services where needed. Notably, the trial sites all appeared to be relatively well-resourced, including existing multidisciplinary teams and the appointment of an additional psychiatrist or emergency physician for the trial. The intervention also included formal integration with existing teams and periodic case conferences with psychiatrists. People who received the intervention also had access to an intervention website that included psychoeducation and intervention resources (including self-evaluation tools), articles, social resources, and crisis intervention. The program also involved rapid follow-up that was face-to-face in the hospital where possible and assertive follow up with family members where individuals were not reachable (consent obtained at start of program).

An initial evaluation of the program found a significant reduction in the incidence of first recurrent suicidal behaviour, but only until the six-month timepoint (RR 0.50, 95% CI 0.32-0.80; $p = 0.003$)⁹. Interestingly, this is the timepoint at which contact further reduces in frequency to six-monthly contact only. Subgroup analyses found that the intervention was more effective for women and in people under 40 years of age with a history of previous attempts.

Another evaluation of the same sample found that the program also led to fewer self-harm episodes per-person per-year across the whole study period compared to those in the usual care group (adjusted incidence risk ratio (IRR) 0.88, 95%CI 0.80-0.96, $P = 0.003$)⁴⁶. Examination of the detailed distribution of reattempts suggested that the intervention effects were mainly attributable to a reduction in the number of people who experienced multiple (three or more) repeated attempts. Subgroup analysis of this outcome found that the reduction in overall self-harm episodes was larger for patients who had no history of suicide attempts prior to the index event (27%), compared to the reduction observed in the overall sample (12%; adjusted IRR 0.73, 95%CI 0.53-0.98, $p = 0.037$). This contrasts with the incidence of first reattempts reported by Kawanishi and colleagues, which found a larger intervention benefit for those with a history of previous attempts when the incidence of first reattempt was evaluated, compared to the overall frequency of reattempts examined by Furuno and colleagues.

A further reanalysis published during the current review period found that the previously observed reduction in incidence of first attempt at six months was only observed for people who only experienced an Axis I disorder (RR 0.51, 95%CI 0.31-0.84) and not those who also experienced a comorbid Axis II disorder (RR 0.44, 95%CI 0.14-1.40)⁴². Taken together, these analyses suggest that the ACTION-J program may be effective in reducing reattempts, particularly in the first six months

where contact was more frequent. They also suggest the need for further evaluation of whether the effectiveness of aftercare interventions differs between groups of people, such as those who do vs. do not have Axis II disorders.

Other comprehensive aftercare programs

In the current review period, we identified two other non-randomised controlled evaluations of comprehensive aftercare programs. One of the larger studies involved a flexible approach where case management was provided by clinical staff in three phases that varied in intensity from high (crisis management at weeks 1, 2, and 4), moderate (intensive management at weeks 8, 12, and 16), and low (maintenance management every three months)¹¹. In this program, case managers regularly reviewed risks, provided supports and treatment encouragement, and consulted with psychiatry supervisors weekly. The program is notable in its flexibility, wherein clients could move up and down the levels of care according to their needs and clinical indications. Evaluations found that deaths by reattempt were significantly reduced among those who received the intervention (2.27% vs. 7.35%, $p = 0.019$). Although the groups were not randomised, the findings were consistent after controlling for potential confounds such as psychiatric treatment, suicide attempts, family history etc.

A smaller evaluation compared case management to case management + psychoeducation, and treatment as usual⁴⁷. Findings of this study are more difficult to interpret, indicating a reduced likelihood of reattempt among those who received case management, but also a shorter duration to reattempt among the treatment group. The results also found no difference between groups at 30 months, although this is consistent with previous results finding that intervention effects appear to fade over time.

We identified an additional five non-controlled evaluations of comprehensive aftercare programs, all of which provided some degree of support for the effectiveness of this model of aftercare⁴⁸⁻⁵². All five of these provided some evidence for a reduction in suicide-related outcomes following a comprehensive aftercare program. Interestingly, one study also found that people who did not complete the case management program had more untreated stressors than those who did complete the program⁵¹. This suggests that a possible mechanism of action for the intervention may have been supporting people to resolve stressors that precipitated their suicide attempt.

Comprehensive aftercare – summary

We identified a range of evaluations of comprehensive aftercare programs. These evaluations took place in a variety of cultural contexts by distinct clinical and research teams. Although there were some exceptions, the overall majority of these studies provided support for the effectiveness of comprehensive aftercare in reducing rates of reattempt. However, several evaluations found that the effects of interventions tended to fade over time, with the specific estimates of effect duration varying between six months and three years across studies.

Subgroup analyses yielded mixed findings, with suggestions that programs may be differentially effective depending upon whether a person has a history of prior reattempts, their gender, or whether they experience a comorbid Axis II disorder. However, in most cases these findings resulted from post-hoc re-analysis of initial evaluation data and tended not to have been replicated. Further research is required to understand the varying needs and potentially differential effectiveness of aftercare for various subgroups within the broader population.

Comprehensive aftercare – common components

The comprehensive aftercare programs that demonstrated reductions in suicide-related outcomes tended to:

- Be well-integrated with broader service models and were often co-located. The aftercare programs were not a substitute for healthcare but offered support and facilitated engagement with broader service models that appeared to be well-resourced and able to offer clinical services in a timely manner.
- Begin care with initial contact while the patient was still in hospital to offer education, with several also offering support for family members at this time.
- Be clinically staffed. Several also included support for aftercare staff such as regular case conferences or supervision with mental health professionals e.g., psychiatrists.
- Offer assertive or persistent follow-up that is initiated rapidly (if not initiated in-hospital, then typically within 24-48 hours of discharge).
- Explicitly reference flexible implementation in response to the needs of people accessing the program, with the frequency and duration modifiable.
- Couple case management intervention with brief contacts or informative websites offering education and therapeutic resources.
- Offer a higher intensity of care early in the program that gradually decreases. Several described weekly contact in the initial 4 weeks, then monthly contact until around six months, at which point it may have ceased or decreased to quarterly or biannual contact. Notably, the effectiveness of programs often decreased around the time that the intensity of intervention tapered.
- Address a broader scope of biopsychosocial needs that a person who has attempted suicide may have via broader case management and problem-solving assistance, rather than narrow focus on adherence to a treatment plan made at discharge.

Brief interventions

Brief intervention aftercare programs typically offer short-term support via limited sessions (usually less than six), and often of brief duration (around 15 minutes). They are more active than brief contact interventions and usually involve reciprocal communication with participants. Overall, brief interventions are less likely to include case management and are not assertive in follow-up. The content and goals of sessions varies considerably between programs, including brief risk assessment, support and encouragement to engage in treatment, and even clinical strategies. The number of controlled evaluations of brief interventions has more than doubled compared to the 2019 Evidence Check, with many more uncontrolled (e.g. pre-post) evaluation studies. Below we discuss findings from controlled evaluations of brief intervention programs including the components evaluated and their evidence.

Telephone follow-up for adults

Several programs included a series of telephone-based follow-up calls at pre-determined timepoints. Many programs included phone calls alongside other intervention components, but at least two

programs have found evidence for the effectiveness of follow-up calls as single component interventions. One program included three follow-up calls by a nurse at days 8, 30, and 60, and resulted in a 33% reduction in reattempts compared to a historical control group⁵³. The calls focused on assessing suicide risk, emergency and degree of harmfulness, and medication adherence.

An interrupted time series evaluation of the Emergency Department Safety Assessment and Follow-up Evaluation (ED-SAFE) program found that universal screening coupled with brief intervention led to fewer suicide attempts at 12 months compared to TAU or universal screening alone (18% vs 22 and 23%)⁵⁴. The intervention included a secondary risk assessment by an ED physician, provision of self-administered safety plan resources by ED nurses, and a series of brief (10-20 minute) telephone supports over a year (seven to the patient and four to their support person). Note that this intervention began while patients were still in hospital. At the first phone call at one week, 34% of participants had completed a written safety plan. An economic evaluation of this study estimated cost-savings of \$8,502 USD per averted suicide attempt, equating to approximately \$840 million per annum in the American context of the study¹².

A different program in Barcelona included a single-session psychiatry follow-up within 10 days of discharge, coupled with six brief follow-up calls by a trained mental health nurse over 12 months. The calls focused on assessing risk, treatment adherence, encouraging treatment engagement, and facilitating urgent ED attendance where participants reported elevated risk. Compared to both TAU at another site and historical controls, the program reduced the rate of participants who reattempted (6% vs 14%) and delayed reattempt to 347 days compared to 300 for the TAU sample and 316 for historical controls⁵⁵. The effect was not maintained at a five-year follow-up⁵⁶.

Telephone follow-up programs with inconsistent results

Contrastingly, several other evaluations have not found support for the effectiveness of telephone follow-up programs when delivered as single component interventions. One evaluation of a five-call brief intervention delivered over six months by a nurse did not find evidence to support a reduction in the number or proportion of reattempts, nor a delay in reattempting compared to TAU at a control site⁵⁷. A different program involving six calls over 12 months similarly did not find any evidence for a reduction in reattempts compared to a historical control group⁵⁸. Note that the historical control sample had been analysed in at least three other studies. Another evaluation of the same intervention also failed to find evidence for a reduction in reattempts compared to patients who received TAU at another site⁵⁹. However, the patient characteristics varied between the groups at baseline, with the intervention group having twice the proportion of participants with diagnosed personality disorders (20.8% vs 10%). Sub-analyses found that people who received the intervention after a first-time attempt were less likely to reattempt than those who had a history of prior attempts before receiving the intervention. It is also important to note that two of the studies^{58, 59} both utilised data pertaining to patients who attended Complejo Hospitalario de Navarra during 2018 within their intervention samples, i.e. their samples are likely to substantially overlap. These studies caution the use of telephone follow-ups as a single component aftercare intervention for adults, with inconclusive evidence for its effectiveness in this context.

Telephone follow-up program for adolescents (12-18 years)

The 2019 Evidence Check identified a single study evaluating the use of telephone follow-ups for adolescents. The study compared a single follow-up call at 90 days to a multi-call intervention that

included both the adolescent and their guardian in six calls across 90 days after discharge⁶⁰. The intervention resulted in significantly fewer reattempts for those who received the multi-call intervention (6%) compared to those who received the single call (17%; OR = 0.28, 95%CI 0.09-0.93, p = .037).

Brief interventions with multiple components

Telephone follow-up + either traditional Polynesian massage or Mobile Intervention Team

One study evaluated the combination of telephone follow-up with traditional massage in French Polynesia⁶¹. The program included 1-5 sessions of either massage or Mobile Intervention Team visits for those who did not wish to or could not attend the massage intervention, provided over four months. Massage was chosen as an intervention due to its establishment as a spiritual and therapeutic traditional intervention known as taurumi. The intervention also included one telephone follow-up between days 10-21, and another six months later. Compared to a control sample who did not receive the intervention, the intervention led to significantly few suicide attempts and suicides (3% vs 12%) and fewer people lost to follow-up (7.35% vs 9.72%).

Tailored interventions for primary (first-time) attempts vs. reattempts: ALGOS to Vigilans

The ALGOS intervention sought to compile available evidence suggesting that different aftercare interventions may be beneficial for different groups of people. An algorithm was used to provide tailored aftercare dependent upon a person's attempt history. People who were discharged following a primary attempt were given a crisis card that contained contact details for a triage and crisis response centre. People with a history of previous attempts received two follow-up phone calls around days 10-21 and six months to provide psychological support, evaluate coping, and encourage further support. Where patients were unreachable, experiencing crisis or struggling with adherence to treatment, they received postcards at 2,3,4, and 5 months. Contact was summarised in letters to patient's GP or referring psychiatrist after each contact.

Twenty-three emergency departments participated in a RCT across 2010 to early 2013 where patients were allocated to receive the above intervention or TAU alone which involved a single follow-up 23-48 hours after discharge. An initial analysis of this data did not find a significant difference between those who received the intervention and those who did not¹⁸. However, later re-analysis found evidence for reduced reattempts at both six and 13 months for people who received the intervention after a primary suicide attempt (RR 0.46, 95%CI 0.25-0.85 and RR 0.50, 95%CI 0.31-0.81) but not for people who received the intervention after a reattempt¹⁷. This suggested that the crisis card and crisis response teams may have been effective in reducing reattempts for people who receive the intervention after a primary attempt. Simultaneous qualitative evaluations suggested that the intervention may be helpful in facilitating feelings of belonging, and there was growing interest in the program among GPs⁶².

Consequently, the program received further investment, and an enhanced version was renamed Vigilans and rolled out across the Nord-Pas-de-Calais region to EDs, psychiatry crisis centres, psychiatry departments, and private clinics. The program was made more flexible and responsive. A protocol paper for the revised program outlines a number of features that were not outlined in early ALGOS papers⁶². The postcards were signed by the practitioner who initially met the patient and could be reactivated such that patients could receive multiple batches, either if they reattempt or if indicated by clinical judgement of members of the call team following interaction. The enhanced program also allowed for additional calls to be programmed as preferred by patients, and calls could be repeated as many times as required within a period from a few hours to several days. The program

was also resourced to provide crisis outreach supports. Where calls detected immediate risk, an emergency practitioner would dispatch appropriate crisis aids such as GP, ambulance, or a medicalised urgency vehicle. Where moderate risk was indicated, the calls could provide counselling and guidance to alleviate distress, as well as support close relatives or seek assistance from other health professionals. Importantly, the program could be extended for an additional six months at the discretion of the call team or on patient request. However, for patients with multiple reattempts within 12 months, the program was deemed inefficient and referrals to more intensive programs were made.

We did not identify any RCT evaluations of the revised program. However, we did identify one evaluation which compared patients who received the intervention in one region to patients who received TAU in another region⁶³. In the 30 days following discharged, unmatched estimates suggest that those who received Vigilans were four times less likely to reattempt, with estimates of a six-fold reduction where participants across samples were matched based on factors such as attempt history and methods. Enrolment in the program was associated with a significant reduction in the probability of reattempt at both six and 12 months (3.2% vs 16.8% at six months, $p < .001$; 5.2% vs 22.2% at 12 months, $p < .001$).

We also identified an evaluation which explored the relationship between the utilisation rates of Vigilans with changes in suicide attempt rates⁶⁴. The authors compared the relationship between the percentage of people who received Vigilans after an attempt across 2015-2018 with changes in the rate of suicide attempts in the same region across 2014 and 2018. There was a significant decline in the rate of suicide attempts as the utilisation of Vigilans increased (slope = -1.13, SE = 0.30, $p < .001$). This model suggested that 25% utilisation of Vigilance would yield a suicide attempt decrease of 41%.

Overall, these findings suggest that the enhanced multicomponent tailored intervention may be beneficial in reducing suicide reattempts. However, it is important to note that in this intervention the team were resourced to be able to answer and respond to crisis calls, as well as flexibly adapt the intervention schedule where clinically indicated.

Brief interventions that incorporate clinical components

Suicide Risk Attention Program (ARSUIC) - Madrid

To combat rising suicide rates in Spain, in 2012 the Community of Madrid's Health Council implemented the Suicide Risk Attention Program (ARSUIC). The minimum requirement of this program is that individuals' access to a psychiatry appointment within seven days of discharge from the emergency department following a suicide attempt. There are no requirements stipulated for ongoing contact or particular therapeutic interventions within that appointment. An observational study comparing rates of reattempt following this intervention to historical control data found that this intervention reduced the risk of reattempt by 25% over a three-year follow-up⁶⁵. Since this time, a number of catchment areas have opted to include additional aftercare components, some of which have been evaluated as adjuncts to this single session intervention (described below).

One observational study compared the rate of reattempts across three catchment areas that implemented (i) the above intervention as TAU, (ii) enhanced contact comprising of 6-12 months of outpatient psychiatry and phone call follow-up at months 1, 6, and 12, and (iii) eight weekly 30-minute sessions of problem-solving therapy. Both the problem-solving therapy intervention and the enhanced contact intervention resulted in lower rates of reattempt by 38% and 44% during the one-year follow-up compared to TAU⁶⁶. A further economic evaluation of this data found that the incremental costs

associated with the enhanced contact and problem-solving interventions relative to TAU were below acceptable thresholds per averted suicide⁶⁵. Cost-savings analyses found that the interventions may be associated with cost-savings when accounting for the value of life years lost as cost of death using the European Commission's estimate. This suggests that both interventions may be both effective and cost-effective. However, the enhanced contact intervention was associated with lower incremental costs compared to the problem-solving intervention (ICER = 2,340 pounds per averted attempt for enhanced contact vs. 6,260 pounds for problem-solving therapy).

SUPRE-MISS

In 2000 the World Health Organisation launched the SUicide-PREvention Multisite Intervention Study on Suicidal Behaviours (SUPRE-MISS) which included an RCT evaluation of a brief intervention and contact program for aftercare support. Fleischmann reported the outcomes of five sites that completed the protocol, all of which were located in lower-middle income countries¹³. The intervention included a one-hour psychoeducation session which explained suicidal behaviour as a sign of distress, explored risk and protective factors, epidemiology, repetition, and importantly alternative strategies/options to suicidal behaviour and referral options. The intervention also included nine follow-up sessions with a clinical member of staff (e.g., doctor, nurse, psychologist). The sessions were held either over the phone or as home visits, and were spaced over 18 months (weeks 1, 2, 4, 7, and 11 then months 4, 6, 12, and 18). Another group were randomly allocated to TAU, which in these contexts did not involve psychological support, only treatment for physical injuries then discharge. The trial did not evaluate reattempt rates but found that people who received the intervention were significantly less likely to die by suicide over the follow-up period than those who received TAU (0.2% vs. 2.2%, $\chi^2 = 13.83$, $p < 0.001$).

Aspects of SUPRE-MISS were also used in a tailored program for veterans which had a much shorter duration (5 months vs 18 months) but included safety planning⁶⁷. This study has been discussed further in the Priority population section of this review, but briefly, it found significant reductions in ideation in the very short term (one month) but not at three months.

A modified version of SUPRE-MISS has also been evaluated in an RCT in Iran⁶⁸. The program education session was modified to include discharge planning, details about available mental health services and how to access via a hotline. The follow-up schedule was also slightly modified to include 15-20 minute telephone follow-ups at weeks 1, 2, 4 and then monthly until 12 months. Both aspects of the intervention were delivered by clinical psychologists. Importantly, the service systems in Iran include a Social Emergency Program which, although broader in scope than suicide prevention, include a range of support services, social workers, psychologists, and an emergency mobile unit that can support in suicide crisis. Those who received the intervention had a lower rate of reattempts than those who received TAU (11% vs 26%), with a high risk of reattempt in the TAU group (HR = 2.78, 95%CI 1.4-5.9). The use of support services was also higher among those who received the intervention (36.4% reported a need for help, 74% of those used the services (approximately 41 people) and 65.7% of those who did were satisfied with the service). Only two people in the TAU group accessed the services. These findings suggest that a combined intervention that is well-integrated, facilitates referral to broader support services, and provides psychosocial follow-up supports can be beneficial in reducing suicide risk.

ASSIP – brief narrative therapy

Another brief intervention program including clinical components with RCT-level evidence is the Attempted Suicide Short Intervention Program (ASSIP). The intervention includes 3-4 patient-centred

therapy sessions delivered by psychiatrists or psychologists. The sessions last 60-90 minutes and include narrative interviewing, case formulation, psychoeducation, safety planning, and continued contact via letters that are sent quarterly in the first year then biannually in the second year. In an initial RCT¹⁰, patients who received the intervention were less likely to reattempt (8.3% in the intervention group vs 26.7% in the TAU group) and the intervention was associated with an 80% reduced risk of reattempt (Wald $\chi^2_1 = 13.1$ CI 12.4-13.7, $p < 0.001$). The intervention also led to a significant reduction in days of inpatient care (72%) and a non-significant reduction in days of hospitalisation (63%). Notably, the intervention heavily prioritised therapeutic alliance, and this was reinforced in moderator analyses which found that stronger therapeutic alliance was associated with lower rates of reattempt within the ASSIP group.

Several secondary evaluations of this sample have been published. An economic evaluation of this data found that the ASSIP program may present cost-savings through averted attempts and significantly lower general hospital costs among those who receive the intervention⁶⁹. Another secondary evaluation found a significant 11% reduction in dysfunctional coping scores among those who received ASSIP (median = 1.83) compared to TAU (median = 2.05; $p = .011$) and a 6% increase in problem-focused coping (ASSIP median = 2.83 vs. TAU median = 2.67, $p = 0.029$) at 24 month follow-up⁷⁰. Another secondary evaluation found that higher levels of therapeutic alliance were associated with lower levels of ideation at 24 months ($r = -.42$, $p = .001$)⁷¹. When two components of therapeutic alliance were analysed, both satisfaction with the therapeutic relationship ($r = -.31$, $p = .025$) and satisfaction with the therapeutic outcome ($r = -.46$, $p = .001$) were significantly associated with lower levels of ideation at 24 months. These findings reinforce the importance of prioritising therapeutic alliance as a key characteristic of effective aftercare.

The ASSIP intervention has also been evaluated at another site in Finland (the original study was conducted in Switzerland) and compared to crisis counselling⁷². In this trial both groups showed a significant reduction in ideation at follow-up, but there was no significant difference in the proportion of patients who reattempted between those who received ASSIP (29.2% [26/89]) vs. crisis counselling (35.2% [25/71]). However, it is important to note that the control intervention in this trial was active and involved 60-minute sessions with professional counsellors. The number of crisis counselling sessions varied according to patient need (median = 3, mean = 4.4, 8 patients had 6-14 sessions). Although not applied systematically, several treatment components within the ASSIP model were also identified in the content of counselling sessions including functional chain analysis, identifying warning sign and establishing strategies to keep safe. Notably several characteristic ASSIP components (video recording, narrative transcribing, follow-up letters) were reported to be used by the crisis counsellors. This allows for the possibility that some of the treatment characteristics identified as common to these interventions may be important aftercare components (i.e., some form of chain analysis or individual case formulation, and some form of safety plan identifying warning signs and strategies to stay safe).

Problem-solving therapy

Several aftercare programs have also evaluated problem-solving as an aftercare intervention. As described previously, Martínez-Alés, and colleagues⁶⁶ found an eight-session dose of problem-solving therapy to effectively reduce the risk of reattempt at one year. Problem-solving has also been evaluated in the *MIDSHIPS* RCT which compared a six session dose of problem-solving therapy delivered by a nurse or OT to TAU⁷³. Although not adequately powered to detect a significant difference, the difference in rates of self-harm recurrence trended to be lower for patients who

received the problem-solving therapy (23% repeated 19 times) than those who received TAU (38% repeated 44 times). This difference was more pronounced for self-reported self-harm at six months (32% of the problem-solving group vs. 59% of the TAU group).

Programs including motivational interviewing components

Several studies have also evaluated programs that involve motivational-interviewing components to intervention. In one quasi-experiment people who received three sessions of motivation interviewing after an attempt had significantly lower ideation ($p < .001$) and were significantly less likely to reattempt suicide (2.85%) 12 weeks after the intervention than those who received TAU (22.85%, $p < .001$)⁷⁴. However, care should be taken when interpreting these results due to a lack of clarity regarding inclusion/exclusion, with a lack of engagement listed as an exclusion criterion and 0% attrition reported, suggesting that intention to treat analyses were not conducted.

A more comprehensive RCT has evaluated the use of brief contact interventions (texts and phone calls) as adjuncts to motivational-interviewing enhanced safety plans for adolescents who have attempted suicide¹⁴. The addition of texts was shown to significantly lower the intensity of suicidal urges ($B = -0.59$, $p = .018$, $d = 0.39$), increase self-efficacy to refrain from suicidal action ($B = 0.99$, $p = .007$, $d = 0.46$), and increased likelihood of seeking support from professionals on days when they experienced suicidal ideation ($B = 0.82$, $p = .039$, $OR = 2.27$).

Programs that include clinical components – studies with inconsistent findings

We also identified two studies with inconsistent findings regarding the effectiveness of programs that include clinical components. One study evaluated the use of brief cognitive therapy as an adjunct to standard case management and did not find a significant difference in the proportion of reattempts between the two groups³⁴. However, in line with several other studies that did not find an effect, the control group in this trial was also an active intervention. It is also important to note that the brief cognitive therapy was delivered by the case managers who also provided the standard case management intervention.

Another RCT compared the Collaborative Assessment and Management of Suicidality (CAMS) intervention to TAU, finding no association between treatment condition and reattempts during follow-up³⁵. However, this trial also utilised a highly active TAU that included an intake session, 1-11 visits with a clinician, medication management, and referral to primary care follow-up. The sessions focused on resolving the suicide crisis using case management and psychotherapy as appropriate, including supervision by a psychiatrist. As a result, these studies don't allow for strong inference regarding the effectiveness of the clinical interventions, due to the nature of the control interventions which shared a number of treatment components with the clinical interventions.

Interventions combining several brief strategies – varied findings

We identified a few studies that combined several brief intervention strategies with varied findings. One study evaluated the effectiveness of three phone call follow-ups as an adjunct to three brief contact letters at 1-, 6-, and 11-months post-discharge⁷⁵. At 12 months there was no significant difference in the proportion of patients who reattempted suicide between the groups (14.5% vs 14%). However, this is not entirely unexpected given that the brief call intervention included fewer calls than other reported studies and concluded at three months post-discharge. It is possible that this dose was

insufficient, or that an effect may have faded. It was not reported whether there was a difference between groups in outcomes at the three-month timepoint.

Another study compared a multicomponent aftercare program known as ACCESS to a TAU that included multidisciplinary psychiatric or psychological intervention, crisis team referrals, and recommendations for engagement with community services⁷⁶. The intervention included two weeks of patient support following discharge, eight brief contact postcards over 12 months, 4-6 sessions of problem-solving therapy, vouchers to access GPs, risk management strategy, and a cultural assessment for each participant. A variety of outcomes were evaluated including hospital re-presentation, hopelessness, anxiety, depression, quality of life, sense of belonging, self-reported reattempt, and health service use. There were no significant differences between groups in the hospital re-presentation, self-reported reattempt, or for most of the secondary outcomes. The authors posited a number of explanations for their findings that relate to difficulty in implementation and engagement with the intervention. They recruited fewer patients than planned, and of those who consented to the intervention, 34% did not receive either the patient support or problem-solving therapy, limiting their intervention to postcard contact and for some the GP voucher (although uptake of this was limited). Furthermore, for those who did receive the problem-solving intervention, the dose was low, with less than half of participants in the intervention group attending three or more sessions. The authors compared this to a previous study finding support for problem-solving therapy for people who have experienced self-harm, where participants received an average of six sessions.

The intervention has also been adapted and evaluated in a culturally-informed delivery for Māori people in a program renamed as Te Ira Tangata¹⁹. This version was delivered by Māori clinicians and cultural assessments involved identification of where both the therapist and patient belong and what connections they have. This study found reduced re-presentation to hospital with self-harm at three months (10.4% vs 18%, $p = 0.05$) but no difference at 12 months. There was however a significant decrease in general hospital presentations over 12 months (44.2% vs. 61.1%, $p = 0.03$).

Other brief interventions - peer support

The 2019 Evidence Check noted a lack of rigorous studies evaluating the impact of peer support in suicide aftercare programs. One trial compared SUPRE-MISS delivered by a clinical researcher to a buddy intervention where a nominated support person was trained across three four-hour workshops in strategies to assist the patient in managing challenges, coping skills, and facilitating referrals⁷⁷. At 18 months, significantly fewer patients in the buddy group had reattempted (1.9%) compared to those in the control group (3.2%, $p = .004$). The 2019 Evidence Check also noted that the Australian Next Steps Program includes peer support. We did not identify any new controlled evaluations of peer support programs for suicide aftercare during the current review period. However, we did identify a pre-post evaluation of a small Australian psychoeducational group program that included peer workers as facilitators⁷⁸ – this program has been discussed further in the *Evaluated Australian programs* section of this review. Consultation with our Lived Experience Advisors also highlighted the inclusion of peer support workers within broader aftercare teams as a good opportunity to formally integrate ongoing lived experience within services.

Brief interventions – summary

We identified a large number of controlled evaluations of a wide range of brief intervention aftercare programs. The intervention elements included in these programs varied considerably, including

telephone follow-ups, education sessions, various brief therapies, and even massage therapy. Many of these evaluations found evidence for a significant reduction in reattempts, some found evidence for reductions in suicide deaths, and some found evidence for increased service use among people who received the intervention. A small number of studies found evidence for improvements on other clinically relevant factors including a reduction in unresolved stressors, reduced dysfunctional coping, increased problem-focused coping. A couple of studies also found evidence for therapeutic alliance as an important moderator of intervention effect. A number of brief interventions were also subject to economic evaluations which demonstrated the interventions to be cost-effective or to offer cost-savings when considering the financial cost of treating reattempts at hospital and the value of life years lost.

However, several studies did not find evidence for an intervention effect. Many of these inconsistent studies utilised an active control that included features common to other effective interventions, limiting inference to non-inferiority conclusions. A pattern also emerged wherein single-component interventions providing only telephone follow-up tended not to be effective, whereas multicomponent interventions that included multiple elements of care were more likely to be effective. This observation is consistent with meta-analysis findings that only brief interventions combining multiple elements were effective²⁴.

Brief interventions – common components

Despite the wide variation in the components of effective brief interventions programs tended to:

- Include multiple intervention components beyond phone call follow-up alone e.g., education sessions, therapy, safety planning, brief contact letters/postcards.
- Include safety planning.
- Provide continued risk assessment and management.
- Be well-integrated with broader clinical services and able to facilitate crisis response in situations of elevated risk.
- Provide ongoing assessment and dialogue about engagement with treatment and provide encouragement or support to bolster engagement.
- Be administered by clinical staff or, in the case of programs for priority populations, be administered by members of that population.
- Explicitly focus on relationship factors such as therapeutic alliance, continuity of care. Therapeutic alliance demonstrated to be a moderator of outcome.

Several programs:

- Also incorporated support or education for family or significant support people.
- Began care while the person was still in the hospital emergency department.

2. Components and characteristics of effective programs

To date, there have been no comprehensive dismantling studies published which evaluate the effectiveness of individual components or characteristics of suicide aftercare programs. However, we have identified components and characteristics that were common to programs that effectively

reduced suicide-related outcomes such as reattempts. Given mixed findings for brief contact interventions and substantial evidence that single component interventions are unlikely to be effective, we have extracted these components from comparisons of effective comprehensive aftercare and brief intervention programs; many of these factors are also not applicable to brief contact interventions.

Common components

Multiple intervention components

The overwhelming majority of programs identified as effective in this review included multiple intervention components, e.g., coupling case management with brief contacts, or telephone follow-ups with a time-limited therapy or education. Less than 15% of the effective programs included a single intervention, while 60% of the non-effective programs included only a single intervention. This observation is consistent with a meta-analysis finding that only programs including multiple components were effective in reduction reattempts²⁴. Conceptually, the inclusion of multiple components may also allow for the possibility of broader coverage if some components are unacceptable or ineffective for subgroups of the population.

“People who present with self-harm to emergency departments are a heterogeneous population and thinking that one intervention would be effective for everyone is probably naive.”

Hatcher et al., 2015, p. 235

Case management with a broad scope

All of the comprehensive aftercare programs included case management, and about a quarter of the brief intervention programs also referred to case management within their intervention description. Around 60% of the comprehensive aftercare programs also described a scope of case management that encompasses a broad range of biopsychosocial needs beyond mental-health related services alone.

The notion of ensuring a broad scope of aftercare is consistent with evidence that the precipitating factors and causes for suicidal crisis are diverse, and not always attributable to an underlying mental-health disorder. One study routinely collected and coded “suicide motive” when people presented to hospital following a suicide attempt, with the most common factors being interpersonal problems (46.2%), a mental disorder (34.4%), arguing or fighting (21%), economic problems (16.2%), physical disease (11.4%), school or work-related difficulties (6.2%)⁵¹. This diverse range of underlying difficulties aligns with the range of psychosocial risk factors in coroner-certified suicide deaths in Australia, which has identified relationship conflict, family disruption, disappearance/death of a family member, impact of disability, legal, housing, and economic issues as prevalent factors⁷⁹.

This diverse range of stressors are unlikely to spontaneously resolve over the course of a brief emergency department admission. Without further supports such as broad case management, there is a risk that these stressors will remain unresolved and continue to place people at risk of reattempt. In line with this, Australia’s National Agreement on Mental Health and Suicide Prevention specifically states that policy should ensure to “...address the economic, environmental and social drivers of distress, and support social, emotional and cultural wellbeing...” (section 112).

Safety planning

Although only 20% and 40% of the comprehensive aftercare and brief intervention programs explicitly referenced the inclusion of safety plans, we have opted to include safety planning in the list of components. A number of the programs included in this review were implemented prior to the development of safety planning interventions in 2012¹ or its rise to widespread use in the late 2010’s. However, the level of evidence for safety planning is strong, with demonstrated reductions in suicidal ideation, behaviour, and hospitalisations² and the intervention has been recommended for inclusion in suicide prevention programs³. Safety planning has also been included as a core component of several Australian aftercare programs including TWBSS and HOPE. Notably, none of the programs that failed to find an effect when comparing to a non-active control included safety planning.

Ongoing risk monitoring

All of the effective comprehensive aftercare programs and 87% of the effective brief intervention programs included ongoing risk assessment. However, note that this was paired with broader services to respond to situations of elevated risk (described below).

Focus on engagement in treatment

All of these effective comprehensive aftercare programs and around a third of the effective brief interventions explicitly stated a focus on encouraging or motivating participants to engage in ongoing supports or to adhere to their treatment plan that was prepared at discharge. This goal is consistent with the model of aftercare as a bridging intervention after hospital-based care to facilitate ongoing supports within the community.

Common implementation and process characteristics

Integration with broader services

Most effective aftercare programs described some degree of formal integration with broader support services (80% for effective comprehensive aftercare programs and 73% for brief intervention programs). Many explicitly acknowledged that the aftercare programs were not a substitute for healthcare provided by broader services such as clinical teams, and some were co-located within the hospital to assist with this. Effective integration was noted for the purposes of facilitating both crisis responses in situations of elevated risk as well as referral to clinical care or ongoing treatment where required.

Person-centred care

The 2019 Evidence Check identified the importance of person-centred care in suicide aftercare, noting particular importance in facilitating service engagement. A review of TWBSS in the Australian Capital Territory was described which identified the following elements as contributors to engagement:

- A flexible service model.
- Caring and non-judgemental staff.
- Meeting people at a place and time that was comfortable for them.
- Meeting people prior to discharge and knowing that this person would be supporting them when they left hospital.
- Having conversations about the suicide attempt that acknowledge the impact but also focused on how to manage thoughts of suicide in future.
- Having a focus that was holistic and focused on actions and that assisted people to experience greater integration across their lives.
- Having a creative and innovative approach to safety planning, having conversations, life planning and increasing motivation.

In this Evidence Check, several of these factors were identified across multiple effective programs. Several studies described programs which were flexible and responsive to patient needs with regards to intensity and duration. In one study this included flexibility in moving up and down pre-determined levels of intervention¹¹. In the VigilantS model this included flexibility in the provision of additional modes of intervention (e.g. postcards), higher intervention intensity (e.g. more frequent calls) or a longer duration of intervention where requested by the patient or clinically indicated⁶².

A holistic focus of care has been described above under *Case management with a broad scope*. Several of the effective programs identified in the current review explicitly described taking a collaborative approach with patients.

Continuity of care was also explicitly prioritised in many of the effective programs evaluated. Several referred to a form of continuity of care wherein there was ongoing contact with a provider who first made contact prior to discharge (e.g., OPAC, ASSIP). Others referred to a form of continuity of care where the treating practitioner/care provider may not have made contact during hospital care but was otherwise consistent throughout the intervention. This form of continuity of care was more common and explicitly described for 40% of effective comprehensive aftercare programs and about 47% of effective brief intervention programs.

The 2019 Evidence Check also identified therapeutic alliance as an important person-centred care factor, noting a study which found patient-rated therapeutic alliance to be a significant moderator of treatment effectiveness on reattempt as an outcome¹⁰. In this Evidence Check we identified a secondary evaluation⁷¹ which found stronger patient-rated therapeutic alliance to also predict lower suicidal ideation scores 24 months later.

Clinical or specialist staff

Almost all of the aftercare programs that have been shown to be effective in controlled trials explicitly noted that the interventions were delivered by clinically-trained staff, including psychiatrists, psychologists, social workers, nurses. There only exceptions to this pattern included other appropriately qualified staff such as a massage therapist to administer body contact care or a same-culture volunteer in conjunction with a psychologist or nurse⁶¹. There was also one study in which the qualifications of the staff were not explicitly stated⁴⁷.

Rapid initiation of care

Rapid initiation of care was a common theme among effective programs, with many commencing care while the patient was still in hospital. Sixty percent of the effective comprehensive aftercare programs reported initiation within 24 hours, 80% within 72 hours, and 100% within one week. The onset of the brief intervention programs was less reliably reported, with 5/16 studies of these studies not providing a timeframe in which initial contact occurred. Of those that did state the timeframe for initial contact, 27% occurred within 24 hours, 36% occurred within 48 hours, 45% occurred within 72 hours, 82% within a week, and 100% within a month.

Higher frequency of contact in the early weeks

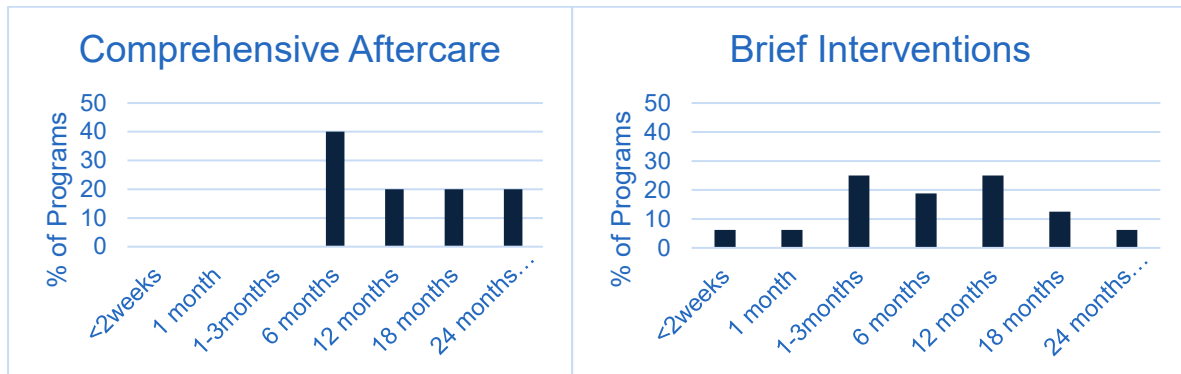
Most of the effective programs identified in this review described an intervention schedule that was more frequent early in treatment before tapering off later in treatment. Many described weekly contact until around 4-6 weeks, then monthly or quarterly contact until six months, at which point some interventions ceased while others tapered further to quarterly or biannual contact. Notably, for some of the programs the intervention effect decreased around the time that the intensity of the intervention tapered.

Program duration

The duration of effective programs varied between comprehensive aftercare and brief intervention programs. The median duration of effective comprehensive aftercare services was 12 months, while the median duration of brief intervention programs was six months. The distribution of program durations is represented for each in Figures 1 and 2 as a percentage. However, it is important to note

the complementary findings discussed above regarding flexibility and responsiveness of interventions to the needs of individuals, both with respect to program intensity and duration.

Figures 1 and 1—The duration of evaluated programs presented as percentage, for comprehensive aftercare and brief interventions respectively.



Assertive follow-up

Many of the effective programs identified in this review referred to the provision of assertive follow-up, wherein the burden of maintaining contact rests with the care provider, and multiple attempts at contact are made when clients do not respond. Of the effective comprehensive aftercare programs we identified, 80% explicitly referred to assertive or persistent follow-up. Forty-four percent of the effective case management programs also reported adopting assertive follow-up procedures.

Engaging people at the first attempt

As previously noted in the 2019 Evidence Check, some studies have suggested that aftercare may be more effective when delivered to people after their first suicide attempt, rather than after a reattempt^{17, 46}. This may have implications for referral pathways and the need to ensure comprehensive coverage so that people are well-supported after an initial attempt.

Lived experience involvement

The inclusion of lived experience has become more common over recent years. Notably, none of the ineffective programs referred to lived experience consultation or co-design (only one referred to post-implementation review). In comparison, three of the effective programs referred to lived experience involvement that resembled co-design, while another three referred to lived experience consultation or input.

Components with emerging evidence

Involvement of a support person (e.g., family, carer)

The inclusion of a support person has become more common, with 40% of the effective comprehensive aftercare programs and 32% of the effective Brief Intervention programs reporting doing so. This commonly involved providing education around suicide risk and safety planning and awareness of available services, particularly in studies where care was initiated in-hospital. One study referred to family therapy⁴⁸ and only one referred to support *for* the support people¹¹. This was

identified as an important gap in existing aftercare services by our Lived Experience Advisors. Notably, none of the non-effective programs included support people in the intervention.

Peer support workers

Overall, there were few studies which evaluated the inclusion of peer support workers in aftercare. We identified one evaluation how a peer support 'Buddy' program which found evidence for reduced reattempts⁷⁷, and one qualitative evaluation of the inclusion of peer work in Next Steps⁸⁰. The study explored perceptions of peer-work among both peer-workers themselves as well as clinicians who worked alongside them at a comprehensive aftercare service. Both cohorts found the inclusion of peer work to be a beneficial way of formally integrating lived experience within the program. Both cohorts also emphasised collaboration and consultation to facilitate effective risk management, as well as the promotion of agency among service users. We also identified a pre-post evaluation of a peer support program that found promising reductions in ideation and increase in hope⁸¹. Qualitative analyses identified as important the holistic and responsive support, ongoing social connectedness, having peer workers that understood their experiences and treated them like people, and ongoing social connectedness. However, the evaluation lacked a control group. Further evaluations of programs that include peer support workers is required, particularly controlled evaluations.

3. Current Australian aftercare service landscape

In this section we provide an overview of the range of aftercare services currently implemented across Australia. This information was difficult to obtain, as services have been funded by a variety of sources and no central service directory exists. Some programs were funded at the federal or state level, with some of these aligned with PHNs of Local Health Districts in jurisdiction. Others such as the Culture Care Connect program are being established based on need rather than PHN boundaries. Some were funded as part of temporary trials, while others have been intended as ongoing services. Still others have been funded by community organisations or charities. To comprehensively canvas this range within the scope of this review, we have compiled information from grey literature searches, personal communications, and information requests sent to each PHN. However, given the range in funding and jurisdictions, there may be services that have not been identified within this review. We also noted an overlap in the services provided across various programs. We identified several programs that provide support to people following a suicide attempt, but which have a broader scope and support people in a wider range of circumstances. We have limited our description of services to those which provide supports that are dedicated to suicide aftercare.

Evaluated programs

A limited number of Australian aftercare programs have been formally evaluated, and few of these have been subject to peer-review. The 2019 Evidence Check described non-controlled evaluations of the Lifeline Suicide Crisis Support Program (LCSP)⁸² and TWBSS⁸³, which were tentative but supportive. The review also described a RCT demonstrating reduced ideation following an Intensive Case Management (ICM) intervention⁸⁴, and a pre-post evaluation showing reduced self-rated suicide risk and desire to die following the Next Steps intervention⁸⁵.

We discuss subsequent evaluations of several programs below, including TWBSS, HOPE, Peer, Acceptance, Support, Understanding, and Empathy program (PAUSE), and Lifeline Eclipse. Evaluations of other programs for specific subgroups of people have been included in the 'Priority populations' section of this review, including the LGBTIQ+ program by Mind Australia and the Aboriginal-led program by Pika Wiya.

TWBSS

TWBSS is a national aftercare program that is currently provided across 23 PHN's in New South Wales, Victoria, Queensland, South Australia, Tasmania, the Australian Capital Territory, and the Northern Territory. Based on an assertive outreach model the program provides non-clinical, psychosocial support to clients during the first three months after hospital discharge following a suicidal attempt or suicidal crisis. The program includes several components consistent with the evidence-based components identified in this review, including rapid follow-up (ideally while the person is still in hospital), safety planning, patient-centred care, case management, and ongoing risk monitoring.

We identified one peer-reviewed evaluation of TWBSS which did not find a reduction in hospital-recorded deliberate self-harm⁴³. As we have previously noted, there may be a disconnection between hospital-recorded self-harm/attempt vs. self-reported instances (with hospital records potentially reflecting a combination of instances and help-seeking) vs. underlying distress. It is also notable that the version of TWBSS implemented at this site differed from other effective interventions that are longer in duration, are delivered by clinicians, and integrated with clinical services etc.

TWBSS was also independently evaluated by the Nous Group (Nous) between June 2020 and December 2022, including data from 8,734 participants across 27/38 sites⁸⁶. TWBSS had an uptake rate of 79% (16% did not consent and 5% were ineligible) but 41% of participants did not complete their service episode (this is above usual non-completion rate in the literature of 30%), with an average program duration of 12 to 13 weeks. Only 19% of service episodes had available pre-post data. Of those, there was a 63% reduction in suicidal ideation, 28% reduction in psychological distress, and 86% improvement in wellbeing following the program. 94% of participants who participated in the evaluation were satisfied with the service.

Qualitative evaluations identified therapeutic alliance with the support coordinator as a primary contributor to engagement and recovery. Other important characteristics included: assertive follow-up, person-centred and trauma-informed care, good integration with services, cultural responsiveness, and evidence-informed practice. Areas for improvement included broadened referral pathways, extended duration, and access prior to suicide crisis.

The Nous evaluation gave 18 recommendations to providers, service commissioners, states and territories, and the Australian Department of Health and Aged care. The recommendations fit broadly into the following six dimensions:

- **Service intake:** broadening inbound referral pathways to community-based referral pathways, reducing the average length of time between initial client contact and service delivery, and establishing a liaison officer role in all referring hospitals.
- **Service delivery:** increasing the proportion of participants who complete safety and support planning, investigate variations in aftercare service models through co-design, gather evidence to

determine whether peer support should be included, and consider including provision of support to participants support persons.

- **Governance and funding:** provide greater certainty through longer funding duration, simplify and clarify funding arrangements, and simplify and strengthen aftercare services governance.
- **Workforce:** develop a capability framework for support coordinators, establish community practice with PHNs and aftercare providers to share best practice, and improve support for aftercare service staff.
- **Monitoring & continuous improvement:** ensure the appropriate and consensual use of outcome measures, evaluate the appropriateness of mental health outcome measures, and reconcile and simplify data collection sharing requirements to allow for data consistency and quality across sites.
- **Recommendations for the handover of TWBSS:** Beyond Blue to handover their role to the Australian Department of Health and Aged Care, and states and territories, and Beyond Blue to ensure it's involved in transitional governance.

HOPE

The HOPE program is a comprehensive aftercare program that has been implemented in 21 sites across Victoria. HOPE delivers a combination of both clinical (psychiatry, psychology, and family therapy) and non-clinical (a psychosocial support worker) support over three-months to individuals and their support networks following a suicide attempt or crisis. The current service framework of HOPE addresses almost all the components and characteristics identified as common to effective programs in this review. It described a model of care that is person-centred, culturally responsive, and can be flexibly implemented. It includes multiple treatment components including case management that addresses a broad range of biopsychosocial needs, risk monitoring, safety planning, and peer support. Care is initiated rapidly after discharge and includes frequent contact in early weeks. The service is co-located and well-integrated with broader services. A notable deviation from the pattern observed in this review is the duration of care, with HOPE providing services for a maximum of three months while most of the effective programs we evaluated provided care for 6-12 months.

An evaluation of the initial 12 adult sites from 2019 yielded positive results. We are seeking permission to include details of the evaluation. During the review period, HOPE received 2,680 referrals with an uptake rate of 78.36%. A comparison of pre- and post- intervention data found that 64% of participants experienced a clinically significant improvement in suicidal ideation. People who received the HOPE intervention were less likely to present to the emergency department for self-harm (5.4% to 2.5%) compared to pre-treatment, and at 36 months they had lower mortality rates compared to people who had attempted suicide but not received the intervention (0.9% compared to 2.7%). Further evaluations of the HOPE expansion to 22 sites are currently underway.

PAUSE

PAUSE is a peer-led aftercare program implemented by Brook RED servicing South Brisbane. The program links people with a lived-experience peer worker after discharge. For up to 13 weeks the PAUSE peer worker provides non-clinical support by sharing their recovery strategies, setting goals,

finding community resources, and identifying support networks. Peer workers also provide practical support such as transportation, liaison, advocacy, and any other support required. Additionally, they assist people with engaging with the required health and community services.

An evaluation of the PAUSE pilot program took place between August 2017 to January 2020 to (1) evaluate the effectiveness and acceptability of the program and (2) explore the experiences of people receiving peer-support follow-up after hospital discharge to understand the key components of the program⁸¹. During the evaluation period 142 participants engaged with a PAUSE worker, with pre- and post- data available for only 21 to 33 people depending on the measure. Following the program, average suicidal ideation scores decreased, and hope scores increased. Thirty-six participants completed experience questionnaires, with all reporting feeling connected with their PAUSE support worker and that their peer worker made them feel that their recovery work was valuable. Thematic analysis identified key effectiveness factors including holistic and responsive support, ongoing social connectedness, and having peer workers that understood their experiences and treated them like people. Many participants reported that assistance with social housing waitlist applications was particularly beneficial. This highlights the need for programs to continue to integrate broad holistic assistance to address suicidality. It was noted that the program engagement rates were not significantly different for men, and CALD populations, suggesting that the PAUSE program is acceptable for priority populations, however further research is needed on this due to the studies low numbers.

Lifeline Eclipse

The Lifeline Eclipse program is an eight-week, non-clinical, psychoeducational group for people who have survived a suicide attempt. Weekly two-hour sessions are facilitated by a crisis support worker and a peer support worker with experience in suicide crisis support, prevention education, and bereavement. Group members offer each other emotional support and explore coping strategies including skill building, learning how to live with suicidal thoughts and how to respond with an emphasis safety planning.

An evaluation of Eclipse ran from January 2018 to December 2019 at two Lifeline centres, with a follow-up in May 2020⁷⁸. The aim was to evaluate intervention effectiveness in reducing suicidal ideation, depressive symptoms, perceived burdensomeness, and thwarted belongingness, and increasing resilience and help-seeking. The number of people who completed outcome measures was small (31 at baseline, 24 post-intervention, and 17 at one month follow-up). However, there were significant reductions in depressive symptoms and perceived burdensomeness, as well as increases in resilience and help-seeking immediately post-treatment. Perceived burdensomeness' showed further reductions at one month. The evaluation reinforces the role of social support as a protective factor against suicide and the need for connection in aftercare services.

Overview of services and programs delivered in Australia

Our review of the Australia aftercare service landscape identified that almost all Australian services use an assertive, coordinated aftercare model, ranging from eight weeks to six months, with a three-month program being most common. Most offer rapid, assertive follow-up after a suicidal crisis, case management and care coordination to address psychosocial needs, and safety planning. A table of available services by region may be found in Appendix C and a detailed table of service information including program components may be found in Appendix D.

Referral pathways have broadened, with more services accepting GP, community mental health, and self-referrals. There has also been an increase in the inclusion of peer support since the last review and more services including family members as part of the care plan. Criteria for inclusion vary across services, with some services providing support for people who have made a suicide attempt and to people experiencing suicidal distress, others focusing primarily on people who have attempted suicide but where capacity permits, including those with suicidal distress, and a smaller number providing service only to those who have made a suicide attempt. Except for the New South Wales pilot of the i.am youth service for people aged under 25 years, most services set a lower age limit for clients. Other exceptions to this are some Aboriginal and Torres Strait Islander services and one peer-led support service, which accept all ages. Aboriginal and Torres Strait Islander aftercare services also include postvention/suicide bereavement services.

TWBSS remains the most common model of care, particularly in New South Wales, Queensland, and Tasmania. In Victoria, the majority of services use the HOPE model, with two regional services using a blended TWBSS/HOPE model. The main service providers are NEAMI, Anglicare, and Wellways. Overall, services are located where the majority of the population resides. Some jurisdictions have a good geographic spread of services, with Victoria having the most comprehensive geographic coverage, and New South Wales also covering most areas. Most services identified in Queensland were in coastal locations or within 200km of the coast, with no services identified in far western Queensland and gaps identified even in more populated coastal areas (see next section). Similarly, the only service identified in the Northern Territory is based in Darwin, and in Western Australia, there appears to be a gap in the north of the state. For Aboriginal and Torres Strait Islander communities in WA, this gap will be addressed to some extent as Culture Care Connect aftercare services are established. Tasmania's services are located in Hobart, Burnie, and Launceston, with a potential gap for the west.

4. Evaluation of existing Australian aftercare landscape

Alignment with population needs

Although 7/24 PHNs indicated that the current distribution of services align with the population needs of their PHN, the majority of regions indicated that this was not the case. At least 9 referenced inequities in access to services for people living in outer metro, rural, or geographically isolated areas. Several referenced a lack of access to appropriate and safe services for people within priority populations. Others referenced a lack of resourcing and that the available services were not able to meet demands, even with restrictive eligibility criteria allowing referral only after hospital treatment. Further information regarding identified gaps in services is provided below.

Service gaps and barriers to engagement

A number of common themes emerged within the feedback provided by PHNs. These primarily concern the appropriateness of services for specific populations of people, issues regarding the accessibility or reach of services, and limited resources to deliver services.

Lack of aftercare services tailored towards specific/priority populations

Most PHNs provided feedback that existing services are not meeting the needs of a range of priority populations within their areas. Existing services were described as overly westernised and not adequately addressing the needs of the substantial proportion of Australians from CALD backgrounds. A lack of aftercare services for children and young people was also identified. Priority populations identified are noted below alongside their frequency of mentions across regions:

- Aboriginal and Torres Strait Islanders (22x)
- Youth (21x)
- People who live rurally or are geographically isolated (12x)
- LGBTQIA+ (11x)
- CALD (17x)
- Men (7x)
- People struggling with drug or alcohol use (2x)
- Older people (2x)
- New mothers (2x)
- People struggling with homelessness (2x)
- People with neurodiversity (1x)

Limited referral pathways

PHNs acknowledged the limited scope of existing referral pathways for most of the major multisite aftercare programs, which typically only allow for referrals from hospital emergency departments. There was widespread agreement that existing services exclude people who have attempted suicide but have not been treated in the emergency department, and there is a need to broaden referral pathways. PHNs reported that the reliance on referrals through hospital and emergency departments served as an additional barrier to Aboriginal and Torres Strait Islanders and the LGBTQIA+ community accessing aftercare, as these groups have historically faced discrimination within hospital settings. Additional referral sources identified in this survey include (but are not limited to) GPs, allied health, community based mental health services and safe spaces, Aboriginal Community Controlled Health Organisations, community cultural centres, and social care services.

Limited resource capacity

Several regions reported limitations to their funding and resources that have had impacts on the accessibility of services across their region and their ability to meet demands. Several referred to programs having to restrict eligibility further at times, and at least one referred to a reliance on other suicide prevention services to provide overflow support when the aftercare service is at capacity. Resource capacity additionally presents a gap for individuals who seek to access intensive support prior to the point of crisis.

Several reported that existing funding does not permit for adequate flexibility in duration of care, with clients repeating the program as many as three times due to reattempt. One PHN mentioned the aftercare service provided in their area is short-term (six weeks), despite the service model recommendation being 12 weeks. While in theory the service model of some aftercare programs stipulates that service care can be extended based on clients' needs, the reality of limited resources

and understaffing mean that care cannot be extended beyond 12 weeks or outside of regular business hours despite demand.

Others reported that there is a lack of community knowledge, and even knowledge among GPs, about available aftercare services within broader contexts of poor mental health/suicide literacy and communications. Several reported that they are inadequately resourced to provide outreach and education to address these gaps and improve awareness and acceptance of aftercare services.

Several PHNs raised the implications of inadequate staffing on their ability to provide in-service training or ensure that all staff attend minimally required cultural competency training, much less additional upskilling. A notable driver of this was staff turnover and a fluctuating workplace in the context of program funding insecurity.

Poor integration with broader support services (e.g., mental health)

In line with the findings of the peer-reviewed literature, several PHNs acknowledged the importance of good integration between services to facilitate both inbound referrals from the emergency department to aftercare, and outbound referrals from aftercare to ongoing care options in the community. However, many regions reported that the implementation of effective integration between services requires further improvement in their region.

In terms of transition from hospital to aftercare, several regions reported poor communication or strained relationships between the two services which have subsequently impacted referral and patient handover. Issues identified include poor delineation of roles between hospital and aftercare, with blurred boundaries regarding who is responsible for care of individual cases. Some regions also identified a lack of direct communication and reciprocal points of escalation to ensure that both services are in agreement regarding the degree of risk, triage, and urgency of care required for each patient. One PHN acknowledged loss of life due to suicide during this transition. Several stated that improvements to collective governance between services and improved clinical care coordination are desperately required. In contrast to these reports, one PHN referred to an effective communication and response protocol within their area that facilitates effective care coordination between services. It may be helpful to implement such protocols across regions as standard.

In terms of outgoing referrals from aftercare to community-based services at the conclusion of the aftercare program, several PHNs described a lack of resourcing for community-based mental health or related services. They reported that this resulted in long waitlists and a gap in care. Several noted the need for additional resources for ongoing services at the conclusion of care. PHNs also noted the need for better care coordination between aftercare and community services, describing a mismatch in risk thresholds and capacities for holding risk.

Need for workforce improvements

Several PHNs noted the need for significant improvements in workforce development to facilitate quality service delivery. The role of Hospital Liaison Officer within TWBSS was praised by several PHNs as a role that increased awareness, education, and integration of TWBSS with those that needed it. They recommended the Hospital Liaison Officer role as a role that should be available for all aftercare services within their region to improve and facilitate ease of access to services. In contrast, some regions described inconsistency of the workforce within the hospital setting. One PHN mentioned that high turnover rates, and difficulty filling vacancies for clinical care roles in the hospital,

has led to a depletion of skills and expertise that would typically be available to support aftercare services.

Two important themes also included the expansion of services to include both clinical and peer workers. A number of PHNs noted the need for better access to psychologists and more psychologists integrated within aftercare services. Several regions also described a need for more peer support workers, which they argued would bolster service engagement.

PHNs also emphasised a need for funding to provide learning and development opportunities so that the existing workforce has the capacity to meet increased and diverse demands of the community they serve.

5. Tailored programs for specific populations

Background

A number of subgroups of people have been recognised as having diverse needs and experiences of suicide aftercare, as well as differential suicide risk. To address the specific challenges and barriers faced by these groups of people, a variety of tailored programs have been implemented.

In Australia, the National Mental health and Suicide Prevention Agreement outlines several groups of people who may face such challenges (Section 111). For some of these groups, we identified several tailored Aftercare interventions that had been developed and evaluated. For other priority populations, tailored interventions have been developed (and in some cases implemented) but not yet formally evaluated. However, for many subgroups we were unable to identify any tailored interventions, either within Australian programs or even within the international peer-reviewed literature. This is a significant gap that was consistently identified in survey responses from PHNs across Australia, which have been outlined in the *Evaluation of current aftercare landscape* section of this review. In the section below we describe aftercare programs that have been tailored for priority populations, as well as outline any evaluation finding where applicable.

A brief note on intersectionality

It is important to recognise that individuals may hold multiple identities that interact in complex ways, which may further increase their risk for suicide or may give rise to a need for more nuanced care. For example, Blossom et al.⁸⁷ described the alarming rates of suicide among children and young people in the US, but noted that these rates are higher for children and young people who are also members of historically marginalised communities, and that there are also greater barriers to care for people in these communities.

All aftercare programs should therefore account for the multiple identities that people who access the service may hold. Broader population-wide programs should include policies and procedures setting out how the program will respond to these identities to provide safe and appropriate care. Similarly, it is insufficient for tailored programs to consider the needs of only one subgroup. These programs should also include policies and procedures for providing safe and appropriate care for people with other intersecting minority identities.

Kodish and colleagues⁸⁸ outlined the impact of intersecting identities on engagement, and the need to also incorporate this approach into broader systems. They outline the impact of culturally safe care in the emergency department on subsequent engagement, noting that in their sample youth from racial or ethnic minorities were less likely to receive follow-up care. They argue that young people from minority backgrounds are disproportionately impacted by breaks in continuity of care, as well as the broader context of systemic barriers, institutional racism, inequitable access, and a lack of culturally responsive services. It is therefore clear that the need for culturally responsive care that accounts for intersecting identities is also needed in broader systems such as emergency healthcare, and that the responsiveness of care at other stages of a suicidal crisis can substantially affect engagement with aftercare. We encourage the reader to keep intersectionality in mind when reviewing the tailored interventions outlined below.

Aboriginal and Torres Strait Islander peoples

Current landscape

Critical to the success of aftercare services for Aboriginal and Torres Strait Islander peoples is recognising and responding to the historical and cultural differences which shape the needs of people following a suicidal crisis, and their communities. The role of the Aboriginal Community Controlled Health Organisation (ACCHO) sector in providing aftercare-adjacent services to their clients is critical in this sense: ACCHOs are trusted wellbeing supporters for their communities and work within the holistic Aboriginal understanding of health, including the care they provide to people who are in suicidal crisis through dedicated and an often unfunded or underfunded community and social and emotional wellbeing (SEWB) workforce.

We identified a small number of established aftercare services specifically for Aboriginal and Torres Strait Islander people. The first is a service run through the Pika Wiya Aboriginal Health Service in Port Augusta, South Australia. The second is in Brisbane, the Aboriginal and Torres Strait Islander Aftercare Service (Kurbingui). Both services provide an emergency response and follow-up care to people who are experiencing a suicidal crisis, have attempted to end their life through suicide, or have been impacted by suicide. They offer face-to-face support, assertive follow-up, connection to other services, and incorporate cultural aspects into care.

The Pika Wiya service has been evaluated. While the evaluation described below is promising, it also emphasises the need for co-design with local communities, and the recommendations emerging from the evaluation should be viewed in this context. The evaluation used a mixed methods approach of yarning and analysis of the minimum dataset maintained by the Pika Wiya Aboriginal Health Service. The aftercare service sits within the Aboriginal Health Service, and the evaluation determined that this was one of its strengths that aligned with good practice in suicide prevention in Aboriginal communities. Other strengths were a quick response to new referrals, comprehensive engagement with clients, being co-located with the SEWB Team, using multiple service pathways, flexible entry and re-entry to the service for clients, culturally important elements such as the inclusion of kinships and involvement of traditional healers in clients care, connections with postvention services, provision of psychosocial models of care, and helping clients with practical problems, e.g. housing and employment.

Findings of note include high levels of prescribed mental health medication at first episode (approximately half of the clients, with some clients prescribed up to four different types of medication, all prescribed by other services). During the evaluation period, 15% were repeat episodes of care; most episodes of care were less than three months. Two thirds of clients were followed up within 24 hours of receiving a service referral. Follow-up care involved an average of 12.5 contacts per person during which individual psychosocial support was provided face to face. Nineteen clients aged 12-18 years received support from the aftercare service for an average of 72 days.

Interviews and yarning with stakeholders identified reductions in ED presentations for those receiving aftercare, increases in medication adherence, improvements in service engagement and physical and mental health (self-reported), high levels of satisfaction from clients, family, and community elders. The service has been recognised as promising by the Centre for Best Practice in Aboriginal and Torres Strait Islander Suicide Prevention. The service is experienced as culturally safe and responsive, using a holistic blended service model including assertive follow-up, therapeutic elements, case management, and traditional medicine.

Recommendations from the evaluation include:

- Establishing a sustainable funding model to provide certainty for staff and clients.
- Formalising shared care to ensure continuity of care.
- Enhancing a youth support model and consideration of formalised shared care arrangements with community partners to support young Aboriginal people experiencing suicidal crisis.
- Providing continuous capacity building and education for staff to sustain good practice, through building their confidence and knowledge of contemporary and clinical practice in crisis resolution.
- Developing and using culturally appropriate outcome measures: consider reducing the number of clinical outcome measures to a single evidence-based, culturally appropriate outcome measure.
- Extending hours to seven days per week to allow for rapid follow-up of people who experience suicidal crisis on a weekend day.
- Building in quality assurance to services and to support more robust monitoring and management of data integrity and compliance requirements.

In the Kurbingui aftercare service (Brisbane North), clients can self-refer or be referred by their GP or other health-practitioner. The service duration is client dependent and can be anywhere from one month to two years. The service is provided by SEWB practitioners, who work with clients to establish appropriate support, access to services, and follow up to assist with the client's journey. They develop support plans with clients to assist working through psychosocial barriers and accompany, support and advocate for clients with appointments. Safety planning and building stakeholder relationships with culturally appropriate mental health professionals (i.e., mental health services, psychologists, medical clinics, etc) are core components of the program. SEWB practitioners understand connection to land, culture, spirituality, family and community, and work with community to build clients relationships with culture and country. No evaluation was available at the time of writing. Key components of the support model are:

- Face-to-face
- Assertive follow-up
- Continuity of care

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- Integration with community services
 - Culturally appropriate and specific care
 - Safety planning

Culture Care Connect: developing and implementing culturally sensitive aftercare services

As part of a suite of federally funded suicide prevention programs for Aboriginal and Torres Strait Islander communities, the National Aboriginal Community Controlled Health Organisation is implementing culturally sensitive, co-designed and place-based aftercare services for Aboriginal and Torres Strait Islander people following a suicide attempt or suicidal crisis. Up to 31 networks consisting of one or more aftercare services will be established over four phased tranches. At the time of writing, tranches 1, 2 and 3 are established or are in the design phase and tranche 4 is to be rolled out. As such, no evaluations or service data are available yet.

The Culture Care Connect (CCC) Program is governed by Aboriginal and Torres Strait Islander experts in the field of Aboriginal and Torres Strait Islander mental health and social and emotional wellbeing. These experts have informed the development of guidance materials for the aftercare services within the program such as a booklet on how to establish an aftercare service, an aftercare service delivery model template and an Operational Guidance Paper which includes the CCC model of care.

The CCC Operational Guidance Paper outlines governance requirements, underpinning principles, roles and responsibilities, and an implementation timeline. The underpinning principles of the CCC Program are:

- Aboriginal leadership and Community control – appropriate governance structures to be established, and ensure all actions address Community priorities.
- Evidence-based – a broad view of evidence will be taken, recognising the wealth of local and cultural expertise within Communities. Qualitative and quantitative data will inform all aspects of planning and implementation. Data will inform monitoring and where feasible and appropriate may support improvements in local data quality.
- Culturally safe and appropriate – all services are developed, delivered, and evaluated in a manner that recognises and respects the unique cultural identity of Aboriginal and Torres Strait Islander Communities
- Place-based – acknowledging local control and adaptation to local contexts.
- Rights-based – equity as a matter of justice.
- Equity focus – to address the greatest need and priorities first. For example, subpopulations with the highest need for suicide prevention networks and aftercare services.
- Holistic, life-course approaches that address the social and cultural determinants of health and promotes appropriate, sustainable investment in Comprehensive Primary Health Care.
- Strengths-based approaches – recognising the strength of Aboriginal and Torres Strait Islander individuals and Communities.

The CCC Operational Guidance Paper also includes the CCC Suicide Prevention and Aftercare Model of Care (CCC MoC) for participating ACCHOs. To assist with developing the CCC MoC,

NACCHO identified three key frameworks that are useful for conceptualising the delivery of suicide prevention and aftercare activity in an ACCHO setting:

- Social and emotional wellbeing model from an Aboriginal and Torres Strait Islander perspective developed by Gee, Dudgeon, Schultz, Hart, and Kelly, 2013.
- The NACCHO NCD Model, adapted from the WHO Cancer Framework which incorporates prevention of disease through to supportive care and surviving and thriving (internal documentation).
- NACCHO Core Services and Outcomes Framework: The model of Aboriginal and Torres Strait Islander Community-Controlled Comprehensive Primary Health Care.

Collectively, these three models outline the core components of SEWB for Aboriginal and Torres Strait Islander people; group service activity to support SEWB and reduce the burden of suicide into various stages of the patient journey; and contextualise this activity within the ACCHO setting. NACCHO has combined these key approaches into the model, for use in program design and delivery. Enablers of the model include: data and indicators; workforce training; and career pathways. The Aboriginal and Torres Strait Islander Advisory Committee was consulted in the development of this model.

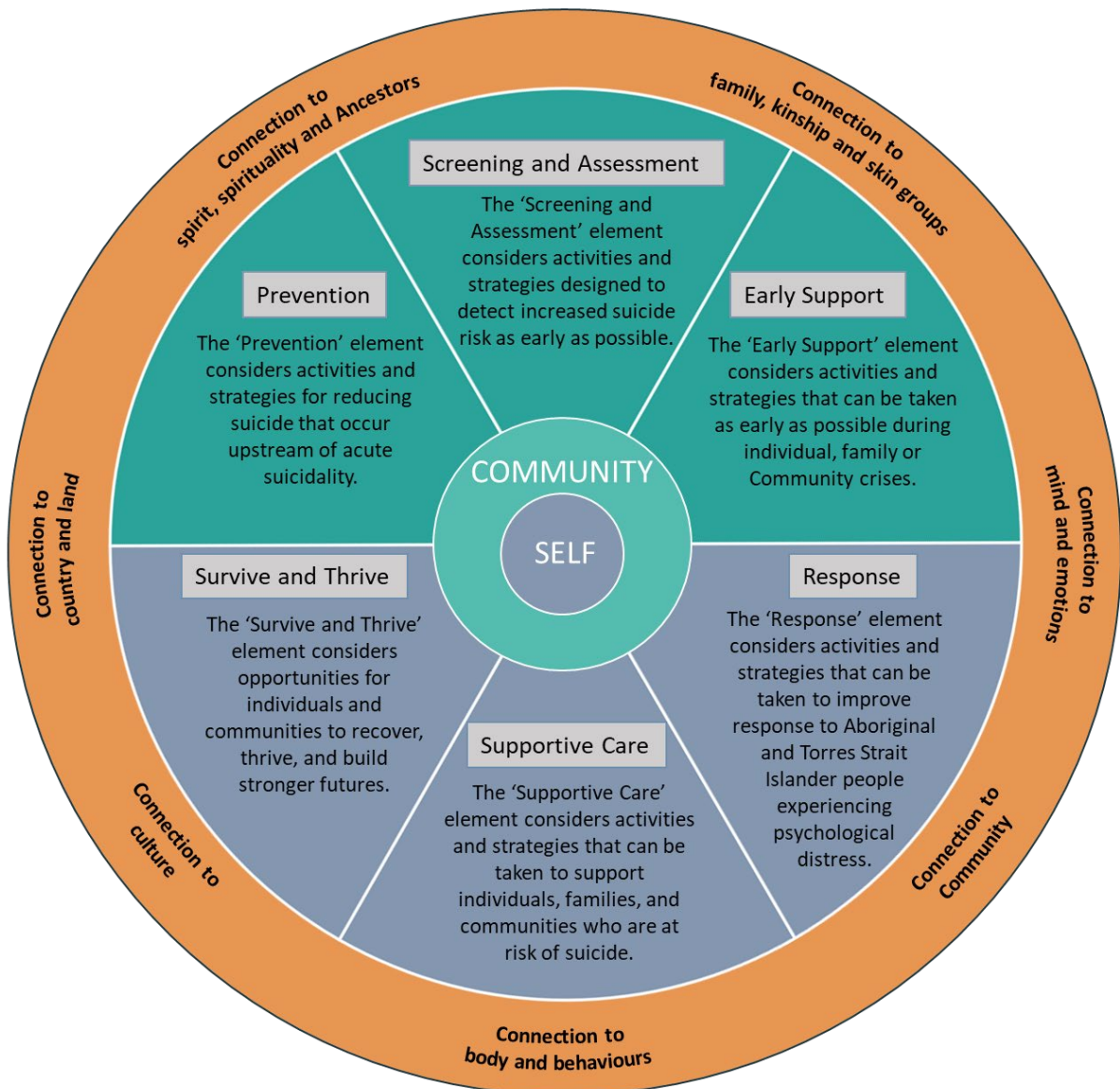


Figure 3— Culture Care Connect Model of Care⁸⁹. Enablers of the model include: data and indicators; workforce training; and career pathways.

In the model, there are six elements of the patient journey. While some effort has been made to clearly define each aspect and potential activities, NACCHO notes that there is considerable overlap between activities in each element of the patient journey. There are consistent enablers across each element that are vital for supporting activities. The use of local and regional data and indicators will enable ACCHOs/ACCOs to plan, monitor and evaluate activities. Building and supporting a strong workforce that is skilled, confident, resilient and culturally competent will also be essential to delivering an effective program. In addition, the model by its very nature is a key enabler to the provision of culturally safe and comprehensive care for people at risk of suicide.

Other service and funding arrangements

Currently, the Culture Care Connect program is funded at \$25.3m for four years (2021/22 to 2024/25). Separate to this program funding, each jurisdiction also makes some commitment to fund aftercare and other trauma and mental health services for Aboriginal and Torres Strait Islander people. There remains a need for *all* aftercare services to provide culturally secure care for Aboriginal and Torres Strait Islander people and for expansion of funding of CCC aftercare services, not only mainstream. There are many cultural security frameworks available to guide service provision (although none are specific to aftercare), with those that have been led by or co-designed with Aboriginal and Torres Strait Islander organisations and people recommended. Service co-design and strong Indigenous governance are also critical to success.

International evidence review

We found only one new peer-reviewed study of aftercare services for Indigenous people since the 2019 Evidence Check (Amadeo, 2020). In this study in French Polynesia, participants in the treatment group received either assertive aftercare and case management delivered by a Mobile Intervention Team (MIT) or therapeutic Body Contact Care (BCC), depending on their preference. The control group received treatment as usual. At the six-month follow-up, the BCC/MIT group had a lower rate of combined suicide and suicide attempt rates (3%) compared with the TAU group (12%). Engagement, measured by loss to follow-up, was stronger in the BCC/MIT group (7.35%) than in the control group (9.72%). People in the treatment group received one to five visits over a period of four months, with BCC comprising ~50 min with a body therapist, and MIT comprising supportive psychotherapy (problem solving, active listening, and a traditional approach based on local cultural beliefs). The study reported in the 2019 review (Hatcher et al., 2016) did not find differences between the intervention and control groups.

One study adapted a caring contacts approach for American Indian/Alaska Native communities using a community-based participatory approach to both the caring contacts and the study design⁹⁰. They conducted a RCT to test acceptability of the caring contacts, using two groups: enhanced usual care plus caring contacts, or enhanced usual care alone. The content of the caring contacts was adapted to suit each community. Acceptability of caring contacts was high. To date, no other outcomes have been reported.

LGBTQIA+ people

There are limited aftercare services tailored for LGBTQIA+ Australians outside of metropolitan Victoria and New South Wales. In Victoria, Mind Australia's LGBTQIA+ aftercare program services North-Western Melbourne. In New South Wales, Community Care by ACON provides a statewide service via telehealth and in-person for residents in Sydney, Newcastle, and Lismore. Both programs allocate community peer workers to clients to support them following a suicide attempt or suicidal crisis. A third LGBTQIA+ aftercare service run by the Queensland Council for LGBTI health servicing Brisbane North was identified, but little information about this program was available.

Mind Australia's LGBTQIA+ program underwent extensive co-design with stakeholders, community leaders, and people with lived experience. Co-design was implemented through focus groups with LGBTQIA+ individuals with lived experience, establishing a lived experience advisory panel, and consultations with current and previous aftercare peer practitioners. The result was a 12-week long service model that allows for self-referral, comprises safety planning and goal setting. Program staff included people from the LGBTQIA+ community with a diverse range of identities and backgrounds

and lived experience of mental ill-health and suicidal ideation. Care was provided across three key streams of support including:

1. Direct peer support – 1-on-1 sessions delivered by a peer worker
2. Direct clinical support – 1-on-1 sessions delivered by a clinician and
3. Group peer support – group programs.

Evaluation found that the program was able to be delivered effectively and produce positive significant mental health outcomes⁹¹. On an individual level, participants reported reduced suicidal ideation, improved mental health and wellbeing, improved resilience to effectively manage their suicidal ideation, and strengthened connections with others within the LGBTIQ+ community. Service users reported having a safe and positive experience, with many referring to the positive impact of staff with shared experience. The integration of peer practitioners and clinicians was identified as a key strength, allowing the program to foster an affirming safe space, and create a reciprocal environment between clients and peer workers. On a systemic level, the program increased collaboration and integration between service providers and the capacity and capability of the system to support the LGBTIQ+ community.

There were initial implementation challenges due to high staff turnover within the program, low referrals (only 60 client referrals received, and 52 supported, which is consistent with reports from most new aftercare services), and insufficient resource allocation. Additionally, the evaluation reported that LGBTIQ+ staff needed to be better supported within mainstream organisations. The evaluation gave 11 recommendations focused on program design and delivery, staff experience and wellbeing, and program sustainability and reach. This included:

- Greater flexibility for service delivery, including shortening or extending service timeframe and providing blended care options (i.e., virtual teleconference platforms).
- Continue to empower choice and control among clients and direct them towards the appropriate services.
- Set clear targets for service access timeframes to increase client confidence.
- Incorporate interim supports in the service model.
- Maintain integration between peer and clinical supports.
- Increase the focus on fit between the peer practitioner, clinician, and client.
- Maintain the team programs autonomy so that they may leverage their expertise and lived experience in working with the LGBTIQ+ community.
- Ensure that program staff are in a work environment that is appropriate, safe and has clear expectations.
- Ensure the program is adequately resourced.
- Expand the programs' role to include secondary consultation to mainstream service providers.
- Expand the program reach beyond the existing North-Western Melbourne catchment.

Although specialised services for LGBTIQ+ populations are important, generalised aftercare programs should also have capacity to tailor existing programs to meet the needs of the LGBTIQ+ community. The HOPE program has recently implemented an LGBTIQ+ training capacity program for its staff to raise awareness of the risk profiles of LGBTIQ+ communities, and to build staff members

ability to respond with safety and sensitivity. The training has been found to increase staff awareness of institutional barriers inhibiting intersex people from using health services, their understanding of intersectionality, their confidence in providing culturally safe support to LGBTIQ participants, and their understanding of affirmative practice.

Children and young people

Australian programs

Suicide is the leading cause of death among young Australians and rates are increasing^{92, 93}. Around 7.5% of all young people aged 12-17 experience suicidal ideation, with females reporting rates more than double those of young males⁹⁴ and 26% of females aged 14-17 report having engaged in self-harm compared to 9% of young males. Rates also appear to have increased over time, with young females accounting for much of this growth⁹⁵.

Despite this urgency, very few youth-specific models exist in Australia aimed at preventing suicide in children and youth. These include youth-focused HOPE and i.am (AKA Youth Aftercare).

Youth-focused HOPE is a comprehensive program that has been implemented in four sites across Victoria. Youth-focused HOPE delivers both clinical and psychosocial support to children and young people (up to 25 years of age), and their family/care givers, following presentation to ED for significant self-harm or suicide attempt. As the name suggests, the service is based on the adult HOPE aftercare model. The current service framework of HOPE address almost all of the components and characteristics identified as common to effective programs in this review. It is based on Relational Clinical Care model, that emphasises collaborative treatment formulation and planning and positions the young person as the leader of the care team. Working in collaboration with their family/caregivers, other supports and the HOPE clinical care team, the young person is encouraged to develop a shared understanding of their difficulties, make informed decisions regarding their care, from the best available evidence presented to them in an age and culturally/linguistically appropriate format with consideration of the needs of priority groups. It includes multiple treatment components including case management that addresses a broad range of biopsychosocial needs, risk monitoring, safety planning, family support, and lived-experience peer support. Care is initiated rapidly (in first 72 hours), following discharge and includes regular weekly face-to-face contact, including outreach, up to three months. The service is co-located and well-integrated with broader services. A notable deviation from the adult HOPE model of care, and a central feature of the youth-focused HOPE care is the involvement of family members/caregivers in decision-making. Through collaborative work with lived experience peers support workers, family members/carers are involved, where possible, in suicide risk and safety planning, family therapy and psychoeducation. A notable deviation from the pattern observed in this review is once again the duration of care, with youth-focused HOPE providing services for a maximum of three months.

The i.am (AKA Youth Aftercare) is another comprehensive program that has been implemented across four sites in NSW. The service offers community-based psychosocial support service for children and young people aged under 25, and their family members/carers, following significant suicidal ideation, self-harm, or a suicide attempt. The service is based on the Wayback Aftercare model for adults. It includes multiple treatment components that are person-centred and culturally-responsive, and can be flexibly implemented to address a broad range of biopsychosocial needs, risk

monitoring, safety planning. i.am is delivered for up to three months by trained mental health professionals and case workers, with lived experience.

Evaluation of Australian programs

While early evaluation of the adult HOPE aftercare has yielded positive results, youth-focused HOPE and i.am are both currently under evaluation with some early results estimated to be delivered in late 2023. A comprehensive longitudinal 5-year evaluation of one of the youth-focused HOPE sites will also be available in 2026.

International research

International research offers very little evidence on the effectiveness of these models to reduce suicide risk among children and adolescents. We identified two RCTs that evaluated different brief interventions. One study compared the use of multiple telephone follow-ups to the child and their guardian to a single telephone follow-up⁶⁰. The intervention significantly reduced the number of reattempts (6% vs 17%) but there was no impact on rehospitalisation rates. The other study evaluated the use of text messages and booster calls as adjuncts to a motivational interviewing enhanced safety planning intervention. The text adjunct led to significant reductions in suicidal urges, significant increases in self-efficacy to refrain from suicidal action, and greater use of safety plans when needed. However, the interventions did not have any effect on ideation severity at one or three month follow-up⁹⁶.

We also identified two pre-post evaluations with large sample sizes that evaluated the effects of comprehensive aftercare programs. A study with children (10-17 years) found significant reductions in ideation and suicide-related behaviours, even adjusting for demographic and clinical characteristics, baseline depressive symptoms, and suicidal ideation⁵⁰. Another study with young people (under 25) found significant reductions in reattempts⁵². Although these results are promising, they provide only low-level evidence as neither study included a control group.

We did not identify any studies that reported suicide-related outcomes of aftercare programs for young people from CALD backgrounds. However, we did identify one qualitative study which explored the impact of a culturally sensitive intervention - (SAFETY-A) on care linkage⁸⁸. Findings indicated that the brief strengths-based, cognitive-behavioural family intervention resulted in higher rates of treatment linkage than usual care. However, the impact on suicidal thoughts or behaviours was not evaluated.

Components/characteristics important to young people

We identified one qualitative study that explored the components and characteristics of aftercare that were important to young people (12-21 years) with lived experience of suicidality, as well as parents, carers, and emergency department clinicians⁹⁶. Three primary themes emerged from the data, which are consistent with the characteristics of effective aftercare that we have identified in this review. A person-centred focus was considered important, with young people wanting to be active participants in the care that is responsive to their needs. Within this, the need to respect growing independence was noted. A strong therapeutic alliance was reflected in the theme of “dynamics” and the need for empathy, genuine and authentic communication, and rapport. Young people also described the

content that is important to them in follow-up calls, including check ins and psychoeducation for family members on how to watch for warning signs and support the young people.

Older Australians

One pilot study was identified in the peer-reviewed literature⁹⁸. Ten patients aged 65 and over who were hospitalised after a suicide attempt were contacted monthly via phone by a continuous caregiver for a period of one year. Three participants died (one suicide, two deaths by natural causes) and one dropped out for other reasons. One participant was readmitted during the project. While mood remained relatively stable in most participants during the observed period, activities and social isolation could not be modified. Phone contacts proved to be feasible in the follow-up after suicide attempts especially in old age, because of the limited mobility of this vulnerable population.

One pre-2019 study found that a more intensive assertive aftercare model, including psychogeriatric care, multidisciplinary case reviews, home visits, and case management, may have reduced suicide deaths but not reattempt rate⁹⁹. Caution should be exercised given methodological limitations, such as the use of an historical control group, and the cultural and health setting context, with the study conducted in Hong Kong.

We also identified a related qualitative evaluation of care for older adults who have self-harmed¹⁰⁰. Notable barriers to care included feelings of shame and mistrust of doctors. The patient-reported therapeutic alliance with GPs appeared to be poor, with older patients reporting feeling that interactions from GPs were superficial, dismissive, and focused on physical health to the neglect of emotional health. Participants also described practical transport and mobility challenges. Reported facilitators of care included empathy, feeling heard and valued, and accessible facilities.

Australian Defence Force members and veterans

Key messages:

- We found no Australian studies of aftercare for military veterans.
- Brief contact interventions appear to be acceptable to US veterans.
- Brief contact interventions hold some promise and may reduce suicide attempts and ideation, but this is based on one study in the US. This study provided caring contacts for 12 months.
- Brief intervention and home-based care hold some promise but require further research.

A small number of studies have examined aftercare for military veterans, with two using a brief contacts intervention (referred to as caring contacts), two using a brief intervention, and one using a randomised control design, one using a quasi-experimental design, and none conducted with Australian military or veterans.

A pilot randomised trial of a brief contact intervention program compared with standard care for US veterans found reductions in suicidal ideation and improvements in thwarted belongingness, hopelessness and burdensomeness at one-month follow-up⁶⁷. At the three-month follow-up only the improvements in thwarted belongingness were maintained. The brief contact intervention provided support for three months comprising an initial 60-minute psychoeducation session prior to discharge, followed by six 30-minute sessions (in-person, video, or phone) using safety planning and motivational interviewing, and covering social support and tailored veteran mental health services.

A multisite non-randomised two-arm controlled trial of Home-Based Mental Health Evaluation (HOME) vs advanced care as usual (E-CARE) for US veterans measured treatment engagement as its primary outcome, and found that those in the HOME group were 1.33 times more likely to engage in treatment¹⁰¹. HOME program participants were estimated to have attended 55% more individual appointments compared with those in the E-CARE group. Prior to discharge from the inpatient unit, the HOME program provider met with participants to provide additional information, answer questions regarding the HOME program and schedule the initial phone or in-person clinical contacts. The HOME provider then called the participant within one business day of discharge, conducted a home visit during the first week post-discharge from a psychiatric inpatient unit, and called the patient at least weekly until he or she was engaged in follow-up mental health care. HOME program contacts include suicide risk assessment, safety planning, and problem solving around barriers to care.

The program was subsequently adapted for veterans living in rural areas and achieved similar levels of engagement, but the barrier of distance remained an obstacle to delivering home-based interventions to rural patients¹⁰².

A feasibility study examined “Caring Cards”, where veterans create cards that are sent to veterans recently discharged from a psychiatric hospitalisation for suicidal crisis¹⁰³. Card recipients were sent one caring card, one-week post-discharge. Feasibility was examined for both card makers and card recipients. Card makers and recipients both expressed positive experiences with Caring Cards. Caring Cards was found to be a feasible, and acceptable intervention with potential benefits for both veteran card makers and recipients, although the efficacy of this low-intensity intervention is yet to be examined.

Reger et al (2019) examined high-risk inpatient preferences for a caring contacts intervention. Veteran psychiatric inpatients completed an anonymous patient preferences survey to obtain feedback on caring contact methods such as message wording, preferred correspondent, frequency of contact, duration of the intervention, imagery, and mailing modality¹⁰³. Eighty-five percent of veterans agreed that they would like to receive caring contacts from at least one of the correspondent options, with mental health counsellor and primary care physician preferred. Over 80% believed that caring contacts could help people who had experienced a suicidal crisis. Letters or postcards sent through postal mail were preferred over email or text messages. Monthly contact for a period of a year was preferred.

A brief contact intervention, augmenting treatment as usual, reduced the rate of suicide attempt and suicidal ideation amongst a serving military population in the US (see 2019 report)³⁷. Text messages were delivered for 12-months after discharge. The intervention was supplemented by telephone calls to individuals who indicated they were experiencing suicidal thoughts or distress.

People experiencing harmful drug or alcohol use

Although alcohol is a well-established and substantial risk factor for suicidal behaviour, no studies of outpatient aftercare for people with substance use disorders were identified and only one Australian service specialised in providing aftercare for people with harmful use of alcohol and other drugs, the Choice Program in Western Australia. Choice is a peer support program aimed at reducing repeat presentations to the emergency department for people who have an alcohol or other drug problem, mental health problem, or individuals with repeat presentations to justice services, and is not specifically aimed at suicidal crisis. No evaluation was available.

We found one small study which adapted the Attempted Suicide Short Intervention (ASSIP) for rapid delivery (three sessions) during hospitalisation, to adults with substance use problems who had attempted suicide¹⁰⁵. Although participants reported high levels of satisfaction and strong therapeutic alliance, the repetition of suicide attempt was high in both the intervention and control groups. Authors concluded that people with substance use disorders requiring longer hospitalisation (and are therefore likely to have more complex needs) may need additional strategies to reduce their suicide risk.

Despite this lack of evidence, it is likely that mainstream aftercare services are identifying and responding to this need with their clients with varying levels of access to specialised, integrated alcohol and other drug services. As such, this represents a substantial gap in our knowledge.

Groups currently without tailored care

There are a number of groups who have been acknowledged as likely to benefit from tailored aftercare programs, but for which we did not identify any tailored programs within the Australian system. People experiencing homelessness or housing instability face notable barriers to engaging in generalised aftercare services. Several studies acknowledged that brief contact interventions are not accessible for this population. The challenges associated with lack of secure housing are also likely to impact on peoples' ability to engage in other programs also e.g., costs of travel to in-person services or unavailability of technology required for telehealth. Housing identified by some services as an issue, and many have links with housing services. However, there were no programs tailored for people experiencing housing instability or homelessness.

No outcome evaluations were identified for people in regional, rural or remote locations. We identified one pilot study that explored the feasibility of a comprehensive aftercare program for veterans living in rural areas of the US compared to those living in urban areas. Although the trial was not powered to evaluate outcomes, the program demonstrated reasonably high referral uptake among rural veteran (85.3%) that was only slightly lower than non-rural veterans (90%). However, rural veterans were more likely to withdraw from the program (5.9% vs. 2.3%) or not respond (19.1% vs 17.7%) than non-rural veterans¹⁰². However, our evaluation of the Australian service landscape did identify increasing numbers of aftercare services being established outside of urban centres. This strategy is supported by a systems modelling and simulation study for regional areas which suggested that post-attempt assertive aftercare was likely to deliver substantial impact (a reduction of 5.65% in hospital treated self-harm and 5.45% in suicide deaths)¹⁰⁵.

Several other groups have been acknowledged within the National Agreement on Mental Health and Suicide Prevention but for whom we were unable to identify tailored services within Australia. These include:

- People experiencing socioeconomic disadvantage
- People who are (or were previously) in contact with the criminal justice system
- People with complex mental health needs, including people with co-occurring mental health and cognitive disability and/or autism.
- People experiencing or at risk of abuse and violence, including sexual abuse, neglect and family and domestic violence
- People with a disability
- Culturally and linguistically diverse communities and refugees.

6. Other themes

Components important to those with lived experience

We identified two qualitative studies that have explored the aspects of care after a suicide attempt that are important to people with lived experience of an attempt. In one study, 329 suicide attempt survivors completed an open-ended self-report survey regarding how care might be improved following an attempt¹⁰⁷. The following broad areas were identified as important:

- The quality of interactions with providers should reduce stigma, express empathy and active listening.
- Providing a thorough psychosocial assessment and a range of options in treatment planning.
- Treatment should be trauma-informed, address underlying stressors, and bolster coping skills.
- Improve structural issues such as access to care and continuity of care.

In another study¹⁰⁸, 41 suicide attempt survivors were interviewed regarding an aftercare intervention they had received. The following themes were identified:

- Interaction with provider – empathetic, attentive listening, caring.
- Opportunity to reflect on the attempt, causes for the crisis, find meaning, and face its consequences.
- Continuity of care.
- Developing joint safety plans were acknowledged as important but were viewed as unfavourable when administered on the same day as hospital attendance. Participants reported that the affective distance from the suicidal attempt was too short, and they were often still at emotional capacity. Several noted that even the next day they would have better capacity to engage.
- Inclusion of support people was generally seen as a good opportunity to provide explanations and talk to family/friends about the attempt where the provider can ask as a supportive mediator. However, patient choice in who should be included and the timing were seen as critical.
- Follow-up calls were seen as valuable opportunities for risk assessment, being heard, non-judgemental support, and fostering the therapeutic relationship.
- Modality of follow-up via phone call was seen as helpful. However, patient choice regarding the scheduling was again seen as critical to minimise intrusion but also ensure sufficient frequency to meet varied needs.
- Several participants noted the need to include social aspects and support in reintegration after attempt.
- Several stated that there too much attention paid to the attempt itself over the course of intervention, noting themes of shame and wanting to forget about the event.
- Some critiqued the growing number of involved health professionals when aftercare was added to regular care.
- A number of recovery factors were described as beneficial:

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- Interpersonal relationships.
 - Psychological resources (self-reflection, introspection, guilt toward others, faith).
 - Life changes (e.g., new hobby, professional activity, disengagement from conflicting relationships).

Potential implementation challenges

Acknowledging the systems context of aftercare

A number of considerations for the implementation of aftercare services were identified across the peer-reviewed literature as well as in both PHN and lived experience feedback. Several sources noted the need for clear mapping of existing services across the entire pathway of care that a person may receive following a suicide attempt, which may include emergency services, emergency departments, other hospital services, aftercare services, referral options for ongoing supports. Given variability in funding, there may be overlap in services and there is need to consider issues regarding referral pathways, defining differential scope between services, and clear communication and coordination of care between services.

There has also been a consistent observation that aftercare programs present a bridge between hospital-based care and ongoing outpatient services, and thus the effectiveness of aftercare programs will be limited by the accessibility of care within the community. Thus, the extent to which a national aftercare system will be truly universal will be dependent upon the extent to which community services are also universally accessible.

The programs identified as effective in this review tended to be integrated with other well-resources services including crisis response teams and outpatient mental health care. However, the results of our PHN surveys show that this is often not the case in this context. A common theme in survey responses was limited capacity of outpatient services. Various regions reported that this results in challenges to outgoing referrals, with long waitlists, few options, and various other barriers to engagement such as cost.

To address these challenges, there is a clear need for investment in outpatient clinical services alongside aftercare services. As a case study, Denmark has previously had one of the highest rates of suicide globally, with 1980 estimates of annual rates at 38 suicide deaths per 100,000 people over 15 years of age¹⁰⁹. However, as of 2007, the rate of suicides reduced to 11.4 per 100,000 following the implementation of a national suicide prevention effort in 2000. This program involved multiple components including means restriction, but another important component was a dramatic increase (66%) in psychiatric services. This example illustrates the need for broader systems improvements that include adequate resourcing for community mental health services. However, the availability of care from mental health professionals such as psychologists and mental health social workers continues to be limited in Australia, with recent changes to Medicare halving the number of rebateable sessions per year from 20 to 10.

Transitioning from existing services to a universal model

There are likely to be additional challenges associated with the transition from existing services to a universal model. Existing services are fragmented and highly individualised; they offer a wide range of

care models, are dependent upon varied and inconsistent funding, and vary in the availability of clinical staff and general resourcing. Ribbers and colleagues¹¹⁰ faced similar barriers when implementing a youth-focused aftercare service model to replace existing local service models across the state of Oregon. To overcome these challenges, when implementing their model they focused heavily upon building trust and cohesion among partner services. They noted that the local health organisation also convenes a twice-yearly conference in which teams collaboratively solve problems alongside other teams from throughout the state. The conference includes team-building activities, professional development on best practices, and relevant guest speakers.

Engagement rates and overcoming barriers

The rates of initial engagement with aftercare services were not consistently reported across studies, and where they were, varied considerably. In one evaluation of a telephone follow-up program, less than half of the people who were offered the service in the emergency department accepted it¹¹¹. A case management program had similar initial engagement with an uptake rate of 57%⁵¹. In contrast, an assertive aftercare program that began in hospital had engagement rates as high as 90% for people living rurally and 85% for non-rural. Another brief intervention program had engagement rates of 78.4%¹¹². In an evaluation of the Australian TWBSS program, 19% of those eligible declined to engage⁴³. Thus, although there was variability in uptake, across programs a substantial proportion of people were declining aftercare interventions at the outset. Coupled with ongoing attrition over the course of interventions, there is clear scope for improvement regarding the capacity of interventions to engage potential service users. This is problematic, as poor engagement has been associated with increased risk¹¹².

This risk may be greater for subgroups of people who face greater barriers to service access and engagement, including those identified within the priority population section of this review. One evaluation of the VigilantS program found increased disengagement rates for people with a prior history of other suicide attempts, those who had consumed alcohol at the time of the attempt, and those who were unaccompanied when attending hospital¹¹⁴.

However, it is possible that targeted interventions may enhance engagement rates. One study found that the addition of mobile messenger counselling increased engagement with case management-based aftercare¹¹⁵. Another found that a tailored program for young people of racial or ethnic minorities improved service uptake rates to 92% compared to usual care that was enhanced with provider education (76%)⁸⁸. This suggested that programs that have been specifically tailored for priority populations may be more successful at engagement than general programs that have included education for providers.

It is important to note that optimal engagement will never reach uptake rates of 100% as there are other reasons why clients may decline services. In one study, the reasons that clients gave for declining services included receiving care elsewhere (15%), relocation (1.6%), incarceration (1.6%), and no longer needing the program (1.6%)⁵². However, there were still substantial proportions of referrals declined by the young people (44% of those who did not engage) and by the guardian (31%). Although there may be other reasons why clients decline services, there is clear need for strategies to boost engagement and better meet the needs of those who may otherwise choose to engage.

Alternate outcomes

The main aftercare service models operating in Australia have had, to varying degrees, lived experience input to the model, principles, and service outcomes. It is less clear that this has translated into the research arena: we found little evidence that researchers had sought lived experience input to deciding what outcomes were important for research trials to measure. To address this, we reviewed qualitative studies that examined outcomes of interest to people with a lived experience of suicide.

An Australian study with young people (17-25 years) and with carers for young people identified that young people want to be an active participant in the care process, and have the service tailored to them and their personal situation, suggesting that they wanted to have some control over the situation⁹⁶. Young people spoke of the importance of connection and rapport. Carers also wanted information they could use to gain some control over the situation (e.g., when contact would be made).

A different qualitative study with adults found that they wanted to be listened to, have an active dialogue, therapeutic bond, and continuity of care with same person. They spoke of the need for an increase in social support via family and other relationships; of the need for life changes such as hobbies, reintegration with work, and disconnecting from conflict relationships; and of measuring the helpfulness of family involvement in care (e.g. meetings with family).

One study of military veterans examining recovery needs for men and women after a suicide attempt found a common need to reconnect to a sense of purpose¹¹⁶. For women, connection (mutually supportive relationships) and self-knowledge were noted as important. For men, there was a focus on doing right towards becoming their ideal self, and on connection in the form of being needed and accountable.

Although more tangential, inferences can be drawn from a study that examined what safety means to service users, carers, and health care professionals in health care transitions after a mental health crisis¹¹⁷. Health care professionals in the study were focused on suicide and self-harm, but no service users or family/carers spoke about suicide, self-harm, or violence in relation to safety at discharge. Service users and carers instead spoke about the safety implications of not being involved in discharge planning or shared decision-making, with service users emphasising the importance of being involved in shared decision-making. All groups mentioned better integration of services to improve safety at discharge, and that a fragmented care system can be dangerous. All groups spoke of isolation and loneliness as the most difficult part of discharge from acute services. Service users described this in the context of their own emotions: *'Loneliness alone at home after the busyness of hospital ward'*, while carers and family members described their own feelings of loneliness when they took on caring responsibilities after discharge: *'Feeling alone with the responsibility of caring for someone who is still very unwell and perhaps suicidal'*.

Common threads through these studies are the importance of connection, continuity, and rapport between the health care professional and the client, the client's sense of agency during the provision of care, and the helpfulness or otherwise of involving family members and carers in the provision of care and support, including strengthening social support networks, and the need for ongoing support for family members. Reconnect to a sense of purpose, albeit different from one person to another, was also identified as important, as was the often-difficult process of connecting from one service to the next. These concepts (connection, rapport, agency, social support, purpose, family support) could

be explored further with lived experience advisors and incorporated as measures into research and evaluation of aftercare services.

Discussion

This Evidence Check contributes to decisions regarding the agreement to fund universal aftercare in Australia. Current evidence suggests that aftercare services that include only a single intervention component are unlikely to be effective in reducing the reoccurrence of suicide attempts. Aftercare services which include multiple components and adopt a Comprehensive Aftercare model are most likely to be effective. Brief interventions that contain more than one component are also likely to be effective.

Aftercare services in Australia have predominantly adopted a comprehensive model of care. The past decade has seen a substantial increase in the number of services and service models, with several other changes, including some broadening of both referral pathways and eligibility criteria, the piloting and implementation of services for priority groups, evaluation of services, and a move towards providing peer support and including support persons in the assessment and care process.

Gaps in service provision remain, particularly for priority populations. The top five priority groups identified in this Evidence Check are Aboriginal and Torres Strait Islander people, young people, people living in rural and remote locations, LGBTQIA+ communities, and culturally and linguistically diverse communities. While development of specific services for these groups is important, so is the provision of care for our diverse community within all aftercare services.

Based on these findings, we make recommendations across two areas. Firstly, we outline 12 principles that should underpin aftercare services in Australia. These principles are based on our findings from both the scientific and grey literature. Secondly, we make four recommendations for working to address gaps and priority areas for resources that were identified in consultations with Primary Health Networks.

Principles for Universal Aftercare

Principle 1

Whether adopting a Comprehensive or Brief Intervention model, aftercare services should combine multiple components. For example, case management may be coupled with a brief contact intervention, or telephone follow-ups may be paired with a time-limited therapy or education. Conceptually, the inclusion of multiple components may allow for the possibility of broader coverage if some components are unacceptable or ineffective for subgroups of the population.

Principle 2

Comprehensive aftercare programs should include case management that provides support to address a broad range of biopsychosocial needs beyond mental-health related services alone. The notion of ensuring a broad scope of aftercare is consistent with evidence that the precipitating factors

and causes for suicidal crisis are diverse, and not always attributable to an underlying mental-health disorder.

Principle 3

Aftercare should involve safety planning. However, safety planning should be a flexible and collaborative process that is undertaken in partnership *with* the person at-risk. The process should be supported by a skilled and compassionate health professional who can respond effectively to peoples' readiness to plan for their safety. Safety planning should be an ongoing process and reviews can be incorporated into ongoing risk monitoring and response. The level of evidence for safety planning is strong, with demonstrated reductions in suicidal ideation, behaviour, and hospitalisations. Safety planning has also been included as a core component of several Australian aftercare programs including TWBSS and HOPE. All of the effective comprehensive aftercare programs included ongoing risk monitoring, paired with effective response to elevated risk.

Principle 4

Aftercare programs should explicitly prioritise engagement and linkages with other services. However, this should be balanced with the person-centred care principles described below in Principle 5, ensuring that services align with the needs of the person at risk. All the effective comprehensive aftercare programs explicitly stated a focus on encouraging or motivating participants to engage in ongoing supports or to adhere to their treatment plan that was prepared at discharge. This goal is consistent with the model of aftercare as a bridging intervention after hospital-based care to facilitate ongoing supports within the community.

Principle 5

To support Principle 4, aftercare services should focus on providing person-centred care as described in detail in the Person-Centred Care section of this Evidence Check. Briefly, this includes flexible program delivery in collaboration with service-users and the prioritisation of therapeutic alliance. Continuity of care with the same support person should be a goal. This will require using co-design with lived experience advisors to ensure services are meeting the needs, effective supervisory structures, and a focus on organisational culture that supports excellent clinical practice.

Principle 6

To support engagement with other services, aftercare services should pursue formalised integration and/or agreements with other support services, and these relationships should be fostered through the placement of a liaison officer in key referral services such as hospitals. This was also recommended by the TWBSS evaluation from Nous. Most effective aftercare programs described some degree of formal integration with broader support services. Effective integration was noted for the purposes of facilitating both crisis responses in situations of elevated risk as well as referral to clinical care or ongoing support and treatment where required.

Principle 7

We recommend that services consider the inclusion of peer support, alongside clinical and specialist staff, as part of the person's support team. This is now occurring more commonly in Australian

services and there are good models of training, supervision, role definitions, and team structure that can be adapted and adopted.

Principle 8

The rapid initiation of care that exists in current Australian services should be maintained and further enhanced. Rapid initiation of care remains a common theme among effective programs, with many commencing care while the person is still in hospital.

Principle 9

In the early weeks following a suicidal crisis, contact should occur at a higher frequency as agreed on collaboratively with the person at-risk. Most of the effective programs identified in this review described an intervention schedule that was more frequent early in treatment before tapering off later in treatment.

Principle 10

We recommend assertive follow-up where the responsibility to make and maintain contact rests with the service provider. Many of the effective programs identified in this review referred to the provision of assertive follow-up, where multiple attempts at contact are made when clients do not respond.

Principle 11

Ongoing work is needed to ensure people are referred to aftercare support the first time they present with a suicidal crisis. This may mean broadening referral pathways and eligibility criteria to include people who may present to primary care or community services rather than to the emergency department and may present with suicidal distress rather than suicide attempt. As noted in the 2019 Evidence Check, some studies have suggested that aftercare may be more effective when delivered to people after their first suicide attempt, rather than after a reattempt. This has implications for referral pathways and the need to ensure comprehensive coverage so that people are well-supported after an initial attempt.

Principle 12

With the agreement of the person at-risk and consideration of the potential benefits and harms, services should engage support person/s in the assessment, planning and care process. Support for the support person was also identified as an important gap in existing aftercare services by Lived Experience Advisors.

Recommendations to address gaps and resourcing

Recommendation 1

Expand referral pathways and eligibility criteria while ensuring adequate staffing to accommodate the increased demand. Draw insights from existing services which have successfully taken these steps to ensure that referrals remain appropriate and manageable.

Recommendation 2

Improve funding security and simplify agreements for services. This will help to reduce staff turnover that occurs within the context of funding insecurity.

Recommendation 3

Maintain a focus on developing the skills of the workforce and providing career pathways for health professionals and peer workers, including access to regular case consultation support. This recommendation aims to address the dual and related purposes to improve quality of care and reduce staff turnover.

Recommendation 4

While development of specific services for priority groups is important, so is the provision of safe and appropriate care within all aftercare services for Australia's diverse community. Population-specific services are important but cannot meet all of the need, particularly given the wide geographic spread in Australia. We recommend that providers of mainstream service models (1) ensure diversity of their support staff, (2) engage with community and peak bodies to co-design principles of service provision for priority populations in their region, and (3) ensure these principles address the needs of people with intersecting identities.

Limitations and Gaps in the Evidence

The availability of rigorous evaluations of Australian aftercare programs and their impact on suicidal behaviour is limited. The recently completed NOUS evaluation of TWBSS reported a decrease in ideation as well as distress and an increase in wellbeing following the program. However, the evaluation did not report the impact upon behavioural outcomes. An evaluation of HOPE services found a reduction in both ideation scores and the rate of self-harm related presentations to hospital following the program. However, the details of these evaluations are unclear, have not been subject to peer-review, and the availability of controlled evaluations is sparse. For example, it is unclear at what timepoint the reduction in self-harm related presentations was observed, how long this intervention effect was maintained, and whether a control group who did not receive the intervention would have exhibited a similar reduction.

There has been an increase in tailored interventions for some priority populations (e.g., Aboriginal and Torres Strait Islander people, LGBTQIA+ people, children and young people). However, there are few evaluations available and many of these programs are in the early stages of implementation and have yet to be formally evaluated. We did not identify any tailored interventions for several groups of people including those experiencing socioeconomic disadvantage, those with contact with the justice system, complex mental health needs, disability, experiencing abuse or violence, neurodivergent people, or CALD communities. Other groups had minimal evidence for tailored interventions, largely from international studies, including older people, military service personnel or veterans, people experiencing alcohol or drug misuse, and people living rurally.

In line with the 2019 Evidence Check, there was a lack of rigorous evaluations of the effectiveness of individual components of aftercare programs. One notable exception was an evaluation of brief contact as an adjunct to motivational interviewing – the adjunct was associated with improvements in urge intensity, self-efficacy, and likelihood of sustaining safety plan use when needed⁹⁶.

Overall, there were few studies which evaluated the inclusion of peer support workers in aftercare. We identified one qualitative evaluation of Next Steps which found that the inclusion of peer-work was regarded as positive by both peer workers themselves and clinicians who work alongside them. However, we did not identify any evaluations of the impact of peer workers within broader aftercare programs.

There were few studies which evaluated the inclusion of nominated support people in care. Of these, only one also provided care for these support people¹¹. This is a notable gap in programs and evaluations, as support people can face difficult challenges such as providing initial first aid, organising hospital care, and accompanying the service-user to hospital, as well as providing ongoing psycho-social supports. This was identified as an important gap by our Lived Experience Advisors.

The 2019 Evidence Check noted the need for future research to explore the impact of aftercare services on various user groups to explore service delivery practices to maximise engagement and effectiveness for particular audiences. The NOUS evaluation of TWBSS provided a preliminary investigation of this, finding relatively poorer intervention effects on suicidal ideation for men and

people referred following hospitalisation for a suicide crisis rather than attempt. The evaluation also found relatively poorer intervention effects on distress and wellbeing for: people who were LGBTQIA+, experienced a personality disorder, were under 25, or were unemployed. There is a need for further research to explore whether these findings are replicated and whether similar patterns occur for other Australian programs such as HOPE. Further research is also required to better understand the needs and experienced of those for whom aftercare is less effective, e.g., men and people with a history of multiple attempts.

Conclusion

The importance of effective aftercare services in the prevention of a range of suicide-related outcomes has been reinforced by this review. A variety of aftercare models have been supported as effective in reduction suicide deaths, reattempts, and ideation.

Clear themes emerged regarding the importance of particular components and characteristics of effective aftercare. These include a range of content factors such as the inclusion of broad-scoping case management and the need for multicomponent programs, as well as process factors such as the need for person-centred care.

While there has been significant effort and investment to improve aftercare in Australia, there are notable gaps in the provision of services. These include a lack of services tailored for priority populations, the need for stronger integration and referral pathways with other services, and restrictive inward referral pathways and eligibility criteria driven largely by resource constraints. A consistently identified limitation of existing services was the lack of supports for people who do not access medical care and are thus ineligible for referral via this route.

We have outlined 12 principles for Universal Aftercare and have made several recommendations to address gaps and resourcing, summarised in the discussion above and the executive summary of this report.

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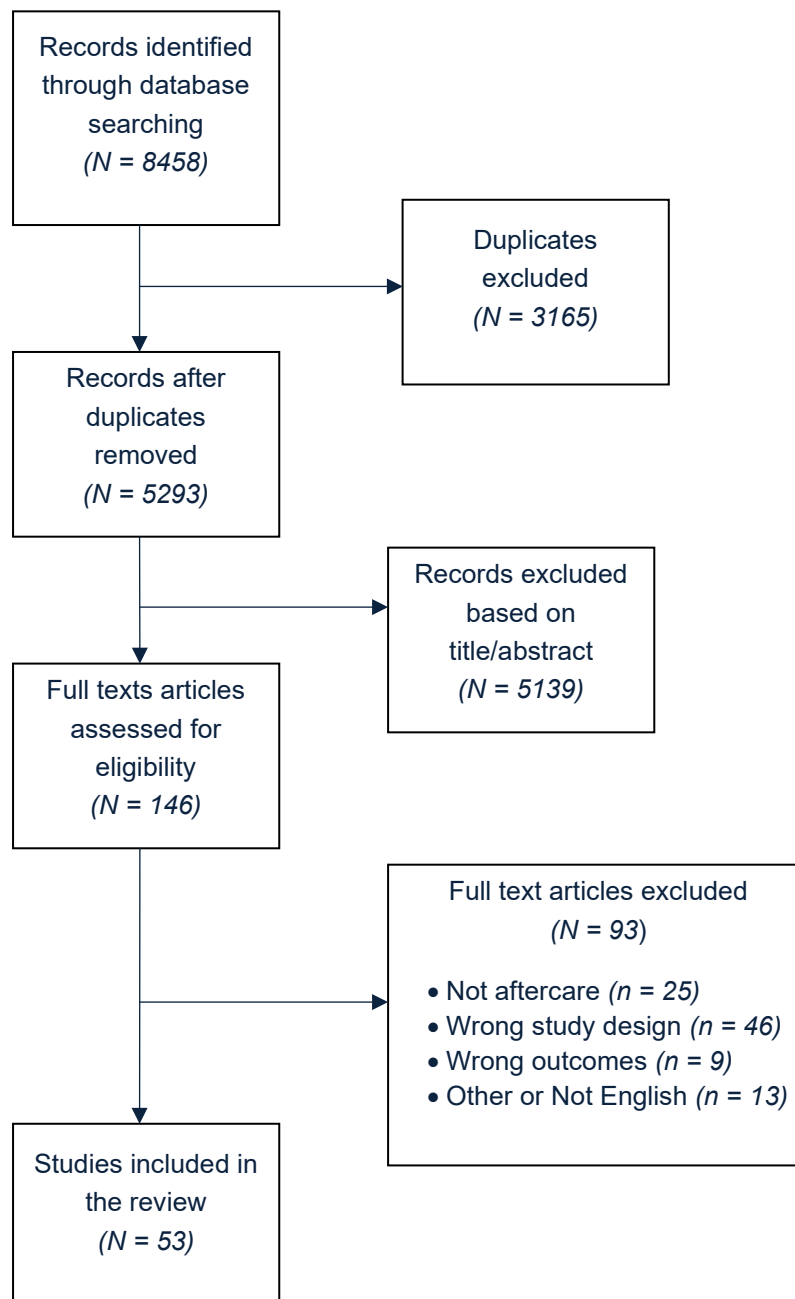
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Appendices

Appendix A: Literature Search Process



NB: Wrong study design includes protocol and conference abstracts/commentary pieces

Appendix B: Details of Included Studies

Studies Finding Evidence of Effectiveness

Authors	Study Type (Level of Evidence)	Population	Sample Size (N)	Intervention	Control	Outcomes	Finding/result	Comments
Comprehensive aftercare – Randomised controlled trials								
Hvid et al - The Amager Project 2011	RCT (II)	Presented to ED following a suicide attempt (ages 12+)	133	OPAC (Outreach, Problem solving, Adherence, Continuity): Assertive case management (nurse) + brief contact	TAU	Reattempt	Significantly fewer participants the intervention group reattempted within 12 months (8.7%) than in the control group (21.9%), even controlling for previous suicidal behaviour (p=.04). Significant reduction in the incidence of reattempt in the intervention group compared to control (8 vs 22, p <.004).	
Lahoz et al - 5 year follow up of The Amager Project 2016	RCT (II)	Presented to ED following a suicide attempt (ages 12+)	133	OPAC (Outreach, Problem solving, Adherence, Continuity): Assertive case management	TAU	Reattempt at 5 year follow up	At 5 year follow-up, the intervention effect on the proportion of people reattempting was no longer significant (p=.07) but the effect on the number of suicidal events remained	

				(nurse) + brief contact			significant (p=.04). The suicide preventive effect fades around 3-4 years.	
Kawanishi et al., 2014	RCT (II)	Adults (20+) who presented to ED following a suicide attempt and had an axis 1 psychiatric diagnosis	914	ACTION-J: assertive case management	Enhanced usual care	Reattempt	No significant difference for first recurrent attempt at end of study; but ad-hoc analyses revealed cumulative incidence of first recurrent attempt was sig lower in intervention group than control at 1 (intv = 3/444, cont = 16/445, RR = 0.18), 3 (intv = 7/430, cont = 32/440, RR = 0.21) and 6 months (intv = 25/417, cont = 51/428, RR = 0.47) but not at 12 or 18 months.	
Furuno et al., 2018	RCT (II)	Adults (20+) who presented to ED following a suicide attempt and had an axis 1 psychiatric diagnosis	914	ACTION-J: assertive case management	Enhanced usual care	Self-harm events	Number of overall self-harm episodes reduced by approx 12% for intv group. Suggested that effectiveness of intv of no. of self-harm episodes accounted for by reduction in number of ppts with multiple repetitions	
Norimoto et al., 2020	RCT (II)	Adults (20+) who presented to ED following a suicide attempt and had an axis	914	ACTION-J: assertive case management	Enhanced usual care	Reattempt	Sig differences between Axis I/CM group and Axis I/EUC group (RR 0.51, p = 0.009). No clear differences for Axis I + II/CM and Axis I + II/EUC (RR 0.44, p = 0.164)	Effective for those who do not have a comorbid Axis II disorder

1 psychiatric diagnosis

Comprehensive aftercare – Non-randomised controlled trials

Hvid et al - The Amager Project 2009	Quasi-experiment (III)	Presented to ED following a suicide attempt	151	OPAC (Outreach, Problem solving, Adherence, Continuity): Assertive case management (nurse) + brief contact	TAU - historical case control	Reattempt	At 12 months, smaller proportion of patients reattempted following OPAC (16%) than in historical control group (22%), with intervention a significant protective factor (HR 0.3559, 95%CI 0.18-0.72). (p=.004). Fewer # of suicide acts (22 acts in 93 patients in OPAC vs 37 acts in 58 patients in control).	
Kim et al., 2020	Non-randomised experimental study (III)	Presented to ED following a suicide attempt	489	Case management	TAU	Reattempt	Significantly fewer suicide deaths the case management group (p=0.019) (HR=0.34, 95% CI=0.13-0.87). Fifty percent of the deaths occurred within six months in the case management group and within a month in the no-case management group.	Case management program reduced the risk of death from suicide attempts by 75% and delayed the time to death from suicide attempt
Fernández-Artamendi et al., 2019	Non-randomised experimental study (III)	Adults who presented to ED following a suicide attempt	163	Group 1: Case management; Group 2: Case management + Psychoed	TAU	Reattempt	Inclusion in the case management only group proved to be a significant predictor of a reduced likelihood of suicidal behaviour (OR = .319;	

p< .001; CI = .11 - .89).
 Significant differences were found between groups in the median number of days before the first suicide attempt, with case management only showing the shortest median time (182 days) vs control (357) and case management + psychoed (534).

Comprehensive aftercare – Non-controlled studies

Wright et al., 2021	Pre-post case series (IV)	Presented to ED following a suicide attempt or ideation	141	HOPE - Alfred Health	No control	Ideation	Reduced suicidal ideation (effect size 1.44), pre M (SD) = 31.28(11.75), post M(SD) = 10.64(12.80)	
Kehoe et al., 2022	Pre-post case series (IV)	Presented to ED following a suicide attempt or ideation	141	HOPE - Alfred Health	No control	ideation	reduced suicidal ideation at 6 month follow-up, M(SD) = 9.5(12.7), effect size = 0.67	6 month follow up to Wright (2021)
Gryglewicz et al., 2021	Cohort Study (IV)	10 - 17 year olds with self-injurious thoughts and behaviours or multiple risk factors (e.g., history of self-injury, victimization)	460	Linking Individuals Needing Care (LINC) - 90 comprehensive care coordination and risk management	No control	Ideation and reattempt	Significant decreases in ideation (86%) and suicide-related behaviours, even adjusting for demographic and clinical characteristics, baseline depressive symptoms, and suicidal ideation.	

substance use).							
Shin et al., 2019	Cross-sectional study (IV)	People attending ED following a suicide attempt	439	People who completed a 4 week case management program	People who did not complete a case management program		Compared with the incomplete group, the complete group was more likely to have reduced suicide risk (AOR (95% CI): 2.11 (1.40–3.16)).
Sale et al., 2021	Pre-post case series (IV)	youth (under 25) referred from hospital, peer gatekeepers in school, or community services.	983	suicide prevention specialists provide in-person mental health and case management services across 3-7 months followed by monthly postcards/emails/texts.	no control	Reattempt	Sig decrease in number of SA over time p <.001, partial $\eta^2 = 0.106$.
BCI – Randomised controlled trials							
Comtois, Kerbrat, et al., 2019	RCT (II)	Soldiers at risk of suicide (presenting with ideation or attempt)	658	Caring contacts	TAU	Ideation	44% decrease in proportion experiencing ideation following intervention (79.6%) vs control (87.7%); OR 0.56, 95% CI, 0.33-0.95;p= .03). No impact on severity of worst ideation among those who re-experienced.
Carter et al., 2013	RCT (II)	Adults (16+) who	772	Postcards from the Edge	TAU	Readmission to	No sig reduction in prop of ppts presenting to hospital

		presented to toxicology service at local hospital following self-poisoning			hospital for self-poisoning	for self-poisoning but sig reduction in number of events (RR = 0.54). Subgroup analyses showed effective only for females and those who had history of prior self-poisoning.
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BCI – Non-controlled studies

Josifovski et al., 2022	Pre-post (IV)	Adult patients admitted to ED following a suicide attempt or self-harm	13	Reconnecting AFTer Self-Harm (RAFT)	no control	ideation	Sig reduction in suicidal ideation from baseline to 6-weeks (p = .001), baseline to 6 months (p = .004) and baseline to 12 months (p = .033).
Ryan et al., 2022	Cohort Study (IV)	12-17 year olds attending ED with ideation, attempt, or positive risk screen. Psychosis exclusion.	37	Suicide Intervention Assisted by Messages (SIAM): Brief follow-up intervention using automated caring text messages (days 1, 7, 13 and 30 after discharge),	No control	ideation	No control, was feasibility study, no stats re pre-post just rough indication - 18 (67%) indicated it had reduced their suicidal ideation

Brief Intervention – Randomised controlled trials

Rengasamy & Sparks, 2019	RCT (II)	Adolescents (12-18 yrs) admitted to	142	Multiple telephone calls 1, 7, 14, 30, 60, 90 days post	Single telephone call 90 days	Repeat suicide attempt	Significantly fewer suicidal behaviour incidents (6% vs 17%) for those receiving MCI
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		hospital for SA		discharge. Separate calls made to guardian	post-discharge		vs. SCI (OR=0.28, 95% CI=0.09-0.93, p=0.037); no significant differences for rehospitalisation rates	
Gysin-Maillart et al., 2016	RCT (II)	Adult patients admitted to ED following suicide attempt	120	ASSIP (Attempted Suicide Short Intervention Program): Three therapy sessions using narrative interviewing followed by tailored letters for 24 months	TAU	Repeat suicide attempt	Decrease in suicidal behaviour in intervention group (8% vs. 27%). 80% reduced risk of participants making at least one repeat suicide attempt in ASSIP group, with therapeutic alliance a moderating factor.	Low-intensity support after relationship is established may be effective
Ring et al., 2020	RCT (II)	Adult patients admitted to ED following suicide attempt	120	ASSIP	TAU	Suicidal Ideation	Satisfaction with the therapeutic outcome was associated with lower rates of SI during the 2 year follow up.	
Fleischman et al., 2008	RCT (II)	Patients who had a suicide attempt seen at the ED	1,867	SUPREMISS brief intervention and contact (BIC): (phone calls or visits)	TAU	Death from suicide at 18 month follow-up	Significantly more deaths from suicide in the treatment as usual group than the BIC group ($\chi^2 = 13.83$; $P < 0.001$)	Study was conducted across low to middle income countries
Malakouti et al., 2022	RCT (II)	Adults who had attempted suicide.	305	Modified SUPREMISS (Multisite Intervention Study on Suicidal Behaviours): not original site and some variations.	TAU	Reattempt	The BIC group had a significantly lower rate of reattempt episodes (11%) than the TAU group (25%), with a higher probability among the TAU group (HR = 2.57).	

Vaiva et al., 2018	RCT (II) but secondary analysis of Vaiva et al.	Adult patients (over 18 years old) were offered to participate in the study if they presented at the ED within 7 days of an SA, provided that their total number of SA was no more than 3 over the 3 past years.	1,040	ALGOS - crisis cards, brief telephone calls	TAU	Reattempt	No significant effect of intervention on rate of reattempts, number of reattempts per patient or on the duration until first reattempt	NB reanalysis by Messiah found that effective for first-time attempters but not repeat attempters
Messiah et al., 2019	RCT (II)	Adult patients attending ED following attempt. Exclusion: more than 3 attempts over the past 3 years.	1,040	ALGOS (secondary subanalysis of Vaiva et al)	TAU	Reattempt	At 6 and 13 months there was a reduced likelihood of reattempting in intervention than control groups, but only for those who received the intervention after a first attempt.	Post-hoc analyses
Hatcher et al., 2016	Zelen RCT (II)	Maori people who presented to ED following self-harm	167 consented	Te Ira Tangata: Culturally-informed delivery of aftercare including face-to-face or telephone contact over two	TAU	Representation to hospital with self-harm within 12 months	Reduced representation to hospital with self-harm at 3 months (10.4% vs 18%) but no difference at 12 months. Significant decrease in general hospital	

				weeks, postcards for one year, problem solving therapy, encouragement to access primary healthcare		of the index episode	presentations over 12 months.	
Naidoo et al., 2014	RCT (II)	Adult patients admitted to ED following suicide attempt	688	Buddy intervention support group. 'Buddy' attends 3 x 4 hrs workshops covering info sharing, feedback, management of challenges, coping skills, counselling strategies & info on how to facilitate further care or support; 'buddy' engages in regular follow-up (as per assessment timepoints)	SUPRE MISS brief intervention	Suicide attempt, suicide death	Over 18 month period, 97 patients in control group reattempted (3.2% of group) vs 58 in buddy group (1.9%). There was a statistically significant reduction in reattempts at week 1 and 6 months for buddy group vs control group.	
Riblet et al., 2021	RCT (II)	Veterans admitted to VA mental health hospital for self-harm risk	19	VA BIC department of Veterans Affairs modification to the WHO Brief Contact Intervention:	TAU	Suicidal Ideation	Medium effect on SI, Hedges' g = 0.45 at 1 month. The effect had diminished at the 3 month mark.	Pilot study, small sample, very short term effect

				Education session before discharge, then professional support for 3 months after discharge (30 min sessions)				
Owens et al., 2020	RCT (II)	Adults with attendance at general hospital (ED or in-patient) as a consequence of self-harm in previous 6 weeks	62	MIDSHIPs (multicentre intervention designed for self-harm using interpersonal problem solving) : Problem-solving therapy delivered over 6 sessions	TAU	Repeated self-harm	Intervention group had reduced hospital-treated self-harm (23.3%(7/30) of participants repeated 18 times) and reduced self-reported self-harm (32%(8/25)) in 6 months after randomisation compared to TAU group (hosp-reported: 37.5% ppt (12/32) repeated 44 times, and self-report: 59%(17/29)).	
Czyz et al., 2021	SMART design- Sequential Multiple Assignment Randomised Trial (II)	Adolescents- psychiatric inpatients presenting with suicide risk concerns	80	phase 1- motivational interview-enhanced safety plan + brief contact texts; phase 2- booster calls	phase 1- motivational interview-enhanced safety plan alone (no brief contact intervention); phase 2- no booster calls	Suicidal urges, self-efficacy to refrain from suicidal action, safety plan use	Effective but fades at follow-up Addition of texts vs no texts: --> significantly lower intensity of suicidal urges (B=-0.59; d=0.39). Hazard ratio of reducing suicide attempt and behaviour risk 0.3 and 0.36 respectively. (although no difference in frequency or duration) --> significantly higher self-efficacy to refrain from suicidal action (Cohens d = .46) --> greater likelihood of	Phased intervention with 4 groups. Controlled if evaluating if evaluating BCI, but if evaluating MI then no. 2 (phase 1) x 2 (phase 2) Phase 1- Motivational interview-enhanced safety plan (MI-

sustaining safety plan use on days where ideation was present and not on days when ideation not present (compared to no text condition)

SP) + texts and monitoring vs MI-SP + monitoring
Phase 2: booster call vs no

Addition of booster calls:
--> almost significant (p=.056) increase in self-efficacy to refrain from suicidal action (d = .38)

FU:
- trends for reductions in attempts and rehospitalisations at 3mth FU but not sig
- No benefit to texts or booster calls at 1 or 3 month FU in terms of ideation severity

Brief Intervention – Non-randomised controlled trials

Sedghy et al., 2020	Quasi-experiment (III)	Adult patients admitted to ED following suicide attempt	70	Brief intervention (3 sessions of motivational interviewing)	TAU	Reattempt and ideation	Suicidal ideation severity significantly lower in the experimental group(P=0.0001) than control after the intervention, and significantly fewer people in the intervention group had reattempted 12weeks after the intervention 2.85%(n=1), compared to 22.85%(n=8) of the control group (P=0.0001). However, rigour likely to be	However, rigour limited - engagement listed as an exclusion criteria and not reported in flow chart (which lists 0% attrition - unlikely in such a study).
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							limited - engagement listed as an exclusion criteria and not reported in flow chart (which lists 0% attrition - unlikely in such a study).
Cebria et al., 2013	Multi-centre (2 Eds) non randomised case control study (III)	Patients presenting to ED following suicide attempt	991	Brief intervention (psychiatrist visit + phone calls)	TAU controls- Control site who did not receive intervention + Historical controls	Change in rate of repeat suicide attempt + time to first reattempt	Reduced rate of intervention vs controls. No diff in rates for control site for year 1 vs yr 2. Intervention group had delayed reattempt compared to baseline year and site controls; 347 days vs 316 days vs 300 days respectively.
Cebria et al., 2015	Multi-centre (2 Eds) non randomised case control study (III)	Patients presenting to ED following suicide attempt	991	Brief intervention (psychiatrist visit + phone calls)	TAU controls- Control site who did not receive intervention + Historical controls	Number of people who had reattempted; number of recurrences	Effects not maintained at 5 years
Exbrayat et al., 2017	Single centre case control ITT study (III)	18+ years; suicide attempt; no history of psychiatric hospitalisation. Included those seen as outpatients & those with <3 day hosp	823	Brief intervention (phone calls x 3)	Historical controls (1 yr prior) with same presenting criteria	Reattempt	Significantly fewer suicide attempt in intervention compared to control group at 12 months

		stays. NOT PD					
Plancke et al., 2021	Cohort study (III)	Discharged from hospital for suicide attempt	4602	VigilanS: Brief intervention (VigilanS exposure, a brief contact and assertive followup intervention)	Control group - retrospective cohort who were not exposed to the program	Reattempt	Use of the program associated with a significant reduction in proportion of individuals re-presenting to hospital for SA (HR = 0.19, p < .001). At 12 months the cumulative probability of SR was 5.2% in the exposed versus 22.2% in non-exposed patients P<.001
Martínez-Alés, Angora et al., 2019	Cohort study (III)	Discharge from ED following suicide attempt	1492	Brief contact (Int 1= + brief contact intervention (supportive, encourage tmt engagement) series of repeated in person and phone follow up contacts) Brief intervention (Int 2= + individual problem solving psychotherapy)	TAU (single medical appointment within 7 days)	Reattempt	Both the individual problem solving therapy group and the enhanced contact groups had lower risk of relapse by 38% and 44% respectively during a 1year follow up compared to TAU.
Amadéo et al., 2020	Non-randomised experimental study (III)	Presented to ED following a suicide attempt OR contacted a crisis line for suicide	140	Group 1: Body contact care + brief intervention, Group 2: mobile intervention team + brief intervention	TAU	Reattempt	Both intervention groups had fewer reattempts than control (3% vs 12%).

attempt or suicidal ideation

Brief Intervention – Non-controlled studies

Arvilommi et al., 2021	RCT but supporting evidence from pre-post analyses (IV)	Adults who have recently attempted suicide, recruited from ED or outpatient service	160	ASSIP: Brief intervention + Contact (ASSIP: 3 visits (including formulation, safety plan) + letters over 12 months)	3 sessions of crisis counselling	Ideation and reattempt	Both groups showed significantly reduced ideation at follow-up. No differences in the proportion of patients who reattempted between groups but both active controls (29.2% [26/89] vs. 35.2% [25/71]).	RCT but comparing ASSIP to another active control (crisis counselling) with null effects. However, pre-post differences of improvement for both interventions.
Miller et al., 2017	Time series without control (IV)	Adult patients presenting to ED with suicidal ideation or attempt	1376	ED-SAFE: Universal screening + intervention (secondary risk assessment, self-administered safety plan and information provided by nurse, 7 phone call follow-ups over 12 months + up to 4 to a significant other	TAU	Reattempt	Universal screening plus intervention showed a significant reduction in suicide attempts compared with treatment as usual (18.3% vs 22.9%).	

Dunlap et al., 2019 (secondary/ economic analysis of Miller et al)	Economic evaluation (IV)	Adult patients presenting to ED with suicidal ideation or attempt	1376	ED-SAFE: Universal screening + intervention (secondary risk assessment, self-administered safety plan and information provided by nurse, 7 phone call follow-ups over 12 months + up to 4 to a significant other	TAU	Economic cost	Moving from screening to intervention further decreased suicide attempts and deaths and increased costs yielding an ICER of \$5020 per averted attempt or death.	Secondary analysis of Miller et al 2017
Cross et al., 2022	Case control study (IV)	Patients discharged from ED who are engaging in repeated self-harm	61	Rapid response pathway united to reduce self-harm (RUSH): 8 session brief intervention (problem-solving, CBT, risk monitoring and management)	No control	Self-reported self-harm	Reduced SH from baseline to follow-up	
Siu et al., 2022	Cohort study (IV)	People who have attempted suicide reported to the Suicide Surveillance System	1557	National Suicide Surveillance System (NSSS): Brief intervention follow-up with brief counselling, psychoeducation, and follow-up. Those with elevated PHQ-9	No control	Ideation, reattempt, death	Suicide ideators or family members who received aftercare twice or more significantly reduced the recurrence of suicide-related episodes (including ideation, attempt, and death)	

				scores referred for intensive psychiatry, when risk moderate person followed up weekly.			
Fossi Djembi et al., 2020	Cohort study (IV)	People who presented to hospital or acute mental health with suicidality.	21 centres, participant numbers not reported	VigilanS: Compared degree of 'penetrance' of Vigilans across regions and outcomes. Program involved phone call follow up and brief contact postcards if calls not possible.	Sites without/fewer Vigilans occasions of service	Reattempt	A significant relationship was identified, showing a sharp decrease in SA as a function of penetrance (slope = -1.13; p = 3*10 ⁻⁵). The model suggested that a 25% of penetrance would yield a SA decrease of 41%
Mansfield et al., 2021	Cohort study (IV)	People presenting to ED or acute mental health with suicidality.	149	Allied Health Brief Therapies Clinics: Brief intervention (up to 4 sessions) using strengths based solution focused framework, family involvement, and access to 24 hour mental health triage phone service.	No control	Ideation	Significantly fewer participants experiencing ideation following intervention (44%, n= 11) than baseline (80%, n= 20), and fewer experiencing frequent (nearly every day) ideation (8% vs 36%).

Studies That Did Not Find Evidence of Effectiveness

Authors	Study Type (Level of Evidence)	Population	Sample Size (N)	Intervention	Control	Outcomes	Finding/result	Comments
Comprehensive aftercare – Randomised controlled trials								
Morthorst et al., 2012	Blinded superiority RCT (II)	Patients older than 12 years admitted to regional hospitals in Copenhagen with a suicide attempt withing the past 14 days	243	AID: Assertive Outreach	CAMS	Reattempt	hospital-reported reattempts non-significantly HIGHER in intervention group, but non-significantly LOWER in intervention group when self-report (12% vs 18%)	NB active control
Comprehensive aftercare – Non-randomised controlled trials								
Johannessen et al., - followo up of The Baerum Model 2011	Quasi-experiment (III)	People admitted to hospital after a suicide attempt	1304	Follow-up of the Baerum Model including medical treatment and monitoring, Psychosocial/psychiatric intervention, aftercare by a public health nurse, Continued residential or non-residential treatment	TAU	Reattempt	No difference between groups. Similar effect for treatment and control groups: 60/675 (9%) of intervention cohort repeated an attempt within 6 months of their index episode with 47/629 (7%) for treatment as	

							usual cohort. 80/675 (12%) of intervention cohort repeated an attempt within 12 months of index episode and 70/629 (11%) for treatment as usual cohort at 12 months.	
McGill et al., 2022	Non- randomised experimental study (III)	Admitted to hospital (toxicology service) for deliberate self- poisoning	2270	The Way Back Support Service (TWBSS): Proactive non-clinical follow up care to reduce suicidal behaviour	Two historical control cohorts	Reattempt	At a clinical population level, TWBSS did not demonstrate an overall reduction in DSP repetition and may have been associated with increased hospitalisations for other reasons.	Version of TWBSS model implemented at this site differed from other effective interventions that focus on engagement and adherence only, are longer in duration, are delivered by clinicians, integrated with clinical services etc.
BCI – Non-randomised controlled trials								
Matsubara et al., 2019	Quasi- randomised CT (III)	Admitted to ED following suicide attempt	48	TAU + phone calls and postcards	TAU	Reattempt or suicide plan	No significant differences between groups	

Brief Intervention – Randomised controlled trials

Lin et al., 2020	RCT (II)	Adults who have recently attempted suicide with ongoing ideation	147	brief cognitive based psychotherapy plus standard case management	standard case management	Reattempt	The effect of cognitive-based intervention was not statistically significant (p=.076), there was a 15.7% difference in the proportion of a repeated suicide attempt between patients in the two groups.	NB active control
Comtois et al., 2023	RCT (II)	ED or inpatient admission for suicide risk	150	Collaborative Assessment and Management of Suicidality (CAMS): therapeutic framework that is guided by the collaborative use of the Suicide Status Form (assessment, treatment planning, tracking and clinical outcome tool). Includes weekly therapy.	TAU (intake, 1-11 visits with clinician and medication management, referral to provider for primary care follow-up)	Reattempt	No assoc between CAMS treatment condition and presence-absence of a suicide event during follow-up (OR = 0.95, p = 0.893)	NB active control
Mouaffak et al., 2015	RCT (II) - prospective	Adults admitted to ED following attempt and referred to outpatient program	320	OSTA: TAU but initial letter also included resources and contact details for 24 hour psychiatrist on duty. Plus p/calls 2 wks post	In-hospital risk assessment and treatment plan by psychiatrist. Further psychosocial	Reattempt	At 12 months there was no significant difference in reattempt rates. Subgroup analysis found	Active control - comprehensive psychosocial assessments are protective and received by all participants.

		(following stay of less than 72 hours)		d/c, & mths 1 & 3 w brief Ax of psychopathological state & risk of suicide & evaluation of MH treatment adherence	assessment by a senior psychiatrist prior to randomisation. Letter advising of randomisation outcome a few days after randomisation. Reminder letters 1st, 6th & 11th mth checking contact details.		no difference when intervention delivered after first attempt vs reattempt. Outcome data included a range of self-report with patient or their designated support person, physician, or using the hospital database. Unclear to what extent each source relied on. More patients in intervention referred to psychiatric follow-up than in control, but this expected because intervention by protocol included more opportunities for referral than control.	NB: the telephone call intervention (primary differentiator between groups) lasted 6 months. Unclear whether there was a difference at this time as not analysed.
Hatcher et al., 2015	Zelen RCT (II)	People aged over 17yrs presenting to ED following	684	Brief intervention including: Patient support for up to 2 weeks	Treatment as usual (TAU) varied but included	Reattempt as evaluated through	No difference between groups in number of reattempts or	

an episode
of self-harm.

Postcard contact for 1
year (x8)
Problem-solving therapy
Improved access to
primary care
A risk management
strategy
Cultural assessment

referral to
mental health
services, crisis
teams,
recommended
engagement
with
community
alcohol and
drug centres.
The discharge
plan included
referrals to
more than one
healthcare
provider, or
consisted
solely of
referral back to
the patient's
GP.

hospital
records

proportion of
those
reattempting, or
on
questionnaires
(excepting
sense fo
belonging at 3
months and the
multigroup
ethnic identity
measure at 1
year).

Brief Intervention – Non-randomised controlled trials

Gabilondo et
al., 2020

Non-
randomised
experimental
study (III)

Adults seen
in ED for
suicide
attempt and
discharged
after
psychiatric
assessment

586

5 short telephone
sessions post-discharge
as an adjunct to other
medical/psychological
follow-up

TAU -
prescribed by
physician in
charge of
follow-up (no
further details)

Reattempt

6-month follow
up assoc with a
delay in first
reattempt but
not sig. No
reduction in % of
those who did a
reattempt nor
the mean
number of
re-attempts.

López-Goñi et al., 2021	Case control study (III)	Adults treated for suicide attempt at ED	410	Telephone follow-up programme (TFP) six calls after discharge in addition to routine follow-up from mental health service	Case control cohort, received routine mental health service treatment	Reattempt	TFP group 23.6% re-attempted at least once, control 20.3%. No sig difference, p = 0.503
Goñi-Sarriés et al., 2022	Case control study (III)	Patients admitted to psychiatric units after suicide attempt	191	Brief intervention (TAU + telephone follow-up)	TAU	Reattempt	No difference in reattempt rates between groups. However, within the intervention group, people for whom the index case was a first-attempt were less likely to reattempt than those for whom the index case was not their first suicide attempt.

Studies Finding Evidence of Potential for Harm

Authors	Study Type (Level of Evidence)	Population	Sample Size (N)	Intervention	Control	Outcomes	Finding/result	Comments
BCI – Randomised controlled trials								
Kapur et al., 2013	RCT (II)	Adults who presented to ED with self-harm		Messages from Manchester: Brief contacts	TAU	Self-harm events	12 month repeat rate for individuals in the intervention group was 34.4% compared to 12.5% in the TAU group (odds ratio (OR) 3.67, 95% CI 1.0-13.1, P=0.046). The total number of episodes of repeat self-harm over 12 months was higher in the intervention group (41 v 7)(incidence rate ratio (IRR) 5.86, 95% CI 1.4-24.7, P=0.016). Adjusting for baseline clinical factors the odds ratio was no longer statistically significant.	

Appendix C: Identified Aftercare Programs by Region

Primary Health Network	Program Name	Provider	Program Dates	Site/Areas Served
ACT				
Australian Capital Territory	Aboriginal and Torres Strait Islander Suicide Prevention, Intervention, Postvention and Aftercare program	Thirrili, delivered in partnership with the local postvention TWBSS at Woden Community Service	In the Co-design phase	In the Co-design phase
Australian Capital Territory	TWBSS	Woden Community Services	17/10/2019 - Present	ACT
New South Wales				
Central and Eastern Sydney	TWBSS	NEAMI	2018 as 'SP Connect' program but transitioned to TWBSS in 2020	CESPHN region via outreach
Central and Eastern Sydney	Connector Service	Babana, currently transitioning to Tribal Warrior	2020 - Present	Located Inner City/ Redfern and available more broadly

					across CESP HN region based on community need
Hunter, New England, and Central Coast	TWBSS	Hunter Primary Care			Newcastle
Hunter, New England, and Central Coast	Aboriginal Aftercare	Hunter Primary Care			
Hunter, New England, and Central Coast	"i.am" (aka Youth Aftercare)	New Horizons	August 2022 – Present		Tamworth region
Hunter, New England, and Central Coast	Care Connect Aftercare				
Murrumbidgee	TWBSS	Wellways	February 2018 - Present		Murrumbidgee region wide
Nepean Blue Mountains	Peer Led Suicide Aftercare program	Nepean Blue Mountains Local Health District	2018 until 30 June 2023		NBM region (Lithgow, Blue Mountains, Hawkesbury & Penrith)
North Coast	TWBSS				
North Coast	Wesley LifeForce Aftercare	Wesley Mission			Coffs Harbour Local Government Area

North Coast	Care Connect	Social Future		
North Coast	"i.am" (aka Youth Aftercare)	New Horizons	August 2022 - Present	Mid-North Coast region, based in Coffs Harbour
Northern Sydney	TWBSS	CCNB	2016 - Present (previously Seasons program)	Northern Sydney PHN region
South Eastern New South Wales	Next Steps	Grand Pacific Health	Present	Whole of PHN area SENSW
South Western Sydney	TWBSS	Grand Pacific Health	January 2021 - Present	Liverpool/Campbelltown
South Western Sydney	The Lifeline Crisis Support Suicide Aftercare Program	Lifeline Macarthur and Western Sydney	July 2019 - Present	South Western Sydney
South Western Sydney	Lifeline Eclipse Support Group	Lifeline Macarthur and Western Sydney	July 2019 - Present	South Western Sydney
South Western Sydney	"i.am"	New Horizons	Present	South Western Sydney, based in Campbelltown
Western New South Wales	Roses in the Ocean - Peer CARE Connect programme	Roses in the Ocean	12-month trial	Orange / Bathurst LGA

Western New South Wales	TWBSS	Mission Australia	2022-2024	Broken Hill
Western Sydney	TWBSS	Neami National	November 2020 - Present	All 5 public hospitals within the 4 Local Government areas within Western Sydney catchment: Cumberland Hospital, Blacktown Hospital, Mt Druitt Hospital, Westmead Hospital and Auburn Hospital
Western Sydney	"i.am" (aka Youth Aftercare)	New Horizons	August 2022 - Present	Western Sydney region, based in Mt Druitt
Western Sydney	Hospital to Home Program			
NSW (State-wide)	Community Care	ACON	Present	Sydney, Newcastle, and Lismore for in-person services or state-wide for telehealth

Northern Territory

Northern Territory	TWBSS	Team Health	2019 - Present	Darwin
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Queensland

Brisbane North	TWBSS (Inner North)	Community	July 2021 - Present	Brisbane Inner North
Brisbane North	TWBSS (Redcliffe Caboolture)	Richmond Fellowship Queensland	July 2020 - Present	Redcliffe Caboolture Region
Brisbane North	LGBTQIA+ Aftercare	Queensland Council for LGBTI Health	July 2019 - Present	Brisbane North, Brisbane Inner City
Brisbane North	Aboriginal and Torres Strait Islander Aftercare	Kurbingui	2019 - Present	Brisbane North, Redcliffe, Pine Rivers
Brisbane South	TWBSS	Wesley Mission Queensland	2018 - Present	Brisbane Princess Alexandra Hospital, with expansion to Logan and Redlands Hospital between now and July 2023
Brisbane South	PAUSE Program	Brook Red	Since 2017, however the service will be transitioning to TWBSS from July 2023	Logan Hospital

Country to Coast Queensland (formerly Central Queensland, Wide Bay, Sunshine Coast PHN)	TWBSS (Central Queensland)	Anglicare CQ	01/03/21 - Present	Biloela, Central Highlands, Gladstone, Rockhampton, & Livingstone Shire
Country to Coast Queensland (formerly Central Queensland, Wide Bay, Sunshine Coast PHN)	TWBSS (Wide Bay)	RFQ	01/03/21 - Present	Bundaberg Burnett Hervey Bay Maryborough
Country to Coast Queensland (formerly Central Queensland, Wide Bay, Sunshine Coast PHN)	TWBSS (Sunshine Coast)	Open Minds	01/03/21 - Present	Sunshine Coast LGA Noosa LGA Gympie LGA
Darling Downs West Moreton	TWBSS	Richmond Fellowship Queensland	2020 - Present	All Darling Downs and West Moreton regions
Gold Coast	TWBSS	Wesley Mission Queensland	May 2020 to replace a previous aftercare service called 'Lotus'	People presenting to Robina or Gold Coast University hospital emergency department
Northern Queensland	TWBSS	Wellways		Cairns, Innisfail, Tully, Tablelands, Mossman, Georgetown

Western Queensland

TWBSS

Selectability

Mount Isa

South Australia

Adelaide

TWBSS

Anglicare SA

January 2021 -
June 30 2023

CALHN

Adelaide

Suicide Prevention Service

Anglicare SA

July 2016 - Present

SALHN and NALHN and
CALHN referrals that are not
from ED, i.e., GP referrals

Country South Australia

Suicide Prevention Service

Anglicare SA

2019 - Present

Adelaide Hills and outreach
to Fleurieu Peninsula where
appropriate

Country South Australia

Aboriginal Aftercare Service

Pika Wiya Health
Service

Tasmania

Tasmania

Attempted Suicide Aftercare
Program (ASAP)

Anglicare TAS

Tasmania

TWBSS

Anglicare TAS

September 2022 -
Present

Hobart and
Launceston/Burnie

Victoria

Eastern Melbourne	HOPE	Northern Health	2021 - Present	LGA areas - Whittlesea, Darebin
Eastern Melbourne	HOPE	Eastern Health	TBC	LGA areas - Maroondah, Knox, Yarra Ranges, Whitehorse, Manningham, Monash
Eastern Melbourne	HOPE	Austin Health	TBC	City of Banyule, Nillumbik
Eastern Melbourne	HOPE	St Vincent's Hospital	TBC	City of Boroondara, city of Yarra
Eastern Melbourne	Youth Focused HOPE	Alfred Health	2022-Present	
Gippsland	TWBSS	Wellways	2019 - Present	Whole of Gippsland
Murray	TWBSS (Mildura)	Wellways	2018 - Present	Mildura
Murray	Blended TWBSS and HOPE model	Albury Wodonga Health	2021 with delayed implementation of TWBSS portion, likely be	Albury Wodonga = Wangaratta, Bright

				transitioned back to HOPE only service
Murray	Blended TWBSS and HOPE model	Goulburn Valley Health	HOPE since 2021 with additional TWBSS from 2022	Shepparton and Seymour
North Western Melbourne	LGBTQIA+ Aftercare	MIND Australia	2018 - 2021	North Western Melbourne
North Western Melbourne	Youth Focused HOPE	Royal Children's Hospital	2022-Present	
North Western Melbourne	Youth Focused HOPE	Orygen	2022-Present	LGA – Hume, Brimbank, Melton, Wyndham, Meri Beck, Moonee Valey, Maribyrnong, Hobson Bay,
South Eastern Melbourne	TWBSS	Better Place Australia	2020 – June 2023, transitioning to HOPE	South Eastern Melbourne
South Eastern Melbourne	Youth Focussed HOPE	Monash Children's Hospital	2022-Present	
Western Victoria	TWBSS	Wellways	Present, transitioning to HOPE	Ballarat, Horsham, Warrnambool

Western Australia

Perth North, South, and Country	After Care Coordinator Service (ACCS)	HOLYOAKE	Present	Northam
Perth North, South, and Country	Choice Program	RUAH Community Services		North Metro, South Metro, East Metro; Royal Perth Hospital, Rockingham General Hospital, Armadale Hospital, Joondalup Health Campus, St John of God Midland, Peel Health Campus, Perth Magistrates Court
Perth North, South, and Country	Hospital to Home Program	Fellowship of WA		

Appendix D: Descriptions of Australian Aftercare Services

Program Name	Brief Program Description	Aftercare Model Offered	Key components addressed	Eligibility criteria	Target Population(s)	Referral pathways
Aboriginal Aftercare	Supports First Nations people who have recently experienced a recent suicide attempt or suicidal crisis for up to 3 months. Individuals are linked with an Aboriginal Support Coordinator who provides non-clinical, practical, and tailored support within the community. Support includes service navigation, safety planning, and building cultural connections	Assertive aftercare/case management	<ul style="list-style-type: none"> • Peer support • Integration with community services • Culturally appropriate and specific care • Safety planning 	<ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander people who have recently experienced a recent suicide attempt or suicidal crisis 	<ul style="list-style-type: none"> • Aboriginal or Torres Strait Islander people 	<ul style="list-style-type: none"> • GP or other health-practitioner facilitated • Community or primary mental health care
Aboriginal Aftercare Service (Pika Wika)	A blended model of therapeutic service delivery with traditional healers to support clients and their families. Risk and eligibility are assessed within 24 hours of referral receipt. The service is provided by SEWB practitioners who contact clients weekly for 12 weeks. The SEWB practitioners are responsive to the cultural needs of clients and recognise the importance of kinship and family involvement in maintaining social and emotional wellbeing. Traditional complimentary medicine including the performance of smoking ceremonies and	Brief intervention and assertive aftercare/case management	<ul style="list-style-type: none"> • Assertive follow-up • Culturally safe & sensitive assessment • Integration with community services • Addressing a broad range of psychosocial needs 	<ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander people of all who have recently attempted suicide 	<ul style="list-style-type: none"> • Aboriginal or Torres Strait Islander people 	<ul style="list-style-type: none"> • GP or other health-practitioner facilitated • Self-referred • ED facilitated • Community or primary mental health care

bush medicines are included as part of service delivery in addition to therapeutic interventions and case management. This case management includes addressing clients' broader psychosocial concerns (i.e., integration with the State Government Housing Support services)

<p>Aboriginal and Torres Strait Islander Aftercare (Kurbingui)</p>	<p>An emergency response and follow-up aftercare to First Nations people who are experiencing a suicidal crisis, have attempted to end their life through suicide, or have been impacted by suicide. Service duration is client dependent and ranges from 1 month to 2 years. The service is provided by SEWB practitioners who work with clients to establish appropriate support and access to services. They develop support plans with clients to work through psychosocial barriers, accompany clients to appointments, perform safety planning, and build stakeholder relationships with culturally appropriate mental health professionals (i.e., mental health services, psychologists, medical clinics, etc). SEWB practitioners understand connection to land, culture, spirituality, family and community, and work with community to build clients relationships with culture and country.</p>	<p>Assertive aftercare/case management</p>	<ul style="list-style-type: none"> • Face-to-face • Assertive follow-up • Continuity of care • Integration with community services • Culturally appropriate and specific care • Safety planning 	<ul style="list-style-type: none"> • Aboriginal and Torres Strait Islander people of all ages who are experiencing a suicidal crisis, have recently attempted, or been bereaved by suicide. 	<ul style="list-style-type: none"> • Aboriginal or Torres Strait Islander people 	<ul style="list-style-type: none"> • GP or other health-practitioner facilitated • Self-referred
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<p>After Care Coordinator Service (ACCS)</p>	<p>ACCS provides intensive support and care coordination for people who have experienced recent suicidal ideation or made a suicide attempt as a response to a difficult life event. ACCS provides clinical, social and practical support that encompasses care coordination to broader community services, support for clients to attend clinical or psychosocial related appointments (housing, financial, medical etc), implementing hospital discharge plans, and ongoing suicide risk assessment, safety planning and review.</p>	<p>Assertive aftercare/case management</p>	<ul style="list-style-type: none"> • Assertive follow-up • Addressing a broad range of psychosocial needs • Safety planning 	<ul style="list-style-type: none"> • Individuals who presented at an ED or were admitted to hospital with suicidal ideation or suicide attempt. • Those who were referred by a GP or Nurse Practitioner who believed that the patient is in the mild to moderate risk category • Individuals referred by the WA Country Health Service (WACHS) Wheatbelt Mental Health Service. 	<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • GP or other health-practitioner facilitated • ED facilitated
<p>Attempted Suicide Aftercare Program (ASAP)</p>	<p>ASAP provides immediate and assertive follow-up, contacting patients within 48 of receiving the referral, following discharge from the emergency department and other acute settings. Clinicians at ASAP provide psychosocial support to patients, ongoing risk</p>	<p>Assertive aftercare/case management</p>	<ul style="list-style-type: none"> • Assertive follow-up • Safety planning 	<ul style="list-style-type: none"> • Individuals aged 15 years and over who have attempted suicide and are not receiving ongoing 	<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • GP or other health-practitioner facilitated • ED facilitated

assessment and safety planning, and encouragement and motivation to adhere to treatment plans.

[public] MHS
Case management
• Friends and family members who are supporting someone who has attempted suicide

Care Connect	An assertive aftercare program providing therapeutic support to individuals, their families and their caregivers after a suicide attempt. Clients are provided a dedicated worker to help access the support needed, provide individual case management to work towards meeting support plan goals, link with other local supports and services to improve health and wellbeing	Assertive aftercare/case management	<ul style="list-style-type: none"> • Continuity of care • Assertive follow-up • Integration with community services 	<ul style="list-style-type: none"> • Individuals aged 16 years and over, who are at risk of, or have previously attempted suicide or self-harm 	<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • Self-referred
Choices Program	A 3-month long peer support program aimed at reducing repeated admissions to the ED, through a post-discharge peer support with lived experience. Initial contact occurs during an ED presentation and consenting participants are followed-up by a peer worker who conducts a risk assessment and continues emotional and psychosocial support in the community. Upon exit individuals receive follow-up at 2, 4, and 8	Assertive aftercare/case management	<ul style="list-style-type: none"> • Peer support • Integration with community services 	<ul style="list-style-type: none"> • People who present frequently to hospital EDs and justice services • People who do not have existing case management 	<ul style="list-style-type: none"> • Individuals who present repeatedly to the justice services • People who have a mental health or alcohol and drug issue 	<ul style="list-style-type: none"> • ED facilitated

	weeks. People can receive further support (up to 4 months) through the Choices Extra program.	support from another service	(AOD) that they are interested in addressing	
Community Care (ACON)	Aftercare service comprising non-judgmental short-term care coordination and counselling support for LGBTQ+ people	<ul style="list-style-type: none"> • LGBTQIA+ people experiencing thoughts of suicide or who have recently made a suicide attempt • Individuals aged 18+ • Individuals residing in NSW 	• LGBTQIA+	• Self-referred
Connector Service	Details unavailable and no response received to email request for information.	<ul style="list-style-type: none"> • Aboriginal and/or Torres Strait Islander peoples following an attempt, suicidal crisis, or death from suicide in community 	• Aboriginal or Torres Strait Islander people	Self-referred, Other (please specify)

Hospital Outreach Post-suicidal Engagement (HOPE)	An assertive outreach model that delivers both clinical and psychosocial support over 3-months to individuals following suicide crisis using a Relational Clinical Care (RCC) Clients are contacted within 24 hours of receiving a referral and intake is arranged within 72 hours. Clients are assigned a psychosocial support worker and mental health clinician. The psychosocial support worker contacts the client 1 to 2 times per week depending on the clients' needs. The support worker and clinician provide intense and individualised therapeutic care, conduct safety planning, provide family support, develop support plans, collaborate with GPs and other mental health practitioners for handovers, and provide broad psychosocial support	Assertive aftercare /case management	<ul style="list-style-type: none"> • Assertive follow-up • Face-to-face contact • Continuity of care • Integration with clinical care • Addressing a broad range of psychosocial needs 	<ul style="list-style-type: none"> • Exact age eligibility varies across locations, but it is typically available to person's aged 18+ years. However, some models for young people have been developed and are operating in Victoria for 15 and above. • People who have been discharged from ED or a medical ward following a suicide attempt or having displayed serious suicidal ideation, intent or planning. • Aimed at people who do NOT require ongoing or immediate, intensive mental health support 	<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • No self-referral, however, some unspecified sites allow self-referral. HOPE programs operating in metropolitan regions do not allow self-referral due to capacity limitations. • Referrals made from ED staff, Psychiatric Services, Inpatient Psychiatric Units, Consultant Liaison Psychiatry service and Department of Health Crisis Assessment and Treatment. • Referral is
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				which would be provided by another community team that provides specialist public mental health care (e.g., Community Mental Health).		made via a triage phone service operated by the HOPE program.
<p>Youth Focused Hospital Outreach Post-suicidal Engagement (HOPE)</p>	<p>An assertive outreach model that delivers both clinical and psychosocial support up to 3-months to children and young people and their family/care givers following presentation to ED using a Relational Clinical Care (RCC). Clients are contacted within 24 hours of receiving a referral and intake is arranged within 72 hours. Clients are assigned a psychosocial support worker and/or mental health clinician, and a lived-experience peer support worker. Family member/care giver receive support from family lived-experience peer support worker. The client is contacted 1 to 2 times per week depending on the clients' needs. The support worker and clinician provide intense and individualised therapeutic care, conduct safety planning, provide family support, provide assertive outreach, develop support plans, collaborate</p>	<p>Assertive aftercare</p>	<p>Assertive follow-up</p> <ul style="list-style-type: none"> • Face-to-face contact • Continuity of care • Integration with psychiatric care • Lived experience consultations • Addressing a broad range of psychosocial needs 	<p>Children and young people aged under 25</p>	<p>General Program</p>	<p>As above</p>

with GPs and other mental health practitioners for handovers, and provide broad psychosocial support.

Hospital to Home Program	Linking individuals recently discharged from hospital with a Peer Case Worker with a lived experience of mental illness and mental health qualifications. The Peer Case Worker provides social support, helps the client establish goals, accompany clients to medical appointments, links them with community services, and helps them navigate broader non-clinical services (i.e., Centrelink, Government agencies) over a 12-week period	Assertive aftercare/case management	<ul style="list-style-type: none"> • Addressing a broad range of psychosocial needs • Peer led 		<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • ED-facilitated
LGBTQIA+ Aftercare (Mind Australia)	An assertive outreach model that provides therapeutic support for LGBTQIA+ individuals experiencing suicidal thoughts, as well as their chosen family members and other important people in their lives. The program is peer-led and community-based with individuals being matched with a lived experience peer support worker, and a counsellor/psychologist from the LGBTQIA+ community. The aftercare program is	Assertive aftercare/case management	<ul style="list-style-type: none"> • Assertive follow-up • Continuity of care • Peer led • Lived experience involvement 	LGBTQIA+	<ul style="list-style-type: none"> • LGBTQIA+ 	<ul style="list-style-type: none"> • GP or other health-practitioner facilitated • Self-referred

	recovery focused and individuals meet with their aftercare team for weekly or fortnightly sessions for up to 6 months. An 'Aftercare Circles' support group is offered with 8-10 clients and led by the Peer Practitioner Group Facilitator		• Integrated clinical care			
LGBTQIA+ Aftercare (Queensland Council for LGBTI Health)	Details unavailable and no response received to email request for information.			LGBTIQ+ sisters and brotherboys aged 16 years and older experiencing suicidal crisis or bereavement.	• LGBTQIA+ • Aboriginal or Torres Strait Islander people	• GP or other health-practitioner facilitated • Self-referred
Lifeline Eclipse Support Group	An 8-week long, face-to-face, support group for adults who have survived a suicide attempt. Group sessions are evidence based, and facilitated by a crisis support worker, and a peer support worker who is experienced in suicide crisis support, prevention education and bereavement. Group members offer each other emotional support and explore coping strategies. The support group focuses on skill building, learning how to live with suicidal thoughts and how to respond with an emphasis safety planning. Sessions are hosted weekly for 2-hours. The program is not a substitute for clinical therapy, and it's	Unsure	• Face-to-face • Psychoeducational focus • Peer led	• Individuals who have survived a suicide attempt.	• General program	• Self-referred

recommended that group members have additional support and resources outside the group

Next Steps	A peer and clinical, psychosocial program for people who have presented in suicidal crisis to emergency departments or community mental health teams. Individuals are paired with a peer worker with lived experience who will contact them up to 3 times for 12 weeks. Next Steps involves a holistic approach to support, including addressing the physical, emotional, and social aspects of an individual's well-being. It aims to assist clients in their recovery journey by connecting them with relevant services, such as mental health professionals, community supports, and other resources. The client and peer worker will work collaboratively with a mental clinician for the initial meeting and at four weekly reviews.	Assertive aftercare/case management	<ul style="list-style-type: none"> • Assertive follow-up • Engagement and continuity of care • Integration with community services • Addressing a wide range of psychosocial needs 	<ul style="list-style-type: none"> • People who have presented in suicidal crisis to emergency departments or community mental health teams. • Individuals aged 16+ years 	<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • ED-facilitated
PAUSE Program	A 13-week long aftercare program for individuals who have presented to the Logan General Hospital - Emergency Department. Clients are paired with a peer worker with lived experience following hospital discharge. Approximately 24-72 hours after hospital discharge individuals receive a phone call from a PAUSE peer worker and in-person	Assertive aftercare/case management	<ul style="list-style-type: none"> • Continuity and coordination of care • Face-to-face • Addressing a wide range of psychosocial needs 	<ul style="list-style-type: none"> • Individuals aged 18+ years • Individuals presenting to Logan General Hospital - Emergency Department for 	<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • ED-facilitated

contact is organised for the first program week. For up to 13 weeks PAUSE peer workers provide referred individuals with the opportunity to talk about their suicidal experiences, and workers share their recovery strategies. Peer workers also assist participants with identifying and making goals toward change, find community resources, and people who can support them in this process. Peer workers also provide practical support such as transportation, liaison, advocacy, and any other support and assistance required during this time and assist people with engaging with the required health and community services

- Integration with community services
- Engaging and assertive follow-up

suicidal ideation, self-injury, or a suicide attempt

Peer Led Suicide Aftercare program

Assistance and support from a Peer Worker with lived experience of suicide to those recently discharged from the hospital for a suicide attempt. The program aims to assist the individual when transitioning home and into the community to engage with support programs and relevant services for ongoing care

Assertive aftercare/case management

- Peer Led
- Connecting clients with community

• People leaving hospital after an attempt to end their own life, no age restrictions or restrictions on gender, sexuality, or cultural identity.

- General program

• Made internally by Nepean Blue Mountains Local Health District

Roses in the Ocean - Peer CARE Connect programme	Suicide prevention and postvention program in which individuals or communities impacted by emotional distress, isolation and/or suicide are paired with a Peer CARE Companion - a person with lived experience of suicide.	Other	• Peer Support	• Varies by location	• General program	• Self-referred
Suicide Prevention Service	A 3-month long intensive program supporting individuals who have made a recent suicide attempt. An AnglicareSA support worker provides face-to-face support sessions wherever the client feels most comfortable. The first month involves weekly support sessions that include safety planning, the second month involves maintenance of regular appointments and getting the client back involved in the community and the things they love, and the third month involves connecting the client with community support and resources	Assertive aftercare/case management	• Assertive follow-up • Safety planning • Connecting clients with community	• For individuals and families following an attempt, or for those experiencing suicidal crisis	• General program	• ED-facilitated • GP or other health-practitioner facilitated • Community or primary mental health care
The Lifeline Crisis Support Suicide Aftercare Program	A non-clinical service that offers free, short-term telephone crisis support. Phone calls are made by an experienced Lifeline Crisis Supporters who aims to monitor the individuals' wellbeing and help keep them connected following a suicide attempt or if they're experiencing a suicidal crisis. Individuals are contacted as soon as possible after receipt of referral and will receive daily or weekly supportive phone calls or text	Assertive aftercare/case management	• Assertive follow-up	• Individuals aged 18+ • People at risk of suicide/recently discharge from a hospital following a suicide attempt or experiencing a suicidal crisis • Assessed as	• General program	• GP or other health-practitioner facilitated • Self-referred • Family and community organisations

messages depending on the individual's preference. In between outgoing phone calls the individual has access to the 13 11 14 Lifeline Crisis Support Line.

able to benefit from short-term telephone support

- Clients fitting the above criteria who have limited accessible support and/or resources

<p>The Way Back Support Service</p>	<p>TWBSS provides non-clinical support during the first 3 months after discharge and aims to support and actively encourage and link people with existing clinical and other supports and services (e.g., social, financial, etc) within the community. The service model of TWBSS was specifically designed to bridge the gap between hospital care and community aftercare services, acknowledging the significance of accessing community-based services and supports for the recovery process. TWBSS aims to provide a designated support coordinator as a case manager who can assist in resolving any challenges related to accessing appropriate community services. The support coordinator, supported by clinical psychologists in the role of clinician adviser and operations manager, aims to provide accessible and trauma informed support,</p>	<p>Assertive aftercare/case management</p>	<ul style="list-style-type: none"> • Initial contact within the first 24 hours • Face-to-face contact • Rapid assertive follow-up • Engagement and continuity of care • Integration with clinical services • Safety planning and support planning 	<ul style="list-style-type: none"> • Exact age eligibility varies across locations, but it is typically available to person's aged 16+ years. <p>Primary criteria:</p> <ul style="list-style-type: none"> • People who have been hospitalised for a suicide attempt. <p>Secondary criteria:</p> <ul style="list-style-type: none"> • People who have presented to a hospital, emergency department or a community health 	<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • No self-referral. • Referrals made by Hospital Services or Community mental health staff. • If service capacity allows referrals from General Practitioners (GPs) are permitted.
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contacting the client at least once per week. Safety planning and support planning is important part of TWBSS protocol to identify the client's needs and goals and ensure their safety.

service following a suicidal crisis, or whose risk of suicide is identified as imminent

Wesley LifeForce Aftercare	14 weeks of personalised care with the option to attend a support group. Clients are assisted with connecting to flexible community-based support services to improve wellbeing	Assertive aftercare/case management		<ul style="list-style-type: none"> • Individuals aged 18 years or older • Those that live in the Coffs Harbour Local Government Area • Those not currently be supported by another suicide aftercare service • Individuals experiencing suicidal distress or self-harm behaviour. 	<ul style="list-style-type: none"> • General program 	<ul style="list-style-type: none"> • Self-referred
Youth Aftercare Pilot (YAP/ 'i.am')	Supports young people with lived experiences of suicide, suicidality, and self-harm. Personalised support is provided by youth and peer workers who aim to address clients' immediate needs and goals, develop coping and problem-solving skills, build	Assertive aftercare/case management	<ul style="list-style-type: none"> • Lived Experience consultation • Peer Led 	<ul style="list-style-type: none"> • Individuals aged under 25 • Live in Southwest Sydney (Bankstown, 	<ul style="list-style-type: none"> • Youth 	<ul style="list-style-type: none"> • GP or other health-practitioner facilitated • Self-referred • Family and

resilience, mental health and wellbeing, provide practical and psychosocial interventions. Peer support for clients also includes building relationships with friends and family and finding a support network in community as well as addressing clients' broader psychosocial needs (i.e., managing addiction and finding secure housing). Throughout the program workers are considerate of clients social, cultural, educational and environmental situations.

Liverpool or Fairfield); Western Sydney (Mt Druitt); the Coffs Harbour or Nambucca areas of Mid North Coast NSW; or the Tamworth area of Hunter New England.

community organisations