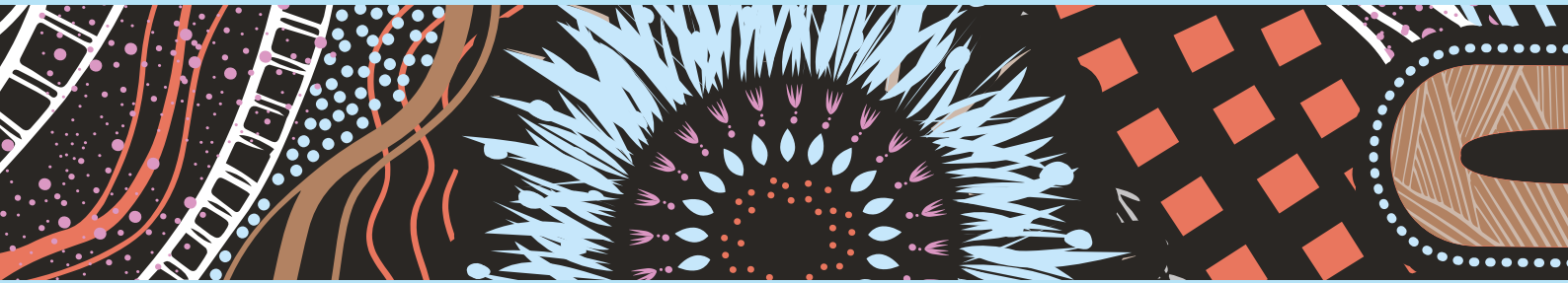




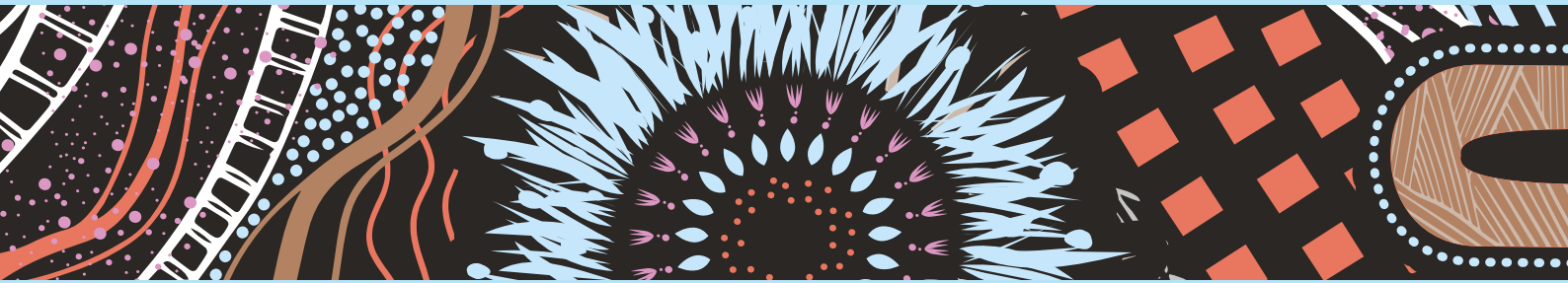
Australian Government

**Australian Institute of
Health and Welfare**



Digital mental health resources for First Nations people

Australian Institute of Health and Welfare



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The AIHW is an independent statutory Australian Government agency producing authoritative and accessible information and statistics to inform and support better policy and service delivery decisions, leading to better health and wellbeing for all Australians.

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Caution: Some people may find the content in this report confronting or distressing.

Please carefully consider your needs when reading the following information about Indigenous mental health and suicide prevention. If you are looking for help or crisis support, please contact:

13YARN (13 92 76), Lifeline (13 11 14) or Beyond Blue (1300 22 4536).

The AIHW acknowledges the Aboriginal and Torres Strait Islander individuals, families and communities that are affected by suicide each year. If you or your community has been affected by suicide and need support, please contact the **Indigenous Suicide Postvention Services** on **1800 805 801**.

The AIHW supports the use of the [Mindframe guidelines](#) on responsible, accurate and safe suicide and self-harm reporting. Please consider these guidelines when reporting on these topics.




Summary

What we know

- In Australia, First Nations people are strong users of digital technology and are recognised for their innovation with technology (Henson et al. 2022). However, across the First Nations population there are barriers to using technology, with use affected by digital coverage, access to devices, cost of data, digital literacy and confidence.
- Using web-based resources for suicide prevention and to treat mental health conditions has been increasing (Ramshaw et al. 2023). Since the COVID-19 pandemic, there has been increasing comfort and expertise in using technology for health interventions (Henson et al. 2022).
- Almost a quarter (24%) of First Nations people have a diagnosed mental health condition or behavioural condition, with anxiety being the most common condition (17%), followed by depression (13%) (ABS 2019). Suicide was the fifth leading cause of death among First Nations people, accounting for 5.4% of all deaths for this group in 2021 (ABS 2022).
- Digital mental health tools have been shown to be effective for suicide prevention, providing effective treatment for anxiety, depression and psychological distress in First Nations people (Tighe et al. 2017b; Titov et al. 2019). Such resources can also contribute to a strong sense of identity and community-building (Dingwall et al. 2015b; Li and Brar 2022).
- There is a substantial body of evidence for the effectiveness of digital mental health services. Indeed, Australian governments have identified digital mental health services as an element of delivering care for people at risk of mental health, or for those with mild or moderate mental illness (COAG 2017). These services are recognised as being cost-effective and accessible for people in rural and remote areas (Bassilios et al. 2022).
- There are a limited number of Indigenous-specific digital mental health tools, particularly tools that have undergone robust evaluation.

What works

- Digital mental health resources are accessible, convenient and flexible. For some First Nations people who are reluctant to seek help in traditional health service settings, a digital mental health resource may also provide a non-judgemental, safe space.
- For First Nations people, factors that can drive uptake of and engagement with digital mental health resources include:
 - innovative apps that are visually appealing and use culturally appropriate language
 - tools containing content that has been developed or shaped by local First Nations people
 - incorporation of social and emotional wellbeing support: that is, support across a range of cultural domains. These resources are broader in scope than those provided within Western conceptions of mental health.

- 
- Development of digital mental health resources by First Nations people (or in partnership with First Nations people) will help ensure their cultural safety and cultural relevance.
 - Tools need to be easy to use and navigate, ideally free to use, and able to be used offline.
 - Security and confidentiality are important. Devices are often shared in communities, so the inclusion of password protection will provide greater confidence in using an app.
 - Providing training for health practitioners in the use of digital mental health resources will build knowledge of their suitability and contribute to quality assurance.

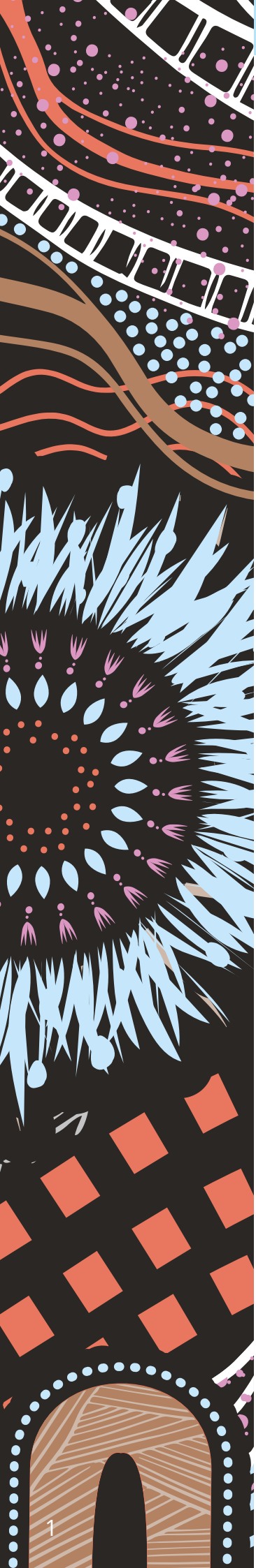
What doesn't work

- Currently there is no single regulatory framework covering the development and operation of digital mental health services in Australia. This can pose a safety issue for users of apps and can put at risk the information collected by digital service providers. Many mental health apps do not have a privacy policy (Parker et al. 2019).
- Evaluation frameworks for electronic health resources do not reflect the cultural and community-related priorities of First Nations people. Evaluations need to use Indigenous wellbeing indicators.
- Identifying reputable, evidence-based apps is made more challenging by the lack of a standard classification system for digital mental health resources. Also, few resources publish evidence for their efficacy (Marshall et al. 2020a).
- Digital mental health resources that are difficult to navigate, text-dense and not built in partnership with First Nations people will not be effective.

What we don't know

- There is limited evidence for the efficacy of culturally appropriate, digital resources for the social and emotional wellbeing of First Nations people. The opportunities afforded by digital mental health resources are still to be fully explored.
- Best-practice principles governing the development, implementation and evaluation of digital social and emotional wellbeing (SEWB) resources for First Nations people need to be developed and agreed by First Nations people.





1



Introduction

1 Introduction

Digital mental health resources provide an opportunity to deliver more accessible services to rural and remote communities or to people seeking an alternative to face-to-face treatment. Some have described the proliferation of mental health apps as like having ‘a therapist in your pocket’ (Balaskas et al. 2021; Stawarz et al. 2018). They are strongly used by Aboriginal and Torres Strait Islander (First Nations) people, particularly by young people (Henson et al. 2022; Toombs et al. 2021).

This article explores the value of digital mental health resources for First Nations people, with a focus on web-based, mobile health programs and/or apps. Such resources may be self-directed or used as an adjunct to treatment by a health service provider. Best-practice approaches to the development and application of these tools will be highlighted, along with learnings regarding the limitations and challenges of using such services.

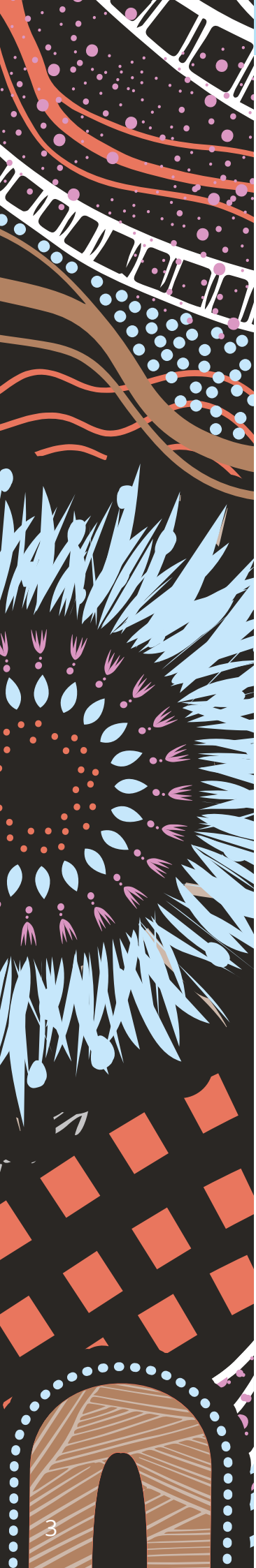
The 2019–20 bushfires and COVID-19 pandemic saw challenges to accessing mental health practitioners become more common, with both the fires and the pandemic triggering increases in depression and anxiety (Arjmand et al. 2021; Bower et al. 2022; Halcomb et al. 2023). The use of web-based mental health interventions has been increasing (Ramshaw et al. 2023), and these resources are increasing access to and engagement with psychological treatment by people experiencing mental health conditions.

First Nations mental health and wellbeing experts responding to the mental health and wellbeing implications of the COVID-19 pandemic proposed:

Embracing and harnessing innovative digital SEWB [social and emotional wellbeing] support tools provides an opportunity for equitable, culturally safe, trauma-informed, and lived-experience service delivery (Gayaa Dhuwi 2021:13).

There is a substantial body of research showing that internet-delivered cognitive behavioural therapy programs can be as effective as face-to-face treatment, particularly when supported by a practitioner (Andersson et al. 2014; Carlbring et al. 2018). The convenience of services can be particularly important for First Nations populations, who often have poor access to health services compared with the general population (especially within rural and remote areas). This paper explores evidence for the development of digital resources and how useful and effective they are for First Nations people.

The use of social media and mobile communication technology in health promotion and for digital treatments has been well supported by First Nations people (Povey et al. 2016; Titov et al. 2019). Research shows that digital technology can facilitate a strong sense of identity and community-building among First Nations people, which are protective factors against mental health issues (Li and Brar 2022). Research also suggests that First Nations people have always been early adopters of digital technology and use social media at rates higher than non-Indigenous Australians (Carlson and Frazer 2018). The COVID-19 pandemic has also increased comfort with and expertise in using mobile health technologies (Henson et al. 2022).



2



Background

2 Background

First Nations people experience mental illness at greater levels than non-Indigenous Australians, with deaths from suicide twice as high (AIHW and NIAA 2023a). Access to mental health services is essential for improving wellbeing, with early intervention able to prevent suicide (AIHW and NIAA 2023b). Structural, systemic and social barriers to service use further undermine the wellbeing of First Nations people.

However, digital mental health applications can overcome these barriers and support the wellbeing and resilience of First Nations people and their communities. This section outlines the current data on mental health and wellbeing of First Nations people and describes the concept of 'social and emotional wellbeing'. It goes on to set the context for First Nations mental health access to culturally safe services and how digital health services can help.

Measures of mental health and wellbeing

Measuring psychological distress provides an indication of the wellbeing of individuals and of the population. Psychological distress can be a sign that someone is not coping; it can be a cause for mental illness; it can worsen an existing condition; and it is a risk factor for suicide (PM&C 2017).

Results from the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) in 2018–19 showed that two-thirds of First Nations adults reported 'low or moderate' levels of psychological distress (66%). The rate for males (70%) was higher than for females (63%) (ABS 2019).


Over time, a worsening of psychological distress levels among First Nations adults has been observed, with 'high' or 'very high' levels increasing from 27% to 31% between 2004–05 and 2018–19 (ABS 2019). The rates of 'high' or 'very high' psychological distress were similar for people living in non-remote areas and remote areas (31% and 28% respectively) (ABS 2019).

The NATSIHS also revealed that almost a quarter (24%) of First Nations people had a diagnosed mental health or behavioural condition, with females more likely than males to report these conditions (25% and 23%, respectively). 'Anxiety' (17%) was the most commonly reported condition, followed by 'depression' (13%) (ABS 2019).

In 2021, suicide was the 5th leading cause of death among First Nations people, accounting for 5.4% of all deaths. (By comparison, it is the 15th leading cause of death for all Australians, accounting for 1.8% of all deaths). Rates of death by suicide for First Nations people have increased over the 10-year period to 2021, from 22.4 per 100,000 people to 26.4 between 2012–16 and 2017–21. It was also the leading cause of death for First Nations children aged 5–17 (ABS 2022).

Social and emotional wellbeing (SEWB)

For First Nations people, social and emotional wellbeing (SEWB) forms the basis of physical and mental health. 'Health' is a holistic concept which includes not only the physical wellbeing of an individual, but also the 'social, emotional, cultural wellbeing of the whole community' (Dudgeon et al. 2014; Gee et al. 2014; Parker and Milroy 2014; Social Health Reference Group 2004). The *National Strategic Framework for Aboriginal and Torres Strait Islander Peoples' Mental Health and Social and*



Emotional Wellbeing 2017–2023 outlines a model of SEWB with seven overlapping domains: body; mind and emotions; family and kin; community; culture; Country; and spirituality and ancestors (PM&C 2017).

The concept of SEWB incorporates other factors that influence health and wellbeing. Mental health issues are widely acknowledged to be a result of the impact of cultural genocide and colonisation (Calma et al. 2017). Colonisation and government policies leading to the dispossession of land, institutional racism and forced removal of children from families have disrupted SEWB and resulted in ongoing trauma and intergenerational mental health problems.

Recognition of the social and cultural determinants of mental health is vital, with culturally safe healing an essential part of responses to poor social and emotional wellbeing (Calma et al. 2017).

Barriers to service use

Research shows that, for a variety of reasons, use of mental health services by First Nations people is low. These reasons include:

- inaccessibility, which can be related to distance from health services; limited access to transport; and a lower number of First Nations and/or qualified service providers in areas where First Nations peoples live (ABS and AIHW 2011; AIHW and NIAA 2023b; AIHW and NIAA 2023c; Rosier and McDonald 2011).
- mistrust of government, including a fear of racism, disrespect, judgement and of government interventions – particularly from child protection agencies (Nolan-Isles et al. 2022; Lee et al. 2014).
- long waiting times and an inability to get an appointment when needed, which can also be associated with a low number of service providers (Williamson et al. 2010; ABS 2011).
- costs, which may include treatment costs, transport costs or opportunity costs (such as lost wages to attend appointments) (Page et al. 2022).
- confidentiality risk, particularly in small communities where there can be discomfort associated with sharing personal information with a member of the community, or where stigma is attached to mental illness (Lee et al. 2014).
- feelings of shame, which may prevent people from seeking help (Lee et al. 2014; Marriott and Ferguson-Hill 2014).
- the ‘unequal power inherent in the therapist–client relationship’ which can impede the development of respect and trust in service provision (Walker et al. 2014:203; McBain-Rigg and Veitch 2011).

Culturally safe services

‘Cultural safety’ underpins the effective management of First Nations mental health and wellbeing. It refers to the subjective experience of recipients of mental health care, indicating whether a person feels ‘comfortable that they are accepted for who they are and what they need’ (Upton et al. 2021:3). For a service to be culturally safe, it must recognise and respect the cultural identities of their clients and consider their values, beliefs and preferences (Walker et al. 2014).

Also central to this concept are shared respect, meaning and knowledge (Upton et al. 2021). Such knowledge is not quickly acquired; 'acquiring and demonstrating or "doing" cultural competence is a complex, demanding and life-long endeavour' (Dudgeon et al. 2010).

As noted, the small number of First Nations mental health practitioners can be a barrier to timely and culturally safe treatment. In turn, these barriers may deter help-seeking. The barriers to obtaining and retaining skilled First Nations mental health workers, particularly in rural and remote areas, have been described elsewhere (Upton et al. 2021). First Nations people hold less than 2% of jobs in the entire health sector and represent a very small percentage of the mental health workforce (Lai et al. 2018).

Can digital mental health services overcome these barriers?

What is 'digital' mental health?

In this paper, we explore web-based mental health and wellbeing interventions or applications (apps) for First Nations people, defined in this paper as 'digital mental health'. In some literature, the terms 'e-mental health' or 'electronic mental health' are also used. These terms encompass the range of digital resources, tools or interventions that are self-guided and/or supported by therapists or clinicians.


Digital mental health is a dynamic and rapidly evolving environment. Specifying a rigid definition of digital mental health and all that it includes is challenging. Similarly, there is no universal term for digital mental health, and various terms are used in the literature to describe such interventions for mental health and wellbeing. Along with 'digital mental health' and 'e-mental health', terms include 'internet-assisted therapy', 'mobile mental health' or combinations of these terms.

Frequently, the acronym DMHI is used to refer to digital mental health interventions. 'd-SEWB' was also coined as a term for applications developed specifically for First Nations people (Bennett-Levy et al. 2021; see also Box 4.1).

The technology-assisted interventions covered by these terms can include web-based or internet-assisted services, tools and information; telehealth (encompassing video conferencing); phone counselling services; and social media platforms and messaging services. Current advances in artificial intelligence (AI) are seeing AI therapists emerge as another service option. These many technologies may also be combined into a single service offering or application to provide users different support options.

The focus of this paper is a subset of digital mental health services, being web-based tools or mobile phone apps for First Nations mental health and wellbeing, generally referred to as digital mental health resources or tools. Such tools can often be downloaded, allowing for their use anywhere and anytime. The information and resources within them may also be accessed multiple times. They can be used as a stand-alone tool, or in concert with a therapeutic relationship.

The terms 'app' and 'application' are used interchangeably in this paper to refer to a software program used on a smart phone, tablet or computer. Apps may be used while connected to the internet or downloaded and used offline.



While social media platforms may also be an avenue through which First Nations people are able to access social and emotional support, applications solely using this technological support are not the subject of this examination. Similarly, telehealth and dedicated phone counselling services are not examined in this paper.

The evidence for digital mental health

Australia has long been at the forefront of e-mental health research, with its researchers being among the first to recognise its potential (Jorm et al. 2013). In 2013, Jorm and colleagues asserted that Australia was responsible for around half of the world's e-mental health programs and had 'produced more publications on the topic over the last decade than the rest of the world put together' (Jorm et al. 2013:104). Indeed, a specific e-mental health Australian Government strategy was in place as early as 2012 (see Chapter 5).

Recently, the Australian Government Department of Health commissioned a comprehensive independent review on the efficacy and cost-effectiveness of supported digital mental health interventions for mental disorders. The review found them to be 'efficacious for treating depression, anxiety disorders, and binge eating disorder' (Bassilios et al. 2022:13). While this review was largely focused on interventions involving some form of clinical or practitioner support or guidance, others advocate for the value of self-administered apps. For example, the Black Dog Institute asserts that '[s]elf-guided interventions for depression and suicide prevention have been shown to be effective in reducing suicide ideation' (2020:3). They advocate for digital solutions, flagging their clinical effectiveness, accessibility and low cost (Black Dog Institute 2020) and recommend that automated ehealth services be made widely available for people at risk of mental illness who do not seek traditional health care (Black Dog Institute 2020).

A systematic review of e-mental health service use for depressive and anxiety disorders concluded that 'internet-based' and 'internet-assisted therapies' are an effective means of treating many people with these disorders (Meurk et al. 2016). Meta-analyses showed that those who use these therapies 'tend to be satisfied with them' (Meurk et al. 2016:12).

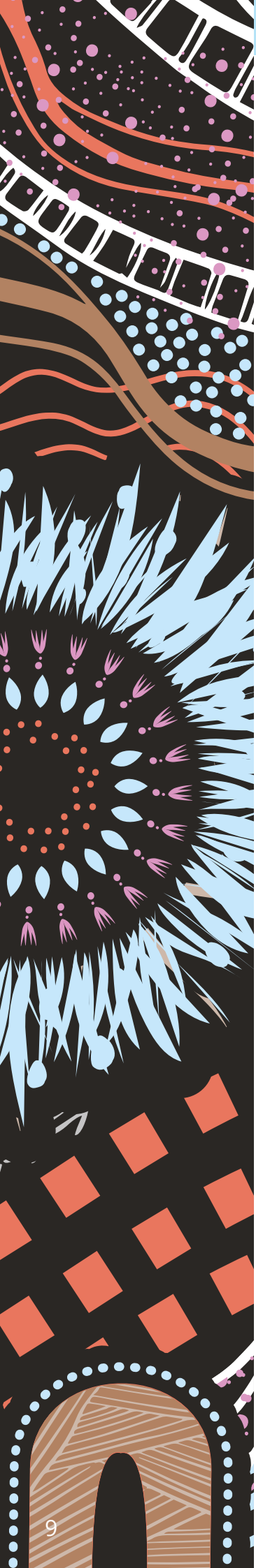
Digital mental health services have some clear advantages – the remote delivery of services that are frequently inaccessible to people in rural and remote communities being at the forefront of these (Black Dog Institute 2019). A recent international review on the use of digital technologies for the mental health and wellbeing of First Nations people found these technologies to be 'effective in aiding the provision and improvement of First Nations mental health services, particularly when applying decolonising, culturally appropriate approaches' (Li and Brar 2022). Their value for First Nations people in Australia has also been acknowledged, especially when designed within a framework of social determinants of social and emotional wellbeing (Bird et al. 2017).

The evidence against digital mental health

In contemporary research literature, the evidence for digital mental health resources is overwhelmingly positive. However, concerns remain about this burgeoning means of treatment. A review that explored the effectiveness of both apps and desktop programs found that evidence for the effectiveness of apps is still lacking (Marshall et al. 2020b). These researchers noted the speed of change in the market for apps, which often outpaces evidence on their effectiveness. Furthermore, they urged the involvement of clinicians in app development (Marshall et al. 2020b).



Also of concern are safety risks associated with incorrect descriptions of digital mental health tools (Marshall et al. 2020a); privacy risks (Parker et al. 2019); and the risk of digital health services exacerbating isolation of people with mental illness (Crichton and Burmeister 2017). These issues are discussed in Chapter 4: Key issues in this paper.



3



Methods

3 Methods

A literature review was conducted across scholarly databases, government reports and in 'grey' literature for material relevant to this research. Online search engines and scholarly databases searched included Google, Google Scholar, Medline, Pubmed, the Analysis and Policy Observatory and the Australian Indigenous HealthInfoNet. Snowballing methods (using references from initially identified sources describing relevant programs, policy or research on the topic) were also used.

Initially, a quality appraisal of articles and literature retrieved was undertaken. All of the programs reviewed in this article (see Chapter 6) were developed with First Nations people, and/or their use, suitability and efficacy for First Nations people was a central tenet of their development. Priority was also given to programs with published and available evaluation evidence. The included resources have been evaluated or analysed in peer-reviewed literature, allowing for learnings about their use, efficacy and best practice to be shared.

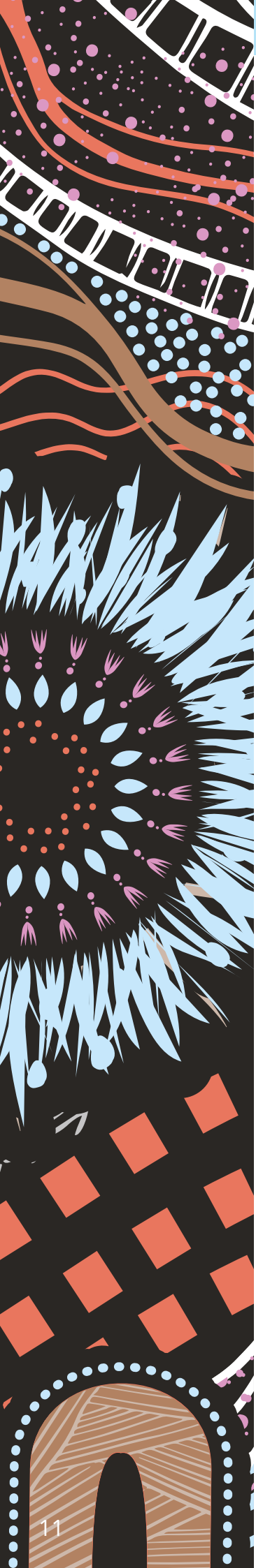
The nature of the digital mental health field and rapidly developing research meant that preference was given to more contemporary research when reviewing and refining search results.

Search criteria

Key terms used in searches are listed below, with these terms, or parsed variants of these terms, used in a variety of combinations:

- Indigenous, First Nations, First Australians, Aboriginal and/or Torres Strait Islander
- mental health, electronic mental health, e-mental health, digital mental health, mobile health, suicide prevention, social and emotional wellbeing (or SEWB)
- interventions, services, apps/applications, programs, resources, technology/technologies, mobile technology/technologies, mobile apps, mobile devices, web.

Dedicated searches were also made for literature relating to the 5 programs included in Chapter 6.



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Key issues

4 Key issues

While digital mental health applications can overcome many of the barriers to accessing face-to-face mental health services for First Nations people, there are a number of issues that pose challenges to their use, including:

- the 'digital inclusion/exclusion' of users, such as internet access barriers and level of digital literacy
- privacy risks
- lack of user information regarding quality and efficacy
- the impersonal nature of these tools and risk to greater isolation
- cultural safety and suitability.

Digital inclusion

Digital inclusion ensures people have access to relevant information and technology to benefit from socioeconomic opportunities (NIAA 2021). Digital inclusion barriers have been described as having 'broad-reaching wellbeing implications', limiting access to government services and important online resources such as banking, employment websites and online learning (Dudgeon et al. 2020:12). Digital exclusion also imposes a barrier to using digital mental health resources, driven by factors such as digital connections and coverage; reliability; device availability; sufficient data allowances; cost of access; and skills and confidence in using technology (NIAA 2021; Featherstone et al. 2022).

According to the Australian Digital Inclusion Index (ADII), First Nations people experience high levels of digital exclusion, with digital inclusion diminishing with remoteness (ADII 2023). The ADII assesses digital inclusion across 3 measures: access, affordability and digital ability. In 2020, the ADII score for Indigenous Australians was 55.1 (from a maximum of 100 points), which was 7.9 points below the national average score (Thomas et al. 2020).

The ADII faces challenges measuring digital inclusion for First Nations people, particularly those living remotely. A new project – *Mapping the Digital Gap* – will build the evidence in this area (ADII 2023). Preceding this project, case studies in remote First Nations communities by Featherstone and colleagues (2022), found a substantial gap (of between 17.3 and 25.2 points) in digital inclusion, particularly in access and affordability. The researchers noted a high reliance on mobile technology in these communities, but that affordability was a key barrier to digital inclusion.

The same researchers identified high levels of digital ability in these communities 'underlining the importance and potential benefits of digital services for remote communities' (Featherstone et al. 2022:11). Henson and colleagues (2022) describe First Nations people as 'avid' users of technology and note their propensity for early adoption and innovation with technology. They assert that the COVID-19 pandemic accelerated comfort and expertise in using digital health technologies.

Privacy

Mental health apps are frequently promoted for the discreet, accessible service they offer. Many users prefer the privacy and anonymity offered by these digital mental health resources, which may not require as much identification and disclosure of personal information as a health professional may require (Black Dog Institute 2019).

However, some users do not trust mental health apps to securely manage their personal information (Hendrikoff et al. 2019). Indeed, Australian research has identified that many mental health apps do not have a privacy policy (Parker et al. 2019). Parker and colleagues' research flagged risks associated with privacy breaches, which can arise from hacking when personal data is not stored securely by services. But more insidious are the commercial data-sharing practices of some web products. The same researchers note that data sharing is a monetisation strategy for apps, done both for app functionality and commercial purposes, such as for targeted advertising. They go on to describe the use of aggregated data by third parties in proprietary algorithms to generate 'employability scores' for individuals or 'credit ratings' and 'rental scores', with sensitive health and mental health data having significant weight in such algorithms (Parker et al. 2019).

The Australian Commission on Safety and Quality in Health Care (ACSQHC) has developed standards for digital mental health service providers that include information security guidance. However, the standards are voluntary and accreditation has only become available since November 2022 (see Chapter 5 and Appendix A) (ACSQHC 2022).

Privacy issues can also arise where devices used to access the internet are shared. Research into cyber safety in central Australia flagged security issues for First Nations people, where the sharing of mobile devices is a common practice (Rennie et al. 2018). Similar device-sharing practices among First Nations families have been identified by researchers in Queensland in the Gulf of Carpentaria (Rogers et al. 2023), which brings further risks to secure access for online services.


Evidence of quality and efficacy

There is no single regulatory framework covering the development and operation of digital mental health services in Australia. The ACSQHC's *National Safety and Quality Digital Mental Health Standards* are voluntary (ACSQHC 2020), so digital mental health services remain largely unregulated (Nichols 2 June 2023). This makes it difficult for users to find reputable, evidence-based resources.

The Black Dog Institute, a strong proponent for digital mental health resources, has flagged concerns about this issue, arguing that:

...the proliferation of apps that are available publicly, but lack credibility, can detract from overall perceptions of app suitability. Strategies are therefore required to raise awareness of technologies that have undergone extensive testing and evaluation to ensure the public are utilising evidence-based treatments (Black Dog Institute 2019:51).

Similarly, in their work examining mobile phone apps for at-risk drinking, Choo and Burton (2018) recognised promise in these behavioural interventions but expressed concern about the lack of empirical testing for apps in Australia, concluding that 'quality and ethical issues relating to the use of such technology need to be considered on a deeper level' (Choo and Burton 2018: Discussion).



Parker and colleagues expressed concerns at the harm some apps can cause (Parker et al. 2018). Through their 2016 qualitative content analysis of 61 mental health apps from Australia, the United States, United Kingdom and Canada, they identified some apps that ‘promote medicalisation of normal mental states’ (Parker et al. 2018:338), with apps ‘diagnosing mild or temporary symptoms as illness’ and implying individual responsibility for mental wellbeing, which Parker and colleagues believe to be ‘a denial of the social determinants of health’ (Parker et al. 2018:341).

Further safety issues have been flagged by researchers, with Nichols (2 June 2023) citing the case of a prominent US-based platform that was unable to guarantee that its listed therapists were licensed professionals. Other researchers warn of apps being incorrectly described online by non-expert developers, such as by including misleading claims about cognitive behavioural therapy principles underpinning the app (Marshall et al. 2020a).

Marshall and colleagues undertook a comprehensive review of mental health apps, in app stores, that offered therapeutic treatments for anxiety and/or depression. Their research sought to identify apps developed using evidence-based frameworks. They described the proportion they found as ‘unacceptably low’; of the 293 apps they examined, 162 claimed they had used a theoretical framework in their app store descriptions, but only 10 had published evidence for their efficacy (Marshall et al. 2020a:1).

The problem of identifying efficacious mental health apps is especially profound for First Nations people seeking to use such resources. In 2021, the *WellMob* website (a site dedicated to digital social and emotional wellbeing resources for First Nations people in Australia – see Box 4.1) contained over 240 resources, but Bennett-Levy and colleagues (2021:12) lamented the ‘lack of culturally appropriate evidence-based programs for Indigenous Australians with mental health disorders’. At that point in time, the researchers identified only 3 evidence-based programs (being one online therapy program and 2 mental health apps). The researchers considered this an equity issue, given the number of evidence-based mental health apps available for the broader population. They also described it as a problem given the ‘significant and growing need, particularly amongst young Indigenous peoples’ (Bennett-Levy et al. 2021:13).

Impersonal and isolating

Some reviews have identified issues of trust associated with digital services. Exploring the effectiveness in rural and remote settings, the Black Dog Institute describes a ‘negative perception of disembodied service provision’ and refers to a ‘general reluctance to rely on electronic advice’ by some people in First Nations communities (Black Dog Institute 2019:50). Another evaluation of supported digital mental health services reported them to be ‘impersonal’, which was a barrier to establishing rapport, adding: ‘This was particularly thought to be an issue for marginalised communities for whom strong relationships may be core to success’ (Bassilios et al. 2022:149).

Even greater reservations were expressed through research on eHealth in the Western Murray Darling Basin by Crichton and Burmeister (2017). These researchers consider ‘the impact on isolation of people with mental illness is inconclusive, the adequacy of privacy measures, whether eHealth genuinely enables and encourages service users’ autonomy, and whether the harm that potentially arises from eHealth outweighs the benefits’ (Crichton and Burmeister 2017:57). They suggest it be used for follow-up and information distribution rather than as a primary, direct means of treatment.



On the other hand, there are suggestions that mental health apps can help combat loneliness. In work to co-design a mental health app with young First Nations people, among the benefits of such apps identified by Povey and colleagues (2020) were its ability to normalise experiences and combat feelings of loneliness, with participants referring to reminders (from the app) that they were not alone in their experiences. Walker and colleagues (2021), writing early during the COVID-19 pandemic, championed the advantages of digital technologies to keep young people and their families connected to communities, culture and Country.

Cultural safety and SEWB e-resources

As with any mental health and wellbeing initiative, for many First Nations people it is important that digital mental health programs reflect holistic approaches to wellbeing that are culturally safe and effective. However, First Nations consumers face challenges finding culturally appropriate mental health apps.

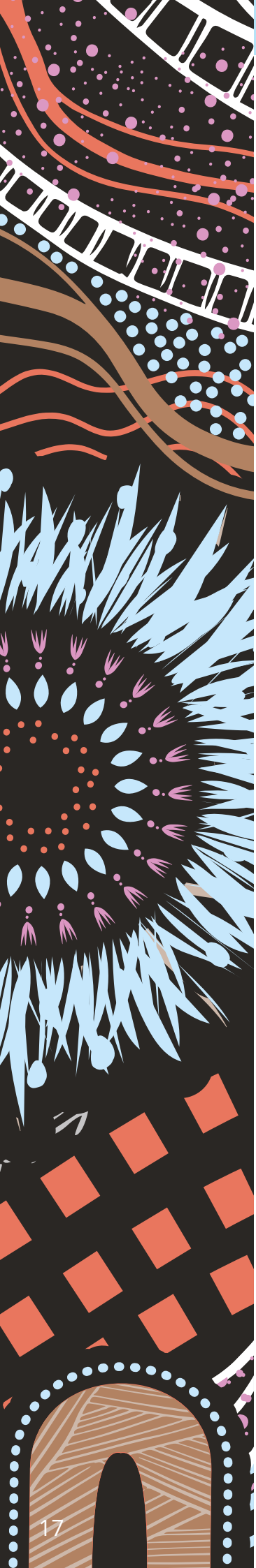
In their work to develop guidance on culturally appropriate mental first aid for First Nations adolescents, Chalmers and colleagues (2014) emphasised the importance of appropriate communication strategies when treating mental health problems. They described the fundamental difference as being the recognition of historical, cultural and political forces that affect First Nations mental health. Other researchers emphasise the need to place First Nations voices at the centre of mental health initiatives, describing lived experience as invaluable to culturally safe, accessible and responsive mental health care (Culbong et al. 2023). International research on digital solutions for First Nations mental wellbeing concurs, describing a best-practice approach in digital mental health as one that is 'adapted and implemented with careful consideration of Indigenous values and local community needs' (Hensel et al. 2019:7).

In their work to train First Nations mental health professionals in digital mental health, Bennett-Levy and colleagues coined the term 'digital social and emotional wellbeing' (or 'd-SEWB'). D-SEWB resources incorporate the domains of SEWB. Alongside individual domains of body, mind and emotions, these resources include connections to Country, community and kin (Bennett-Levy et al. 2021). When their work commenced, the researchers identified only one available First Nations-specific app (Bennett-Levy et al. 2017). Their participants had trouble finding First Nations-specific and culturally relevant digital SEWB resources, which differ substantially from Western concepts of mental health. Their project resulted in the development of the *WellMob* website, described as a d-SEWB 'one-stop shop' (Bennett-Levy et al. 2021:11) (see Box 4.1).

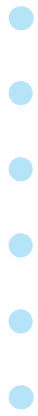
**Box 4.1: The WellMob website**

WellMob creates a centralised location for digital social and emotional wellbeing resources for use by health workers or community. It emerged from work to train First Nations health professionals in digital mental health, which was an element of the Australian Government's *e-Mental Health Strategy for Australia* (DoHA 2012) (see Chapter 5). Participants in this training flagged difficulties locating culturally appropriate digital resources: 'a wide range of d-resources were understood to promote SEWB, yet technically they sat outside of the narrow definition of a "mental health" resource' (Bennett-Levy et al. 2021:10).

The WellMob website brings together First Nations-specific online resources promoting a healthy mind, body and culture. The resources focus on social and emotional wellbeing, and include apps, podcasts, videos, social media and online counselling, along with links to websites. It was developed by eMHPrac (e-mental health in practice) in collaboration with the Australian Indigenous HealthInfoNet and with funding from the Australian Government (Bennett-Levy et al. 2021).



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Policy context

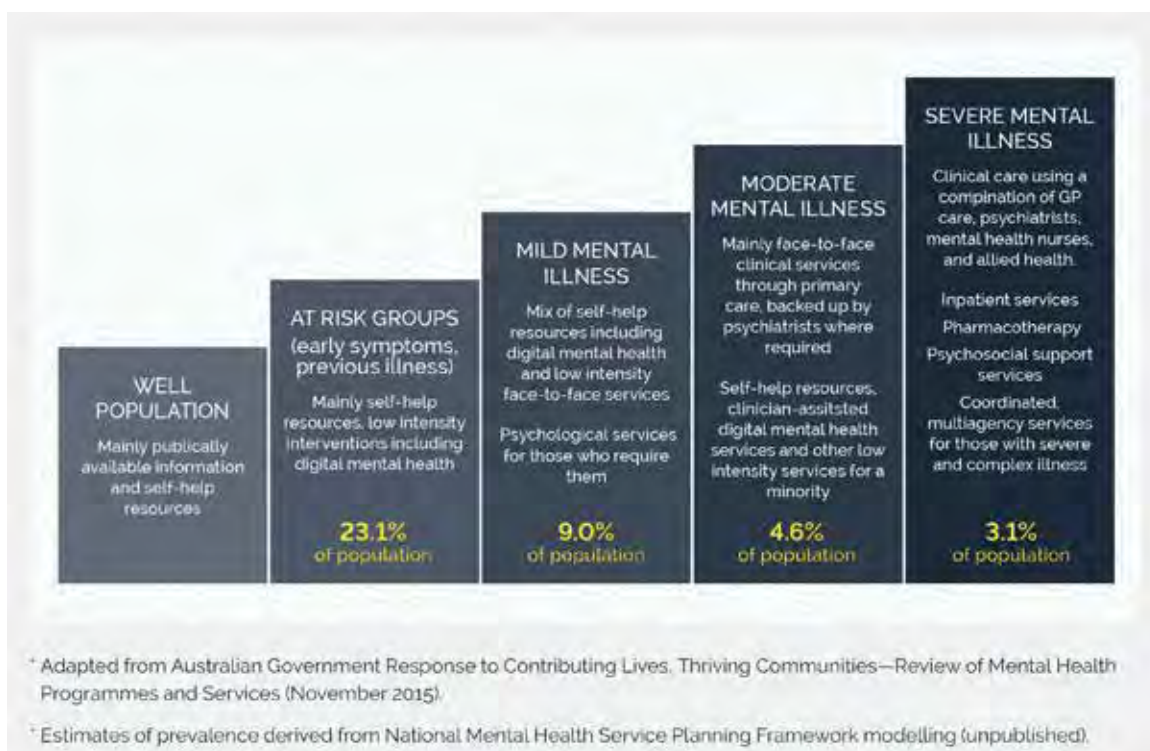
5 Policy context

This section focuses on policies, strategies and frameworks specific to digital mental health resources for First Nations people. For information regarding policies, strategies and frameworks that focus more generally on First Nations mental health and suicide prevention, see AIHW 2021a, 2021b; Dudgeon et al. 2021a; Martin et al. 2023; and the Indigenous Mental Health & Suicide Prevention Clearinghouse website 2023.


The Australian Government identified the use of electronic or digital mental health services and resources as a priority in 2012, with the release of an *e-Mental Health Strategy for Australia* (DoHA 2012). That strategy capitalised on Australia’s research achievements in the area, recognising the potential of e-mental health for the future prevention and treatment of mental illness. In particular, the strategy saw e-mental health providing a solution to overcome ‘issues of distance, cost and stigma’ (DoHA 2012:11). A priority of the strategy was workforce support and training in e-mental health services, particularly for health professionals working with First Nations people.

The *National Strategic Framework for Aboriginal and Torres Strait Islander Peoples’ Mental Health and Social and Emotional Wellbeing* (the Framework) sets out a framework for culturally appropriate social and emotional health service provision (PM&C 2017). Both the Framework and the *Fifth National Mental Health and Suicide Prevention Plan* (the Fifth Plan) (COAG 2017) set out the Australian Government’s stepped care model for primary mental health care service delivery. The model outlines service delivery options or treatments matching a person’s level of need (Figure 5.1). According to the stepped care model, digital mental health is identified as a component of service delivery for people in ‘at-risk groups’, and those with mild and moderate mental illness (COAG 2017; PM&C 2017).

Figure 5.1: Mental health stepped care levels of need and services



Source: COAG 2017:20.



However, the Fifth Plan noted some challenges in the transition to digital mental health platforms, including a lack of coordination between commissioning agencies developing these services, resulting in duplication of efforts. It also called for workforce support to adapt to digital mental health platforms and for the community to be better informed about the availability of digital resources. The Fifth Plan flagged the requirement for indicators of the accessibility, quality and safety of such services (COAG 2017). The related Action 32 of the Fifth Plan committed the Australian Government to the development of a National Digital Mental Health Framework.

The resultant National Digital Mental Health Framework (DoH 2021) outlines objectives for Australia's digital mental health ecosystem, guiding the efficient and effective integration of digital mental health and suicide prevention-related services. The Framework presents a pathway for digital health services to meet 'the gap between what people need and what current systems can deliver' (DoH 2021:4). Action area 3 – 'Enable equitable access to digital mental health services for consumer cohorts' – highlights barriers that limit access to digital mental health services, including cultural beliefs and preferences, along with unequal access to appropriate digital infrastructure. Co-creation, design and delivery are recommended via the integration of lived experience, and culturally appropriate and trauma-informed guidance to digital mental health services. The Framework also prescribes monitoring and evaluation as key to the evidence base, with Action Area 4 requiring digital mental health service programs to measure impact and drive continuous improvement.

The Productivity Commission's inquiry into mental health, released in 2020 shortly before the Framework, also made a series of recommendations for reform of Australia's mental health system (Productivity Commission 2020). In the context of improving person-centred care and gateways to mental health care, the report recommended the creation of a digital mental health platform, co-designed with consumers (Recommendation 10). The report recognised that not all GPs – who are the primary pathway to mental health care – are accessible or culturally capable. A digital mental health platform would provide more information on potential mental health-care options and pathways. It recommended that such a platform include 'low-cost, accessible and evidence-based low-intensity digital services' and be co-designed with consumers (Productivity Commission 2020:27). It also recommended the expansion of supported online treatment (Recommendation 11), as a 'convenient, clinically effective, low-cost way for [managing]...mental illness' (Productivity Commission 2020:70).


Such recommendations had a mixed reception, with some in the sector urging the government to 'fully recognise the clinical effectiveness, potential for reach, and low-to-zero marginal cost of digital solutions' (Black Dog Institute 2020:3). Others urged caution, recommending such a platform should not 'override clinical expertise or patient preference' (RACGP 2021:9).

The Australian Government's online digital mental health gateway *Head to Health* (headtohealth.gov.au), launched in 2017, has since been redeveloped in response to the recommendations of the Productivity Commission. The new website includes a broader range of mental health services and face-to-face options, and a referral service for health professionals to recommend information and services. The *WellMob* website was also created to bring together First Nations-specific online resources promoting a healthy mind, body and culture. It was developed by Australian Indigenous HealthInfoNet and funded by the Australian Government in 2019–2021. (More information on *WellMob* is included in Box 4.1, Chapter 4.)

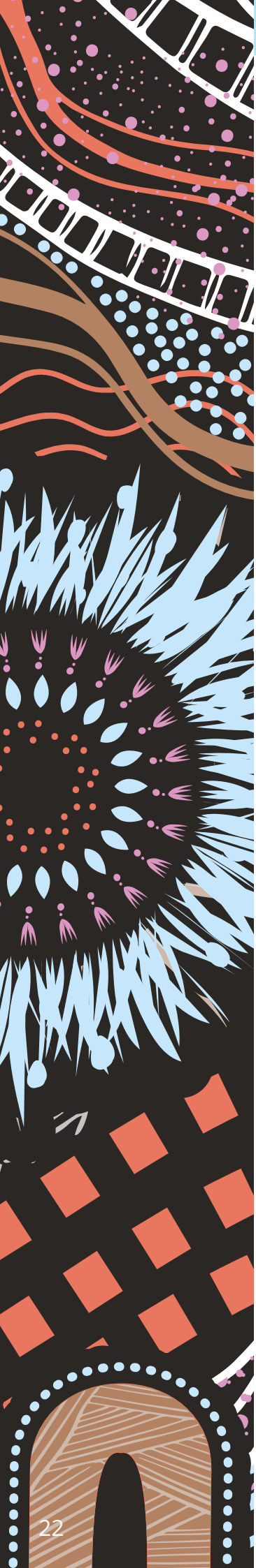
Other related policies and frameworks

Complementary to these developments are policies to improve digital inclusion, to ensure the quality and safety of digital mental health interventions, and to establish the digital infrastructure for a sustainable health system:

- The *National Agreement on Closing the Gap* includes a relevant new target, added in November 2020, as part of the Access to Information target. Target 17 specifies: *By 2026, Aboriginal and Torres Strait Islander people have equal levels of digital inclusion* (Coalition of Peaks 2020).
- A forthcoming *Indigenous Digital Inclusion Plan* (IDIP) will address key issues to improve First Nations digital inclusion in the three areas of: Access, Affordability and Digital ability. Consultations for the Plan commenced in 2021, with a discussion paper released by the National Indigenous Australians Agency (NIAA 2021). In January 2023, the Australian Government established a First Nations Digital Inclusion Group to accelerate progress towards digital inclusion (Rowland 2023).
- The *National Safety and Quality Digital Mental Health Standards* (NSQDMHS) are voluntary standards developed to reduce the risk of harm to the people who use digital mental health services. They describe the level of care and safeguards that a digital mental health service should provide (ACSQHC 2020). There are 3 standards – Clinical and Technical Governance Standard; Partnering with Consumers Standard; and Model of Care Standard – covering 59 actions related to clinical, technical and safety aspects of these services. From November 2022, an accreditation scheme was added for digital mental health service providers. Service providers may opt to engage an approved accrediting agency to conduct their assessment to the NSQDMH Standards.
- The Therapeutic Goods Administration (TGA) has a role in regulating medical devices, which can include software. Apps, websites and internet-based services that provide therapy, check for mental health symptoms or offer suicide prevention are defined as medical devices. In May 2023, the TGA published *Digital tools and medical devices – guidance for the mental health sector* (TGA 2023a). This document assists providers of digital mental health tools to understand their regulatory obligations. The guidance advises that digital mental health tools are excluded from regulation provided developers of the tool follow and refer to established clinical practice guidelines, and users are able to view those guidelines (TGA 2023b). The TGA also notes that it does not regulate health and lifestyle apps, which are apps that provide information only. By way of an example of a health and lifestyle app, the TGA refers to an app providing cognitive behavioural therapy for mild anxiety, which suggests exercise and lifestyle changes to manage symptoms (TGA 2023a).
- The *National Digital Health Strategy* (ADHA 2018), covering the period 2018–2022, sets out a plan for a coordinated and inclusive approach to digital health care in Australia. It supports the better use of technology to improve the health and wellbeing of all Australians, aiming to improve the information Australian consumers have throughout their health-care journey. It includes a consumer digital health literacy program ‘to improve accessibility to digital health in vulnerable communities’, which will see the translation of resources into community languages and education programs, delivered through partnerships with organisations like the Aboriginal Community Controlled Health Organisations (ADHA 2022:14). A new 5-year strategy is expected to be released in 2022–2023.

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- The *National Suicide Prevention Strategy for Australia's Health System: 2020–2023* sets the strategic directions for Australia's suicide prevention efforts. It flags exploring 'the effectiveness and best utilisation of digital technology for suicide prevention' as an area of focus (National Suicide Prevention Project Reference Group 2020:31).

More information on the policies and frameworks most relevant to digital mental health is available in Appendix A.



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Programs and initiatives

6 Programs and initiatives

The applications or web-based tools discussed below fall into two intervention categories, being therapist-supported or self-directed. These digital mental health tools have been developed for and by First Nations people, and/or there have been rigorous assessments of their usability, suitability and efficacy for First Nations people. The evaluations or analyses of these tools have been published in peer-reviewed literature. More information is included in Appendix B.

While the following digital mental health tools all support the health and wellbeing of First Nations people, they are by no means an exhaustive list. The [WellMob website](#) (see Box 4.1) contains links to a wide range of online social and emotional wellbeing resources for First Nations people.

AIMhi Stay Strong app

The *AIMhi Stay Strong* app is a mobile app used in conjunction with face-to-face therapy. It was developed through the Australian Integrated Mental Health Initiative (AIMhi) to test the acceptability of an e-mental health resource for service providers working with First Nations people in the Northern Territory. It formed part of a research program that commenced in 2003 (Dingwall et al. 2015b). The initiative recognised electronic resources as an opportunity for workers in rural and remote areas to provide culturally appropriate treatments with limited training.

The app supports service providers to provide structured interventions for First Nations clients (Dingwall et al. 2015b). It is used by a health provider to guide discussions with clients about their strengths and to set personal goals, with visual representations of areas in the client's life depicted in the app. The resulting discussion summary depicts things that help the client stay strong; for example, spiritual and cultural strengths may include icons representing music or dance, identity, or going to Country. This pictorial summary of the client's story can be printed or emailed and serves as a record of the session for the health provider and for the client. Text and audio instructions for each step of the process are provided by the app (Dingwall et al. 2015b; CBPATISIP 2023).

Development of the app included an expert reference group comprising service providers working with Northern Territory First Nations people with wellbeing concerns. A participatory action framework was used to translate the results of earlier research undertaken with local Aboriginal mental health workers concerning mental health promotion into an electronic format (the *AIMhi Stay Strong* app) and then test its acceptability (Dingwall et al. 2015b).

Following 3 years of co-design workshops with First Nations young people, a new version of the app – *AIMhi for Youth* – was released in 2020 (Dingwall et al. 2023).

Evaluations and reviews

Evaluations of the *AIMhi Stay Strong* app describe a range of its features and outcomes:

- Reviews by Dingwall and colleagues highlighted the importance of training for service providers using the app to improve their knowledge and confidence in using it (2015a; 2015b).
- Being engaging, attractive and fun to use, the app helps overcome difficulties that some non-Indigenous practitioners may experience in engaging with culturally and linguistically diverse

clients (Dingwall et al. 2015b:66). It also ‘focuses on families ... promotes strengths and encourages conversations about cultural strengths, identity, and cultural worries’ (Dingwall et al. 2015b:67).

- It can help relieve poor service access for remote First Nations clients and provides an innovative means of delivering health care to these clients (Dingwall et al. 2015b).
- Povey and colleagues (2016) explored its acceptability, with the influencing factors categorised as:
 - personal factors, such as the motivation of the user and their technical competence
 - environmental factors, including awareness of the app, stigma (which serves as a barrier to accessing help), supported use (that is the use of the app with assistance from a clinician)
 - app characteristics, such as graphics, content, security and ease of use.
- The app has also been successfully trialled in Australian prisons with First Nations prisoners (Perdacher et al. 2022). Some themes in the findings from this trial included its cultural appropriateness (including that it was culturally safe; high engagement) and ease of use. The app was seen to support client goal setting and empowerment (Perdacher et al. 2022).
- Dingwall and colleagues have also undertaken a non-randomised, mixed-methods study of the *AIMhi for Youth* app. They found that users of the app experienced improvements in depression and psychological distress that were statistically and clinically significant (Dingwall et al. 2023).

HITnet (Health Interactive Technology Network)

The National Health Interactive Technology Network (HITnet) began an action-research project developed by the University of Queensland to address ‘information disadvantage’ by providing access to technology and culturally appropriate information and services (HITnet n.d.; Smith et al. 2016). It commenced in 2001–02 as a proof-of-concept study of touchscreen technology (with audio feedback) to provide access to culturally appropriate health information concerning diabetes and joint problems to 2 communities in Cape York. Subsequent phases of *HITnet* have included additional modules on alcohol use, child health (with a section on ‘feelings’), and a mental health module (Hunter et al. 2007; Smith et al. 2016).

HITnet was initially a multimedia health promotion study, delivered through *HITnet* kiosks to provide ‘interactive content for low literacy and inexperienced technology users’ (Smith et al. 2016:11; Hunter et al. 2007). HITnet Innovations Pty Ltd is now a social enterprise that offers a mobile app (hitnet. app, which can be downloaded through a website URL rather than an app store), community wi-fi hotspots, and 40 *HITnet* community hubs (HITnet n.d.). All of the content on *HITnet* is co-created with the communities that engage with it.

The project is not directly aimed at improving mental health but incorporates wellbeing concepts, with the broad objectives of:

- improving health literacy through autonomous learning
- digital inclusion by providing free technology access
- participation in creative expression, and
- enhancing social inclusion and connectedness (Hunter et al. 2009).

Evaluations and reviews

Several evaluations of *HITnet* have occurred, including:

- those led by Hunter and colleagues, which include Hunter and Travers 2002; Hunter et al. 2003; Hunter et al. 2007; and Hunter et al. 2009. In these, *HITnet* was found to change attitudes and intentions towards health (Hunter et al. 2009). The 2009 evaluation, which focused on the nutrition interventions, incorporated the voices of the community and recognised the creative and performative elements of the project (Hunter et al. 2009). Positive observations included:
 - *HITnet's* accessibility and high community engagement with the technology
 - *HITnet's* focus on the importance of local production for community interest, using First Nations and recognisable voices with non-text-based content
 - the value *HITnet* places on capacity building.
- an assessment of *HITnet* by Smith and colleagues (2016), which focused on the end-user experience of the kiosks and was undertaken to gather information on digital resource use in remote communities. The researchers noted that 'Content provided via digital technologies has greater potential for 'stickiness' when local people and communities drive and shape content' (Smith et al. 2016:55).

iBobbly app

iBobbly is a social and emotional wellbeing self-help app for young First Nations peoples aged 15 years and over. Users require access to a smartphone or tablet and require data for downloading.

The app was developed by the Black Dog Institute in partnership with First Nations community members in the Kimberley, Western Australia. This culturally relevant app (its name coming from a Kimberley greeting) uses First Nations imagery, audio recordings and stories from local First Nations artists and performers (Black Dog Institute 2019; Tighe et al. 2017b). The app uses Acceptance and Commitment Therapy (ACT), which focuses on the tendency to avoid unwanted emotions, and uses mindfulness to address suicidal ideation, depression, psychological distress and impulsivity. Users complete 3 content modules and 3 suicide self-assessments over 6 weeks.

Evaluations and reviews

Evidence for the effectiveness of *iBobbly* includes the following:

- A randomised control trial of the app found significant reductions in depression and psychological distress, but changes to suicidal ideation and impulsivity were not significant (Tighe et al. 2017b).
 - 61 First Nations people participated in this trial of the app. The control group received the *iBobbly* app immediately and the 'waitlist group' waited 6 weeks before receiving the app.
 - Depression scores, measured by the Patient Health Questionnaire 9 (PHQ-9) at 6 weeks in both groups, showed a 42% reduction in depression for the control group, compared with a 15% reduction in the waitlist group.
 - There was also a 28% reduction in psychological distress scores, measured by the Kessler Psychological Distress Scale (K10), compared with a 12% reduction in the waitlist group (Tighe et al. 2017a; Tighe et al. 2017b).

- Additional work by Tighe and colleagues (2020) further explored use of the *iBobbly* app – outlining evidence for its acceptability, cultural appropriateness and therapeutic value. This study involved a survey, semi-structured interviews and analysis of app use within a subsample of the original trial participants. In thematic analysis of the survey and interviews, the app was commended for its flexibility, accessibility and privacy and for the non-judgemental support it provided. Regression analysis of app use indicated improved psychological outcomes, although the effects were not significant (which was not surprising given the smaller sample size (n=18) and shorter use period for this analysis).
- Povey and colleagues' (2016) study of both the *iBobbly* and *AIMhi* mental health interventions noted that acceptability was linked to co-design with the community, along with appropriate language and imagery.

MindSpot

MindSpot is a free online mental health service – the first and, currently, only culturally adapted online therapy program in Australia for First Nations people (Bennett-Levy et al. 2021). The service commenced in 2013 and offers a live online mental health assessment with a psychologist and access to guided web-based, self-management courses or ongoing teletherapy sessions (Hensel et al. 2019; MindSpot 2023). The service is not First Nations-specific; however, it includes a program – the Indigenous Wellbeing Course – developed for First Nations people and made available in January 2015 (Titov et al. 2019).

The service provides online treatment courses for adults with anxiety, stress, depression and chronic pain, comprising online lessons and resources. Real-life case stories are included, along with a treatment dashboard to track symptoms and progress.

The First Nations Wellbeing Course has the same core content as other courses but has been modified by an Indigenous mental health worker, in consultation with an Indigenous advisory group and other First Nations experts. Adaptations to the course include additional content on intergenerational trauma, family and community violence and longing for Country (Titov et al. 2019).

Evaluations and reviews

Several evaluations of *MindSpot* have occurred. The following are noted:

- In 2019, more than 20,000 mental health assessments were started on *MindSpot* and 4.4% clients identified as Aboriginal and Torres Strait Islander people (Titov et al. 2020). Treatment satisfaction, measured by asking patients whether they would recommend the treatment to a friend, was high for both First Nations and non-Indigenous clients (> 97% for both groups) (Titov et al. 2020).
- Outcomes for First Nations and non-Indigenous users of *MindSpot* are similar. The service has been assessed as effective in treating anxiety and depression in First Nations people and assisting in overcoming barriers to mental health care (Titov et al. 2019). Analysis of outcomes for First Nations *MindSpot* clients who completed the Indigenous Wellbeing Course showed a 54% reduction in depression following treatment as measured by the PHQ-9 and a 35% reduction in psychological distress measured by the K10 (Titov et al. 2020).


- Following an audit of case summaries and acute referrals, the service's management of urgent referrals (0.6% of clients) has been assessed as satisfactory: 'in every case, either emergency services or local mental health services were able to take over the patient's care' (Nielsen et al. 2015:1).
- A cohort study of patients registered with *MindSpot* measured suicide rates within two years of last contact, by linkage with the National Death Index. Records available for linkage were for the period 1 January 2013 to 31 December 2016, representing 59,033 people registered with *MindSpot*. Researchers concluded that when safety management protocols are followed, the safety of the service was comparable to that of face-to-face services (Nielsen et al. 2022).
- Three digital mental health services, including *MindSpot*, were evaluated by the Centre for Mental Health at the University of Melbourne (Bassilios et al. 2022). Broad findings included:
 - Consumers were highly satisfied with the care received.
 - Both the therapist-supported and self-directed treatment were found to be effective in improving mental health and were cost-effective compared with usual care. Participants commented on the value of a therapist in helping with understanding material; personalisation of content; and validation of their progress (Bassilios et al. 2022:8).
 - Barriers included the complexity of the sites, with a lot of text and difficulties navigating material, particularly for people with low literacy or English as a second language. There were also challenges for some people, associated with access to technology; having a confidential space; and digital literacy (Bassilios et al. 2022).

Stayin' on Track and SMS4dads

Stayin' on Track is a set of online support and wellbeing resources for First Nations fathers. The set of resources was developed through a participatory design study (Fletcher et al. 2017). Two First Nations mentors and researchers were engaged alongside 20 young First Nations fathers from one regional and two rural First Nations communities in New South Wales. These young men were recruited as co-investigators and paid fees in line with their level of involvement in the project.

The study covered the development of web-based resources for the *Stayin' on Track* mobile phone-optimised website, including films of the young fathers' stories. The young men were involved in reviewing and approving their film clips, which include themes of 'pride in being a father, tough times, culture and fathers, the emotions on finding out, feeling down, and role models' (*Stayin' on Track* 2021; Perkins 2015). The *Stayin' on Track* mobile app tested phone-based text messaging (*SMS4dads*) and a Mood Tracker. *SMS4dads* was culturally adapted from a mainstream version of this service, with messages sent to dads that are synced to their baby's stage of development. The Mood Tracker involved regular texts sent to fathers asking them to monitor their level of stress. A response indicating distress triggered a phone call from a mentor to check on the father's wellbeing and to follow up where needed (Fletcher et al. 2017). The First Nations version of the program was relaunched in October 2022 as *SMS4DeadlyDads* (Australian Indigenous HealthInfoNet 2022).

These resources provide 'ongoing social, cultural and emotional support to the fathers to address issues in relation to mental health and wellbeing' (Fletcher et al. 2017:330). Both resources – the *Stayin' on Track* website and the *SMS4dads* text support and information – have evolved into



independent, nationally available supports for young fathers-to-be, with the Mood Tracker continuing as part of the SMS service.

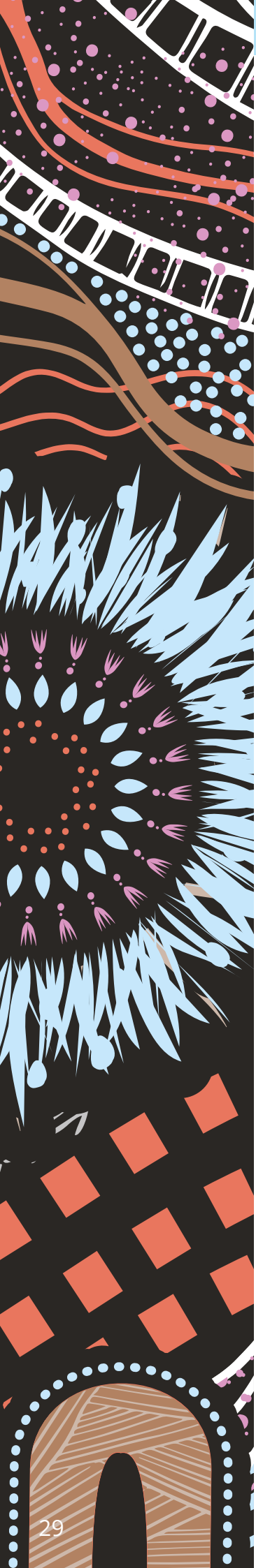
Evaluations and reviews

Fletcher and colleagues documented their feasibility study to develop *Stayin' on Track*. This work included collecting feedback and evaluations from fathers and community members, noting that:

- critical to the success of this project were the close partnerships developed between researchers and First Nations communities, mentors and fathers
- the involvement of young First Nations fathers in developing website content helped ensure it was culturally relevant
- the project received positive feedback from participants and community members regarding the text message support and the participatory research design, reflecting community pride in and ownership of outcomes (Fletcher et al. 2017).

Several studies have cited exemplary aspects of *Stayin' on Track's* development and content:

- Povey and colleagues' study of best practice in digital mental health interventions for First Nations youth praises the participatory design approach taken to develop *Stayin' on Track*. They assessed the program as having a 'strong focus on capability building and community governance, dissemination, [with] benefit to community evident' (Povey et al. 2023:9).
- Other studies have also commended *Stayin' on Track* for:
 - acknowledging First Nations fathers' role in building cultural identity in their children (Prehn et al. 2020)
 - recognising the importance of culture as a treatment in mental health programs (Supino 2022).



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Overarching strategies, approaches and best practice

7 Overarching strategies, approaches and best practice

The digital mental health resources examined in the previous chapter make a clear argument for several best-practice approaches in the development of these resources for First Nations people. They highlight the importance of:

- culturally relevant content
- culturally safe resources that provide SEWB support
- collaboration and partnerships with the intended audience for the apps
- resources that are easy to use
- security and confidentiality.

The evaluations and research for this article also highlight some challenges for potential users of these resources including establishing their efficacy and purpose.

This chapter summarises these findings, establishing some best-practice standards for the development, implementation and evaluation of digital mental health resources. What may also become evident for researchers familiar with social and emotional wellbeing interventions for First Nations people are many similarities across the literature covering best practice in social and emotional wellbeing programs.


Culturally relevant content

The inclusion of cultural content was widely considered by First Nations people as a drawcard for use of digital mental health resources, particularly for resources that were self-directed. Content and apps were most successful when material was designed and developed by First Nations people, contributing to cultural safety and engagement.

When evaluators of a mainstream app for people experiencing crisis (the *Ask Izzy* app) asked First Nations users about the design of the app, they said they wanted it 'to show a signal that their needs had been considered, and to connect them culturally to their community' (Burrows et al. 2019:12). This helped these users 'to feel that this software application had been designed with their needs in mind' (Burrows et al. 2019:12). This sums up the findings of the digital mental resources analysed for this article.

Henson and colleagues (2022) assert that the multimedia nature of the online environment, and its compatibility with orally and visually focused cultures, is a reason for high usage by First Nations youth. Evaluations of the digital mental health resources found they needed to be locally relevant and attractive (Dingwall et al. 2015b; Povey et al. 2016), noting that First Nations people 'valued resources made by and for First Nations peoples, which featured culture and language' (Bennett-Levy et al. 2021:11). The failure to culturally adapt existing online programs was identified as a barrier to their use:

...one Learning Circle participant's comment about a non-Indigenous online program [was] that it "wasn't very inviting, it was drab to read, like you might as well have read a government website or something, that's how drab it was" (Bennett-Levy et al. 2021:10).



To build engagement, several of the evaluations recommended translation into language (Bennett-Levy et al. 2021; Dingwall et al. 2015b; Povey et al. 2016) and consideration of the style of language used (Fletcher et al. 2017; Puszka et al. 2016), with some labelling this ‘culturally relevant language’ (Hensel et al. 2019:5; Povey et al. 2016:9).

A closely aligned challenge for developers is the need to localise content (Povey et al. 2016; Hunter et al. 2009; Puszka et al. 2016). As well as adapting language, this may entail adapting graphics, descriptions and other multimedia content. These adaptations recognise the diversity of the intended user population and are necessary for the nationwide accessibility of the apps (Povey et al. 2016).

Cultural safety

Cultural safety is an essential element of health services for First Nations people (Lowitja Institute 2022). It is an aspect of care that is ultimately determined by First Nations people; care that is safe, accessible, responsive and free of racism (Truong and Moore 2023).

Co-designing approaches, as described below, centre cultural safety in the intervention and strengthen engagement with the app (Perkes et al. 2022). An international systematic review of mobile health interventions for First Nations populations concluded that ‘Genuine cultural consultation through collaborative research and participatory design ... [is] considered paramount for cultural relevance and safety’ (Hobson et al. 2019).

Evaluations reported in Chapter 6 highlighted similar conclusions:


- *iBobbly* researchers flagged co-design and effective partnerships as essential components of cultural safety (Tighe et al. 2020).
- For researchers on the *AIMhi Stay Strong* app, building positive relationships and genuine engagement between service providers clients were key to effective practice and cultural safety. Genuine partnerships were essential (Dingwall et al. 2015b).
- The young fathers, who were engaged as researchers in the creation of *Stayin’ on Track*, sought parenting information that integrated First Nations culture (Fletcher et al. 2017).

One research team offered a warning for software that lacked diversity of representation, asserting that this ‘lack of diversity in representation of users and stressors may alienate persons with serious needs’ (Parker et al. 2018:341).

SEWB support

Closely linked to the cultural relevance of the app, is offering support that is broader than Western conceptions of mental health (Bennett-Levy et al. 2021). During work to train First Nations health professionals in digital mental health, Bennett-Levy and colleagues described a shift in their conceptual framework, from digital mental health (d-MH) to digital social and emotional wellbeing (d-SEWB). This ‘culturally relevant’ shift was seen to open up the range of resources available to practitioners and software users, with it relating to:

...different types of digital resources, across a wide range of cultural domains from Indigenous connection to land and sea, community and kin, as well as individual domains of body, mind and emotions. In this context, d-MH is seen as a subset of a much wider range of d-SEWB resources that can contribute to an Indigenous person’s wellbeing (Bennett-Levy et al. 2021:3).



For some researchers, this conceptual shift to SEWB is identified as not only more culturally relevant but also a more positive term than ‘mental health’ (Bird et al. 2017).

Writing in response to mental health challenges for young First Nations people posed by the COVID-19 pandemic, Walker and colleagues (2021) flagged the benefits of digital technologies for connecting young people to community and Country and supporting wellbeing. Their research implores greater investment to ‘adapt technology-based mental health services to include connection to culture and country as core elements to support connection for young people’ (Walker et al. 2021:8). They recognise the benefits of this technology for improving SEWB and contributing to a strong cultural identity.

Gayaa Dhuwi (Proud Spirit) Australia – Australia’s national peak body for SEWB, mental health and suicide prevention – have also underscored the importance of these SEWB resources:

Embracing and harnessing innovative digital SEWB-support tools provides an opportunity for equitable, culturally safe, trauma-informed, and lived-experience service delivery. To be successful it is necessary to build, improve and coordinate technology capacity in all Indigenous communities (urban, rural and remote) (Gayaa Dhuwi 2021:11).

Collaboration

Collaboration, partnerships and co-design were all central to the success of engaging apps and helped ensure cultural relevance and safety.

For example, researchers who developed the *AIMhi Stay Strong* app found being engaging, innovative and visually appealing were best achieved by collaboration (Dingwall et al. 2015b). There were similar findings by the other app developers:

- the involvement of the young First Nations fathers in developing the *Stayin’ on Track* website helped ensure cultural relevance (Fletcher et al. 2017).
- *HITnet* and *iBobbly* had similar approaches:
 - Locally produced content featured in *HITnet*, built pride in participants, serving as an enhancement to the messages (Hunter et al. 2009).
 - Most of the artwork for the *iBobbly* app was developed by local artists in Broome and the language used was also chosen in consultation with young people in Broome (Black Dog Institute 2023). Cultural safety was achieved through a co-design approach (Tighe et al. 2020).

In their scoping review of co-design of digital health tools for suicide prevention, Wepa and colleagues (2023:32) write that:

Authentic involvement requires experts-by-experience as co-authors and end-to-end partners from design, implementation and evaluation of digital health tools for suicide prevention.

Following a scoping review of best practice, Povey and colleagues (2023) developed a model for participatory design of digital mental health resources with First Nations youth. That model comprises 4 domains: governance; engagement (including methods for engaging youth); partnerships (recognising mutual learning); and research or knowledge translation. Privileging the voices of young First Nations people is also essential.

Bennett-Levy and colleagues' work with First Nations health professionals on digital social and emotional wellbeing (2021) also identified learning outcomes which could be described as best practice. Central to success were community involvement and building local capacity.

Easy to use

Along with the obvious prohibitive factors – such as access to a phone, the internet and a charging source – users need to have trust in the electronic intervention and find it easy to use. The technical literacy of users will also be a driving factor in the use of these resources, so simplicity is essential.

The evaluation of *MindSpot* referred to the complexity of digital mental health services as a barrier to their use. Dense amounts of text and navigation challenges can be off-putting, particularly for people with low literacy or English as a second language (Bassilios et al. 2022). The impact of 'text dense' content was also flagged by *Stayin' on Track* researchers, with their participants struggling to engage with such material (Fletcher et al. 2017:331).


It follows that being intuitive and easy to use were strong drivers for success of digital interventions (Povey et al. 2016; Dingwall et al. 2015b; Puszka et al. 2016; Perkes et al. 2022). Their flexible nature, their convenience, and the instant access to support were also noted (Bassilios et al. 2022; Reilly et al. 2020). Being COVID-19 safe was also an important feature highlighted in more recent reviews (Bassilios et al. 2022; Walker et al. 2021).

Research in 2017 by Bird and colleagues identified a 'mobile smartphone with a prepaid service plan as the digital device of choice among Aboriginal and Torres Strait Islanders' (2017:7). As a result, they suggested many First Nations people prefer mental health resources specifically designed for mobile devices; that do not require long periods of time on the internet; and that are not expensive to download (Bird et al. 2017). Povey and colleagues (2016) concur, citing the importance of being able to download an app for free and the advantages of being able to use it offline. The SMS text messaging used by some apps also offered this advantage, with consistent access to a data service not required (Perkes et al. 2022; Fletcher et al. 2017).

Confidentiality and security

The confidentiality offered by online apps enables people to feel free to ask health-related questions that they may otherwise feel embarrassed to ask (Perkes et al. 2022). Reviewers of the *iBobbly* app noted that apps can provide a safe space, where users are not judged, to help overcome the stigma associated with mental health (Tighe et al. 2020). Alongside this, users need to feel confident in the security of their information; thus 'password protection may aid uptake' (Povey et al. 2016:1) with passwords an essential feature in communities where technology may be shared (Black Dog Institute 2019).

Researchers assessing the safety procedures of *MindSpot* considered that users may be more inclined to disclose suicidal thoughts via the web, given the anonymity offered, as opposed to a face-to-face interview (Nielssen et al. 2015). Early international research into online mental health interventions described this as a benefit of online interventions, with these persons able to 'anonymously learn to gain control over their suicidal thoughts' (van Spijker et al. 2010:1).



Such aspects give rise to the essential regard for patient safety. The National Safety and Quality Digital Mental Health Standards include a 'Model of Care Standard', which outlines strategies to prevent and manage harm to users (ACSQHC 2020). As outlined in Chapter 5, these standards are currently voluntary, however an accreditation process was established in late 2022.

Establishing efficacy

The safety issues just discussed give rise to a serious challenge for users of digital mental health resources in Australia, namely the lack of regulation covering these resources and challenges in establishing their efficacy. Discussion of this issue was included in Chapter 4.

With the development of digital technology outpacing laws and regulations, as well as the paucity of ethical guidelines in some areas relevant to digital services, strategies are needed to help potential users identify those resources which have undergone extensive testing and are evidence-based (Black Dog Institute 2019). The lack of peer-reviewed studies of digital mental health interventions for First Nations people has meant that documentation of best practice for these resources is limited. While the *WellMob* website (see Box 4.1) lists over 240 resources 'there remains a lack of culturally appropriate evidence-based programs for Indigenous Australians with mental health disorders' (Bennett-Levy et al. 2021:12).

Evaluation of these resources is needed to inform users about their safety and efficacy. However, this can be challenging. The researchers working on *iBobbly* documented their difficulties demonstrating a significant effect in a small sample (Tighe et al. 2017b). Some researchers have suggested that investment in research and evaluation of digital mental health apps is lacking, due to a stronger focus on web-based therapy programs (Bennett-Levy et al. 2017). Resource allocation is not the only shortcoming, evaluations need to use First Nations wellbeing indicators (Walker et al. 2021). Existing eHealth evaluation frameworks do not 'adequately encapsulate the health, cultural, and community-related priorities of Aboriginal and Torres Strait Islander people' (Chelberg et al. 2022:3).

HITnet researchers considered the challenge of evaluating health promotion interventions in First Nations settings 'in which widespread social disadvantage presents a range of confounding factors' (Hunter et al. 2009:S156). They described the challenge to develop evaluation strategies that 'are not only capable of identifying social and health outcomes but which match the ingenuity and innovation of the interventions with methodologies that recognise participation and creativity' (Hunter et al. 2009:S158).

Elsewhere, Dudgeon and colleagues have described the evidence-deficit narrative about First Nations programs and interventions (2021b). That work recognised that the restrictive definition of 'evidence' can result in the loss of evidence from suicide prevention programs for First Nations people. They recommend building 'practice-based evidence' from a systematic process and continual refinement of the evidence through rigorous gathering and continual testing of evidence. Similar to participatory action research, this approach reflects First Nations knowledge systems (Dudgeon et al. 2021b).



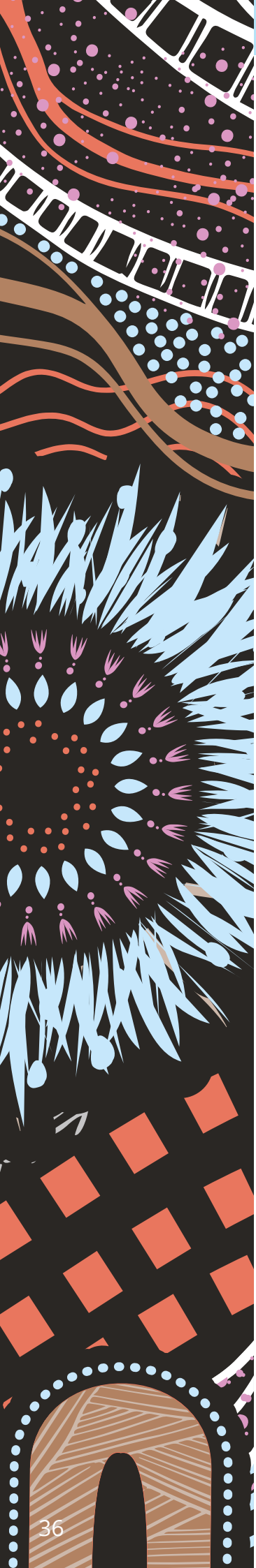
Establishing purpose

Alongside challenges identifying evidence-based apps, are the issues of identifying the purpose and intended users for an app.

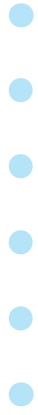
Several researchers have flagged the need for benchmarking of digital mental health interventions, which would aid standardised measurement of outcomes (Melia et al. 2020; Battersby et al. 2020). The same researchers have also called for standardised classification systems and descriptor systems for digital mental health services and resources (Melia et al. 2020; Battersby et al. 2020). Bennett-Levy and colleagues (2017) considered criteria for evaluating apps would be a means of empowering health workers to use electronic resources with their clients.

Battersby and colleagues (2020) referred to *MindSpot*'s range of treatment options and considered that the broad descriptions of these service options might confuse the public and health professionals seeking therapy. Clarification is needed regarding their service offerings, particularly in relation to how they relate to the stepped care model.

There is a lack of awareness and knowledge about digital mental health resources among clients and practitioners (Puszka et al. 2016). Work on the *AIMhi Stay Strong* app established the importance of training for services providers in using the app. Beyond practical obstacles, such as access to suitable technology, dedicated training was essential for building knowledge and confidence about use of these resources (Dingwall et al. 2015a). *MindSpot* also includes training for provisional psychologists and other mental health interns, with evaluators suggesting this workforce capacity building is essential and that it will contribute to quality assurance and clinical governance (Bassilios et al. 2022).



8



Conclusions

8 Conclusions

Digital mental health resources are an important tool for suicide prevention, having been shown to provide effective treatment for anxiety, depression and psychological distress in First Nations people (Tighe et al. 2017b; Titov et al. 2019). They are a key component of service delivery in the Australian Government's stepped care model for primary mental health care service delivery, and have been recommended for those with mild to moderate symptoms (COAG 2017). They also offer more accessible mental health services, particularly for people located in rural and remote areas. Research has shown them to provide good value for money, including those digital mental health resources supported by therapists or clinicians (Bassilios et al. 2022).

For some First Nations people, concerns about confidentiality or feelings of shame may prevent help-seeking in traditional health service settings (Lee et al. 2014; Marriott and Ferguson-Hill 2014). Digital mental health resources can overcome this by providing a safe space, free from judgement, where the client can be anonymous. They have been shown to contribute to a strong sense of identity in First Nations people (Dingwall et al. 2015b; Fletcher et al. 2017; Li and Brar 2022).

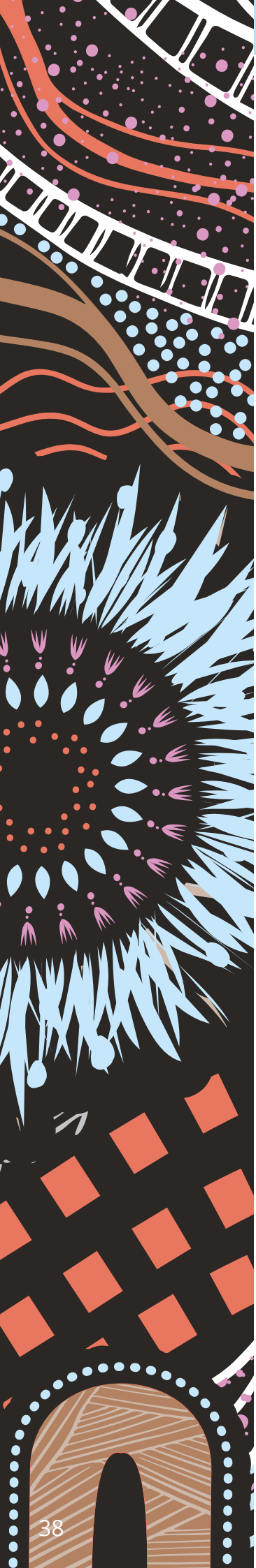
To be effective, the development of digital mental health resources for First Nations people needs to be done in partnership with the intended audience. There is also greater take up and engagement with these tools when the imagery and language used are culturally appropriate. Co-design, attractive visual elements and culturally appropriate language contribute to their cultural relevance and safety.

However, there are currently limited options for digital social and emotional wellbeing resources that meet these criteria, particularly those that have undergone rigorous evaluation. Undertaking such evaluations for these resources is costly, time intensive and can be challenging, given small samples and the presence of confounding social factors.

Identifying effective and suitable digital mental health resources is made more challenging by lack of regulation of their development and implementation, including the data and information they collect. Adding greater complexity is the expanding array of online interventions. There is not a standardised classification scheme or set of descriptors for the services provided by these apps, so their purpose can be confusing for those seeking to use them or recommend them for patients.

Access to the internet, to sufficient data and appropriate technology can pose barriers to their use, alongside low digital literacy. Some of these issues can be ameliorated by simplifying the resources, allowing offline use, and offering training and support for health practitioners and users. Safety can be boosted by developers who implement care standards and include appropriate safeguards (see ACSQHC 2020).

Researchers have identified First Nations people, particularly young people, as early and high users of technology (Carlson and Frazer 2018; Featherstone et al. 2022; Henson et al. 2022; Tighe et al. 2020). The opportunities afforded by targeted digital mental health resources – that is, those designed for and by First Nations people to improve their social and emotional wellbeing and for suicide prevention – deserve greater investment and attention. However, the current limited options, barriers to their use and safety demand immediate attention by governments and public health researchers.



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Appendixes

Appendix A: Policies and framework

Table A1: Description of policies and frameworks

Name	Details	Key recommendations	Implementation
e-Mental Health Strategy for Australia (DoHA 2012)	The 2012 strategy set out a path to embed e-mental health into the broader primary health care system, to deliver appropriate and high-quality care seamlessly and conveniently throughout Australia (DoHA 2012). The strategy outlines goals across three areas: access, quality and integration.	<p>Key areas for action were:</p> <ul style="list-style-type: none"> Improving access and services – including through an e-mental health portal, a virtual clinic and other online services. E-mental health support service – to work with traditional primary health care providers to promote online services. This included workforce training, with priority given to training professionals working with First Nations people. The development of an e-mental health quality assurance framework was also part of this goal. Promotion of the e-mental health service environment – provided targeted and consistent messages about the effectiveness of e-mental health services. 	<p>Important outcomes from this strategy included:</p> <ul style="list-style-type: none"> the <i>Head to Health</i> website <i>MindSpot</i> online clinic nationwide electronic mental health training and support (electronic mental health in practice [eMHPrac]). <p>The training component raised awareness of electronic mental health and provided training and support to service providers working with First Nations people (Raphiphatthana et al. 2020).</p>

(continued)

Table A1 (continued): Description of policies and frameworks

Name	Details	Key recommendations	Implementation
National Digital Mental Health Framework (DoH 2021)	Prepared in response to Action 32 of the Fifth National Mental Health and Suicide Prevention Plan, which committed to develop a National Digital Mental Health Framework.	<p>The Framework includes 5 Action areas:</p> <ul style="list-style-type: none"> Action area 1 – Strengthen the delivery of connected care to support each person to receive the right care, at the right time, at the right location Action area 2 – Enhance trust and confidence to adopt and deliver digital mental health services and, where appropriate, blended models of care Action area 3 – Enable equitable access to digital mental health services for consumer cohorts Action area 4 – Build monitoring and evaluation into digital mental health service programs to measure impact and drive continuous improvement Action area 5 – Enhance integration of digital mental health services with the broader system to support the delivery of person centric and holistic care 	
National Safety and Quality Digital Mental Health (NSQDMH) Standards (ACSQHC 2020)	These voluntary standards have been developed by the Australian Commission on Safety and Quality in Health Care in partnership with service users, consumers, carers, families, clinicians and service providers. They describe the level of care a consumer should expect from a digital mental health service and implementation of the standards will improve the safety and quality of service provision for service users. The standards cover mental health services that use technology to deliver care, including telephone, videoconferencing, online services (including web chats), SMS and apps.	<p>The three NSQDMH standards are:</p> <ul style="list-style-type: none"> • Clinical and Technical Governance Standard: alongside clinical and technical governance, this covers safety and quality systems and the safe environment for service users • Partnering with Consumers Standard: describes the approach to a person-centred digital health system, ensuring service users are included in shared decision-making and involved in development and design of digital mental health care • Model of Care Standard: includes processes for developing and delivering services to minimise harm to users, community safety and recognise and respond to acute deterioration in mental state (ACSGHC 2020). <p>Included within the standards are 59 actions to meet the standard.</p>	<p>The standards were released nationally on 30 November 2020. Self-assessment tools and guides were also released for service providers.</p> <p>An accreditation scheme, operating under operate under the Australian Health Service Safety and Quality Accreditation Scheme, commenced in November 2022. Service providers are required to complete an accreditation assessment in order to declare that they meet the NSQDMH Standards.</p> <p>The ACSQHC has prepared some information for consumers who are looking to use digital mental health services.</p>

Appendix B: Programs

Table B1: Description of programs, associated evaluations and outcomes

Program	Program details	Evaluation	Evaluation details	Evaluation outcomes
AIMhi Stay Strong This tool for service providers helps build a cross-cultural approach to managing mental health and wellbeing concerns of First Nations people.	Location	Available from: www.menzies.edu.au/aimhiapp	Location	Developed in Darwin, Menzies School of Health Research. Trial involved service providers in Queensland, Western Australia and South Australia.
	Participants	Initially developed for service providers in clinical and community settings working with First Nations people in the Northern Territory.	Participants	15 service providers
	Duration	n.a.	Duration	Participants had at least one month for testing app
	Indigenous-specific?	Service providers may be Indigenous or non-Indigenous. First Nations people are the intended client group.	Indigenous-specific?	Service providers in the trial were 4 First Nations and 11 non-Indigenous participants.
Evaluation		Several evaluations have occurred. Dingwall et al. 2015b is referenced below. Objective: to develop and determine the acceptability, feasibility, and appropriateness of the AIMhi Stay Strong App for service providers working with First Nations people in the Northern Territory. Evaluation method: User-testing of the app was undertaken. Recruitment for the trial used purposive sampling. Interviews were undertaken with the 15 service providers, with common themes identified by the researchers. Cross-checking of the accuracy of interpretation of responses with participants also occurred.	Most respondents were positive about the usefulness, relevance and appropriateness of the app. It helped build relationships and engaging First Nations clients. Notable features of the app were its innovative format; cultural relevance; visual appeal; and ease of use. Another evaluation by Dingwall et al. (2015a) describes the benefits of training service providers in the app. It also highlighted some other relevant factors to use such as technology availability and follow-up support.	

(continued)

Table B1 (continued): Description of programs, associated evaluations and outcomes

Program	Program details	Evaluation	Evaluation details	Evaluation outcomes
<p>HITnet (National Health Interactive Technology Network)</p> <p>This project promotes digital inclusion and provides health information in communities through hubs/ kiosks, a website, an app and via wi-fi hotspots. Content is co-created with communities that engage it.</p>	<p>Focus</p> <p>Assists service providers deliver structured, culturally appropriate wellbeing interventions to First Nations clients.</p>	<p>Multiple evaluations of different phases and elements of the program have occurred, including Hunter and Travers 2002; Hunter et al. 2003; Hunter et al. 2007 and Hunter et al. 2009.</p> <p>Hunter et al. 2007 is outlined here.</p> <p>Objective: At the time of this evaluation, 3 phases of the HITnet Development Program had occurred. This analysis primarily covered the third phase, which was a national expansion including multimedia and web products. In Phase 3, touchscreen kiosks were in 30 remote and urban sites in Queensland and Western Australia. A further 20 were planned for 2008-09 in the Northern Territory, South Australia and the Queensland Corrections system.</p>	<p>Focus</p> <p>Location</p> <p>To determine the acceptability of the app</p> <p>Initially tested in 2 communities in Cape York, then expanded nationally in subsequent phases.</p>	<p>User engagement information from kiosks show purposeful engagement with information in the kiosks. The quantitative measurement of health outcomes, in terms of health literacy or behavioural improvements was more problematic. The project highlighted the importance of local production for community interest and capacity building.</p> <p>The later evaluation by Smith et al. (2016) notes that highest user groups of HITnet are children and young people. It commends the contribution of HITnet to health literacy in communities. It notes that it provides engaging and relevant health information particularly when content is co-created</p>

(continued)

Table B1 (continued): Description of programs, associated evaluations and outcomes

Program		Program details		Evaluation		Evaluation details		Evaluation outcomes	
		Participants	n.a.	<p>Evaluation method: An action-research framework was used, with experiences of project staff informing the project structure. The analyses involved gathering quantitative information from the HITnet kiosks and qualitative findings from 100 individual and group interviews with community members and clinic staff where kiosks were located.</p> <p>Smith et al. 2016 outlines an assessment of HITnet kiosks in 3 northern Australian communities. Ethnographic methods and usage statistics were used.</p>	Participants	100 interviews undertaken	<p>by the communities that use it, and where stories and knowledge are networked and shared between communities through the kiosks.</p>		
		Duration	n.a.		Duration	n.a.			
		Indigenous-specific?	Yes		Indigenous-specific?	Kiosks were located in Indigenous communities.			
		Focus	Health promotion, with a focus on digital inclusion for First Nations young people. Content for the information kiosks initially focused on diabetes and pain management, with later expansions covering child health, alcohol use, mental health, sexual health, smoking, cancer and nutrition. There has been a further diversification of content as HITnet has expanded.		Focus	Exploring the use of kiosk-based approaches to the provision of health information in communities			

(continued)

Table B1 (continued): Description of programs, associated evaluations and outcomes

Program	Program details	Evaluation	Evaluation details	Evaluation outcomes
iBobbly This is a self-help social and emotional wellbeing app for young First Nations people helps with managing thoughts and feelings, set goals and focus on what is important in life.	Location This app is currently unavailable but for more information see: https://www.blackdoginstitute.org.au/wp-content/uploads/2023/02/iBobbly-Product-information-and-terms-of-use_Jan-2023.pdf	Tighe et al. 2017b Objective: To test the effectiveness of the iBobbly app targeting suicidal ideation, depression, psychological distress and impulsivity among First Nations young people in remote Australia. Evaluation method: A two-arm randomised control trial involving 61 young First Nations people; one intervention group and one waitlist control group. Participants were expected to test the app over a 6-week period and complete regular self-assessments.	Location Trial location - Kimberley, Western Australia	The randomised control study found significant reductions in depression and psychological distress. But changes to suicidality and impulsivity were not significant. The small sample with suicidal ideation made it difficult to demonstrate a significant effect. The study highlighted the importance of co-design. The qualitative analyses demonstrated that use of the app was associated with self-reported improvements in psychological wellbeing, mental health literacy, and reductions in shame (Tighe et al. 2020). The interviews highlighted the acceptability, helpfulness and cultural relevance of the app.
	Participants The app is for young First Nations people aged 15 years and over	The waitlist control group also received the app 6 weeks after baseline questionnaires were completed. Post-test and 6-week follow-ups occurred with the waitlist group. Tighe et al. 2020 covers a feasibility / acceptability qualitative pilot.	Participants First Nations people from the Kimberley, Western Australia. 61 young First Nations community members, aged 18-35 years, (n=31 intervention and n=30 waitlist)	
	Duration Recommended minimum duration is 6 weeks		Duration Recruitment commenced September 2013 and ended in March 2015	
	Indigenous-specific? Yes	Indigenous-specific? Yes	Focus Participants were expected to test the app over a 6-week period	
	Focus A social and emotional wellbeing self-help app for young First Nations people.			

(continued)

Table B1 (continued): Description of programs, associated evaluations and outcomes

Program	Program details	Evaluation	Evaluation details	Evaluation outcomes
<p>MindSpot, including the Indigenous Wellbeing Course</p> <p>The Indigenous Wellbeing course provides information and skills to help gain confidence and manage symptoms related to anxiety, stress, depression and panic attacks.</p>	<p>Location</p> <p>Available online at: https://www.mindspot.org.au/</p>	<p>Several evaluations of MindSpot, or aspects of the service, have occurred including: The following information relates to Titov et al. 2019.</p>	<p>Location</p> <p>Completers of MindSpot assessments</p>	<p>MindSpot treatments were effective in treating anxiety and depression in Indigenous Australians, and outcomes were similar to those of non-Indigenous patients.</p> <p>Twice as many Indigenous patients were from rural or remote locations, which is consistent with the distribution of the Indigenous population of Australia' (Titov et al. 2019:4). The Indigenous patients were also younger and there was a higher proportion of females.</p> <p>The study confirms the potential of remote mental health services to improve mental health outcomes and reduce barriers to mental health care.</p>
	<p>Participants</p> <p>Australian adults</p>	<p>Objective: To examine the characteristics and treatment outcomes of Indigenous patients using MindSpot compared with non-Indigenous users.</p> <p>Evaluation method: The analysis was a prospective uncontrolled observational cohort study, which examined data from people who completed an assessment at MindSpot in the 24 months beginning 1 January 2015.</p>	<p>Participants</p> <p>23,235 people, of which 780 identified as Indigenous</p>	
	<p>Duration</p> <p>Course users are recommended that over an 8-week duration they should expect to commit about 4 hours per week (MindSpot 2023). The Indigenous Wellbeing Course consists of 5 lessons over 8 weeks.</p>	<p>Indigenous-specific?</p> <p>No</p>	<p>Duration</p> <p>2 years</p>	
	<p>Focus</p> <p>Therapist-supported and self-directed treatment programs covering: Anxiety, stress or worry; Depression, low mood or energy; Obsessive-compulsive disorder;</p>	<p>Changes in psychological distress, depression and anxiety were measured using the Kessler 10-Item (K-10), Patient Health Questionnaire 9-Item (PHQ-9), and Generalised Anxiety Disorder Scale 7-Item (GAD-7).</p>	<p>Indigenous-specific?</p> <p>No</p>	

(continued)

Table B1 (continued): Description of programs, associated evaluations and outcomes

Program	Program details	Evaluation	Evaluation details	Evaluation outcomes
Stayin' on Track A set of online support and wellbeing resources for Aboriginal fathers developed out of a study using a participatory design approach.	Post-traumatic stress disorder; Chronic pain; Chronic physical health conditions; and Substance misuse.	Fletcher et al. 2017 Objective: Examined the feasibility of participatory design to develop internet and phone resources to support young First Nations fathers.	Location One regional city (Newcastle) and two rural towns (Moree and Tamworth) in New South Wales, Australia	The participatory design approach resulted in very strong engagement by the young fathers who were participants, as well as the First Nations communities. Their involvement helped ensure the cultural relevance of the material produced for the website. These factors helped sustainability, build cultural identity and contributed to capacity building in the community. The involvement of the two mentors who provided support to the young fathers was also an important success element. The networking and mentoring helped the young fathers build their knowledge and confidence. The Mood Tracker also proved an acceptable mechanism to monitor emotional wellbeing.
	Available online at: www.stayinontrack.com	Evaluation method: Undertaken as a quality study involving young First Nations fathers in social and health research. This feasibility study engaged two trusted Aboriginal mentors and researchers to partner with several communities in NSW. Specifically, 20 young Aboriginal fathers were recruited as co-investigators. Research included 'Yarn up' sessions, filming of the young fathers' stories and testing of the SMS text messaging and Mood Tracker messages.	Participants 20 young Aboriginal fathers	
	New First Nations fathers		Duration Commenced 2014	
	From first learning about becoming a dad, through birth and beyond.		Indigenous-specific? Yes	
	Yes		Focus Development of resources to support young fathers	
	Support and wellbeing resources for Young First Nations fathers.			

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Abbreviations

ABS	Australian Bureau of Statistics
ACSQHC	Australian Commission on Safety and Quality in Health Care
ADII	Australian Digital Inclusion Index
AI	artificial intelligence
AIHW	Australian Institute of Health and Welfare
COAG	Council of Australian Governments
DMHI	digital mental health interventions
d-SEWB	digital social and emotional wellbeing
GAD-7	Generalised Anxiety Disorder Scale 7
K-10	Kessler Psychological Distress Scale
n.a.	not applicable
NATSIHS	National Aboriginal and Torres Strait Islander Health Survey
NIAA	National Indigenous Australians Agency
PHQ-9	Patient Health Questionnaire 9
SEWB	social and emotional wellbeing
SMS	short message/messaging service
TGA	Therapeutic Goods Administration

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This paper explores the evidence for digital mental health tools, specifically web-based tools or mobile phone apps, for First Nations people. It highlights benefits of these resources, examples of best practice in their development, alongside barriers and challenges to their use.



Stronger evidence,
better decisions,
improved health and welfare

