Productivity Commission Inquiry into Mental Health

Submission by

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Response to the Draft Report, Chapter 6: “Supported online treatment”

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eMental Health in Practice (eMHPrac)

eMHPrac has been funded by the Australian Department of Health since 2013, to promote the use of digital mental health services and resources by primary healthcare providers across Australia. It is a collaboration between Queensland University of Technology, the Black Dog Institute at the University of New South Wales, Menzies School of Health Research and the University Centre for Rural Health (North Coast) of the University of Sydney.

eMHPrac informs primary health practitioners about therapist-supported and self-guided digital mental health programs, as well as apps, forums, online or phone counselling and crisis lines. It undertakes awareness raising on digital mental health and on the government's digital mental health gateway (Head to Health), through professional conferences, social media, a website and a resource guide. It offers webinars, workshops and videos to build practitioners' skills and confidence in selecting and using digital mental health services and resources in their work, supports organisational change to support the integration of digital mental health in routine practice, and has an online community of practice for graduates or training, where they can continue to exchange information and ideas on digital mental health.

From 2013-19, eMHPrac offered trade exhibits at 155 conferences with over 85,000 attendees, distributed over 34,000 hard copies of its resource guide and over 25,000 copies of brochures. It delivered 733 workshops to nearly 13,000 practitioners, together with 48 webinars, 28 podcasts, and 8 online modules. It had around 3,000 members in its online community of practice. The website had over 58,000 users, 80,000 sessions and 172,000 page views. While this work does not detract from the need to undertake an information campaign on digital mental health to consumers and health professionals (Recommendation 6.2), we suggest that this represents a significant existing awareness campaign with practitioners that might be noted in the preceding text.

eMHPrac initially had a primary focus on general practitioners, psychologists and nurses, as well as workers in Aboriginal and Torres Strait Islander communities. However, it now covers a wide range of healthcare practitioners including pharmacists, and is progressively offering training, information to other professional groups such as school counsellors and guidance officers. A current initiative involves the co-development of an online compendium of digital resources for wellbeing on the HealthInfoNet website, which will support people who work with Aboriginal and Torres Strait Islanders.

Since mid-2013, eMHPrac has also monitored the numbers of new registrations on digital programs and services from the leading Australian providers, and whether these registrants were referred by a health practitioner. Over the last 6 years, there have been substantial increases in the use of digital mental health and in referrals, so that digital resources and services now make a significant contribution to community mental health care in Australia.

A final role of eMHPrac involves the provision of advice to the Australian Department of Health on policy and practice in digital mental health. It is in the context of that work that this submission is made.

Overview

We strongly support Recommendations 6.1 and 6.2 in the Draft Report, on expanding the number of Australians receiving supported online treatments and on a related information campaign. Implementation of these recommendations would be likely to result in increased community wellbeing and a reduction in unmet need for evidence-based mental health treatment.

However, a strong case can also be made for similar recommendations to apply to self-guided resources that can fulfil criteria of efficacy, quality, safety and user acceptance. Expansion of the recommendations to these resources offers potential for substantial further increases in scale and community benefit at low unit cost. These resources have particular relevance to preventive interventions and to ones targeting sub-clinical mental health issues because of the very large numbers of affected individuals, but they also have a place in the self-management of mental health disorders, especially in the case of people who are unwilling to receive other mental health services, including supported digital services. We also argue that statements in the draft report on the nature of support and the application of digital interventions to remote communities could also be more nuanced.

A restriction of recommendations on digital mental health to supported online treatment is too narrow

The title and some subheadings of Chapter 6 and the content of its recommendations refer to supported online treatment: we argue that this is too narrow a focus.

Supported treatments do not necessarily have to be online.

Stay Strong is an app for tablets that is used by health workers to guide motivational care planning with Aboriginal and Torres Strait Islanders in regional and remote settings. It has a high level of acceptability (Povey et al., 2016), represents a digitised version of an evidence-based wellbeing intervention (Nagel, Robinson, Condon & Trauer, 2009) and is actively being trialled (Dingwall et al., 2019). The use of an app allows the intervention to be used in settings that have no web access, with records and summaries being downloaded and printed later in the clinic. (Note also that this example contradicts the statement at the bottom of the draft report p. 272 that "supported online treatment may not be a practical low-intensity treatment option" in remote communities and that the use of apps helps to address many of the issues raised in the draft report regarding unreliable internet coverage and slow speeds).

Distinctions between online interventions and apps are increasingly becoming blurred, with some web programs having the look and feel of an app, and with some apps, families of apps or app/program combinations offering a range of intervention elements that can function like self-guided interventions or as key elements in a blended treatment. While the timing of these innovations means that their evidentiary support is at an earlier stage than for online treatments, recommendations on the role of digital interventions in mental health services need to acknowledge the rapidly changing nature of the field in the language that is used.

Furthermore, the support need not be online either—it can be provided by phone or (as argued below) it can be given by a face-to-face service.

Self-guided interventions are readily taken to scale and have low unit cost when widely accessed.

Once developed, self-guided interventions incur minimal cost or logistical problems from adding new users. Accordingly, they are readily taken to very large scale, and unit costs rapidly diminish as numbers increase. This makes them particularly suited to community-wide interventions to prevent mental disorders or deal with very high prevalence problems.

Self-guided interventions are supported by research evidence.

In meta-analyses, significant (though often small) average effects are consistently found from self-guided interventions. For example, a recent meta-analysis that focused on trials of self-guided digital interventions for depression and was able to access individual participant data from 3876 participants observed small but significantly superior effects than control conditions in symptom severity (g = 0.27), and almost double the odds (x1.95) of ≥ 50% reduction in depression scores (Karyotaki et al., 2017). An identical effect size was found in a meta-analysis on children and adolescents (Bennett et al., 2019). However, some studies on self-guided interventions show substantial within-group effect sizes (e.g. Kählke et al., 2019; Klein, Meyer, Austin & Kyrios, 2011; Newby et al., 2019; Titov et al., 2010a; Titov et al., 2016). Understanding the determinants of differing outcomes across self-guided programs remains an important research question, whose answer may allow much greater impact to be more reliably obtained.

Self-guided interventions also show effects outside randomised controlled trials, in research on their routine application (e.g. Klein et al., 2011; March, Spence, Donovan & Kenardy, 2018), although that evidence is sometimes subject to high rates of dropout from post-baseline assessments. Interestingly, similar benefits are obtained from users of self-guided treatments under and over 60 years, and in fact, older users are more likely to complete web-based courses of treatment (Mewton, Sachdev, & Andrews, 2013).

Self-guided interventions can also show cost-effectiveness (Donker et al., 2015). For example, when the cost-utility of the self-guided web intervention *myCompass* was examined within a stepped care model for depression that had myCompass as the first step, it had a greater mean incremental net monetary benefit than either antidepressant medication ($1165.88) or face-to-face psychological treatment ($522.58; Solomon, Proudfoot, Clarke & Christensen, 2015).

As noted already, the scalability of self-guided interventions and potential for low unit cost when taken to scale makes them particularly suited to both universal and indicated prevention. A recent meta-analysis also showed small but statistically significant effect sizes compared with control groups for prevention of both depression and anxiety (Standardised Mean Differences (SMDs) = 0.25, 0.31 respectively; Deady et al., 2017), although the authors noted that as yet there was insufficient evidence to support long-term effects on disorder incidence. A meta-analysis by Harrer et al. (2018) of Internet-based mental health interventions for university students (which encompass both prevention and treatment), also showed small to moderate relative effects (g = 0.18-0.27) for depression, anxiety and stress, and moderate effects (g = 0.41-0.52) on eating disorder symptoms and role functioning. Most of these interventions either had no support, or only gave automated reminders or feedback.

It is true that meta-analyses typically show larger effect sizes from therapist-supported interventions than from self-guided ones (e.g. Bennett et al., 2019; Domhardt, Geßlein, von Rezori & Baumeister, 2019; Harrer et al., 2018). However, substantial heterogeneity in effect sizes is often seen (Bennett et al., 2019; cf. Domhardt et al., 2019), which further underlines the need to understand factors that moderate differential effects. Furthermore, one meta-analysis found that differences in effect sizes between supported and self-guided interventions are not sustained when the analysis is restricted to studies with low research bias (Bennett et al., 2019).

Meta-analyses comparing supported and self-guided interventions typically include separate trials examining each form of intervention. When studies that offer head-to-head comparisons are examined, some show significantly greater effects from supported programs (e.g. Titov, Andrews, Choi, Schwencke, & Mahoney, 2008), but others do not (e.g. Dear et al., 2015, 2018; Titov et al., 2016). In an as-yet unpublished trial on people with xo-occurring depression and alcohol misuse by our research group, greater benefits from emailed therapist support were only obtained while that support was provided: the effect was on the rapidity of change rather than on longer-term outcomes. Overall, it seems that the true average difference is small to moderate in size (Domhardt et al., 2018; Shim, Mahaffey, Bleidistel & Gonzalez, 2017).

Retention in treatment is low in self-guided programs (Klein et al., 2011; Morgan et al., 2017; Newby et al., 2019; Nilsson et al., 2019) compared with supported ones (Titov et al., 2008; van Ballegooijen et al., 2014; SMD = .38 in Domhardt et al., 2018), and usage rates of self-guided interventions may be even lower in routine use than in research trials (IQR = 4.49; Baumel, Edan & Kane, 2019). Differential retention may be a contributing factor to smaller effect sizes from self-guided treatments. For example, completion of more elements in the intervention is usually associated with more positive outcomes (Karyotaki et al., 2017). If the issue of retention could be addressed more effectively, much larger effect sizes from self-guided interventions might be obtained. However, some studies do not find an effect of program completion on outcomes (Morgan et al., 2017). If key effective elements are front-loaded in self-guided interventions, completion of all segments may not always be essential, and some dropouts from treatment are likely to be by users who have already obtained benefits.

Summary

Self-guided interventions have an important place in the promotion of wellbeing, management of sub-clinical distress and the prevention of mental disorders. Their modest average effect sizes may not make them the treatment of choice for established disorders, but for people who reject other alternatives (including supported treatments), they provide a way to increase access to evidence-based digital support for their self-management. The inclusion of self-guided interventions as an option for service users would be highly consistent with current digital mental health policies and funding frameworks, and with

existing comments in the draft report on increasing access to interventions by overcoming stigma, increasing convenience and providing additional low-cost alternatives (pp. 252ff).

We recommend that

1. Draft Recommendation 6.1 on expanding access to supported treatment should be supplemented with a recommendation that self-guided digital interventions also be continued and expanded. A target of 150,000 new users per year for these interventions would be readily attainable.
2. A phrase such as “Digital Interventions” be used for the title and selected subheadings.
3. Dot points at the start of Chapter 6 be expanded to encompass benefits of self-guided programs, particularly for community-wide interventions, and that supporting argument in the chapter be provided.

Support for use of a digital intervention need not be from a mental health specialist

While many trials of supported treatment have used clinical psychologists, positive effects can also be obtained when others such as general practitioners provide the coaching or guidance (Pier et al., 2008). In fact, support from a skilled technician has been shown to give equivalently strong results to support from a clinical psychologist (e.g. Shim et al., 2017; Titov et al., 2010b). Issues that users identify when reflecting on the impact of received support include the need for recognition of their efforts and achievements: in the absence of these social rewards, they find it hard to maintain engagement (Darvell, Kavanagh, & Connolly, 2015). These data suggest that encouragement of maintained intervention use and skills practice, together with coaching on how to best to use the intervention, may be more important to greater average outcomes than are specialist knowledge and skills.

Consistent with the above arguments, an emerging area of research involves examining enhancements to self-guided programs that mimic elements of supported interventions, such as avatars or individually tailored but automated feedback and coaching, which may be supplemented by therapist monitoring of progress and risk (supported by automated notifications), but with little other human support. An early pilot of a chatbot supporting behavioural activation suggests that this approach may provide some benefit (Suganuma, Sakamoto, & Shimoyama, 2018). It will be interesting to see if randomised controlled trials show that this technology allows the added effects of support to be available at very low unit cost within large-scale preventive programs that otherwise remain self-guided.

While digital interventions can alert users to exacerbations and help them obtain assistance in crises, clinician support clearly remains important for crisis intervention and for optimal management of complex or severe conditions. However, this support can be offered within routine clinical practice in a variety of ways, ranging from periodic monitoring of outcomes after recommendations or referrals, through the provision of coaching, to face-to-face treatments that blend in digital components adjunctively or use them to structure or guide session segments. These applications offer potential to increase the impact of standard clinical sessions. Additional cost-effectiveness may be gained from coaching by trained peers, paraprofessionals or other supporters such as family members, under the supervision of therapists.

We recommend that:

4. The long-term recommendation under Draft Recommendation 6.1 (a review of supported online treatment as a low-intensity option), be extended to also incorporate an evaluation of the integration of digital mental health components in other services, including an examination of any effects from the use of digital resources or services increase within standard services on their impact and cost-effectiveness.

Note also that the views in Box 6.5 concern online treatment as an alternative to face-to-face treatment, and do not encompass the potential for digital mental health to be integrated into existing health and welfare services.

The expansion of supported digital mental health to face-to-face services is consistent with the consumer preferences for face-to-face treatment that are noted in Box 6.6 and in the literature (Clough et al., 2019; Musiat, Goldstone, & Tarrier, 2014). However, we note that personal online counselling and supported programs also receive strong acceptance among potential users (e.g. in Clough et al., 2019, by two-thirds of respondents). This strong acceptance gives a sound foundation for the chapter's endorsement of therapist support that is given by phone or online, and is worth noting in the text.

Conclusion

We welcome the inclusion of supported digital interventions in the Draft Report and its recommendations, but argue that Chapter 6 would be enhanced by also including self-guided interventions and by encompassing support for digital interventions that is given by existing healthcare providers. The chapter would then provide a stronger foundation for the digital revolution in mental healthcare that is required to optimise access, outcomes and efficiency.

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