

# True technology-enabled mental health care: when will we trust the computers and robots?

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Burch *et al.* (1) report on internet-delivered cognitive behavioural therapy for older individuals with depression. As part of the Improving Access to Psychological Therapies (IAPT) initiative, the Authors report on secondary user data collected from individuals accessing an online therapy service either via referral from an eligible medical practitioner (noted as a general practitioner), or via self-referral.

The most interesting finding reported relates to the large proportion (71%) of older individuals elected into the online therapy service through the self-referral pathway rather than being referred from a health care practitioner. Further, this self-referral group presented with a wider range of psychological complaints and met assessment criteria for diagnoses not represented in the health care practitioner referral pathway (e.g., panic disorder, post-traumatic stress disorder, obsessive-compulsive disorder). Without knowing additional information about the nature of advertisement for the online therapy service, the clinical pathways in place for the referral system, and the larger organizational context in which the service is run, it is difficult to know how to interpret these findings. Although speculative, it may be the case that general practitioners are hesitant to refer patients with more complex or co-morbid clinical presentations to psychotherapy in general (irrespective of traditional face-to-face or online format), instead preferring pharmacological routes for patient care. The lower percentage of health care referrals could also reflect the noted problem of under recognition of mental health symptoms, particularly in the context of overlapping somatic symptoms when occurring

in the context of declining physical health. Alternatively, as noted by Burch *et al.* (1), some health care practitioners may hold strong beliefs about what constitutes a ‘treatable condition’ in older individuals, which could restrict the likelihood of referral to any type of treatment. Regardless, the gap highlights the need for future research to investigate the barriers to older individuals in accessing care—in the form of attitudinal barriers on the part of health providers, carers, and patients themselves, as well as the pragmatic and financial barriers.

From a pragmatic perspective, internet-delivered cognitive behavioural therapy (CBT) is arguably less resource-intensive than traditional face-to-face therapy, affording many benefits noted by researchers in the field, including fewer demands placed on the limited number of trained clinicians, reduced travel time for patients, and projected cost savings for providers and patients. Extensive research has already established the clinical efficacy of guided internet-delivered CBT [for a recent overview see (2)], with some countries offering it as part of routine care (3-5). In addition to significant and clinically meaningful effects on standard symptom measures of depression (and anxiety), accruing evidence for comparative outcomes to traditional face-to-face therapy, and evidence of acceptability, research supports cost-effectiveness when estimates reflect both unsupported and guided programs with (limited) support provided by clinicians (6). Evidence is also accruing for the cost-effectiveness of guided internet-delivered CBT (requiring approximately 1 hour of clinician time

per patient) specifically in older adults with anxiety and depression (7,8).

Therefore, it is interesting to note that the form of therapy Burch *et al.* report on, as part of the IAPT initiative in the UK, is quite intensive by comparison. Burch *et al.* refer to internet-enabled CBT, yet given the nature of the mode of delivery (including regular, synchronous, instant messaging communication between the therapist and the patient), it is clear that the authors describe more than a CBT program simply enabled by Internet access. This form of treatment appears to more closely mirror what clinicians do in traditional face-to-face settings. In order for wider dissemination efforts to be realized, it will be important to consider how clinician's own beliefs about what constitutes 'appropriate internet-based care' may play in creating barriers to accessing evidence-based internet-delivered therapies.

With the estimated increase in the elderly population [to over 1.5 billion in 2030 and 2.1 billion by 2050 (9)], there will certainly be a need to consider other technology-enabled approaches that support the mental health needs of older individuals, and that do so in a manner that are even less reliant on clinician input. We have already seen innovative solutions to support physical health [ambient and assisted living (AAL) technologies (10)] and behavioural and social wellbeing [e.g., socially assistive robots (11,12)] coming into development in response to this demographic shift. Equal enthusiasm for similar advancements for the promotion of mental health applications have not yet emerged. This should be encouraged, as even for aging individuals who maintain good physical health as they age, impairments in mental health can confer risks; not only to their overall wellbeing, but also in terms of risk of later onset of chronic physical health conditions (13). Considering the basic premise of AAL is the use of technologies to enable individuals to age well in their own homes, there are many possibilities for incorporating mental health within this framework and the scope to reduce provider costs and carer burden, if we are willing to trust in them.

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### Footnote

*Conflicts of Interest:* The author has no conflicts of interest to

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