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We can manage depression better with technology

Background

Gotzsche, in *Lancet Psychiatry*, argued that antidepressants produce more harm than good and should be used sparingly. Karange et al showed that GP prescriptions of antidepressants in Australia are continuing to rise, especially in children. A rethink about the treatment of depression is indicated.

Objective

This paper provides a summary of the evidence for internet-delivered cognitive behaviour therapy, and looks at the three RACGP Handbook of Non-Drug Intervention (HANDI) recommendations for non-drug treatments for depression and arranged for the developers to comment.

Discussion

The systems identified by HANDI are beneficial in major depression and are supported by evidence. They have not been shown to harm or to be beneficial in depression associated with schizophrenia, bipolar disorder or substance dependence. Although little input is required from general practitioners who prescribe these courses, they may form part of a more comprehensive treatment plan. Australia is a world leader in automated internet-delivered cognitive behaviour therapy. Australian clinicians should take advantage and use these courses.

Keywords

Doctor-patient relations, consultation; mental health; medical informatics



Problem: medication for depression is unsatisfactory

Being invited to write about technology that could help with the management of people who have a mental disorder was a welcome challenge. The focus was narrowed in light of two articles that have indicated that current use of antidepressants may have to be reconsidered. There has been a growing acceptance that antidepressants are not good treatments for mild and moderate major depressive disorder¹ and a recent polemic entitled 'Why I think antidepressants cause more harm than good' defined a problem.² The author concluded that the average number needed to treat (NNT) with selective serotonin reuptake inhibitors (SSRIs) or serotonin and noradrenaline reuptake inhibitors (SNRIs) to get one person better was greater than ten. His more disturbing conclusion was that harm was frequent: serious sexual difficulties in half and difficulties in discontinuing in a similar proportion, so that the number needed to harm was two. In addition, he reported an increased suicide risk in the young, and increased mortality from falling in the aged. He concluded that any medicine that produces more harm than good has to be used sparingly. The second problem is that prescriptions of SSRIs/SNRIs by Australian general practitioners (GPs) are increasing.³ In 2009–12, prescriptions for antidepressants increased 16% overall, and 36% in children aged 10–14 years, GPs being the principal prescribers.

Solution step 1: decide if it is major depression

If these numbers are correct, then GPs could be doing more harm than good. It is not that we want to do harm, but that the pressures of the consultation may be such that we have to be seen to be instantly useful and antidepressant medication has seemed a useful remedy for patient predicaments.

Major depressive disorder requires the persistence of five or more of the nine Criterion A symptoms listed in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5) – depression, loss of pleasure, weight change, sleep change,



retardation, loss of energy, feelings of worthlessness, diminished concentration, thoughts of death – in a person who has never had an episode of mania. It tends to be recurrent and is not usually about being sad or depressed over a stressful life event. It is best measured with the Patient Health Questionnaire (PHQ-9),⁴ where a score of 10–19 indicates mild or moderate depression and a score of 20–27, severe depression. In primary care, 13% of patients will score as mild, moderate or severe;⁵ many of the milder cases are responses to adversity, not symptoms of a major depressive disorder. For these milder cases advice about problem-solving and lifestyle review is preferred to medication.

Solution step 2: use cognitive behaviour therapy

Cognitive behaviour therapy (CBT) is the treatment of choice for mild and moderate depression, while CBT and medication together is the treatment of choice for severe depression. CBT from an experienced clinical psychologist is not easy to find. Internet-delivered cognitive behaviour therapy (iCBT) was developed to meet this need, and because the internet allows therapy across Australia's distances. The iCBT courses differ from CBT provided by clinicians doing telepsychiatry in that the content is automated, there is no enquiry into a patient's history and there is little variation in content according to individual patient differences.

iCBT courses are essentially 'CBT 101' – psychoeducation about the target disorder and a model for recovery, a model that involves control of thoughts, emotions and behaviours that are characteristic of the target disorder. Most courses are arranged in a sequence of weekly lessons that progressively build on the previous lesson, followed by 'homework' that consolidates the learning and requires that the participant put into practice what has been learned, essentially by conducting a series of self-formulated behavioural experiments. Courses are therefore most suited to people with recurrent depression as they know well why it is important to use knowledge to get well and stay well. Most courses use distress or depression questionnaires at each lesson to assess participant progress and alert the participant and the prescribing clinician if additional actions are required. There are no reports that iCBT is of benefit for depression in people with schizophrenia, bipolar disorder or drug dependence, including benzodiazepine dependence.

Five meta-analyses of iCBT for major depression have shown superiority to the progress of the control group. The most recent meta-analysis⁶ of 20 RCTs conducted by six independent research groups reported on the benefits of iCBT for depression or depressive symptoms. The mean effect size was 0.96, NNT = 2. The authors considered that iCBT for depression met the American Psychological Association's criteria for a well-established treatment. There are four conclusions from this research on iCBT for depressive disorders: improvement is considerable, adherence and satisfaction are high, and neither a precise diagnosis and face-to-face contact with a therapist nor therapist guidance seem to be essential.

Solution step 3: decide which iCBT program to use

Australia has many providers of iCBT and, short of doing a systematic review, the author, who is the developer of such programs, sought an independent method to inform practitioners about selected programs.

The RACGP has developed the Handbook of Non-Drug Intervention (HANDI).⁷ The HANDI program 'aims to make "prescribing" a non-drug therapy almost as easy as writing a prescription'. This program lists three iCBT programs for depression or anxiety (MoodGYM, THIS WAY UP Clinic, Mental Health OnLine) and we asked the provider of each to describe their programs in 200 words or less. The HANDI listings and the providers' descriptions are listed below.

Beacon and MoodGYM

'Beacon (<http://beacon.anu.edu.au>) is an application providing ratings of online depression applications. MoodGYM (<http://MoodGYM.anu.edu.au>) is a free, online CBT-based training program for depression, available in multiple languages.'⁸

E-hub self-help services (ehub.anu.edu.au) state that they provide a number of evidence-based self-help online programs, including MoodGYM, targeting depression. The subject of 37 peer-reviewed papers, MoodGYM has been shown to be effective in reducing depressive symptoms in a range of settings, populations and countries by a number of research groups within and outside Australia, with and without guidance, and across the healthcare spectrum from prevention to treatment. There is evidence that MoodGYM is an effective adjunct to usual care in general practice and by psychologists. Effect sizes vary across studies but a trial within Australia's Lifeline yielded a between-group effect size for unguided MoodGYM of 1.24 (NNT = 2) at 6-months post-intervention.⁹ Randomised controlled trials (RCTs) have also reported that MoodGYM is effective in reducing anxiety and alcohol use and in improving wellbeing. E-hub also hosts Beacon, a guide to depression and other online behavioural internet applications across the world. This resource provides practitioners and consumers with a description of each application and its accessibility, together with the evidence base underpinning each application (accompanied by a consumer-friendly smiley-face rating) and consumer ratings of the application. E-hub services are provided by the ANU's National Institute for Mental Health Research (formerly the Centre for Mental Health Research).

How to use: intending patients log on to www.MoodGYM.anu.edu.au

THIS WAY UP

THIS WAY UP Clinic offers several courses developed by staff at the Clinical Unit of Anxiety and Depression at St Vincent's Hospital, Sydney, and the University of New South Wales Faculty of Medicine. Patient use requires a GP referral and there is a fee of \$55. Progress can be monitored by the referring GP. Courses available include depression, generalised anxiety disorder and mixed depression and anxiety. Clinicians have free access.⁸



THIS WAY UP (www.thiswayupclinic.org) states that there are six courses that can be accessed, either from a clinician's referral or by people navigating on their own. The courses for major depression, mixed anxiety and depression, generalised anxiety disorder, panic disorder, social phobia and obsessive compulsive disorder have been shown, in published and replicated RCTs, to be superior to the progress of control groups (NNT = 2).¹⁰⁻¹² In four courses the benefits have been replicated by independent researchers,¹³ and there is evidence of effectiveness when used in primary care.^{14,15} Each course consists of six illustrated lessons coupled with written material that serves to reinforce the message from the lesson and lists the tasks for the forthcoming week. A distress measure precedes every lesson and the prescribing clinician and the patient are alerted if distress rises. The strength of the clinician-prescribed system is the feedback provided. In practice, adherence is high (55–60%) and 80% of people who complete the course improve. No harm is reported, but 20% do not improve and will require review and other treatment. Work loss days and suicidal ideation are halved.^{16,17} THIS WAY UP seems to be one of the more powerful treatments available for depression (*Table 1*).¹⁸

How to use: go to the home page, www.thiswayupclinic.org

Mental Health Online

'Mental Health Online (www.mentalhealthonline.org.au), previously known as Anxiety Online, is a website which provides online assessment and treatment programs for depression and anxiety

disorders including social anxiety disorder, post-traumatic stress disorder, general anxiety disorder, panic disorder and obsessive compulsive disorder. It is run by the National eTherapy Centre at Swinburne University of Technology, Melbourne.⁸

Mental Health Online says that their website provides information on mental health, mental health self-assessment and a range of self-directed CBT-based programs. In addition to self-help materials for depression, which is the most common diagnosis among users, programs are provided for each of the main anxiety syndromes. Use of these programs is associated with large effect sizes for post-therapy symptom reduction.¹⁹ Because comorbidity with depression and anxiety is the norm rather than the exception, Mental Health Online will be introducing a 'multi-disorder' program in 2014, which addresses anxiety and depressive symptoms together by automatically tailoring content of core CBT materials on the basis of self-reported symptoms. Similarly to other sites, Mental Health Online includes self-help materials designed for the person to work through at their own pace, which can be completed either independently or with the support of an online therapist. Therapist contact helps to maintain engagement with self-directed materials to maximise outcomes. Traditionally, this has primarily involved weekly, secure email messaging via the site. However, developments on Mental Health Online illustrate the increasing sophistication of online communication; the site is trialling real-time online instant messaging, audio communication and videoconferencing, possible via a smartphone as well as web browser.

Table 1. How to use iCBT: an example from THIS WAY UP

Example from THIS WAY UP

Patients:

- Register 'as patient' on www.thiswayupclinic.org. Enter your details. Prescription/registration code is provided by clinician or emailed to you. Your registration is complete when payment is made
- Before you start the course, run through our technical requirements
- From the time you register, THIS WAY UP Clinic will give you 90 days to complete your course. We recommend that you ensure you have 3–4 hours per week to commit to the course
- Between each lesson, you will have a lock-out period of 5 days. This is time for you to revise your homework and put all the lessons learnt into practice
- When you have completed all lessons, we will give you an extra 90 days to review the course content
- You will receive email reminders from us if you have missed your next scheduled lesson
- We will send your clinician updates on your progress

Clinicians:

- Register 'as clinician' at www.thiswayupclinic.org. You will receive an email to activate your account
- When you have a patient who is suitable for a THIS WAY UP course go to www.thiswayupclinic.org (keep it in favourites) and login, it will bring you to a prescription page
- Type in the patient's email and the course you want them to do. Click 'Send' and the system will do the rest. Tell them to check their junk mail just in case the email is caught by the filter
- You will get an email when they have finished lesson 1. You may wish to call the patient (or have another staff member call on your behalf) to say you are pleased. Check again after they have done lesson 2. If you receive an alert that their K10 score is worsening call and ask if they are OK, if not schedule an extra consultation to discuss



Conclusion

Australia is a world leader in automated iCBT. The systems identified by HANDI are beneficial in major depressive disorder and are supported by good evidence. They have not been shown to harm, or to be beneficial in depression associated with schizophrenia, bipolar disorder or substance dependence. GPs can prescribe these courses as part of their mental health plan (tick the self-help box); GP input and follow-up are determined according to patient needs. Australian clinicians should take advantage of and use these courses.

Key points

- Major depressive disorder is a frequent reason for consultation in general practice.
- Medication is a weak treatment for mild and moderate depression and harmful side effects are common.
- CBT is a treatment of choice and can be delivered over the internet.
- The RACGP's HANDI project reviewed three Australian services that provide iCBT and each service is worthy of consideration by Australian practitioners.

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