example of this was the finding that CBTp did not perform significantly better than a control treatment of supportive counselling, although both did better than routine care, in the treatment of delusions. However, supportive counselling appeared to worsen auditory hallucinations, whilst CBTp resulted in their reduction (4).

Accepting that CBTp has a beneficial effect, how then to increase availability? The apparently simple solution to this is to train the workforce in these treatment techniques, thus an increasingly skilled workforce will increase access and availability of CBTp. This is based upon a number of assumptions which may not be accurate. First, it assumes that training is available. This is not always true. In the US there is a lack of training opportunities (5). In the UK, where training may be available, it is not clear to what level of training, experience or skills clinicians need to be able to deliver CBTp.

With the heterogeneity and variation in CBTp, it is not clear what should be taught. What are the necessary techniques and competencies, assuming it is possible to try and define these, a difficult task at the best. Given that psychotic disorders are notoriously difficult to treat, it might be expected that the most qualified and experienced practitioners would provide treatment, as would be the case, say, with complex heart surgery. But this is rarely the case in mental health services, where costs are the main driver. Thus, there is frequently a move to employ the cheapest staff and provide the minimum training necessary when rolling out new treatments, which could dilute treatment effects and be poor value for money.

Once trained staff return to their work place, they do not necessarily receive the management support and have the time to implement their training. Furthermore, having received training, staff may no longer be willing to work on the front line and, having become more qualified, they may prefer to take up teaching or research posts. Thus, training has the unanticipated effect of depleting the skilled workforce rather than enhancing it.

Lastly, what of the future? I would like to raise a few possibilities. First, an integration with neuroscience, so that investigations on brain plasticity effects of cognitive, behavioral and social interventions can be undertaken. Second, a greater focus on positive emotions and clinical methods which elicit and encourage these as part of a treatment strategy, from both a theoretical and clinical perspective. For example, broaden-and-build theories (6) and broad minded affective coping intervention (7,8). Third, the potential for the use of new technologies as a delivery platform for psychological interventions (9). This would include the use of mobile phone technology for real time assessment and interventions and the use of intelligent systems to individualize interventions and identify critical time points (10). The possibilities here for the widespread application of CBT in the developing world, where mobile phones are ubiquitous but health system infrastructure is undeveloped and prohibitively expensive, by “leap frogging” the normal pedestrian development (or lack of it) of mental health care, are exciting.

References

1. Thase ME, Kingdon D, Turkington D. The promise of cognitive behavior therapy for treatment of severe mental disorders: a review of recent developments. *World Psychiatry* 2014;13:244-50.
2. Wykes T, Steele C, Everitt B et al. Cognitive behaviour therapy (CBTp) for schizophrenia: effect sizes, clinical models and methodological rigor. *Schizophr Bull* 2008;34:523-37.
3. Tarrier N, Kelly J, Maqsood S et al. The cognitive behavioural prevention of suicide in psychosis: a clinical trial. *Schizophr Res* 2014;156:204-10.
4. Tarrier N, Kinney C, McCarthy E et al. Are some types of psychotic symptoms more responsive to CBT? *Behav Cogn Psychother* 2001;29:45-55.
5. Kimhy D, Tarrier N, Essock S et al. Cognitive behavioral therapy for psychosis – training practices and dissemination in the United States. *Psychosis* 2013;5.
6. Fredrickson BL. The role of positive emotions in positive psychology: the broaden-and-build theory of positive emotions. *Am Psychol* 2001;56:218-26.
7. Tarrier N. Broad minded affective coping (BMAC): a positive CBT approach to facilitating positive emotions. *Int J Cogn Ther* 2010;3:65-78.
8. Tarrier N, Gooding P, Pratt D et al. Cognitive behavioural prevention of suicide in psychosis. London: Routledge, 2013.
9. Musiat P, Tarrier N. Collateral outcomes in e-mental health: a systematic review of the evidence for added benefits of computerized cognitive behaviour therapy interventions for mental health. *Psychol Med* (in press).
10. Kelly JA, Gooding P, Pratt D et al. Intelligent Real Time Therapy (iRTT): harnessing the power of machine learning to optimise the delivery of momentary cognitive-behavioural interventions. *J Mental Health* 2012;21:404-14.

DOI 10.1002/wps.20161

The efficacy of CBT for severe mental illness and the challenge of dissemination in routine care

MARK VAN DER GAAG

Department of Clinical Psychology, VU University, Amsterdam, The Netherlands; Parnassia Psychiatric Institute, The Hague, The Netherlands

Cognitive behavior therapy (CBT) for severe mental illness has acquired

a solid scientific status. Although the effect sizes are small to moderate, they are also quite robust and re-established in many meta-analyses over the last decade. Small to moderate effect sizes are common in adjunctive therapies, since the adjunctive intervention has

to add further effects to a treatment which is already efficacious.

The conclusion at this moment is that monotherapy with pharmacological agents such as antipsychotic medication and antidepressants does not constitute optimal treatment for severe

mental illness. CBT can add to that with improved symptom reduction and fewer relapses in cases of depression (1). In children and adolescents, early intervention services for psychosis, delivering CBT and other interventions, are cost-effective (2). CBT has been found to be effective in the prevention of a first episode of psychosis in meta-analyses (3), and also cost-effective (4,5). So, CBT adds health gains for lower costs. Why not implement CBT in routine services?

Here we meet the biggest challenge for CBT in severe mental illness. Although CBT for schizophrenia has been recommended in several guidelines (e.g., 6) for over a decade, the accessibility in routine services even in England, where CBT for psychosis is most promoted and researched, is dramatically low (7).

The pharmaceutical industry has built an implementation infrastructure that is missing in psychosocial and psychological interventions. Whenever a new drug is released on the market, a substantial marketing budget is used on merchandising. Hundreds of salesmen will then visit doctors with brochures, free specimens and small gifts. In this way, the medication is successfully disseminated in the routine practices of the prescribers in a relatively short time. The challenge for CBT is that the professionals who will deliver the intervention first have to be trained and employed by the services, while a marketing budget is completely lacking. Training takes several years, and vacancies are not automatically open after training. This slows down the process enormously.

The caseload for a CBT therapist is much lower than for a medication-prescribing psychiatrist. Many more CBT therapists are needed to guarantee an access to CBT comparable to the access to drug treatment. Several therapists have been training nurses in CBT, but these nurses in general have too little knowledge of general psychopathology to develop adequate individually tailored case formulations, and permanent supervision is often needed.

Training of nurses and low-intensity therapists in CBT interventions directed at accomplishing a patient's personal

goal has been successful. These interventions are more broadly accessible to service users, but the need for more specialized CBT for complex cases is not diminished (8). At some places in the Netherlands, CBT therapists work in teams with nurses, where the CBT therapist develops the individually tailored case formulation and the nurse is conducting parts of the therapy such as exposure exercises, self-esteem protocols, relaxation exercises. In this way, the shortage of CBT therapists working with patients with severe mental illness can partly be overcome.

On the other hand, CBT is a transdiagnostic intervention, successfully applied to almost all psychiatric conditions. The underlying mechanisms of (for instance) selective attention and avoidance behavior are common to several anxiety disorders, depression, eating disorders and also paranoid delusions. This is certainly an advantage. A therapist can use the principles of CBT in several kinds of disorders, and comorbid disorders as well. Training can be limited to the universal principles, and only small adjustments are needed for each disorder, such as different assessment instruments, a different speed of progress through the protocol, and different attitudes in case formulation dependent on the patient's illness insight. Because of the universal nature of generic CBT, therapists working in other psychiatric domains could easily enter the field of severe mental illness with little extra training.

This advantage of universality is, however, a disadvantage as well. Generic therapy might not be targeted enough for the specific problems of some patients. In recent years, more specific variants of CBT have been developed and successfully tested for psychotic symptoms, command hallucinations, and negative symptoms. Dissemination is not the dissemination of a final intervention. The intervention is at the same time improved and differentiated to address more specific problems with improved efficacy.

In conclusion, we can state that CBT has reached such a level of adjunctive effectiveness in severe mental illness

that pharmacological monotherapy is not the optimal treatment anymore. CBT must be made available and accessible in routine psychiatric practice. This can only be accomplished if budgets are reallocated from clinical services with high 24-hour staffing needs to less labour-intensive outpatient services with more specialized interventions directed at symptomatic and social remission. The era of implementation has a slow start, but there is progress.

At the same time, there is room for improvement of CBT protocols by more specific and symptom-tailored interventions. The era of research has just begun for psychological treatments such as CBT in severe mental illness.

References

1. Cuijpers P, Hollon SD, van Straten A et al. Does cognitive behaviour therapy have an enduring effect that is superior to keeping patients on continuation pharmacotherapy? A meta-analysis. *BMJ Open* 2013;3(4).
2. McCrone P, Singh SP, Knapp M et al. The economic impact of early intervention in psychosis services for children and adolescents. *Early Interv Psychiatry* 2013;7:368-73.
3. van der Gaag M, Smit F, Bechdolf A et al. Preventing a first episode of psychosis: meta-analysis of randomized controlled prevention trials of 12 month and longer-term follow-ups. *Schizophr Res* 2013;149:56-62.
4. Valmaggia LR, McGuire PK, Fusar-Poli P et al. Economic impact of early detection and early intervention of psychosis. *Curr Pharm Des* 2012;18:592-5.
5. Mihalopoulos C, Vos T, Pirkis J et al. The economic analysis of prevention in mental health programs. *Annu Rev Clin Psychol* 2011;7:169-201.
6. National Institute for Clinical Excellence. Schizophrenia: core interventions in the treatment and management of schizophrenia in the primary and secondary care. London: National Institute for Clinical Excellence, 2002.
7. The Schizophrenia Commission. The abandoned illness. A report by the Schizophrenia Commission. London: Rethink Mental Illness, 2012.
8. Waller H, Garety P, Jolley S et al. Training frontline mental health staff to deliver "low intensity" psychological therapy for psychosis: a qualitative analysis of therapist and service user views on the therapy and its future implementation. *Behav Cogn Psychother* 2013;23:1-16.

DOI 10.1002/wps.20162