

From the Editor's desk

By Kamaldeep Bhui CBE

Quality improvement and psychiatric research: can design thinking bridge the gap?

Mental health interventions are complex, with multiple components, and research investigates the precise overall benefits, the benefits from each component, or for specific patient groups. For example, Lasalvia *et al* (pp. 342–349) show that all elements of psychosocial interventions are helpful for all patients with a first episode of psychosis. Research methods that disentangle the effects of specific elements of complex interventions include randomised trials, mediation and moderator analyses, meta-analyses and network meta-analyses (aggregate intention-to-treat and individual participant), and meta-regressions, alongside narrative syntheses. Experiences, patient and professional, are essential to ensure that interventions are implemented and translate into actual gains, to better understand mechanisms or logical models, and to identify unexpected outcomes, including adverse events. Qualitative research is a powerful tool to capture, reveal, understand and exploit weaknesses in trials and meta-analyses in order to give a fuller, experience-based perspective that can shape evidence to deliver better care.¹ All research methods have strengths and weaknesses, but aim to provide important and widely applicable information for patient benefit, and to inform quality improvement initiatives.^{2,3}

Quality improvement methods have escalated in popularity as a key means by which organisations organise their resources to meet patient needs, and implement best evidence. The emphasis is on planning activity, studying it, observing impacts, and learning and entering into iterative cycles of activity. Quality improvement initiatives make use of research, but have a broader remit to implement evidence in complex health systems, to provide sustainable solutions for patients, for managers and commissioners, and to do this irrespective of the constraints and uncertainty facing health systems. In England, quality improvement is at the heart of STPs (sustainability and transformation plans) that are proffered as a partnership-based mechanism through which healthcare will continue to be delivered at less cost, and yet protect and improve the quality of care and patient safety. Whatever the political position in response to this proposition, this scenario is the reality facing most healthcare providers. Quality improvement is already closely aligned with audit, training and continuing professional development.^{4–6} However, despite many examples of quality improvement initiatives,^{7–9} quality improvement methods remain poorly understood and are contested, specifically in relation to the underpinning research into quality improvement processes. The explanation for this disconnect may lie in very different approaches to solve problems found in science (including medical sciences), which relies on empirical observational of data to test hypotheses and to solve a defined problem within a specific setting and context. Quality improvement seems more aligned to the approach taken by artists, engineers and designers using a quite different set of thinking processes and stages and levels of uncertainty.⁸ Designers are future focused, use research to ideate, develop a prototype and test it, and rapidly adapt in order to find a solution that works in a local context, and meets the needs of multiple end-users: patients, clinicians, managers, commissioners and policy makers.¹⁰ Participatory and empirical research

networks can help in design, but the future and solution focus of design thinking methods may offer advantages. For example, conventional research and implementation efforts have not been successful at tackling 'wicked problems', such as health inequalities that are sustained and seem resistant to intervention.^{11,12}

BJPsych offers several debates and new evidence that contributes to quality improvement. The findings need to be carefully entwined in quality improvement initiatives, and in the design of future-focused systems of healthcare, ones that perhaps we cannot yet imagine, or ones which need to be repurposed to fit current contexts. Democratic therapeutic communities have been a valuable component of healthcare for decades, but are less visible now, not least as there are challenges in evaluations and their value is contested (Haigh, pp. 313–314); community treatment orders were implemented in many countries, almost without evidence of benefit and have subsequently been found to be lacking benefit. The lack of value may lie in poor patient selection, as their use is not driven by capacity assessments (Newton-Howes & Ryan, pp. 311–312). Negative symptoms in severe mental illnesses are disabling and difficult to treat. Lutgens *et al* (pp. 324–332) show that psychological and psychosocial interventions may help negative symptoms of schizophrenia, although the effect sizes were modest and the quality of evidence moderate at best. A network meta-analysis, a complex method of synthesising evidence from multiple trials using different comparators,¹³ evaluated the effectiveness of adjunctive treatments in bipolar disorder: family interventions reduced relapse rates, psychoeducation along with cognitive-behavioural therapy (CBT) reduced medication non-adherence, and improved mania symptoms and global function (Chatterton *et al*, pp. 333–341). Gilbody *et al* (pp. 362–367) show that telephone facilitation of computerised CBT improves engagement and expedites depression improvement; although the effect was small to moderate, it was comparable with other low-intensity psychological interventions. Anxiety in pregnant women is relatively common, yet it is rarely identified or treated despite the profound impact on maternal and child mental health (Dennis *et al*, pp. 315–323). Pre-existing depression in patients with myocardial infarction carries a higher mortality risk (Sundbøll *et al*, pp. 356–361), especially among those being actively treated with antidepressants or with recent depression, but the mechanism and prevention opportunities warrant further investigation among cardiac patients with histories of depressive illness. Findings from the Australian twin registry suggest that peer-teasing about weight problems leads to more disordered eating in young people, and could be prevented (Fairweather-Schmidt & Wade, pp. 350–355). This intriguing study suggests that genetic aetiology becomes a greater contributor to disordered eating when the teasing is more severe. These studies help us to understand the fundamental nature of mental illness, how it affects people, and what interventions or their components might work; the evidence is available for implementation, but decision-making around what is implemented is in part influenced by the strength of evidence and by consensus on the evidence narrative, as well as the values and priorities of providers and commissioning communities.

- 1 Greenhalgh T. Integrating qualitative research into evidence based practice. *Endocrinol Metab Clin North Am* 2002; **31**: 583–601.
- 2 Pincus HA, England MJ. Implementing quality improvement for psychosocial interventions – reply. *JAMA* 2016; **315**: 943–4.
- 3 Grant S, Mayo-Wilson E, Montgomery P. Implementing quality improvement for psychosocial interventions. *JAMA* 2016; **315**: 943.
- 4 Ewins E, Macpherson R, van der Linden G, Arnott S. Training in quality improvement for the next generation of psychiatrists. *BJPsych Bull* 2017; **41**: 45–50.

- 5 Sockalingam S, Tehrani H, Lin E, Lieff S, Harris I, Soklaridis S. Integrating quality improvement and continuing professional development: a model from the mental health care system. *Acad Med* 2016; **91**: 540–7.
- 6 Paxton R, Whitty P, Zaatar A, Fairbairn A, Lothian J. Research, audit and quality improvement. *Int J Health Care Qual Assur Inc Leadersh Health Serv* 2006; **19**: 105–11.
- 7 Li C, Stellman J, Patel N, Dalton F. Improving capacity and consent to treatment recording in psychiatric inpatient wards: A multi-centre quality improvement project. *BMJ Qual Improv Rep* 2016; **5**.
- 8 Brown LC, Epstein D, Manca A, Beard JD, Powell JT, Greenhalgh RM. The UK Endovascular Aneurysm Repair (EVAR) trials: design, methodology and progress. *Eur J Vasc Endovasc Surg* 2004; **27**: 372–81.
- 9 Aimola L, Jasim S, Tripathi N, Tucker S, Worrall A, Quirk A, et al. Impact of peer-led quality improvement networks on quality of inpatient mental health care: study protocol for a cluster randomized controlled trial. *BMC Psychiatry* 2016; **16**: 331.
- 10 Roberts JP, Fisher TR, Trowbridge MJ, Bent C. A design thinking framework for healthcare management and innovation. *Healthc (Amst)* 2016; **4**: 11–4.
- 11 Hannigan B, Coffey M. Where the wicked problems are: the case of mental health. *Health Policy* 2011; **101**: 220–7.
- 12 Bremault-Phillips S, Friesen S, Moulton L, Germani T, Miciak M, Parmar J, et al. Managing responsive behaviours: a wicked problem addressed through a grassroots approach. *Healthc Q* 2015; **18**(2): 31–5.
- 13 Cipriani A, Higgins JP, Geddes JR, Salanti G. Conceptual and technical challenges in network meta-analysis. *Ann Intern Med* 2013; **159**: 130–7.