CrossMark

BJPsych Advances (2022), vol. 28, 137–140 doi: 10.1192/bja.2022.10

ROUND THE CORNER

Specialised early intervention for recent-onset psychosis†

Harun S. Butt

SUMMARY

Specialised early intervention (SEI) services have seen significant investment and expansion in the UK, aiming to improve long-term outcomes for psychotic disorders. This commentary discusses a recent Cochrane review that examines the evidence for SEI services delivered within the first 3 years of onset of psychotic illness. From a small number of studies conducted in high-income countries, the review draws the conclusion that there is low- to moderate-certainty evidence that SEI services improve recovery and reduce disengagement.

KEYWORDS

Schizophrenia; psychotic disorders; community mental health teams; early intervention; first-episode psychosis.

Specialised early intervention (SEI) services for psychosis have been recommended by the UK's National Institute for Health and Care Excellence (NICE) since 2014 (NICE 2014). In 2016, NHS England released guidance on the implementation of SEI services, setting a standard of care, requiring treatment to commence within 2 weeks of referral and for it to be delivered in accordance with the NICE guidelines for the treatment of psychosis and schizophrenia (NICE 2016). Both conditions must be met in at least 50% of individuals experiencing first-episode psychosis for the standard to be achieved.

Although acceptance criteria vary between services, in general, SEI services in the UK are expected to be offered to individuals with a first presentation of psychosis between the ages of 14 and 65 years (Early Intervention in Psychosis Network 2021). Care is usually provided for a period of 3 years, attempting to intervene during a 'critical period' in which the individual's outcomes and functioning can be improved (Birchwood 1998).

The critical period hypothesis is based on an association between the duration of untreated psychosis (DUP, the period between the onset of psychotic symptoms and the initiation of treatment) and worse long-term outcomes, including greater symptom severity, worse social and global functioning, and decreased chances of remission (Penttilä 2014; Howes 2021).

This concept is attractive not only in terms of clinical outcomes, but also because it presents a more palatable use of resources, thanks to its 3-year limit, than previous models of care, such as assertive community treatment (ACT). In ACT, difficult-to-engage individuals requiring high levels of inpatient care are assertively engaged to reduce service use and improve outcomes; however, most ACT teams have been disbanded owing to evidence suggesting they were not effective (Killaspy 2009).

Evidence for SEI services has been conflicting too. A previous Cochrane review evaluating interventions to improve outcomes for people with first-episode psychosis found insufficient data to draw meaningful conclusions about efficacy (Marshall 2011). Critics of the 'stand-alone SEI model' have argued that it results in the diversion of resources from individuals with long-term illness and that the services themselves introduce 'silo effects' (Box 1), the deskilling of general psychiatric clinicians and difficult transitions between services (Castle 2011).

Given the significant intellectual and financial investment in SEI services, the importance of further establishing the evidence base is clear. This presents significant challenges, particularly owing to the variability between services, making it difficult to determine which elements of SEI, if any, are indeed effective.

The Cochrane review

The authors of the paper in this month's Cochrane Corner (Puntis 2020a) conducted a systematic review and meta-analysis of randomised control trials (RCTs) comparing SEI with standard psychiatric care for individuals in the early stages of psychosis. Four RCTs, published between 2004 and 2016, were included in the meta-analysis, involving a total of 1145 participants. Overall, the authors found low-certainty evidence that SEI resulted in more participants being in recovery at the end of treatment and moderate-certainty evidence suggesting that fewer participants were disengaged from services at the end of treatment. The authors also collected 15 further secondary outcome measures, which will not be discussed here owing to space constraints.

Harun S. Butt is currently a higher trainee in general adult psychiatry with Oxford Health NHS Foundation Trust, working at the Whiteleaf Centre, Aylesbury, UK. His primary interests are in liaison psychiatry and psychotic disorders.
Correspondence: Harun Butt. Email: harun.butt@oxfordhealth.nhs.uk

First received 2 Feb 2022
Final revision 8 Feb 2022
Accepted 8 Feb 2022

Copyright and usage
© The Author(s), 2022. Published by Cambridge University Press on behalf of the Royal College of Psychiatrists

†Commentary on… Specialised early intervention teams for recent-onset psychosis (Cochrane Corner). See this issue, doi: 10.1192/bja.2022.11.

https://doi.org/10.1192/bja.2022.10 Published online by Cambridge University Press

BOX 1 Silo effects

Organisational silos refer to structures that separate employees into individual groups, such as teams or departments. Collaboration and communication are usually limited outside of the silos, leading to impaired joint working and even rivalries. Each silo may also have its own goals, rather than working towards a common organisational goal.

Study population

Included participants were within 3 years of onset of their first psychotic episode and were experiencing a first or second episode of psychosis, as defined by standardised criteria (DSM, ICD or Melbourne Criteria). Individuals with organic psychoses or head injuries were excluded, which is appropriate, given the differing pathology and prognosis for this subgroup. The authors also excluded individuals with prodromal symptoms (in the 'at-risk mental state'), which is also reasonable as these people would not normally be offered ordinary psychiatric care and would require different primary outcome measures compared with people with psychosis, such as progression to psychosis, rather than recovery or relapse.

Intervention and comparison under investigation

The intervention was SEI care, defined as a standalone multidisciplinary community-based mental health team providing an alternative to standard psychiatric care for individuals with early-onset psychosis and delivering a broad range of treatment options using an assertive outreach approach. The teams had to accept individuals who were experiencing their first or second episode of psychosis within 3 years of onset of illness. For comparison, 'treatment as usual' (TAU) was defined as normal psychiatric care.

BOX 2 The Cochrane Schizophrenia register of trials

The Cochrane Schizophrenia Group maintains a register of all controlled trials relevant to the scope of the Cochrane Schizophrenia Group (schizophrenia.cochrane.org/register-trials). It is maintained by systematic searches of major databases, periodic searches of grey literature, handsearches of journals and conference proceedings, reference checks of other relevant papers, and direct contacts with relevant researchers and organisations. There are no date, language or publication status limits for documents to be included. It provides a robust way of ensuring a comprehensive literature search relating to psychotic illness.

Outcomes of interest

Primary outcomes for the study were recovery, as defined by the individual trial, and disengagement from mental health services. Outcomes were grouped according to end of the study treatment, medium-term follow-up (1–60 months post-intervention) and long-term follow up (>60 months post-intervention).

The search and grading of evidence

The authors performed an initial literature search in October 2019, which was updated in October 2020. They relied on Cochrane Schizophrenia's register of trials (Box 2). The use of this register can be considered a strength of the study, as it includes a greater number of publications than would be practical to include via separate searches of multiple databases. The authors also performed a further reference search of the included studies and contacted experts for information regarding unpublished trials.

Overall, 1857 studies were screened by two authors, with a third independently re-inspecting 20% of these to ensure interrater reliability. This resulted in 54 full texts which were assessed for inclusion, of which 4 met criteria for the study – 3 RCTs and 1 cluster RCT (Box 3). Of the 50 excluded trials, the most common reasons for exclusion were having a comparator that was not TAU, or the intervention being a medication or non-SEI service.

Risk of bias for the included studies was assessed using the Cochrane criteria (Higgins 2011). The authors rated all included trials as having a high risk of performance bias (Box 4), owing to the difficulty masking ('blinding') participants and staff to the intervention. Two studies also had a high risk of detection bias, owing to the outcome assessors not being masked. One of the trials was at high risk of selective reporting, owing to a change in primary outcome, with the result that the original primary outcome was not reported. Another was at uncertain risk, as the trial was only registered after completion and no published protocol was available. This is significant given that of the four trials included in the review, one did not report outcome measures for the primary outcomes of the review. Therefore, only three (one with a high risk of reporting bias) were included in the meta-analyses for the primary outcomes.

As both primary outcomes were dichotomous (i.e. yes/no), the review authors calculated risk ratios for both relapse and disengagement. Heterogeneity between studies was evaluated using the I^2 statistic, and the authors chose a random-effects model for the meta-analysis (Box 5). Given the variation in SEI delivery between the studies, this is an appropriate

BJPsych Advances (2022), vol. 28, 137–140 doi: 10.1192/bja.2022.10

https://doi.org/10.1192/bja.2022.10 Published online by Cambridge University Press

BOX 3 Cluster randomisation

Cluster randomisation involves randomising participants in groups rather than individually. For example, all patients on a given ward or attending a clinic may be randomised to one arm of a trial. This has practical benefits – it may be difficult to deliver different treatments within the same setting. It also limits contamination between participants who might discuss differing treatments.

Cluster randomisation introduces problems, however. Intraclass correlation (similarity between participants within a cluster) must be accounted for, so more participants are required for cluster RCTs to achieve similar statistical power compared with individually randomised trials. As it may not be possible to conceal treatment allocation from recruiters, there is also a potentially greater risk of selection bias.

choice, as there is unlikely to be a single or 'fixed' effect size.

Results

The review authors found moderate-quality evidence that SEI services reduced disengagement from services at the end of treatment (RR = 0.5, 95% CI 0.31–0.79; 3 studies, 630 participants). There was low-certainty evidence that SEI services were associated with a higher rate of recovery at the end of treatment (RR = 1.41, 95% CI 1.01–1.97; 2 studies, 194 participants) but no clear difference at medium-term follow-up (RR = 0.96, 95% CI 0.71–1.30; 1 study, 547 participants). None of the studies reported values at long-term follow-up. Heterogeneity was low for all primary outcomes, possibly reflecting the small number of studies included.

Discussion

This Cochrane review highlights several issues pertinent to SEI services. Most intriguing is the overall lack of strong evidence for a service that is recommended by NICE and that has seen broad adoption across the UK's National Health Service (NHS). The review identified a small number of completed trials and only one ongoing study. All studies were funded by national or public health organisations, perhaps reflecting difficulties in obtaining funding for trials evaluating a service model, rather than a monetisable intervention. Although this presents challenges, it is a strength of the studies, reducing the risk of sponsorship bias.

Despite the small number of studies, the inclusion criteria more accurately reflect current SEI services in the UK than previous reviews (Correll 2018). This increases the applicability of the study to UK-only services, but it reduces the overall generalisability, and it should be noted that all the included studies were conducted in high-income countries.

In evaluating health services, further valuable information can be gleaned from economic analysis. Cost-effectiveness studies have found moderate-strength evidence that SEI may be cost-effective (Aceituno 2019). This is an important finding, given the resource constraints commonly seen in mental healthcare.

The results of this study, while limited, question the validity of a time-limited model without sustained benefit at follow-up. The authors also conducted a Cochrane review which examined the evidence for extended SEI care compared with TAU (Puntis 2020b). This review was similarly limited by the small number of included studies (four) and it found very low-certainty evidence that extended SEI increased remission rates and low-certainty evidence that extended SEI reduced disengagement.

BOX 4 Detection bias versus performance bias

Detection bias is introduced by a test performing differently in distinct groups. For example, outcome assessors who are unmasked, and therefore know if the participant they are evaluating was in the intervention or control group, may record a greater improvement for those the intervention group.

Performance bias is introduced by participants being unmasked. For example, individuals who know they are in the control group may be disappointed or pessimistic, negatively affecting outcome measures.

BOX 5 Random-effects versus fixed-effects modelling

Random- and fixed-effects models are two statistical methods of estimating mean values in meta-analysis.

The fixed-effects model assumes that the effect size of all studies is the same: in other words, that there is a single 'true' effect size. Variability in this effect size is assumed to be due to errors in estimation within the individual studies. Larger studies are given more weight, as they include better information about the same effect.

The random-effects model assumes that the 'true' effect size varies between studies and aims to estimate the mean of this distribution. Therefore, smaller studies are given more weight than in the fixed-effects model, as they are assumed to be measuring a different effect size, which we do not wish to discount.

Selection of a model should be made according to which of the models fits the research scenario. Often, and particularly in psychiatric research, the random-effects model is more plausible or it is preferred as more conservative.

https://doi.org/10.1192/bja.2022.10 Published online by Cambridge University Press

Without further research to clearly establish further evidence for SEI, we risk adherence to a model that may be suboptimal. Further research into the efficacy of SEI, and comparison between integrated and stand-alone teams, would help to identify where to focus development of SEI services and how positive effects might be sustained.

Data availability

Data availability is not applicable to this article as no new data were created or analysed in this study.

Funding

This research received no specific grant from any funding agency, commercial or not-for-profit sectors.

Declaration of interest

None.

References

Aceituno D, Vera N, Prina AM, et al (2019) Cost-effectiveness of early intervention in psychosis: systematic review. *British Journal of Psychiatry*, **215**: 388–94.

Birchwood M, Todd P, Jackson C (1998) Early intervention in psychosis: the critical period hypothesis. *British Journal of Psychiatry*, **172**(suppl 33): 53–9.

Castle DJ (2011) Should early psychosis intervention be the focus for mental health services? *Advances in Psychiatric Treatment*, **17**: 398–400.

Correll CU, Galling B, Pawar A, et al (2018) Comparison of early intervention services vs treatment as usual for early-phase psychosis: a systematic review, meta-analysis, and meta-regression. *JAMA Psychiatry*, **75**: 555–65.

Early Intervention in Psychosis Network (2021) *Standards for Early Intervention in Psychosis Services* (2nd edn) (CCQI 373). Royal College of Psychiatrists.

Higgins JPT, Altman DG, Gøtzsche PC, et al (2011) The Cochrane Collaboration's tool for assessing risk of bias in randomised trials. *BMJ*, **343**: d5928.

Howes OD, Whitehurst T, Shatalina E, et al (2021) The clinical significance of duration of untreated psychosis: an umbrella review and random-effects meta-analysis. *World Psychiatry*, **20**: 75–95.

Killaspy H, Kingett S, Bebbington P, et al (2009) Randomised evaluation of assertive community treatment: 3-year outcomes. *British Journal of Psychiatry*, **195**: 81–2.

Marshall M, Rathbone J (2011) Early intervention for psychosis. *Cochrane Database of Systematic Reviews*, **6**: CD004718. Available from: https://doi.org/10.1002/14651858.CD004718.pub3.

National Institute for Health and Care Excellence (2014) *Psychosis and Schizophrenia in Adults: Prevention and Management (NICE Guideline CG178)*. NICE.

NHS England, National Collaborating Centre for Mental Health, National Institute for Health and Care Excellence (2016) *Implementing the Early Intervention in Psychosis Access and Waiting Time Standard: Guidance*. NICE.

Penttilä M, Jääskeläinen E, Hirvonen N, et al (2014) Duration of untreated psychosis as predictor of long-term outcome in schizophrenia: systematic review and meta-analysis. *British Journal of Psychiatry*, **205**: 88–94.

Puntis S, Minichino A, de Crescenzo F, et al (2020a) Specialised early intervention teams for recent-onset psychosis. *Cochrane Database of Systematic Reviews*, **11**: CD013288. Available from: https://doi.org/10.1002/14651858.CD013288.pub2.

Puntis S, Minichino A, de Crescenzo F, et al (2020b) Specialised early intervention teams (extended time) for recent-onset psychosis. *Cochrane Database of Systematic Reviews*, **11**: CD013287. Available from: https://doi.org/10.1002/14651858.CD013287.pub2.

https://doi.org/10.1192/bja.2022.10 Published online by Cambridge University Press