Record Status
This is a critical abstract of an economic evaluation that meets the criteria for inclusion on NHS EED. Each abstract contains a brief summary of the methods, the results and conclusions followed by a detailed critical assessment on the reliability of the study and the conclusions drawn.

CRD summary
This study evaluated the cost-effectiveness of the Improving Access to Psychological Therapies (IAPT) service for patients with depression or anxiety. The authors concluded that the service was probably cost-effective at National Institute for Health and Care Excellence thresholds, with considerable uncertainty in the results. The study was clearly reported. Appropriate methods were used, with a clear discussion of the limitations, external validity, and generalisability. The authors reached appropriate conclusions.

Type of economic evaluation
Cost-effectiveness analysis, cost-utility analysis

Study objective
This study evaluated the cost-effectiveness of the Improving Access to Psychological Therapies (IAPT) service, for patients with depression or anxiety.

Interventions
The intervention was the IAPT service, which consisted of a stepped therapeutic approach, based on National Institute for Health and Care Excellence (NICE) guidelines. Step one was watchful waiting. Step two was guided self-help including bibliotherapy, cognitive-behavioural therapy (CBT), CBT with support, and CBT-based telephone support for problem solving. Step three was CBT with or without medication. Most patients (90%) were assigned to step two after initial contact. The service was implemented in Doncaster. Not all patients, at the Doncaster site, received the IAPT service, but they were included in the analysis.

The comparator was usual care, without the new IAPT service, which included primary care counselling and secondary care referral to mental health professionals. Wakefield and Barnsley were selected as the comparator sites, based on their similarity to the Doncaster site.

Location/setting
UK/primary and secondary care.

Methods
Analytical approach:
The cost and outcome data from a large cohort study were used to conduct a cost-utility analysis and a cost-effectiveness analysis. Patients were recruited between 2007 and 2009, and they were followed-up for eight months. The authors reported that the perspective was that of the UK NHS and Personal Social Services.

Effectiveness data:
The primary clinical outcomes were patient scores on the Patient Health Questionnaire (PHQ)-9 and the Generalised Anxiety Disorder (GAD)-7. Questionnaires were posted to patients at the start, and at four and eight months of follow-up. Outcomes were adjusted for initial imbalances using ordinary least-squares regression. The two comparator sites were similar to the IAPT site, in Quality Outcomes Framework performance, geographic location, implementation of the pathways-to-work scheme, organisational structure, ethnic diversity, service configuration, capacity and case mix. All general practitioners (GPs), at all three sites, were approached to participate in the trial. Patients were recruited from 29 practices. In total, 403 patients (289 for IAPT and 114 for usual care) were recruited; 99% provided usable initial data (285 for IAPT and 113 for usual care) and 74.1% (212 for IAPT, 85 for usual care) provided data at eight-
month follow-up.

**Monetary benefit and utility valuations:**
The utilities were valued using SF-6D questionnaires, which were completed by patients, alongside the effectiveness outcomes. These were valued using data from the UK general population.

**Measure of benefit:**
Measures of benefit were quality-adjusted life-years (QALYs), and the proportion of patients who made a reliable and clinically significant improvement on the PHQ-9. This was defined as improvement by 6 points or more, and a move from clinical depression (a score of 10 or more) to non-clinical depression (a score of 9 or less).

**Cost data:**
The cost categories included psychological therapy, other mental health care, primary care, secondary care, social care, the intervention and productivity lost. The resource use was from a patient-completed postal questionnaire, identifying health care use over the previous four months. Questionnaires were completed at the start, and at four and eight months. The costs for IAPT included set-up (such as training, equipment, facilities and overheads), the service, and non-IAPT services. Set-up costs were from financial records from the study. Service costs were presented as an average cost per minute, calculated from face-to-face or phone contact time, and total costs. Non-IAPT services were valued using data from the Personal Social Services Research Unit, NHS Reference Costs, and a published evaluation. The costs for the comparator sites were valued using national data. Productivity lost was calculated using the human capital approach, using age, gender, and part- or full-time work status. These costs were presented separately, and were not included in the incremental cost-effectiveness ratios (ICERs). The cost data were adjusted for initial differences using ordinary least-squares regression. They were reported in 2008 to 2009 UK £. Where necessary, they were inflated using the UK retail price index.

**Analysis of uncertainty:**
A sensitivity analysis was conducted in which the utilities were mapped to the EQ-5D, using a function from a large database (15,184 patients) of both EQ-5D and SF-6D scores. A 10,000 bootstrap simulation probabilistic sensitivity analysis was undertaken for QALYs based on SF-6D and EQ-5D measures, and for clinically significant improvement. The results were presented in cost-effectiveness acceptability curves of the probability that the intervention was cost-effective, for a range of willingness-to-pay thresholds. An analysis was undertaken with IAPT costs, replaced by NHS unit costs, for seeing a counsellor. The differences in outcomes were assessed for statistical significance.

**Results**
Patients receiving IAPT services and usual care had statistically significant improvements in PHQ-9, GAD-7, and SF-6D scores at four and eight months, but there were no statistically significant differences between the two groups. At eight months, 22% (46 of 209) of patients receiving IAPT services and 20% (17 of 84) of patients receiving usual care had achieved reliable and clinically significant improvements.

The costs at the IAPT site were higher for seeing an NHS psychologist (including the intervention cost), but primary care and hospital services were slightly lower and social service costs were significantly lower. The mean total costs were higher for IAPT than for usual care, but this was not statistically significantly different (MD £163, 95% CI -331 to 660).

The ICER for the IAPT service was £29,500 per QALY gained, with large uncertainty around the estimate. In the probabilistic analysis, the service was cost-effective in 40% of simulations at a willingness-to-pay threshold of £30,000 per QALY. Using EQ-5D utilities, the ICER was £16,857 per QALY gained, and the service was cost-effective in 53% of simulations. The ICER was £9,440 per additional patient achieving a reliable and clinically significant improvement. When NHS unit costs were used in place of IAPT costs, the ICER was reduced to £11,875 per QALY gained (using SF-6D), or £3,800 per patient achieving a reliable and clinically significant improvement.

**Authors’ conclusions**
The authors concluded that the service was probably cost-effective at NICE thresholds, with considerable uncertainty in the results.
CRD commentary

Interventions:
The interventions were sufficiently described and seem to have been reasonable.

Effectiveness/benefits:
The outcome and benefit measures were clearly defined, with detailed reporting. Appropriate adjustments were made to account for initial differences between groups. There were clear and detailed diagrams showing the study recruitment process. There was no randomisation, which could have introduced bias, but care was taken to select usual care sites that were comparable to the Doncaster IAPT site, which should minimise bias. Due to the nature of the study, it was not possible to randomise patients; the methods used to control for potential imbalances were appropriate. Sensitivity analyses using EQ-5D utilities enhanced the study generalisability as the EQ-5D is commonly used, and is the standard for the UK NICE.

Costs:
The cost categories were appropriate for the study perspective, and the cost data was reported with sufficient detail. Productivity costs were analysed using appropriate methods, and they were presented separately to the primary cost-effectiveness analysis.

Analysis and results:
The results were presented clearly and thoroughly. Comparisons were made both for statistical significance and for the likelihood of cost-effectiveness, which gave a thorough account of the effect of uncertainty on results. The authors acknowledged that there was considerable uncertainty and they reached appropriate conclusions. They addressed both parameter and methodological uncertainty appropriately. They conducted a thorough comparison of their results with those of similar studies and observational data, with appropriate discussion of the differences. The limitations were discussed appropriately. The authors indicated that low response rates, the small sample for usual care, potential differences between the sample and the IAPT population, and potential attrition bias with the healthier patients who stayed in the IAPT group, were limitations of their study. They indicated that in spite of the small sample and low recruitment, the outcomes from the study for IAPT were very similar to observational data for the IAPT service, with no statistically significant differences. This indicated that the results should be generalisable to other IAPT populations.

Concluding remarks:
The study was clearly reported. Appropriate methods were used, with a clear discussion of the limitations, external validity, and generalisability. The authors reached appropriate conclusions.

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