Supported employment: cost-effectiveness across six European sites


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 and budget impact of Individual Placement and Support to help patients with severe mental illness, to obtain competitive employment, across six European cities. The authors concluded that Individual Placement and Support appeared to be cost-effective for helping people with serious mental illness achieve their employment goals. Generally, the study was well reported, with appropriate methods, but the measures of benefit may not have captured all the benefits. The conclusions appear to be valid.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
This study evaluated the cost-effectiveness and budget impact of Individual Placement and Support to help patients with severe mental illness, to obtain competitive employment, across six European cities.

Interventions
Individual Placement and Support was compared with standard vocational services. The details of Individual Placement and Support were reported in the main paper for the EQOLISE trial (see Other Publications of Related Interest). Standard vocational care was a train-and-place approach, consisting of day treatment or, in Germany, residential care.

Location/setting
UK, Netherlands, Italy, Bulgaria, Germany, and Switzerland/social care.

Methods
Analytical approach:
The evaluation was based on data from the EQOLISE trial, which was undertaken in six European cities: Groningen, Netherlands; London, United Kingdom; Rimini, Italy; Sofia, Bulgaria; Ulm-Gunzburg, Germany; and Zurich, Switzerland. The evaluation lasted 18 months, and the authors stated that they took a health and social care perspective.

Effectiveness data:
In the trial, 312 patients with severe mental illness (schizophrenia, schizophrenia-like disorder, bipolar disorder, or depression with psychotic features), from the six cities, were randomised to either Individual Placement and Support (156 patients) or standard vocational services (156 patients). Randomisation was by patient, stratified using minimisation by centre, diagnosis and work history. The two effectiveness measures were the additional days of work; and the additional percentage of patients who worked for at least a day. Vocational staff in each service recorded the patient’s work experience, noting those who worked for at least a day in competitive settings, and alerting research staff to potential jobs for patients. Research staff contacted patients to determine the hours and days that they worked.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
The two outcomes were the benefit measures: additional days of work, and additional percentage of patients who worked for at least a day.

Cost data:
The costs of mental and physical health care, social care (including accommodation), and vocational rehabilitation were considered. The resource use for Individual Placement and Support and standard vocational services was collected during the trial at the start, and at six, 12 and 18 months. A validated tool (Client Socio-demographic and Service Receipt Inventory - European Version; CSSRI-EU) was used to collect sociodemographics, usual living situation, employment, income, use of health and social services, and medication use, over the previous six months. The unit costs were from the UK Personal Social Services Research Unit. The costs were compared at each assessment point, and for the whole 18 months. Mean differences and 95% confidence intervals were calculated using nonparametric bootstrapping, which included the initial cost as a covariate. Missing data (83 patients) were imputed using multiple imputation, based on the costs at each time point, age, gender, country, and treatment group. The price year was 2003 and costs were presented in UK £.

Analysis of uncertainty:
A probabilistic sensitivity analysis was conducted using bootstrapped linear regression, including imputed missing values. The results were presented in cost-effectiveness acceptability curves. A partial cost-benefit analysis was presented, by calculating the difference between the intervention costs and the value of employment, for each group. Bootstrapping and adjusting for baseline cost differences were used to produce the overall difference in net benefit.

Results
Incremental cost-effectiveness ratios were calculated for the whole sample, and for each of the six cities. For the whole sample, regardless of whether missing data were imputed or excluded, Individual Placement and Support dominated standard vocational services, as the intervention was less costly and more effective. For each of the cities, except in the Netherlands, Individual Placement and Support dominated standard vocational services.

In the Netherlands, spending an additional £30 per person, over 18 months, on Individual Placement and Support, resulted in an additional 1% of patients working at least a day in a competitive setting; and £10 per person resulted in an additional day worked at a competitive wage.

The results suggested that patients receiving standard vocational care were more likely to drop out of the programme (45% compared with 13% for Individual Placement and Support); and more likely to be readmitted to hospital (31% compared with 20% for Individual Placement and Support).

Sensitivity analysis demonstrated that there was a near 100% likelihood of cost-effectiveness at all the examined thresholds, for the whole sample, but the cost-effectiveness varied by city, with the Netherlands having nearly an equivalent likelihood of cost-effectiveness for the two options, at thresholds of zero to £1,000 (0.545 probability at a threshold of £10,000) for an additional 1% of patients working at least a day.

The partial cost-benefit analysis suggested that Individual Placement and Support was a more efficient use of resources than standard vocational services.

Authors’ conclusions
The authors concluded that Individual Placement and Support appeared to be cost-effective in helping people with serious mental illness come closer to achieving their employment goals.

CRD commentary
Interventions:
The interventions seem to have been appropriate, and the comparators to Individual Placement and Support were sufficiently described. A full description of Individual Placement and Support was not provided in this paper, but a reference was given.

Effectiveness/benefits:
The outcome measures for the cost-effectiveness analyses were appropriate, but they did not capture health-related quality of life, which could be important for these patients. The outcome measures limit the ability to compare across specialities or interventions, making decisions between them difficult. While there was no direct measure of health benefit, measures of continuation in the programme and hospital readmissions were included. These could be used as proxies for patient stability and mental health, suggesting some quality of life improvement. Many of the elements
within the clinical trial were subject to variation; some adjustments were made, where possible, but the remaining uncertainty cannot be ignored.

Costs:
The costs were generally well reported, with appropriate adjustments for initial cost differences and for missing data. Over 25% of the cost data were missing, and it was unclear whether they were missing at random, or related to the effectiveness of the interventions. The analyses with imputed data and those with available data had similar results. The categories of expenditure were reported, with adjustments for initial cost differences, but the items of expenditure were not reported. UK costs were used for all sites; the advantages and limitations of this were fully discussed. For almost all costs, the standard deviation was greater than the mean, across all locations. Most 95% confidence intervals crossed zero for the difference in costs, by significant margins, which increases the importance of probabilistic sensitivity analysis.

Analysis and results:
The results of the study were clearly presented for the main analysis. Appropriate methods were used to estimate the incremental cost-effectiveness ratios, and to generate cost-effectiveness acceptability curves. A thorough discussion of the wider evidence, and its similarity with these findings, was presented, suggesting a reasonable level of external validity. The authors acknowledged their study limitations, and discussed their likely impact.

Concluding remarks:
Generally, the study was well reported, with appropriate methods, but the measures of benefit may not have captured all the potential benefits of the programme. The conclusions appear to be valid.

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