Adults with intellectual disabilities and challenging behaviour: the costs and outcomes of in- and out-of-area placements


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 differences in care quality, patient quality of life, and costs of in-area and out-of-area care, for adult patients with intellectual disabilities and challenging behaviour. The authors concluded that out-of-area care appeared to be cheaper, but in-area care could have more advantages for patients; no cost-effectiveness conclusions could be reached. The study was generally well conducted, but its limitations make the validity and generalisability of the results difficult to ascertain.

Type of economic evaluation
Cost-effectiveness analysis

Study objective
This study evaluated the differences in care structure and characteristics, quality of care, patient quality of life, and costs, associated with in-area and out-of-area care, for adult patients with intellectual disabilities and challenging behaviour.

Interventions
In-area care was compared with out-of-area care. In-area care was defined as care delivered within 10 miles of the six local authority boundaries of a Welsh Health Board Directorate of Learning Disabilities. This was the largest specialist care provider in Wales. Out-of-area care was that delivered more than 10 miles from these boundaries. One purpose of the research was to define the elements of the care given.

Location/setting
Wales/social care.

Methods
Analytical approach:
The economic evaluation was conducted as part of a small observational study. The authors stated that a societal perspective was taken.

Effectiveness data:
Various effectiveness measures were from the observational study, which was a follow-up of a survey of out-of-area patients, who were matched to similar patients residing within the area. Many aspects of quality of life were measured for patients who were considered competent to answer questions. Paid carers, who knew the patients well, confirmed their lifestyle responses. Patients who showed a tendency to answer questions affirmatively, without consideration, were excluded from results. Quality of care was assessed on two scales completed by institutional staff and case managers. Aspects of the treatment and management of challenging behaviour were monitored.

Monetary benefit and utility valuations:
Not relevant.

Measure of benefit:
There was no aggregate measure of benefit. The various effectiveness outcomes were the measures of benefit.
Cost data:
The costs included those of the care-giving agencies, the NHS, local authorities, and families of residents. The costs for residence were from the Residential Services Setting Questionnaire and a questionnaire developed by the project team. Other costs were from the accounts of the providing agencies. They included site-specific staff and services provided externally, such as daytime, hospital and community services. Total weekly site costs were averaged for the number of residents at that site. The costs of external services and families of residents were recorded using the Client Service Receipt Inventory. Service use was translated into costs in UK £, using 2008 to 2009 unit costs, or earlier unit costs that were inflated to 2008 to 2009, using the NHS Hospital and Community Health price index.

Analysis of uncertainty:
Most of the outcomes and costs were reported with variance measurements and assessed for statistically significant differences using $X^2$ and $z$-values.

Results
There were some significant differences in the quality of care. Procedures for the behavioural assessment of residents and writing teaching programmes, and induction training, regular in-service training and supervision, were more common in in-area care. For in-area care, sedation was more likely to be used in response to challenging behaviour ($p<0.01$), while for out-of-area care, physical restraint was more likely to be used ($p<0.05$). Functional analysis was used more often in in-area care ($p<0.05$).

For patient quality of life, in-area residents undertook more activities ($p<0.01$) in the last month, and there was a trend towards more visits from family and friends, and less loneliness, with a statistically significant difference in visits from friends in the last three months ($p<0.05$). Patients in in-area care were more likely to have vision checks ($p<0.05$).

The weekly costs were higher for in-area care, with total costs on average £484.40 more than out-of-area costs (95% CI 297.4 to 810.8). This was driven by differences in direct staffing, which was an average of £556.10 more expensive per week in area than out of area (95% CI 368.1 to 874.6). The difference in accommodation costs remained significant even after analysis of covariance ($p<0.01$).

Authors' conclusions
The authors concluded that out-of-area care appeared to be cheaper, but in-area care could have more advantages for patients; no cost-effectiveness conclusions could be reached.

CRD commentary
Interventions:
The details of the interventions were not predefined, because one goal was to compare the practices in the two settings. The authors defined in-area and out-of-area care; it was not clear which was standard practice. There was no explanation of why the services were different between the areas.

Effectiveness/benefits:
There were many effectiveness measures; as acknowledged by the authors, more measures increase the chances of a spurious statistically significant finding. They acknowledged that their study had a very small sample, which reduced the ability to find statistically significant results, where a larger sample might find them. There was no randomisation and no controls for patient characteristics, which could have introduced bias.

Costs:
The methods used to gather the costs appear to have been appropriate. The costs were reported as broad categories, with very little detail, so it is not possible to precisely explain any differences between the groups and whether these differences might be generalisable to other locations. The sources for the unit costs were not reported, but were stated to be available from the authors.

Analysis and results:
The results were generally well reported, with appropriate measures of variance for most results. The study evaluated the uncertainty in the differences between groups using $X^2$ and $z$-values of statistical significance. The authors thoroughly discussed their study's limitations, acknowledging the ones reported here. They discussed the consistency of
their findings with the results of other studies, and gave plausible explanations for any differences.

Concluding remarks:
The study was generally well conducted, but its limitations make the validity and generalisability of the results difficult to ascertain.

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