Joint crisis plans for people with psychosis: economic evaluation of a randomised controlled trial


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.

Health technology
The study considered joint crisis plans in addition to usual care in the treatment of patients with psychosis. Joint crisis plans consist of drawing up a care plan with an advance statement of preferences for care in the event of a future relapse. This is formulated by the patient, care coordinator, psychiatrist and project worker in conjunction with details of the illness, treatments and relapse indicators.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
The study population comprised patients with a diagnosis of psychotic illness who were not inpatients but who had been admitted to inpatient care in the last two years.

Setting
The setting was secondary care. The economic study was carried out in the UK.

Dates to which data relate
The dates for the clinical effectiveness and resource use data were not specified in this paper, but details were reported in the parent clinical trial (Henderson et al. 2004, see ‘Other Publications of Related Interest’ below for bibliographic details). The price year was 2000/01.

Source of effectiveness data
The effectiveness data were derived from a single study.

Link between effectiveness and cost data
The costing was carried out prospectively on the same patient sample as that which provided the clinical effectiveness data.

Study sample
A total of 160 patients were included in the study. Of these, 80 were in the joint crisis plan group and 80 were in the standard information group. Twenty-three of the 466 patients assessed for eligibility to the trial did not meet the inclusion criteria, while 283 patients either declined to participate or were not contacted.
Study design
The study was a multi-centre, single-blind, randomised controlled trial that covered eight community mental health teams. No details of how the patients were randomised to the two patient groups were provided. The patients were followed up for 15 months. No loss to follow-up was reported in this paper (details might have been reported elsewhere, see Henderson et al. 2004).

Analysis of effectiveness
The primary health outcomes were the proportion of patients admitted to hospital and the proportion of patients being compulsorily admitted. The analysis of the data was conducted on an intention to treat basis. This paper did not compare the baseline characteristics of the two patient groups (see Henderson et al. 2004).

Effectiveness results
Thirty per cent of patients in the joint crisis plan group were admitted to hospital compared with 44% in the standard service information group, (p=0.07).

Thirteen per cent of patients in the joint crisis plan group were compulsorily admitted to hospital under the Mental Health Act compared with 27% in the standard service information group, (p=0.03).

Clinical conclusions
The authors concluded that joint crisis plans resulted in a non significant reduction in hospital admissions.

Measure of benefits used in the economic analysis
The measure of health benefit used was the percentage of patients admitted to hospital.

Direct costs
The direct costs to the health care provider, social services, the criminal justice system and the patient were included in the study. Resource use was taken from the patient sample that provided the clinical effectiveness data, using questionnaires and hospital records. The cost of the facilitator for joint crisis planning was calculated using the actual time spent plus support costs. The cost of providing information leaflets was taken as the cost of purchasing the leaflets and the facilitator’s time to distribute them. Secondary care services were costed using National Health Service reference costs and data from one of the hospitals included in the study. The unit costs of community health and social services, prison stays, medication and criminal justice resources were taken from published data. The unit costs of patients’ out-of-pocket expenses were reported by the study participants. The price year was 2000/01. Costs incurred after the initial 12 months were not discounted.

Statistical analysis of costs
Differences in the cost data were tested using t-tests and bootstrapping methods.

Indirect Costs
No indirect costs were included in the study.

Currency
UK pounds sterling ().
One-way and threshold analyses were undertaken to assess the impact of variation in the data. Cost-effectiveness acceptability curves were derived from the distributions produced by the bootstrapping analysis.

**Estimated benefits used in the economic analysis**
The proportion of patients admitted to hospital was 30% in the joint crisis plan group and 44% in the standard information group.

**Cost results**
The total mean cost per patient over the 15-month period was 6,064.00 (standard deviation, SD=12,638.00) in the joint crisis planning group compared with 6,912.00 (SD=12,022.00) in the standard service information group (95% confidence interval for the difference: -2,948.00 to 4,698.00).

**Synthesis of costs and benefits**
The incremental cost-effectiveness ratio was -131.00 per 1% reduction in the proportion of patients admitted to hospital.

The sensitivity analysis showed that an additional reduction of 14 days in hospital per patient would be required in the joint crisis plan group for the difference in the mean total cost between the two groups to become statistically significant.

Halving or doubling the key cost (unit cost per bed day) did not impact on the statistical significance of the results. The cost-effectiveness acceptability curve showed that there is a greater than 78% probability that joint crisis plans are more cost-effective than standardised service in reducing the proportion of admissions.

**Authors' conclusions**
Joint crisis planning in patients with psychosis resulted in a non significant reduction in the proportion of patients admitted to hospital and costs.

**CRD COMMENTARY - Selection of comparators**
This study compared joint crisis plans in addition to usual care with standard service information in addition to usual care. No explicit rationale for this choice of the comparator was provided in the paper. You should consider how these options compare with practice in your own setting before applying the results of this study.

**Validity of estimate of measure of effectiveness**
The measure of clinical effectiveness was taken from a randomised controlled trial, which was an appropriate study design. The paper did not give details of the baseline characteristics of the two patient groups, thus it was unclear whether differences between the two patient groups could explain the trial results. Full details of the trial are reported elsewhere (Henderson et al. 2004). However, the data analysis was performed on an intention to treat basis. The difference in effectiveness between the two treatment options was not statistically significant. Since no sample size or power calculations were presented, it was unclear whether the study had sufficient power to detect possible differences in effectiveness.

**Validity of estimate of measure of benefit**
The measure of health benefit was the proportion of patients who were admitted to hospital. These data were taken directly from the study discussed. Whilst it is a valid benefit measure, it does not allow comparisons with other health care programmes as would be the case with a utility measure such as the quality-adjusted life-year.
Validity of estimate of costs
The study was conducted from the perspective of health care providers plus patients’ and carers’ out-of-pocket costs. No assessment of lost productivity due to time off work was made, as the authors indicated that the majority of their patient population were not in work. The authors argued that the inclusion of these costs would make little difference to the study results. A breakdown of resource use was provided and costs by service were included in the paper. Differences in cost data were tested using statistical methods, and sensitivity analyses were conducted to examine the impact of variability in the data. These factors enhance the generalisability of the study results. A clear price year was reported, which will enable future reflation exercises. The study identified costs for a 15-month period. Costs incurred more than 12 months after the start of the study were not discounted, but the authors suggested that this would have had only a minor impact on the study results.

Other issues
The authors do not appear to have presented their results selectively and their conclusions reflected the scope of their analysis. However, they did not compare their findings with those from similar studies. This study was designed to represent the situation in England and the authors did not discuss how their findings might be applied to other countries. The authors acknowledged that their study did not take changes in quality of life, as perceived by the patients, into account but suggested that a reduction in the number of hospital admissions would result in an improvement in quality of life.

Implications of the study
The authors suggested that further research to assess the impact of these interventions on quality of life, as perceived by the patients, is needed.

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Other publications of related interest
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