Post-hospital sub-acute care: an example of a managed care model

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
Subacute care after hospitalisation by a multidisciplinary team of clinicians, geriatricians and other staff or customary continuity care for patients requiring subacute care.

Type of intervention
Rehabilitation.

Economic study type
Cost-effectiveness analysis.

Study population
Patients requiring subacute care.

Setting
Primary care. The economic study was carried out in Minnesota, USA.

Dates to which data relate
Not stated.

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

Link between effectiveness and cost data
The costing was undertaken retrospectively on the same patient sample as that used in the effectiveness study.

Study sample
Whilst power calculations were not reported, 1,144 patients were included in the intervention group. A survey of experience was carried out on 253 patients. The sample size of the comparator was not reported.

Study design
The study was a retrospective non-randomised trial with concurrent controls. The intervention study was carried out in five area nursing homes, but the number of study sites involved in the control group was not reported. The duration of follow-up was until 6 months after discharge.
Analysis of effectiveness
It was not clear whether the analysis was based on intention to treat or on treatment completers only. The primary health outcome was the overall rehospitalization rate, post-discharge status assessed by activity of daily living (ADL) at 3 and 6 months from discharge, rehospitalization rate for infections (urosepsis, pneumonia), and patient and physician satisfaction with the TCC programme. Although data were not provided, the groups were reported as comparable in terms of their diagnoses.

Effectiveness results
The overall rates of rehospitalization and rehospitalization for infections were 0.06 and 0.03, respectively, for the intervention group, and 0.05 and 0.06 for the comparator. It was reported that, with regard to post-discharge status assessed by ADL score at 3 and 6 months from discharge, the patients in the intervention group experienced the same or higher ADL functional levels (no data were given). Patient and physician satisfaction on different dimensions of the TCC programme were reported to be high.

Clinical conclusions
Overall, the rehospitalization rate for TCC units and non-contract homes was approximately six patients per 100. However, the TCC hospital readmission rate for patients with diagnoses of pneumonia, UT, and sepsis was lower than the non-contract rate despite the high level of acuity, which would lead to an expectation of higher rehospitalization rates.

Measure of benefits used in the economic analysis
No summary benefit measure was identified in the economic study and only separate clinical outcomes were reported.

Direct costs
The quantities of resource use were not fully reported separately from the costs. The unit per diem costs included room, board and therapy costs. The source of cost data was the study units. The dates associated with the data were not stated. The analysis included data for the first year of implementation of the programme. The hospital inpatient costs were omitted from the analysis. The perspective adopted in the cost analysis was not explicitly reported.

Indirect Costs
Not considered.

Currency
US dollars ($).

Sensitivity analysis
No sensitivity analysis was performed.

Estimated benefits used in the economic analysis
Not applicable.

Cost results
Per diem costs for the intervention group were $185 versus $280-$300 for the control group. The authors reported that the value of savings in resource use amounted to $1 million to $1.5 million dollars for the first year of the programme. The length of hospital stay was reported as 14.3 for the intervention group and 20.5 days for the control group.
Synthesis of costs and benefits
The costs and benefits were not combined since the intervention was the dominant strategy.

Authors' conclusions
The TCC programme provides rehabilitative and geriatric evaluation services in settings more conducive to and less costly than usual care, and yields improvements in care and resource use outcomes.

CRD COMMENTARY - Selection of comparators
The comparator was that of non-contracted, non-managed venues, including community long-term care facilities and rehabilitation units attached to hospitals. These represented the standard of care for postoperative care of frail patients.

Validity of estimate of measure of benefit
The lack of randomization and information about the control of relevant differences in patient characteristics between groups make the internal validity of the results questionable. The number of patients in the comparator group were not reported.

Validity of estimate of costs
Although length of hospital stay data were provided, the analysis lacked details with respect to the methodology employed in the unit cost estimation. The costs associated with hospital stay (immediately before referral to subacute care) were not considered in the analysis. No dates were provided for the collection of the data.

Other issues
Given the lack of randomisation, sensitivity analysis, and statistical analysis, the results need to be treated with some caution. The conclusions were not justified given the uncertainties in the data. The issue of generalisability was not addressed.

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