A pilot study of the economic cost and clinical outcome of day patient vs inpatient management of active rheumatoid arthritis


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
Inpatient versus day patient care for the management of active rheumatoid arthritis.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Patients attending a rheumatic diseases unit who presented deteriorating functional status, active synovitis, laboratory evidence of active inflammation, need for rest, physical or psychological treatment and modification or introduction of second-line drug treatment.

Setting
The setting was a hospital in Edinburgh, UK.

Dates to which data relate
Effectiveness and resource data were collected in 1992. No price date was given.

Source of effectiveness data
Single study.

Link between effectiveness and cost data
Cost data were collected prospectively, as part of the trial.

Study sample
20 patients were randomised (10 patients in each group). 76 patients were admitted to hospital, but 56 did not satisfy the inclusion criteria. Study sample was for a pilot study in order to assess the feasibility of a larger trial and to inform the larger trial's sample size. The sample was haphazard in that 20 consecutive patients were chosen.

Study design
Randomised controlled trial, single centre study. Each patient was allocated using a sequence of sealed envelopes containing random treatment assignments. Randomisation was by Zelin's method where only those patients randomised...
to the new treatment (in this case day patient care) were asked for their informed consent for inclusion within the trial. The unit of randomisation was individual patients. Duration of follow-up was six months. Loss to follow-up was not specified.

**Analysis of effectiveness**

Intention to treat was the analytical method used. A number of biochemical measures of arthritis activity and patient completed outcome measures were used as the measures of outcome. Physical function was measured using the Health Assessment Questionnaire (HAQ) and the Functional Independence Measurement (FIM); psychological outcome was measured using the Hospital Anxiety and Depression Scale (HAD). Groups were shown matched for disease process and functional and psychological parameters.

**Effectiveness results**

There was no difference between the two methods in any of the measures of effectiveness.

**Clinical conclusions**

The sample size was too small to draw meaningful clinical conclusions from this trial.

**Measure of benefits used in the economic analysis**

Since no difference in clinical outcomes was found between the two groups, the economic analysis was based on difference in costs only.

**Direct costs**

Costs and quantities were reported separately. A societal perspective was used. A standard cost was derived for a standard inpatient or outpatient treatment day. This was derived from calculations of medical and nursing staff costs, medication and investigations, overheads and inputed rental value to account for building capital costs. Furthermore, community care costs were also calculated for such items as physiotherapy and nursing time. Transport costs were also included. Generally, costs were based on actual date (unit of analysis). Price date was not specified.

**Indirect Costs**

Production losses to the patients and their carers have been calculated on admission to the study and until the end of the study. Costs were based on actual data (unit of analysis). No date was given.

**Currency**

UK pounds sterling (€).

**Sensitivity analysis**

A one-way simple sensitivity analysis was undertaken by changing the ward occupancy rates, transport costs, inputed rental value.

**Estimated benefits used in the economic analysis**

Not applicable.

**Cost results**

The cost of treating 10 outpatients was 10,272 and for 10 inpatients was 14,528. Sensitivity analysis did not alter the conclusion that outpatient care was about 40% less expensive than inpatient care. Indirect costs were not taken into
account.

Synthesis of costs and benefits
Not applicable.

Authors' conclusions
The pilot study demonstrated that outpatient care is feasible and acceptable to patients and that in patient care costs 40% more than outpatient management. But the study is too small to draw firm conclusions of the clinical efficacy of day patient care.

CRD Commentary
The study is good in so far as it went. Unfortunately as this is only a pilot study, no firm conclusions can be drawn. The authors are undertaking a larger trial which should provide definitive results with respect to the most cost effective management strategy of this condition.

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