Advantages of outpatient breast surgery
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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
Outpatient, definitive breast cancer surgery.

Type of intervention
Treatment.

Economic study type
Cost-effectiveness analysis.

Study population
Patients undergoing definitive breast cancer surgery.

Setting
Ambulatory setting. The study was carried out at the Ambulatory Surgery Department at Saint Peter's Medical Center, New Jersey, USA.

Dates to which data relate
Effectiveness and resource use data were collected between July 1991 and December 1993. The price year was not stated.

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

Link between effectiveness and cost data
The costing was undertaken on the same patient sample as that used in the effectiveness study. The costing was carried out prospectively alongside the effectiveness analysis.

Study sample
118 patients, ranging in age from 29 to 87, underwent definitive breast cancer surgery. In terms of outpatient procedures, 90 patients had lumpectomy with axillary dissection or axillary dissection alone, 20 had modified radical mastectomy, and 8 had partial or simple mastectomy. In the inpatient group, 13 patients had lumpectomy with axillary dissection or axillary dissection alone, 36 had modified radical mastectomy, and 6 had partial or simple mastectomy. No power calculations were reported.

Study design
This was a retrospective cohort study carried out at a single centre. Outpatients were discharged on the same day. No patients were lost to follow-up.

**Analysis of effectiveness**
The analysis of the clinical study was based on the intention to treat principle. The primary health outcomes studied included operating room time, recovery room time, mortality, complication rates and infection rate.

**Effectiveness results**
Operating room time ranged between 35 minutes and 2.5 hours (average 90 minutes). Recovery room time ranged between 2 and 4 hours, (average 2.5 hours). There were no deaths and no intraoperative complications. Only three patients developed minor complications requiring admission. There were no wound or drain site infections. No range of motion problems were encountered.

**Clinical conclusions**
Standard surgical procedures for locoregional control of breast cancer were performed safely and with minimal complication in ambulatory surgery.(Note:There is an implicit assumption, therefore, that inpatient and outpatient procedures are associated with similar health outcomes. This assumption is made as the authors did not report outcomes for each category separately).

**Measure of benefits used in the economic analysis**
The measure of benefit used was post-operative patient satisfaction. Responses were elicited using a questionnaire. As the authors appear to be making the assumption that health outcomes were similar for both groups, the principal benefit was the attained reduction in treatment costs (cost-minimization analysis).

**Direct costs**
Costs were not discounted given the short time frame of the study (less than 1 year). Quantities and costs were not reported separately. Direct costs included drug and treatment costs. The quantity/cost boundary adopted was that of the hospital. The estimation of quantities and costs was based on actual data. The source of the data and the price year were not stated.

**Statistical analysis of costs**
Not reported.

**Indirect Costs**
Not reported.

**Currency**
US dollars ($).

**Sensitivity analysis**
Not reported.

**Estimated benefits used in the economic analysis**
Patients felt well prepared for the procedures by office and ambulatory surgery staff. Despite expected anxiety related to having surgery, patients were comfortable with the surroundings and nature of the procedures. Oral pain medications
were adequate for all patients. There were no reported problems related to drain management. Patients and family were overwhelmingly positive regarding being discharged on the same day as surgery.

**Cost results**
Modified radical mastectomy cost $1,572 on an outpatient basis and $6,282 on an inpatient basis. Lumpectomy with axillary dissection cost $1,080 on an outpatient basis and $3,827 on an inpatient basis.

**Synthesis of costs and benefits**
Cost and effectiveness results were not combined into a cost-effectiveness ratio.

**Authors' conclusions**
Patients have indicated a high level of satisfaction with ambulatory surgery and experienced faster healing and recovery at home within the family milieu. The potential economic benefits amount to a potential saving of 70% in the costs of treatment.

**CRD COMMENTARY - Selection of comparators**
The rationale for the choice of the comparator was clear. However, as the authors pointed out, there is a caveat associated with the choice of comparator in that many patients will opt for immediate breast reconstruction procedures which will involve longer inpatient stays and some patients with medical conditions will not be suitable for outpatient procedures.

**Validity of estimate of measure of benefit**
Relevant effectiveness measures were examined. The presentation of the effectiveness results was unclear. Outpatient and inpatient health outcomes were not reported separately and the authors did not compare results for the three procedures. No long-term outcomes were examined. The authors did not elicit utility values from patients.

**Validity of estimate of costs**
The costs and quantities were not reported separately it was unclear which costs were included in the direct costs measure. If one of the alternatives involves carrying out a procedure on an outpatient basis, indirect costs falling to patients and family would also need to be included in the analysis if a perspective other than the hospital's is to be considered. No cost results for simple/partial mastectomy were presented. No statistical analyses were performed.

**Other issues**
On the basis of this study, it is difficult to assess the robustness and generalisability of the results to other settings or countries.

**Implications of the study**
The authors support the view that, for suitable patients who do not need or seek immediate breast reconstruction, outpatient procedures offer a more acceptable and less traumatic experience, as well as reducing the direct costs of treatment.

**Source of funding**
None stated.

**Bibliographic details**

**PubMedID**
Other publications of related interest


Indexing Status
Subject indexing assigned by NLM

MeSH
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