A comparison of clinical outcomes and cost of office versus hospital hysteroscopy

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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
Office hysteroscopy with suction biopsy.

Type of intervention
Diagnosis.

Economic study type
Cost-effectiveness analysis.

Study population
Women undergoing hysteroscopy. A cohort of 473 women who had office hysteroscopy and 95 who had hospital diagnostic hysteroscopy with D&C. The mean ages of women undergoing office and hospital procedures were 46 (range: 20 - 84) years and 52 years (range: 30 - 82), respectively. Four of the 95 women in the hospital group had had failed office hysteroscopies.

Setting
Multispeciality office group practice and a university-affiliated private hospital. The economic study was carried out in Massachusetts, USA.

Dates to which data relate
The effectiveness and resource use data were collected during 1991-1995 (for the intervention group), and during 1993-1994 (for the comparator). The price date 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 retrospectively on the same patient sample as that used in the effectiveness study.

Study sample
A cohort of 473 women who had office hysteroscopy and another group of 95 women who had hospital diagnostic hysteroscopy with D&C were included in the analysis. The mean ages of women undergoing office and hospital procedures were 46 (range: 20 - 84) years and 52 years (range: 30 - 82), respectively. Four of the 95 women in the hospital group had had failed office hysteroscopies. Power calculations to determine the sample size were not given.
Study design
Retrospective cohort study from two centres (multispeciality office group practice (two offices) for the intervention group), and a university hospital for the comparator). The duration of the follow-up was not clearly stated.

Analysis of effectiveness
The analysis was based on treatment completers only. The primary health outcomes used in the analysis were the diagnostic accuracy (adequate tissue sampling), clinical outcomes, and success rates (completed procedures). Abnormal uterine bleeding (menorrhagia, menometrorrhagia, and postmenopausal bleeding) was estimated to be the indication in 89% of office and 96% of hospital procedures.

Effectiveness results
The overall failure rates to complete the office and hospital hysteroscopies were estimated to be 7.2% and 3.1%, respectively. Office hysteroscopy in women with abnormal uterine bleeding was estimated to reveal an abnormality in 40.1% of office versus 38.5% of hospital procedures. Histology was estimated to reveal insufficient tissue for diagnosis in 3.4% of office and 22.1% of hospital procedures. The minor complication rate for office hysteroscopy was estimated to be 1.9%, whilst for hospital hysteroscopy, it was 4.2%. No major complications were estimated to occur in either group.

Clinical conclusions
Office hysteroscopy has a high success rate and a low complication rate even when performed by a group of gynecologists with limited experience in the procedure.

Measure of benefits used in the economic analysis
Additional successful cases and cases with adequate diagnostic sampling, and complicated cases avoided.

Direct costs
Hospital and anaesthesia charges for the hospital procedure and instrument repair and capital equipment costs were included in the analysis. Quantities of resource use were not analysed separately from the costs. Charges were used to approximate some or all of the costs (although this was not clearly stated by the author). The source of data was the hospital billing department for the hospital procedure (not stated for the office-based procedure). The quantity/cost boundary adopted was the hospital. The date to which the price data refer was not stated. The gynecologists’ professional fees were excluded from the analysis since they were considered to be common to both strategies.

Currency
US dollars ($).

Sensitivity analysis
No sensitivity analysis was performed.

Estimated benefits used in the economic analysis
The overall failure rates to complete the office and hospital hysteroscopies were estimated to be 7.2% and 3.1%, respectively. Histology was estimated to reveal insufficient tissue for diagnosis in 3.4% of office and 22.1% of hospital procedures. The minor complication rate for office hysteroscopy was estimated to be 1.9% and for hospital hysteroscopy 4.2%.

Cost results
The mean charges, excluding professional fees, for the hospital-based procedure were estimated to be $1,799 versus $62 for office hysteroscopy.

**Synthesis of costs and benefits**
Since the intervention was the dominant strategy, a synthesis of the estimated benefits and costs was not provided.

**Authors' conclusions**
Office hysteroscopy has a high success rate and a low complication rate even when performed by a group of gynaecologists with limited experience in the procedure. Because of its lower cost and greater diagnostic accuracy, office hysteroscopy with suction biopsy should be the method of choice for evaluating gynaecologic conditions such as abnormal bleeding.

**CRD COMMENTARY - Selection of comparators**
The choice of comparator was justified by the author in terms of its current, widespread use in clinical practice.

**Validity of estimate of measure of benefit**
The estimates of measure of benefit used in the economic analysis may be open to question given that the analysis of the data was based on treatment completers only.

**Validity of estimate of costs**
The resource quantities were not reported separately from the costs. Adequate details of methods of quantity/cost estimation were not given and important cost items may have been omitted; in particular professional fees were excluded from the analysis since they were assumed to be common; although it seems this conclusion was based on charge data rather than on true costs.

**Other issues**
The authors’ conclusions may not be justified, given the uncertainties in the data. The issue of generalisability to other settings was addressed and appropriate comparisons were made with other studies.

**Implications of the study**
Further analysis of the data and/or studies are needed in order to validate the results of the study.

**Source of funding**
None stated.

**Bibliographic details**

**PubMedID**
9050710

**Indexing Status**
Subject indexing assigned by NLM
Adult; Aged; Aged, 80 and over; Biopsy, Needle /adverse effects /economics; Costs and Cost Analysis; Dilatation and Curettage /adverse effects /economics; Female; Hospitals; Humans; Hysteroscopy /adverse effects /economics; Middle Aged; Physicians’ Offices; Postmenopause; Retrospective Studies; Uterine Hemorrhage /diagnosis /therapy

**AccessionNumber**
21997000706

**Date bibliographic record published**
31/03/1999

**Date abstract record published**
31/03/1999