An evaluation of educational outreach to general practitioners as part of a statewide cervical screening program

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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
Educational intervention for general practitioners as part of a Cervical Screening Program. The educational intervention was as follows: an investigator visited all general practices during June 1994. The visits included a verbal presentation on the national cervical screening policy, guidelines for the management of screen-detected abnormalities, data from the Victorian Cervical Cytology Registry supporting the emphasis on older women, and data related to GP contacts by unscreened and underscreened women.

Type of intervention
Educational outreach to GPs to increase their awareness of the content and operation of a screening program.

Economic study type
Cost-effectiveness analysis.

Study population
Eligible patients (women aged between 20-69 years with an intact uterus) for cervical screening within the Victoria health regions in which Pap Test Victoria was being conducted in 1994.

Setting
Community. The study was conducted in the local government areas of Camberwell and Nunawading, Victoria, Australia.

Dates to which data relate
The effectiveness data relate to the period July to September of 1993 and 1994. The resource and price dates used were both July-September 1994.

Source of effectiveness data
Single study.

Link between effectiveness and cost data
The costing was undertaken on the same patient sample as that used in the effectiveness analysis. It seems that the costing was undertaken prospectively.

Study sample
Power calculations were carried out to identify approximately large enough study sites. Two communities were included in the analysis. The intervention was carried out for one of these (Nunawading), with the other (Camberwell) serving as
the control. Total sample size was not reported but it was stated that each decade age group included more than 2,533 eligible women (fulfilling the criteria set by power calculations).

**Study design**
A before-and-after historically-controlled study design was employed in the analysis. The study was carried out in a single community. The duration of follow-up was three months. No loss to follow-up was reported.

**Analysis of effectiveness**
The analysis was based on treatment completers only. The primary outcome used in the analysis was the change in the number of cervical screenings performed and changes in odds ratios in the intervention and control groups. The cervical screening rates were derived from the Victorian Cervical Cytology Register.

**Effectiveness results**
The percentage increase in the number of screening tests performed at the intervention was 11%, whereas the figure for the control was 10% (for the three-month period July-September 1994 relative to the same period the year before in the same area). The overall odds ratio for the whole age range in the intervention area relative to the same period one year before was 1.13 (95% CI: 1.07 - 1.19); the corresponding value for the nonintervention area was 1.12 (95% CI: 1.06 - 1.18). The rate ratio (the first outcome divided by the second one) was 1.01 (95% CI: 0.94 - 1.09).

**Clinical conclusions**
Changes in primary outcomes were approximately the same in both groups. The educational intervention, therefore, was not proved to bring clinically significant benefits.

**Measure of benefits used in the economic analysis**
Since the effectiveness analysis showed no difference in clinical benefit between the intervention and the comparator, the economic analysis was based on the difference in costs only.

**Direct costs**
The quantities of resource use were not reported separately from the prices. The operating and travelling costs were included in the analysis. The boundaries adopted were those of the hospital and the general practitioner who made the visit to the different practices. The estimation of costs was based on actual data. The source of travel costs data was the Anti-Cancer Council of Victoria rates current at the time of the intervention (July 1994). The source of data for resource quantities consumed by the intervention was the Victorian Cytology Registry.

**Currency**
Australian Dollars (Aus$).

**Sensitivity analysis**
No sensitivity analysis was carried out.

**Estimated benefits used in the economic analysis**
Not applicable.

**Cost results**
The total cost of the educational intervention was Aus$ 2,010.05. The cost of educational intervention per GP visited
was Aus$34.

Synthesis of costs and benefits
Not applicable.

Authors' conclusions
The intervention turned out to be expensive and, based on the study results, it cannot be recommended as a strategy to be widely employed in a cervical screening program.

CRD COMMENTARY - Selection of comparators
The control used in the study was the do-nothing option.

Validity of estimate of measure of effectiveness
The internal validity of the study results is doubtful, given the study designs and the quality of information used, in particular, to estimate the number of eligible women in the area (based on data from the 1991 census). As the authors recognized, the lack of adequate control of the underlying population in the study could lead to biases. The authors pointed out that the impossibility of determining the precise reason for Pap tests or whether the tests were carried out on women who were due for screening, overdue for screening or presenting for screening earlier than required, was likely to result in the effectiveness of the intervention being understated. They further pointed out that the study results could be biased by external factors. As an example they cited two legal cases involving negative test results in women who later developed cervical cancer, both of which were widely reported by the media during the course of the study - the publicity given to these cases resulted in a significant upsurge in pap testing, predominantly amongst women who were already adequately screened.

Validity of estimate of costs
The cost analysis was reported in a very summarized fashion and lacked detail. Given the perspective used in the analysis (that of the Health Authority) no relevant costs appear to have been omitted.

Other issues
The issue of the generalisability of study results was not discussed. The results were balanced and were not presented selectively.

Implications of the study
A study including more sites, concurrent control groups, and possibly with a longer intervention and follow-up period might provide more externally and internally valid results.

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