Understanding barriers for adherence to follow-up care for abnormal Pap tests

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CRD summary
The authors concluded that interventions focusing on psychological, educational and communication barriers should be adapted and applied to reach all women at high risk of cervical cancer. In view of the limited search, potential for bias and heterogeneity between the studies, it is difficult to determine the reliability of these conclusions and they should be interpreted with caution.

Authors' objectives
To evaluate interventions to improve adherence to recommended follow-up care among women with an abnormal Pap test.

Searching
MEDLINE, Medical Sciences and ScienceDirect databases were searched for articles published from 1990 to 2005. Search terms were reported. The reference lists of articles identified were handsearched. The search was restricted to studies published in English.

Study selection
Prospective and retrospective studies of women who received an abnormal Pap test between 1984 and 2002 were eligible for inclusion. Eligible studies had to be conducted in the USA and include an intervention to improve adherence to follow-up care. An abnormal Pap test was defined as any result requiring additional follow-up or diagnostic procedures (including insufficient Pap test, infection, atypia and glandular or epithelial lesions). Studies were required to report adherence rates to recommended follow-up care. Qualitative studies were excluded.

Interventions in the review included economic incentives, written information or telephone counselling, case management to address psychosocial factors (e.g. fear of cancer, concerns with the examination, treatment and fertility issues), reminder protocols (by telephone or post) or a combination of these. Included studies were conducted in a variety of settings, including public health and community clinics, hospitals and academic clinics. Included studies varied in their definition of adherence. Most studies used medical records, with or without self-report, to assess adherence.

The authors did not state how the papers were selected for the review or how many reviewers performed the selection.

Assessment of study quality
Studies were awarded points for validity based on the following criteria: sample size/power, use of theoretical model, study design, response rate, validity of outcomes measures, and whether lesion severity was addressed in analysis. Prospective studies were awarded a score out of 14, and retrospective studies were given a score out of 12. Studies scoring in the top third of the sample were deemed to be of high quality.

The authors did not state how many reviewers performed validity assessment.

Data extraction
The authors did not state how the data were extracted for the review or how many reviewers performed the data extraction.

Methods of synthesis
Data were combined in a narrative synthesis and in tables, grouped by the risk factors targeted.

Results of the review
Twelve interventional studies were included in the review, nine randomised controlled trials (RCTs, n=5,633 patients)
and three non-randomised controlled trials (CTs, n=4,785 patients). Sample sizes ranged from 60 to 4,488 patients. Quality scores ranged from 7 to 13 out of a possible 14 points. Five of these studies were designated high quality.

**Economic incentives** (three studies): One RCT found that economic vouchers had a statistically significant impact on adherence rates. Another RCT reported that transportation incentives had a significant impact on adherence rates among specific groups of patients. However, one CT of transportation and financial incentives reported no statistically significant findings.

**Educational interventions** (eight studies): Three RCTs used educational brochures. Two reported a significantly higher adherence rate in the intervention group, but the third reported no statistically significant findings. Three RCTs and one CT administered telephone counselling interventions and all reported statistically significant benefit associated with the intervention. Another RCT reported that personalised follow-up with a slide-tape programme had a significant impact on adherence rates among specific groups of patients.

**Psychosocial interventions** (four studies): All studies reported significant benefit associated with the interventions addressing psychological concerns, with women receiving the intervention twice as likely as controls to adhere to follow-up.

**Reminder protocols** (six studies): Five studies (four RCTs, one CT) reported a statistically significant benefit associated with the intervention, but one CT (in which reminder letters were used) reported no such benefit.

The results of 14 observational studies were also reported in the review.

**Authors' conclusions**
Interventions focusing on psychological, educational and communication barriers should be adapted and applied to reach all women at high risk of cervical cancer.

**CRD commentary**
The review objectives and inclusion criteria were clear. Relevant sources were searched for studies, but few databases were searched, so some studies may have been missed. The limitation to published studies in English, also meant that the review may be prone to publication and language biases. It was unclear whether steps were taken to minimise the risk of reviewer bias and error by having more than one reviewer make decisions on study selection, validity and data extraction. Details of study findings (with effect measures and confidence intervals) were provided, but few details were reported about the interventions used in individual studies, and control group conditions were not described. It was also unclear what proportion of participants was lost to follow-up. The decision to combine the studies in narrative synthesis was appropriate, given the heterogeneity between them. However, the synthesis of the findings of interventional and observational studies made the results section a little hard to follow. Potential sources of bias were addressed in the text, including small sample sizes, reliance on medical records for outcomes data, and heterogeneity between the studies. In view of the limited search, potential for bias and heterogeneity between the studies, it is difficult to determine the reliability of the authors' conclusions and they should be interpreted with caution.

**Implications of the review for practice and research**
**Practice**: The authors did not state any implications for practice.

**Research**: The authors stated that for women at high risk of invasive cervical cancer there is a need to investigate tailored interventions (e.g. case management, patient navigation) to increase adherence to follow-up care after an abnormal Pap test. Culturally appropriate and up-to-date patient educational materials and interventions addressing psychological, educational and communication barriers should be developed.

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