CORRESPONDENCE

- *All letters must be typed with double spacing and signed by all authors.*
- *No letter should be more than 400 words.*
- *For letters on scientific subjects we normally reserve our correspondence columns for those relating to issues discussed recently (within six weeks) in the BMJ.*
- *We do not routinely acknowledge letters. Please send a stamped addressed envelope if you would like an acknowledgment.*
- *Because we receive many more letters than we can publish we may shorten those we do print, particularly when we receive several on the same subject.*

Smoke detectors save lives

SIR,—A 3 year old child was recently admitted to the accident department of this hospital with minor burns to his feet. He had been playing with matches in a bedroom. Luckily the family's home had been fitted with a smoke detector. The detector sounded an alarm, allowing the mother to rescue the child from the room and put out the fire.

A recent study based in the paediatric accident department at Cardiff Royal Infirmary found that only 36% of properties in Cardiff had a smoke detector, with private houses being more likely to be fitted with one than properties rented privately or from the council.[1] Cardiff City Council, in line with other councils, now has a programme for installing smoke detectors in all its properties.

Over the past few years the number of deaths caused by road traffic accidents has been falling steadily owing to a combination of legislation and design improvements. Unfortunately, deaths from house fires have remained at about 700 a year since 1978. In America smoke detectors have been shown to improve the chances of surviving a house fire.[2] New approaches are needed to increase the number of smoke detectors in the community, particularly in the private rented sector, where most of our poorest families live. Legislation may be needed to achieve this.

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1 McCabe MJ, Moore HE. Is national fire safety week a waste of time? *Fire Prevention* 1990;232:12-4.
2 Child Accident Prevention Trust. *Burn and scald accidents to children.* London: Child Accident Prevention Trust, 1985:31-3.

Follow up of women with dyskaryotic cervical smears

SIR,—The long term behaviour of those cervical intraepithelial neoplasia lesions that are diagnosed as mild or moderate dyskaryosis on cervical smear testing is unknown, yet this is fundamental to the appropriate management of women with such smear test results. The study by Dr Astrid Fletcher and colleagues is aimed at remedying this, but unfortunately, there are basic faults in its design.[1]

Firstly, in common with previous studies of this type, they have not used a control group. As a compromise they compared the number of women who developed carcinoma (five) with the expected number calculated from the "background annual rate" derived from the general population (0·08). This is not a valid comparison, however, as most women who develop cervical carcinoma in the general population have never been screened and are therefore more likely to present with advanced symptomatic disease. The background rate will therefore be an underestimate of the expected incidence of carcinomas (preclinical and symptomatic) detected by screening and follow up. Thus a control group of women who are being screened and are matched for age is needed, although this may not be feasible given the study's short follow up period to date.

Secondly, in view of the high mobility of their population, can they be sure that only five women developed carcinoma? Some carcinomas may have been diagnosed in neighbouring hospitals; this can be excluded with certainty only by reviewing these hospitals' histopathology records.[2]

Thirdly, the authors state that a criterion for their study was the presence of endocervical or metaplastic squamous cells in the initial abnormal smear. This criterion is not used in British practice, and probably more than half of abnormal cervical smears lack these cells. In using such a criterion for their study the authors have selected a subgroup of cervical abnormalities that may have a different behaviour to the rest. In Bristol we have just completed a study of over 700 women with mild or moderate dyskaryosis. The women were followed up for up to 11 years (mean 6·5 years), and all the above problems were considered. The preliminary results suggest that the presence of endocervical or metaplastic cells does have prognostic importance.

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1 Fletcher A, Metaxas N, Grubb C, Chamberlain J. Four and a half year follow up of women with dyskaryotic cervical smears. *BMJ* 1990;301:641-4. (29 September.)
2 Robertson JH, Woodend BE, Crozier EH, Hutchinson J. Risk of cervical cancer associated with mild dyskaryosis. *BMJ* 1988;297:18-21.

SIR,—We would like to comment on the study by Dr Astrid Fletcher and colleagues, which confirms previously known facts regarding cervical pre-invasive disease.[1]

The authors state that 45 women were referred for cone biopsy because of a smear showing severe dyskaryosis. We assume that this is a mistake as cone biopsies are not usually undertaken for this type of smear unless, for example, the whole of the lesion is not visible by colposcopy or invasion is suspected. Thirty nine of the patients with moderate dyskaryosis were initially followed up cytologically. The intercollegiate working party on cervical cytology screening suggested immediate colposcopic assessment for these patients.[2] Patients with mild dyskaryosis should have a repeat smear test at six months, and, if abnormality persists, they should be referred for colposcopy. The same applies for borderline abnormalities.

Many studies have recommended referral for colposcopy after a single abnormal smear. This policy would lead to an increased burden on colposcopy services and psychological morbidity for the patients but would get over the problem of default from cytological surveillance. Those who oppose such a view are comforted that repeat cytology will differentiate between clinically unimportant and high grade lesions. The poor correlation between initial results of cytological and histological examination may be related to lesion size, which has a significant positive association with histological grade of cervical intraepithelial neoplasia and is of importance in relation to cytological pick up rate.[3,4] Clearly, identifying women likely to have a high grade lesion is desirable, and factors such as lesion size merit further study.

The five patients who developed invasive cancer during the study period deserve special mention. One of these cases shows the problem of false negative results on cytological examination and highlights the importance of inspecting the cervix when taking a cervical smear. In one case the patient defaulted from normal cytological surveillance but the other three cases seem to represent a failure of the screening programme and hesitancy to do colposcopy and biopsy in women with persisting cytological abnormalities. These cancers may have been avoidable with recourse to proper diagnostic techniques.

Retrospective studies will always be flawed, and prospective longitudinal studies are needed to evaluate the safety and effectiveness of differing management protocols with relation to default rates, psychological morbidity, and cost-benefit ratio. The study should be designed to allow true progression and regression rates to be computed.

Randomised control trials are well established in Birmingham and other centres, and results from these studies should help to determine appropriate management for patients with minor cytological abnormalities and, in particular, should be able to differentiate between lesions with high grade and low grade cervical intraepithelial neoplasia. High grade lesions represent precursor lesions whereas low grade lesions have an unpredictable outcome and may be treated or observed depending on the clinical setting.[5]

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1 Fletcher A, Metaxas N, Grubb C, Chamberlain J. Four and a half year follow up of women with dyskaryotic cervical smears. *BMJ* 1990;301:641-4. (29 September.)
2 Intercollegiate Working Party on Cervical Cytology Screening. *Report.* London: Royal College of Obstetricians and Gynaecologists, 1987.
3 Giles GA, Hudson E, Crow J, Williams D, Walker P. Colposcopic assessment of the accuracy of cervical cytology screening. *BMJ* 1988;296:1099-102.
4 Shafi MI, Finn C, Luesley DM, Jordan JA. Lesion size and histology of CIN. *Journal of Experimental and Clinical Cancer Research* 1990;9(suppl 1):FC109.
5 Richart RM. A modified terminology for cervical intraepithelial neoplasia. *Obstet Gynecol* 1990;75:131-3.