

Comparison of uptake of breast screening, cervical screening, and childhood immunisation

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See editorial by Creighton

The national breast screening programme invites women aged 50-64 to have mammography every three years, by using the lists of the family health services authorities and health boards to provide a call and recall system. Breast screening centres ask general practitioners to check previous notification lists, encourage attendance, provide practical advice, allay fears, and, with non-attenders, discuss breast screening. Despite the additional workload that promoting a high uptake entails no financial incentive is paid to general practitioners.

Cervical screening and childhood immunisation are largely managed and delivered by general practitioners and primary care teams, although some practices also use a central call and recall system. General practitioners receive target payments (payments for reaching certain levels of uptake) for cervical screening and childhood immunisation.¹ Different methods of management and remuneration may influence levels of uptake of breast screening, cervical screening, and childhood immunisation, by influencing general practitioners' attitudes and sense of participation in these services. We compared the rates of uptake for the three services among general practitioners in Grampian, Scotland.

Methods and results

We derived the rate of uptake for breast screening for 164 general practitioners in Grampian randomly selected from records held by the North East Scotland Breast Screening Centre, and we obtained rates of uptake for childhood immunisation and cervical screening from computerised databases held by the Grampian Health Board's computing centre. The data for the prevalence round of breast screening (completed in December 1992) and the data for 1992 for immunisation and cervical screening were linked and analysed with the software package SPSS/PC+.

The table shows the data for the rates of uptake. Differences between the rate of uptake for breast screening and the rates for cervical screening and immunisation were close to the normal distribution. Paired *t* tests showed that the mean rate for breast screening was significantly lower than the mean rates for primary immunisation (95% confidence interval 15.4% to 17.7%, $P < 0.0001$) and cervical screening

*Comparison of rates of uptake for 164 general practitioners in Grampian for breast screening, primary childhood immunisation, and cervical screening for 1992**

	Breast screening	Primary immunisation	Cervical screening
No invited	17 118	5823	52 776
Uptake (%):			
Mean (SD)	80.9 (7.25)	97.5 (3.04)	90.4 (4.20)
Minimum	44.5	79.6	73.0
Maximum	93.4	100.0	97.8

*Rates for breast screening are based on prevalence round of screening, completed in 1992.

(8.2% to 11.0%, $P < 0.0001$). Spearman's rank correlations were done to compare the rates for breast screening, cervical screening, and primary immunisation. A significant positive correlation existed between the rates for cervical screening and immunisation ($r_s = 0.27, 0.10, 0.42, P < 0.01$), but not between breast and cervical screening ($r_s = 0.16, -0.02, 0.32$) or between breast screening and immunisation ($r_s = 0.04, -0.22, 0.14$).

Comment

North east Scotland has one of the highest rates of uptake in the United Kingdom for breast screening (81%),² cervical screening (90%), and primary childhood immunisation (98%),³ with the rates for Scotland in 1992 being 72%, 78%, and 96% respectively. The area has a well established, accurate primary care register with motivated general practitioners and compliant patients. Deprivation is less severe in Grampian than in most other Scottish health boards,⁴ which may contribute to an overall rate of uptake for breast screening that was higher than that found in previous British trials of breast screening.⁵ All these factors may also account for the higher rates for cervical cytology and immunisation.

In this study the rate of uptake for breast screening was consistently lower than for cervical screening and for primary immunisation. We have also shown significant positive correlations between rates for cervical screening and immunisation, both of which are largely organised within general practices and bring target payments. No significant correlation, however, was observed between rates for breast screening and cervical screening or immunisation.

Our preliminary findings may have implications for the future development of breast cancer screening programmes in Britain. Any new proposals for increased participation of primary care staff in the management of breast screening should be carefully investigated and costed before widespread implementation.

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5 UK Trial of Early Detection of Breast Cancer Group. First results on mortality reduction in the UK trial of early detection of breast cancer. *Lancet* 1988;ii:411-6.

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