

Cervical screening in general practice

Strategies for improving participation

BACKGROUND

National cervical screening rates have plateaued at around 60%. Each method of recruitment has an upper limit to uptake and the benefits of multiple strategies are additive. There is debate about reallocating Pap testing to nurses in general practice.

OBJECTIVE

To assess the effects on cervical screening rates in one small general practice.

METHODS

An audit of the effect of: updating Pap test details in electronic records; active recruitment by letter; follow up telephone call if no appointment made; altering the letter to invite women to separate themselves into Pap test 'plus other issues' or 'screening test only'; and the offer of a Pap test for the 'Pap test only' group to be performed by a nurse.

RESULTS

Over 18 months there was a 27% improvement from a biannual screening rate of 53% at baseline to 67.5% at the end of the audit. Over the past 6 months, 49% of women elected for the 'screening only' test provided by a nurse.

DISCUSSION

All four strategies are feasible and associated with a considerable increase in screening rates. Patients can choose to have their test performed by a nurse in general practice. This study suggests that each strategy's improvement in uptake is independently additive.

Patrick Byrnes

MBBS, FRACGP, is a general practitioner, Bundaberg, Queensland, Medical Educator, CSQTC, and Senior Lecturer, University of Queensland. patrick@apmc.net.au

Colleen McGoldrick

RN, is a nurse Pap test provider, Bundaberg, Queensland.

Margaret Crawford

MBBS, FRACGP, is a general practitioner, Bundaberg, Queensland.

Marilyn Peers

MBBS, is a general practitioner, Bundaberg, Queensland.

Cervical cancer death rates fell 46.7% between the 1991 introduction of the National Cervical Cancer Screening Program and 2003, suggesting substantial benefit from this program.¹

However, participation in the National Cervical Screening Program has plateaued in the low 60% range. Despite the introduction of a statewide recall system (Queensland Health Pap Smear Register) in 1999, Queensland has consistently had the lowest participation rates (58.1% in 2000–2001).¹ In 2002, the Health Insurance Commission introduced a Practice Incentive Payment (PIP). Currently, general practices that screen more than 50% of eligible patients over a 2.5 year cycle attract this payment. There are four main approaches to promoting screening:

- individual invitations, referred to as an 'active' approach
- opportunistic screening, referred to a 'passive' approach

- special screening services, and
- community and media education programs.²

Different strategies appear to recruit different groups up to an individual ceiling, and so it is likely that strategies would be additive in effect.³

Sending a reminder letter to under screened women is associated with an increase in Pap testing rates,³ and significant improvement results if rarely screened women are sent tailored letters followed by motivational telephone interviews.⁵ Hence we postulated that active recruitment by letter followed by proactive recruitment with a telephone call would be useful and feasible strategies for our study.

A study of Australian general practitioners showed that the majority of participants did not adhere to the guidelines of biannual screening, and over screened low risk groups while under screening high risk groups.⁶ This suggested that a systematic approach was required to ensure that the target population was screened.

We postulated that significant improvement in Pap test rates would result from the combination of four strategies:

- search of an updated database register⁷
- active recruitment by letter
- proactive telephone follow up
- invitation to women to declare themselves as 'screening only' (to be offered nurse Pap test provision), or 'plus other issues' to have a medical consultation.

Methods

Study population

Our practice in the large provincial city of Bundaberg has 2.1 full time GPs serving 2941 standardised whole patient equivalents. We targeted our approximately 1500 current female patients aged 18–69 years who met the following criteria:

- the woman or any family member had attended the practice within the previous 2 years
- had not requested a records transfer to another practice, and
- did not have an address outside of the Bundaberg district.

To establish an electronic database, we obtained a complete list of all Pap tests performed in the practice for the previous 2 years (01/07/2002 to 30/06/2004) from the cytology laboratory, and the corresponding patient records (Medical Director 2 (MD2)) were opened and updated in the Pap test section by a receptionist. A MD2 search was then performed for 'all women aged 18–69 years' and 'no test recorded' from 01/07/2002 to 30/06/2004, followed by a limiting search for 'all women aged 18–69 years' and 'hysterectomy' (women with a subtotal hysterectomy are not recorded as 'hysterectomy' in our records). Amalgamation of these lists produced the 'target list'.

Initially, active recruitment letters were sent out that informed the patient they were overdue for a Pap test and asked them to make an appointment. Seven months later, proactive recruitment was added. A receptionist telephoned if there had been no response to the letter within 1 month. The uptake was measured at the end of the first 12 months and another MD2 search was performed to update the target list.

Twelve months after commencement we employed a registered nurse Pap test provider. The proactive recruitment letter was altered

at this time to encourage women to separate themselves into requiring a Pap test 'plus other issues' or a 'screening only' Pap test. The letter further recommended nurse provider for 'screening only' Pap tests, and doctor consultation at the usual fee for the Pap test 'plus other issues' group. Pap tests performed by the nurse were charged as Medicare rebate item 10998 (available in rural areas). The doctor also saw the nurse's patients briefly to inform them of the procedure for obtaining results, and to sign the cytology request form (item 3 rebate).

Screening uptake was measured 6 months after the introduction of this initiative.

Results

Participation rates rose from a baseline of 53 to 67.5% 18 months later (*Table 1*). During the past 6 months when 'screening only' nurse test provision was offered, 49% of women making a Pap test appointment chose this option. The nurse called the doctor for assistance because of cervix appearance or technical difficulty in 4% of tests.

The initial establishment cost for the database was \$0.38 per woman (*Table 2*). Maintenance costs were \$3.48 per woman per 2.5 year cycle (*Table 3*).

Discussion

This was a simple study in one small practice of the effect of four strategies. There was incomplete separation of the effect of each strategy because another strategy was added before the previous strategy had sufficient time to reach full effect. We also failed to measure participation rate after active recruitment was used alone.

The practice rate was based only on tests done by the practice, whereas the PIP scheme counts patients who have Pap tests elsewhere. The audit also included the 18–20 years age group unlike the National Screening Program, and this age group has a poor participation rate. Both of these factors may have led to underestimation of the true rate.

However, all four strategies were feasible and were associated with a considerable 18 month increase in Pap test screening. The only requirement for an average general practice to implement the first three strategies would be use of electronic records for recording Pap test results. The fourth strategy may be more difficult to implement.

Table 1. Participation rates

Chi-square $p < 0.0001$

Date	Number of Pap tests over 2 years	Women patients	%
01/07/2004	816	1540	53
30/06/2005	867	1467	60
31/12/2005	966	1431	67.5

Table 2. Practice register establishment costs

22 hours receptionist time, divided by target population 18–69 years of age	\$594 1540
Total cost per woman	\$0.38

Table 3. Monthly administration cost of proactive recruitment

Receptionist time for data search, letter mailout, follow up telephone call, checking monthly Pap reports to ensure accurate updating of database	6 hours = \$122
Pap test nurse input into nonattendees and updating database	1.5 hours = \$36
Cost of letters and telephone calls	\$21.25

* Cost per woman per month is \$179.25 divided by 1540 = \$0.12 over a 2.5 year cycle = \$3.48 per woman

It requires a consulting room for the nurse, paying for a nurse to attend a suitable training course, and use of item 10998 which is only available in rural areas. In our private payment practice there was a price incentive to see the nurse. This would not pertain in a bulk billing practice.

In the United Kingdom in 1990, two levels of Pap test incentive payments were introduced: one for >50% coverage and a higher payment for >80% coverage over a 3 year cycle. Over the following 3 years, the percentage of GPs achieving >80% coverage increased 53 to 83%, and the percentage with <50% coverage declined from 15 to 3%.² In Australia, there is one level of incentive payment. General practitioners are eligible for payment under the PIP for >50% coverage over a 2.5 year cycle. If the PIP followed the UK example and offered a further payment for a higher level of coverage, extra maintenance costs of this four strategy approach would be covered.²

Our principal reason for introducing nurse Pap test provision was to reduce the workload on doctors. With 49% of patients selecting this option over the 6 months studied, and estimating 10 minutes for a doctor to perform a Pap test, this strategy saved 18 hours of doctor time. With a suitably worded invitation letter, this task reallocation can be left to patient choice.

Conflict of interest: none declared.

References

1. Australian Institute of Health and Welfare. Cervical screening in Australia 2002–2003. Canberra: AIHW, 2005.
2. Straton JA. Recruitment for cervical screening: a review of the literature. University of Western Australia 1994;16–8.
3. Byles JE, Sanson-Fisher RW, Redman S, Dickinson JA, Halpin S. Effectiveness of three community based strategies to promote screening for cervical cancer. *J Med Screen* 1994;1:150–8.
4. Morrell S, Taylor R, Zeckendorf S, Niciak A, Wain G, Ross J. How much does a reminder letter increase cervical screening among under screened women in NSW? *Aust N Z J Public Health* 2005;29:78–84.
5. Valanis B, Whitlock EE, Mullooly J, et al. Screening rarely screened women: time-to-service and 24 month outcomes of tailored interventions. *Prev Med* 2003;37:442–50.
6. Wai D, Ferrier A, Collings S, Laverty C. Have the most recent Pap smear guidelines affected GP practices? *Aust Fam Physician* 1996;(Suppl 1):S44–8.
7. Laurence CO, Burgess T, Beilby J, Symon B, Wilkinson D. Electronic medical records may be inadequate for improving population health status through general practice: cervical smears as a case study. *Aust N Z J Public Health* 2004;28:317–20.