10 Vaccination and mammography

10.1 Background

General practitioners are the primary source of immunisation against tetanus and influenza in Australia (Britt et al. 1999b; Health Insurance Commission 1999). The SAND questions on influenza and tetanus immunisation were based on the NHMRC criteria set out in the sixth edition of the *Australian Immunisation Handbook 1997* (National Health and Medical Research Council 1997).

While the incidence of tetanus in Australia is very low, with only two cases being reported in 1996 (Australian Institute of Health and Welfare 1998a), the disease is often fatal, and continued control depends on high levels of immunisation (National Health and Medical Research Council 1997).

Influenza is still a life-threatening disease, particularly for 'high risk' groups (Australian Institute of Health and Welfare 1998a). High risk categories include patients over 65 years (over 50 years for Aboriginal people and Torres Strait Islanders), adults with a chronic debilitating disease (especially chronic cardiac, pulmonary, renal and metabolic diseases), children with cyanotic congenital heart disease, adults and children receiving immuno-suppressive therapy, residents. Vaccination is also recommended for staff members of nursing homes and for other health workers caring for immuno-compromised patients (National Health and Medical Research Council 1997). Immunisation is an important preventive measure which significantly reduces the impact of the disease (Ahmed et al. 1995; Ahmed et al. 1997).

In the 1995 National Health Survey, 64% of women aged 50–69 reported having a mammogram (Australian Institute of Health and Welfare 1998b). Women have direct access to breast cancer screening and frequently attend in response to public awareness programs. The extent to which GPs are aware of their patients attendance may reflect both their involvement in and promotion of screening activities and their communication with their patients. While the mammography question to patients was asked of all women over the age of 18, the prime target was women in the 50–69 age group for whom BreastScreen Australia has set a target of 70% mammography level aiming to achieve a 30% reduction in breast cancer deaths (Australian Institute of Health and Welfare 1998b).

10.2 Research questions

1. How many general practice patients report having tetanus immunisation in the preceding 10 years?
2. How many general practice patients report having influenza immunisation in the preceding year?
3. How many general practice patients are classified by the general practitioner in an at-risk category for influenza?
4. What proportion of general practice patients who are classified in an at-risk category for influenza report having been immunised against influenza in the preceding year?
5. How many women over the age of 18 years presenting to general practice report having screening mammography in the preceding two years?

6. What proportion of women over the age of 18 years presenting to general practice report having screening mammography in the preceding two years and in what proportion was this known to the general practitioner?

10.3 SAND questions

Box 10.1: Vaccination and mammography screening

GPs asked the patients:

♦ *Have you had a tetanus immunisation or booster in the last 10 years?*	*Yes / No / Don't know*
♦ *Have you been vaccinated against influenza in the last year?*	*Yes / No / Don't know*
♦ *Have you had a screening mammography in the last two years? (asked of women over 18 years)*	*Yes / No / Don't know*

Questions asked of the GPs:

♦ *Is the patient in an at-risk category for influenza?*	*Yes / No / Don't know*
♦ *Prior to asking today, were you aware of this patient's mammography? (asked for women who responded positively to the question regarding mammography)*	*Yes / No / Not sure*

Note: In this report the 'at risk' category includes health care workers for whom vaccination is advised.

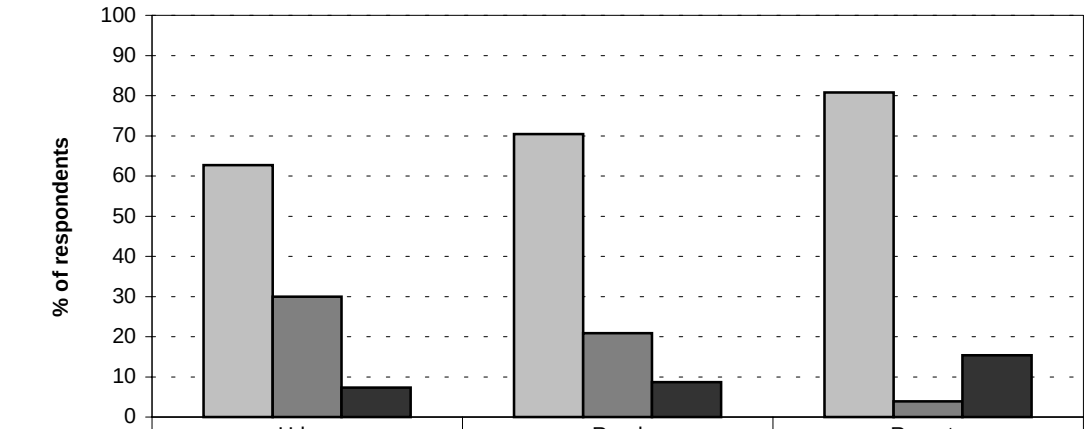
10.4 Results

Sample size was 2,002 patient encounters from 100 GPs.

Tetanus immunisation

Overall 63.7% (95% CI: 59.9–67.5) of encounters in general practice were with persons who had tetanus immunisation in the preceding 10 years. A small percentage did not know whether they had or not. There was no significant difference in the tetanus immunisation rates of males and females. Patients over the age of 45 years were significantly less likely (53.7%; 95% CI: 47.8–59.5) to have been immunised than patients aged 15–44 years (69.3%; 95% CI: 64.3–74.4) and those aged 0–14 years (91.0%; 95% CI: 72.0–100.0).

Patients encountered who resided in remote areas were significantly more likely (80.8%; 95% CI: 69.2–92.4) to have been immunised than patients residing in urban areas (62.0%; 95% CI: 57.9–66.2) (Figure 10.1).



	Urban	Rural	Remote
Yes	62.7	70.4	80.8
No	30.0	20.9	3.9
Don't Know	7.3	8.7	15.4

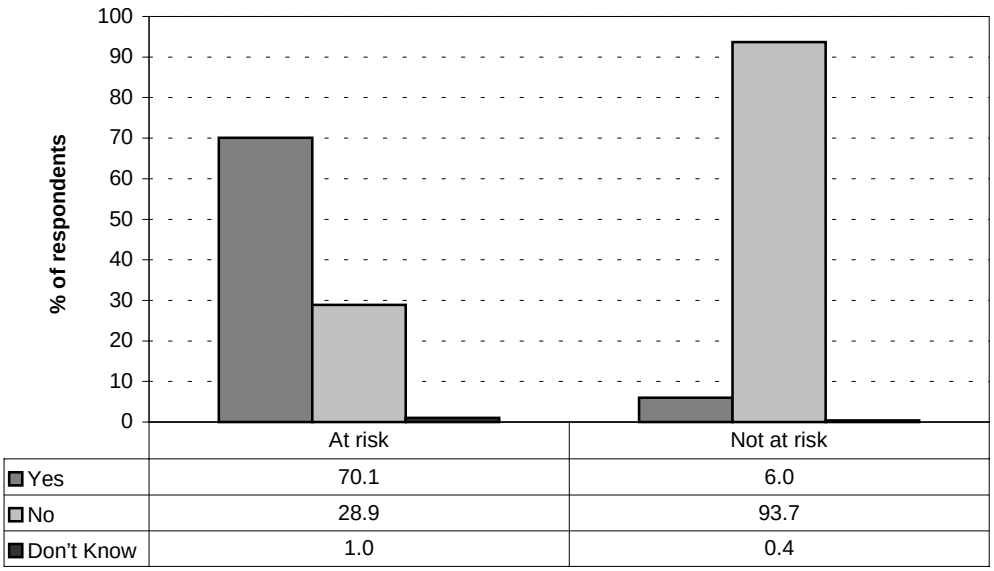
Figure 10.1: Tetanus immunisation rates by RRMA

Influenza vaccination

Overall 28.5% (95% CI: 24.9–32.1) of encounters in general practice were with persons who have had influenza vaccination in the preceding year. There was no significant difference in the influenza vaccination rates of males and females.

Patients over the age of 65 years were significantly more likely (74.1%; 95% CI: 60.5–87.8) to have been vaccinated than patients aged 45–64 years (26.8%; 95% CI: 18.4–35.2), who, in turn, were more likely to be vaccinated than patients under 45 years, a group which had low levels of vaccination (6.2%; 95% CI: 3.0–9.3).

Patients classified as at risk for influenza were seen at 35.5% (95% CI: 31.5–39.5) of encounters. There was no significant difference between males and females in the proportion classified as 'at-risk'. Of those classified as at-risk, 69.5% had been vaccinated, while only 5.9% of those not classified 'at-risk' had been vaccinated (Figure 10.2). There were no significant differences by age or gender in the relationship between being at-risk and influenza vaccination.



	At risk	Not at risk
Yes	70.1	6.0
No	28.9	93.7
Don't Know	1.0	0.4

Figure 10.2: Influenza immunisation rates by risk catagory

Mammography screening

Overall 35.3%, (95% CI: 32.1–38.4) of women aged 18 years and over encountered in general practice reported having screening mammography in the preceding two years. Only 4.6% of women aged between 18 and 39 reported having a mammogram compared with 69.5% of women in the 50–69 age group. Women in the 70+ age group reported lower rates (29.5%) of mammography than those in the 50–69 years age group (69.5%) (Figure 10.3). There were no significant differences in reported screening rates between urban and rural patients presenting to general practitioners in the study (data not shown).

General practitioners reported being aware of the patient's mammogram in 75.4% of the instances where women reported having had a mammogram in the preceding two years. There were no significant differences in the level of awareness related to the age of the patient or the age or gender of the GP (data not shown).

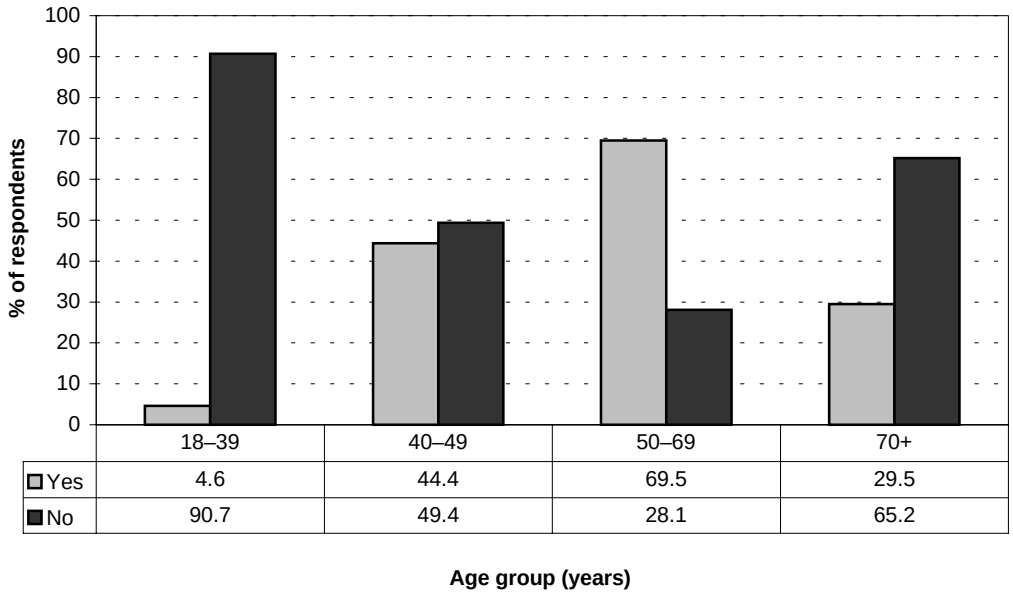


Figure 10.3: Age specific rates of mammography in previous two years

10.5 Discussion

Tetanus immunisation levels in the higher risk remote areas were significantly higher than in the lower risk urban areas, possibly reflecting a patient and/or GP awareness of the greater risks. While few patients classified 'not-at-risk' by GPs receive immunisation against influenza, there is a substantial group of 'at-risk' patients who are not receiving immunisation. This study provides one measure of the immunisation levels in the general practice patient population and could be repeated to monitor changes in reported immunisation levels.

BreastScreen's national screening target for mammography of 70% for women aged 50–69 may now be being reached. It is notable that in spite of the direct patient access to mammography, the patient's GP reported awareness of the mammogram in over three-quarters of instances. General practitioners can play an important part in the screening process and the SAND survey could be used to supplement future monitoring of mammography screening.