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*Better information and statistics
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2009 Adult Vaccination Survey

Summary results

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Canberra

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Abbreviations and symbols

Abbreviations

AIHW	Australian Institute of Health and Welfare
CATI	Computer-assisted telephone interview
DoHA	Australian Government Department of Health and Ageing
NHMRC	National Health and Medical Research Council
NIP	National Immunisation Program

Symbols

—	Number rounded or equal to zero
..	Invalid calculation; not applicable
*	Estimate has 25% or greater relative standard error

Note: In tables, the calculations of totals use unrounded data. Rows and columns of some (rounded) results may not add up to the total provided due to the rounding.

Summary

2009 Adult Vaccination Survey

The 2009 Adult Vaccination Survey was a survey of 10,231 Australians aged 18 years or older, conducted during November–December 2009. It was the seventh national survey in the current series. Previous surveys focused predominantly on the National Influenza Vaccination Program for Older Australians. Participants in the survey were asked about their recent experience of influenza and pneumococcal vaccination, and about their medical and socio-demographic status. Due to the epidemic of pandemic (H1N1) influenza (commonly referred to as ‘swine flu’), and subsequent government support for vaccination of people against this epidemic from September 2009, this survey included questions on vaccination status of H1N1 influenza. Also for the first time, the survey included questions on pertussis (whooping cough) vaccination for adults.

Main findings

Seasonal influenza

An estimated 74.6% of Australians aged 65 years and over (2.2 million people) were vaccinated against seasonal influenza in 2009. This coverage was similar to that estimated from previous surveys. The vast majority of these vaccinations (96%) were provided free of charge, either under the government-funded program or by employers (see Figure S.1 for more details).

Pneumococcal disease

An estimated 54.4% of Australians aged 65 years and over (1.6 million people) were currently vaccinated against pneumococcal disease in 2009. This coverage was also similar to that estimated from previous surveys. A large majority of these vaccinations (96%) were provided free of charge, either under the government-funded program or by employers (see Figure S.2 for more details).

Pandemic (H1N1) influenza

An estimated 18.9% of Australians aged 18 years and over (3.0 million people) had received the pandemic (H1N1) influenza vaccine by December 2009. Uptake was slightly higher in the ‘health and community carer’ at-risk group (26.3%).

Pertussis

An estimated 11.3% of Australians aged 18 years and over had received a pertussis vaccination as an adult or adolescent. Uptake was substantially higher among parents of infants aged less than 12 months old (51.5%).

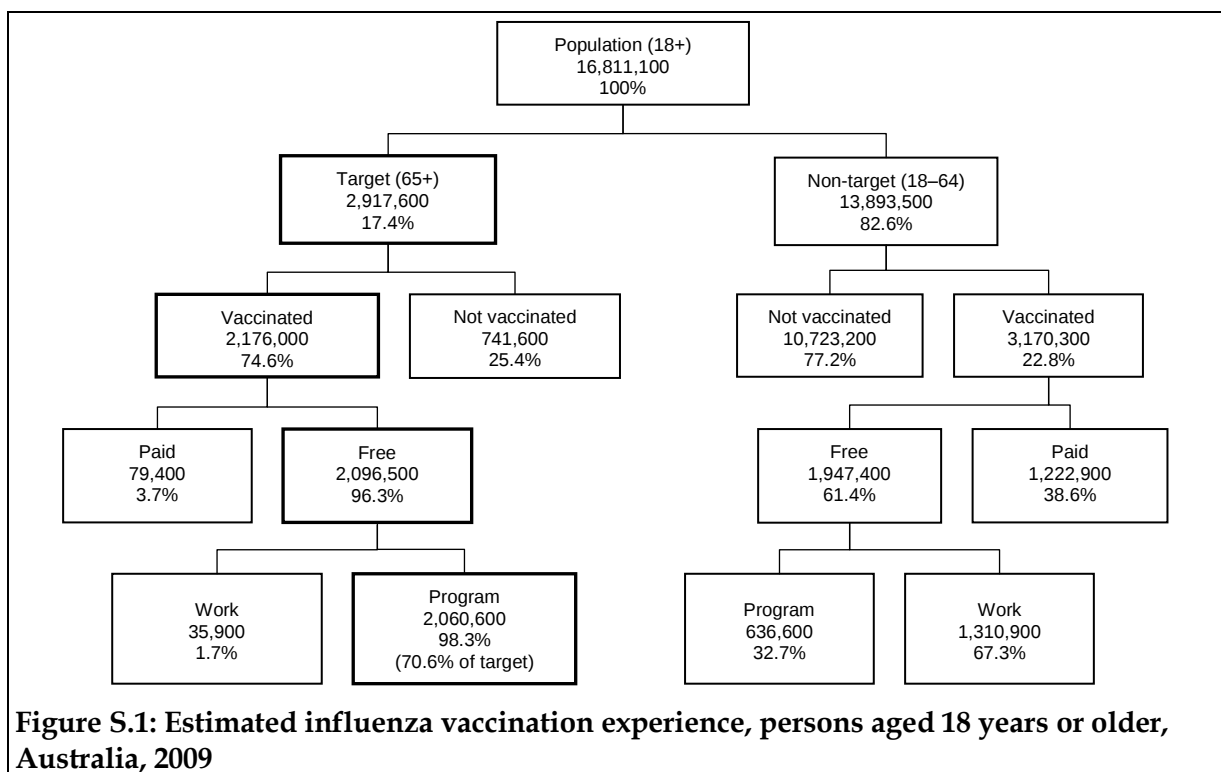


Figure S.1: Estimated influenza vaccination experience, persons aged 18 years or older, Australia, 2009

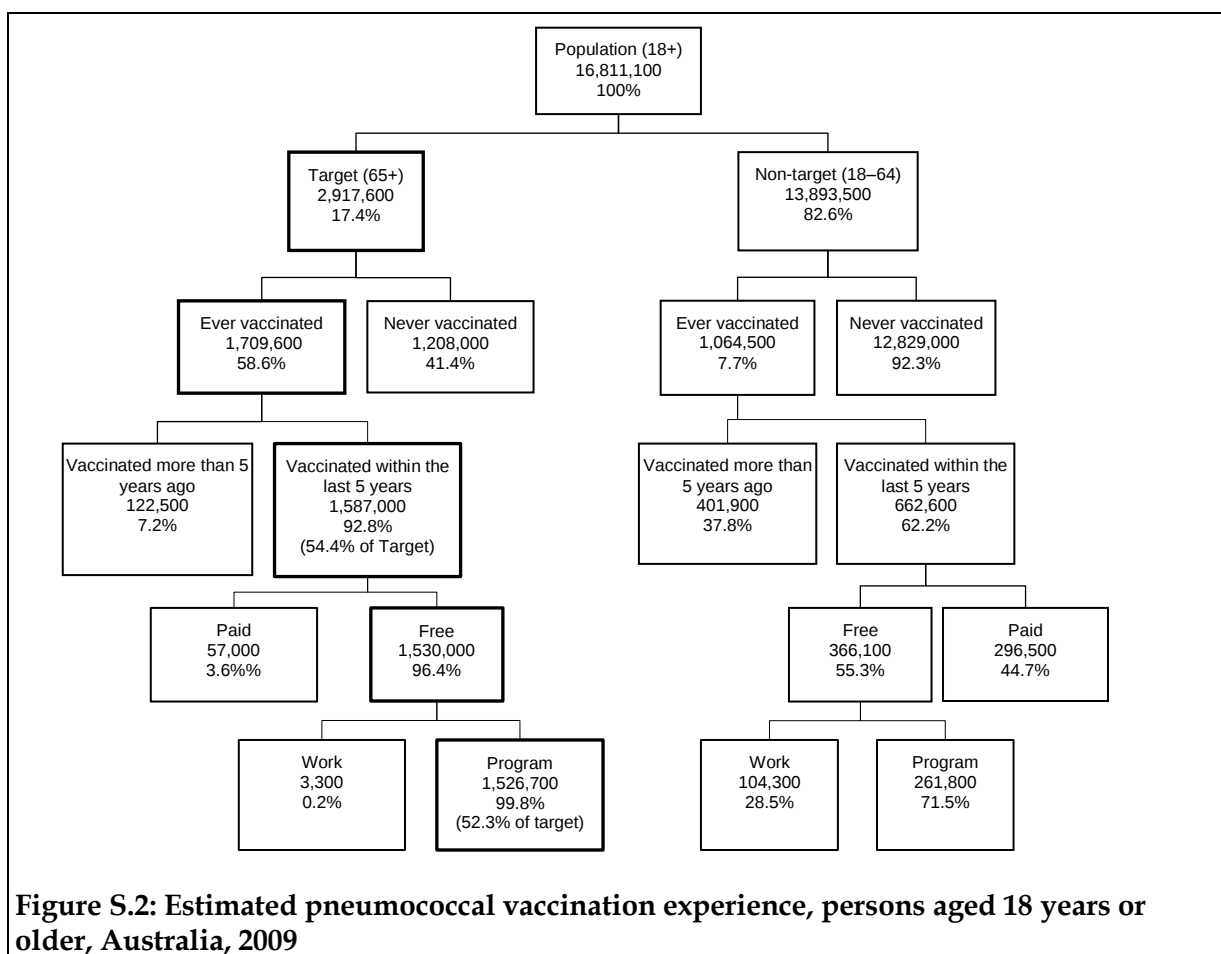


Figure S.2: Estimated pneumococcal vaccination experience, persons aged 18 years or older, Australia, 2009

1 Introduction

Impact of influenza and pneumococcal disease in Australia

Influenza is an infectious viral disease which can sometimes cause widespread illness in the community (NHMRC 2008). It can lead to complications such as pneumonia and pleurisy. People in the older age group are at increased risk of serious complications and death following influenza infection (NHMRC 2008). In Australia in 2009, 55 Australians aged 65 years or older were documented as dying from influenza as an underlying cause (Australian Institute of Health and Welfare (AIHW) National Mortality Database), although this is possibly an underestimate of the mortality burden from influenza because many deaths from pneumonia – a complication of influenza infection – are not verified as influenza cases.

Pneumococcal disease is an infectious bacterial disease, most frequently occurring in young children and the elderly. The most common form of the disease in adults is pneumococcal pneumonia. Other forms are meningitis and septicaemia. In the elderly, invasive pneumococcal disease occurs at a rate of 20–60 per 100,000 elderly people per annum with a fatality rate of 15–20%. The disease was documented on death certificates as responsible for 12 deaths of people aged 65 years or older in 2009; again, this is possibly an underestimate of the mortality burden from invasive pneumococcal disease.

National influenza and pneumococcal vaccination programs for older Australians

Influenza and pneumococcal vaccination are population health interventions that reduce the impact of influenza and pneumococcal diseases. The Australian Government funds two vaccination programs for older Australians: the National Influenza Vaccination Program for Older Australians and the National Pneumococcal Vaccination Program for Older Australians. State and territory governments receive funding to purchase vaccine to administer to Australian residents aged 65 years or older. In the case of influenza, funding is for one vaccine dose annually for each state/territory resident aged 65 years or older. For pneumococcal vaccine, fewer doses are funded, as a single revaccination is recommended, in most instances, 5 years after the first dose.

In 2009, state and territory governments purchased vaccine doses at a nationally negotiated price, and then distributed the purchased vaccine to immunisation providers (for example, general practitioners or council clinics) for delivery to the population.

In this report, Australians aged 65 years or older are referred to as the target population or target group. In addition to vaccine for this group, vaccines are also funded for Indigenous people aged 50 years and over, and aged 15 to 49 years with medical or other risk factors (as recommended in the *Australian immunisation handbook* (NHMRC 2008)).

An estimate of the proportion of the target population who are currently vaccinated against influenza is derived from information on vaccination in the prior calendar year. For pneumococcal disease, an estimate of the proportion of the target population who are currently vaccinated is derived from information on vaccination in the previous 5 years.

Adult Vaccination Survey

The 2009 Adult Vaccination Survey was the seventh such survey. As in previous years, the 2009 survey used the computer-assisted telephone interview (CATI) survey method.

Although the main objective of the Adult Vaccination Survey was to collect information on influenza and pneumococcal vaccination coverage, one-off coverage for other vaccinations among adult Australians has also been collected in different waves. For example, in 2006, vaccination information on tetanus and shingles was collected, and in 2009 vaccination information on H1N1 and pertussis was collected.

The 2009 survey sample was 10,231 people aged 18 years or older, ranging from 665 people in the ACT to 2,688 in NSW. Historically, the primary focus of the survey has been on people aged 65 or older (5,307 survey respondents). In 2009, the sample of those aged 18–64 years (4,924 respondents) was more than doubled (over that of 2006) to support the analysis of data on H1N1 (pandemic influenza, commonly referred to as ‘swine flu’) and pertussis (whooping cough) vaccination, gathered for the first time in 2009. The response rate for the survey (completed interviews divided by total eligible calls) was 33.5%. The extent of non-response bias associated with this relatively low response rate is unknown, although some of the bias may be corrected by ‘weighting’ of the survey records before analysis.

Individual survey records were allocated to categories according to sex, age group and state/territory and assigned weightings to reflect the size of these categories within the total Australian population.

Note that the CATI method may not be the most appropriate method to survey people in the Northern Territory, as, compared with other jurisdictions, a greater proportion of people cannot be contacted by telephone. Hence, the coverage estimates in the Northern Territory are likely to be an underestimate and should be interpreted with caution.

About this report

The figures provided in the report are population estimates based on the information obtained from the survey, and may differ from measures obtained from a vaccination register.

The report presents estimates derived from survey responses weighted to the Australian population aged 18 years or older (see Appendix 2).

Point estimates are provided in the body of the report, and confidence intervals – indicating a degree of imprecision that arises from the survey rather than a census or register – for selected results are provided in Appendix 3.

Chapter 2 presents an analysis of influenza and pneumococcal coverage, including:

- coverage of the target groups
- trends in coverage
- the incidence of people who paid for the vaccine when they did not need to
- coverage of the non-target group
- outcomes for two of the population groups that the National Health and Medical Research Council (NHMRC) recommends be vaccinated.

Chapter 3 presents an analysis of the responses to the H1N1 and pertussis survey questions.

Chapter 4 summarises characteristics of the respondents to the survey and the methods used.

2 Seasonal influenza and pneumococcal results

Introduction

The 2009 Adult Vaccination Survey collected information on adults' self-reported vaccination status for four vaccines: seasonal influenza, pneumococcal disease, H1N1 pandemic influenza and pertussis. The survey recorded the most recent vaccination received for those who have been vaccinated. It did not record instances of more than one dose of the vaccine being received. This chapter presents results on seasonal influenza and pneumococcal vaccination, with the other vaccinations covered in Chapter 3.

Seasonal influenza vaccination

Total coverage

Total coverage is defined as the proportion of the target population vaccinated against influenza. The target population is Australians aged 65 years or older. In 2009, there were over 2.9 million Australians in this target population.

The survey showed that of the target population, almost three in four (74.6%) were vaccinated against influenza (Table 2.1). The survey also showed that coverage varied greatly by state/territory, with South Australia showing the highest coverage (81.3%) and the Northern Territory the lowest (69.3%).

Program coverage

Program coverage is defined as the proportion of the target population vaccinated against influenza with program-provided vaccine. It is also possible for the target group population to obtain vaccination free of charge through employment, or by purchasing privately. In this report, program-funded vaccination is defined as vaccine that was neither paid for by the employer nor by the respondent.

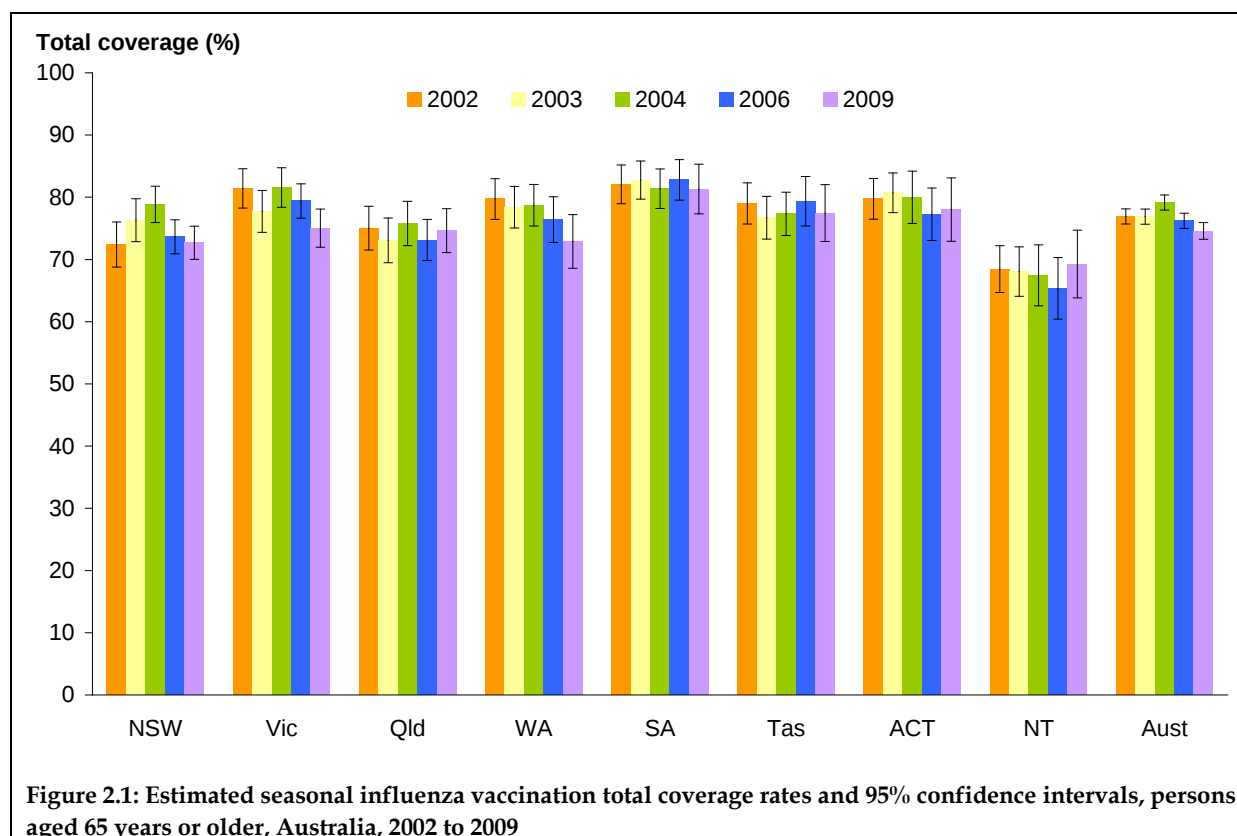
The survey showed that seven in ten (70.6%) people in the target group were vaccinated through the program. Program-funded vaccination varied among states and territories, with South Australia the highest (77.4%) and the Northern Territory the lowest (62.0%).

Put another way, the survey showed that some 95% of the vaccinated target population were vaccinated with program-provided vaccine (Table 2.1, Figure 2.1).

Table 2.1: Estimated seasonal influenza vaccination coverage, persons aged 65 years or older, Australia, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number ('000)									
Target population	990	740	550	270	250	77	36	12	2,900
Vaccinated	720	550	410	200	200	60	28	*8	2,200
With program vaccine	680	530	380	180	190	56	26	*7	2,100
Not with program vaccine	36	28	24	11	10	*3	*2	*1	120
Not vaccinated	270	180	140	73	47	17	8	*4	740
Per cent									
Total coverage	72.7	75.0	74.6	72.9	81.3	77.5	78.0	*69.3	74.6
Program coverage	69.1	71.2	70.1	68.9	77.4	73.2	72.5	*62.0	70.6
Proportion of total coverage using program-funded vaccine	95.0	94.9	94.0	94.4	95.1	94.5	92.9	*89.6	94.7

* Estimate has 25% or greater relative standard error.



Reasons for not getting vaccinated

The survey asked respondents to give the main reason for not being vaccinated in the 2009 influenza season. The three most cited reasons for not getting vaccinated among the target group included 'I don't get the flu', 'I'm not at risk', and 'It brings on the flu' (Table 2.2).

Table 2.2: Reason for non-vaccination, persons aged 18 years or older, Australia, 2009

Reason	Target group (aged 65+ years)	Other adults (aged 18–64 years)	All adults
	Per cent		
I don't get the flu/rarely get flu	26.3	25.7	25.7
I'm not at risk/don't need it	16.2	21.0	20.7
No time/ too busy/didn't get around to get vaccinated	6.6	10.2	9.9
Did not think about it/forgot to ask about it	5.3	7.4	7.3
It brings on the flu/I may get the flu	6.9	3.8	4.0
I don't believe in vaccinations	4.4	3.8	3.8
I don't like injections/vaccinations	4.0	3.3	3.4
Got the flu from it last time/had a worse case of flu from it	6.8	3.1	3.3
Other reasons	19.7	15.7	16.0
No reason	3.9	6.0	5.9
Total	100.0	100.0	100.0

Pneumococcal vaccination

Introduction

There are currently two different types of pneumococcal vaccine available in Australia. A 7-valent pneumococcal conjugate vaccine (7vPCV) became available in 2001 for immunisation of infants and children aged from 6 weeks to 9 years. The 7vPCV was added to the National Immunisation Program (NIP) for high-risk children in 2001 and for all children up to 2 years of age from January 2005.

The 23-valent pneumococcal polysaccharide vaccine (23vPPV) has been available since 1983. A funded program with 23vPPV for Indigenous Australians aged 50 years or older began in 1999. Non-Indigenous Australians aged 65 years became eligible to receive the vaccine under the NIP from January 2005. In addition, people aged less than 65 years with underlying chronic conditions predisposing them to invasive pneumococcal disease (IPD) could access 23vPPV through the Pharmaceutical Benefits Scheme.

The National Pneumococcal Vaccination Program for Older Australians provides funding to purchase doses for the initial vaccination of all Australians aged 65 years or older. A catch-up program was also available for people aged 65 years or older, but ended in 2009. From January 2010, there has been a re-vaccination program for those requiring booster doses 5 years after the initial vaccination.

The *Australian immunisation handbook* recommends at most three pneumococcal vaccinations in an adult's lifetime (Table 2.3). The pneumococcal vaccination is sometimes given at the same time as the influenza vaccination, and is usually given only twice, the second time 5 years after the first. A third dose is recommended for people with risk factors first vaccinated before 65 years of age.

Table 2.3: Revaccination with 23vPPV for people ≥10 years of age

Primary dose 23vPPV given to	First 23vPPV re-vaccination	Second 23vPPV re-vaccination
Non-Indigenous adults ≥65 years	5 years after first dose	No
Non-Indigenous adults <65 years with underlying chronic medical condition, asplenia, or smoker	5 years after first dose	Either 5 years after first re-vaccination or at 65 years of age (whichever is later)
Indigenous adults aged ≥50 years	5 years after first dose	No
Indigenous adults aged <50 years with underlying chronic medical condition, asplenia, or smoker	5 years after first dose	Either 5 years after first re-vaccination or at 50 years of age (whichever is later)

Note: 23vPPV stands for 23-valent pneumococcal polysaccharide vaccine.

Source: NHMRC 2008.

The survey asked whether the respondent was ever vaccinated against pneumococcal disease, and, if so, were they vaccinated in the last 5 years. Anyone vaccinated within the last 5 years is included as currently vaccinated in coverage calculations for pneumococcal vaccine.

Total coverage

The survey showed that pneumococcal vaccine coverage among the target population was 54.4%, with South Australia having the highest coverage rate of 57.6%, and the Northern Territory the lowest coverage of 47.8% (Table 2.4).

The survey showed that four in ten adults (41.4%) who were eligible for pneumococcal vaccination have never been vaccinated. Further, just over 4% of Australian adults 65 years or older said that they were vaccinated against pneumococcal disease, but not within the last 5 years. When current vaccination status by age group was analysed, the estimates showed that vaccination peaks at age 75–79 years (Table 2.5). This pattern of higher uptake in the older age groups was seen in previous surveys (Figure 2.2).

Program coverage

Program coverage is defined as the proportion of the target population vaccinated against pneumococcal disease with program-provided vaccine. It is also possible for the target group population to obtain vaccination free through employment or purchasing privately. In this report, program-funded vaccination is defined as vaccine that was neither paid for by the employer nor by the respondent. There are a number of ways respondents in the target group can get a vaccination for free. These include obtaining vaccination at a free clinic, or because the vaccination was covered by a pensioner or Veterans' Affairs health-care card.

The survey showed that about half (52.3%) of the target group were vaccinated through the program (Table 2.4). Program-funded vaccination varied among states and territories, with South Australia the highest (56.2%) and the Northern Territory the lowest (45.0%).

Put another way, the survey showed that some 96% of the vaccinated target population were vaccinated with program provided vaccine.

Table 2.4: Estimated pneumococcal vaccination status^(a), persons aged 65 years or older, Australia, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number ('000)									
Target population	990	740	550	270	250	77	36	12	2,900
Currently vaccinated	530	410	300	140	140	43	19	*6	1,600
Not vaccinated in the last five years	33	39	*20	*12	13	*4	*2	*1	120
Never vaccinated	430	290	230	120	93	31	15	*6	1,200
Per cent									
Total coverage	53.5	55.5	54.6	51.8	57.6	55.4	53.3	*47.8	54.4
Program coverage	51.2	54.0	52.6	48.7	56.2	50.3	51.1	*45.0	52.3
Proportion of total coverage using program-funded vaccine	95.8	97.4	96.5	94.2	97.6	90.8	95.8	*94.1	96.2

* Estimate has 25% or greater relative standard error.

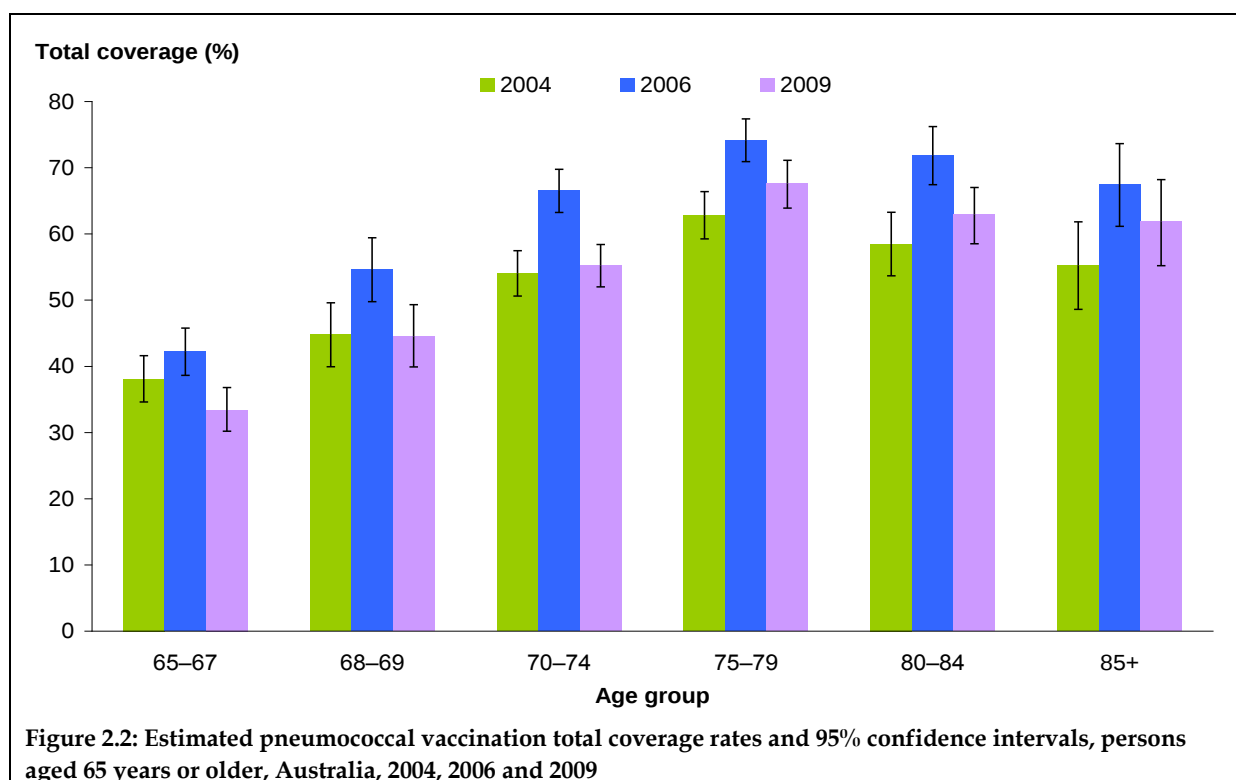
(a) The survey did not identify the age of a person when they received the vaccine if they received it before 2005. The derivation in the above table assumes that if the person received the vaccine more than 5 years previously they are not currently vaccinated.

Table 2.5: Estimated pneumococcal vaccination status^(a), persons aged 65 years or older, by age group, Australia, 2009

Age group	Currently vaccinated	95% confidence interval	
		Lower bound	Upper bound
Per cent			
65–67	33.4	30.2	36.8
68–69	44.5	39.9	49.3
70–74	55.2	52.0	58.4
75–79	67.6	63.9	71.1
80–84	62.9	58.5	67.0
85+	61.9	55.2	68.2
Total 65+ years ^(b)	54.4	52.8	56.0

(a) The survey did not identify the age of a person when they received the vaccine if they received it before 2005. The derivation in the above table assumes that if the person received the vaccine more than 5 years previously they are not currently vaccinated.

(b) Includes respondents who did not provide age.



Combined influenza and pneumococcal vaccination

The survey estimated that 51.1% of the target population (1.5 million people aged 65 years and over) were vaccinated against influenza and pneumococcal disease (Table 2.6). Conversely, 22.1% (0.6 million) were not vaccinated for either disease.

The highest combined vaccination rate was in South Australia (55.3%), and the lowest in the Northern Territory (42.9%).

Table 2.6: Estimated seasonal influenza and pneumococcal vaccinations, persons aged 65 years or older, Australia, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number ('000)									
Target population	990	740	550	270	250	77	36	12	2,900
Vaccination status									
Both	490	380	280	130	140	41	18	*5	1,500
Influenza only	230	170	120	66	65	18	10	*3	690
Pneumococcal only	38	25	15	*10	*6	*2	*1	*1	97
Neither	230	160	120	63	41	16	7	*3	640
Per cent									
As a proportion of target population									
Both	49.6	52.0	51.8	48.2	55.3	53.4	49.8	*42.9	51.1
Influenza only	23.1	23.0	22.8	24.7	26.0	24.0	28.2	*26.3	23.5
Pneumococcal only	3.9	3.4	2.7	*3.5	*2.3	*2.0	*3.6	*4.9	*3.3
Neither	23.5	21.5	22.6	23.6	16.4	20.5	18.4	25.8	22.1

* Estimate has 25% or greater relative standard error.

Note: The survey did not identify the age of a person when they received the vaccine if they received it before 2005. The derivation in the above table assumes that if the person received the vaccine more than 5 years previously they are not currently vaccinated.

Variations in coverage by sex

Nationally, proportionately more females (76.5%) than males (72.2%) were vaccinated against influenza (Table 2.7). The survey also showed state/territory and gender variations in vaccine coverage. South Australia had the highest proportion of males (83.2%) vaccinated against influenza and the Australian Capital Territory had the highest proportion of females vaccinated (80.7%).

The gender difference in vaccine coverage was more pronounced in the case of pneumococcal vaccinations. Nationally, only 48.8% of males were vaccinated against pneumococcal disease compared with 59.0% of females (Table 2.8). There was also a large variation in vaccine coverage by gender within states/territories. Victoria had the highest proportion of females vaccinated against pneumococcal disease (61.2%) whereas South Australia had the highest proportion of males vaccinated (57.9%). The Northern Territory had the lowest coverage for both males (39.5%) and females (57.3%, equal with South Australia).

Table 2.7: Estimated seasonal influenza vaccination coverage, by sex, persons aged 65 years or older, Australia, 2009

Sex and measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Males									
Total coverage	68.7	74.0	71.4	70.5	83.2	77.3	74.8	67.3	72.2
Program coverage	64.3	69.4	67.7	65.8	79.1	75.1	68.5	57.7	67.9
Females									
Total coverage	76.0	75.9	77.5	75.0	79.8	77.6	80.7	71.5	76.5
Program coverage	73.0	72.7	72.3	71.5	75.9	71.6	75.9	67.0	72.9

Table 2.8: Estimated pneumococcal vaccination coverage, by sex, persons aged 65 years or older, Australia, 2009

Sex and measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Males									
Total coverage	47.2	48.5	50.6	45.1	57.9	49.0	45.2	39.5	48.8
Program coverage	45.0	47.4	49.4	41.4	57.6	44.8	43.5	36.5	47.1
Females									
Total coverage	58.6	61.2	58.0	57.6	57.3	60.8	60.1	57.3	59.0
Program coverage	56.4	59.4	55.5	55.1	55.0	55.0	57.4	54.7	56.7

Note: The survey did not identify the age of a person when they received the vaccine if they received it before 2005. The derivation in the above table assumes that if the person received the vaccine more than 5 years previously they are not currently vaccinated.

Influenza vaccinations by month

The NHMRC recommends that influenza vaccination is best undertaken in autumn, in anticipation of winter outbreaks of influenza (NHMRC 2008). Vaccination can be given as early as February.

The survey showed that more than half of all adult vaccinations occurred in March or April 2009 (Table 2.9). Generally, vaccinations for people in the target group occur earlier on average than for the population as a whole. By the end of April, 71.4% of the total vaccinations among the target group had been administered, compared with 60.7% for the population as a whole.

Table 2.9: Seasonal influenza vaccination: reported month of vaccination, persons aged 18 years or older, Australia, 2009

Scope and month	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
All vaccinations									
January–February	8.4	6.3	6.7	*6.8	*4.4	5.6	*3.0	11.4	6.9
March	28.7	30.7	30.7	29.0	23.7	24.4	26.4	*22.5	28.9
April	24.0	23.9	25.9	26.6	26.4	28.2	24.2	*16.5	24.9
May	19.1	18.7	18.4	13.4	25.0	20.6	24.9	*12.8	19.0
June	8.1	10.1	8.3	*13.0	*8.5	*8.9	*12.2	*13.8	9.3
July	*4.1	*3.0	*2.1	*2.7	*4.9	*7.1	*2.6	*7.5	3.5
August	*1.3	*2.4	*4.1	*2.7	*2.9	*1.5	*1.3	*4.3	2.4
September–December	6.4	5.0	*3.6	*5.9	*4.3	*3.8	*5.4	*11.1	5.2
Vaccinations of people in the target group									
January–February	8.6	6.7	9.2	6.1	7.0	10.7	*8.0	18.3	7.9
March	34.5	36.3	41.6	37.0	34.9	29.1	39.1	36.0	36.5
April	27.7	26.5	23.9	28.6	30.8	28.3	26.6	14.2	27.0
May	15.3	14.0	15.1	11.8	13.4	15.9	14.1	10.9	14.4
June	5.6	7.2	*4.3	*5.1	*3.8	*5.3	*4.6	*6.6	5.5
July	*2.4	*1.9	*0.5	*2.7	*2.9	5.8	*2.8	7.1	2.1
August	*0.8	*1.7	*1.3	*4.5	*1.7	*1.2	*1.7	*3.1	1.6
September–December	5.1	5.8	4.0	4.3	5.6	3.8	3.0	3.9	5.0
Program-funded vaccinations of people in the target group									
January–February	8.6	6.3	9.0	6.2	7.2	10.6	8.6	18.7	7.9
March	34.7	37.3	42.2	37.4	35.7	29.5	38.7	39.3	37.0
April	27.8	25.6	23.8	29.2	29.8	28.1	27.4	13.3	26.8
May	15.3	14.3	14.8	11.0	13.4	15.7	13.8	*9.4	14.4
June	5.0	7.1	*4.3	*5.2	*3.9	*5.2	*3.9	*5.5	5.3
July	*2.5	*1.7	*0.5	*2.8	*2.9	*5.5	*3.0	*6.8	2.1
August	*0.9	*1.8	*1.4	*3.9	*1.3	*1.3	*1.4	*3.5	1.5
September–December	5.2	5.9	*3.9	*4.3	*5.9	*4.0	*3.3	*3.6	5.1

* Estimate has 25% or greater relative standard error.

Target population: payment for vaccine

Less than 4% of people who were eligible to receive a free influenza vaccination paid for the vaccine (Table 2.10). Of these, about three-quarters paid for the vaccine to a pharmacy, and the remainder paid directly to the provider. For those who received the vaccine for free, the cost was normally met by the relevant program (95%). The employer paid for the seasonal influenza vaccine for 1.7% of people.

Some 2.8% of the population who were entitled to free vaccination under the pneumococcal program nevertheless paid for their vaccine: four-fifths to a pharmacy and the remainder directly to the provider of their vaccination (Table 2.11).

Table 2.10: Seasonal influenza vaccination: reported payment for vaccine, persons aged 65 years or older, Australia, 2009

Payment and method	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Paid									
Pharmacy	2.6	*1.7	4.7	*1.7	*1.3	*3.1	*4.3	*2.8	2.6
Direct	*1.2	*0.7	*0.2	*1.0	*0.5	*0.5	*0.7	*0.8	0.8
<i>Total paid</i>	3.8	*2.4	4.9	*2.7	*1.7	*3.7	5.0	*3.6	3.4
Free									
Program	95.3	95.4	94.1	94.6	95.5	94.5	93.2	90.9	95.0
Employer	*1.0	*2.2	*0.9	*2.7	*2.8	*1.8	*1.8	5.5	1.7
<i>Total free</i>	96.3	97.6	95.1	97.3	98.3	96.3	95.0	96.4	96.6

* Estimate has 25% or greater relative standard error.

Note: Estimates in this table are based on non-imputed values and may differ slightly from similar estimates in other parts of the report.

Table 2.11: Pneumococcal vaccination: reported payment for vaccine, persons aged 65 years or older, Australia, 2009

Payment and method	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Paid									
Pharmacy	2.5	*1.2	*2.7	*4.7	*1.1	5.3	*2.0	*2.8	2.3
Direct	*0.5	*0.6	0.0	*0.4	*0.2	*1.3	*1.4	*0.4	*0.4
<i>Total paid</i>	3.0	*1.8	*2.7	*5.1	*1.3	6.6	*3.5	*3.2	2.8
Free									
Program	96.9	98.1	97.1	94.9	98.5	91.4	96.4	94.5	97.0
Employer	*0.1	*0.2	*0.3	0.0	*0.2	*2.0	*0.2	*2.3	*0.2
<i>Total free</i>	97.0	98.2	97.3	94.9	98.7	93.4	96.5	96.8	97.3

* Estimate has 25% or greater relative standard error.

Notes

1. The survey did not identify the age of a person when they received the vaccine if they received it before 2005. The derivation in this table assumes that if the person received the vaccine more than 5 years previously they are not currently vaccinated.
2. Estimates in this table are based on non-imputed values and may differ slightly from similar estimates in other parts of the report.

Coverage of those not in the target age group

Some 22.8% of those not in the target age group (that is, aged 18–64 years) were vaccinated against seasonal influenza (Table 2.12) and 4.8% against pneumococcal disease (Table 2.13). Some 4.6% of those not in the target age group were vaccinated against seasonal influenza with program vaccine, but only 1.9% of those vaccinated against pneumococcal disease received program-funded vaccine.

There was substantial variation in coverage across the states and territories for influenza, but not for pneumococcal disease. The ‘coverage’ for influenza vaccinations of people not in the target population ranged from 33.4% in the South Australia to a low of 20.8% in Western Australia. The corresponding coverage rate for pneumococcal disease was highest in the Northern Territory (11.9%) and lowest in Western Australia (2.8%).

Table 2.12: Estimated seasonal influenza vaccination of the non-target population, persons aged 18–64 years, Australia, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number ('000)									
Population aged 18–64 years	4,500	3,500	2,800	1,400	1,000	310	240	150	14,000
Vaccinated	950	760	640	300	340	84	66	41	3,200
Self-funded	360	300	270	91	140	35	21	*9	1,200
Program-funded	210	140	120	*58	*87	*12	*13	*8	640
Employer-funded	390	320	250	150	110	*38	32	*24	1,300
Not vaccinated	3,500	2,700	2,200	1,100	680	220	170	110	11,000
Per cent									
Coverage	21.1	21.8	22.8	20.8	33.4	27.4	27.9	27.1	22.8
Used program-funded vaccine	4.6	3.9	4.2	*4.1	*8.6	*3.8	*5.4	*5.5	4.6

* Estimate has 25% or greater relative standard error.

Table 2.13: Estimated pneumococcal vaccination of the non-target population, persons aged 18–64 years, Australia, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number ('000)									
Population aged 18–64 years	4,500	3,500	2,800	1,400	1,000	310	240	150	14,000
Never vaccinated	4,100	3,200	2,600	1,400	930	280	220	130	13,000
Not vaccinated in the last five years	*160	*59	*86	*40	*34	*8	*11	*6	400
Currently vaccinated	230	160	130	*41	*53	*16	*9	18	660
Self-funded	100	*68	*75	*17	*13	*11	*6	*2	300
Program-funded	*89	*68	*38	*16	*32	*5	*3	*11	260
Per cent									
Coverage	5.1	4.8	4.7	*2.8	*5.2	5.1	*3.9	11.9	4.8
Used program-funded vaccine	*2.0	*2.0	*1.4	*1.1	*3.2	*1.5	*1.1	*7.1	1.9

* Estimate has 25% or greater relative standard error.

Note: The survey did not identify the age of a person when they received the vaccine if they received it before 2005. The derivation in the above table assumes that if the person received the vaccine more than 5 years previously they are not currently vaccinated.

Coverage for other groups recommended by the NHMRC

The *Australian immunisation handbook* (NHMRC 2008) lists population groups with a heightened risk from influenza. In 2009, people in these at-risk groups (and not otherwise covered by the older persons and Indigenous vaccination programs) could access vaccine under the Pharmaceutical Benefits Scheme (PBS—a universal subsidy scheme for prescription medicines) or by purchasing privately.

Since the survey was a general population survey, not all at-risk groups were specifically targeted for interviews. However, the survey asked respondents:

- about their self-identification of Aboriginal and Torres Strait Islander status ($n = 159$)
- whether they were pregnant at any time since May last year, if the female respondents were of child-bearing age ($n = 182$)
- whether they were a child care worker, a worker at a residential age care facility or a health-care provider ($n = 756$)
- whether they were living in a household with someone under 65 years old suffering from a long-term chronic condition ($n = 380$).

The survey showed that more than one-quarter of all Australians aged 18 years or older reported a medical condition predisposing them to severe influenza. Due to sample size constraints, this section reports on vaccination status for:

- people with medical conditions ($n = 4,357$) by state/territory and age group
- other groups at a national level (without any breakdown by state/territory).

Vaccination status among people predisposed to severe influenza

Australians suffering from various circulatory, respiratory and immuno-suppressant conditions constitute a group of people at further risk from influenza and its complications. Of these, 53.4% were vaccinated in 2009 (Table 2.14). The vaccination rate of those at risk but not in the target age group for funded vaccine (adults aged 18–64 years old) was 36.2%. In this latter group, 47.2% of all vaccinations were purchased with personal funds or through the PBS.

Table 2.14: Estimated seasonal influenza vaccination among the at-risk population^(a), persons aged 18 years or older, Australia, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Persons aged 18 years or older									
Vaccinated	49.3	55.1	52.2	53.0	69.0	61.4	47.1	36.3	53.4
Self-funded	10.3	10.6	12.5	*8.3	17.2	*13.6	10.6	*6.6	11.2
Program-funded ^(b)	34.7	36.0	34.8	35.4	43.7	37.2	28.5	23.2	35.7
Employer-funded	*4.3	8.6	*4.9	*9.4	*8.1	*10.5	*7.9	*6.4	6.5
Persons aged 18–64 years									
Vaccinated	31.4	37.6	34.1	36.6	56.2	49.1	31.6	26.4	36.2
Self-funded	15.6	16.0	18.8	*12.6	29.6	*21.8	*13.9	*7.5	17.1
Program-funded ^(b)	9.1	*8.3	*7.3	*10.4	*13.7	*10.7	*6.4	*11.3	9.0
Employer-funded	*6.7	13.2	*8.0	*13.7	*12.9	*16.6	*11.4	*7.7	10.1

* Estimate has 25% or greater relative standard error.

(a) Australians suffering from various circulatory, respiratory and immuno-suppressant conditions.

(b) The estimates of program-funded vaccine are obtained from the survey response where the respondents reported that the vaccine was free. The respondents could get free vaccine if the vaccine was obtained through a free clinic, or by meeting other eligibility criteria.

Vaccination status among other NHMRC-recommended groups

As explained above, although the survey was not designed to cover all NHMRC-recommended groups, certain population groups were captured in the survey. Despite widespread information dissemination, the vaccine coverage rate among these selected groups was relatively low (Table 2.15).

Table 2.15: Estimated seasonal influenza vaccination among other selected NHMRC^(a) recommended groups, persons aged 18 years or older, Australia, 2009

NHMRC recommended group	Not vaccinated	Vaccinated			Total
		Self-funded	Program-funded	Employer-funded	
Per cent					
Health-care provider, residential care worker, or child care worker	57.5	23.9	9.1	9.5	42.5
Living in a household with someone aged under 65 years suffering from long-term chronic conditions	72.8	*5.3	11.3	10.6	27.2
Pregnant any time since May 2009	87.3	*5.8	*5.1	*1.8	12.7
Persons of Aboriginal or Torres Strait Islander origin	72.5	*4.8	*7.5	*15.2	27.5

* Estimate has 25% or greater relative standard error.

(a) NHMRC = National Health and Medical Research Council.

Sensitivity analysis—aged care residents

The sensitivity of the overall population estimates of influenza and pneumococcal vaccination coverage rates to the inclusion of estimates derived from aged care facilities is summarised here and detailed in Appendix 4. Because the CATI survey is household-based, it was not administered to residents of aged care facilities.

For previous Adult Vaccination Surveys, a separate survey of aged care facilities was undertaken to assess coverage and related program statistics. The rates calculated for residents were used to assess what effect their inclusion in the main survey might have had on the results. The effect was not large—in 2006, nationally, influenza total coverage and program coverage would have increased by less than one percentage point and pneumococcal total coverage would have decreased by less than two percentage points, if residents had been included in the main results.

For this report, a sensitivity analysis, assuming various levels of resident total coverage or program coverage, was made and is reported in Appendix 4.

For influenza total coverage, nationally, a 'residents' coverage of 90% would have increased total coverage from 74.6% to 75.4%. A 'residents' program coverage of 90% would have increased program coverage from 70.6% to 71.7%.

For pneumococcal total coverage, nationally, a 'residents' total coverage of 70% would have increased total coverage from 54.4% to 55.2%. A 'residents' program coverage of 70% would have increased program coverage from 52.3% to 53.3%.

3 Pandemic influenza (H1N1) and pertussis results

H1N1 vaccination

In April 2009, the Australian Government declared H1N1 09 to be a quarantinable disease in humans under the *Quarantine Act 1908*. The 2009 H1N1 (sometimes called 'swine flu') virus is a new influenza virus causing illness in people. This virus spreads from person to person, probably in much the same way that regular seasonal influenza viruses spread (CDC 2009).

According to the Australian Government Department of Health and Ageing (DoHA), as at 1 January 2010, there had been 37,553 confirmed cases and 191 deaths reported in Australia (DoHA 2010).

In Australia, the H1N1 pandemic influenza vaccine became available free of charge from 30 September 2009, and was approved for people aged 10 years and older. From 3 December 2009, it was further approved for children aged 6 months to 9 years of age. Vaccination was strongly recommended for pregnant women, parents and guardians of infants up to 6 months old, people with underlying chronic conditions, people who are severely obese, Indigenous Australians, and health and community care workers.

The survey showed that at a national level vaccination uptake of H1N1 influenza among adults up to the end of December 2009 was 18.9% (Table 3.1). The survey showed that more than four in ten (42.6%) Australians aged 65 years or older had their vaccination by the third week of December 2009 compared with 14.0% of adults aged 18–64 years. Among the states and territories, South Australia had the highest vaccination uptake (30.0%) while Western Australia had the lowest uptake (13.9%).

Table 3.1: Estimated H1N1 vaccination coverage, persons aged 18 years or older, Australia, September to December 2009

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Per cent								
18–64 years	12.3	13.9	14.4	9.5	23.9	19.5	14.4	17.9	14.0
65 years or older	39.8	40.3	47.0	36.7	54.6	49.7	43.3	40.9	42.6
All 18 years or older	17.3	18.6	19.7	13.9	30.0	25.3	18.3	19.6	18.9

As explained in the influenza vaccination section, the Adult Vaccination Survey was a population survey and did not specifically target recruitment of specified at-risk groups. However, at a national level, significant numbers of interviews were obtained for some selected at-risk groups. Their H1N1 vaccination status is shown in Table 3.2. The survey showed that the vaccination uptake among the selected at-risk groups ranged from 22.2% to 26.3%.

Table 3.2: Estimated H1N1 vaccination coverage among at-risk groups, persons aged 18 years or older, Australia, September to December 2009

At-risk group	Vaccination uptake
	Per cent
Health-care provider, residential care worker, or a child care worker	26.3
Living in a household with someone aged under 65 years suffering from long-term chronic conditions	20.0
Pregnant any time since May 2009	22.8
Persons with Aboriginal or Torres Strait Islander origin	22.8
Obese persons	22.2

Reasons for vaccination

The survey asked respondents to cite the main reason why they chose to be vaccinated against H1N1 influenza. Based on the results of a pilot survey, a list of common reasons was prepared. The reasons were not read from the list; rather, the interviewer selected the pre-coded item in the list based on the respondent's answer. If the reason did not match exactly to the pre-coded reason, the verbatim response was collected. Later, during the data cleaning phase, the verbatim responses were coded to the closest match with the pre-coded reason. In some cases, multiple reasons were combined to form a group of reasons due to the small number of responses for each reason.

Similarly, the reason for intention to be vaccinated was asked of respondents who reported they would get vaccinated before the winter of 2010. The responses from these two groups were combined for this analysis.

The most cited reason for vaccination was 'Swine flu is serious'/'I don't want to get swine flu', followed by 'My doctor advised me to' (Table 3.3). However, the reasons for getting vaccinated varied greatly by age group. Among the 65 years or older vaccinated population, 36.8% reported that they got vaccinated because the doctor advised them, compared with only 4.9% of 18–34 year olds.

Table 3.3: H1N1 vaccination: reported reasons for vaccination, by age group, persons aged 18 years or older, Australia, 2009

Reason	18–34	35–54	55–64	65+	All adults
	Per cent				
Swine flu is serious/I don't want to get swine flu	29.6	24.8	19.3	20.8	24.3
My doctor advised me to	4.9	11.7	19.5	36.8	17.2
To protect myself if a second, more serious, wave of swine flu came to Australia	22.7	15.9	12.7	10.4	16.0
I'm in an 'at risk'/'vulnerable'/'priority' group	7.3	9.7	15.8	15.4	11.4
Knowing that if I was vaccinated it would help protect friends and family	12.4	10.1	5.6	2.5	8.2
I work with vulnerable people (e.g. in health care)	7.2	9.5	5.8	0.8	6.1

Reasons for non-vaccination

Respondents who either had not been vaccinated or were not intending to get vaccinated before the winter of 2010 were asked to give a reason for that decision. Of Australians aged 18 years or older who had not been vaccinated or did not intend getting vaccinated, the most cited explanation/reason was 'I don't get sick/I am healthy/swine flu is not serious' (21.1%)(Table 3.4). Other common reasons were 'I'm not at risk' (13.7%) and 'Problems with vaccine side effects' (10.5%).

Table 3.4: H1N1 vaccination: reported reasons for non-vaccination, by age group, persons aged 18 years or older, Australia, 2009

Reason	18–34	35–54	55–64	65+	All persons
Per cent					
I don't get sick/ I'm healthy/swine flu isn't serious/I'm unlikely to get swine flu	16.3	23.5	28.8	16.8	21.1
I'm not at risk/swine flu is only serious for those with pre-existing health conditions or if you are pregnant	16.4	14.2	11.4	6.7	13.7
Problems with swine flu vaccine side effects	8.9	11.2	9.7	13.7	10.5
A swine flu vaccine is unnecessary/the threat has passed in Australia/swine flu happens in winter, winter is over	9.2	7.3	6.5	7.6	7.8
Not a priority for me/don't have time/too busy	10.0	6.3	3.3	4.1	6.8
I want more information or advice before I decide	5.0	4.4	5.4	11.3	5.6

Pertussis vaccination

Pertussis (whooping cough) is caused by a bacterial infection. It is an epidemic respiratory infection with an incubation period of 7–20 days. In unvaccinated individuals, it is highly infectious. In adults, pertussis can be associated with significant morbidity, with cough persisting for up to 3 months.

Pertussis vaccination is recommended and funded under the National Immunisation Program (NIP) schedule for children at 2, 4 and 6 months of age, with booster doses at 4 years and 15-17 years. The adult-formula vaccine has been available for older children and adults since 2003, and was included on the NIP schedule for adolescents in January 2004.

For adults, a single booster dose is recommended – but not funded at the national level – for the following groups (NHMRC 2008):

- adults planning a pregnancy, or for both parents as soon as possible after delivery of an infant (preferably before leaving hospital)
- other adult household members, grandparents and carers of young children
- adults working with young children
- all health-care workers.

The 2009 survey, for the first time, asked about the pertussis vaccination status of adults, including the year vaccinated as an adult or adolescent. From the survey, it is estimated that around one in nine adult Australians (11.3%) have been vaccinated against pertussis as an adult or adolescent (Table 3.5). There was substantial variation amongst the jurisdictions,

ranging from 17.3% in New South Wales down to 5.4% in Victoria. On average across the jurisdictions, 45% of these vaccinations had been received during 2009.

In the survey, a large proportion of respondents reported that they were vaccinated in 2002 or earlier (before the vaccine was generally available in Australia), and another portion could not recall the time when they were vaccinated against pertussis. Hence, the estimates of vaccination uptake for pertussis as an adult or adolescent need to be interpreted with caution.

Table 3.5: Estimated pertussis vaccination as an adolescent or adult, Australia, as at 2009

Estimate/year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Per cent								
Proportion vaccinated as an adult	17.3	5.4	11.7	7.5	7.8	9.7	12.6	15.6	11.3
Year of vaccination									
2009	48.4	43.1	46.5	*24.6	*32.3	49.3	48.6	47.7	45.0
2008	*12.9	*11.5	*12.1	*10.7	*35.3	*9.6	*5.1	*13.3	13.4
2007 or earlier ^(a)	38.7	45.4	41.4	64.6	*32.4	41.1	46.3	*39.0	41.6

* Estimate has 25% or greater relative standard error.

(a) Excludes respondents who reported vaccination before 2003 and respondents who did not know when they were vaccinated.

Vaccination coverage among at-risk group was higher than in the population overall, at around 42.0% or better for the groups covered in this survey (Table 3.6).

The estimated coverage is based on small samples, as the survey did not specifically recruit large numbers in the at-risk groups. Further, some of the vaccinations reported by respondents in these categories may have been received while the respondent was at school (and not as part of the targeted adult campaigns). Hence, the estimates need to be interpreted with caution.

Table 3.6: Estimated pertussis vaccination as an adult or adolescent, by at-risk group, Australia, 2009

At-risk group	Estimate	95% confidence interval	
		Lower bound	Upper bound
		Per cent	
Health-care provider (<i>n</i> = 756)	42.0	36.5	47.7
Parent of infant aged less than 12 months old (<i>n</i> = 277)	44.2	37.2	51.5
Carer of infants under 12 months old (<i>n</i> = 1,443)	42.4	38.0	46.9

4 Explanatory notes

Introduction

The Australian Institute of Health and Welfare (AIHW) commissioned Roy Morgan Research to conduct the 2009 Adult Vaccination Survey. The 2009 survey used the computer-assisted telephone interview (CATI) method. The questionnaire was largely based on the 2006 questionnaire, although some changes were made to include the addition of a new section for the recently released pandemic (H1N1) 2009 influenza vaccine, and a section on pertussis (whooping cough). The survey was conducted from 12 November to 21 December 2009.

Survey objectives

The survey was a national project to provide cross-sectional data to produce reliable estimates of influenza and pneumococcal vaccinations among Australian adults aged 65 or older, and related estimates. The survey also collected information about self-reported uptake of H1N1 pandemic influenza and pertussis vaccines.

Methodology

Survey design

The sampling frame for the 2009 survey was residential phone numbers in Australia. Households were randomly selected using a random digit dialling (RDD) sampling approach. This approach employed a stratified RDD approach to select households, and once a household was selected, an adult respondent was selected using a 'next birthday' method. This method necessarily excludes people with no fixed address and residents of institutional quarters. Dwellings without a fixed-line telephone were also excluded from the sampling frame.

The sample was stratified by age and geography so that no state or territory should have fewer than 300 responses for each of the 18–64 years and 65 years or older age groups. In addition, the sample was designed to target approximately 5,600 older adult respondents (aged 65+), and 4,800 respondents in the 18–64 years age group, giving a total sample size of approximately 10,400 responses. However, the achieved sample size was 10,231, a fraction short of what was designed (see 'Respondents' section below).

Weighting

The sample was a multistage stratified design. Since the number of residential fixed line telephones within each geographical area (combination of state/territory and metropolitan/non-metropolitan) area is unknown, a pool of randomly generated telephone numbers was selected proportional to the adult population in that stratum. The initial probability of selection was then the proportion of telephone numbers in each stratum in

relation to the total randomly generated telephone numbers. This initial probability was constant within each stratum. We also adjusted for the differential probability due to the number of fixed line telephones in the selected dwelling – dwellings with two or more fixed line telephones have higher probability of selection in the sample than those dwellings with only one telephone line. Finally, we adjusted for the differential probability of selection due to variation in number of adults in the household – larger weights were attached to the dwellings with higher numbers of adults in the household, as the probability of selection of a respondent is smaller in the larger household. To reduce the variation in the weights, dwellings with five or more adults were capped to five, and the maximum number of fixed lines was capped to three.

Once we calculated the survey weights at a stratum level (age/sex/state-territory/metropolitan-non-metropolitan), post-stratification benchmark weights were calculated using the June 2009 Australian Bureau of Statistics estimated resident population (ERP). The final weight corrects for sample non-coverage, and non-response, and the estimated population sizes are forced to sum to ERP at stratum level. When population estimates are presented in the results, rounding to the nearest 1,000 was done only after obtaining the weighted estimates.

Respondents

As with many household telephone-based surveys, there were more females (63.6%) than males in the sample (Table 4.1). Persons aged 65 years or older were oversampled, and represented 48.1% of the total sample. The sample was designed to obtain at least 300 respondents aged over 65 years in each state and territory.

Table 4.1: Respondents by sex, age group and metropolitan/non-metropolitan status, 2009

Characteristic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number									
Sex									
Male	969	750	566	333	281	266	255	303	3,723
Female	1,719	1,290	988	699	560	462	410	380	6,508
Age group									
65 years or older	1,311	1,011	794	505	357	313	314	319	4,924
18–64 years	1,377	1,029	760	527	484	415	351	364	5,307
Metropolitan/non-metro									
Metropolitan areas	1,558	1,437	680	761	612	302	—	—	5,350
Non-metro areas	1,130	603	874	271	229	426	665	683	4,881
Total	2,688	2,040	1,554	1,032	841	728	665	683	10,231

— Number rounded or equal to zero.

Response rate

Despite employing strategies to increase response rates (such as specific training, offering to send letter or email from AIHW, taking appointments, and making a number of calls to reach the target respondent), the response rate achieved was 33.9% (Table 4.2), with the lowest rate in the Northern Territory (23.3%) and the highest rate in Tasmania (44.3%).

Table 4.2: Sample disposition, Australia, 2009

Disposition	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Number									
A Out of scope	23,413	13,559	11,279	9,626	5,121	3,419	5,486	17,254	89,157
B In excess of quota	3,277	2,395	2,228	1,315	1,068	777	1,301	2,934	15,295
C Scope unknown	6,063	4,269	3,857	4,480	1,805	1,424	1,757	5,976	29,631
D Refusals	3,744	2,929	2,211	1,196	1,055	683	688	1,367	13,873
E Contacts not resolved—open	351	283	100	69	72	19	66	153	1,113
F Contacts not resolved—closed	1,446	1,026	674	369	325	208	250	683	4,981
G Interviews	2,690	2,045	1,551	1,030	852	725	667	671	10,231
<i>Total numbers attempted</i>	<i>40,984</i>	<i>26,506</i>	<i>21,900</i>	<i>18,085</i>	<i>10,298</i>	<i>7,255</i>	<i>10,215</i>	<i>29,038</i>	<i>164,281</i>
H Denominator for response rate calculation (D + E + F + G)	8,231	6,283	4,536	2,664	2,304	1,635	1,671	2,874	30,198
Per cent									
Response rate (G / H)	32.7	32.5	34.2	38.7	37.0	44.3	39.9	23.3	33.9

Editing

As the survey was conducted using the CATI approach, data entry was automatic at the point of interviewing. The questionnaire programming had built in logic, consistency and control checks and directed respondents to questions which were applicable to them depending on the responses they gave to previous questions. As a result, there was little or no need to edit the data for any inconsistencies.

However, there were some inconsistencies in postcodes between the one provided by the respondent and the one obtained using the telephone exchange prefix. Furthermore, there were some respondents who did not know their postcode, and some respondents were unable to provide sufficient information on their suburb/town. The Roy Morgan Research coders derived the postcodes for these cases based on other information including the Australian Bureau of Statistics (ABS) Postal Area.

Imputation

Missing data and responses such as ‘Don’t know/can’t say’ for items such as whether respondents had heard of the flu vaccination, or whether respondents had had a flu injection in the current year, were imputed. We used Stata’s *ice* (Imputation by Chained Equations) command for imputation. *Ice* imputes missing values by using switching regression; an iterative multivariable regression technique.

Reliability of estimates

Sampling error

The prevalence estimate obtained from a sample will differ from the prevalence rate obtained from counting the whole population. The error in this estimate is known as

sampling error. This error occurs because observations are only made on the sample. Other things remaining the same, sampling error can be minimised by selecting a larger proportion of the population in the sample.

Confidence intervals

Confidence intervals of the survey estimates are not symmetrical for two reasons. For proportions, the confidence intervals are calculated using *svy* command in Stata. Stata uses a logit transformation so that the lower and upper bounds of the confidence intervals lie between 0 and 1 (that is, 0% and 100%) (StataCorp 2007).

For total population counts of vaccinations, the estimates have been adjusted for the estimated resident population as at June 2009, whereas the standard errors have been estimated using survey weights. Doing so means that for some estimates, the lower and upper bounds have been slightly underestimated.

Non-sampling error

Non-sampling error can be attributed to many sources. These include respondents understanding questions differently, respondents not providing correct information, interviewers making errors in recording answers, definitional problems, processing errors, and estimation of missing data. To minimise non-sampling error, we piloted the survey instrument to assess whether respondents understood the concepts and questions and whether they were able to provide coherent answers. Pilot interviews for the 2009 survey were conducted in selected Victorian metropolitan and non-metropolitan regions. A total of 59 pilot interviews were completed in early November 2009. Interviewers received specific survey briefing and familiarisation with the survey material. To increase the response rate, AIHW established a toll-free number, offered to send a letter, provided information on the web, and employed a call regime where we allowed respondents to make a time for interview that suited them most.

Responses are based on self-report without reference to written vaccination records. As such, the coverage estimates may overestimate or underestimate actual vaccination coverage. In one study, self-reported coverage by telephone survey of elderly Australians was found to overestimate actual influenza coverage (vaccinated in the previous year) by 3–8%, and underestimate actual pneumococcal coverage (vaccinated in previous 5 years) by 7%, when compared to medical records (Andrews 2005).

Further, this survey included an added complication of the introduction of another influenza-containing vaccine, H1N1. The amount of misclassification between H1N1 and seasonal influenza vaccines is unknown.

Limitations of the data

As with all self-reported survey data, the major limitation is that the estimates are based on self-reporting of vaccination status. Intentional deception, poor memory or misunderstanding of the question can all contribute to inaccuracies in the data. Further, although the sample size was reasonable for the national level, any estimates for subpopulations are based on a smaller sample sizes and are less precise.

Since the survey used the random digit dialling (RDD) method to contact the respondents and the CATI method to collect the information, dwellings without a fixed-line telephone were excluded from the survey. According to a study by The Social Research Centre, 14.7% of the population nationally live in mobile phone-only households (Pennay and Bishop 2009). That study also showed that mobile-only households differ from landline-only households, with proportionately more younger people and females living in mobile-only households. We have no measures to assess the bias due to the exclusion of mobile-only households in the sample.

Comparability with previous surveys

The 2009 survey used similar survey methods to those of earlier surveys. The 2009 survey instrument was largely based on the 2006 version. In the 2009 survey, two new sections were added – H1N1 vaccination and pertussis vaccination. Two earlier sections on tetanus and shingles were removed in the 2009 version.

Appendix 1: Membership of Survey Advisory Group

Table A1.1: Membership of the Adult Vaccination Survey Advisory Group

Members	Affiliations
Ms Angela McKinnon (Chair)	Department of Health and Ageing, Office of Health Protection, Immunisation Branch, Immunisation Policy Section
Dr Yasmine Gray	Department of Health and Ageing, Office of Health Protection, Immunisation Branch, Immunisation Programs
Dr Julia Brotherton	Victorian Cytology Service, National Human Papillomavirus Vaccination Program (HPV) Register
Mr Rob Menzies	National Centre for Immunisation Research and Surveillance (NCIRS)
Mr Mark Cooper-Stanbury	Australian Institute of Health and Welfare (AIHW), Population Health Unit
Dr Pramod Adhikari	Australian Institute of Health and Welfare (AIHW), Population Health Unit
Ms Maureen Watson	South Australian Department of Health, Immunisation Coordination Unit
Departmental staff	
Ms Toni Grange	Department of Health and Ageing, Office of Health Protection, Immunisation Branch, Immunisation Policy Section
Ms May Gladki	Department of Health and Ageing, Office of Health Protection, Immunisation Branch, Immunisation Policy Section
Ms Michelle Morgan	Department of Health and Ageing, Office of Health Protection, Immunisation Branch, Immunisation Policy Section

Appendix 2: Population estimates

Table A2.1: Population estimates, by age and sex, Australia, as at 30 June 2009 ('000)

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males									
18–34	859	679	534	285	186	51	50	33	2,678
35–54	979	755	614	326	226	69	49	34	3,051
55–64	399	296	250	127	97	32	19	11	1,231
<i>18–64</i>	<i>2,237</i>	<i>1,730</i>	<i>1,398</i>	<i>738</i>	<i>509</i>	<i>152</i>	<i>118</i>	<i>78</i>	<i>6,960</i>
65+	448	333	255	125	112	35	16	6	1,330
Total 18 or older	2,684	2,064	1,654	862	620	187	134	84	8,290
Females									
18–34	845	659	520	263	179	51	48	31	2,596
35–54	999	774	623	316	228	72	51	32	3,094
55–64	404	306	248	123	101	33	20	10	1,243
<i>18–64</i>	<i>2,248</i>	<i>1,739</i>	<i>1,391</i>	<i>702</i>	<i>508</i>	<i>156</i>	<i>119</i>	<i>73</i>	<i>6,933</i>
65+	542	405	291	143	139	42	20	6	1,587
Total 18 or older	2,790	2,143	1,682	845	648	197	138	78	8,521
Persons									
18–34	1,704	1,338	1,055	547	365	102	98	64	5,274
35–54	1,977	1,529	1,237	643	454	140	100	65	6,145
55–64	803	602	498	249	198	65	38	21	2,475
<i>18–64</i>	<i>4,485</i>	<i>3,469</i>	<i>2,789</i>	<i>1,440</i>	<i>1,017</i>	<i>308</i>	<i>237</i>	<i>151</i>	<i>13,893</i>
65+	990	738	546	268	251	77	36	12	2,918
Total 18 or older	5,474	4,207	3,336	1,707	1,268	384	273	162	16,811

Source: AIHW Population Database, compiled from Australian Bureau of Statistics Estimated Resident Population series.

Appendix 3: Confidence intervals

Table A3.1: Estimates and confidence intervals, influenza vaccination total coverage and program coverage, persons aged 65 years and over, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number ('000)									
Target population	990	740	550	270	250	77	36	12	2,900
Total coverage	720	550	410	200	200	60	28	8	2,200
Lower bound	640	490	340	160	180	40	20	3	2,000
Upper bound	790	610	480	230	230	80	36	13	2,300
Program coverage	680	530	380	180	190	56	26	7	2,100
Lower bound	610	460	310	150	170	38	19	3	1,900
Upper bound	760	580	450	220	220	75	33	12	2,200
Non-program coverage	36	28	25	11	10	3	2	1	120
Lower bound	26	18	15	6	6	1	1	—	97
Upper bound	46	38	34	16	14	6	3	1	130
Not vaccinated	270	180	140	73	47	17	8	4	740
Lower bound	240	150	110	54	37	13	6	1	680
Upper bound	300	210	160	92	57	22	10	6	800
Per cent									
Total coverage	72.7	75.0	74.6	72.9	81.3	77.5	78.0	69.3	74.6
Lower bound	69.9	71.8	71.3	67.7	77.7	71.4	75.3	66.0	73.1
Upper bound	75.3	78.0	77.7	77.5	84.5	82.5	80.5	72.3	76.0
Program coverage	69.1	71.2	70.1	68.9	77.4	73.2	72.5	62.0	70.6
Lower bound	66.1	67.9	66.7	64.0	73.3	68.1	69.2	58.2	69.1
Upper bound	71.9	74.4	73.4	73.3	81.0	77.8	75.6	65.7	72.1
Percentage of total coverage using program-funded vaccine	95.0	94.9	94.0	94.4	95.1	94.5	92.9	89.6	94.7
Lower bound	93.4	92.9	91.5	91.7	92.5	91.0	89.7	85.4	93.8
Upper bound	96.2	96.4	95.8	96.3	96.9	96.7	95.2	92.6	95.5

— Value rounded to zero.

Table A3.2: Estimates and confidence intervals, pneumococcal vaccination total coverage and program coverage, persons 65 years or older, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number ('000)									
Target population	990	740	550	270	250	77	36	12	2,900
Total coverage	530	410	300	140	140	43	19	6	1,600
Lower bound	470	360	250	110	120	28	13	2	1,500
Upper bound	590	460	350	170	170	58	25	10	1,700
Program coverage	510	400	290	130	140	39	18	5	1,500
Lower bound	450	350	240	100	120	25	13	2	1,400
Upper bound	560	450	330	160	160	52	24	9	1,600
Not vaccinated in the last five years	33	39	20	12	13	4	2	1	120
Lower bound	21	27	10	5	8	2	1	—	100
Upper bound	45	50	30	20	19	6	2	1	140
Never vaccinated	430	290	230	120	93	31	15	6	1,200
Lower bound	380	250	180	95	78	23	11	2	1,100
Upper bound	480	330	270	140	110	39	19	9	1,300
Per cent									
Total coverage	53.5	55.5	54.6	51.8	57.6	55.4	53.3	47.8	54.4
Lower bound	50.4	52.1	50.6	46.8	53.1	49.5	47.1	40.9	52.8
Upper bound	56.4	58.7	58.5	56.7	62.0	61.1	59.5	54.9	56.0
Program coverage	51.2	54.0	52.6	48.7	56.2	50.3	51.1	45.0	52.3
Lower bound	48.2	50.7	48.8	43.8	51.7	45.0	44.8	38.1	50.7
Upper bound	54.2	57.2	56.5	53.7	60.5	55.6	57.3	52.1	53.9
Percentage of total coverage using program-funded vaccine	95.8	97.4	96.5	94.2	97.6	90.8	95.8	94.1	96.2
Lower bound	94.0	95.6	94.1	90.7	95.4	87.2	92.2	87.9	95.4
Upper bound	97.0	98.4	97.9	96.4	98.7	93.5	97.7	97.2	96.9

— Value rounded to zero.

Table A3.3: Estimates and confidence intervals, influenza vaccination of the non-target population, persons aged 18–64 years, Australia, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	Number ('000)								
Population 18–64 years	4,500	3,500	2,800	1,400	1,000	310	240	150	14,000
Vaccinated	950	760	640	300	340	84	66	41	3,200
Lower bound	780	620	510	220	250	53	45	21	2,900
Upper bound	1,100	870	750	370	420	120	84	57	3,400
Self-funded	360	300	270	91	140	35	21	9	1,200
Lower bound	270	230	200	52	98	19	13	4	1,100
Upper bound	430	360	330	130	190	51	29	12	1,300
Program-funded	210	140	120	58	87	12	13	8	640
Lower bound	140	89	69	29	32	6	4	3	520
Upper bound	270	180	160	86	140	18	21	13	740
Employer-funded	390	320	250	150	110	38	32	24	1,300
Lower bound	280	230	170	87	65	19	18	11	1,100
Upper bound	480	400	320	210	150	56	44	35	1,500
Not vaccinated	3,500	2,700	2,200	1,100	680	220	170	110	10,700
Lower bound	3,100	2,300	1,800	930	570	150	120	65	9,900
Upper bound	3,900	3,000	2,500	1,300	770	290	210	150	11,200
	Per cent								
Coverage	21.1	21.8	22.8	20.8	33.4	27.4	27.9	27.1	22.8
Lower bound	18.4	18.8	19.4	16.8	26.7	22.6	22.8	21.2	21.3
Upper bound	24.1	25.1	26.6	25.5	40.8	32.8	33.7	33.9	24.4
Percentage of coverage using program-funded vaccine	4.6	3.9	4.2	4.1	8.6	3.8	5.4	5.5	4.6
Lower bound	3.4	2.8	2.8	2.5	4.7	2.3	2.9	3.4	3.9
Upper bound	6.1	5.4	6.2	6.4	15.1	6.4	10.0	8.9	5.4

Table A3.4: Estimates and confidence intervals, pneumococcal vaccination of the non-target population, persons aged 18–64 years, Australia, 2009

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Number ('000)									
Population aged 18–64 years	4,500	3,500	2,800	1,400	1,000	310	240	150	14,000
Currently vaccinated	230	160	130	41	53	16	9	18	660
Lower bound	160	92	79	17	25	9	2	9	540
Upper bound	300	230	180	64	80	22	16	25	770
Self-funded	100	68	75	17	13	11	7	2	300
Lower bound	66	35	38	3	2	5	1	—	230
Upper bound	140	99	110	30	25	17	12	4	360
Program-funded	89	68	38	16	32	5	3	11	260
Lower bound	39	10	12	2	8	1	—	5	170
Upper bound	140	120	64	30	57	8	7	16	340
Employer-funded	36	29	19	8	7	—	—	5	100
Lower bound	8	1	—	—	—	—	—	1	55
Upper bound	63	56	42	20	15	—	1	9	150
Not vaccinated in the last 5 years	160	59	86	40	34	8	11	6	400
Lower bound	79	20	40	12	10	—	4	2	290
Upper bound	230	97	130	67	59	20	17	10	500
Never vaccinated	4,100	3,200	2,600	1,400	930	280	220	130	12,800
Lower bound	3,600	2,800	2,200	1,100	810	190	160	73	12,000
Upper bound	4,500	3,600	2,900	1,600	1,000	370	270	170	13,400
Per cent									
Coverage	5.1	4.8	4.7	2.8	5.2	5.1	3.9	11.9	4.8
Lower bound	3.8	3.1	3.2	1.6	3.1	3.4	1.9	7.8	4.0
Upper bound	6.8	7.2	6.9	5.0	8.7	7.6	7.8	17.7	5.7
Percentage of coverage using program-funded vaccine	2.0	2.0	1.4	1.1	3.2	1.5	1.1	7.1	1.9
Lower bound	1.2	0.8	0.7	0.5	1.5	0.7	0.3	4.1	1.4
Upper bound	3.4	4.5	2.6	2.7	6.8	3.1	4.7	12.1	2.6

— Value rounded to zero.

Table A3.5: Estimates and confidence intervals, H1N1 vaccination, by age group, Australia, 2009

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
18–64 years	12.3	13.9	14.4	9.5	23.9	19.5	14.4	17.9	14.0
Lower bound	10.4	11.4	12.0	7.0	18.5	15.3	10.5	13.8	12.8
Upper bound	14.6	16.8	17.3	12.9	30.5	24.4	19.5	22.9	15.3
65 years or older	39.8	40.3	47.0	36.7	54.6	49.7	43.3	40.9	42.6
Lower bound	36.9	37.1	43.0	31.9	50.1	42.8	36.8	36.8	41.0
Upper bound	42.7	43.6	51.0	41.7	59.1	56.6	50.0	45.0	44.2
18 years or older	17.3	18.6	19.7	13.9	30.0	25.3	18.3	19.6	18.9
Lower bound	15.5	16.4	17.4	11.4	25.2	21.6	14.5	15.9	17.9
Upper bound	19.2	20.9	22.1	16.8	35.2	29.5	22.7	24.0	20.1

Table A3.6: Estimates and confidence intervals, pertussis vaccination as an adult or adolescent, by year of vaccination, Australia, 2009

Measure and year of vaccination	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Proportion vaccinated as an adult	17.3	5.4	11.7	7.5	7.8	9.7	12.6	15.6	11.3
Lower bound	14.6	3.8	9.0	4.4	4.8	6.3	9.7	12.5	10.0
Upper bound	20.3	7.6	15.2	12.4	12.5	14.8	16.3	19.4	12.7
Year of vaccination									
2009	48.4	43.1	46.5	24.6	32.3	49.3	48.6	47.7	45.0
Lower bound	39.5	26.2	32.5	9.6	16.4	32.7	28.9	33.1	38.8
Upper bound	57.3	61.8	61.1	49.9	53.8	66.0	68.7	62.7	51.2
2008	12.9	11.5	12.1	10.7	35.3	9.6	5.1	13.3	13.4
Lower bound	7.5	5.2	6.1	3.9	15.7	3.1	1.4	6.9	9.7
Upper bound	21.3	23.6	22.5	26.2	61.5	25.8	17.0	24.0	18.3
2007 or earlier	38.7	45.4	41.4	64.6	32.4	41.1	46.3	39.0	41.6
Lower bound	29.9	28.0	26.3	40.8	14.8	25.2	27.7	22.2	35.1
Upper bound	48.3	64.0	58.3	82.9	56.9	59.1	65.9	58.9	48.4

Appendix 4: Sensitivity analysis—aged care facility residents vaccination

The 2009 CATI survey was not administered to residents of aged care facilities. For this report, a sensitivity analysis was undertaken.

During 2009, approximately 155,700 Australians aged 65 years or older were residents of aged care facilities at any one time. This represented 5.3% of the total population aged 65 years or older.

As expected, adjusting the estimates with a higher residents' rate increased the adjusted rate. However, the movements made are small, because of the relatively small resident population.

Influenza vaccination

We present total coverage results obtained from a hypothetical scenario where we vary residential vaccination coverage rates. This hypothetical scenario allows us to assess how sensitive the total coverage rate is in the absence of coverage rates for aged care facilities. For example, if the influenza vaccination coverage of aged care facilities residents were 90% (estimated to be 84.7% in 2006), the 2009 population coverage estimate would increase from 74.6% to 75.4% (Table A4.1). However, if the influenza coverage of aged care facilities residents were 80%, the population coverage estimate would be 74.9%.

Table A4.1 Sensitivity of survey-derived influenza vaccination rate estimates to adjustment for aged care facilities residents aged 65 years or older, Australia, 2009

Circumstance/(adjusted) rates	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Total coverage									
Survey rate	72.7	75.0	74.6	72.9	81.3	77.5	78.0	69.3	74.6
Adjusted rate, if residential coverage were:									
70%	72.5	74.7	74.4	72.8	80.6	77.1	77.7	69.3	74.3
80%	73.1	75.3	74.9	73.2	81.2	77.6	78.1	69.6	74.9
90%	73.6	75.8	75.4	73.7	81.8	78.1	78.6	69.9	75.4
Program coverage									
Survey rate	69.1	71.2	70.1	68.9	77.4	73.2	72.5	62.0	70.6
Adjusted rate, if residential program coverage were:									
70%	69.1	71.2	70.1	68.9	76.9	73.0	72.4	62.3	70.6
80%	69.6	71.7	70.6	69.4	77.5	73.6	72.9	62.6	71.1
90%	70.2	72.3	71.2	69.9	78.1	74.1	73.3	62.9	71.7

Note: Based on aged care facilities resident population aged 65 years or older, 30 Jun 2009—preliminary (unpublished) data from the Commonwealth Department of Health and Ageing, Aged and Community Care Management Information System (ACCMIS).

Pneumococcal vaccination

If the pneumococcal vaccination coverage of aged care facilities residents were 30% (estimated to be 30.9% in 2006), the 2009 population coverage estimate would decrease from 54.4% to 53.1% (Table A4.2). If the program coverage rate among residents were 30% (also estimated to be 30.9% in 2006), the 2009 population estimate would decrease from 52.3% to 51.1%.

Table A4.2 Sensitivity of survey-derived pneumococcal vaccination rate estimates to adjustment for aged care facilities residents aged 65 years or older, Australia, 2009

Circumstance/(adjusted) rates	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Per cent									
Coverage									
Survey rate	53.5	55.5	54.6	51.8	57.6	55.4	53.3	47.8	54.4
Adjusted rate, if residential coverage were:									
30%	52.2	54.1	53.3	50.7	55.9	54.1	52.3	47.3	53.1
50%	53.3	55.2	54.3	51.7	57.1	55.1	53.2	47.9	54.2
70%	54.3	56.3	55.4	52.6	58.3	56.2	54.1	48.5	55.2
Program coverage									
Survey rate	51.2	54.0	52.6	48.7	56.2	50.3	51.1	45.0	52.3
Adjusted rate, if residential program coverage were:									
30%	50.1	52.7	51.5	47.8	54.6	49.2	50.1	44.6	51.1
50%	51.1	53.8	52.5	48.8	55.8	50.3	51.0	45.2	52.2
70%	52.2	54.9	53.5	49.8	57.0	51.3	51.9	45.8	53.3

Note: Based on aged care facilities resident population aged 65 years or older, 30 Jun 2009—preliminary (unpublished) data from the Commonwealth Department of Health and Ageing, Aged and Community Care Management Information System (ACCMIS).

Appendix 5: Survey instrument

2009 Adult Vaccination Survey November 2009

Modules

Introduction and screening

A: Awareness of flu injection

B: Influenza vaccination status

C: Doctors' recommendations

G: Pneumococcal

H: Pandemic (H1N1) 2009 influenza/Swine flu

I: Pertussis/whooping cough

D: Risk factors and general and health

E: Demographics

INTRODUCTION

Good morning/afternoon/evening. My name is (...). I'm calling on behalf of the Australian Institute of Health and Welfare from Roy Morgan Research. We're conducting an important public health study about influenza and pneumonia vaccinations and some related health issues. Can you spare me a minute please to see if anyone in this household is able to help?

(IF NECESSARY: This is a public health study, not a sales call.)

EXPLAIN IF NECESSARY: Your telephone number has been automatically generated by computer as it is important to give everyone a chance to participate in this important study not just those people who have their phone number in the White Pages.

S1 To see if there's anyone in the household who can help, we need to ask a couple of quick questions. Firstly, can you please tell me how many people, in total, including yourself and any children, usually live in this household?

1. CONTINUE

16. RESPONDENT REQUIRES FURTHER INFORMATION <GO TO PLET1>

17. HOUSEHOLD REFUSAL <GO TO R1>

18. HH NEEDS RECONTACT IN ITALIAN

19. HH NEEDS RECONTACT IN GREEK

20. HH NEEDS RECONTACT IN CANTONESE

21. HH NEEDS RECONTACT IN ARABIC

22. HH NEEDS RECONTACT IN VIETNAMESE

23. HH NEEDS RECONTACT IN MANDARIN

24. HH NEEDS RECONTACT IN OTHER LOTE (SPECIFY)

25. HH LOTE – CANNOT IDENTIFY LANGUAGE

26. NO ONE IN HOUSEHOLD OVER 18 (TERMINATE)

27. NONE LIVE PERMANENTLY IN HOUSEHOLD (OUT OF SCOPE, TERMINATE)

S1. <QUANTITY VARIABLE FOR RECORDING OF S1>

DON'T KNOW / CAN'T SAY <GO TO S2>

IF WOULD LIKE MORE INFORMATION (CODE 17 ON S1)

PLET1 If you would like more information, you can contact the Australian Institute of Health and Welfare Infoline on <1800 007 673>. We can send a letter to you about the survey. I can read the letter over the phone if you like. There is also information about the survey available on the Australian Institute of Health and Welfare's website. I can give you those links if you like. <www.aihw.gov.au>. Or I can send you the letter straight away by email.

1. RESPONDENT WOULD LIKE TO BE SENT A COPY OF THE LETTER BEFORE DECIDING
2. RESPONDENT HAPPY TO CONTINUE, BUT WOULD ALSO LIKE TO BE SENT A COPY OF THE LETTER
3. LETTER NOT REQUIRED – CONTINUE ON WITH SURVEY – <RETURN TO S1>
4. Household refusal (ABANDON TO REFUSAL SEQUENCE STARTING R1)

ASK IF CODE 1 OR CODE 2 ON PLET1

PLET2 Would you like us to mail or email you a copy of the letter?

1. MAIL
2. EMAIL <EMAIL THE LETTER TO THE RESPONDENT STRAIGHT AWAY>

IF CODE 2 ON PLET1, NOW RETURN TO S1

IDN. Can I please have your name?

IF LETTER NEEDS TO BE MAILED (CODE 1 ON PLET2), ASK:

ADDRESS. Can I please have your address? RECORD HOUSE
NUMBER AND STREET HERE ONLY
RECORD SUBURB, STATE AND POSTCODE ON NEXT
QUESTIONS

SUBURB. RECORD SUBURB HERE, STATE AND POSTCODE
ON NEXT QUESTIONS

PCODE. RECORD POSTCODE HERE, STATE ON NEXT
QUESTION

STATE. RECORD STATE HERE

ENDIF

IF LETTER NEEDS TO BE EMAILED (CODE 2 ON PLET2), ASK:

EMAIL. Can I please have your email address?
AFTER RECORDING EMAIL ADDRESS, READ OUT EMAIL
ADDRESS TO CONFIRM

ENDIF

**IF RESPONDENT WOULD LIKE TO BE SENT A COPY OF THE LETTER
BEFORE DECIDING (CODE 1 ON PLET1), MAKE APPOINTMENT**

*MAKE AN APPOINTMENT – PLEASE ENSURE YOU RECORD THE
RESPONDENT'S NAME IN APPOINTMENT NOTES*

ENDIF

ASK EVERYONE (USE INTRO-A WORDING):

S2 INTROA. How many of these people are aged between 18 and 64 years?
(IF YES, RECORD 1. IF NO, RECORD NONE).

S2. <QUANTITY VARIABLE FOR RECORDING OF S2>

CAN'T SAY <GO TO S3>

REFUSED <GO TO R4>

[IF NUMBER PROVIDED AT S2 IS GREATER THAN NUMBER PROVIDED AT S1, DISPLAY ERROR MESSAGE "PLEASE RE-CHECK ANSWERS AT S1 AND S2. S2 CANNOT BE GREATER THAN S1, WILL NOW GO BACK TO S1"]

ASK ALL (USE INTRO-A IN ALL CASES):

S3. INTROA. And how many of these people are aged 65 years and over?
(IF YES, RECORD 1. IF NO, RECORD NONE).

S3. <QUANTITY VARIABLE FOR RECORDING OF S3>

CAN'T SAY

REFUSED <GO TO R4>

[IF NUMBER PROVIDED AT S3 IS GREATER THAN NUMBER PROVIDED AT S1, OR IF SUM OF NUMBERS PROVIDED AT S2 AND S3 IS GREATER THAN NUMBER PROVIDED AT S1, DISPLAY :

"PLEASE RE-CHECK ANSWERS AT S1, S2 AND S3. THERE CANNOT BE MORE PEOPLE AT S2 AND S3 THAN AT S1, WILL NOW GO BACK TO S1"]

IF REFUSED (17 AT S3), ASK R4

ENDIF

IF NO ONE IN HOUSEHOLD OVER 18 (0 AT S2 AND S3), WILL ABANDON TO USER 59

Thank you for your time and assistance but we need to speak to people aged 18 or over

ENDIF

IF CAN'T SAY ON EITHER S1, S2 OR S3, SAY:

Thank you for your time and assistance but we need to speak to people in specific households.

IF BOTH AGE QUOTAS ARE OPEN AND $S2+S3=1$, THEN ASK S4 (DTS: = "18 or over" IF $S2=1$.
DTS= "65 or over" IF $S3=1$)

IF BOTH AGE QUOTAS ARE OPEN AND $S2+S3$ IS GREATER THAN 1, THEN ASK S5. (DTS,
DISPLAY "18 or over")

IF 65+ AGE QUOTA IS OPEN BUT 18–64 AGE QUOTA IS CLOSED, AND $S3=1$, THEN ASK S4
(DTS="65 or over")

IF 65+ AGE QUOTA IS OPEN BUT 18–64 AGE QUOTA IS CLOSED, AND S3 IS GREATER THAN 1, THEN ASK S5, (DTS="65 or over")

IF 18-64 AGE QUOTA IS OPEN BUT 65+ AGE QUOTA IS CLOSED, AND S2=1, THEN ASK S4 (DTS="18–64")

IF 18-64 AGE QUOTA IS OPEN BUT 65+ AGE QUOTA IS CLOSED, AND S2 IS GREATER THAN 1, THEN ASK S5, (DTS="18-64")

S4 The person selected for this interview is aged [18 or over / 65 or over / 18 to 64], who lives here, is that you? IF NO, ASK: Can I speak to that person please?

1. PERSON SPEAKING <GO TO S8>
2. OTHER PERSON AVAILABLE
3. PERSON NOT AVAILABLE NOW (MAKE APPOINTMENT: INCLUDE NAME AND AGE IN APPOINTMENT NOTES)
4. REFUSED (ABANDON TO REFUSAL SEQUENCE STARTING R4)

S5. Can I please speak to the person aged [18 years or over / 65 years or over / 18 to 64] who lives here and has the next birthday?

1. PERSON SPEAKING <GO TO S8>
2. OTHER PERSON AVAILABLE
3. PERSON NOT AVAILABLE NOW (MAKE APPOINTMENT: INCLUDE NAME AND AGE IN APPOINTMENT NOTES)
4. REFUSED (ABANDON TO REFUSAL SEQUENCE STARTING R4)

IF OTHER PERSON AVAILABLE (CODE 2 ON S4 OR S5), SAY:

S7NEW

Good [Morning/Afternoon/Evening]. My name is (SAY NAME). I'm calling on behalf of the Australian Institute of Health and Welfare from Roy Morgan Research. We're conducting an important public health study about influenza and pneumonia vaccinations and some related health issues. (IF NECESSARY: This is a public health study, not a sales call.)

EXPLAIN IF NECESSARY: Your telephone number has been automatically generated by computer as it is important to give everyone a chance to participate in this important study not just those people who have their phone number in the White Pages.

If you are willing to help me I need less than 10 minutes of your time. Any answers given are completely confidential and protected by the *AIHW Act* and *Privacy Act*. Please be assured that you cannot be personally identified by participating in this study.

1. YES – START SURVEY (GO TO S8)
2. NO – STOP INTERVIEW, MAKE APPOINTMENT (RECORD NAME AND ARRANGE CALL BACK)
3. RESPONDENT REFUSAL (GO TO R4)
4. RESPONDENT NEEDS RECONTACT IN ITALIAN (RECORD NAME AND ARRANGE GENERAL CALL BACK)
5. RESPONDENT NEEDS RECONTACT IN GREEK (RECORD NAME AND ARRANGE GENERAL CALL BACK)
6. RESPONDENT NEEDS RECONTACT IN CANTONESE (RECORD NAME AND ARRANGE GENERAL CALL BACK)
7. RESPONDENT NEEDS RECONTACT IN ARABIC (RECORD NAME AND ARRANGE GENERAL CALL BACK)

8. RESPONDENT NEEDS RECONTACT IN VIETNAMESE (RECORD NAME AND ARRANGE GENERAL CALL BACK)
9. RESPONDENT NEEDS RECONTACT IN MANDARIN (RECORD NAME AND ARRANGE GENERAL CALL BACK)
10. RESPONDENT NEEDS RECONTACT IN OTHER LOTE (SPECIFY) (RECORD NAME AND ARRANGE GENERAL CALL BACK)
11. RESPONDENT LOTE – CANNOT IDENTIFY LANGUAGE

IF NO - STOP INTERVIEW, MAKE APPOINTMENT (CODE 2 ON S7NEW), DISPLAY:
STOP INTERVIEW, MAKE APPOINTMENT - RECORD NAME IN APPOINTMENT NOTES

IF REFUSAL (CODE 3 ON S7NEW), ASK R4

IF DIFFERENT LANGUAGE (CODES 4 TO 11 ON S7NEW), ASK:
LANG IDN. INTERVIEWER NOTE: IF POSSIBLE RECORD NAME OF RESPONDENT

THANK YOU FOR YOUR TIME AND ASSISTANCE

IF RESPONDENT NEEDS RECONTACT IN ITALIAN (CODE 4 ON S7NEW), ABANDON TO USER 51

IF RESPONDENT NEEDS RECONTACT IN GREEK (CODE 5 ON S7NEW), ABANDON TO USER 52

IF RESPONDENT NEEDS RECONTACT IN CANTONESE (CODE 6 ON S7NEW), ABANDON TO USER 53

IF RESPONDENT NEEDS RECONTACT IN ARABIC (CODE 7 ON S7NEW), ABANDON TO USER 54

IF RESPONDENT NEEDS RECONTACT IN VIETNAMESE (CODE 8 ON S7NEW), ABANDON TO USER 55

IF RESPONDENT NEEDS RECONTACT IN MANDARIN (CODE 9 ON S7NEW), ABANDON TO USER 56

IF RESPONDENT NEEDS RECONTACT IN OTHER LOTE (CODE 10 ON S7NEW), ABANDON TO USER 57

IF RESPONDENT LOTE - CANNOT IDENTIFY LANGUAGE (CODE 11 ON S7NEW), ABANDON TO USER 58

ASK EVERYONE

S8 This call may be monitored for training and quality purposes. Is that OK?

1. MONITOR
2. DO NOT MONITOR

S9 Before we begin the main part of the survey, to make sure we are interviewing a random sample of the population I need to ask a couple of questions.

AGE1 Would you mind telling me your age please?

AGE1 <QUANTITY VARIABLE FOR RECORDING OF AGE1>

RECORD 101 IF OVER 100 YEARS OLD

RECORD 102 IF RELUCTANT TO ANSWER

RECORD 103 IF REFUSED

IF AGE1 IS 102 OR 103 ASK:

AGE2 Would you mind telling me which of the following age groups you fall in to?

READ OUT

1. 18 to 24
2. 25 to 34
3. 35 to 44
4. 45 to 54
5. 55 to 64
6. 65 to 74
7. 75 to 84
8. 85 and over
9. (DO NOT READ) REFUSED <GO TO T2>
10. (DO NOT READ) UNDER 18 <GO TO T3>

IF REFUSED (CODE 9 ON AGE2), SAY:

Thanks anyway, but for this survey we need to need to know your age in order to continue.

IF UNDER 18 (CODE 10 ON AGE2), SAY:

Thanks anyway, but for this survey we need to speak to people aged 18 years and over.

IF AGE QUOTA FULL, SAY:

Thank you for your time and assistance but we need to speak to people in certain age groups.

S10 <COMPUTE STATE / TERRITORY FROM POSTCODE AFTER S12>

1. NSW
2. VICTORIA
3. QUEENSLAND
4. SOUTH AUSTRALIA
5. WESTERN AUSTRALIA
6. TASMANIA
7. ACT
8. NORTHERN TERRITORY

S11 And could you please tell me your postcode?

CAN'T SAY / DON'T KNOW / REFUSED

IF POSTCODE NOT KNOWN (9999 ON S11), ASK:

S11A: What is your suburb or locality? SPECIFY

CAN'T SAY / DON'T KNOW / REFUSED

IF POSTCODE NOT KNOWN, ASK

S12 Do you live in the capital city of your state or territory, or not?

1. YES, LIVES IN CAPITAL CITY
2. NO, DOES NOT LIVE IN CAPITAL CITY
3. CAN'T SAY / DON'T KNOW / REFUSED

SEX RECORD SEX OF RESPONDENT

1. MALE
2. FEMALE

SECTION A: AWARENESS OF FLU INJECTION

The first lot of questions I'm going to ask are about the influenza vaccination, sometimes called the flu shot.

To begin with, I'm going to describe what I mean by the flu, as it is often confused with the common cold. Symptoms of the flu include all those you get with a common cold, but with the ADDITION of a rapid onset of fever, muscle aches, fatigue and extreme weariness lasting several days. It can also cause serious respiratory complications including pneumonia.

A1 Have you been sick with the flu at all since the 1st of January this year?

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

Later, I will be asking you some questions about pandemic H1N1 flu or swine flu, but not yet. The next few questions are about vaccinations for the normal, regular, seasonal flu, NOT for swine flu.

A2 In Australia, it's possible to have an influenza vaccination. This is often called the flu shot or flu injection. This is administered by a doctor or health worker to protect people from catching the flu. Before today, had you heard of the flu injection?

1. YES
2. NO <GO TO C2>
3. DON'T KNOW / CAN'T SAY <GO TO C2>

SECTION B: INFLUENZA VACCINATION STATUS

IF HEARD OF THE FLU INJECTION (CODE 1 AT A2) ASK:

B1 Have you had the flu INJECTION since the 1st of January this year? Remember, I mean the NORMAL flu injection, not swine flu.

1. YES <GO TO B2>
2. NO <GO TO B1A>
3. DON'T KNOW / CAN'T SAY <GO TO B2a>
4. REFUSED <GO TO B2a>

IF DID NOT HAVE FLU INJECTION (CODE 2 AT B1), ASK:

B1a What was the main reason you didn't have a flu injection this year? (Single response)

TYPE A KEY WORD TO SEARCH. CTRL-X CANCELS SEARCH

IF OTHER, HIGHLIGHT OTHER AND TYPE IN RESPONSE

LOW RISK / LOW PERCEIVED RELEVANCE

11. DON'T COME INTO CONTACT WITH A LOT OF PEOPLE WHO HAVE THE FLU
12. ONLY GOOD FOR ELDERLY PEOPLE
13. I DON'T GET THE FLU / RARELY GET THE FLU / I SELDOM FALL SICK
15. I'M NOT AT RISK / DON'T NEED IT

PROBLEMS WITH VACCINE / INJECTION / SIDE EFFECTS

21. IT DOESN'T WORK / IS INEFFECTIVE
22. IT BRINGS ON THE FLU / I MAY GET THE FLU FROM IT/IT MIGHT MAKE ME SICK / I FEAR THE SIDE EFFECTS
23. GOT THE FLU FROM IT LAST TIME / HAD THE WORSE CASE OF FLU FROM IT / HAD A BAD REACTION TO IT / IT HAS SIDE EFFECTS ON ME
24. PEOPLE I KNOW WHO'VE HAD IT GOT THE FLU FROM IT
25. PEOPLE I KNOW HAVE HAD A BAD REACTION OR COMPLICATIONS FROM IT / THEY HAVE (NEARLY) DIED
26. I'M ALLERGIC TO THE VACCINE / ALLERGIC TO THE EGG IN IT
27. I DON'T LIKE INJECTIONS / VACCINATIONS
28. I DON'T BELIEVE IN VACCINATIONS

PROBLEMS WITH AWARENESS / ACCESS / AFFORDABILITY

31. DID NOT THINK ABOUT IT / FORGOT TO ASK ABOUT IT THIS YEAR

32. WASN'T OFFERED THE FLU INJECTION BY MY FAMILY DOCTOR / GP
33. DIDN'T KNOW THE FLU INJECTION WAS AVAILABLE TO ME
34. NO TIME / TOO BUSY / DIDN'T GET AROUND TO IT
35. DIFFICULT TO GET TO THE DOCTOR
36. COULD NOT AFFORD THE VACCINE ITSELF
37. COULD NOT AFFORD THE GP'S / DOCTOR'S CONSULTATION FEE

MEDICAL CONDITION / ADVICE

41. I HAVE A MEDICAL CONDITION OR ON MEDICATION FOR SOMETHING ELSE
42. FAMILY DOCTOR / GP SAID I DID NOT NEED ONE
96. NO REASON
97. OTHER (SPECIFY _____)
98. CAN'T SAY / DON'T KNOW / DON'T RECALL
99. REFUSED

NOW GO TO B2A

IF HAD FLU INJECTION THIS YEAR (CODE 1 AT B1), ASK:

B2 What month was that? (IF NOT SURE OF EXACT MONTH, ASK FOR BEST GUESS)

1. JANUARY
2. FEBRUARY
3. MARCH
4. APRIL
5. MAY
6. JUNE
7. JULY
8. AUGUST
9. SEPTEMBER
10. OCTOBER
11. NOVEMBER
12. DECEMBER
13. DON'T KNOW / CAN'T SAY
14. REFUSED

IF HEARD OF THE FLU INJECTION (CODE 1 AT A2), ASK

B2a Did you have a flu injection last year ... that is any time in 2008?

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

IF HEARD OF THE FLU INJECTION (CODE 1 AT A2)

B2b Do you intend to have a flu injection next year ... that is, any time in 2010?

IF ANSWERS "YES" PROMPT "is that yes, definitely or probably"

IF ANSWERS "NO" PROMPT "is that no, probably not or definitely not"

1. YES, DEFINITELY
2. YES, PROBABLY
3. NO, PROBABLY NOT
4. NO, DEFINITELY NOT
5. DON'T KNOW / CAN'T SAY
6. REFUSED

IF HAD FLU INJECTION THIS YEAR (CODE 1 AT B1), ASK:

B4 Now, thinking about the flu injection that you had this year. Who gave you that flu injection? (NOTE: IF HAD MORE THAN ONE, ASK ABOUT MOST RECENT INJECTION)

1. DOCTOR / GP (INCLUDING NURSE / SISTER / HEALTH WORKER EMPLOYED THERE)
2. COUNCIL CLINIC / MOBILE CLINIC
3. SOMEONE AT PLACE OF WORK

4. SOMEONE IN A HOSPITAL
5. SOME OTHER PERSON
6. DON'T KNOW / CAN'T SAY
7. REFUSED

IF HAD FLU INJECTION THIS YEAR (CODE 1 AT B1)

B5 When you had the flu injection, did you have to pay in full, in part or not at all for the consultation? I don't mean payment for the vaccine, just the consultation. (PROBE TO CLARIFY) NOTE, WE ARE STILL REFERRING TO THE FLU INJECTION THEY RECEIVED THIS YEAR.

1. Yes, paid in full (IF NEEDED, CLARIFY – Did not get reimbursed at all) <GO TO B7>
2. Yes, paid in part (IF NEEDED, CLARIFY – Got partially reimbursed)
3. No, did not pay (IF NEEDED, CLARIFY – Didn't pay anything at all – not out of pocket)
4. DON'T KNOW / CAN'T SAY <GO TO B7>
5. REFUSED (GO TO B7)

IF DID NOT HAVE TO PAY FOR FULL COST OF CONSULTATION / PAID IN PART (CODE 2 OR 3 AT B5)

B6 Why didn't you have to pay (the full cost of/for) the consultation? (SINGLE RESPONSE)

1. BULK BILLED
2. WENT TO A FREE CLINIC
3. EMPLOYER PAID
4. COVERED BY CONCESSION / PENSION / VETERANS' AFFAIRS OR OTHER HEALTH-CARE CARD
5. COVERED BY MEDICARE
6. BECAUSE OF AGE
8. SOME OTHER REASON
9. DON'T KNOW / CAN'T SAY
10. REFUSED

IF HAD FLU INJECTION THIS YEAR (CODE 1 AT B1)

B7 Did you <(IF B5=1 OR 2)/also/>have to pay for the vaccine ?

1. YES
2. NO <GO TO B9>
3. DON'T KNOW / CAN'T SAY <GO TO C1>
4. REFUSED <GO TO C1>

IF HAD TO PAY FOR FLU VACCINE (CODE 1 AT B7)

B8 Was this via prescription and payment to a pharmacist or was it a direct payment to the provider of the vaccine?

1. PHARMACIST
 2. DIRECT PAYMENT TO PROVIDER OF VACCINE
 3. OTHER (SPECIFY)
 4. DON'T KNOW / CAN'T SAY
 5. REFUSED
- <NOW GO TO C1>

IF DID NOT HAVE TO PAY FOR FLU VACCINE (CODE 2 AT B7)

B9 Why didn't you have to pay for the vaccine? (SINGLE RESPONSE ONLY)

1. BULK BILLED
2. WENT TO A FREE CLINIC
3. EMPLOYER PAID
4. COVERED BY CONCESSION / PENSION / VETERAN'S AFFAIRS OR OTHER HEALTH-CARE CARD
5. BECAUSE OF AGE
6. BECAUSE I MEET OTHER ELIGIBILITY CRITERIA
7. DOCTOR JUST GAVE IT TO ME
8. SOME OTHER REASON
9. DON'T KNOW / CAN'T SAY

10. REFUSED

SECTION C: DOCTOR RECOMMENDATIONS

IF HEARD OF THE FLU INJECTION (CODE 1 AT A2), ASK

C1 Even if you didn't have one, did your doctor recommend that you have a flu injection? Please remember, I am still just talking about the normal flu injection at the moment.

1. YES (GO TO PREG1)
2. NO
3. DON'T HAVE A DOCTOR / GP
4. DON'T KNOW / CAN'T SAY
5. REFUSED

PREC2 IF DOCTOR DID NOT RECOMMEND FLU INJECTION (CODES 2 TO 5 AT C1) OR NOT HEARD OF FLU INJECTION (CODES 2 OR 3 ON A2), ASK:

C2 (Just to clarify) Would you have a flu injection if a doctor or GP recommended it to you? (NOTE: IF NO DOCTOR, PROBE FOR ANSWER ANYWAY) (PROBE TO CLARIFY)

IF ANSWERS "YES" PROMPT "is that yes, definitely or probably"

IF ANSWERS "NO" PROMPT "is that no, probably not or definitely not"

1. YES, DEFINITELY
2. YES, PROBABLY
3. NO, PROBABLY NOT
4. NO, DEFINITELY NOT
5. DON'T KNOW / CAN'T SAY
6. REFUSED

ASK EVERYONE

SECTION G: PNEUMOCOCCAL VACCINATION

PREG1 We are also interested in whether or not people have been vaccinated against pneumonia . This vaccine is also called Pneumovax or the pneumococcal vaccine and sometimes given at the SAME TIME as the flu injection. It is usually given only twice, the second time five years after the first.

G1 Have you ever been vaccinated against pneumonia?

IF NECESSARY, EXPLAIN: "This is sometimes called the pneumococcal vaccine or Pneumovax")

1. YES <GO TO G2>
2. NO
3. DON'T KNOW
4. REFUSED

IF NEVER BEEN VACCINATED AGAINST PNEUMOCOCCAL DISEASE (CODE 2 AT G1), ASK:

G1a What is the main reason you haven't been vaccinated against pneumonia? (SINGLE RESPONSE)

TYPE A KEY WORD TO SEARCH. CTRL-X CANCELS SEARCH

IF OTHER, HIGHLIGHT OTHER AND TYPE IN RESPONSE

CTRL-F TO SEARCH THROUGH LIST

LOW RISK / LOW PERCEIVED RELEVANCE

- 12 ONLY GOOD FOR ELDERLY PEOPLE
- 14 I DON'T GET SICK / I'M HEALTHY / RARELY GO TO THE DOCTOR
- 15 I'M NOT AT RISK / DON'T NEED IT
- 16 NEVER HAD PNEUMONIA

PROBLEMS WITH VACCINE / INJECTION / SIDE EFFECTS

- 21 IT DOESN'T WORK / IS INEFFECTIVE
- 26 I'M ALLERGIC TO THE VACCINE / ALLERGIC TO THE EGG IN IT

- 27 I DON'T LIKE INJECTIONS / VACCINATIONS
28 I DON'T BELIEVE IN VACCINATIONS

PROBLEMS WITH AWARENESS / ACCESS / AFFORDABILITY

- 31 DID NOT THINK ABOUT IT / FORGOT TO ASK ABOUT IT
34 NO TIME / TOO BUSY / DIDN'T GET AROUND TO IT
35 DIFFICULT TO GET TO THE DOCTOR
36 COULD NOT AFFORD THE VACCINE ITSELF
37 COULD NOT AFFORD THE GP'S / DOCTOR'S CONSULTATION FEE
38 NEVER BEEN OFFERED THE INJECTION
39 DIDN'T KNOW ABOUT IT / DIDN'T KNOW IT WAS AVAILABLE

MEDICAL CONDITION / ADVICE

- 41 I HAVE A MEDICAL CONDITION OR ON MEDICATION FOR SOMETHING ELSE
42 FAMILY DOCTOR / GP SAID I DID NOT NEED ONE

- 96 NO REASON
97 OTHER (SPECIFY _____)
98 CAN'T SAY / DON'T KNOW / DON'T RECALL
99 REFUSED

<NOW GO TO H1>

IF BEEN VACCINATED AGAINST PNEUMOCOCCAL DISEASE (CODE 1 AT G1), ASK:

G2 Have you been vaccinated against pneumonia within the last 5 years?

1. YES
2. NO <Go to H1>
3. DON'T KNOW <Go to H1>
4. REFUSED <Go to H1>

IF HAD PNEUMOCOCCAL VACCINATION IN LAST 5 YEARS (CODE 1 AT G2)

G4 Who gave you that injection? (NOTE: IF HAD MORE THAN ONE, ASK ABOUT MOST RECENT INJECTION)

1. DOCTOR / GP (INCLUDING NURSE / SISTER / HEALTH WORKER EMPLOYED THERE)
2. COUNCIL CLINIC / MOBILE CLINIC
3. SOMEONE AT PLACE OF WORK
4. SOMEONE IN A HOSPITAL
5. SOME OTHER PERSON
6. DON'T KNOW / CAN'T SAY
7. REFUSED

IF HAD PNEUMOCOCCAL VACCINATION IN LAST 5 YEARS (CODE 1 AT G2)

G5 When you were vaccinated against pneumonia, did you have to pay in full, in part or not at all for the consultation? I don't mean payment for the vaccine, just the consultation. (PROBE TO CLARIFY)

1. Yes, paid in full (IF NEEDED, CLARIFY: "That is, did not get reimbursed at all") <GO TO G7>
2. Yes, paid in part (IF NEEDED, CLARIFY: "That is, got partially reimbursed")
3. No, did not pay (IF NEEDED, CLARIFY : "That is, didn't pay anything at all – not out of pocket")
4. DON'T KNOW / CAN'T SAY (GO TO G7)
5. REFUSED (GO TO G7)

IF DID NOT HAVE TO PAY FOR FULL COST OF CONSULTATION (CODE 2 OR 3 AT G5)

G6 Why didn't you have to pay <(IF G5=2)/ the full cost of/><(G5=3)/for/> the consultation? (SINGLE RESPONSE)

1. BULK BILLED
2. WENT TO A FREE CLINIC
3. EMPLOYER PAID
4. COVERED BY CONCESSION / PENSION / VETERAN'S AFFAIRS OR OTHER HEALTH-CARE CARD

5. COVERED BY MEDICARE
6. BECAUSE OF AGE
8. SOME OTHER REASON
9. DON'T KNOW / CAN'T SAY
10. REFUSED

IF HAD PNEUMOCOCCAL VACCINATION IN LAST 5 YEARS (CODE 1 AT G2) ASK:

G7 Did you have to pay for the pneumonia vaccine <(G5=1 or 2)/also/>?

1. YES
2. NO <GO TO G9>
3. DON'T KNOW / CAN'T SAY <GO TO H1>
4. REFUSED <GO TO H1>

IF HAD TO PAY FOR PNEUMOCOCCAL VACCINE (CODE 1 AT G7), ASK:

G8 Was this via prescription and payment to a pharmacist or was it a direct payment to the provider of the vaccine?

1. PHARMACIST
2. DIRECT PAYMENT TO PROVIDER OF VACCINE
3. OTHER (SPECIFY)
4. DON'T KNOW / CAN'T SAY
5. REFUSED

<NOW GO TO H1>

IF DID NOT HAVE TO PAY FOR PNEUMOCOCCAL VACCINE (CODE 2 AT G7), ASK:

G9 Why didn't you have to pay for the vaccine? (SINGLE RESPONSE ONLY)

1. BULK BILLED
2. WENT TO A FREE CLINIC
3. EMPLOYER PAID
4. COVERED BY CONCESSION / PENSION / VETERAN'S AFFAIRS OR OTHER HEALTH-CARE CARD
5. BECAUSE OF AGE
6. BECAUSE I MEET OTHER ELIGIBILITY CRITERIA
7. DOCTOR JUST GAVE IT TO ME
9. SOME OTHER REASON
10. DON'T KNOW / CAN'T SAY
11. REFUSED

ASK EVERYONE

SECTION H: PANDEMIC (H1N1) 2009 INFLUENZA / SWINE FLU

I'm going to ask some questions around a particular influenza virus that appeared this year called pandemic H1N1 influenza virus, sometimes called swine flu.

It is a new strain of flu that spreads easily from person to person, and experience in other countries shows that this is not just a winter flu – it could come back during spring and summer.

H1 In Australia, it is possible to have a vaccination against swine flu. Before today had you heard of a pandemic H1N1 2009 flu vaccine, swine flu vaccine or Panvax? IF ANSWERS "NO" CLARIFY

1. YES
2. NO, RESPONDENT HAS NOT HEARD OF THE VACCINE BEFORE TODAY
3. NO, RESPONDENT HAS NOT HEARD OF SWINE FLU BEFORE TODAY
4. DON'T KNOW / CAN'T SAY
5. REFUSED

PREH3 From now on, for the sake of simplicity, I will call this "the swine flu vaccine".

IF HEARD OF A PANDEMIC H1N1 2009 FLU VACCINE, SWINE FLU VACCINE OR PANVAX (CODE 1 ON H1), ASK:

H2 Have you had the swine flu vaccine?

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY

IF HAVEN'T HAD THE SWINE FLU VACCINE OR HAVEN'T HEARD OF SWINE FLU OR SWINE FLU VACCINE (CODE 2 OR 3 AT H2, OR CODE 2, 3, 4, OR 5 AT H1), ASK:

H3 Before next March / winter season, do you intend to get the swine flu vaccine?

IF ANSWERS "YES" PROMPT "is that yes, definitely or probably"

IF ANSWERS "NO" PROMPT "is that no, probably not or definitely not"

1. YES, DEFINITELY
2. YES, PROBABLY
3. NO, PROBABLY NOT
4. NO, DEFINITELY NOT
5. DON'T KNOW / CAN'T SAY
6. REFUSED

IF HAD OR INTEND TO HAVE THE SWINE FLU VACCINE (CODE 1 AT H2, OR 1 OR 2 AT H3), ASK:

H4 What is the main reason you <(H2=1)/did/> <(H3=1 OR 2) /intend to/> get vaccinated?

1. IT'S FREE
2. I'M IN A 'AT RISK' / 'VULNERABLE' / 'PRIORITY' GROUP
3. MY DOCTOR ADVISED ME TO
4. THE GOVERNMENT / MEDIA CAMPAIGN ADVISED ME TO
5. SWINE FLU IS SERIOUS / I DON'T WANT TO GET SWINE FLU
6. VACCINES ARE IMPORTANT
7. TO PROTECT MYSELF IF A SECOND, MORE SERIOUS, WAVE OF SWINE FLU CAME TO AUSTRALIA / OVER SUMMER
8. KNOWING THAT IF I WAS VACCINATED IT WOULD HELP PROTECT FRIENDS AND FAMILY
9. KNOWING THAT IF I WAS VACCINATED IT WOULD HELP PROTECT THOSE WITH PRE-EXISTING HEALTH CONDITIONS
10. I WORK WITH VULNERABLE PEOPLE (E.G. IN HEALTH CARE)
96. NO REASON
97. OTHER (SPECIFY)
98. CAN'T SAY / DON'T KNOW / DON'T RECALL
99. REFUSED

IF DIDN'T HAVE OR DON'T INTEND TO HAVE THE SWINE FLU VACCINE (CODE 3, 4, 5 OR 6 AT H3)

H5 What is the main reason you <(IF H3=4)/ will not/ ><(IF H3=3, 5, 6)/probably won't/get the swine flu vaccine?

TYPE A KEY WORD TO SEARCH. CTRL-X CANCELS SEARCH

IF OTHER, HIGHLIGHT OTHER AND TYPE IN RESPONSE

PERCEIVED VACCINE SAFETY AND EFFICACY

1. <ADD INDENT SPACES FOR RESPONSES>PROBLEMS WITH SWINE FLU VACCINE SIDE-EFFECTS (SWINE FLU VACCINE WAS RUSHED AND UNSAFE / MULTI-DOSE VIALS ARE UNSAFE / POTENTIAL SIDE EFFECTS / FEAR OF ADVERSE EVENT FROM VACCINE
2. I AVOID ALL VACCINES / VACCINES DON'T WORK AND ARE DANGEROUS
3. BEING VACCINATED WON'T PROTECT ME AGAINST POSSIBLE MUTATIONS OF THE VIRUS IN THE FUTURE
4. I DON'T LIKE INJECTIONS / VACCINATIONS

PERCEPTIONS OF SERIOUSNESS

11. SWINE FLU VACCINE IS UNNECESSARY / THE THREAT HAS PASSED IN AUSTRALIA / SWINE FLU HAPPENS IN WINTER, WINTER IS OVER
12. I'VE ALREADY HAD, OR HAVE BEEN EXPOSED TO, SWINE FLU
13. I DON'T GET SICK / I'M HEALTHY / SWINE FLU ISN'T SERIOUS / I'M UNLIKELY TO GET SWINE FLU

14. I'M NOT AT RISK / SWINE FLU IS ONLY SERIOUS FOR THOSE WITH PRE-EXISTING HEALTH CONDITIONS OR IF YOU ARE PREGNANT
15. NOT A PRIORITY FOR ME / DON'T HAVE TIME / TOO BUSY
16. I DON'T BELIEVE IN SWINE FLU

AWARENESS / ACCESS AND AFFORDABILITY

20. I DIDN'T REALISE IT WAS AVAILABLE TO ME
21. I DIDN'T KNOW HOW TO GET IT
22. I DON'T LIKE GOING TO THE DOCTOR
23. I COULDN'T AFFORD DOCTOR'S CONSULTATION
24. MY DOCTOR DIDN'T OFFER IT TO ME
25. I DIDN'T THINK ABOUT IT / FORGOT TO ASK
26. I DON'T WANT TO SPEND THE MONEY

OTHER

30. SWINE FLU VIRUS VACCINE WILL BE INCORPORATED INTO 2010 SEASONAL FLU VACCINE, WHICH I WILL / MAY RECEIVE
31. I'M ALLERGIC TO VACCINATIONS
32. I WAS ADVISED AGAINST IT FOR MEDICAL REASONS / DOCTOR ADVISED NOT NECESSARY
33. I DON'T BELIEVE IN VACCINATIONS
34. I WANT MORE INFORMATION OR ADVICE BEFORE I DECIDE
97. OTHER (SPECIFY)

SECTION I: PERTUSSIS / WHOOPING COUGH

ASK EVERYONE

And finally on vaccinations, a question about whooping cough, also known as pertussis.

Whooping cough is an infectious coughing disease that seriously affects young babies. Booster shots are recommended for adults caring for young babies, that is, under 12 months old. The vaccine, called Boostrix or Adacel, has been available for adults since 2003.

- I1 To the best of your knowledge, have you been vaccinated against whooping cough as an adolescent or adult? (NOTE: NOT AS A BABY OR YOUNG CHILD)
1. YES
 2. NO
 3. DON'T KNOW / CAN'T SAY
 4. REFUSED

IF HAVE HAD THE WHOOPING COUGH VACCINE (CODE 1 AT I1), ASK:

- I2 When was that? IF MORE THAN ONCE, THEN YEAR OF LATEST VACCINATION ? (IF NOT SURE OF EXACT YEAR, ASK FOR BEST GUESS)
1. 2002 OR EARLIER
 2. 2003
 3. 2004
 4. 2005
 5. 2006
 6. 2007
 7. 2008
 8. 2009
 11. CAN'T SAY / DON'T KNOW

IF RESPONDENT IS AGED 18–64 YEARS (CODE 1–5 AT AGE2 OR CODE 18–64 AT AGE1)), ASK:

- I4 Are you the parent of an infant aged less than 12 months old?
1. YES
 2. NO
 3. DON'T KNOW / CAN'T SAY

4. REFUSED

ASK EVERYONE

- I5 Do you care for or come in contact with infants under 12 months of age regularly, for example babysitting or as a child care worker?
1. YES
 2. NO
 3. DON'T KNOW / CAN'T SAY
 4. REFUSED

SECTION D: RISK FACTORS AND GENERAL HEALTH

ASK ALL THAT QUALIFY FOR SURVEY

- D1 I've now got a couple of questions about selected health issues that may or may not apply to you. If there's anything you don't want to answer just let me know.

Do you now smoke cigarettes ...READ OUT

EXPLAIN AS NECESSARY: By cigarettes we mean factory-made or roll-your-own cigarettes

1. Daily
2. At least weekly
3. Less often than weekly, or
4. Not at all
5. (CAN'T SAY)

ASK ALL, DO NOT ROTATE ORDER. AT FIRST YES IN THE D1A1–D1A7 SERIES, SKIP TO D3. IF NO, DON'T KNOW / CAN'T SAY, REFUSED, AT D1A1–D1A7, CONTINUE

- D1A1. "Do you have high blood pressure or chronic heart disease, for example coronary heart disease, angina or atherosclerosis?"

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

D1A2. "Have you ever had a heart attack or stroke?"

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

D1A3 "Do you have severe asthma that required hospitalisation in the last 12 months?"

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

D1A4. "Do you have chronic lung disease such as chronic bronchitis or emphysema?"

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

D1A5 "Are you currently on medication that may affect your immune system, for example cortisone tablets; having cancer treatment, have you had an organ transplant, other conditions that affect the immune system?"

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

D1A6. "Do you have a chronic illness that required regular medical follow-up or hospitalisation in the last 12 months (eg. diabetes, kidney disease, blood disorder, or metabolic diseases)?"

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

D1A7. "Do you have a condition of the nervous system which affects your respiratory function, for example multiple sclerosis, spinal cord injury, seizure disorder, or motor neurone disorder?"

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

ASK EVERYONE

D3 Are you a health-care worker, do you work at a nursing home or other residential aged care facility, or are you a child care worker?

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

IF SOMEONE IN HOUSEHOLD IS AGED 0–64 (IF S2>0, OR IF S2+S3<S1), ASK:

D4 Do any people in your household aged under 65 (not including yourself) have any long-term illnesses such as heart disease, stroke, chronic lung disease, chronic bronchitis, emphysema, or cancer that they are receiving treatment for?

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

D5 Would you please tell me your approximate height? IF RESPONDENT SAYS A NUMBER WHICH FALLS BETWEEN RESPONSE CODES, ROUND DOWN TO THE LOWER HEIGHT RESPONSE

1. Less than 143cm (4'8")
2. 143 cm (4'8")
3. 145 cm (4'9")
4. 148 cm (4'10")
5. 150 cm (4'11")
6. 153 cm (5'0")
7. 155 cm (5'1")
8. 158 cm (5'2")
9. 160 cm (5'3")
10. 163 cm (5'4")
11. 165 cm (5'5")
12. 168 cm (5'6")
13. 170 cm (5'7")
14. 173 cm (5'8")
15. 175 cm (5'9")
16. 178 cm (5'10")
17. 180 cm (5'11")
18. 183 cm (6'0")
19. 185 cm (6'1")
20. 188 cm (6'2")
21. 190 cm (6'3")
22. 193 cm (6'4")
23. More than 193cm (6'4")
24. Don't know / can't say
25. Refused

D6 Would you please tell me your approximate weight? IF RESPONDENT SAYS A NUMBER WHICH FALLS BETWEEN RESPONSE CODES, ROUND UP TO THE HIGHER WEIGHT RESPONSE

1. Less than 40 kg (6 st 4 lb) (88 lb)
2. 40–44 kg (6 st 4 lb – 6 st 13 lb) (88 lb – 97 lb)
3. 45–49 kg (7 st 0 lb – 7 st 10 lb) (98 lb – 108 lb)
4. 50–54 kg (7 st 11 lb – 8 st 7 lb) (109 lb – 119 lb)
5. 55–59 kg (8 st 8 lb – 9 st 4 lb) (120 lb – 130 lb)
6. 60–64 kg (9 st 5 lb – 10 st 1 lb) (131 lb – 141 lb)
7. 65–69 kg (10 st 2 lb – 10 st 12 lb) (142 lb – 152 lb)
8. 70–74 kg (10 st 13 lb – 11 st 9 lb) (153 lb – 163 lb)
9. 75–79 kg (11 st 10 lb – 12 st 6 lb) (164 lb – 174 lb)
10. 80–84 kg (12 st 7 lb – 13 st 3 lb) (175 lb – 185 lb)
11. 85–89 kg (13 st 4 lb – 14 st 0 lb) (186 lb – 196 lb)
12. 90–94 kg (14 st 1 lb – 14 st 11 lb) (197 lb – 207 lb)
13. 95–99 kg (14 st 12 lb – 15 st 8 lb) (208 lb – 218 lb)
14. 100–104 kg (15 st 9 lb – 16 st 5 lb) (219 lb – 229 lb)
15. 105–109 kg (16 st 6 lb – 17 st 2 lb) (230 lb – 240 lb)
16. 110–114 kg (17 st 3 lb – 17 st 13 lb) (241 lb – 251 lb)
17. 115–119 kg (18 st 0 lb – 18 st 10 lb) (252 lb – 262 lb)
18. 120–124 kg (18 st 11 lb – 19 st 7 lb) (263 lb – 273 lb)
19. 125–129 kg (19 st 8 lb – 20 st 4 lb) (274 lb – 284 lb)
20. 130–134 kg (20 st 5 lb – 21 st 1 lb) (285 lb – 295 lb)
21. 135–139 kg (21 st 2 lb – 21 st 12 lb) (296 lb – 306 lb)
22. 140–144 kg (21 st 13 lb – 22 st 9 lb) (307 lb – 317 lb)
23. 145–149 kg (22 st 10 lb – 23 st 6 lb) (318 lb – 328 lb)
24. 150–154 kg (23 st 7 lb – 24 st 3 lb) (329 lb – 339 lb)
25. 155–159 kg (24 st 4 lb – 25 st 0 lb) (340 lb – 350 lb)
26. 160–164 kg (25 st 1 lb – 25 st 12 lb) (351 lb – 362 lb)
27. 165–169 kg (25 st 13 lb – 26 st 9 lb) (363 lb – 373 lb)
28. 170–174 kg (26 st 10 lb – 27 st 6 lb) (374 lb – 384 lb)
29. 175–179 kg (27 st 7 lb – 28 st 3 lb) (385 lb – 395 lb)
30. 180–184 kg (28 st 4 lb – 29 st 0 lb) (396 lb – 406 lb)
31. 185–189 kg (29 st 1 lb – 29 st 11 lb) (407 lb – 417 lb)
32. 190–194 kg (29 st 12 lb – 30 st 8 lb) (418 lb – 428 lb)
33. 195–199 kg (30 st 9 lb – 31 st 5 lb) (429 lb – 439 lb)
34. 200–204 kg (31 st 6 lb – 32 st 2 lb) (440 lb – 450 lb)

35. 205–209 kg (32 st 3 lb – 32 st 13 lb) (451 lb – 461 lb)
36. 210–214 kg (33 st 0 lb – 33 st 10 lb) (462 lb – 472 lb)
37. 215–219 kg (33 st 11 lb – 34 st 7 lb) (473 lb – 483 lb)
38. 220 KG OR MORE (34 ST 8 LB) (484 LB))
39. Don't know / can't say
40. Refused

IF DON'T KNOW/CAN'T SAY/ REFUSED HEIGHT AND/OR WEIGHT (CODE 24 OR 25 AT D5; AND/OR CODE 39 OR 40 AT D6), ASK:

D7 How would you describe your build?

1. Underweight
2. Normal range
3. Overweight
4. (DO NOT READ) DON'T KNOW / CAN'T SAY
5. (DO NOT READ) REFUSED

IF RESPONDENT IS FEMALE AGED 18–44 YEARS (CODE 2 AT SEX AND CODES 1 TO 3 AT AGE2 OR 18 TO 44 AT AGE1), ASK:

D8a At any time since May this year were you pregnant?

1. YES Continue (D8b)
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

IF PREGNANT SINCE MAY THIS YEAR (IF D8A=1) ASK:

D8b. Are you currently pregnant?

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

SECTION E: DEMOGRAPHICS

ASK EVERYONE

E1 And just two final questions to help us analyse the results.

Are you of Aboriginal or Torres Strait Islander origin?

1. YES
2. NO
3. DON'T KNOW / CAN'T SAY
4. REFUSED

E3 And, how many fixed telephone lines does this household have for personal use? (PAUSE) (IF MORE THAN 'ONE' CLARIFY: Please don't count mobile numbers or numbers ONLY used for the internet or fax or business purposes.)

1. (SPECIFY 1 to 10)
2. NONE
3. DON'T KNOW (AVOID IF POSSIBLE)
4. REFUSED (AVOID IF POSSIBLE)

T1 TERMINATION SCRIPT FOR OVER QUOTA

Thanks anyway, but for this survey we need to speak to people aged 65 years and over?

T2 TERMINATION SCRIPT FOR INSUFFICIENT DETAILS (AGE 2=9)

Thanks anyway, but for this survey we need to need to know (your age / the state or territory you live in) in order to continue.

T3 TERMINATION SCRIPT FOR THOSE UNDER 18 (AGE 2=10)

Thanks anyway, but for this survey we need to speak to people aged 18 years and over.

R1 REFUSAL SCRIPT

IF HOUSEHOLD REFUSAL (CODE 18 AT S1, CODE 4 ON PLET1), ASK REFUSAL SCRIPT

R2 Just before I hang up it would help us tremendously if you could tell us how many people in this household are aged 65 years and over?

1. NONE
2. ONE
3. TWO
4. THREE
5. FOUR
6. FIVE
7. SIX OR MORE
8. DON'T KNOW / CAN'T SAY
9. REFUSED

R3 And how many people in this household are aged 18 and older, including the people aged 65 years and over?

1. NONE
2. ONE
3. TWO
4. THREE
5. FOUR
6. FIVE
7. SIX OR MORE
8. DON'T KNOW / CAN'T SAY (GO TO R4)
9. REFUSED (GO TO R4)

NOW GO TO END

IF DON'T KNOW / CAN'T SAY OR REFUSED (CODES 8 OR 9 ON R2), ASK:

IF REFUSED (17 AT S3) ASK R4

IF REFUSED (CODE 4 ON S4 OR S5), ASK R4

IF NO / REFUSED (CODE 2 ON S6A), ASK R4

IF REFUSAL (CODE 3 ON S7), ASK R4

R4 OK, that's fine, no problem, but could you just tell me the main reason you do not want to participate, because that's important information for us? IF RESPONDENT HANGS UP BEFORE THIS QUESTION BUT YOU KNOW THE REASON WHY THEY REFUSED PLEASE RECORD BELOW:

<CREATE REFUSAL GROUP FROM RESPONDENTS WHO ANSWER THIS QUESTION>

1. REFUSED – HUNG UP / NO COMMENT
2. REFUSED – TOO BUSY / NO TIME / NOT NOW
3. REFUSED – HARD REFUSAL – CATEGORICALLY DO NOT CALL BACK

4. REFUSED – NOT INTERESTED
 5. REFUSED – TOO PERSONAL / INTRUSIVE
 6. REFUSED – SUBJECT MATTER
 7. REFUSED – CONFIDENTIALITY / PRIVACY CONCERNS
 8. REFUSED – DON'T TRUST SURVEYS / GOVERNMENT
 9. REFUSED – NEVER DO SURVEYS
 10. REFUSED – 5 TO 10 MINUTES TOO LONG
 11. REFUSED – GET TOO MANY CALLS FOR SURVEYS / TELEMARKETING
- IF CODE 1 -12: Thank you very much for your time

GO TO END

QF1 Thanks for being prepared to help, but there's no one in your household that qualifies for the survey.
Thanks again (RECORD AS QUOTA FULL)

ASK ALL

END That's the end of the survey. Thank you very much for your time. Just in case you missed it my name is (...) and this survey was conducted on behalf of the Australian Institute of Health and Welfare. Thank you for your help.

INTERVIEWER RECORD: Interview conducted in

1. English
2. IN ITALIAN
3. IN GREEK
4. IN CANTONESE
5. IN ARABIC
6. IN VIETNAMESE
7. IN MANDARIN
8. OTHER LOTE (SPECIFY)

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