

2003 Influenza Vaccine Survey

Summary results



Australian Government

**Australian Institute of
Health and Welfare**

**Department of
Health and Ageing**

The Australian Institute of Health and Welfare is an independent health and welfare statistics and information agency. The Institute's mission is better health and wellbeing for Australians through better health and welfare statistics and information.

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Summary results

March 2004

Australian Institute of Health and Welfare
Australian Government Department of Health and Ageing
Canberra

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Australian Institute of Health and Welfare

Board Chair
Dr Sandra Hacker

Director
Dr Richard Madden

Any enquiries about or comments on this publication should be directed to:

David Batts
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601

Phone: (02) 6289 8515

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Foreword

This report presents summary results from the 2003 Influenza Vaccine Survey.

The AIHW conducted the survey, which was supported by the Australian Government Department of Health and Ageing. The survey project was approved by the AIHW Health Ethics Committee.

AIHW legislation affords a high level of protection to the personal information collected in the survey. Custody of the survey data set rests with the AIHW and is protected by the *Australian Institute of Health and Welfare Act 1987*. The release of this report is an important contribution to the evaluation of the Australian Government's Influenza Vaccine Program for Older Australians.

I would like to pay particular tribute to AIHW staff for their role in managing the survey and to the Department's officers who worked closely with the AIHW throughout the survey.

Richard Madden

Director

Australian Institute of Health and Welfare

March 2004

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The 2003 Influenza Vaccine Survey required the time and input of a number of individuals and organisations. The assistance of the following is particularly appreciated.

The Policy Reference Group (see Appendix 1) was the main steering committee for the survey, with technical development provided by staff of the Australian Government Department of Health and Ageing and the Australian Institute of Health and Welfare.

From the Department of Health and Ageing:

Tracey Rand
Sharon Tuffin

From Roy Morgan Research:

Noel Gibney
Bruce Packard

From the Australian Institute of Health and Welfare:

David Batts
Priscilla Dowling
Mark Cooper-Stanbury

Funding

The funding for the 2003 Influenza Vaccine Survey was provided by the Australian Government Department of Health and Ageing.

Abbreviations and symbols

Abbreviations

AIHW	Australian Institute of Health and Welfare
CATI	Computer-assisted telephone interview
DoHA	Department of Health and Ageing
NHMRC	National Health and Medical Research Council
NIPII	National Indigenous Pneumococcal and Influenza Immunisation
RSE	Relative standard error
SCH	Statistical Clearing House
SE	Standard error

Symbols

n.a.	Not available
..	Not applicable
0, 0.0	Zero or rounded to zero

Notes

1. State means state and/or territory.
2. Totals and calculated results are based on unrounded data.
3. Where the context permits, results are for Australia in 2003.

Summary

The National Influenza Vaccine Program for Older Australians

Through the Program, the Australian Government funds free vaccine for Australians aged 65 years and older – the target group. In 2003, the Australian Government made available to each state government sufficient funds to purchase one vaccine dose for each target group member in that state (the funded doses). The state governments purchase vaccine doses at a nationally fixed rate (\$10.69 in 2003) (the purchased doses). The participation in the Program by individuals is voluntary.

The 2003 Influenza Vaccine Survey

The Australian Government reviews the Program through an annual survey. Conducted in October 2003, the 2003 survey was the fourth national survey in a current series and the second to be managed by the Australian Institute of Health and Welfare.

Almost eight thousand Australians aged 40 years and older participated in the survey. They were asked about their recent medical and financial experience of influenza and influenza vaccination. From their responses, answers to four central questions were estimated and some other analyses made. The central questions and their calculation are discussed below and illustrated in Figures S.1 and S.2.

Results

Coverage is the proportion of the target population vaccinated against influenza. It is estimated from the 2003 survey that, of about 2.5 million Australians in the target group, 1.9 million were vaccinated against influenza (*Vaccinated* in Figure S.1), giving an **estimate of coverage of 76.9%**.

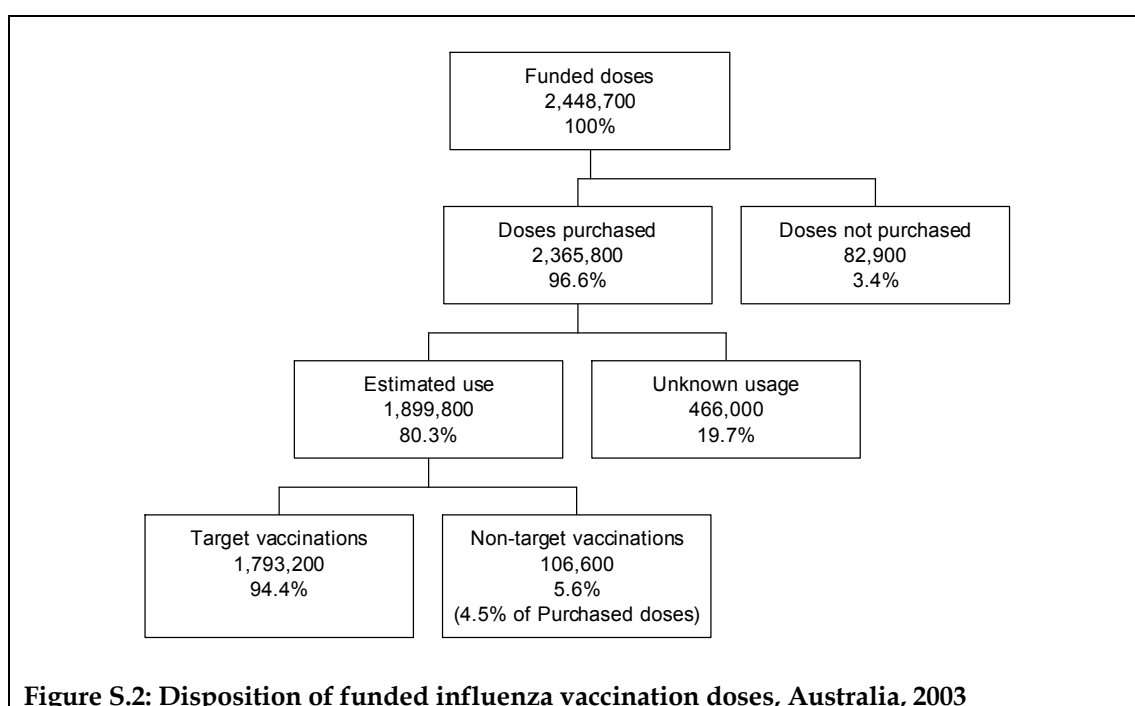
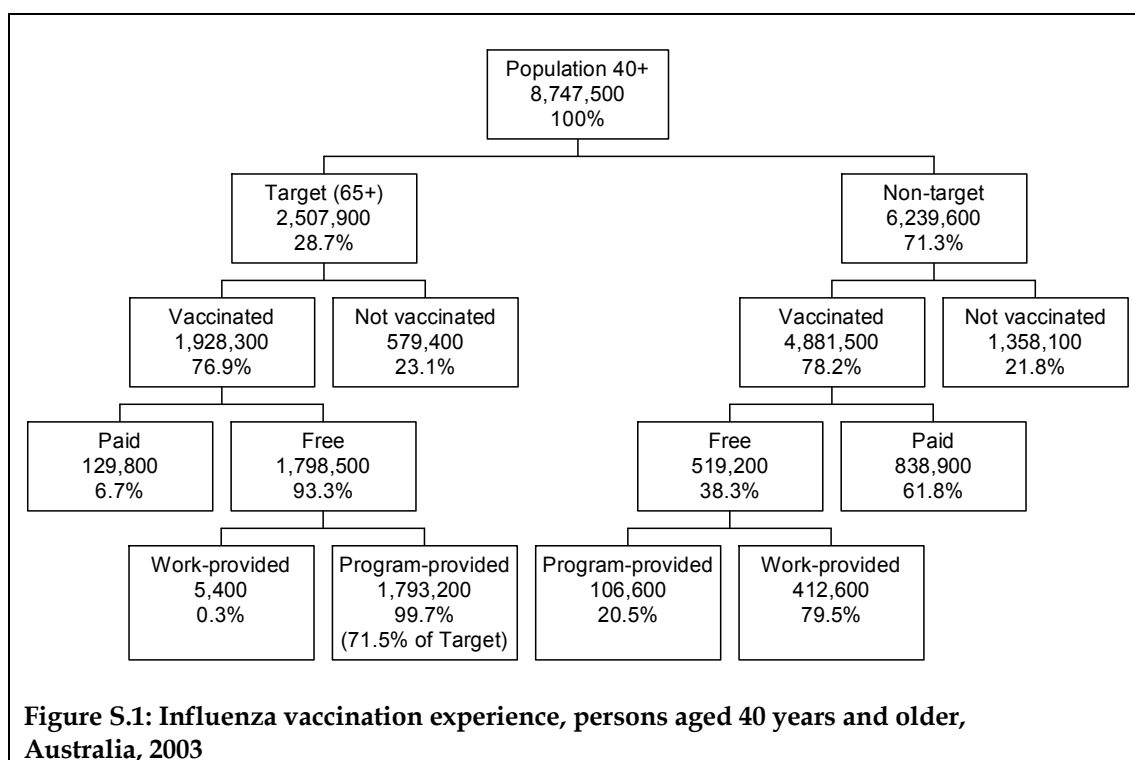
Valid usage is the proportion of the target population vaccinated against influenza with funded vaccine. Again, it is estimated from the 2003 survey that, of about 2.5 million Australians in the target group, 1.8 million were vaccinated against influenza with vaccine provided under the Program (*Program-provided* in Figure S.1), giving an **estimate of valid usage of 71.5%**.

Leakage is the proportion of the purchased doses administered to the non-target population. Of 2.4 million purchased doses, 106,600 doses were administered to non-target Australians (*Non-target vaccinations* in Figure S.2), giving an **estimate of leakage of 4.5%**.

Unknown usage is the proportion of the purchased doses not otherwise accounted for in this report. It arises through administration to those beyond the scope of the survey or just remaining in refrigerators at the end of the 'season' (doses not used in the season are not used later) or through wastage (that is, loss or destruction).

Unknown usage is calculated from purchased doses less valid usage doses less leakage doses. It is estimated that 466,000 doses were not otherwise counted, giving an **estimate of unknown usage of 19.7%**.

In the 2002 survey report, the leakage and unknown usage measures were calculated using the number of doses allocated to the states by the Australian Government (funded doses) (AIHW 2003). However, this report has used the number of doses purchased by the states to provide a more accurate estimate of leakage and unknown usage. This limits the comparability of the 2003 results with the 2002 results for these measures.



1 Introduction

The impact of influenza in Australia

Influenza is an epidemic disease which sometimes becomes pandemic and from which complications (such as pneumonia and pleurisy) can arise. In Australia in 2002, there were 56 deaths with influenza as an underlying cause, of which 45 were of people aged 65 or older (AIHW National Mortality Database). People in the older age group are at increased risk from influenza.

Influenza vaccination is a population health intervention that aims to reduce the impact of influenza.

The National Influenza Vaccine Program for Older Australians

Through the Program, the Australian Government funds the state governments to purchase vaccine for administration to Australian residents aged 65 years and older. In this report, this group is referred to as the target population or target group. In 2003, each state government was funded to provide one vaccine dose for each target group member in that state (the funded doses).

State governments are responsible for the acquisition and distribution of vaccine to immunisation providers. In 2003, state governments purchased vaccine doses at a nationally fixed rate (\$10.69 in 2003) (the purchased doses). The participation in the Program by individuals is voluntary.

Program evaluation

The Australian Government undertakes an annual evaluation of the Program, by way of the Influenza Vaccine Survey.

The Program is designed to cover all and only the people in the target population. It is also intended that the supply of vaccine doses will meet the demand and that over-supply will be minimised. Two aspects of the Program are evaluated by studying:

- the proportion of the target population that received influenza vaccine (called coverage);
- the way the supply of free vaccine (the funded doses) was actually used – for example:
 - not purchased (funded doses less purchased doses);
 - given to people in the target population (valid usage);
 - given to people not in the target population (leakage); or

- lost, destroyed, stored inappropriately, or simply not used in the Program year (unknown usage).

Leakage is further analysed in terms of two NHMRC-recommended population groups – people at increased risk from influenza and its complications; and those caring for people at risk.

Vaccine not used in the Program year (part of unknown usage) must be destroyed because the influenza vaccine is formulated each year according to the particular influenza strains circulating at the time.

The evaluation of leakage and unknown usage is clouded by the existence of other Australian Government and state programs that provide free influenza vaccination.

The Influenza Vaccine Survey

The 2003 Influenza Vaccine Survey is the fourth of its type and the second managed by the Australian Institute of Health and Welfare (AIHW). As in previous years the 2003 survey used the computer-assisted telephone interview (CATI) survey method.

The survey was of almost 8,000 people – 1,000 in each state (only 938 in the Northern Territory) – aged 40 years and older. This age restriction contains the cost of the survey but covers those aged 40 to 64 years who are not in the target population but may have received the vaccine.

Individual survey records are weighted according to gender, age group and state. The weighting is calculated so that the weighted contribution of each such group to the analysis is appropriate to the contribution of that gender/age group/state within the Australian population.

About this report

The report presents estimates derived from survey responses weighted to the Australian population aged 40 years and older.

Chapter 2 presents the central analysis for coverage, valid usage, leakage and unknown usage.

Chapter 3 describes:

- coverage and valid usage in more detail
- people who paid for the vaccine when they did not need to
- coverage of the non-target group
- two population groups that the NHMRC recommends be vaccinated
- the effect of excluding residents of aged care facilities from the survey.

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

The appendixes document the governance of the survey, provide the populations underlying the report, give standard error estimates and include the survey questionnaires.

2 Main results

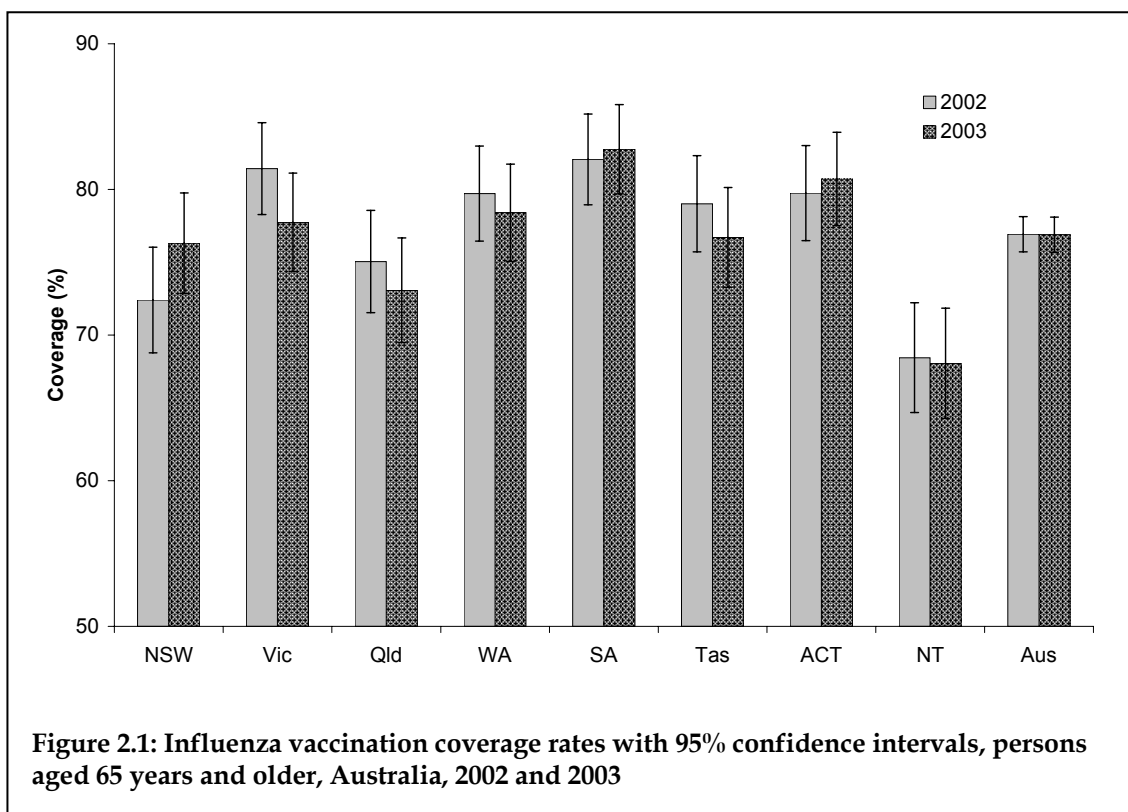
Introduction

The main survey results are presented as population statistics (relating to people) and as dose counts (doses provided through the Program). A person can receive no vaccine, one dose or more than one dose of vaccine.

Vaccination analysis

Coverage

Coverage is the proportion of the target population vaccinated against influenza. In Australia in 2003, overall coverage was 76.9% (1.9 million divided by 2.5 million) (Figure 2.1; Table 2.1). State by state, this varied by 5.9 percentage points or less with the exception of the Northern Territory where coverage was 8.8 percentage points less than that for the country as a whole. For no jurisdiction did the coverage rate differ significantly from that of the previous year.



Valid usage

Valid usage is the proportion of the target population vaccinated against influenza with Program-provided vaccine. Valid usage was 71.5% (1.8 million divided by 2.5 million) (Table 2.1). State by state, this varied from the national rate by as much as 10 percentage points.

Valid usage and coverage can be further analysed by calculating the proportion of the vaccinated target population who were vaccinated with Program-provided vaccine (that is, valid usage divided by coverage) – this was 93.0% (1.8 million divided by 1.9 million) (Table 2.1). This implies 7.0% of the vaccinated target population (coverage) either paid for the vaccine or received vaccine provided by their employer.

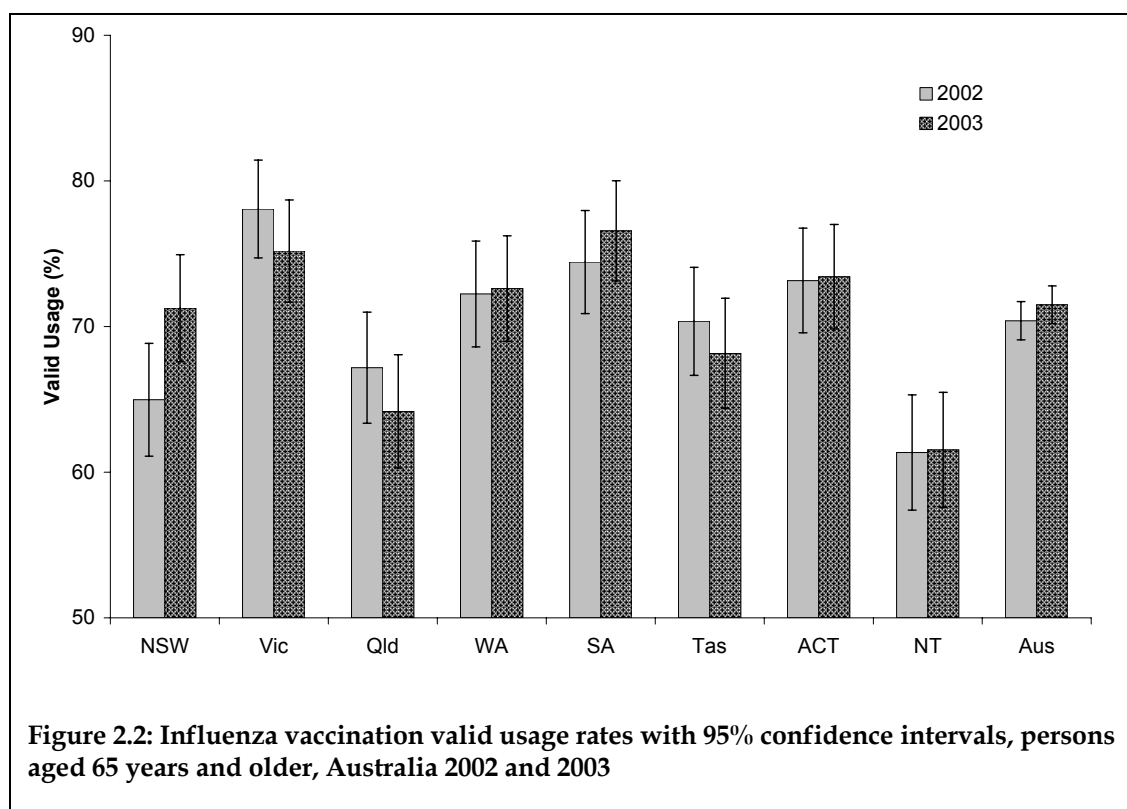


Table 2.1: Influenza vaccination coverage and valid usage, persons aged 65 years and older, Australia, 2003

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(number)								
Target population	869,000	642,300	448,400	219,100	225,000	67,300	28,700	8,000	2,507,900
vaccinated	663,100	499,300	327,700	171,800	186,200	51,600	23,200	5,400	1,928,300
with program vaccine	619,300	482,900	287,800	159,100	172,300	45,900	21,100	4,900	1,793,200
	(per cent)								
Coverage	76.3	77.7	73.1	78.4	82.8	76.7	80.7	68.1	76.9
Valid usage	71.3	75.2	64.2	72.6	76.6	68.2	73.4	61.5	71.5
as a proportion of coverage	93.4	96.7	87.8	92.6	92.5	88.9	91.0	90.4	93.0

Dose analysis

This analysis takes as its starting point the number of doses purchased by the states that were funded by the Australian Government, under the Program (2.4 million) (Table 2.2).

Leakage

Leakage is the proportion of the purchased doses administered to the non-target (ineligible) population. Australia-wide in 2003, 106,600 doses were administered to the ineligible population (Table 2.2): estimated leakage for 2003 is 4.5% of purchased doses.

Other Australian and state government programs affect the estimates. For example, in Victoria, the state government provides free influenza vaccines through public hospitals for people aged less than 65 years with risk factors recognised by the National Health and Medical Research Council (NHMRC), in *The Australian Immunisation Handbook*, as indications for vaccination (NHMRC 2003). It is therefore possible that some of what is classified as leakage, that is, vaccine received free by this group, has been appropriately administered by a public hospital in Victoria.

Similarly, the National Indigenous Pneumococcal and Influenza Immunisation (NIPPI) Program provides free vaccine to Indigenous people aged 50 years and older and to Indigenous people aged 15 to 50 years old with risk factors recognised by the NHMRC as indications for vaccination. Here too it is possible that some of what is classified as leakage is in fact appropriate vaccination under the NIPPI Program. This contribution to apparent leakage is a particular issue for the Northern Territory where a high proportion of the population is Indigenous.

Unknown usage

Unknown usage is the proportion of purchased doses not otherwise accounted for in this report – total purchased doses less valid usage doses less leakage doses.

Australia-wide in 2003, 466,000 doses were not otherwise accounted for (Table 2.2): estimated unknown usage in 2003 is 19.7% of purchased doses.

Unknown usage arises from Program-funded vaccine:

- that is administered to people beyond the scope of the survey – that is, less than 40 years of age or resident in nursing homes or other institutions;
- that remains at the end of the 'season' (around September) – vaccine not used in the season must be discarded because it is formulated each year according to the circulating strains of the influenza virus;
- that is lost, destroyed or stored inappropriately.

Table 2.2: Influenza vaccination: disposition of funded doses, Australia, 2003

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Purchased doses (number)	859,500	633,200	352,000	210,400	214,900	65,800	24,800	5,300	2,365,800
Eligible vaccinations (number)	619,300	482,900	287,800	159,100	172,300	45,900	21,100	4,900	1,793,200
Ineligible vaccinations (number)	29,300	24,700	23,500	7,300	12,200	6,500	1,800	1,400	106,600
Leakage (per cent)	3.4	3.9	6.7	3.5	5.7	9.8	7.4	25.8	4.5
Doses not used (number)	210,900	125,600	40,700	44,100	30,400	13,500	1,800	0	466,000
Unknown usage (per cent)	24.5	19.8	11.6	20.9	14.1	20.5	7.4	0.0	19.7
Doses not purchased (number)	0	0	71,400	0	8,100	0	2,700	1,700	82,900
Total funded doses (number)	859,500	633,200	423,400	210,400	222,900	65,800	27,400	7,000	2,448,700

Second and subsequent vaccination doses are excluded from coverage, valid usage and leakage calculations – it is assumed one person means one dose. These excluded doses are therefore counted as unknown usage.

In 2002, no allowance was made for states not purchasing all of their Program-funded doses. If this approach were retained in 2003, leakage and unknown usage in Australia would have been 4.4% and 22.4% respectively.

3 Other results

Coverage and valid usage by sex

The proportion of the target population that was vaccinated (coverage) varied less by sex than it did by state (Table 3.1). Nevertheless, the variation in sex-specific coverage was as much as 6.7 percentage points, in the Australian Capital Territory.

Across Australia, males in the target population were less likely than their female counterparts to be vaccinated against influenza although this is not true for all states and territories. The same pattern is found for the proportion of the target population vaccinated under the Program (valid usage).

Table 3.1: Influenza vaccination coverage and valid usage, by sex, persons aged 65 years and older, Australia, 2003

Sex and measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(per cent)								
Males									
Coverage	72.8	75.9	69.6	80.5	81.6	77.1	77.0	65.0	74.6
Valid usage	68.1	73.8	58.4	74.5	75.1	68.3	71.2	58.8	69.0
Females									
Coverage	79.1	79.1	76.0	76.7	83.6	76.4	83.7	71.4	78.7
Valid usage	73.8	76.3	69.2	71.0	77.7	68.0	75.2	64.5	73.6

Vaccinations by month

For the whole population (40 years old or more), for the target population and for the target populations vaccinated within the Program, more than 65% of vaccinations occurred in March and April (Table 3.2). However, this was not true for the Northern Territory, where more than 12% of vaccinations occur in February or earlier.

Generally, vaccination of the whole population (aged 40 years or older) is later than that of the Program-funded target group – by the end of April, the proportion of vaccinations completed was 70.1% for the whole population (aged 40 years or older) and 75.4% for the target group.

Table 3.2: Influenza vaccination: month of vaccination, persons aged 40 years and older, Australia, 2003

Group and month	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(per cent)								
Timing of all vaccinations									
January	0.6	0.1	0.1	0.3	1.0	0.2	0.1	2.3	0.4
February	3.4	5.6	2.7	2.0	3.1	5.5	2.3	9.9	3.8
March	30.9	25.7	25.5	28.0	34.8	29.5	23.5	35.1	28.5
April	38.6	36.8	40.1	34.6	32.7	38.9	40.5	22.6	37.4
May	18.6	21.8	20.3	23.8	19.8	15.2	23.1	15.4	20.3
June	3.1	4.2	4.2	7.4	4.8	4.7	7.7	3.8	4.3
July	3.9	3.9	6.0	2.2	1.9	2.4	1.5	5.2	3.8
August	0.5	1.5	1.2	1.3	1.4	2.5	1.3	2.7	1.1
September	0.3	0.2	0.0	0.3	0.6	1.1	0.1	2.8	0.3
October	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Timing of target group vaccinations									
January	1.0	0.2	0.1	0.5	0.3	0.4	0.1	3.6	0.5
February	3.5	3.3	5.0	3.3	3.2	4.3	3.7	19.7	3.7
March	35.1	31.3	33.6	38.6	34.1	31.9	31.0	34.9	33.9
April	37.4	37.0	38.3	32.8	35.6	40.5	39.2	19.0	36.9
May	15.9	19.3	16.5	17.5	16.8	13.9	17.9	11.7	17.1
June	2.6	3.9	3.2	2.7	4.5	4.6	4.3	4.8	3.3
July	3.0	3.5	2.1	2.1	3.1	1.8	2.2	3.6	2.9
August	0.8	1.2	1.2	1.8	1.7	1.8	1.1	1.8	1.2
September	0.4	0.3	0.0	0.7	0.9	0.8	0.2	0.7	0.4
October	0.3	0.2	0.0	0.0	0.0	0.0	0.2	0.3	0.1
Timing of program-funded target group vaccinations									
January	1.0	0.2	0.0	0.6	0.3	0.5	0.2	3.3	0.5
February	3.1	3.4	5.5	3.3	3.4	4.8	3.9	20.0	3.7
March	36.3	31.4	34.0	39.1	33.9	33.6	32.1	34.6	34.5
April	36.9	37.0	38.1	33.5	35.6	40.2	38.7	19.0	36.7
May	16.2	19.2	16.0	16.4	16.6	12.5	17.7	12.2	17.0
June	2.6	4.0	3.1	2.7	4.5	4.6	4.3	5.3	3.3
July	2.7	3.4	2.2	1.9	3.3	1.6	1.7	3.2	2.8
August	0.7	1.0	1.2	1.8	1.5	1.5	1.2	1.4	1.0
September	0.2	0.3	0.0	0.7	0.8	0.9	0.2	0.8	0.3
October	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.2

Target population: payment for vaccine

The great majority (93.6% Australia-wide in 2003) of people who were eligible under the Program and who were vaccinated paid nothing for the vaccine (Table 3.3). Among these people, 0.3% were paid for by their employer and 93.3% by the Program.

Some 6.4% of the vaccinated population who were eligible under the Program nevertheless paid for their vaccine – 5.6% to a pharmacy and 0.8% direct to the provider of their vaccination.

Table 3.3: Influenza vaccination: payment for vaccine, persons aged 65 years and older, Australia, 2003

Proportion	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(per cent)								
Paid									
Pharmacy	5.3	2.4	9.5	6.4	6.4	9.5	7.0	7.2	5.6
Direct	0.7	0.8	1.2	0.6	0.4	0.9	0.5	1.2	0.8
<i>Total paid</i>	<i>6.0</i>	<i>3.2</i>	<i>10.7</i>	<i>7.0</i>	<i>6.9</i>	<i>10.5</i>	<i>7.6</i>	<i>8.3</i>	<i>6.4</i>
Free									
Program	93.7	96.8	88.5	92.9	93.0	89.5	91.3	90.9	93.3
Employer	0.3	0.0	0.8	0.2	0.1	0.0	1.2	0.8	0.3
<i>Total free</i>	<i>94.0</i>	<i>96.8</i>	<i>89.3</i>	<i>93.0</i>	<i>93.1</i>	<i>89.5</i>	<i>92.4</i>	<i>91.7</i>	<i>93.6</i>

Payment by sex and marital status within age

Of those in the target population who paid for the vaccine, 45% were aged 65–69 years (Table 3.4). The greater proportions of these vaccinations were for females and for partnered people.

Table 3.4: Influenza vaccination purchased by target population, by age and sex, by age and marital status, persons aged 65 years and older, Australia, 2003

Profile	65–69	70–74	75–79	80–84	85–89	90+	All
	(per cent)						
Sex							
Male	22.6	14.8	5.1	2.0	0.3	0.0	44.8
Female	22.4	11.0	7.5	9.8	2.7	1.9	55.2
Marital status							
Never married	2.7	1.1	0.8	0.1	0.0	0.0	4.7
Divorced/separated	9.2	7.6	6.4	10.4	2.0	1.8	37.5
Married/de facto	33.2	17.1	5.4	1.1	0.9	0.0	57.8
Overall	45.0	25.8	12.6	11.8	3.0	1.9	100.0

Coverage of those not in the target group

Of those not in the target group (that is, aged 40–64 years), some 21.8% were vaccinated, only 1.7% with Program vaccine (Table 3.5). This ‘coverage’ of people not in the target population varied greatly, from a low of 15.2% in the Northern Territory to 29.2% in Tasmania.

Table 3.5: Influenza vaccination of the non-target population, persons aged 40–64 years, Australia, 2003

Non-target population	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(per cent)								
Vaccinated	18.8	23.7	21.5	25.4	22.0	29.2	25.5	15.2	21.8
Used program-funded vaccine	1.4	1.6	2.0	1.2	2.4	4.2	1.9	2.5	1.7

Use of Program-funded vaccine by sex and marital status within age

Of those not in the target population (aged 40–64 years) who used Program vaccine, 52.2% were aged 60–64 years (Table 3.6). The greater proportion of these vaccinations was for females in this oldest age group. Overall, non-target females appear to have been much greater users of Program vaccine than males (64.2% versus 35.8%).

Table 3.6: Influenza vaccination: use of Program vaccine for the non-target population, by age and sex, by age and marital status, persons aged 40–64 years, Australia, 2003

Profile	40–44	45–49	50–54	55–59	60–64	All
	(per cent)					
Sex						
Male	3.4	5.4	5.9	5.0	16.1	35.8
Female	2.4	9.6	5.6	10.7	36.0	64.2
Marital status						
Never married	2.9	1.5	0.4	3.7	3.2	11.7
Divorced/separated	0.3	0.3	1.3	3.7	26.5	32.0
Married/de facto	2.5	12.8	9.8	8.4	22.8	56.2
Overall	5.8	14.9	11.3	15.8	52.2	100.0

Other groups recommended by the NHMRC

The Australian Immunisation Handbook (NHMRC 2003) identifies a number of population groups as being at heightened risk from influenza. For two such groups (people with medical risk factors and carers of people with medical risk factors), this section provides:

- a coverage measure – the proportion of the defined group who were vaccinated, both overall and among those not in the target population (that is, not aged 65 years and older);
- the proportion of the defined group vaccinated with Program-funded vaccine;
- the number of doses that that represents; and
- an estimate of the contribution to overall leakage of Program-funded doses.

Note that these two population groups are not mutually exclusive. There will be overlap between the two populations, that is, people with risk factors who care for other people with risk factors.

‘At risk’ population

One such group is those Australians suffering from various circulatory, respiratory and immuno-suppressant conditions that put them at further risk from influenza and its complications. Of these, 67.4% were vaccinated in 2003, whereas 45.4% of those at risk but not in the target population were vaccinated (Table 3.7). Of those at risk but not in the target population who were vaccinated, 85.0% ($38.6\% \div 45.4\%$) paid for their vaccination themselves.

Table 3.7: Influenza vaccination among the 'at risk' population, persons aged 40 years and older, Australia, 2003

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(per cent)								
Total 'at risk' (persons aged 40 years and over)									
Vaccinated	69.0	71.9	62.7	61.5	67.4	62.7	63.9	57.5	67.4
Program-funded	45.2	57.2	37.3	43.4	49.6	36.8	41.1	32.7	46.3
Employer-funded	1.4	1.8	0.2	2.2	0.0	2.1	1.4	11.1	1.3
Self-funded	22.4	12.9	25.2	15.8	17.7	23.8	21.4	13.8	19.8
'At risk' and not in the target population (persons aged 40–64 years)									
Vaccinated	50.1	46.4	45.8	34.8	36.9	42.6	40.6	41.7	45.4
Program-funded	2.8	5.2	6.3	2.5	2.4	1.0	5.4	3.2	3.9
Employer-funded	3.3	5.5	0.0	4.2	0.0	4.3	2.6	19.6	2.9
Self-funded	43.9	35.8	39.5	28.2	34.5	37.3	32.6	18.9	38.6

Contribution to leakage

In terms of the contribution to leakage, the at-risk non-target group accounted for less than a quarter of the total Program leakage (1.1 percentage points out of the total 4.5 percentage points leakage (Tables 3.8 and 2.2)).

Table 3.8: Influenza vaccination: contribution to leakage from those 'at risk' but not in the target population, persons aged 40–64 years, Australia, 2003

Contribution to leakage	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Purchased doses (number)	859,500	633,200	352,000	210,400	214,900	65,800	24,800	5,300	2,365,800
Vaccinations to non-target									
'at risk' (number)	6,700	5,900	9,000	1,600	1,300	200	600	100	25,300
Leakage to 'at risk' people									
(per cent)	0.8	0.9	2.6	0.8	0.6	0.3	2.2	2.0	1.1

Caring for the 'at risk' population

People suffering from various circulatory, respiratory and immuno-suppressant conditions are at risk of contracting influenza. Many Australians care for 'at risk' people in aged care and similar facilities. Many others reside with 'at risk' people (aged less than 65 years). Of these carers, 36.5% were immunised in 2003 (Table 3.9). Of these carers not in the target population, 32.2% were vaccinated in 2003, of which a majority (18.1% out of 32.2%) paid for the vaccine themselves.

Table 3.9: Influenza vaccination among carers of the ‘at risk’ population, persons aged 40 years and older, Australia, 2003

Measure	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(per cent)								
Total carers (persons aged 40 years and over)									
Vaccinated	37.6	39.5	24.4	38.0	35.3	51.1	41.3	26.6	36.5
Program-funded	5.7	10.8	8.3	4.3	8.2	7.4	8.2	5.9	7.8
Employer-funded	9.6	14.7	7.8	15.2	9.3	20.9	10.9	11.6	11.7
Self-funded	22.4	13.9	8.3	18.5	17.8	22.7	22.3	9.1	17.1
Carers not in the target population (persons aged 40–64 years)									
Vaccinated	34.0	35.3	16.7	35.5	28.9	47.5	35.4	25.4	32.2
Program-funded	0.0	3.6	0.0	0.0	1.4	2.8	0.0	4.4	1.3
Employer-funded	10.1	16.3	9.2	16.4	9.9	23.1	12.2	12.0	12.8
Self-funded	23.9	15.4	7.5	19.1	17.6	21.6	23.3	9.0	18.1

Contribution to leakage

In terms of the contribution to leakage, carers in the non-target group accounted for 0.5% of purchased doses, one-ninth of the total Program leakage (Table 3.10).

Table 3.10: Influenza vaccination: contribution to leakage from carers not in the target population, persons aged 40–64 years, Australia, 2003

Contribution to leakage	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Purchased doses (number)	859,500	633,200	352,000	210,400	214,900	65,800	24,800	5,300	2,365,800
Vaccinations to non-target carers (number)	0	8,800	0	0	900	600	0	300	10,700
Leakage to carers (per cent)	0.0	1.4	0.0	0.0	0.4	1.0	0.0	5.8	0.5

Residents of aged care facilities—exclusion from survey

The CATI method of the survey excludes residents of institutions. Therefore CATI survey results are not representative of the institutional population. A large part of this population resides in aged care facilities. We estimate there to be 146,200 aged care facility residents aged 65 years or older.

A survey of aged care residential facilities was taken at the same time as the main CATI survey. Some 88 facilities were called and 65 usable responses gathered.

From these responses we estimated coverage Australia-wide for all residents (86.7%) and for high and low care residents separately. The Australian high and low care coverage rates were applied to each state’s high and low care populations and the results combined to give state-specific coverage.

The estimate of coverage for residents of aged care facilities also holds for valid usage – no surveyed facility reported residents paying for vaccine.

Adjusting the main survey coverage and valid usage results for the residential facilities results produces a small increase in the main results (Table 3.11).

Table 3.11: Influenza vaccination: coverage and valid usage adjusted for vaccination of aged care residents, persons aged 65 years and older, Australia, 2003

Measures	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(per cent)								
Survey results									
Coverage	76.3	77.7	73.1	78.4	82.8	76.7	80.7	68.1	76.9
Valid usage	71.3	75.2	64.2	72.6	76.6	68.2	73.4	61.5	71.5
Residential facilities survey results									
Coverage	87.0	86.4	86.5	86.5	86.6	87.0	86.1	86.9	86.7
Valid usage	87.0	86.4	86.5	86.5	86.6	87.0	86.1	86.9	86.7
Adjusted results									
Coverage	76.9	78.2	73.9	78.8	83.0	77.3	81.0	69.0	77.5
Valid usage	72.2	75.8	65.5	73.4	77.2	69.2	74.1	62.9	72.4

4 Explanatory notes

Main survey

Introduction

The 2003 Influenza Vaccine Survey was the fourth survey under current vaccine funding arrangements, and the second to be managed by the Australian Institute of Health and Welfare. The Institute was commissioned by the Australian Government Department of Health and Ageing to manage the 2003 survey. A Departmental Policy Reference Group supported the AIHW in this task.

Roy Morgan Research was selected by competitive tender in July 2003 to conduct the survey. The survey, using computer-assisted telephone interview (CATI), was conducted in October 2003.

Respondents were asked about their recent medical and financial experience of influenza and influenza vaccination.

Scope

The estimates for 2003 contained in this publication are based on information obtained from persons aged 40 years and older from the populations of all states and territories.

Respondents

Respondent quotas of 300 people aged 40–64 years old and 700 people aged 65 or older for each state were set. These quotas were met for all states except the Northern Territory, where only 637 respondents aged 65 or older were surveyed. Thus, including over-sampling (of 1 or 2 respondents) in some other states, 7,945 Australians aged 40 years and older participated in the survey.

Numbers of respondents to the survey are summarised by gender, eligibility (for Program-funded vaccine – that is, aged 65 or older) and Indigenous status (Table 4.1).

Table 4.1: Respondents, unweighted counts, by sex, eligibility and Indigenous status, 2003 Influenza Vaccine Survey

Characteristic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	(number)								
Sex									
Male	418	400	415	403	422	424	415	456	3,353
Female	583	600	587	597	580	577	586	482	4,592
Total	1,001	1,000	1,002	1,000	1,002	1,001	1,001	938	7,945
Eligibility									
Eligible	700	700	700	700	702	700	701	637	5,540
Not eligible	301	300	302	300	300	301	300	301	2,405
Total	1,001	1,000	1,002	1,000	1,002	1,001	1,001	938	7,945
Indigenous status									
Indigenous	11	4	6	3	7	15	1	63	110
Other Australian	990	996	993	996	993	983	998	871	7,820
Not ascertained	0	0	3	1	2	3	2	4	15
Total	1,001	1,000	1,002	1,000	1,002	1,001	1,001	938	7,945

Methodology

Survey design

The 2003 survey used the CATI survey method, drawing telephone numbers from the electronic White Pages directory.

The survey was of people aged 40 years and older. This age restriction reduces the surveyed population and the cost. The utility and validity of the analysis arising are not greatly affected: representation of the target population in the survey is not reduced and representation of the non-target population is not reduced where the greatest interest lies (60–64 year olds).

Weighting

Individual survey records are weighted according to gender, age group and state. The weighting is calculated so that the weighted contribution of each such group to the analysis is appropriate to the contribution of that gender/age group/state within the Australian population. The weighting was further adjusted for 'likelihood of selection', based on the number of entries in the White Pages for the respondent household.

Weighted numbers of respondents to the survey are also summarised by gender, eligibility and Indigenous status (Table 4.2). The represented population (aged 40 years and older) is 8.7 million. Of these, the majority were female and 2.5 million were eligible under the Program.

Table 4.2: Respondents, weighted counts, by sex, eligibility and Indigenous status, 2003 Influenza Vaccine Survey

Characteristic	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
	('000)								
Sex									
Male	1,431	1,048	806	415	342	107	60	34	4,244
Female	1,516	1,132	843	427	374	117	66	29	4,504
Total	2,946	2,180	1,649	842	716	224	127	63	8,748
Eligibility									
Eligible	869	642	448	219	225	67	29	8	2,508
Not eligible	2,077	1,538	1,201	623	491	156	98	55	6,240
Total	2,946	2,180	1,649	842	716	224	127	63	8,748
Indigenous status									
Indigenous	17	12	7	4	5	4	0	5	54
Other Australian	2,930	2,168	1,636	838	710	220	126	58	8,685
Not ascertained	0	0	6	0	1	0	1	0	9
Total	2,946	2,180	1,649	842	716	224	127	63	8,748

Participation rates

Under the CATI methodology, response management is highly automated, at least in the initial scoping and selection of participants. In the 2003 survey, the participation rate (participants divided by total eligible calls) was 20.8% (Table 4.3).

Table 4.3: Sample participation rates, Roy Morgan CATI, Australia, October 2003

Sample outcome	Number	Proportion of	
		all calls	eligible calls
Completed interviews	7,945	7.6	20.8
Refusals/screened out—refused to specify age	29,751	28.3	77.9
Unable to contact selected respondent	509	0.5	1.3
<i>Total eligible</i>	<i>38,205</i>	<i>36.4</i>	<i>100.0</i>
No one of qualifying age in household	48,166	45.8	..
Tried but no contact	5,347	5.1	..
Contact attempts exhausted	12,371	11.8	..
Inadequate English	1,003	1.0	..
Total calls made	105,092	100.0	..

Editing

Minimal editing was required because of the survey method (CATI). Nevertheless, questions with integer answers were checked for outliers. Roy Morgan Research report seven such outliers (in 'number in household' and 'number of White Pages entries') which were corrected by taking the first digit of the outlying responses.

Furthermore, data editing was required for the postcode data – 228 records had postcode data that required replacement with the postcode information contained in the electronic White Pages.

Reliability of estimates

Sampling error

As the estimates are based on a sample, they are subject to sampling variability (that is, the extent to which the sample varies from all persons, had a census been conducted). Estimates in this publication are assumed to be reliable if the relative standard error (the ratio of the sampling error to the population estimate) is less than 25%. Estimates with relative standard errors between 25% and 50% should be interpreted with caution. Estimates with relative standard errors over 50% should be considered unreliable for most practical purposes. To assist readers with these judgments, a table of indicative standard errors is provided in Appendix 2.

Non-sampling error

In addition to sampling errors, the estimates are subject to non-sampling errors. These can arise from errors in transcription of responses, errors in reporting of responses (for example, failure of respondents' memories), and the unwillingness of respondents to reveal their 'true' responses.

Limitations of the data

Excluded from sampling were non-private dwellings (hotels, motels, boarding houses, etc.) and institutional settings (hospitals, nursing homes, other clinical settings such as drug and alcohol rehabilitation centres, prisons, military establishments and university halls of residence). Accordingly, homeless persons were also excluded. The territories of Jervis Bay, Christmas Island and Cocos Island were excluded as well.

Comparability with previous surveys

Limited comparisons have been undertaken. The definitions of the dose-based (leakage and unknown usage) questions have changed significantly. Also, sample size, in this and past surveys, limits the significance of any derived statistics.

Residential facilities survey

Because it is CATI based and designed for households and individuals, the main survey excludes institutional residents. In particular, the exclusion of aged care residential facilities leaves out a population of particular interest to the review of the National Influenza Vaccine Program for Older Australians – residents aged 65 years and older.

The residential facilities survey was submitted to the ABS Statistical Clearing House (SCH). While the survey was considered to be in scope for review, the SCH determined it was unlikely that review of the survey would reduce the respondent load enough to warrant that review.

From a listing of residential facilities, 88 were selected at random and called. Of them 65 responded (directors of nursing and similar) to a short survey (see Appendix 4). A participation rate of 74% was calculated.

Respondents were asked how many residents were aged 65 years or older, how many had been vaccinated against influenza (in 2003) and how many had paid for the vaccine. Weighting of individual records was not undertaken. No data editing was required.

Coverage for high care and low care residents was calculated for Australia as a whole. These separate rates were then applied to each state's high and low care population and the results were combined to give state-specific coverage.

Appendix 1: Membership of Policy Reference Group

Table A1.1: Membership of the Influenza Vaccine Survey Policy Reference Group

Member	Affiliation
Ms Sharon Tuffin (Chair)	Australian Government Department of Health and Ageing
Dr Leslee Roberts	Australian Government Department of Health and Ageing
Dr Rosemary Lester	National Immunisation Committee
Ms Maureen Watson	National Immunisation Committee
Associate Professor Raina MacIntyre	National Centre for Immunisation Research and Surveillance
Ms Tracey Rand (Secretary)	Australian Government Department of Health and Ageing

Appendix 2: Standard errors

Table A2.1: Standard errors (SE) and relative standard errors (RSE), Australia, 2003

Prevalence ^(a)	Indicative base population									
	2,500,000		2,000,000		500,000		50,000		5,000	
	SE ^(b)	RSE	SE	RSE	SE	RSE	SE	RSE	SE	RSE
	(per cent)									
90	0.4	0.5	0.5	0.5	1.0	1.1	3.1	3.5	9.8	10.9
80	0.6	0.7	0.7	0.8	1.3	1.6	4.1	5.2	13.1	16.4
70	0.7	1.0	0.8	1.1	1.5	2.1	4.7	6.8	15.0	21.4
60	0.7	1.2	0.8	1.3	1.6	2.7	5.1	8.5	16.0	26.7
50	0.7	1.5	0.8	1.6	1.6	3.3	5.2	10.4	16.4	32.7
20	0.6	2.9	0.7	3.3	1.3	6.5	4.1	20.7	13.1	65.5
10	0.4	4.4	0.5	4.9	1.0	9.8	3.1	31.1	9.8	98.2

Non-target population										
Prevalence ^(a)	Indicative base population									
	6,000,000		2,000,000		500,000		50,000		5,000	
	SE ^(b)	RSE	SE	RSE	SE	RSE	SE	RSE	SE	RSE
	(per cent)									
90	0.7	0.7	1.2	1.3	2.3	2.6	7.3	8.2	23.2	25.8
80	0.9	1.1	1.5	1.9	3.1	3.9	9.8	12.2	31.0	38.7
70	1.0	1.5	1.8	2.5	3.5	5.1	11.2	16.0	35.5	50.7
60	1.1	1.8	1.9	3.2	3.8	6.3	12.0	20.0	37.9	63.2
50	1.1	2.2	1.9	3.9	3.9	7.7	12.2	24.5	38.7	77.5
20	0.9	4.5	1.5	7.7	3.1	15.5	9.8	49.0	31.0	154.9
10	0.7	6.7	1.2	11.6	2.3	23.2	7.3	73.5	23.2	232.4

(a) Prevalence estimate (values taken from tables in the report can be interpolated between those provided in this table).

(b) Standard error expressed in same units as prevalence.

Appendix 3: Population estimates

Table A3.1: Population estimates, by age and sex, Australia, 2003

Age group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Australia
Males									
0–39	1,876,157	1,376,880	1,085,600	562,614	410,273	126,798	96,500	69,147	5,603,969
40–44	257,519	186,647	143,819	76,643	58,749	18,095	12,153	8,459	762,084
45–49	232,913	169,546	131,410	71,110	54,243	17,195	11,275	7,075	694,767
50–54	217,066	157,318	125,788	66,746	51,673	16,453	10,986	6,642	652,672
55–59	195,784	139,770	114,637	57,463	46,439	14,987	9,336	5,019	583,435
60–64	148,087	107,277	85,374	42,008	35,091	11,732	6,107	3,421	439,097
65–69	122,056	88,093	66,914	32,896	29,224	9,515	4,360	1,877	354,935
70–74	105,085	76,068	54,584	26,873	25,907	8,023	3,465	1,215	301,220
75–79	83,960	61,268	42,485	20,566	22,050	6,332	2,703	728	240,092
80–84	51,722	36,930	26,272	12,244	13,666	3,750	1,642	327	146,553
85+	31,615	23,602	16,404	7,709	8,555	2,388	874	267	91,414
<i>Total 40+</i>	<i>1,445,807</i>	<i>1,046,519</i>	<i>807,687</i>	<i>414,258</i>	<i>345,597</i>	<i>108,470</i>	<i>62,901</i>	<i>35,030</i>	<i>4,266,269</i>
Total all ages	3,321,964	2,423,399	1,893,287	976,872	755,870	235,268	159,401	104,177	9,870,238
Females									
0–39	1,825,109	1,357,313	1,060,518	544,023	393,844	125,024	95,116	63,972	5,464,919
40–44	256,930	189,852	147,162	76,991	59,060	18,804	12,805	7,551	769,155
45–49	234,311	173,776	133,990	71,736	55,279	17,550	12,218	6,632	705,492
50–54	216,763	161,836	125,522	65,895	52,976	16,571	11,603	5,725	656,891
55–59	190,606	140,507	110,164	53,926	47,148	14,784	9,332	3,924	570,391
60–64	145,700	106,899	81,740	40,582	35,347	11,570	6,099	2,474	430,411
65–69	126,262	93,126	65,388	33,577	30,930	9,726	4,637	1,433	365,079
70–74	115,589	84,634	57,274	28,764	28,939	8,733	3,714	982	328,629
75–79	105,148	77,591	50,678	24,746	27,813	7,775	3,446	681	297,878
80–84	78,338	57,132	37,837	18,343	21,110	5,958	2,467	442	221,627
85+	69,924	51,329	33,215	16,825	19,105	5,331	2,012	358	198,099
<i>Total 40+</i>	<i>1,539,571</i>	<i>1,136,682</i>	<i>842,970</i>	<i>431,385</i>	<i>377,707</i>	<i>116,802</i>	<i>68,333</i>	<i>30,202</i>	<i>4,543,652</i>
Total all ages	3,364,680	2,493,995	1,903,488	975,408	771,551	241,826	163,449	94,174	10,008,571
Persons									
0–39	3,701,266	2,734,193	2,146,118	1,106,637	804,117	251,822	191,616	133,119	11,068,888
40–44	514,449	376,499	290,981	153,634	117,809	36,899	24,958	16,010	1,531,239
45–49	467,224	343,322	265,400	142,846	109,522	34,745	23,493	13,707	1,400,259
50–54	433,829	319,154	251,310	132,641	104,649	33,024	22,589	12,367	1,309,563
55–59	386,390	280,277	224,801	111,389	93,587	29,771	18,668	8,943	1,153,826
60–64	293,787	214,176	167,114	82,590	70,438	23,302	12,206	5,895	869,508
65–69	248,318	181,219	132,302	66,473	60,154	19,241	8,997	3,310	720,014
70–74	220,674	160,702	111,858	55,637	54,846	16,756	7,179	2,197	629,849
75–79	189,108	138,859	93,163	45,312	49,863	14,107	6,149	1,409	537,970
80–84	130,060	94,062	64,109	30,587	34,776	9,708	4,109	769	368,180
85+	101,539	74,931	49,619	24,534	27,660	7,719	2,886	625	289,513
<i>Total 40+</i>	<i>2,985,378</i>	<i>2,183,201</i>	<i>1,650,657</i>	<i>845,643</i>	<i>723,304</i>	<i>225,272</i>	<i>131,234</i>	<i>65,232</i>	<i>8,809,921</i>
Total all ages	6,686,644	4,917,394	3,796,775	1,952,280	1,527,421	477,094	322,850	198,351	19,878,809

Source: AIHW National Population Database.

Appendix 4: The questionnaires

The survey instruments follow.

30-SEP-03

ROY MORGAN RESEARCH
CATI Department, 411 Collins Street, Melbourne, Vic., 3000
Tel: (03) 9629-6888

STRICTLY CONFIDENTIAL
CM2937
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Influenza Vaccine Survey 2003

Good %A. My name is (SAY NAME) (from Roy Morgan Research, the people who conduct the Morgan Gallup Poll.) Today we are conducting an important survey on health related issues on behalf of the Australian Institute of Health & Welfare. Your number has been randomly selected from the White Pages directory. The survey will only take 5 to 6 minutes to complete. The answers given are completely confidential and protected by Commonwealth legislation under both the Federal Privacy Act and the AIHW Act. IF NECESSARY SAY: Is now a good time or would it be more convenient if I made an appointment to speak to you at another time? IF NECESSARY, MAKE AN APPOINTMENT. IF ASK WHO THE CLIENT, HIT ESC H AND SELECT CLIENT\$H. IF RESPONDENT ASKS FOR MORE INFO ABOUT THIS PROJECT OR ROY MORGAN RESEARCH, HIT ESC H AND SELECT RMR\$H. IF RESPONDENT HAS CONCERNS ABOUT PRIVACY ISSUES, HIT ESC H AND SELECT ISSUE\$H THE FOLLOWING QUOTAS ARE STILL OPEN: <table border="1"><tr><td>%339,/ Ages</td><td></td></tr><tr><td>40-64/</td><td>/ %341,/ Ages</td></tr><tr><td>65+ /</td><td>/</td></tr></table> %343,/ APPOINTMENT COMMENTS ===== // %345,161.	%339,/ Ages		40-64/	/ %341,/ Ages	65+ /	/	Thank-you for your time but we only need to speak with residential households S2b. And how many of these are aged 40 years and over? IF CAN'T SAY: Could I speak to someone who would be able to help me? MAKE APPOINTMENT IF NECESSARY IF STILL CAN'T SAY, ESC D. IF REFUSES, ESC \. _ _ + IF NO ONE IN HOUSEHOLD IS AGED 40+ Thankyou for your time, but we need to speak to people aged 40 years and over for this survey. S2c. And how many are aged 65 years or over? IF CAN'T SAY: Could I speak to someone who would be able to help me? MAKE APPOINTMENT IF NECESSARY IF STILL CAN'T SAY, ESC D. IF REFUSES, ESC \. _ _ + IF MORE PEOPLE MENTIONED AT S2C THAN AT S2B, REDO FROM S2A INTERVIEWER NOTE: THE RESPONDENT HAS SAID THAT THERE ARE %170. PEOPLE AGED 40+ AND %171. PEOPLE AGED 65+ IN THE HOUSEHOLD. THERE CANNOT BE MORE PEOPLE AGED 65+ IN THE HOUSEHOLD THAN THERE ARE PEOPLE AGED 40+ IN THE HOUSEHOLD. CHECK ANSWERS WITH RESPONDENT. IF MORE PEOPLE MENTIONED AT S2B THAN IN HOUSEHOLD AT S2A, REDO FROM S2A INTERVIEWER NOTE: THE RESPONDENT HAS SAID THAT THERE ARE %169. PEOPLE LIVING IN THE HOUSEHOLD, BUT THAT THERE ARE %170. PEOPLE AGED 40+ IN THE HOUSEHOLD. THERE CANNOT BE MORE PEOPLE AGED 40+ IN THE HOUSEHOLD THAN THERE ARE PEOPLE IN THE HOUSEHOLD. CHECK ANSWERS WITH RESPONDENT.
%339,/ Ages							
40-64/	/ %341,/ Ages						
65+ /	/						
S2a. Including yourself, how many people in total live in this household? IF CAN'T SAY: Could I speak to someone who would be able to help me? MAKE APPOINTMENT IF NECESSARY IF STILL CAN'T SAY, ESC D. IF REFUSES, ESC \. _ _ + IF NO PEOPLE ACTUALLY LIVE AT NUMBER ('0' AT S2A), SAY:							

IF SELECTED RESPONDENT NOT AVAILABLE NOW, MAKE APPOINTMENT +-----+ THE SELECTED RESPONDENT FOR THIS HOUSEHOLD IS %173.. HIT ENTER TO MAKE AN APPOINTMENT. +-----+ IF CURRENT RESPONDENT AVAILABLE NOW, OR ONLY ONE PERSON LIVING IN HOUSEHOLD AND FITS QUOTAS OPEN (CODE 1 ON S4 OR 1 ON S2A), SAY: +-----+ Thank-you, this should only take another 4 minutes IF NECESSARY, MAKE APPOINTMENT +-----+ IF NEW RESPONDENT AVAILABLE NOW (CODE 2 ON S4), REINTRODUCE: +-----+ Good %a. My name is (SAY NAME) (from Roy Morgan Research, the people who conduct the Morgan Gallup Poll.) We are conducting an important survey on health related issues on behalf of the Australian Institute of Health & Welfare. Your number has been randomly selected from the White Pages directory. The survey will only take 4 to 5 minutes to complete. The answers given are completely confidential and protected by Commonwealth legislation under both the Federal Privacy Act and the AIHW Act. IF NECESSARY SAY: Is now a good time or would it be more convenient if I made an appointment to speak to you at another time? IF NECESSARY, MAKE AN APPOINTMENT. IF ASK WHO THE CLIENT, HIT ESC H AND SELECT CLIENT\$H. IF RESPONDENT ASKS FOR MORE INFO ABOUT THIS PROJECT OR ROY MORGAN RESEARCH, HIT ESC H AND SELECT RMR\$H. IF RESPONDENT HAS CONCERNS ABOUT PRIVACY ISSUES, HIT ESC H AND SELECT ISSUE\$H IF RESPONDENT WANTS TO KNOW WHY THEY HAVE BEEN SELECTED, HIT ESC H AND SELECT SELECT\$H +-----+ ASK EVERYONE +-----+ QSEX. RECORD SEX OF RESPONDENT MALE..... 1	FEMALE..... 2 Just to make sure we get a true cross-section of people, would you please tell me your exact age? INTERVIEWER NOTE: RECORD EXACT CURRENT AGE IF REFUSES, ESC \. _ _ _ + IF EXACT AGE REFUSED (CODE 130 ON S5A), ASK: S5B. Would you mind telling me which of the following age groups you fall into? READ OUT. (DO NOT READ) Under 40 years... 1 40-44..... 2 45-49..... 3 50-54..... 4 55-59..... 5 60-64..... 6 65-69..... 7 70-74..... 8 75-79..... 9 80-84..... 10 85-89..... 11 90 years or over. 12 (DO NOT READ) Refused..... 13 IF REFUSES AGE (CODE 13 ON S5B), SAY +-----+ Thank-you for your time, but we need to speak with people in particular age groups +-----+ AGE OF RESPONDENT - SUMMARY 40-64..... 1 65+..... 2 IF AGE OUT OF RANGE OR QUOTA IS FULL +-----+ Thank you for your time and assistance, but we have already interviewed the required number of people in your age group. +-----+ +-----+ ASK EVERYONE +-----+
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-----+----- The following questions are about influenza or the flu. For the purposes of this survey we will describe the flu, as it is often confused with the common cold. Typical symptoms of influenza include a rapid onset of fever, bad cough, sore throat, fatigue, muscle aches, headaches, runny nose and watery eyes, and can cause extreme weariness lasting several days. The flu may include serious respiratory complications, including pneumonia. -----+-----		MAY..... 5, JUNE..... 6, JULY..... 7, AUGUST..... 8, SEPTEMBER..... 9, OCTOBER..... 10, DON'T RECALL..... 11, REFUSED..... 12,
A1. Have you had the flu this year, that is since January 2003? YES..... 1 NO..... 2 DON'T KNOW..... 3		B2a. Did you have a flu injection last year, that is in 2002? YES..... 1 NO..... 2 DON'T RECALL..... 3 REFUSED..... 4
-----+----- In Australia, it is possible to have an influenza vaccination or flu shot, administered by a doctor or health worker, to protect people from catching the flu. -----+-----		B2b. Do you intend to have a flu injection next year, that is in 2004? YES..... 1 NO..... 2 DON'T KNOW..... 3 REFUSED..... 4
A2. Before today, had you heard of the flu injection? YES..... 1 NO..... 2 DON'T KNOW..... 3		IF HAD FLU INJECTION THIS YEAR -----+----- Now thinking about the flu injection that you had this year... -----+-----
IF HEARD OF THE FLU INJECTION (CODE 1 ON A2), ASK: B1. Have you had a flu INJECTION this year, that is since January 2003? YES..... 1 NO..... 2 DON'T RECALL..... 3 REFUSED..... 4		B4. Who gave you the flu injection this year? IF HAD MORE THAN 1 VACCINATION ASK ABOUT THE MOST RECENT ONE DOCTOR OR GP (INCLUDING THE NURSE/ SISTER/ HEALTH WORKER EMPLOYED THERE).. 1 A COUNCIL CLINIC OR MOBILE CLINIC. 2 SOMEONE AT MY PLACE OF WORK.... 3 SOMEONE IN A HOSPITAL..... 4 SOME OTHER PERSON 97 DON'T RECALL..... 98 REFUSED..... 99
IF HAD FLU INJECTION THIS YEAR B2. What month was that? PROMPT FOR RESPONSE IF DOESN'T RECALL RECORD MULTIPLE INJECTIONS JANUARY..... 1, FEBRUARY..... 2, MARCH..... 3, APRIL..... 4,		

B5. Did you have to pay for the CONSULTATION or VISIT you made when you were vaccinated? I don't mean payment for the vaccine. IF HAD MORE THAN 1 VACCINATION ASK ABOUT THE MOST RECENT ONE	REFUSED..... 4
IF YES - PROBE IF NECESSARY: Was that "in full" or "in part"?	IF HAD TO PAY FOR THE VACCINE (CODE 1 ON B7), ASK:
YES, PAID IN FULL 1	B8. Was this via prescription and payment to a pharmacist, or direct payment to the provider of the vaccine?
YES, PAID IN PART 2	IF HAD MORE THAN 1 VACCINATION, ASK ABOUT THE MOST RECENT ONE
NO, DID NOT PAY.. 3	IF OTHER, HIGHLIGHT OTHER AND TYPE IN RESPONSE
DON'T RECALL..... 4	PRESCRIPTION AT PHARMACIST..... 1
REFUSED..... 5	DIRECT PAYMENT... 2
IF DIDN'T PAY IN FULL FOR CONSULTATION (CODES 2 OR 3 ON B5) , ASK:	OTHER..... 97
B6. Why didn't you have to pay the full cost of the consultation? IF HAD MORE THAN 1 VACCINATION ASK ABOUT THE MOST RECENT ONE IF MORE THAN ONE RESPONSE GIVEN, PROBE FOR MAIN REASON	DON'T RECALL..... 98
IF OTHER, HIGHLIGHT OTHER AND TYPE IN RESPONSE	REFUSED..... 99
BULK BILLED..... 1	IF DID NOT HAVE TO PAY FOR THE VACCINE (CODE 2 ON B7), ASK:
A FREE CLINIC.... 2	B9. Why didn't you have to pay for the vaccine? IF HAD MORE THAN 1 VACCINATION ASK ABOUT THE MOST RECENT ONE
MY WORK PAID..... 3	IF MORE THAN ONE RESPONSE GIVEN PROBE FOR MAIN REASON
COVERED ON MY PENSION/ VETERAN'S AFFAIRS HEALTH CARD..... 4	IF OTHER, HIGHLIGHT OTHER AND TYPE IN RESPONSE
COVERED BY MEDICARE..... 5	A FREE CLINIC.... 1
BECAUSE OF MY AGE 6	MY WORK PAID..... 2
COVERED BY MY HEALTH CARE CARD. 7	COVERED ON MY PENSION/ VETERAN'S AFFAIRS HEALTH CARD..... 3
DON'T RECALL..... 96	BECAUSE OF MY AGE 4
OTHER REASON..... 97	BECAUSE I MEET OTHER ELIGIBILITY CRITERIA..... 5
DON'T KNOW..... 98	MY DOCTOR JUST GAVE IT TO ME.... 6
REFUSED..... 99	COVERED BY MY HEALTH CARE CARD. 7
+-----+ IF HAD FLU INJECTION THIS YEAR +-----+	DON'T RECALL..... 96
B7. Did you have to pay for the vaccine?	ANOTHER REASON... 97
IF HAD MORE THAN ONE VACCINATION, ASK ABOUT THE MOST RECENT ONE	DON'T KNOW..... 98
YES..... 1	REFUSED..... 99
NO..... 2	+-----+ IF HAS HEARD OF THE FLU INJECTION (CODE 1 ON A2), ASK: +-----+
DON'T RECALL..... 3	

C1. %444,/Even if you did not have one, did /Did /your doctor recommend that you have a flu injection this year?

YES..... 1

NO..... 2

DON'T HAVE A
DOCTOR/ GP..... 3

DON'T RECALL..... 4

REFUSED..... 5

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

C2. Would you have a flu injection if a doctor or GP recommended it to you?

IF RESPONDENT SAYS THEY DON'T HAVE A DOCTOR, PROBE: What if you had a Doctor and they recommended the flu injection to you, would you have it?

YES..... 1

NO..... 2

DON'T KNOW..... 3

REFUSED..... 4

+-----+
| ASK EVERYONE |
+-----+

+-----+
| I would now like to ask some |
| questions about your general |
| health |
+-----+

D1a. Have you ever had a heart attack or a stroke?

YES..... 1

NO..... 2

DON'T KNOW..... 3

REFUSED..... 4

IF HAS NOT EVER HAD A HEART ATTACK OR STROKE OR DON'T KNOW OR REFUSED (CODES 2 TO 4 ON D1A), ASK:

D1b. Do you have chronic heart disease?

YES..... 1

NO..... 2

DON'T KNOW..... 3

REFUSED..... 4

IF DOES NOT HAVE CHRONIC HEART DISEASE OR DON'T KNOW OR REFUSED (CODES 2 TO 4 ON D1B), ASK:

D1c. Are you on medication that may affect your immune system, for example cortisone tablets [PAUSE - WAIT FOR REPLY]

or are you having cancer treatment

[PAUSE - WAIT FOR REPLY]

or have you had an organ transplant?

YES..... 1

NO..... 2

DON'T KNOW..... 3

REFUSED..... 4

IF NOT ON MEDICATION THAT MAY EFFECT IMMUNE SYSTEM OR DON'T KNOW OR REFUSED (CODES 2 TO 4 ON D1C), ASK:

D1d. Do you have chronic lung disease (such as chronic bronchitis or emphysema)?

YES..... 1

NO..... 2

DON'T KNOW..... 3

REFUSED..... 4

IF DOES NOT HAVE CHRONIC LUNG DISEASE OR DON'T KNOW OR REFUSED (CODES 2 TO 4 ON D1D), ASK:

D1ea. Do you have diabetes?

YES..... 1

NO..... 2

DON'T KNOW..... 3

REFUSED..... 4

IF HAS DIABETES (CODE 1 ON D1EA), ASK:

D1eb. Does that require regular hospitalisation or medical followup?

INTERVIEWER NOTE: QUESTION REFERS TO RESPONDENT'S DIABETES

YES..... 1

NO..... 2

DON'T KNOW..... 3

REFUSED..... 4

IF DOES NOT HAVE DIABETES REQUIRING REGULAR HOSPITALISATION/ MEDICAL FOLLOWUP OR DON'T KNOW OR REFUSED (CODES 2 TO 4 ON D1E), ASK:

D1fa. Do you have severe Asthma?

YES..... 1

NO..... 2

DON'T KNOW..... 3

REFUSED..... 4	E1. Are you of Aboriginal or Torres Strait Islander origin?
IF HAS SEVERE ASTHMA (CODE 1 ON D1FA), ASK:	YES..... 1
	NO..... 2
D1fb. Have you required hospitalisation in the last twelve months for this (asthma)?	DON'T KNOW..... 3
	REFUSED..... 4
INTERVIEWER NOTE: QUESTION REFERS TO RESPONDENT'S ASTHMA	IF OF ABORIGINAL OR TORRES STRAIT ISLANDER ORIGIN (CODES 1 ON E1) , ASK:
YES..... 1	+-----+ ANSWERS IN E2 WILL BE ROTATED +-----+
NO..... 2	
DON'T KNOW..... 3	E2. Are you...? READ OUT
REFUSED..... 4	Aboriginal..... 1
+-----+ ASK EVERYONE +-----+	Torres Strait Islander..... 2
D2. Are you a health care provider, or do you work at a nursing home or other residential aged care facility?	Both Aboriginal and Torres Strait Islander..... 3
YES..... 1	(DO NOT READ) DON'T KNOW..... 4
NO..... 2	(DO NOT READ) REFUSED..... 5
DON'T KNOW..... 3	E3. Can you please tell me your current marital status? PROMPT ONLY IF NECESSARY
REFUSED..... 4	NEVER MARRIED/ SINGLE..... 1
IF DOES NOT WORK IN NURSING HOME OR RESIDENTIAL AGED CARE FACILITY OR DON'T KNOW OR REFUSED (CODES 2 TO 4 ON D2) AND THERE IS AT LEAST ONE OTHER PERSON AGED UNDER 65 IN HOUSEHOLD (IE, 2 OR MORE AGED UNDER 65, OR 1 AGED UNDER 65 AND RESPONDENT IS AGED 65+), ASK:	WIDOWED..... 2
D3. Do you live with people aged under 65 years who have long-term illnesses such as: heart attack, stroke, heart disease, chronic lung disease/ chronic bronchitis, emphysema, or cancer that they are receiving treatment for?	DIVORCED..... 3
YES..... 1	SEPARATED (BUT NOT DIVORCED).... 4
NO..... 2	MARRIED (INCLUDING LIVING WITH A PARTNER OR IN A DE FACTO RELATIONSHIP).... 5
DON'T KNOW..... 3	REFUSED..... 6
REFUSED..... 4	F2. How many times do telephone numbers for this household appear in the current White Pages Telephone Directory? [PAUSE] Please don't count mobile numbers or numbers ONLY used for fax or business purposes
+-----+ ASK EVERYONE +-----+	IF CAN'T SAY, ESC D. IF REFUSES, ESC \.
+-----+ Now to finish with some general questions, could you please tell me... +-----+	IF '0', CONFIRM THAT THE NUMBER WE HAVE CALLED IS NOT LISTED. IF SO, CODE AS '0' IF '10' OR MORE, CODE AS '10'
	_ _ +

F3. May I please have your POSTCODE?

IF CAN'T SAY OR DON'T KNOW POST CODE,
TYPE ESC O AND ASK

Then may I please have the name of
your SUBURB/ LOCALITY?

IF CAN'T SAY, ESC D.

IF REFUSES, ESC \.

|_|_|_|_|+

+-----+
| Thank you for your time and
| assistance. This research is
| carried out in compliance with the
| Privacy Act, as well as the AIHW
| Act, and the information you
| provided will be used only for
| research purposes.
|

| My name is (SAY NAME) from Roy
| Morgan Research, who have been
| commissioned to conduct this
| research on behalf of the
| Australian Institute of Health and
| Welfare.
|

| If you would like any more
| information about this project or
| Roy Morgan Research, you can phone
| us on 1800 337 332
|

+-----+

+-----+
| END-OF-QUESTIONNAIRE
|

+-----+

Date:

Interviewer:

Survey ID:

Draft questionnaire
2003 Influenza Survey—Residential facilities

Start time:

[Greeting: good morning, good afternoon and so on]! My name is [Name]. [If necessary, confirm residential facility (as opposed to administrative centre or head office): is that [desired residential facility]?]

[No:] How can I contact their Director of Nursing? [Record details and start again.]

I'm gathering information about influenza vaccination for the Australian Institute of Health and Welfare. I would like to speak to your Director of Nursing or someone in the same sort of role—is that you?

[Yes:] Do you have two or three minutes now or should I call back later?

[Yes:] Thank you. [Go to Questions]

[Call back:] When would suit you best? [Record direct contact number and details] Thank you—I'll call you then.

[No:] [If necessary] who should I talk to? How could I contact them? [Record details and start again.]

[Questions]

[For all questions, if answer given, record and move on

If no answer: try 'what would be your best guess' or 'why not' or 'would anyone know' or 'is there any way of finding out that wouldn't take up too much of your time'.

If still no answer use instructions for question.]

We've done a national survey of households by telephone but we can't call residents of nursing homes and hostels in the same way.

Q1. We're interested in residents aged 65 or more—how many of your residents are 65 years old or older?

[No useful response] I am sorry but we can't go any further without this information. Thank you for your time today. [End call.]

Q2. Can you tell me how many of these older residents have been vaccinated against influenza, since January this year?

[No useful response] I am sorry but we can't go any further without this information. Thank you for your time today. [End call.]

Q3. Do you know [can you estimate] how many of these vaccinated older residents paid for the vaccine (I don't mean payment for the doctor's attendance)?

Q4. [Unless it is obvious, from earlier conversation] Do you have a specific influenza vaccination policy?

[No: go to End]

Q5. How does it work?

[Record]

[End]

This concludes the survey. On behalf of the Australian Institute of Health and Welfare, thank you very much for taking part in this survey. The information you have provided will be used only for research purposes and its collection, storage and use are protected under the provisions of the *Australian Institute of Health and Welfare Act 1987*.

Thank you again.

[Time completed]

End time:

References

AIHW (Australian Institute of Health and Welfare) 2003. 2002 Influenza vaccine survey: summary results. AIHW cat. no. PHE 46. Canberra: AIHW.

NHMRC (National Health and Medical Research Council) 2003. The Australian immunisation handbook. 8th edn. Canberra: NHMRC.