Lung Foundation Australia

Adult respiratory vaccination status in selected Australian priority population groups

Analysis of Lung Foundation Australia and publicly available national data

September 2025

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About Lung Foundation Australia

Lung Foundation Australia is Australia's leading peak body for lung health and lung disease. We fund life-changing research and deliver support services to enable Australians with lung disease, including lung cancer, to live their best lives.

Acknowledgements

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Contents

Executive summary

In response to declining adult influenza vaccination rates in Australia—particularly since the height of the COVID-19 pandemic—Lung Foundation Australia (LFA) conducted an Adult Vaccination Survey in 2024. The aim was to gather insights into vaccination practices and attitudes among the public and people living with chronic conditions including lung disease, to inform consumer-led policy recommendations. From the findings, we developed five recommendations for government[1]:

1. Implement adult vaccination targets
2. Recognise Australians living with a lung disease as a priority population for vaccination
3. Invest in multi-strategy co-designed vaccination awareness campaigns and community education
4. Support primary care to better meet the vaccination information and service needs of Australians
5. Make clinically recommended vaccinations free.

In addition to these recommendations, our submission to the consultation on the development of the National Immunisation Strategy (NIS) 2025-2030 recommended improved data linkage and availability to monitor vaccine uptake in priority groups. This report focuses on this recommendation. The NIS, launched in June 2025, identifies several priority populations for vaccination, including Aboriginal and Torres Strait Islander peoples, residents in rural, regional, and remote areas, and people with clinical risk factors. LFA's survey obtained data from individuals in these groups, including those with the lung diseases COPD, bronchiectasis, interstitial lung disease, and other chronic conditions.

Analysis of LFA survey data and publicly available data in this report reveals challenges in vaccination uptake among Aboriginal and Torres Strait Islander peoples and rural/remote Australians, and sub-optimal pneumococcal vaccination rates for all priority groups. The audit of publicly available adult respiratory vaccination data reveals that such data is very limited, and this informed our two new recommendations. These recommendations align with the NIS priority areas focused on equity in access and improving the effective use of data to improve national immunisation uptake for all Australians, and Australians from priority populations.

Supporting LFA's five key immunisation policy priorities, these two new supporting recommendations will lead to improved understanding of vaccination status in priority population groups. The two recommendations are:

1. **Creation of publicly accessible dashboards of Australian Immunisation Register data with granular breakdowns by First Nations status and geographic locations to allow better advocacy for improving vaccination coverage in First Nations people and people living in non-metropolitan areas.**
2. **Expanding the data linkage and enhancing reporting access between the Australian Immunisation Register and census data to enable more accurate assessment of vaccine uptake in clinically at-risk populations.**

The analysis affirmed our recommendations on the need to implement adult vaccination targets (vaccination coverage is sub-optimal across groups of Australian adults, even those most clinically at-risk); recognise Australians living with a lung disease as a priority population for vaccination (unaffordability of vaccines vital for lung health is evident); invest in vaccination awareness campaigns and community education (lack of awareness about vaccine recommendations and eligibility for free vaccination were the top barriers to vaccination); support primary care to better meet vaccination information and service needs (general practice is the most preferred source of vaccination information and administration for adults); and make clinically recommended vaccinations free (out-of-pocket cost was a vaccination barrier for the four priority groups).

1. Introduction

1.1 Background and purpose of this report

In 2024, in recognition of Australia's sub-optimal adult respiratory vaccination coverage (particularly the decline in influenza vaccination since the COVID-19 pandemic), Lung Foundation Australia conducted a consumer 'Adult Vaccination Survey'. The objective was to obtain information on vaccination practices and perspectives in aim of developing consumer-informed policy recommendations for government. Information was gathered from our lung disease client cohort and the public. Summary and technical reports were published in 2024, with the findings informing our Vaccination for adult lung health Position Statement and our submission to the development of the National Immunisation Strategy for Australia 2025-2030 (NIS). Our submission called for recognition of Australians living with lung disease as a specific priority population for vaccination and expansion of data linkage to better understand vaccination coverage for priority groups.

The NIS, launched in June 2025, contains six priority areas, two relating to priority groups and data:

- Improve access to immunisation, with a focus on equity for Aboriginal and Torres Strait Islander people and other priority populations
- Use data more effectively to target immunisation strategies and monitor performance

The strategy details 17 priority populations for whom implementation of the NIS is crucial to meet the guiding principle of equity, with Aboriginal and Torres Strait Island people, residents of rural, regional and remote areas, and people with clinical risk factors for severe disease or infection and people with mental illness, four such groups.[2] Information from these four groups was obtained in LFA's Adult Vaccination Survey. We asked respondents to report their Aboriginal and Torres Strait Islander status, residence in a metropolitan, regional, or rural or remote area, type of lung disease*, and if they had one or more of six common chronic conditions (arthritis, cancer [other than lung], chronic kidney disease, diabetes, heart disease, or mental health conditions).

Sub-group analysis of our Adult Vaccination Survey can provide information on the nature of vaccination for the four priority groups. The objective of this report is to detail Lung Foundation Australia data and the publicly available data that exists on vaccination for these priority groups. The aim is to better understand vaccination status in these groups and determine data gaps.

***** *The following three lung diseases were the most prevalent among survey respondents, with data on respondents living with these diseases used in this report:*

Chronic Obstructive Pulmonary Disease (COPD)
COPD describes a chronic, progressive lung disease characterised by obstructed airflow. The disease results from long-term exposure to irritants, often cigarette smoke, but also occupational hazards and air pollution. Genetics, prenatal events, low birth weight, and frequent respiratory infections are also risk factors. Around 1 in 13 Australians over 40 are estimated to have COPD.

Bronchiectasis
Bronchiectasis is a lung disease caused by damage after an infection, genetic conditions like cystic fibrosis or primary ciliary dyskinesia, autoimmune conditions, or unknown origins. Bronchiectasis makes it harder to breathe due to damage to the walls of the breathing tubes. It is unknown how many Australians live with bronchiectasis, but it is significantly more prevalent in First Nations communities.

Interstitial lung disease
Interstitial lung disease (ILD) is a term for a group of similar lung diseases. Pulmonary fibrosis (PF) refers to those ILDs which have scarring of the lung tissue. ILD and PF are often used by doctors interchangeably. The scarring from PF makes breathing harder. Idiopathic pulmonary fibrosis (IPF) is the most common type of PF. Around 2,170 people in Australia are diagnosed with IPF each year.

1.2 National data on the impact of vaccine-preventable respiratory infection in priority groups

Examples of the impact of vaccine-preventable respiratory infection in priority groups are provided by hospitalisation and death data. When hospitalisation occurs a determination is made if it could have potentially been prevented through interventions, such as vaccination.[3] These are called 'potentially preventable hospitalisations' (PPH). In 2017-18, vaccine-preventable pneumonia and influenza were in the top ten specific causes of PPH across remoteness areas of Australia, with hospitalisations higher in remote/very remote areas (Figure 1). In 2023-24, PPH from vaccine-preventable pneumonia and influenza were higher for First Nations people in all Australian jurisdictions (Figure 2).

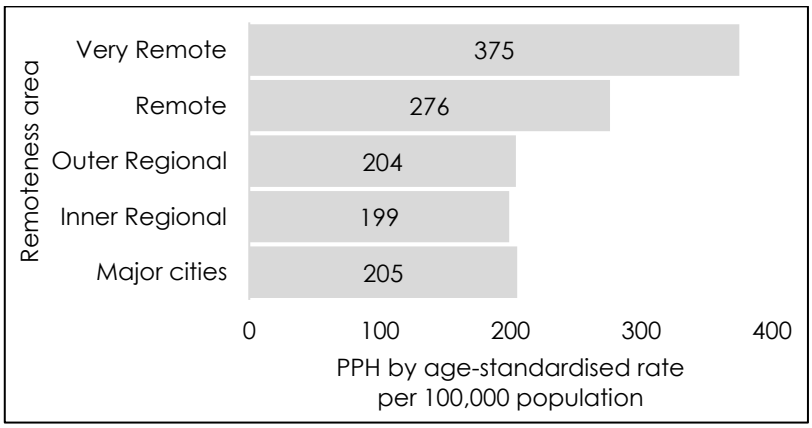

Figure 1. Age-standardised rate of potentially preventable hospitalisations of vaccine-preventable pneumonia and influenza by remoteness, 2017-2018

(Constructed from AIHW 2020[4])

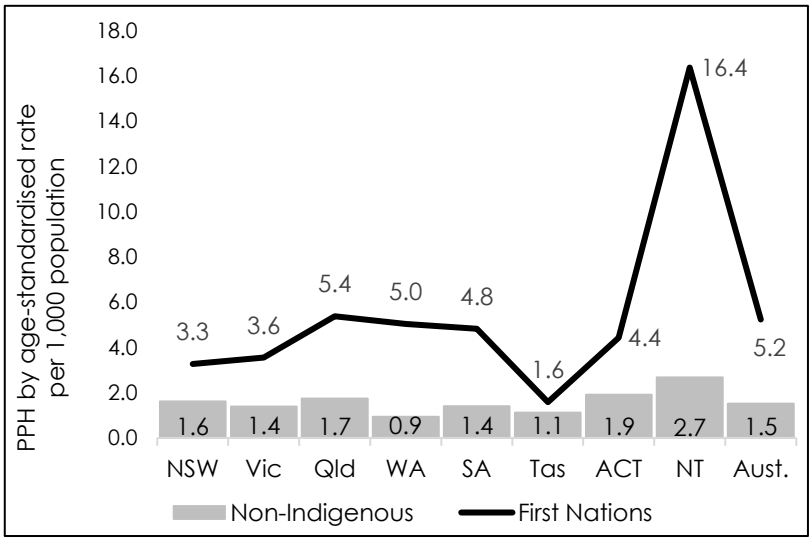

Figure 2. Age-standardised rate of potentially preventable hospitalisations of vaccine-preventable pneumonia and influenza by First Nations status and states and territories, 2023-24

(Constructed from AIHW 2025[5])

ABS data details associated causes that contributed to a death. Influenza and pneumonia are a contributory factor to death from several chronic conditions. For chronic lower respiratory diseases (includes COPD and bronchiectasis), they are an associated cause of a fifth of deaths (Figure 3).

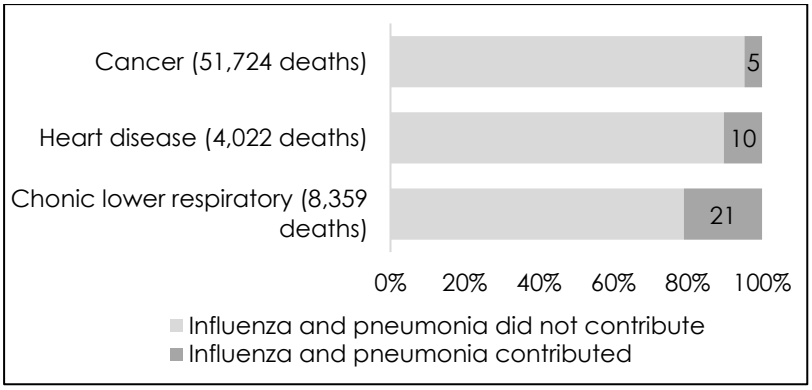

Figure 3. Deaths in 2023 from selected causes by the percentage that influenza and pneumonia was a contributing factor

(Constructed from ABS 2024[6])

1.3 Adult respiratory vaccination access by priority population group

Table 1 shows the clinical recommendations and cost status for adult respiratory vaccinations, with emphasis on the populations of relevance for this report.[7] All clinical recommendations for First Nations adults and adults living with bronchiectasis are reflected in the National COVID-19 Vaccine Program and the National Immunisation Program (NIP), except for RSV vaccination (which is currently under funding negotiation between the manufacturers and the Australian Government). Clinical recommendations for pneumococcal (and RSV) vaccination are not reflected in the NIP for people living with COPD, interstitial lung disease and certain chronic conditions as noted in the table.

Table 1. Recommendations for adult respiratory vaccination and cost status*

Clinical recommendation for adults	Free vaccination?
COVID-19	
Aged 75 and over every six months	✓
Aged 65 to 74 every 12 months	✓
Aged 18-64 with severe immunocompromise every 12 months	✓
Influenza	
All First Nations adults	✓
Aged 65 and over	✓
Aged under 65 with conditions of relevance for this report: bronchiectasis, cardiac disease, chronic kidney disease, COPD, immunocompromise due to disease or treatment (people living with arthritis may qualify due to treatment), malignancy, type 1 or 2 diabetes	✓
All adults aged under 65	✗†
Pneumococcal disease	
Aged 70 and over	✓
First Nations adults aged 50 and over	✓
Aged under 70 with conditions of relevance for this report: bronchiectasis, chronic kidney disease, haematological malignancies.	✓
Aged under 70 with conditions of relevance for this report: COPD, cardiac disease, diabetes, interstitial and fibrotic lung disease, non-haematological malignancies.	✗
Whooping cough	
Aged 65 and over if not had a booster in 10 years	✗
Aged 50 and over as part of tetanus vaccine if not had a tetanus booster in 10 years	✗
Healthcare workers, early childhood educators and carers every 10 years	✗
Household contacts of infants aged under 6 months if not had a booster in 10 years	✗
International traveller if not had a booster in 10 years/5 years if high-risk country	✗
Respiratory syncytial virus (RSV)‡	
First Nations adults aged 60 to 74	✗
Aged 75 and over	✗
Aged 60-74 with conditions of relevance for this report: cardiac disease, bronchiectasis, chronic kidney disease, COPD, immunocompromise due to disease or treatment (people living with arthritis may qualify due to treatment), malignancy, type 1 or 2 diabetes	✗

* Information current to September 2025.
† Some states provide periods of free influenza vaccination to the public and to certain groups such as healthcare workers.
‡ Free to Victorian residents 60+ living in public and Aboriginal community-controlled residential aged care from July 2025.

2. Data sources

All data were analysed descriptively and are presented as frequencies and percentages/proportions.

2.1 Lung Foundation Australia accessible data

Adult Vaccination Survey

In 2024, we received self-report survey data from 3,352 Australians (40% living with a lung disease and 60% who are not) on their experience with respiratory infection, vaccination practices, beliefs, motivations, barriers, and preferences, and support for vaccination policy measures. Detail of the data collection along with the findings presented by key demographics and lung disease status is provided in the technical report – this current report should be read alongside the technical report. The data analysed and included in this current report is annual influenza vaccination practice, pneumococcal vaccination practice, intention to receive RSV vaccination, barriers to vaccination, preferences on source of vaccination information, and preferences on vaccination provider.

Australian Bronchiectasis Registry

The Australian Bronchiectasis Registry(ABR) was established in 2015 by Lung Foundation Australia and the Australasian Bronchiectasis Consortium; an independent steering committee comprised of Australia's and New Zealand's leading respiratory physicians. The principal aim of the registry is to identify and collect longitudinal health information on patients with non-cystic fibrosis bronchiectasis to facilitate epidemiological research, improve clinical care and maximise opportunities for patients to participate in clinical trials. The ABR collects data from several participating sites across Australia. On enrolment, data is recorded on receipt of adult pneumococcal conjugate vaccine (PCV) and pneumococcal polysaccharide vaccine (PPV) (yes, no, and unknown). Adults living with bronchiectasis are recommended to receive one dose of PCV and two doses of PPV.[8] Analysis of this data, extracted on 14 August 2025, is included in this report.

2.2 Publicly available data

Australian Immunisation Register

Most vaccines administered to Australians are recorded by the Australian Immunisation Register (AIR). Reporting by vaccine service providers is mandatory (since 2021) for all COVID-19 and influenza vaccines, and all vaccines given under the National Immunisation Program. Demographic data collected by AIR is age, sex, postcode and First Nations status.[9] The National Centre for Immunisation Research and Surveillance (NCIRS) provide Annual Immunisation Coverage Reports using AIR data (published in the last quarter of the subsequent year) that detail adult vaccination coverage for pneumococcal and influenza (and varicella-zoster virus that causes shingles) by sub-national jurisdiction, different age groups, and First Nations status (also provided by jurisdiction). The interim data release for the Annual Immunisation Coverage Report 2024 is a data source for this current report, along with the Annual Immunisation Coverage Report 2023 (as it contains data about people living in regional, rural or remote Australia – for influenza vaccination, coverage by Statistical Area 3 [a measure of remoteness] for adults aged 65+ is provided).

Other publicly available AIR data that is not a data source for this current report:

Rolling data on seasonal influenza vaccination is provided by the Department of Health, Disability, and Ageing (Department) on this website. The Department dataset comprises influenza vaccine administrations by sub-national jurisdiction, three age ranges (under 5, 5-64, and 65+), First Nations status and vaccination provider type (GP, Pharmacy, and other). The dataset is updated weekly with the total number of administrations since 1 March to the current week – this allows for tracking of uptake at a point in time compared with previous years (data provided back to 2022).

Rolling data on seasonal influenza vaccination is also provided by NCIRS on this website. It comprises the population percentage of vaccination from 1 March of the present year (updated weekly) by sub-national jurisdiction, five age ranges (6months-<5 years, 5-<15 years, 15-<50 years, 50-<65 years, and 65+), and First Nations status (also provided against sub-national jurisdictions and the age ranges).

Rolling data on COVID-19 vaccinations are provided monthly by the Department website. Data is reported by sub-national jurisdiction, and three age ranges (18-64, 65-74, and 75+) and for First Nations Australians, permanent residential aged care residents, National Disability Insurance Scheme participants, and individuals with Culturally and Linguistically Diverse backgrounds (as defined by census data). The data provided on First Nations vaccination, however, is only total numbers vaccinated in the previous six months and 12 months by sub-national jurisdiction, with a population percentage not provided – thus the data is of limited utility and is not used in this current report.

Practice Incentives Program Quality Improvement Incentive

The Practice Incentives Program Quality Improvement (PIP QI) Incentive is an Australian Government program that commenced in August 2019 that comprises payment to general practices that participate in quality improvement activities. There are 10 improvement measures, three of which are on immunisation – two of these are a data source for this current report:

- Proportion of patients with COPD who were immunised against influenza
- Proportion of patients with diabetes who were immunised against influenza

The Australian Institute of Health and Welfare provide an annual report on the aggregate PIP QI data set. The 4th report, covering 2023-2024, includes data from 5,563 general practices. For patients living with diabetes or with COPD who were immunised against influenza, the dataset contains the proportion, numerator and denominator at the end of each quarter since July 2023, and for the end of July 2024 it contains this data by age range, sex, and Primary Health Network (PHN).

3. Results

3.1 Aboriginal and Torres Strait Islander Australians

Lung Foundation Australia Adult Vaccination Survey data

Table 2. Characteristics of survey respondents who identify as Aboriginal and/or Torres Strait Islander

	n	%
Age		
18-29	39	31.5
30-49	47	37.9
50-59	10	8.1
60-69	12	9.7
70+	16	12.9
Residence		
Australian Capital Territory	50	40.3*
New South Wales	25	20.2
Northern Territory	3	2.4
Queensland	17	13.7
South Australia	11	8.9
Tasmania	6	4.8
Victoria	7	5.6
Western Australia	5	4.0
TOTAL	**124**	**100**

	n	%
Gender		
Female	79	63.7
Male	40	32.3
Gender diverse/Not stated	5	4.0
Location		
Metropolitan area	62	50.0
Regional area	52	41.9
Rural or remote area	10	8.1
Living with a lung disease		
Yes	62	50.0
No	62	50.0
Chronic condition (other than lung)		
Yes	83	66.9
No	41	33.1
TOTAL	**124**	**100**

*The higher-than-expected participation by respondents who identify as Aboriginal and/or Torres Strait Islander and living in the ACT may reflect the survey being shared among a particular group.

First Nations respondents were less likely than all survey respondents to always get their annual influenza vaccination, particularly for the youngest age group (Figure 4).

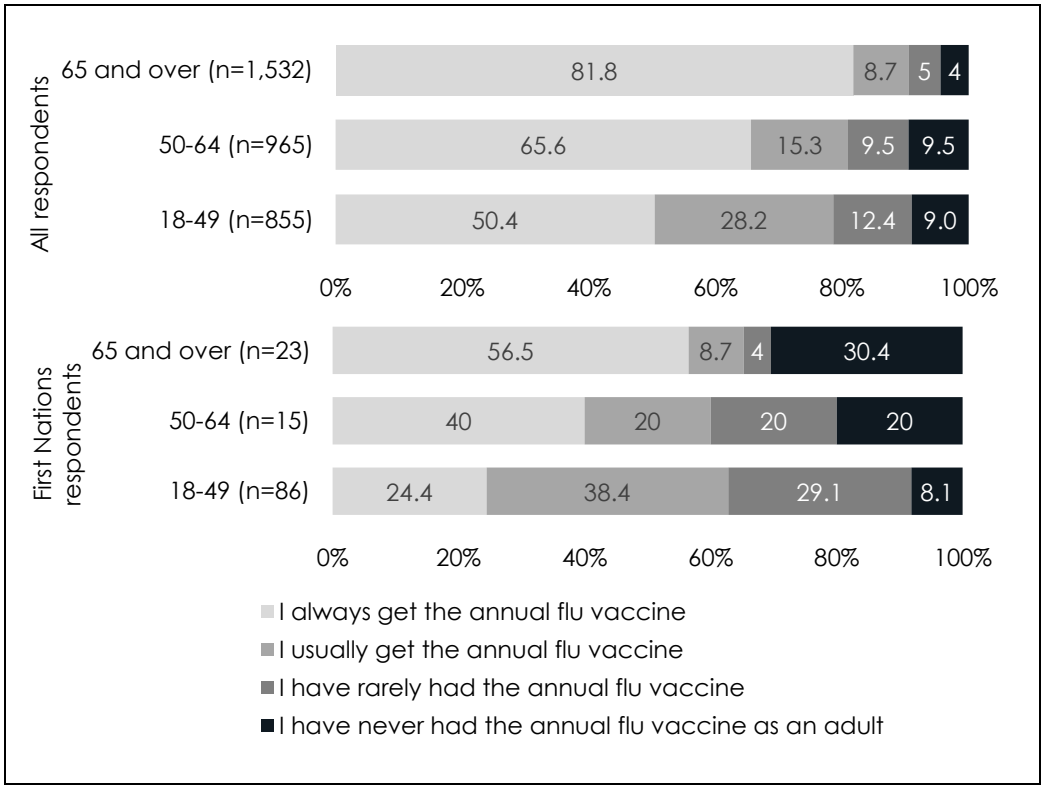

Figure 4. Percentage of respondents by their annual influenza vaccination practice, by age, for all respondents and for First Nations respondents

Just under a third of respondents for whom pneumococcal vaccination is recommended claimed that they had received the vaccination and just over a third claimed they intend to receive it (Figure 5). Most respondents intend to receive the older adult RSV vaccination (came on market 2024), but most reported only if it is free (Figure 6). For both diseases, around 10% of respondents did not want vaccination.

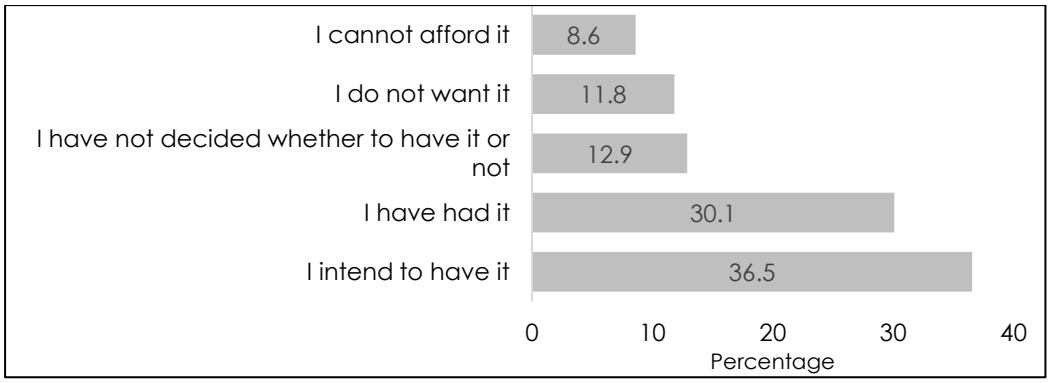

Figure 5. Percentage of First Nations respondents recommended for pneumococcal vaccination (n=93) by their vaccination status

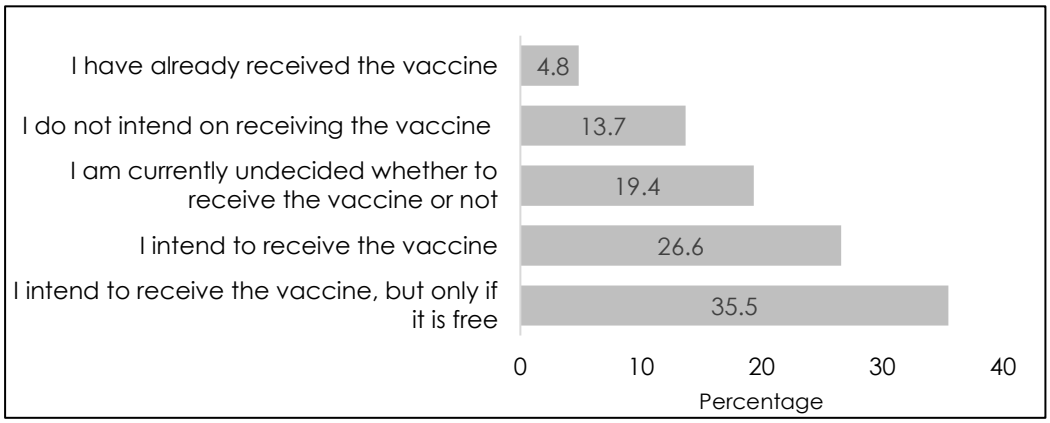

Figure 6. Percentage of First Nations respondents (n=124) by intention to receive older adult RSV vaccination

Just under a fifth of First Nations respondents claimed that they do not face barriers to receiving vaccination. Lack of awareness about vaccine recommendations and eligibility for free vaccination, and out-of-pocket costs for vaccination were the most common barriers (Figure 7).

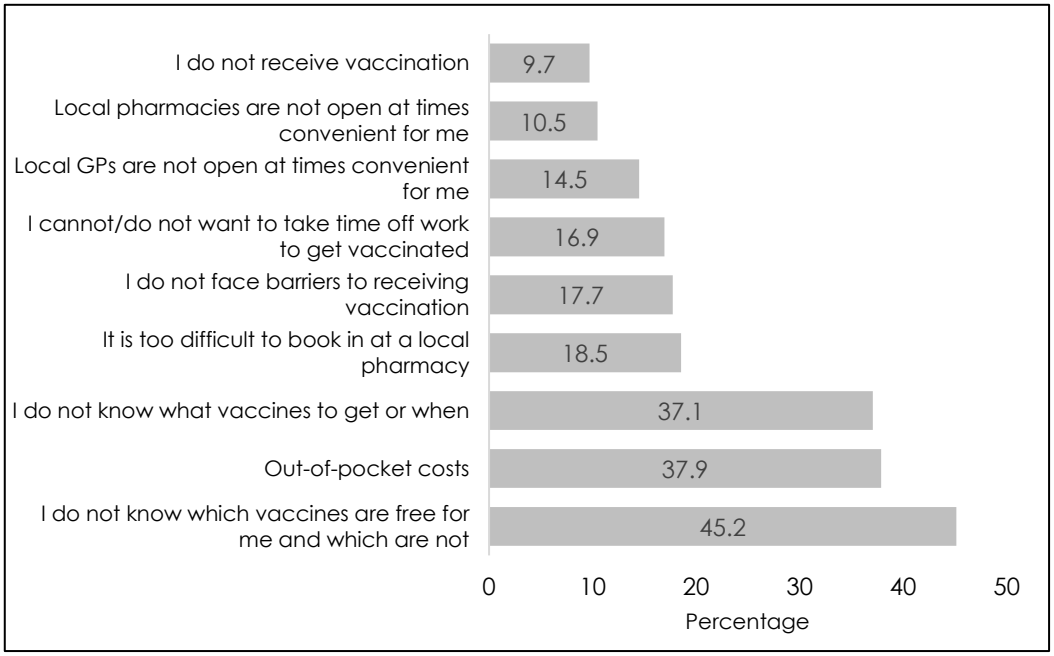

Figure 7. Proportion of First Nations respondents (n=124) by vaccination barriers

Almost half of respondents are happy to receive vaccination information from a consultation with their doctor (Figure 8), with general practice likewise where most respondents wish to receive vaccination (Figure 9). Seven percent expressed a preference to receive vaccination in their home.

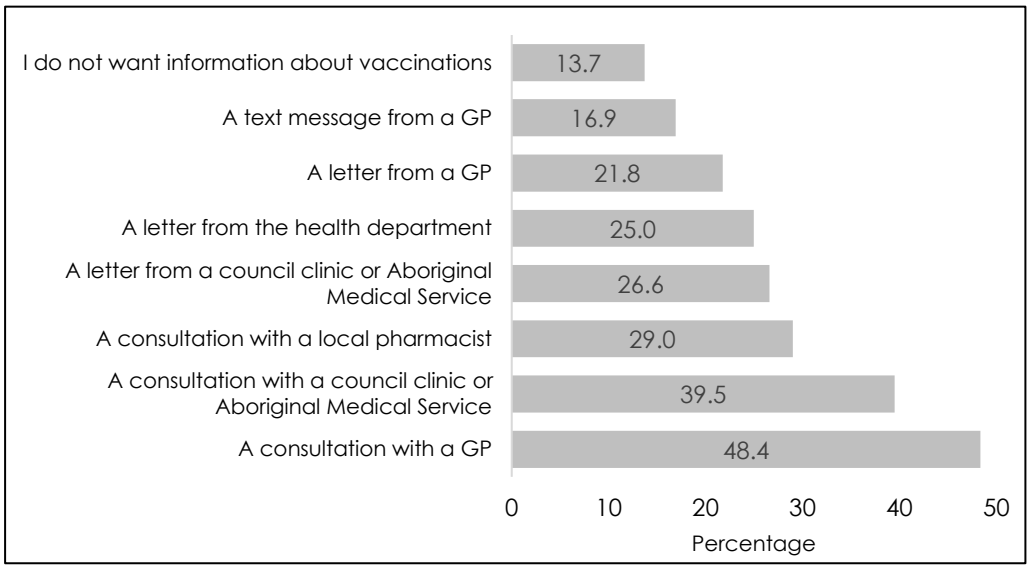

Figure 8. Proportion of First Nations respondents (n=124) by preference for information about personal vaccination recommendations

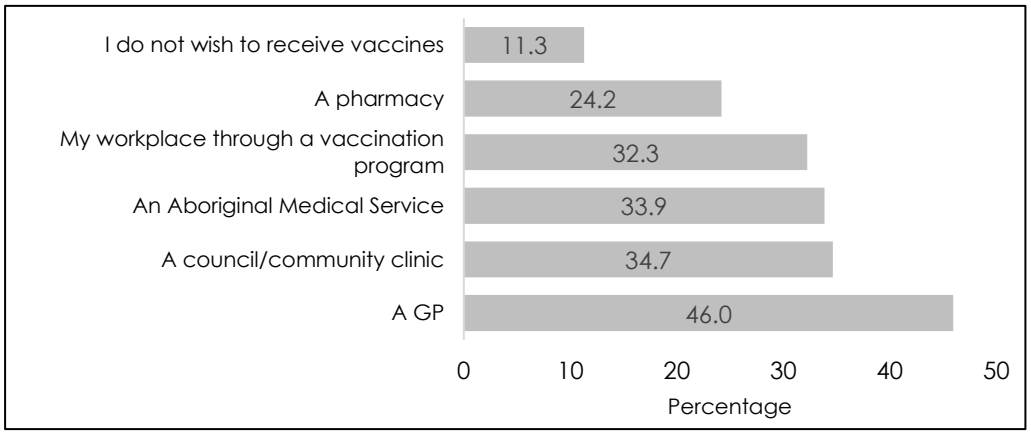

Figure 9. Proportion of First Nations respondents (n=124) by preference of vaccination provider

Australian Immunisation Register data – influenza and pneumococcal vaccination

Influenza vaccination for First Nations adults in 2024 was comparable to all adults except for those aged 50 to 64 where it was considerably higher for First Nations (Figure 10). For pneumococcal vaccination, almost half of First Nations adults aged 70 years in 2024 had received vaccination, with 23.2% of those aged 50-69 (refer to Table 1) having received vaccination.

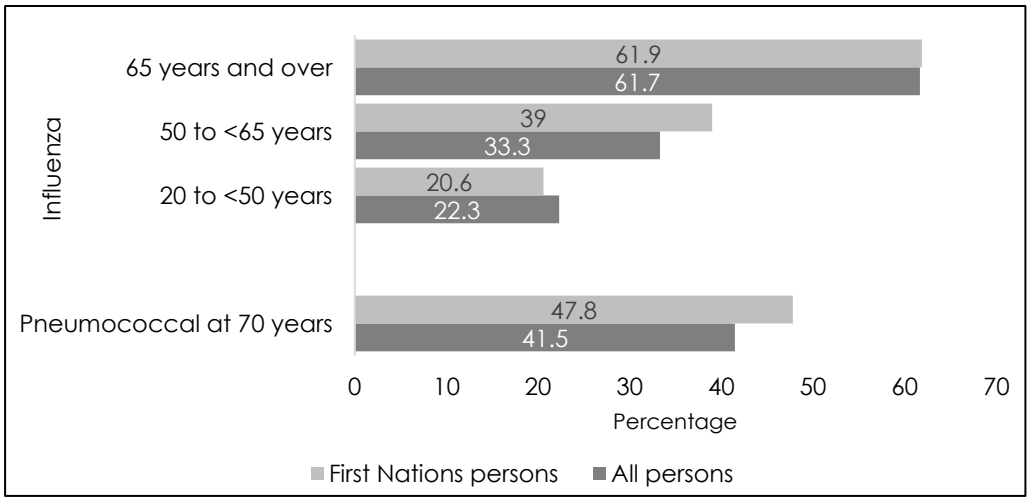

Figure 10. Percentage of all adults and First Nations adults by receipt of 2024 influenza vaccination and a recorded pneumococcal (PCV) vaccination at age 70 in 2024

3.2 People living in regional, rural and remote Australia

Lung Foundation Australia Adult Vaccination Survey data

Table 3. Characteristics of survey respondents living in regional and rural or remote areas

	n	%
Age		
18-29	66	5
30-49	194	14.7
50-59	174	13.2
60-64	196	14.9
65-69	286	21.7
70-74	214	16.3
75+	186	14.1
Residence		
Australian Capital Territory	15	1.1
New South Wales	440	33.4
Northern Territory	9	0.7
Queensland	279	21.2
South Australia	84	6.4
Tasmania	64	4.9
Victoria	354	26.9
Western Australia	71	5.4
TOTAL	**1,316**	**100**

	n	%
Gender		
Female	1,030	78.3
Male	267	20.3
Gender diverse/Not stated		1.4
Identification		
First Nations	62	4.7
Neither	1,254	95.3
Location		
Regional area	1,074	81.6
Rural or remote area	242	18.4
Living with a lung disease		
Yes	548	41.6
No	768	58.4
Chronic condition (other than lung)		
Yes	800	60.8
No	516	39.2
TOTAL	**1,316**	**100**

Respondents living in regional or rural or remote areas of Australia were more likely to have never received annual influenza vaccination as an adult than all survey respondents (Figure 11).

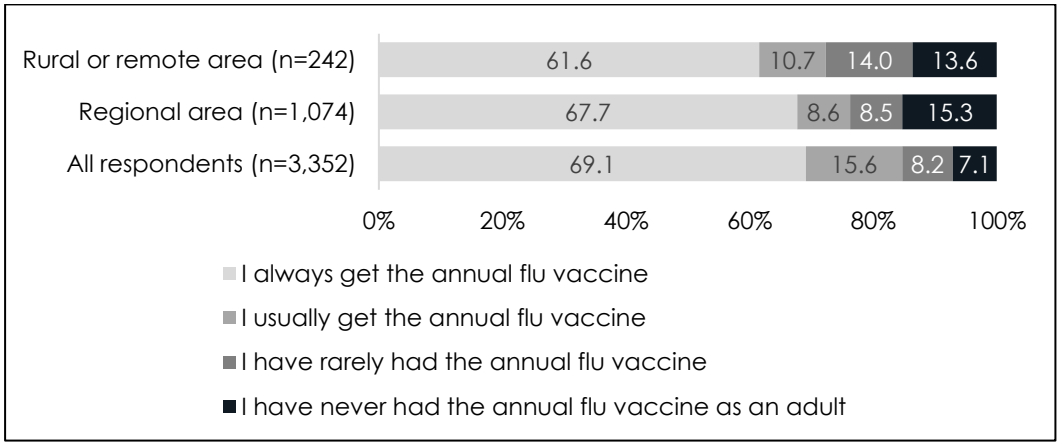

Figure 11. Percentage of respondents' annual influenza vaccination practice by location

Over half of respondents who are recommended to receive pneumoccocal vaccination claimed to have received it (Figure 12), and most respondents aged over 60 (the age that most older adults are eligible to receive RSV vaccination) intended to receive RSV vaccination (Figure 13).

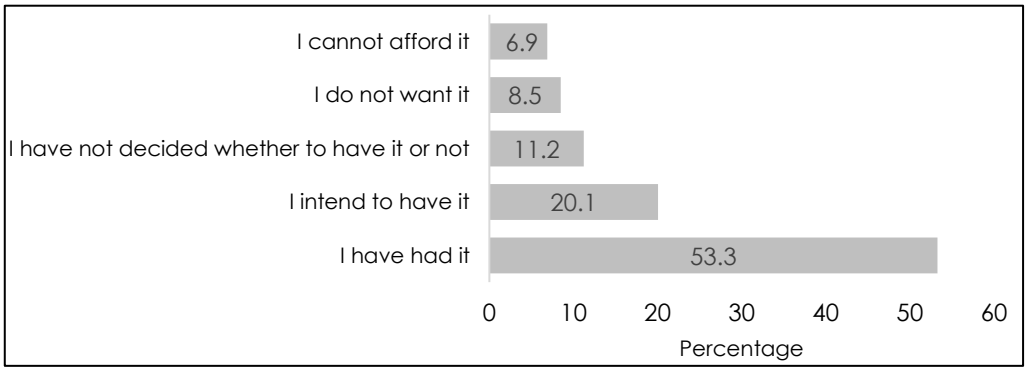

Figure 12. Percentage of regional, rural or remote respondents recommended for pneumococcal vaccination (n=623) by their vaccination status

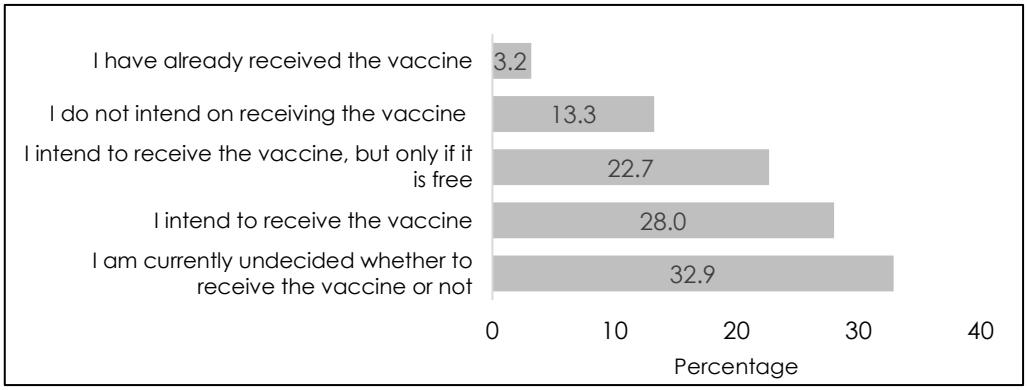

Figure 13. Percentage of regional, rural or remote respondents' aged 60+ (n=882) by intention to receive RSV vaccination

Under half of respondents claimed no barriers to receiving vaccination, with lack of awareness about vaccine recommendations and eligibility for free vaccination, and out-of-pocket costs for vaccination the most common barriers (Figure 14). Almost half of respondents are happy to receive vaccination information from a consultation with their doctor (Figure 15), with general practice likewise where most respondents (almost three quarters) wish to receive vaccination (Figure 16). However, for rural and remote respondents, preference for GP vaccination was lower at 66%.

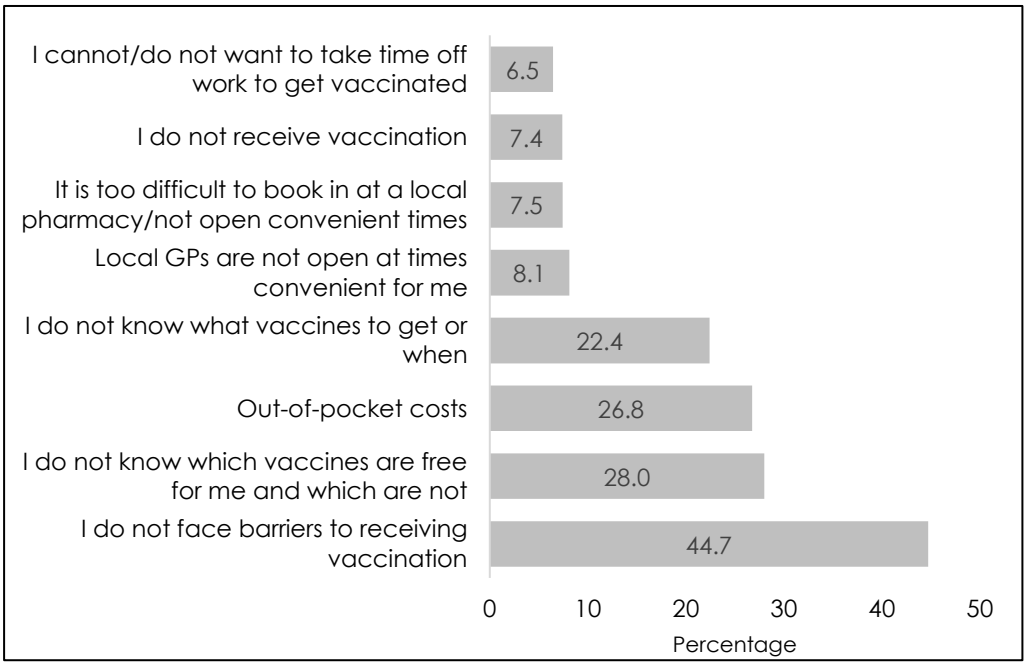

Figure 14. Proportion of regional, rural or remote respondents (n=1,316) by vaccination barriers

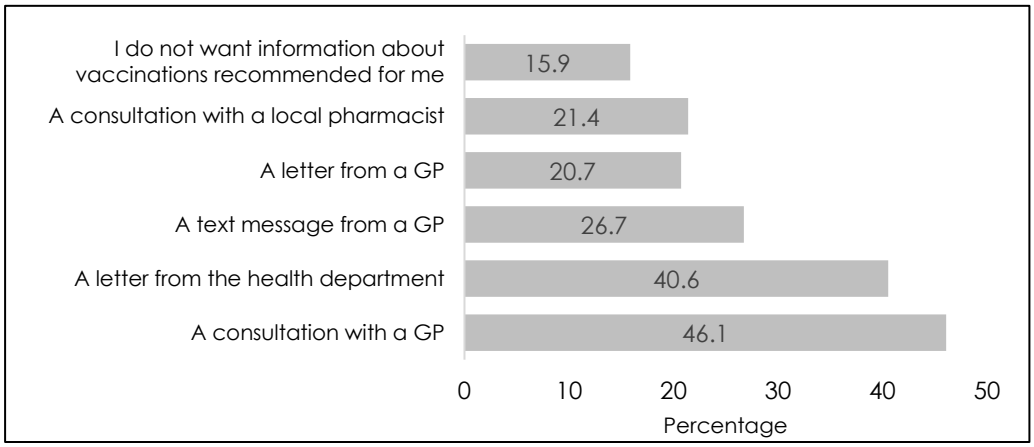

Figure 15. Proportion of regional, rural or remote respondents (n=1,316) by preference for information about personal vaccination recommendations

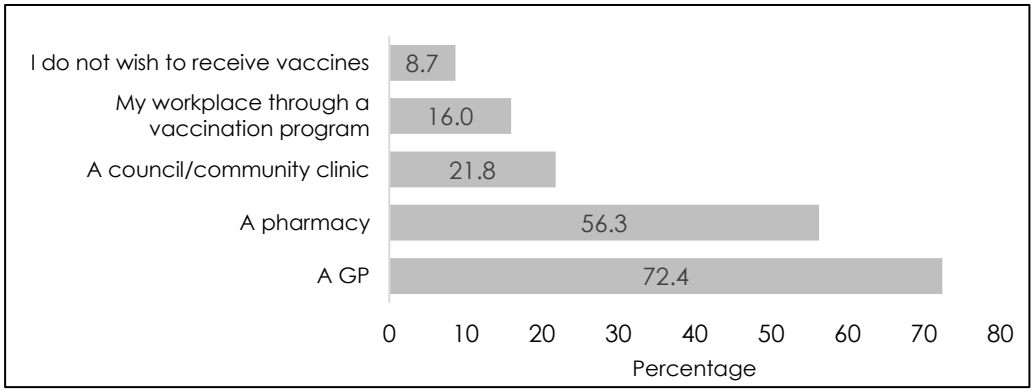

Figure 16. Proportion of regional, rural or remote respondents (n=1,316) by preference of vaccination provider

Australian Immunisation Register data – influenza vaccination by Statistical Area 3 for people aged 65+

NCIRS report this data in their 2023 immunisation coverage report via a map of Australia with five percentage ranges of vaccination coverage (10 to <40, 40 to <60, 60 to <70, 70 to <75, 75 to <80) colour-coded to statistical areas.[10, p. 56]

All areas in the lowest percentage range of coverage were in remote or very remote areas of North Western Australia, Far North Queensland, and all the Northern Territory, except for the Darwin suburbs. Areas in the second lowest percentage range were in several regional areas, but also in metropolitan areas of Sydney, Melbourne, Brisbane and the ACT. The two areas with the highest vaccination coverage were in regional Victoria (around Warrnambool and Geelong). Areas with the second highest coverage were in metropolitan areas of Melbourne, Brisbane, ACT, and several regional areas of Victoria, South Australia, New South Wales and inner regional Queensland (Ipswich, Toowoomba) and inner regional Western Australia (Margaret River).

3.3 People living with selected chronic lung diseases

Lung Foundation Australia Adult Vaccination Survey data

Table 4. Characteristics of respondents living with COPD, bronchiectasis or interstitial lung disease*

	COPD		Bronchiectasis		ILD	
	n	%†	n	%†	n	%†
Age						
18-29	8	2.5	6	2.3	3	1.6
30-49	22	6.9	22	8.4	12	6.3
50-59	35	10.9	21	8	19	10
60-64	45	14	28	10.6	20	10.5
65-69	70	21.8	48	18.3	41	21.6
70-74	61	19	61	23.2	38	20
75+	80	24.9	77	29.3	57	30
Gender						
Female	229	71.3	212	80.6	121	63.7
Male	89	27.7	50	19	67	35.3
Gender diverse/prefer not to say	3	0.9	1	0.4	2	1.1
Residence						
Australian Capital Territory	18	5.6	16	6.1	9	4.7
New South Wales	105	32.7	75	28.5	50	26.3
Northern Territory	2	0.6	1	0.4	0	0
Queensland	67	20.9	48	18.3	37	19.5
South Australia	24	7.5	16	6.1	25	13.2
Tasmania	11	3.4	10	3.8	6	3.2
Victoria	69	21.5	74	28.1	47	24.7
Western Australia	25	7.8	23	8.7	16	8.4
Location						
Metropolitan area	176	54.8	149	56.7	114	60
Regional area	114	35.5	98	37.3	64	33.7
Rural or remote area	31	9.7	16	6.1	12	6.3
Identification						
Aboriginal or Torres Strait Islander	26	8.1	16	6.1	11	5.8
Neither/prefer not to say	295	91.9	247	93.9	179	94.2
Chronic condition other than lung						
Yes	226	70.4	171	65	116	61.1
No	95	29.6	92	35	74	38.9
TOTAL	**321**	**100**	**263**	**100**	**190**	**100**

* There were 693 respondents living with one, two, or all three diseases – these diseases can coexist.
† Column percentages.

Respondents living with bronchiectasis were more likely to receive annual influenza vaccination and have had pneumococcal vaccination than respondents living with COPD or ILD (Figures 17 and 18). Over half (55%) of the respondents living with the three lung diseases intend to receive RSV vaccination (eligible to receive vaccination from age 50), most regardless of whether it is free or not (Figure 19).

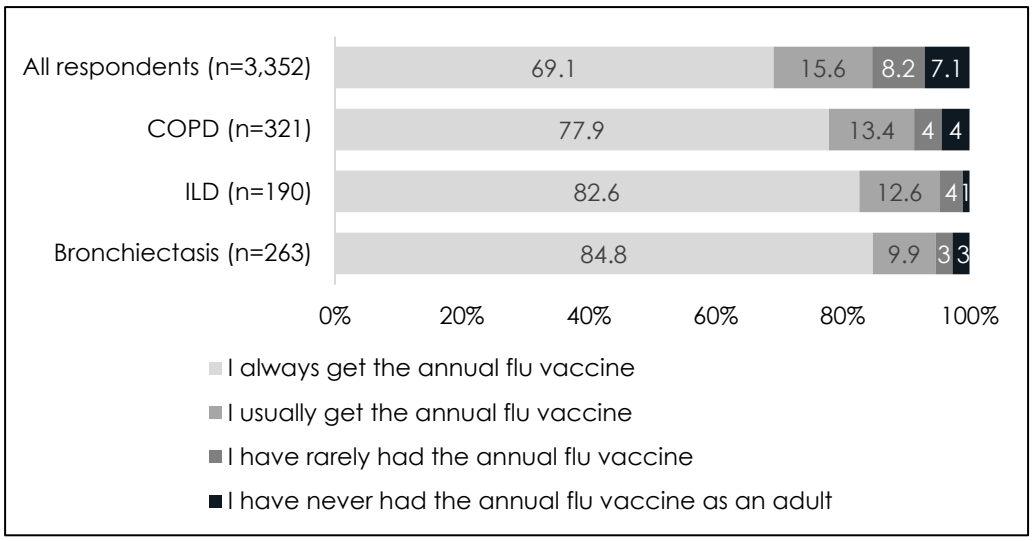

Figure 17. Percentage of respondents' annual influenza vaccination practice by all respondents and respondents living with selected lung diseases

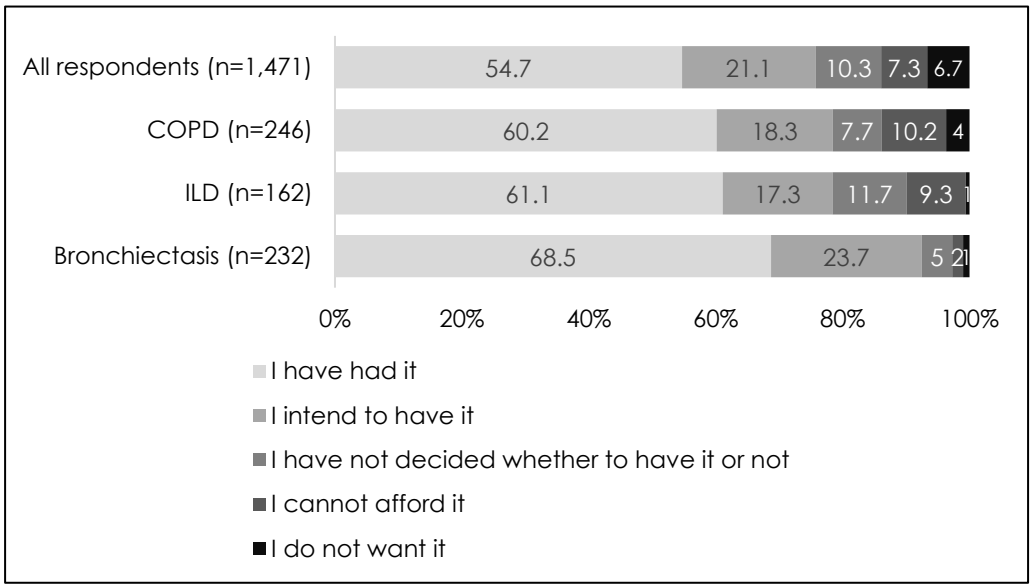

Figure 18. Percentage of respondents' pneumococcal vaccination practice by all respondents it is recommended for and respondents living with selected lung diseases

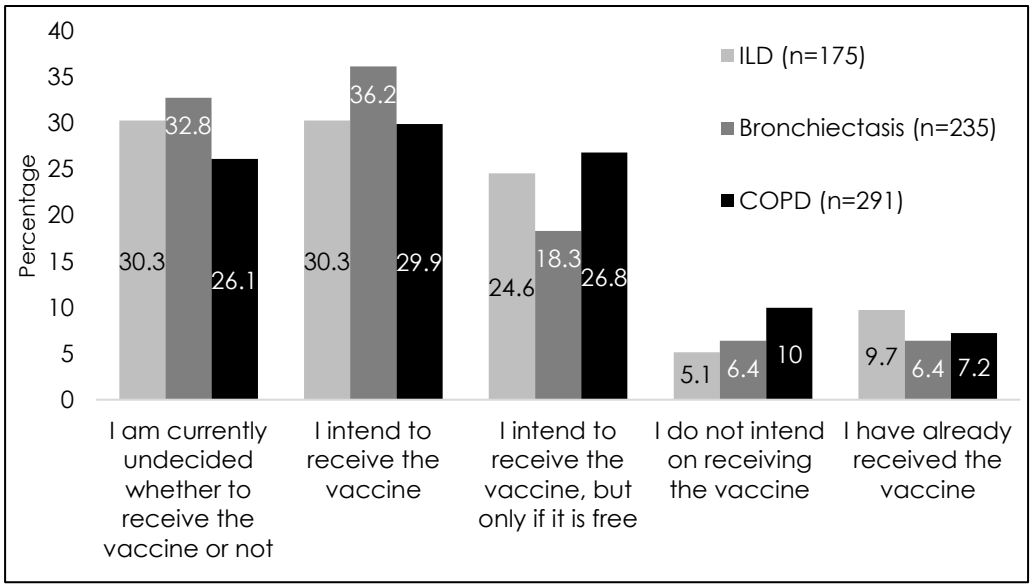

Figure 19. Percentage of respondents' aged 50+ intention to receive RSV vaccination by respondents living with selected lung diseases

Most respondents living with the three lung diseases did not face barriers to vaccination, however around a fifth respectively claimed awareness and cost barriers (Figure 20). The majority wished to receive vaccination information and administration from their doctor (Figures 21 and 22).

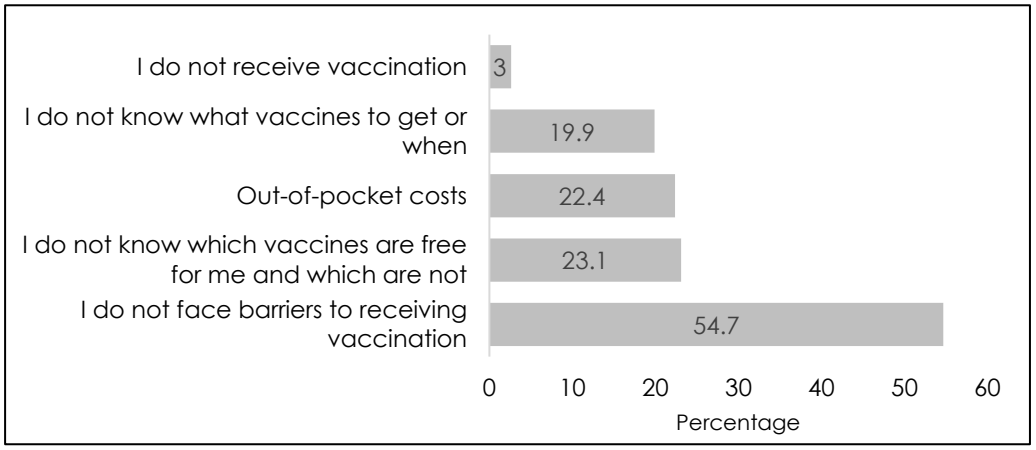

Figure 20. Proportion of respondents living with COPD, bronchiectasis, and/or ILD (n=693) by vaccination barriers

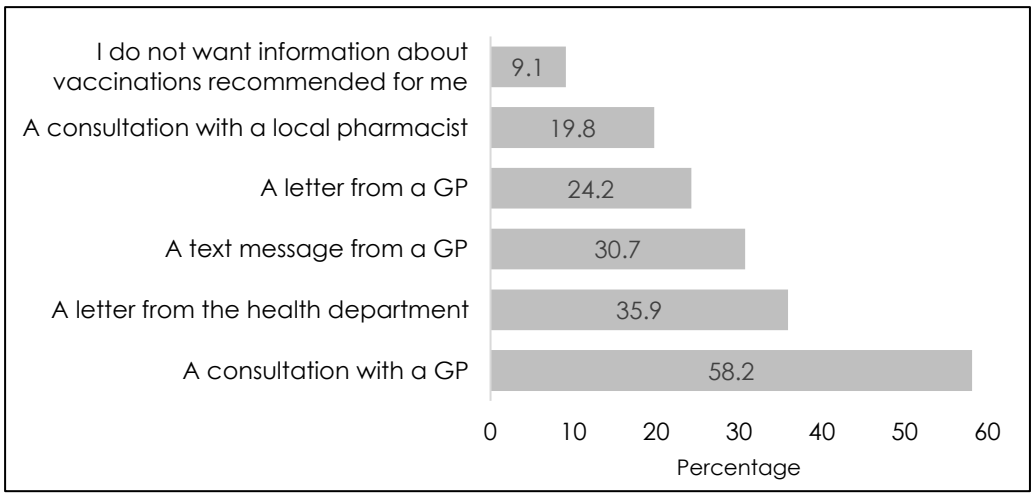

Figure 21. Proportion of respondents living with COPD, bronchiectasis, and/or ILD (n=693) by preference for information about personal vaccination recommendations

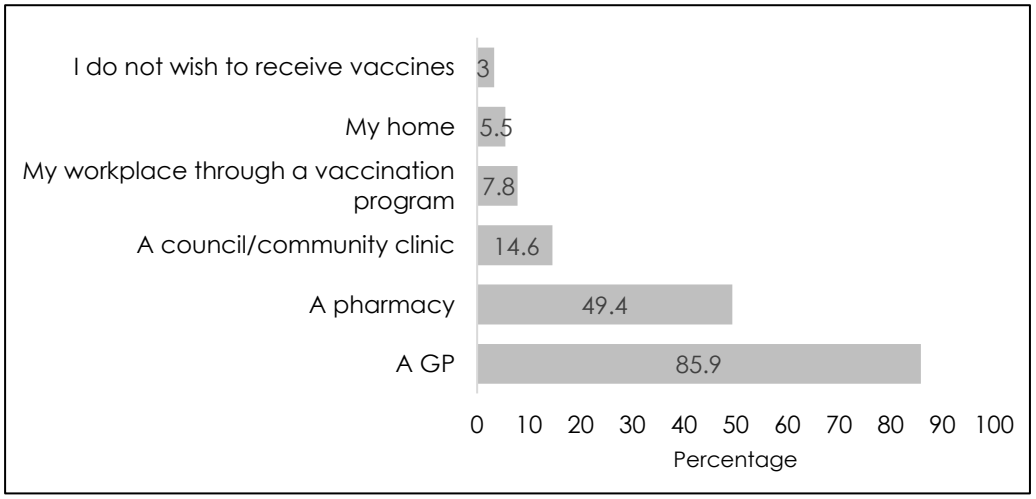

Figure 22. Proportion of respondents living with COPD, bronchiectasis, and/or ILD (n=693) by preference of vaccination provider

Practice Incentives Program Quality Improvement data – COPD and influenza vaccination

The 2024 report of almost half a million regular clients with COPD showed that just under 60% had an influenza immunisation recorded in their GP record within the previous 15 months. This was an improvement on the three previous quarters but lower than the 61.9% reported in July 2023. Proportions varied widely by age group and Primary Health Network (Figure 23).

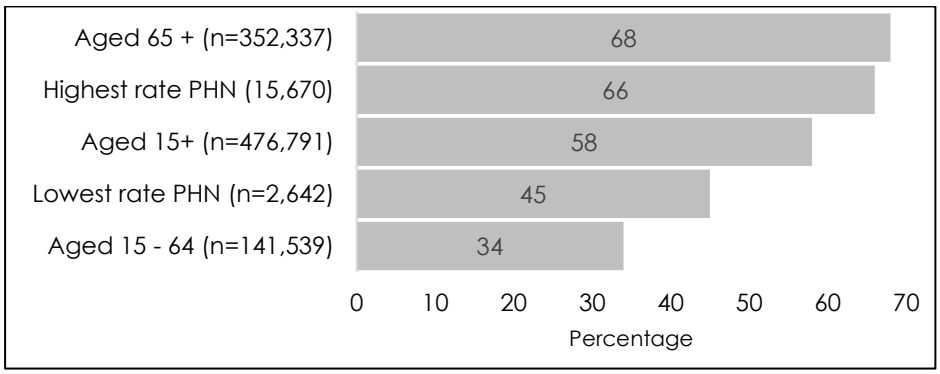

Figure 23. Proportion of PIP QI clients with COPD who had an influenza vaccination recorded in their medical record in the previous 15 months to July 2024, by age group and PHN.

Australian Bronchiectasis Registry data – Pneumococcal vaccination

Receipt of PPV vaccine was more common than PCV vaccine for ABR participants, with the former received by just over a quarter of participants and the latter by just under a fifth (Figure 24). Pneumococcal vaccination status was not recorded for over 40% of participants.

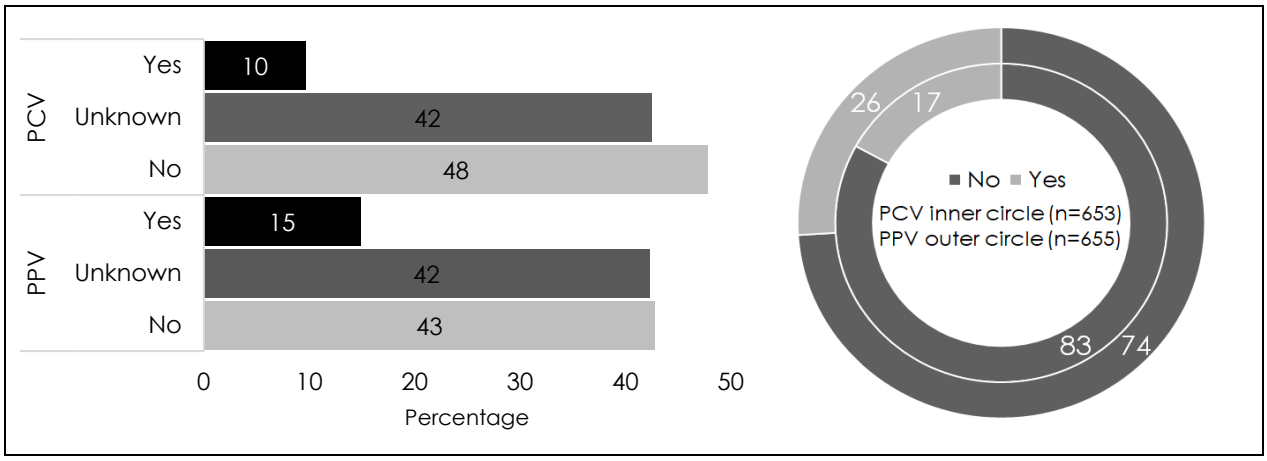

Figure 24. Percentage of ABR participants (n=1,135) by PCV/PPV receipt, and with unknown removed

3.4 People living with selected chronic conditions

Lung Foundation Australia Adult Vaccination Survey data

Arthritis was the most common chronic condition (32%), followed by mental health conditions (20%), diabetes (12%), heart disease (11%), cancer [other than lung] (5%), and chronic kidney disease (3%).

Table 5. Characteristics of respondents living with chronic conditions other than a lung disease

	n	%
Age		
18-29	131	7.0
30-49	288	15.3
50-59	235	12.5
60-64	235	12.5
65-69	371	19.7
70-74	317	16.8
75+	306	16.3
Residence		
Australian Capital Territory	74	3.9
New South Wales	515	27.4
Northern Territory	11	0.6
Queensland	336	17.8
South Australia	161	8.6
Tasmania	64	3.4
Victoria	558	29.6
Western Australia	164	8.7
TOTAL	**1,883**	**100**

	n	%
Gender		
Female	1,467	77.9
Male	381	20.2
Gender diverse/Not stated	35	1.9
Identification		
First Nations	83	4.4
Neither	1800	95.6
Location		
Metropolitan area	1,083	57.5
Regional area	648	34.4
Rural or remote area	152	8.1
Living with a lung disease		
Yes	997	53.0
No	886	46.0
TOTAL	**1,883**	**100**

Respondents living with the selected chronic conditions were more likely to always receive annual influenza vaccination than all survey respondents (Figure 25).

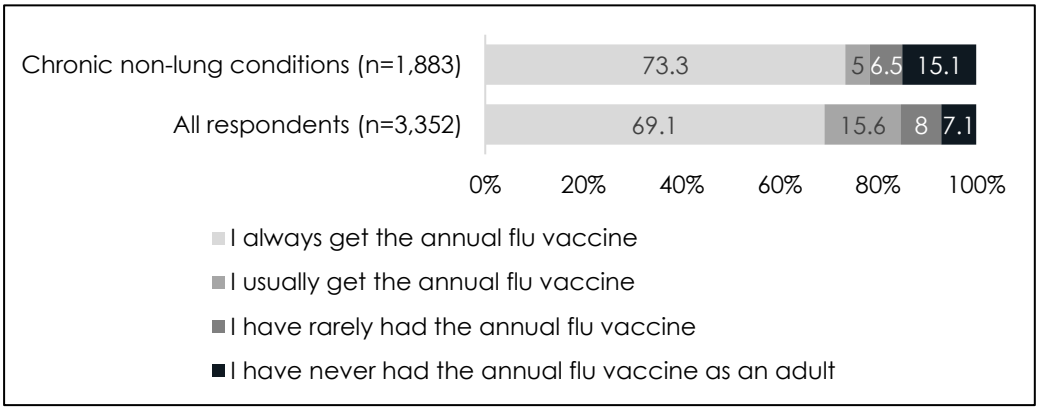

Figure 25. Percentage of respondents' annual influenza vaccination practice by all respondents and respondents with chronic non-lung conditions

Over half of respondents recommended to receive pneumococcal vaccination claimed to have received it (Figure 26). Just under a third aged 60+ were undecided about RSV vaccination, with a similar figure intending to receive it (Figure 27).

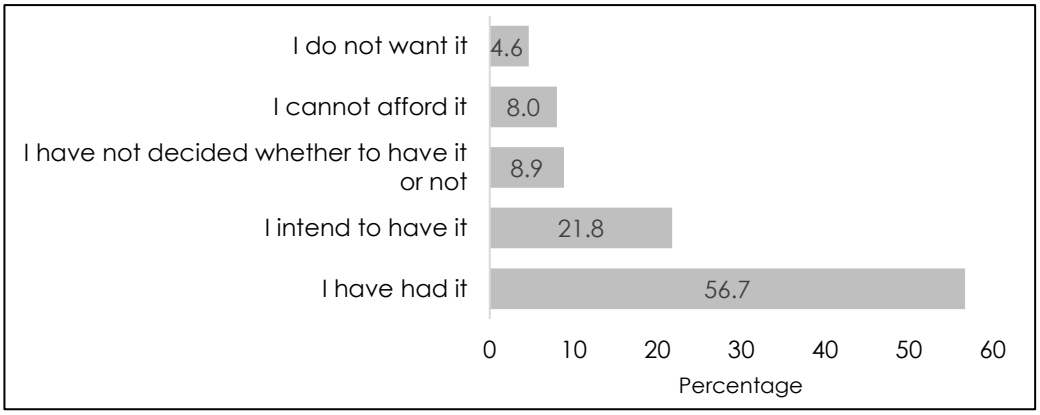

Figure 26. Percentage of chronic non-lung condition respondents recommended for pneumococcal vaccination (n=947) by their vaccination status

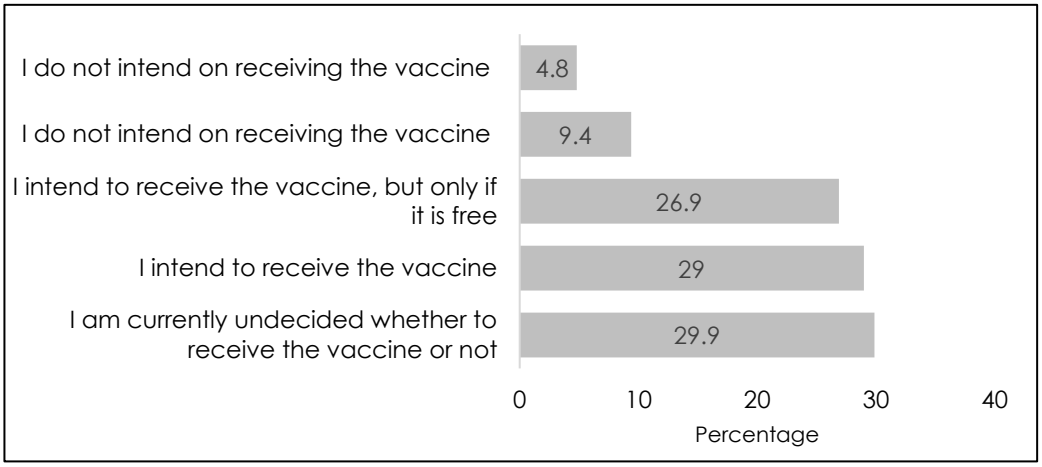

Figure 27. Percentage of chronic non-lung condition respondents' aged 60+ (n=1,229) by intention to receive RSV vaccination

Under half of respondents claimed no barriers to receiving vaccination, with lack of awareness about vaccine recommendations and eligibility for free vaccination, and out-of-pocket costs for vaccination the most common barriers (Figure 28). The majority of respondents desired vaccination information and administration from their doctor (Figures 29 and 30).

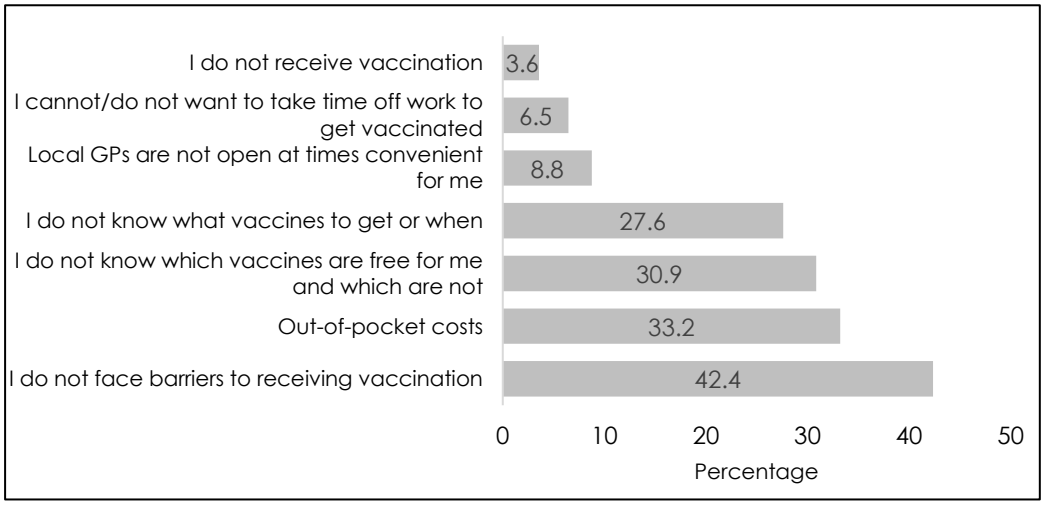

Figure 28. Proportion of respondents living with chronic non-lung conditions (n=1,883) by vaccination barriers

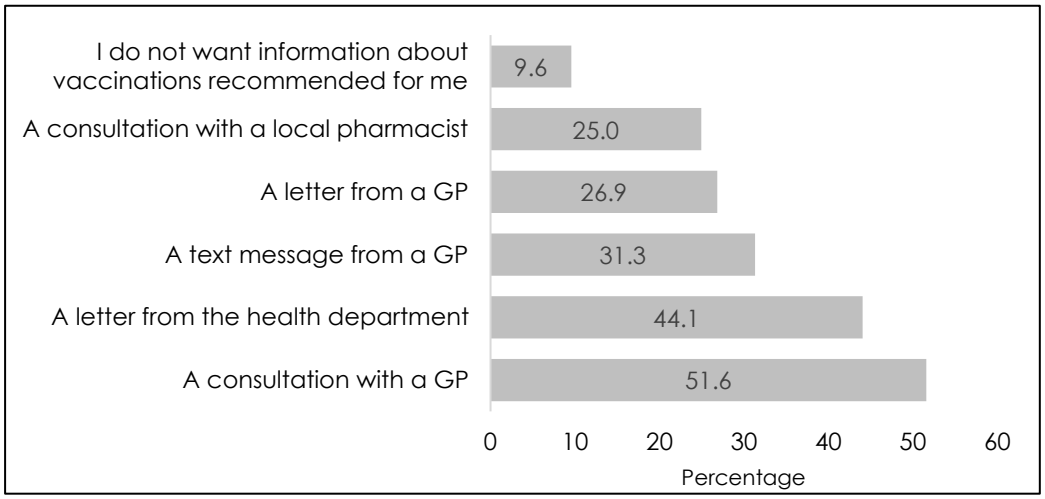

Figure 29. Proportion of respondents living with chronic non-lung conditions (n=1,883) by preference for information about personal vaccination recommendations

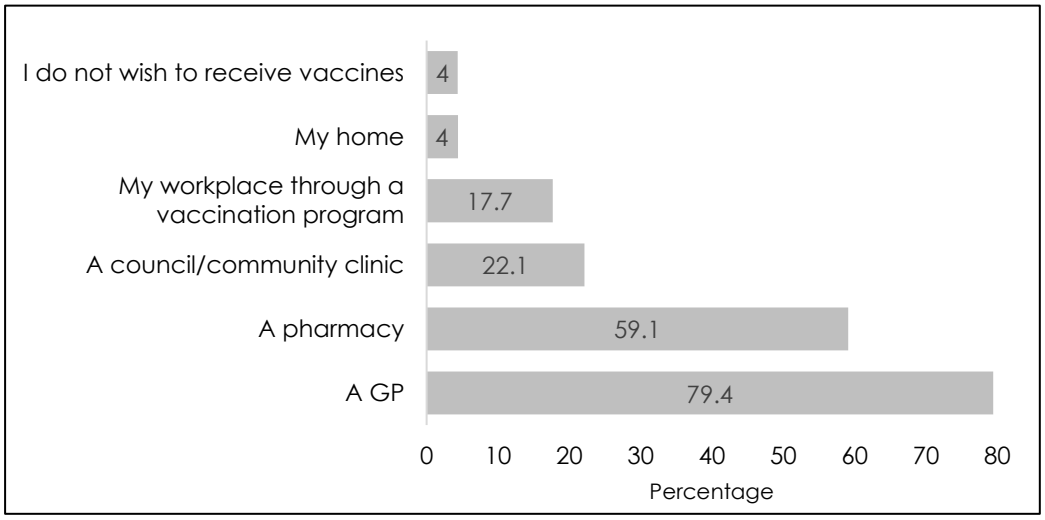

Figure 30. Proportion of respondents living with chronic non-lung conditions (n=1,883) by preference of vaccination provider

Practice Incentives Program Quality Improvement data – Diabetes and influenza vaccination

The 2024 report of just under 1.6 million regular clients with diabetes showed that just under half had an influenza immunisation recorded in their GP record within the previous 15 months. This rate was an improvement on the three previous quarters but lower than the 51.9% rate in July 2023. Proportions varied widely by age group and Primary Health Network (Figure 31).

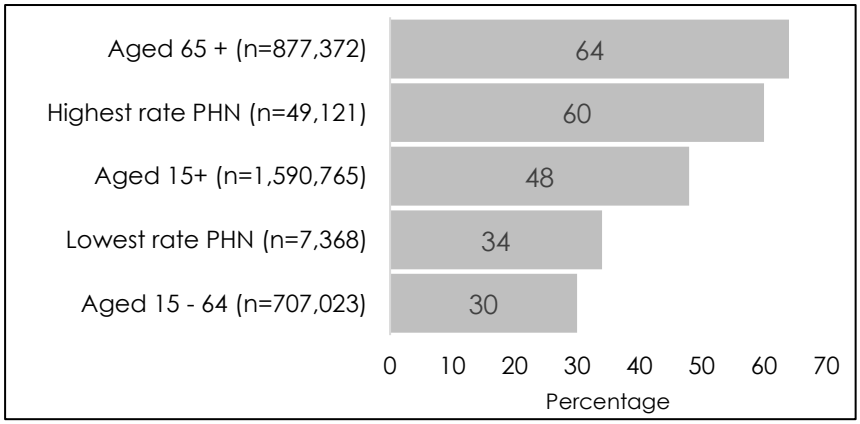

Figure 31. Proportion of PIP QI clients with diabetes who had an influenza vaccination recorded in their medical record in the previous 15 months to July 2024, by age group and PHN.

4. Discussion

This report shows that there is very limited publicly available data on adult respiratory vaccination coverage in these selected priority population groups. Lung Foundation Australia (LFA) and publicly available data affirm challenges in vaccination uptake for Aboriginal and Torres Strait Islander Australians and Australians living in rural and remote areas, and poor pneumococcal vaccination uptake for people living with chronic lung disease and chronic conditions.

The LFA survey data found that for all priority groups, general practice is the preferred provider of vaccination information and administration, however many First Nations Australians requested these services from community clinics or Aboriginal Medical Services. While the LFA data is not nationally representative, the fact that there is evidence of poor vaccination uptake and barriers among a likely more highly educated and health-engaged cohort than the general population underscores the challenge to improving Australia's adult respiratory vaccination coverage.

4.1 Aboriginal and Torres Strait Islander Australians

Despite all Aboriginal and Torres Strait Islander Australians aged six months and over being eligible for free influenza vaccination, national data shows uptake is lower for the 20 to 49 years age group than for all Australians and only slightly higher than all Australians for the older age groups. Likewise, while First Nations pneumococcal vaccination uptake at age 70 is higher than for all Australians, it should be considerably higher given that First Nations adults are clinically recommended to receive pneumococcal vaccination at age 50 (and it is free to receive). The LFA survey data affirms the lower uptake of influenza and pneumococcal vaccination than for non-Indigenous Australians. Under a third (30%) of First Nations survey respondents who are recommended to receive pneumococcal vaccination claimed they had received it, compared with 55% of all respondents. Encouragingly, however, over a third (36%) of First Nations respondents stated that they intend to receive it, suggesting that access barriers (whether awareness barriers or system barriers) may have prevented their uptake of this vaccination to date.

Intention to receive RSV vaccination was higher in First Nations survey respondents than all respondents, however more First Nations respondents said they would only receive the vaccine if it were free. With the clinical recommendation for First Nations Australians to receive RSV vaccination from 60 years – 15 years earlier than the recommendation for non-Indigenous adults – equitable access to First Nations RSV vaccination is required. We note the Pharmaceutical Benefits Advisory Committee's recommendation for RSV vaccination to be provided on the National Immunisation Program for First Nations adults aged 60-74, and the current negotiations between the Australian Government and the manufacturers of RSV vaccines on this recommendation.

The proportion of First Nations respondents claiming that they did not have barriers to vaccination was much lower than for all respondents (17.7% compared with 43%). The barriers of lack of awareness of vaccine recommendations and/or eligibility for free vaccination, and out-of-pocket costs were higher than for all respondents by around 10-15% – this finding speaks to inequitable knowledge and access. Responses to the survey's open-ended questions illustrated knowledge barriers stemming from healthcare providers not being proactive with the delivery of vaccination information:

- *"I have not been offered advice or vaccination by my current GP – I always have to ask."* (First Nations respondent aged 50-59 from regional NSW).
- *"Knowing when we are able to have certain vaccinations rather than having to ask a doctor or pharmacist. I recently found out that I can have whooping cough covered if I am pregnant which I did not know."* (First Nations respondent aged 30-49 from rural South Australia).

While most First Nations respondents (like all respondents), expressed a preference for vaccination information via a consultation with their doctor, a third would be happy to receive this information from a letter or consultation with a council clinic or Aboriginal Medical Service. Likewise for preferred vaccination provider, while most First Nations respondents wish to receive vaccinations from their doctor, a third respectively are happy to receive them from an Aboriginal Medical Service or council clinic.

With adult vaccination recommendations and free vaccination eligibility different for First Nations and non-Indigenous adults, understanding of these differences by healthcare providers is necessary, as is cultural safety in explaining why there are these differences. Ensuring access to Aboriginal Medical Services for First Nations adults for vaccination information and administration for those that desire this is paramount. The establishment, in 2025, of the Aboriginal and Torres Strait Islander Immunisation Advisory Group in the National Centre for Immunisation Research and Surveillance[11] is a welcome step that will see Aboriginal and Torres Strait Islander health professionals provide cultural and technical expertise and advocacy to inform immunisation research, policy, programs and evaluation.

4.2 People living in regional, rural and remote Australia

The LFA survey data and the national data on influenza vaccination uptake for over 65s across Australia shows that people living in rural and remote areas have considerably poorer influenza vaccination uptake than those not living in these areas, with differences between regional and metropolitan Australia less pronounced. Publicly available adult respiratory vaccination data by remoteness area is limited to the one measure detailed in this report.

Receipt of pneumococcal vaccination for people living in regional, rural and remote Australia was comparable to all respondents, as was intention to receive RSV vaccination. Regarding vaccination barriers, people living outside of the major cities were slightly more likely than all respondents to claim that it was too difficult to book in at a local pharmacy or that the pharmacy was not open at convenient times. As with all respondents, people living in non-metropolitan areas preferred vaccination information and administration from general practice – however, as noted in the results, preference for vaccination at general practice was lower for respondents living in rural and remote Australia (but still the most preferred). Responses to the survey's open-ended question on what would make it easier for the respondent to get vaccinated illustrate access and cost challenges for Australians living in rural and remote areas:

- "*Availability of vaccines and access to immunisation with several being offered [would make it easier] instead of going back each time and having to pay for each visit. My nearest regional centre is a 100km round trip adding to the cost.*" (Respondent aged 70-74 from rural/remote Victoria).
- "*In my rural area doctor is only available for 2 half days per week. Getting an appointment when you need is not always possible.*" (Respondent aged 60-64 from rural/remote Victoria).

Data on general practice distribution in Australia shows significantly fewer doctors in small rural towns, remote communities and very remote communities compared with metropolitan and regional areas, with deceases over time in remote communities.[12] Immunisation models of service in general practice in remote Australia should be streamlined (as indicated by the first respondent quote above) to ensure that people living in these areas who wish to receive vaccination information and administration from general practice are able to do so with minimised burden. Models should support efficient coordination of appointment scheduling and vaccine supply.

4.3 People living with selected chronic lung diseases

National data on influenza vaccination uptake for people living with COPD shows rates that are not much higher than the general population, and the considerable differences in rates between Primary Health Networks points to inequity by geographic location. The LFA survey data on pneumococcal vaccination shows sub-optimal uptake for people living with chronic lung diseases, with people living with COPD more likely than the other two lung disease groups to claim that they cannot afford pneumococcal vaccination (people with COPD aged under 70 cannot receive it for free - refer to Table 1). We note that the pneumococcal data contained in the Australian Bronchiectasis Registry is limited in its utility by the high rate of missing data.

Consumer and health professional confusion around pneumococcal vaccination for people living with chronic lung disease was a feature in responses to the LFA survey open-ended questions:

- *"I get all the vaccines required, e.g. COVID-19 and annual flu. However, sometimes we need more info about what is available. For example, the pneumonia vaccine is not really talked about."* (Respondent aged 30-49 living with chronic lung disease from Queensland).
- *"Need more information around vaccine for pneumonia. Am I eligible?"* (Respondent aged 65-69 living with chronic lung disease from Western Australia).
- *"The vaccine I'm struggling with at the moment is pneumococcal. Conflicting information from health professionals about timing & need for booster."* (Respondent aged 50-59 living with chronic lung disease from Victoria).

With the optimal pneumococcal vaccination program for adults in Australia currently under review[8], examination of consumer and health professional understanding and experiences with pneumococcal vaccination for people living with chronic lung disease is required. Lung Foundation Australia is well placed to conduct such investigation. The differences in eligibility for free vaccination detailed in Table 1 by different types of chronic lung disease may complicate decision making for health care professionals. Lung Foundation Australia advocate for free pneumococcal vaccination for Australian adults aged under 70 living with COPD, severe asthma, and interstitial and fibrotic lung disease in line with the clinical recommendation. We advise healthcare professionals to discuss pneumococcal vaccination with their patients who have COPD, ILD or severe asthma and not assume that their patients aged under 70 are not willing to pay for vaccination.

Survey findings on barriers to vaccination for people living with chronic lung diseases reveal that even among a cohort with more clinical recommendations for vaccination and who are more likely engaged with health services due to their diseases, a fifth do not know what vaccinations to get or when and which vaccines are free for them. In response to the survey's open-ended questions, many respondents expressed satisfaction with their health care provider's (specialists and GPs) provision of vaccination information, however some noted that understanding of vaccination in at-risk populations in general practice can be poor or out-of-date:

- *"GP's and health professionals [need to be] better educated that free vaccine eligibility doesn't just mean over 65."* (Respondent aged 30-49 living with chronic lung disease from Victoria).
- *"It was only after seeing a specialist that I knew to get pneumococcal vaccine."* (*Respondent* aged 50-49 living with chronic lung disease from Victoria).

With most survey respondents living with chronic lung disease expressing a preference for vaccination information and administration from general practice, upskilling on vaccination for adults with at-risk conditions in primary care is warranted.

4.4 People living with selected chronic conditions

National data on influenza vaccination uptake for people living with diabetes shows rates that are not much higher than for the general population, and the considerable differences in rates between Primary Health Networks points to inequity by geographic location. As for all LFA survey respondents, those living with selected chronic conditions had sub-optimal pneumococcal vaccination rates, however, also like all respondents, a substantial number indicated that they intend to receive it, suggesting that vaccination barriers may have delayed on-time uptake.

It is important to note that more than half of the respondents living with the selected chronic conditions were also living with lung disease (reflecting the recruitment focus of the LFA survey on people living with lung disease and people from the general population). Multimorbidity presents significant challenges for immunisation at the individual and system level. Altered immune response in certain chronic diseases, complex clinical decision-making regarding timing and contraindications, and health system issues such as fragmented care (for example, multiple specialists) are some of the challenges. Data from the last Australian census show that half (50.2%) of Australians aged 65 years and over, and 30% aged 45-64, were living with two or more chronic conditions in 2022.[13] People living with COPD are highly likely to be living with multimorbidity, with 87% in 2022 living with another chronic condition. For heart disease this statistic was 85%, for cancer 82%, diabetes 78%, and for mental and behavioural conditions 52%.

Among the responses to the survey's open-ended questions were many that contained a request for advice on vaccinations for people living with specific medical conditions or noting challenges in obtaining personally relevant information. Examples of responses from people living with one of the selected chronic conditions included in this report are:

- *"I have diabetes, and I find it hard to work out which vaccinations are free for me, and which are not. Searching online can be confusing if they don't specifically mention diabetics, and sometimes my doctor isn't even clear or up to date on what the latest government regulations are."* (Respondent aged 50-59 from Victoria).
- *"I just don't know what to have (vaccinations) since having cancer".* (Respondent aged 60-64 from Western Australia).

As multimorbidity continues to increase with an ageing population, training and tools that enable health professionals to navigate vaccine recommendations for people living with a range of medical conditions are required. The *PneumoSmart Vaccination Tool* developed by the Immunisation Coalition is an example of such a tool – it was developed to assist GPs, medical specialists and other immunisation providers to comply with pneumococcal disease vaccination recommendations.[14] As the survey respondents living with selected chronic conditions, like for all respondents, indicated that they prefer to receive vaccination information and administration from general practice, increased support for primary care to deliver immunisation services is warranted.

Recommendations

This analysis highlights sub-optimal adult vaccination rates and a widespread lack of awareness across priority populations on vaccination recommendations and eligibility for free vaccines. It also shows that general practice is the preferred source of vaccination information and administration. These findings point to the need for multiple policy changes and increased government investment in immunisation programs, public campaigns, and health professional training.

To this end we reiterate LFA's key immunisation policy priorities as a foundation to improve vaccination coverage for all Australian adults, as well as within key priority populations:

1. Implement adult vaccination targets
2. Recognise Australians living with a lung disease as a priority population for vaccination
3. Invest in multi-strategy co-designed vaccination awareness campaigns and community education
4. Support primary care to better meet the vaccination information and service needs of Australians
5. Make clinically recommended vaccinations free.

Further to these five recommendations, which are detailed in the *Vital vaccines for Australian adults* report[1], we underscore that data improvements are required to measure, monitor and increase vaccination uptake, and particularly to set vaccination targets for adults and priority populations. Our data recommendations will provide the supporting mechanisms required to meet goals outlined in the National Immunisation Strategy. We propose the following:

- **Publicly accessible dashboards of Australian Immunisation Register data with granular breakdowns by First Nations status and geographic locations.** Enabling granular breakdowns of vaccination by Aboriginal and Torres Strait Islander status and geographic location measures such as remoteness allow non-government health organisations and community groups to better advocate for targeted action in groups and areas with low vaccination coverage.
- **Expanding data linkage and enhancing reporting access between the Australian Immunisation Register (AIR) and census data to enable more accurate assessment of vaccine uptake in clinically at-risk populations.** Enhancing existing data linkage between the AIR and census data[15] (and making this information publicly accessible), would enable more accurate identification of vaccination status among Australians who are clinically recommended to receive specific vaccines. This will enable non-government health organisations such as LFA to better advocate for their client populations.

Together, these initiatives would enable a more comprehensive and inclusive immunisation reporting framework. They would provide evidence-based assurance that immunisation programs are responsive to the needs of diverse, vulnerable and priority populations. As vaccination data sources are refined and reviewed, further evaluation of the PIP Quality Improvement Incentive should also be considered in relation to the expansion of its vaccination measures.

This report affirms that there are significant challenges in respiratory vaccination uptake for Australian adults. People from priority populations, including the four groups detailed in this analysis, have additional challenges, some similar across groups, and some unique. Continued consultation, collaboration and co-design with priority population consumers and representative organisations is vital to improving vaccination uptake and reducing health disparities.

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