Lung Foundation Australia's 2024 Adult Vaccination Survey

Technical report

October 2024

enquiries@lungfoundation.com.au
PO Box 1949, Yuggera Country, Milton QLD 4064
ABN: 36 051 131 901

1800 654 301
lungfoundation.com.au

About Lung Foundation Australia

Lung Foundation Australia is Australia's leading peak body for respiratory 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

Lung Foundation Australia's vaccination survey and this report were supported by funds from GSK Australia, Moderna Australia, and Sanofi Australia. These companies were not involved in survey administration, or in the development, review or editing of this report.

We thank the survey respondents from our lung disease community, and from the Australian public, for sharing their experiences and insights. Your responses will guide Lung Foundation Australia's advocacy to improve adult vaccination coverage.

Suggested citation

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Contents

Executive summary

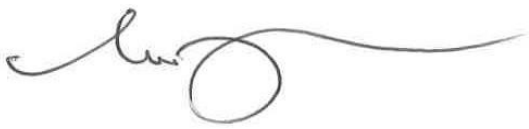
Australia's child vaccination coverage is world-leading. Our adult coverage is not. Heightened vaccine hesitancy, misinformation, and disinformation following the COVID-19 pandemic has compounded existing challenges. Renewed focus and commitment are required to boost adult vaccination rates and protect the health of Australians.

Vaccine-preventable disease (VPD, a disease that can be prevented or have its severity reduced through vaccination) is a leading cause of avoidable hospitalisation in adults and costs the healthcare system billions each year. Lung Foundation Australia focus our efforts on five VPD that are caused by respiratory infections (COVID-19, influenza, pneumococcal disease, whooping cough, and respiratory syncytial virus [RSV]).

In 2024, we surveyed over 3,300 Australians to better understand barriers to adult vaccination, information needs, and support for potential policy measures. Respondents indicated strong support for increased government action, a desire for clear, individualised information, and simpler, more accessible, vaccine administration.

This technical report provides vaccination information and presents the survey method and results. It provides new data for policymakers and will guide Lung Foundation Australia's vaccination advocacy. The technical report can be read in conjunction with the summary advocacy report that details our recommendations to the Australian Government for improving adult vaccination coverage.

Lung Foundation Australia affirm that vaccination against respiratory infection is vital to protect the lung health of Australians living with, and without, lung disease. We will continue to advocate for change that improves lung health and reduces the impact of lung disease.



Professor Lucy Morgan
Chairperson
Lung Foundation Australia

Mark Brooke
Chief Executive Officer
Lung Foundation Australia

1. Introduction

1.1 Rationale, objective, and aim of this study

The COVID-19 pandemic changed the vaccination landscape. New technology, new vaccines and an expanded range of vaccine providers are positive developments, but increased consumer confusion and distrust threaten vaccination uptake. While there are challenges in child vaccination, challenges in adult vaccination pre-date the pandemic and have been exacerbated by it. Australia's adult respiratory vaccination coverage is sub-optimal and since the height of the pandemic in 2022, adult COVID-19 and influenza vaccination uptake has declined. Several strategies are required to improve vaccination rates. Consumer-driven NGO, such as Lung Foundation Australia, can advocate for strategies, guided by the input of the clients they serve and the wider public.

The objective of this research, therefore, was to obtain consumer views on adult vaccination through a survey, with the aim to develop consumer-informed policy recommendations for government.

1.2 Australian governments' policy and strategy

Australian governments (federal, state and territory, and local) collaboratively administer the National Immunisation Program (NIP). Through the NIP, free vaccines are provided to Australians most at risk of vaccine-preventable disease due to age (children, adolescents, and older adults), priority group status (Aboriginal and Torres Strait Islander people), and health conditions (including pregnancy). The NIP follows a schedule that outlines which vaccines should be administered when.

The National Partnership Agreement on Essential Vaccines sets out Australian governments' funding and responsibilities for the NIP. It has five benchmarks for vaccination coverage, four related to children and one to adolescents. These benchmarks are tied to payment for the states and territories.

The National Immunisation Strategy 2019-2024 (2025-2030 currently in development) details strategic priority areas to complement and strengthen the NIP, the first of which is to improve immunisation coverage. Some states and territories and local governments have their own immunisation strategies. Current state strategies are the Tasmanian Immunisation Strategy 2019-2024 and the New South Wales Immunisation Strategy 2024-2028. Queensland is developing an Immunisation Strategy for 2024-2029. An example of a local government strategy is Logan City Council Immunisation Strategy 2022-2025 (Queensland).

Improving immunisation coverage is a strategic direction of the National Preventive Health Strategy (NPHS) 2021-2030. The NPHS comprises several desired immunisation policy achievements by 2030, and these include:

- Individuals and communities' understanding of the value of vaccines is increased
- Improved monitoring and uptake of influenza, pneumococcal and herpes zoster vaccination
- Access to immunisation services is available for all Australians, regardless of financial or geographical barriers
- Immunisation coverage of priority populations, including Aboriginal and Torres Strait Islander people and difficult to reach groups, have improved through strategic targeting, engagement and culturally safe delivery
- Immunisation continues to evolve from a focus on infants and children to vaccinating along the life course
- Establish a benchmark and targets for adults at increased risk of vaccine preventable diseases due to age or underlying medical conditions, and work towards meeting those targets by 2030.

1.3 Impact of respiratory infection in adults

Vaccine-preventable respiratory infections cause morbidity and mortality for Australian adults and burden the healthcare system and economy. COVID-19 alone caused 4,215 deaths in 2023 (all in Australians aged over 75 years)[1] and in 2021 it cost the healthcare system $2.3 billion.[2]

Respiratory infections put Australians living with a lung disease at increased risk of symptom exacerbation and lung function deterioration. They can also lead to other lung infections and lung diseases in people living with, or without, lung disease. COVID-19, influenza, and RSV are causes of viral pneumonia[3], and whooping cough can lead to bacterial pneumonia.[4] Further, severe pneumonia in childhood can cause bronchiectasis[5], and impaired lung growth during childhood caused by a range of adverse exposures, including early-life respiratory infections, is associated with an increased risk of chronic obstructive pulmonary disease (COPD).[6]

We note, that while whooping cough boosters for adults aged under 65 years living with certain health conditions are not currently clinically recommended, there is growing evidence on the heightened risk of whooping cough for people living with COPD[7,8], and as a risk factor for COPD exacerbations.[8]

COVID-19, influenza, pneumococcal disease, whooping cough and RSV are nationally notifiable diseases; this means that all laboratory-confirmed cases are recorded by the National Notifiable Diseases Surveillance System. These notifications are an underestimate of respiratory infection prevalence because testing is not mandatory – this is particularly clear for COVID-19 notifications since the height of the pandemic. In 2023, for Australians aged 15 years and over, there were three-quarters of a million notifications for COVID-19, 170,000 for influenza and 50,000 for RSV. There were 1,718 and 1,110 notifications respectively for pneumococcal disease and whooping cough. Table 1 shows notifications for COVID-19, influenza and RSV over two years.[9] RSV only became notifiable in 2021; thus, notification increases in part reflect an increase in testing and reporting.

Table 1. Notifications for COVID-19, influenza, and RSV in Australians aged 15 years and over, 2022-23

	2022	2023	% change
COVID-19	10,327,744	775,298	↓ 92.5%
Influenza	143,396	169,218	↑ 18%
RSV	38,321	53,363	↑ 39%

Respiratory infections are a common cause of hospitalisation in older adults and adults living with chronic health conditions, including lung disease. When hospitalisation occurs for disease, a determination can be made if a particular hospitalisation "could have potentially been prevented through the provision of appropriate individualised preventative health interventions and early disease management".[10] These cases are called 'potentially preventable hospitalisations' (PPH).

In 2017-18 (the most recent period that age-specific PPH data was available), vaccine-preventable pneumonia and influenza was the sixth most common PPH for Australians aged 15 years and over.[11] It was the ninth most common for Australians aged 15 to 64 years (18,466 hospitalisations), more common than asthma and type 2 diabetes complications. The average length of hospital stay for vaccine-preventable pneumonia and influenza for this age group was 6.6 days. For Australians aged 65 years and over, vaccine-preventable pneumonia and influenza was the fourth most common PPH (33,001 hospitalisations), more common than all type diabetes complications, and the average length of hospital stay was 8.5 days.

1.4 Adult respiratory vaccination access

The Australian Technical Advisory Group on Immunisation, an independent agency, provide clinical immunisation recommendations to the Australian Government. The Government considers these recommendations, along with advice on cost-effectiveness, to determine what vaccines will be free to Australians through the National Immunisation Program (NIP). States and territories can also fund vaccines for their residents. Table 2 shows the recommendations and cost status for adult respiratory vaccination.[12] COVID-19 vaccines are separate to the NIP and are free for all Australians. Vaccines are available at general practice, community health centres, pharmacies, and through workplace vaccination programs – however, not all providers have all vaccines or can administer to all people. Out-of-pocket costs for 'free' vaccinations are incurred by consumers in the case of non-bulk-billed general practice and pharmacy administration fees, however, the NIP Vaccinations in Pharmacy Program (commenced 2024) sees Program-enrolled pharmacies direct these fees to Government.

Table 2. Recommendations for adult respiratory vaccination and cost status by population group*

Clinical recommendation for adults	Vaccines free?
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	
Pregnant women	✓
All First Nations adults	✓
Aged 65 and over	✓
Aged under 65 with certain conditions including the lung diseases: severe asthma, cystic fibrosis, bronchiectasis, suppurative lung disease, COPD	✓
All adults aged under 65	✗†
Pneumococcal disease	
Aged 70 and over	✓
First Nations adults aged 50 and over	✓
Aged under 70 with certain conditions including the lung diseases: suppurative lung disease, bronchiectasis, cystic fibrosis	✓
Aged under 70 with certain conditions including the lung diseases: COPD, severe asthma, interstitial and fibrotic lung disease	✗
Whooping cough	
Pregnant women (for the protection of newborns)	✓
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 educations 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 travel to high-risk country	✗
Respiratory syncytial virus (RSV)	
Pregnant women (for the protection of newborns)	✗
First Nations adults aged 60 to 74	✗
Aged 75 and over	✗
Aged 60-74 with certain conditions including the lung diseases: suppurative lung disease, bronchiectasis, cystic fibrosis, COPD	✗

* Information current to October 2024. †Some states provide periods of free influenza vaccination.

Adults who are not eligible for respiratory vaccinations via the NIP can purchase them, with price varying by the type of vaccine and where they are administered. Some pharmacies and clinics advertise their costs online. A review of websites for this report found that the average cost of influenza vaccines is $25, whooping cough booster $60, pneumococcal $250 (accounting for the three vaccines people aged under 70 with certain conditions receive) and RSV $350. Vaccines that cost more than $41.30 can be claimed under certain private health insurers' extras cover.[13]

1.5 Adult respiratory vaccination rates

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 NIP. Demographic data collected by AIR is age, sex, state/territory of residence and Aboriginal and Torres Strait Islander status.[14] The National Centre for Immunisation Research and Surveillance publish influenza vaccination data against five age groups. Figure 1 (constructed from NCIRS 2024[15]) shows that following a spike in 2022, when almost half of Australians aged 15 years and over received influenza vaccination, rates have declined, most markedly among people aged 50 to 64 years. The rate of COVID-19 vaccination that is up-to-date with clinical recommendations is likewise declining. As of October 9, 2024, a quarter and a third of people aged 75 and over and 65-74 respectively were up-to-date with vaccination (Figure 2).[16]

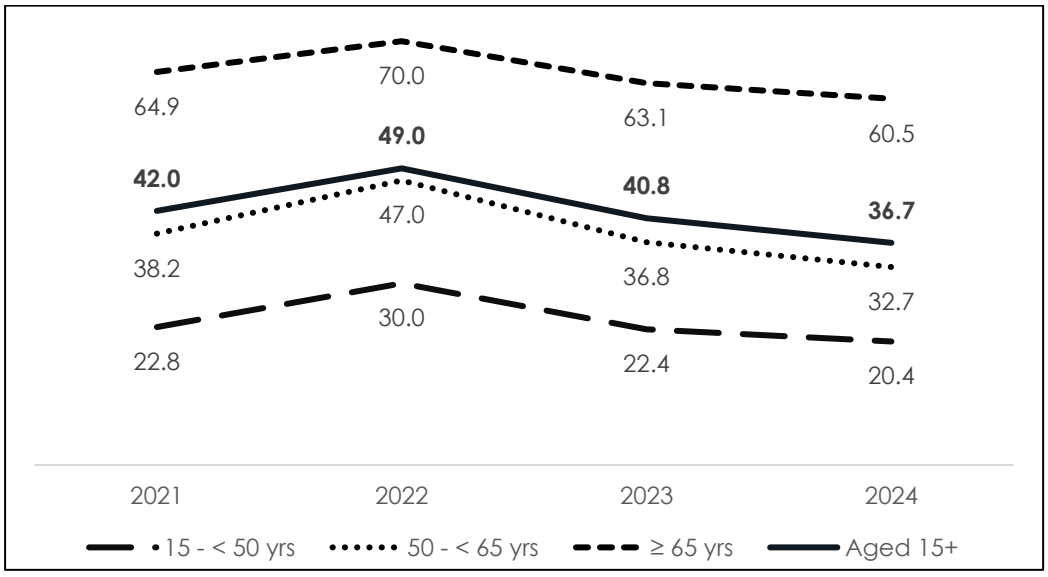


Figure 1. Percentage of Australians aged 15 and over who had influenza vaccination recorded on the AIR, 2021-2024

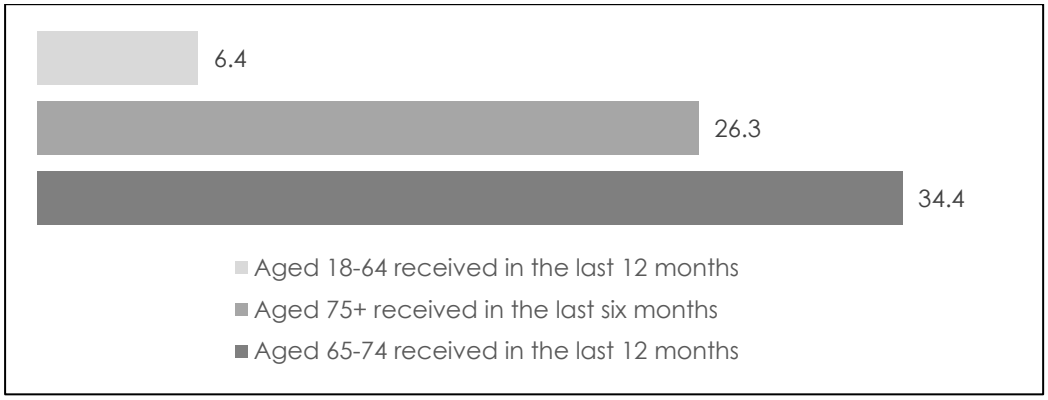


Figure 2. Percentage of Australian adults who have received a COVID-19 vaccine by age group and time period, as at October 9, 2024

For pneumococcal vaccination, in Australians turning 71 years in 2023, 38% had received an adult vaccine.[17] Analysis of AIR data to February 2 2024 found that one-fifth (20.8%) of adults aged 50 years and over were up to date with whooping cough vaccination.[18] It is too early to determine RSV vaccination rates with vaccines only in market from early 2024.

2. Method

2.1 Survey instrument

Lung Foundation Australia developed the survey questions with feedback provided by the consumer team who facilitate our consumer partnerships (to advise on question comprehension). Validated measures were not used. Response types were single choice, multiple choice, Likert scale and open-ended.

Data were obtained on demographics and health characteristics, experience with respiratory infection, vaccination practices, beliefs, motivations, barriers, and preferences, and support for vaccination policy measures.

2.2 Data collection

The English language survey was administered online via Microsoft Forms between 30 April and 16 June 2024 and took an average of 12 minutes to complete. Participants were recruited through direct communication with Lung Foundation Australia's database of clients living with a lung disease (email and a newsletter item), organic and paid social media and the networks of other health advocacy non-government organisations. The email invitation was sent to a segment of clients (n=5,556/7,953) who had not recently completed a survey with Lung Foundation Australia.

Paid social media comprised Meta and LinkedIn, with segmentation to promote to men (traditionally hard-to-reach for public health surveys) and younger people (in recognition that Lung Foundation Australia clients are an older cohort). Advertising was temporarily ceased and re-targeted following strong anti-vaccination comments to posts over a 24-hour period. Respondents (in this 24-hour period) whose responses to the survey's open-ended questions contained offensive and/or threatening language directed at Lung Foundation Australia and/or health professionals, or where consecutive respondents expressed strong anti-vaccination sentiment (suggestive of the survey being shared among an anti-vaccination group, and thus introducing a bias) were excluded from analysis (n=257).

Respondents were informed that by competing the survey they were giving consent for their responses to be used as part of Lung Foundation Australia's work, with storage and use of their data governed by Lung Foundation Australia's Privacy Policy. Respondents did not have to provide their name, and no linkages were made to Lung Foundation Australia's database of clients. An incentive was offered to encourage participation – three $150 retail gift cards. Respondents were advised that to go in the random draw (study id 50, 500 and 2500 were predetermined as winners) for the incentive they would need to provide an email address so that winners could be sent a link to the card.

2.3 Analysis

Closed-ended data are summarised descriptively, presented as frequencies and proportions. Analysis by key demographics and lung disease status is presented. Further subgroup analysis may occur for other Lung Foundation Australia advocacy activities. An analysis of responses to the survey's open-ended questions (shown below) is not included in this report – a qualitative content analysis of this data may form part of Lung Foundation Australia's future workplan.

- [For respondents living with a lung disease] Please tell us more about the respiratory infection you had, and what impact it had on your lung health (n=758)
- Please tell us what would make it easier for you to get vaccinated, and what your information needs are (n=2,201)
- Is there anything else about vaccination, not covered in this survey, that you would like us to know? (n=1,228)

3. Results

3.1 Demographic and health characteristics

Respondents living with a lung disease comprised 40% of respondents. They were older and more likely to have another chronic condition (other than a lung disease) than respondents who are not living with a lung disease (Table 3). For all respondents, the majority were older adults (60% aged over 60), female, and living with one or more chronic conditions.

Table 3. Demographic and health characteristics by respondents living with and without lung disease

	TOTAL		Lung disease		No lung disease	
	n	%*	n	%*	n	%*
Age						
18-29	215	6.4	66	4.8	149	7.5
30-49	640	19.1	199	14.6	441	22.2
50-59	495	14.8	184	13.5	311	15.6
60-64	470	14.0	182	13.3	288	14.5
65-69	620	18.5	251	18.4	369	18.6
70-74	484	14.4	222	16.3	262	13.2
75+	428	12.8	260	19.1	168	8.5
Gender						
Female	2643	78.8	1071	78.5	1572	79.1
Male	658	19.6	269	19.7	389	19.6
Gender diverse/prefer not to say	51	1.5	24	1.8	27	1.4
Residence						
Australian Capital Territory	143	4.3	58	4.3	85	4.3
New South Wales	882	26.3	363	26.6	519	26.1
Northern Territory	20	0.6	6	0.4	14	0.7
Queensland	626	18.7	264	19.4	362	18.2
South Australia	277	8.3	120	8.8	157	7.9
Tasmania	99	3.0	43	3.2	56	2.8
Victoria	994	29.7	388	28.4	606	30.5
Western Australia	311	9.3	122	8.9	189	9.5
Location						
Metropolitan area	2036	60.7	816	59.8	1220	61.4
Regional area	1074	32.0	452	33.1	622	31.3
Rural or remote area	242	7.2	96	7.0	146	7.3
Identification						
Aboriginal or Torres Strait Islander	124	3.7	62	4.5	62	3.1
Neither/prefer not to say	3228	96.3	1302	95.5	1926	96.9
Non-English-speaking background						
Yes	216	6.4	79	5.8	137	6.9
No	3136	93.6	1285	94.2	1851	93.1
Chronic condition other than lung‡						
Yes	1833	56.2	886	65.0	997	50.2
No	1469	43.8	478	35.0	991	49.8
TOTAL	**3352**	**100**	**1364**	**40.7**†	**1988**	**59.3**†

*Column percentage.
† Row percentage.
‡ Arthritis, cancer (other than lung), chronic kidney disease, diabetes, heart disease, mental health conditions.

The majority of respondents (57%) living with a lung disease are living with asthma, with near a quarter living with COPD (Figure 3). Asthma was the most common co-occurring disease for the 26% of respondents who are living with more than one lung disease. The age of respondents by type of lung disease reflects disease epidemiology, with asthma prevalent across ages, and respondents living with COPD, bronchiectasis, and interstitial lung disease concentrated in respondents aged 65 and over.

An interstitial lung disease additional to diseases detailed in the response option (see Figure 3 footnotes), and provided through open-ended response, was cryptogenic organising pneumonia. Other lung or respiratory-related diseases included cystic fibrosis (included as a response option), allergic bronchopulmonary aspergillosis, pulmonary embolism, tuberculosis and long COVID.

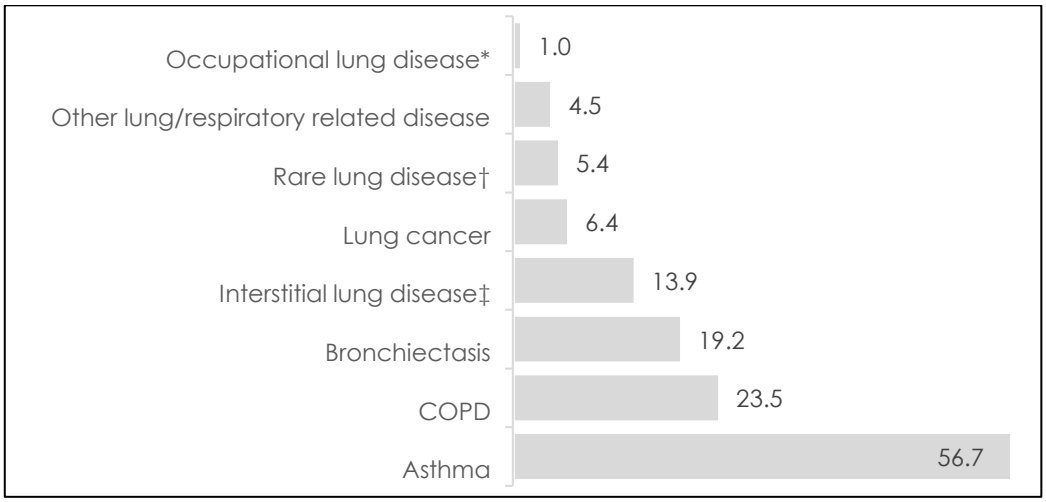


Figure 3. Percentage of respondents living with a lung disease by type (n=1,364)

* Response option included silicosis, asbestosis, mesothelioma, pneumoconiosis, and others.
† Response option included alpha1-antitrypsin deficiency, lymphangioleiomyomatosis [LAM], pulmonary arterial hypertension, pulmonary hypertension, nontuberculous mycobacterium [NTM], tracheobronchomalacia [TBM]).
‡ Response option included idiopathic pulmonary fibrosis, hypersensitivity pneumonitis, pulmonary fibrosis, pulmonary sarcoidosis.

Arthritis was the most common chronic condition other than a lung disease for respondents living with and without a lung disease (31%), followed by mental health conditions (20%). Figure 4 shows differences in chronic condition frequencies by lung disease status, with respondents living with a lung disease particularly more likely to be living with heart disease and arthritis reflecting the older age of lung disease respondents.

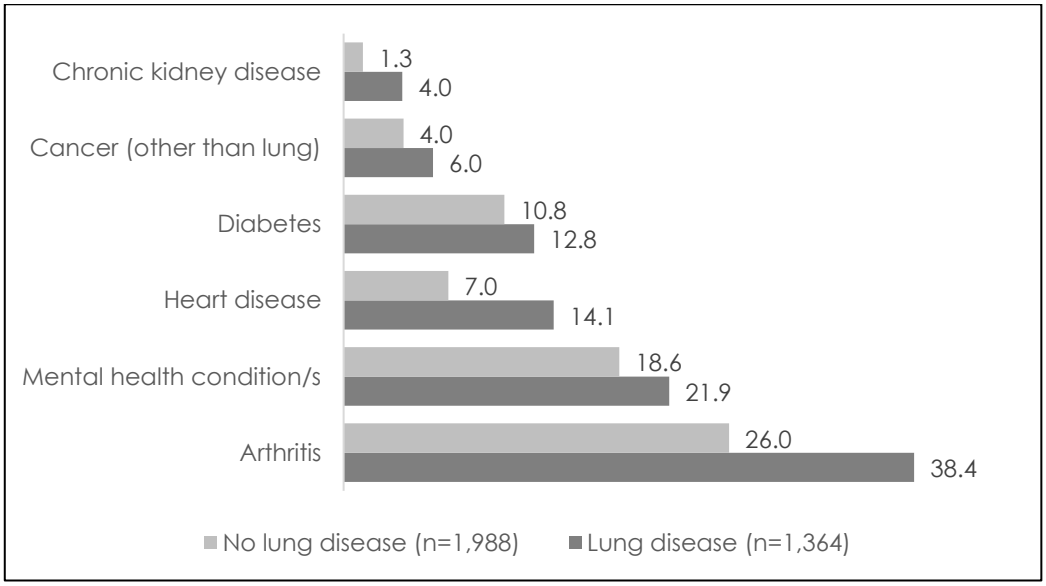


Figure 4. Percentage of respondents living with a chronic condition other than a lung disease by type

3.2 Experience of respiratory infection

The majority of respondents living with a lung disease (53%) were quite or extremely worried about contracting a respiratory infection, compared to 25% of respondents living with other chronic conditions and 19% for those not living with either (Figure 5). A third of all respondents were quite or extremely worried and level of worry generally increased by age.

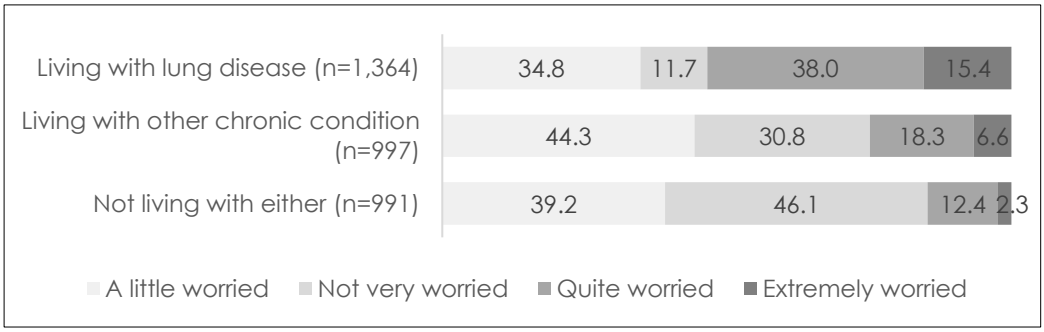


Figure 5. Percentage of respondents' level of worry about respiratory infection, by health status

Almost three quarters (73%) of respondents living with a lung disease stated that they had experienced a respiratory infection (influenza, COVID-19, pneumococcal pneumonia, whooping cough or RSV) in the previous two years. For over a fifth of respondents (22%), that respiratory infection/s had a major impact of their lung health (Figure 6).

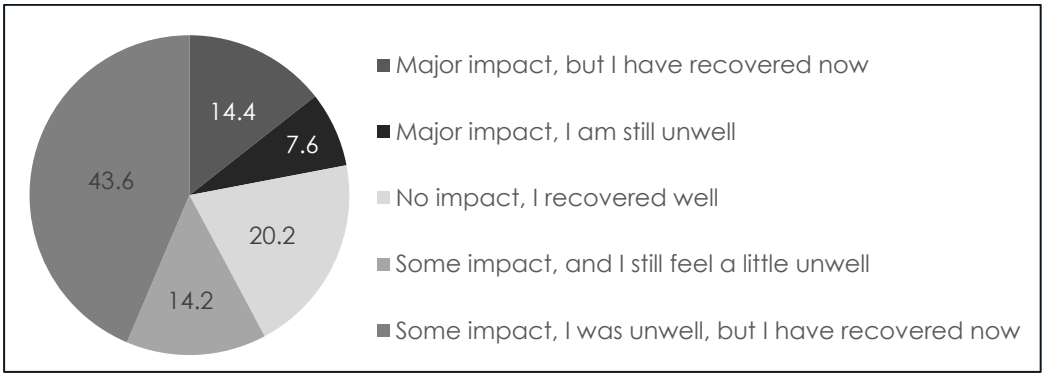


Figure 6. Percentage of respondents living with a lung disease by impact of past two years respiratory infection/s on their lung health (n=1,000)

Influenza

A quarter (24.5%) of respondents stated that they had experienced influenza in the last two years – 28% for respondents living with a lung disease and 22% for respondents not living with a lung disease. Those living with a lung disease required a higher level of support to treat their infection, with 11% requiring hospitalisation compared to 5% for those not living with a lung disease (Figure 7). The impact that this influenza infection had on different areas of the respondents' lives (Figure 8) was greater for respondents living with a lung disease than for respondents that are not, for all areas. It had a major impact on the ongoing physical health of 21% of respondents living with a lung disease compared to 8% of respondents that are not.

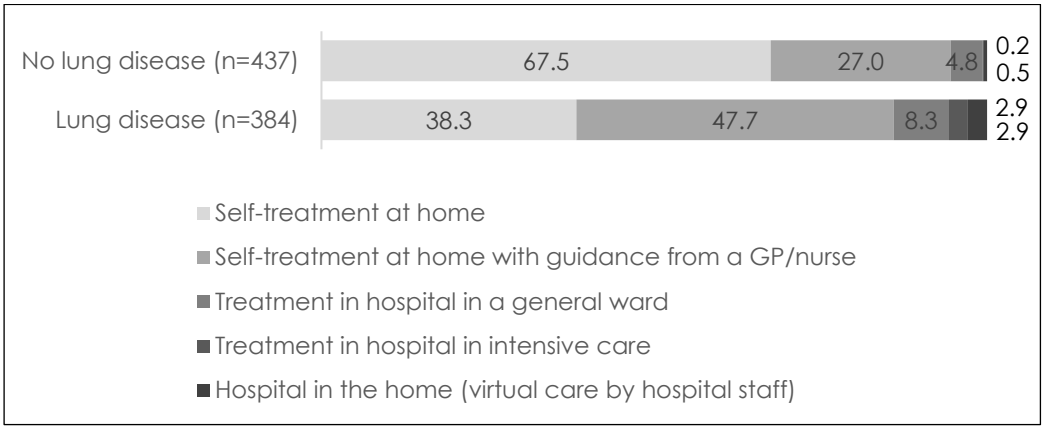


Figure 7. Percentage of respondents who had influenza in the last two years by type of treatment they received

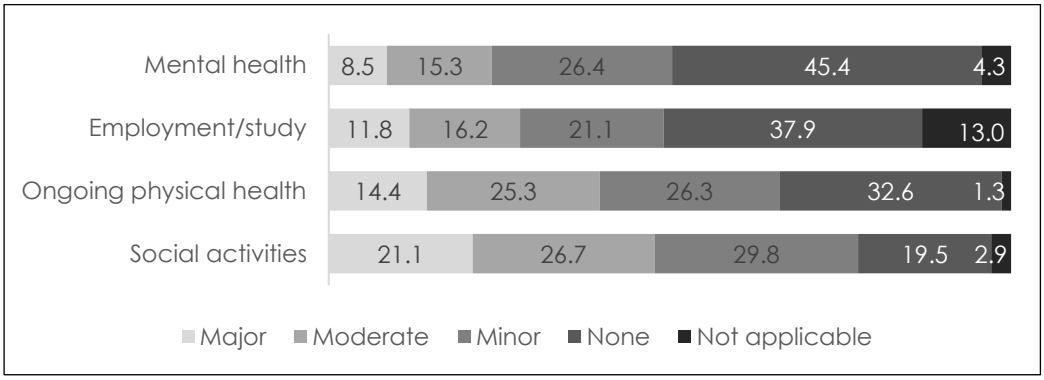


Figure 8. Percentage of respondents who had influenza in the last two years by the impact the infection had on areas of their life (n=821)

Pneumococcal disease

Fourteen percent of respondents stated that they had had pneumococcal disease, 10% weren't sure and 76% said that they had not. Of those who had the disease, almost two-thirds (65%) claimed that they were not vaccinated against it at the time. Respondents living with a lung disease were more likely to have had pneumococcal disease compared to respondents that are not living with a lung disease (Figure 9).

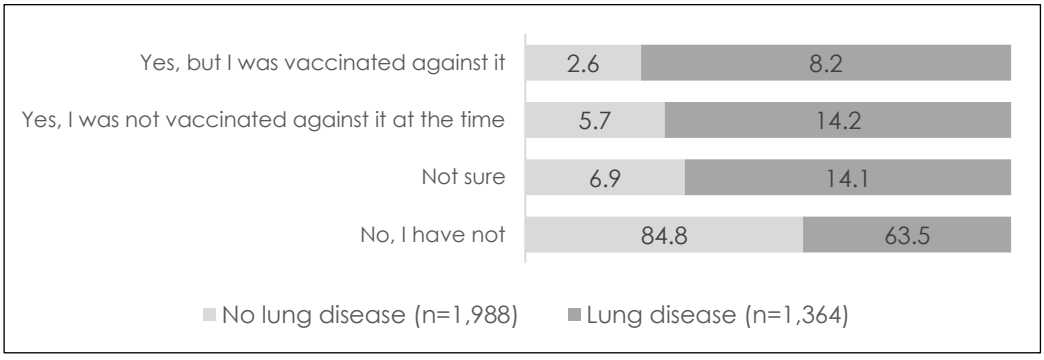


Figure 9. Percentage of respondents by whether or not they had had pneumococcal disease

Those living with a lung disease required a higher level of support to treat pneumococcal disease, with 44% requiring hospitalisation compared to 25.5% for those not living with a lung disease (Figure 10). The impact that this infection had on different areas of the respondents' lives (Figure 11) was greater for respondents living with a lung disease than for respondents that are not, for all areas. It had a major impact on the ongoing physical health of 26.5% of respondents living with a lung disease compared to 8.5% of respondents that are not.

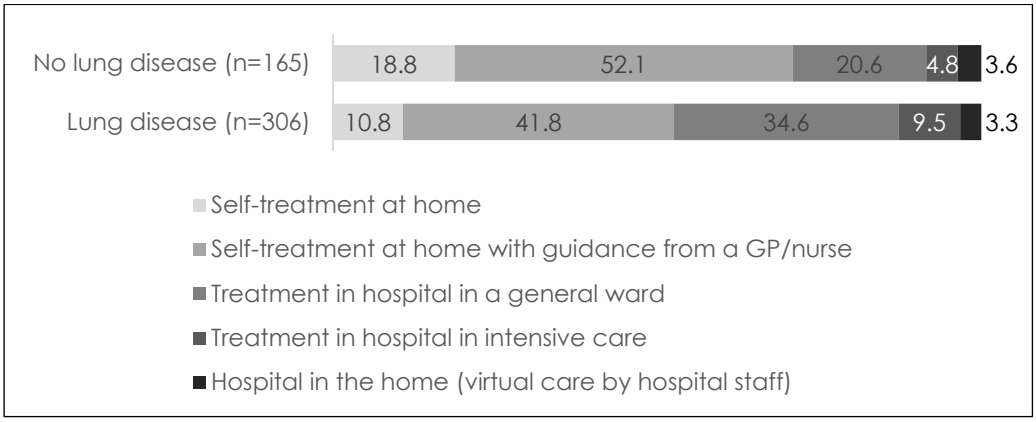


Figure 10. Percentage of respondents who had pneumococcal disease by type of treatment they received

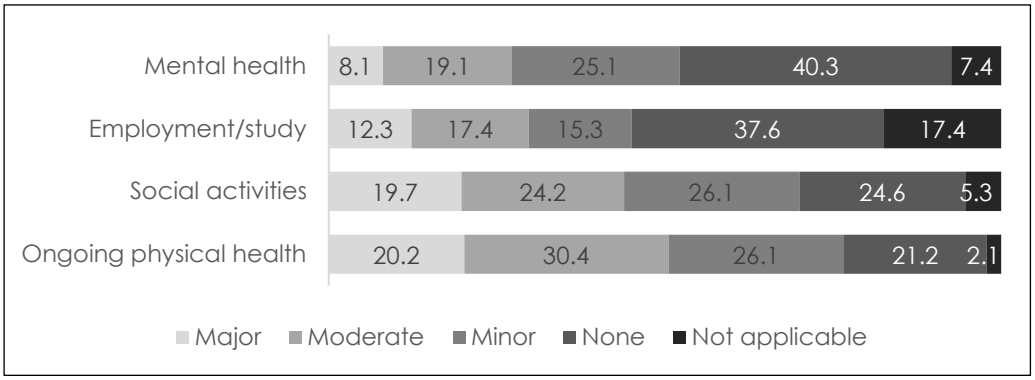


Figure 11. Percentage of respondents who had pneumococcal disease by the impact the infection had on areas of their life (n=471)

Respiratory Syncytial Virus (RSV)

Half of respondents knew what RSV is and what health issues it can cause (Figure 12). Knowledge did not vary between respondents living with or without a lung disease, nor greatly between age groups, however respondents aged 75 years and over were least likely to have heard of it (14%).

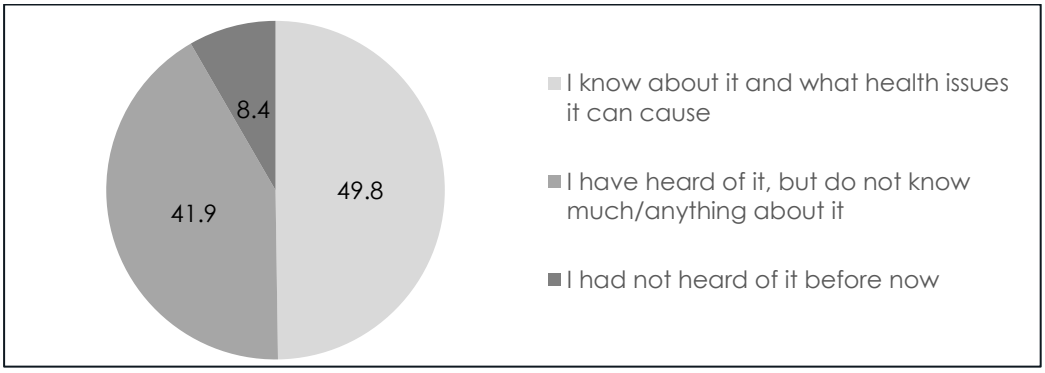


Figure 12. Percentage of respondents by their level of awareness of Respiratory Syncytial Virus (RSV) at the time of the survey

Of respondents who knew what RSV is and the health issues it can cause (n=1,669), 13% stated that they had had RSV (17% for those living with lung disease), 16.5% weren't sure (19% for those living with lung disease)and 70% said that they had not. Fourteen percent were hospitalised as a result of their infection, and it has had a moderate or major impact on the ongoing physical health of 41% of those who contracted it. Respondents living with a lung disease required a higher level of support to treat RSV than respondents not living with a lung disease. Likewise, RSV had a higher impact on all areas of life for respondents living with a lung disease than for those who are not.

3.3 Support for vaccination policies

Respondents provided strong support (Figure 13) for the following five propositions: 1) there should be national targets for adult vaccination coverage, as there are for childhood vaccinations; 2) nurses should be able to give recommended vaccines at General Practice without the patient needing an appointment with a doctor; 3) the government should increase investment in support and information for the community on vaccination; 4) the influenza vaccine should be provided free for all Australians; 5) COVID-19 vaccines should remain free for all Australians. Frequencies did not vary greatly by lung disease status, age, or location.

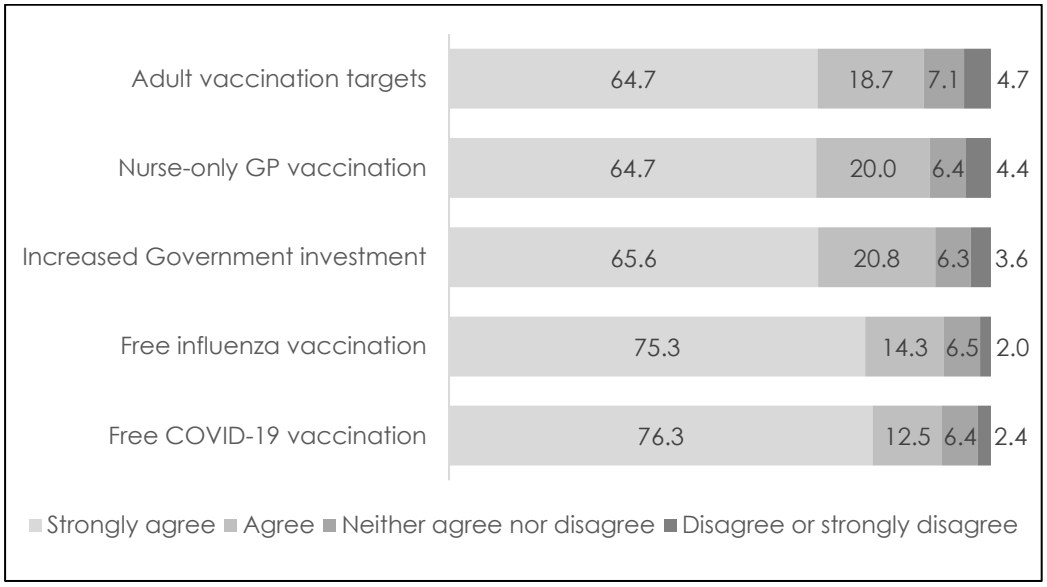


Figure 13. Percentage of respondents by level of agreement with vaccination policies

3.4 Current vaccination practices

Receive annual influenza vaccination

The majority of respondents (69%) claim that they always receive annual influenza vaccination, with 7% stating that they had never received the vaccine as an adult. Frequencies varied by age group (Figure 14), with differences also noted by lung disease status (respondents with lung disease more likely to receive the vaccine than those without lung disease, 76% to 64%) and by location (metropolitan more likely than regional, and rural and remote, 71%, 68%, and 62%).

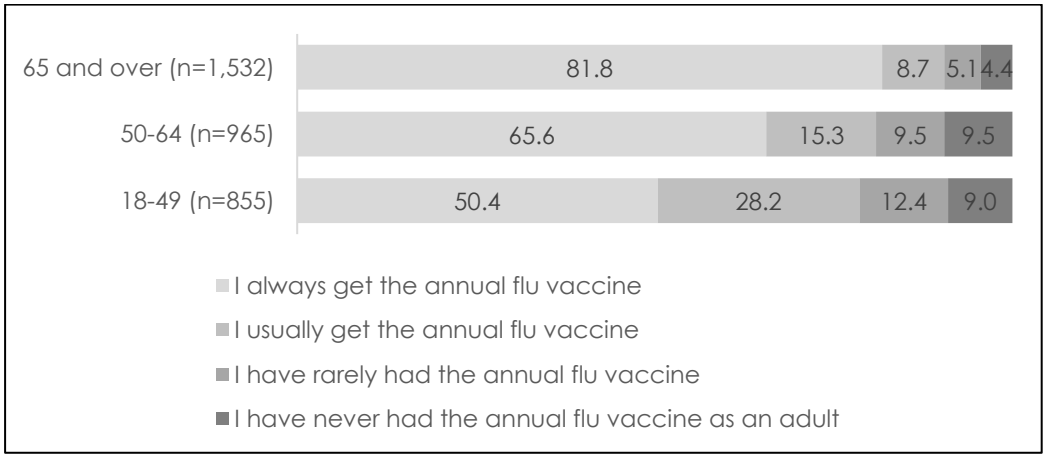


Figure 14. Percentage of respondents by their annual influenza vaccination practice, by age group

Receive COVID-19 booster vaccination

Findings for COVID-19 vaccination followed the pattern of influenza vaccination responses. Over two-thirds (69%) of respondents claimed that they had received a COVID-19 booster in the last 12 months or will receive one within 12 months. Frequencies varied by age group (Figure 15), with differences also noted by lung disease status (respondents with lung disease more likely to receive the vaccine, 76%) and by location (metropolitan more likely than regional, and rural and remote, 71%, 66%, and 63%).

Figure 15. Percentage of respondents by their COVID-19 booster receipt in last 12 months (or intention within 12 months), by age group

Receive pneumococcal vaccination

Information was provided in the survey on the age and lung disease recommendations and eligibility for free adult pneumococcal vaccination. For respondents who it was recommended for, 55% claimed that they had had the vaccination. Respondents living with a lung disease were more likely to have had a vaccination (Figure 16), but more likely not to be able to afford it than respondents living without a lung disease. For respondents living with COPD or interstitial lung disease (who are recommended to have pneumococcal vaccination, but do not get free access until they are aged 70 or aged 50 for First Nations Australians),10% aged under 70 said they could not afford it.

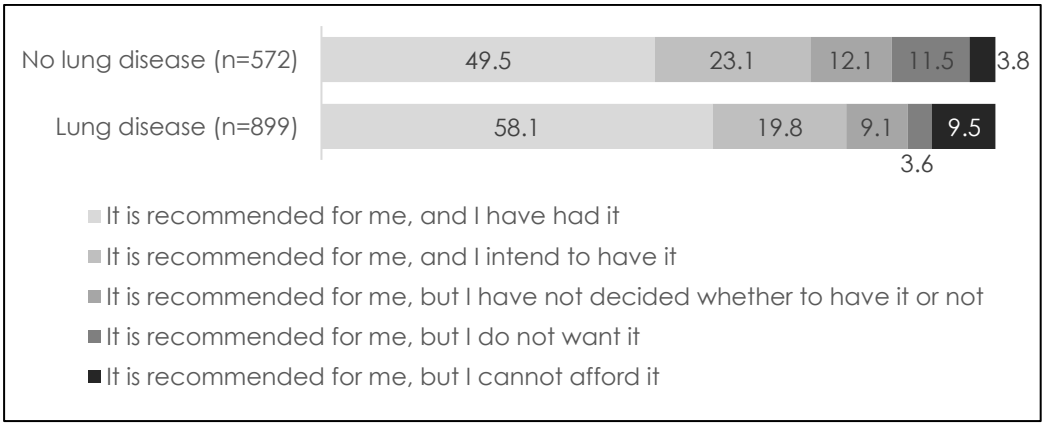


Figure 16. Percentage of respondents who are recommended to receive pneumococcal vaccination by their vaccination status

Receive whooping cough booster and health professional discussion

Under half of respondents claimed to have had a whooping cough booster in the last 10 years, while the majority claimed that a GP or other healthcare professional had not talked to them about a booster (Figure 17). In both cases, respondents aged 30-49 were most likely to respond affirmatively, likely reflecting whooping cough booster recommendation during pregnancy. Respondents living with a lung disease were more likely to have had a booster discussion than those without a lung disease.

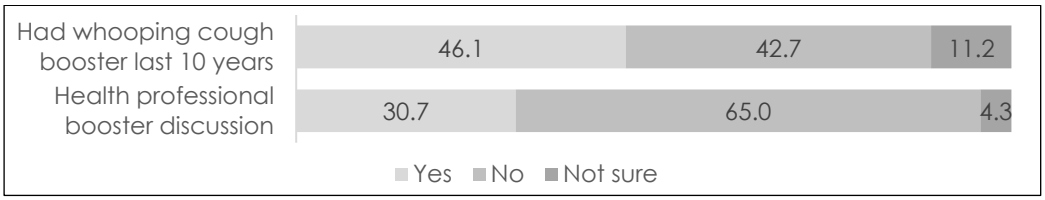


Figure 17. Percentage of respondents by whooping cough booster status

Current source of vaccination information

Over three quarters (76%) of respondents currently receive information about vaccines or vaccination from a general practitioner, just under a third from government webpages (30%) or a pharmacist (28%) and a fifth (21%) from family, friends, or community. Just over 10% received information respectively from other healthcare professionals, internet forums or research papers and nine percent did not seek out vaccination information. Of the seven percent who selected the 'other' open-ended response option, common responses were from mass media, and from the respondent being a healthcare professional themselves or from their healthcare professional colleagues. There were no great differences in frequencies by lung disease status or location, however respondents living with a lung disease were more likely to receive information from a GP (84%). Frequencies differed by age group (Figure 18), with information from a GP more common in respondents aged 65 years and over, and information from government webpages and family, friends and community more common in those aged under 50.

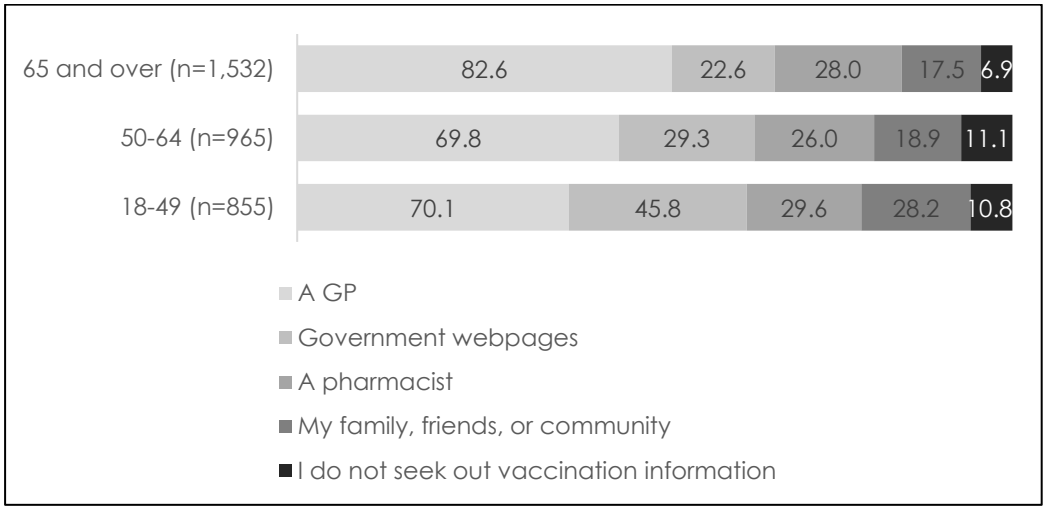


Figure 18. Percentage of respondents by their current source of information about vaccines and vaccination, by age group

Receive travel vaccinations

The majority of respondents (66%) claimed that vaccination was often or always a normal part of their preparation before going on a holiday/travelling (Figure 19). Travel vaccination was more likely for respondents living with a lung disease and increased by age (until aged 75 years and over).

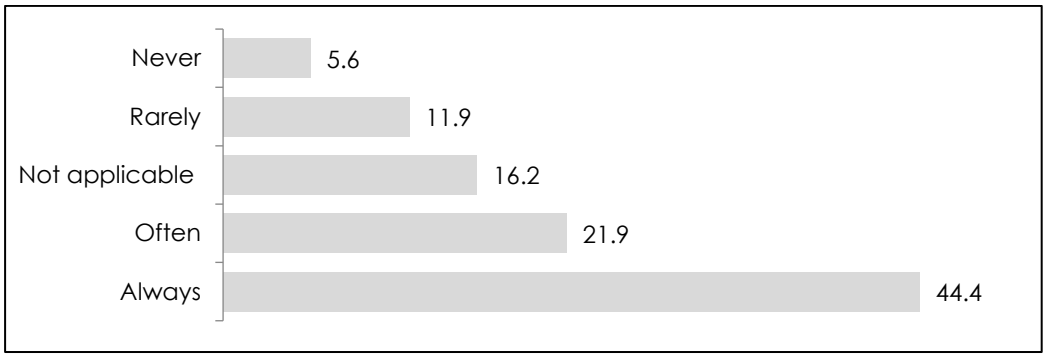


Figure 19. Percentage of respondents by vaccination receipt before going on a holiday/travelling

3.5 Vaccination beliefs and motivations

Respondents strongly supported beliefs on the need for, and value in, adult vaccination (Figure 20). Frequencies did not vary greatly by lung disease status (however, people living with a lung disease were more likely to agree), age, or location.

Figure 20. Percentage of respondents by their level of agreement with beliefs on adult vaccination

Motivations for influenza vaccination

Protection of own health and health of others is the main motivation for the majority of respondents who receive an annual influenza vaccination (Figure 21). Respondents living with a lung disease were more likely than those without a lung disease to be motivated by their own vulnerability (69%), a health professional recommendation (57%) and having had influenza before (34%). Health professional recommendation rose by respondent age. For respondents who rarely or never receive influenza vaccination, over a third did not think vaccination is effective (Figure 22). Frequencies were too low to determine differences by demographic or health characteristics.

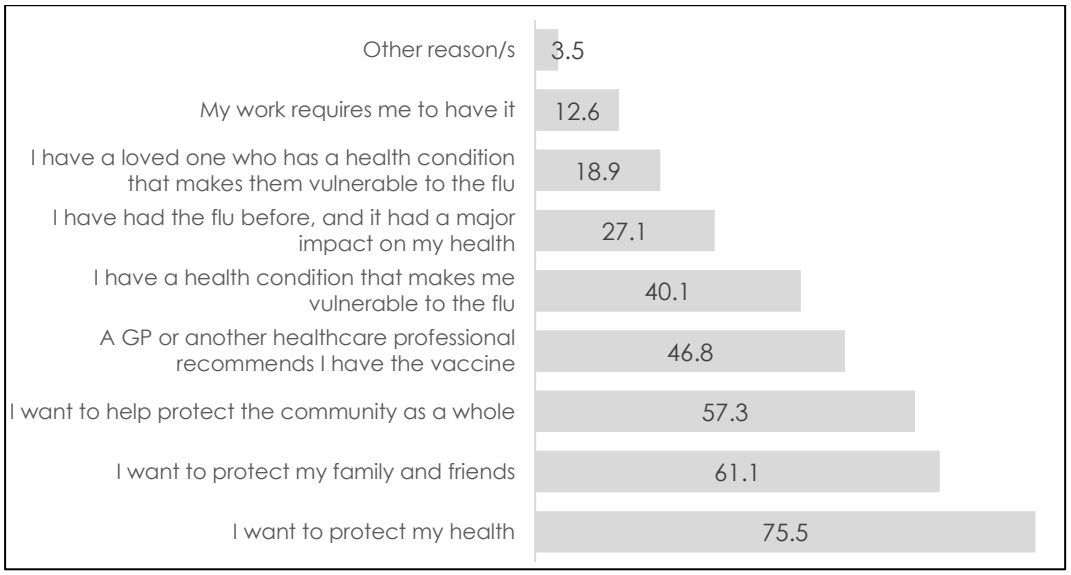


Figure 21. Percentage of respondents who always or usually have annual influenza vaccination by the reason/s for their decision (n=2,839)

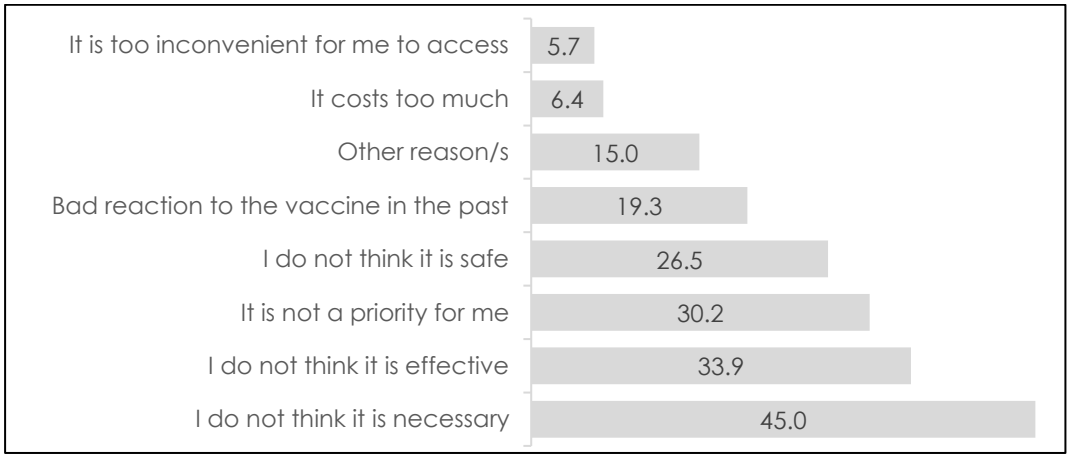


Figure 22. Percentage of respondents who rarely or have never had annual influenza vaccination by the reason/s for their decision (n=513)

Impact of COVID-19 vaccination on vaccination behaviour

Over a third (36%) of respondents claimed that the COVID-19 vaccinations in the past few years had not changed their vaccination behaviour. There were no great differences by age, while respondents living with a lung disease were more likely than respondents without a lung disease to claim that the pandemic positively influenced their vaccination uptake (Figure 23).

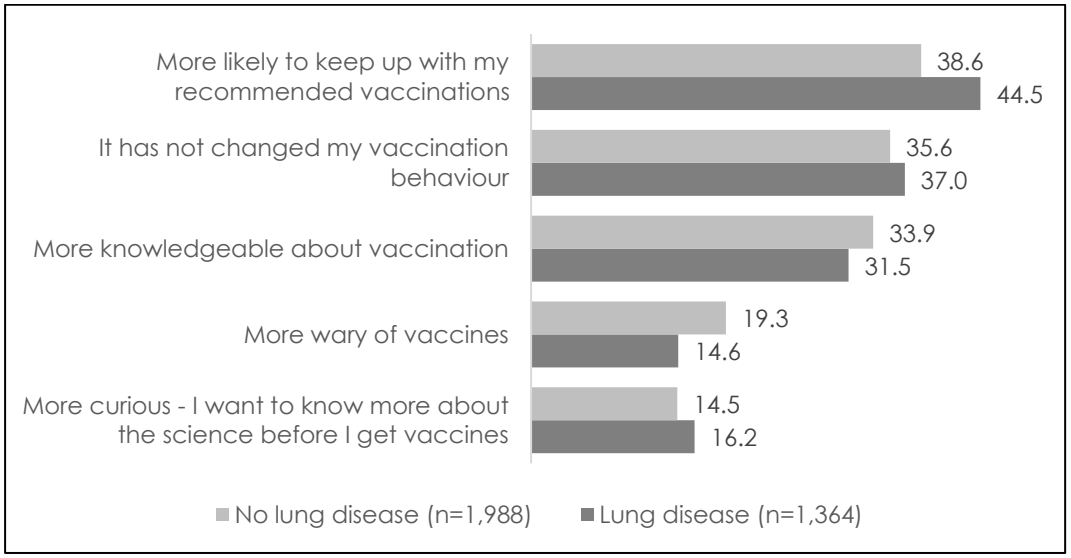


Figure 23. Percentage of respondents by nature of impact that COVID-19 vaccinations had on their vaccination behaviour

Impact of free influenza vaccination on behaviour

If the influenza vaccine was always available for free, 26% of respondents claimed they would be more likely to receive it, with 34% claiming they already receive it without out-of-pocket cost, and 30% claiming they would receive it regardless of cost. Younger age groups were more likely to claim that free vaccination would positively change their uptake (Figure 24), with respondents living with a lung disease more likely than those not living with a lung disease to already receive free vaccination and receive vaccination regardless of cost.

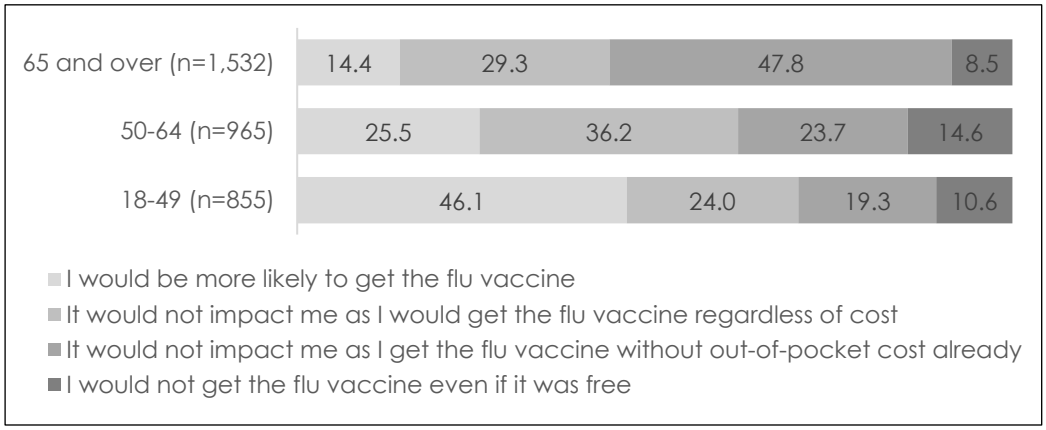


Figure 24. Percentage of respondents by the impact free influenza vaccination would have on their vaccination behaviour

Intention to receive RSV vaccination

The majority (57.5%) of respondents aged 60 years and over (eligible to receive RSV vaccination) intend to receive RSV vaccination or had already received it, however a quarter of respondents said they would only receive it if it were free (Figure 25). Respondents living with a lung disease were more likely to have already had the vaccine or intend to receive it than respondents not living with lung disease.

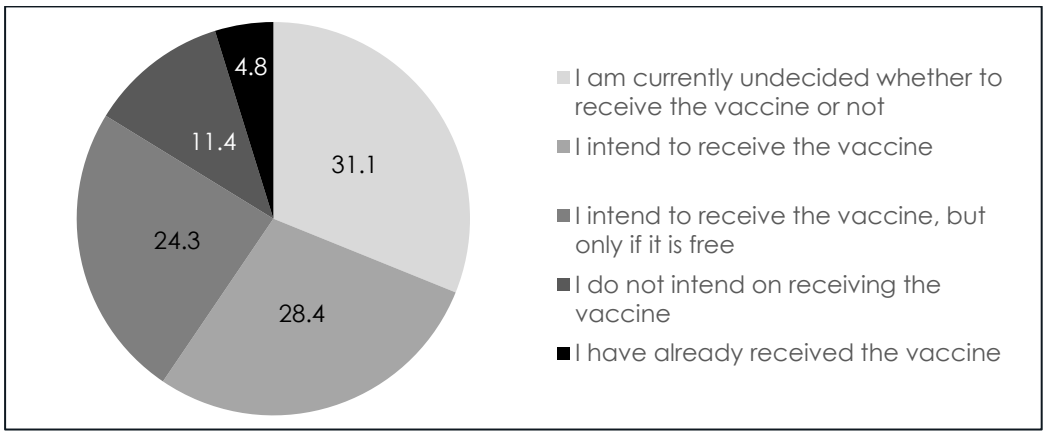


Figure 25. Percentage of respondents aged over 60 (n=2,002) by intention or receipt of RSV vaccination

3.6 Vaccination barriers and preferences

Barriers to vaccination

The majority of respondents claimed one or more barriers to vaccination, with 43% claiming no barriers. Almost a third (31%) claimed that out-of-pocket costs were a barrier, followed by not knowing which vaccines are free for them (29%) and not knowing what vaccines to get or when (27%). Six percent claimed that they do not receive vaccination. For the eight percent who selected the 'other' open-ended response option, common responses were vaccination side effects, inability to get a GP appointment or lack of bulk billing (an out-of-pocket cost), lack of vaccine supply, needle phobia, and uncertainty/distrust of vaccination. There were no large differences in frequencies between people living with or without lung disease and for people living in metropolitan, regional or rural/remote areas. There were, however, differences by age, with all barriers decreasing by age group (Figure 26). For the majority of respondents aged 18–49, out-of-pocket costs are a barrier to vaccination – even more so for respondents aged 18-29(57%).

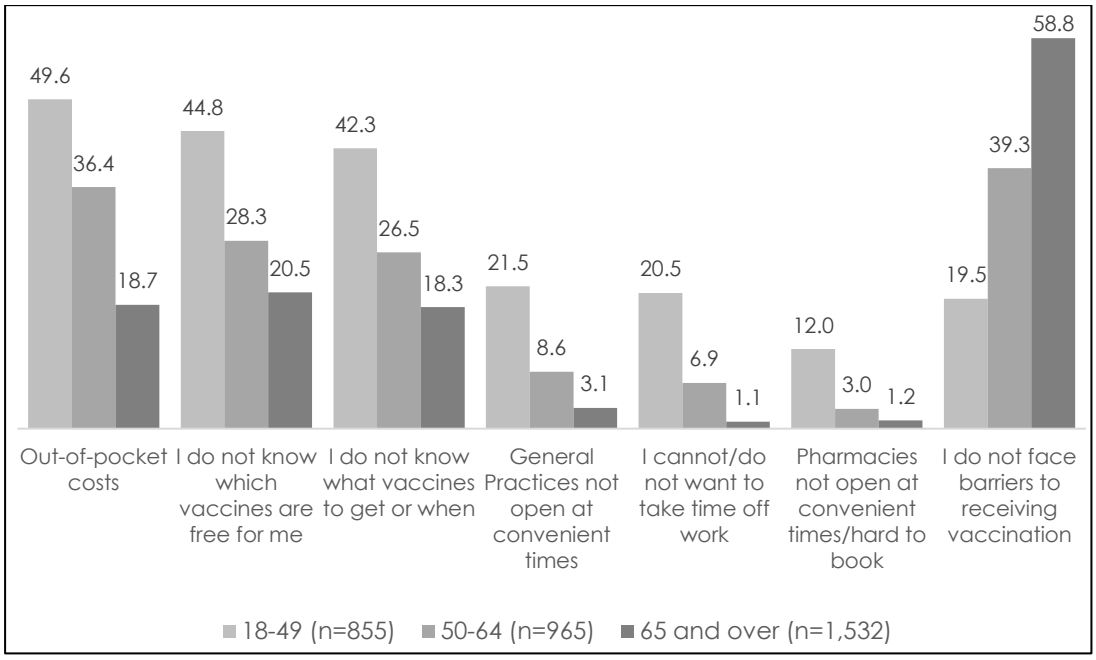


Figure 26. Percentage of respondents by vaccination barriers, by age group

Difficulty to afford recommended vaccinations

Forty percent of respondents agreed or strongly agreed that it is difficulty to afford all the vaccinations recommended for them. Frequencies differed by age, with middle-aged adults (50-64) most likely to cite difficulty (Figure 27). Frequencies did not vary greatly by lung disease status or location.

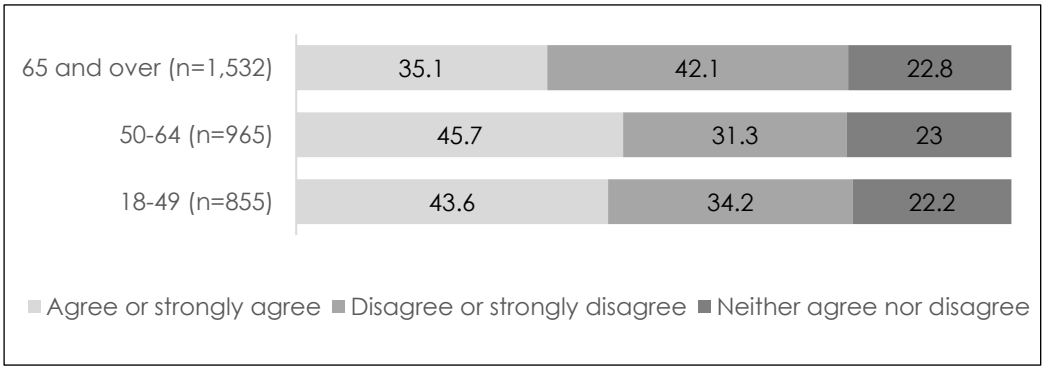


Figure 27. Percentage of respondents by level of agreement with difficulty to afford recommended vaccinations, by age group

Preferences on source of vaccination information

Most respondents would like information about the different vaccinations recommended for them from a consultation with a GP (48%), followed by a letter from the health department (45%), a text message from a GP (30%), a letter from a GP (25%), a consultation with a local pharmacist (24%), and a consultation or letter from a council clinic or Aboriginal Medical Service (3.4%). For the three percent who selected the 'other' open-ended response option, common responses were mass media, specialist healthcare professionals, an email from the health department and a consultation with a nurse. Respondents living with a lung disease were more likely to prefer a consultation with a GP (54%), as were respondents from metropolitan areas (49%) compared to those from rural and remote areas (44%). Younger respondents were most likely to prefer a letter from the health department, a letter or text from a GP and a consultation with a local pharmacist (Figure 28).

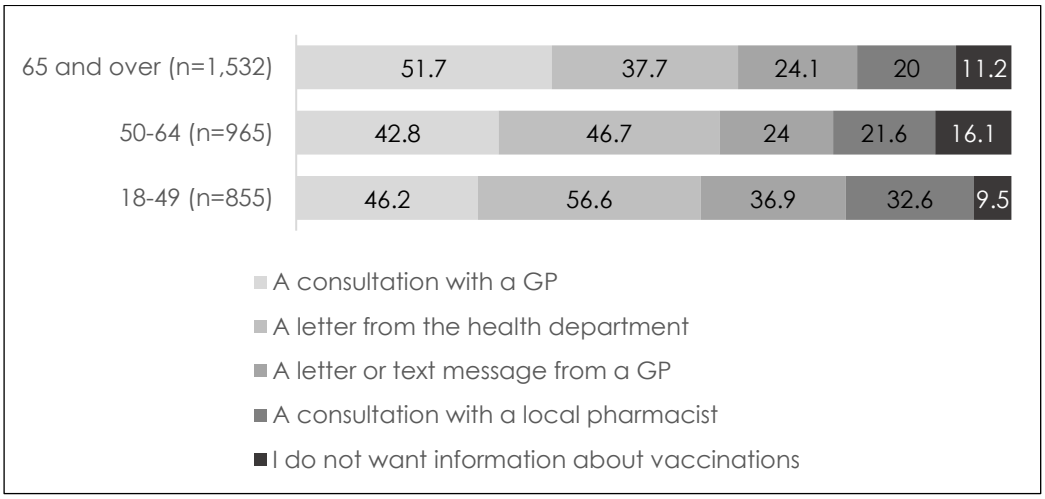


Figure 28. Percentage of respondents by preference for source of vaccination information, by age group

Preferences on location of vaccination administration

Three quarters (75%) of respondents stated that they would prefer to receive vaccination at a GP, followed by a pharmacy (60%), a council/community clinic (24%), and a workplace vaccination program (22%). A small number would prefer vaccination at their home (5%) or at an Aboriginal Medical Service (2%). For the one percent who selected the 'other' open-ended response option, the most common response was nurse-led administration at general practice or clinics. Frequencies varied by age group (Figure 29) and by lung disease status (82% of people living with a lung disease prefer a GP). Respondents living in rural and remote areas and regional areas were less likely to wish to receive vaccines than respondents living in metropolitan areas.

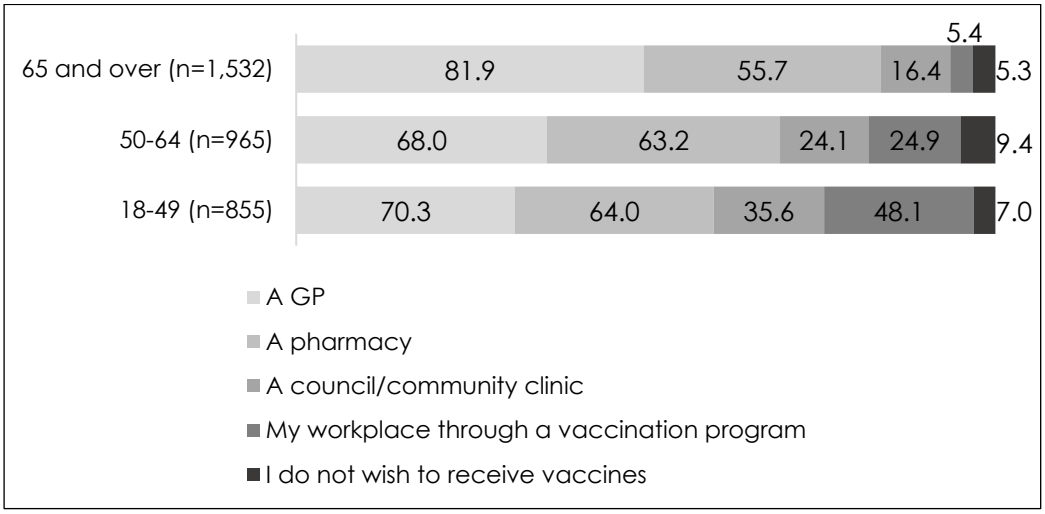


Figure 29. Percentage of respondents by preference for location of vaccination administration, by age group

COVID-19 and influenza vaccine administration preference

Most respondents, if they had the option, would choose to receive a single combined vaccine for influenza and COVID-19 (Figure 30). There were no great differences in frequency by lung disease status. Respondents aged 18-29 and respondents living in a metropolitan area were more likely to prefer a single vaccine (51% and 45.5% respectively).

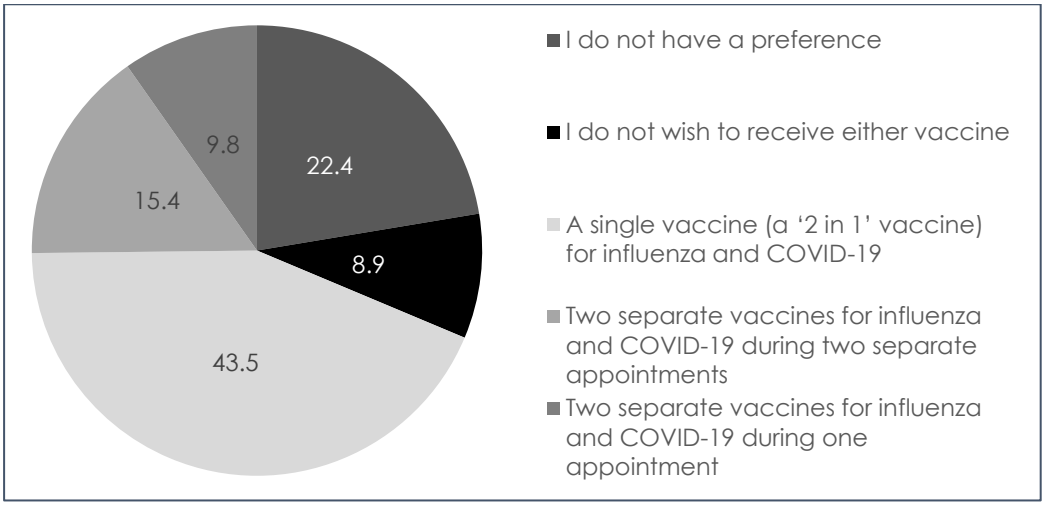


Figure 30. Percentage of respondents by their preference for COVID-19 and influenza vaccination administration

4. Discussion

Strengths and limitations

Respondents aligned with Australian population percentages for place of residence, and identification as Aboriginal and/or Torres Strait Islander. Representation across all age groups was achieved and while attempts were made through targeted advertising to recruit male respondents, a large gender skew remained. This is a limitation, but a common outcome in voluntary public health surveys.

The recruitment strategy was not designed to achieve a representative sample of all people in Australia living with a lung disease, or the general adult population. Respondents living with a lung disease were predominantly recruited via Lung Foundation Australia, and likely differ from all Australians living with a lung disease. Further, those who responded likely differ from those who did not. Likewise, with the general adult population, respondents likely differ from non-respondents. Education level is a known strong correlate with self-report survey response – education level was not obtained in this survey; however, it is a reasonable assumption that respondents had a higher level of education than the Australian population average.

Conclusions and recommendations

Respondents indicated strong support for increased government action on vaccination strategy and investment, a desire for clear, individualised information, and simpler, more accessible, vaccine administration. The survey findings informed the development of five recommendations to the Australian Government for improving adult vaccination coverage, shown below. The recommendations are detailed in the summary advocacy report and will continue to be refined as Lung Foundation Australia develops its vaccination advocacy workplan.

Recommendations:

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

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