

Research Insights

Why is Australians' willingness to be vaccinated falling, and what can we do to increase it?

As vaccination rollout gets closer, the number of Australians willing to have the vaccine is falling. A key reason is uncertainty about the effectiveness and safety of the vaccines. Achieving herd immunity in 2021 is becoming less likely. Communicating the benefits of vaccination to groups of the population who are unwilling or uncertain about vaccination is vital if we are to put COVID-19 behind us and avoid continuing lockdowns.

Vaccination rollout in Australia

The COVID-19 vaccine is set to roll out in Australia at the end of February. Many other countries, with much larger exposure to COVID-19, have already started to use the vaccine, with 128 million vaccinations occurring so far (WHO, 2021). COVID-19 vaccine hesitancy and refusals pose a major barrier to achieving herd immunity, and mean that restrictions on behaviours, freedoms and mobility will continue to be used.

Public debate around the relative effectiveness of the different vaccines is undoubtedly creating uncertainty that can translate into lower rates of vaccination in Australia. Social media enables the rapid spread of misinformation as the scientific evidence can be misinterpreted or ignored (Pickles, 2021). The evidence on the effectiveness of vaccines can be difficult to understand. This is particularly true since vaccine trials have been conducted in different countries and on different population groups with differing levels of disease severity. In addition, there are new variants of the virus emerging such that existing vaccines could become less effective and new vaccines will need to be continually developed.

Herd immunity is when the proportion of the population that is immune from the virus is high enough that those who are not immune are also protected. Less effective vaccines and new, more transmissible variants of the virus mean that the proportion of the population requiring vaccination to achieve herd immunity needs to be higher (Kwok et al, 2020; Fontanet et al, 2021).

This Research Insight examines the willingness of Australians to be vaccinated. Using data from the Melbourne Institute *Taking the Pulse of the Nation* (TTPN) survey, we capture differences in vaccination refusals and vaccine hesitancy between October 2020 and now (February 2021). The willingness has declined substantially from four months ago which will jeopardise the ability for Australia to reach herd immunity. The planned government campaigns for receiving the vaccine will be critical, as will ensuring that Australians receive the relevant information on the efficacy of the vaccine against the various COVID-19 strains.

Key Insights

1 Australians' willingness to have a COVID-19 vaccine has fallen

The percentage of Australians willing to be vaccinated has fallen from 74.4 percent in October 2020 to 66.2 percent in February 2021, a fall of 8.2 percentage points which is statistically significant. This includes those who do not want to be vaccinated (vaccine refusers) which has increased from 12 percent in October 2020 to 19.4 percent in early February 2021,

as well as those who are unsure (vaccine hesitancy) with an increase from 13.6 to 14.4 percent. The general increase in vaccine hesitancy and refusals as we come closer to vaccine rollout is a worrying trend and suggests that herd immunity may not be achieved any time soon.

2 Willingness to be vaccinated has fallen most amongst the unemployed and for those with high levels of mental distress.

Since October 2020, vaccines are being rolled out in other countries and more information is available about their effectiveness and safety. As we get closer to roll out, the vaccine issue may become increasingly important and people may be changing their opinions.

Australians' willingness to be vaccinated since October 2020 has fallen across most population subgroups by a similar amount. For example, the percentage willing to be vaccinated has fallen by

around the same amount for both men and women, and for those in rural and metro areas. However, it has fallen much more for the unemployed compared to the employed, and for those with high mental distress compared with lower mental distress. These differences are large and statistically significant. Figure 1 shows the change in the percentage of those willing to be vaccinated between October 2020 and February 2021.

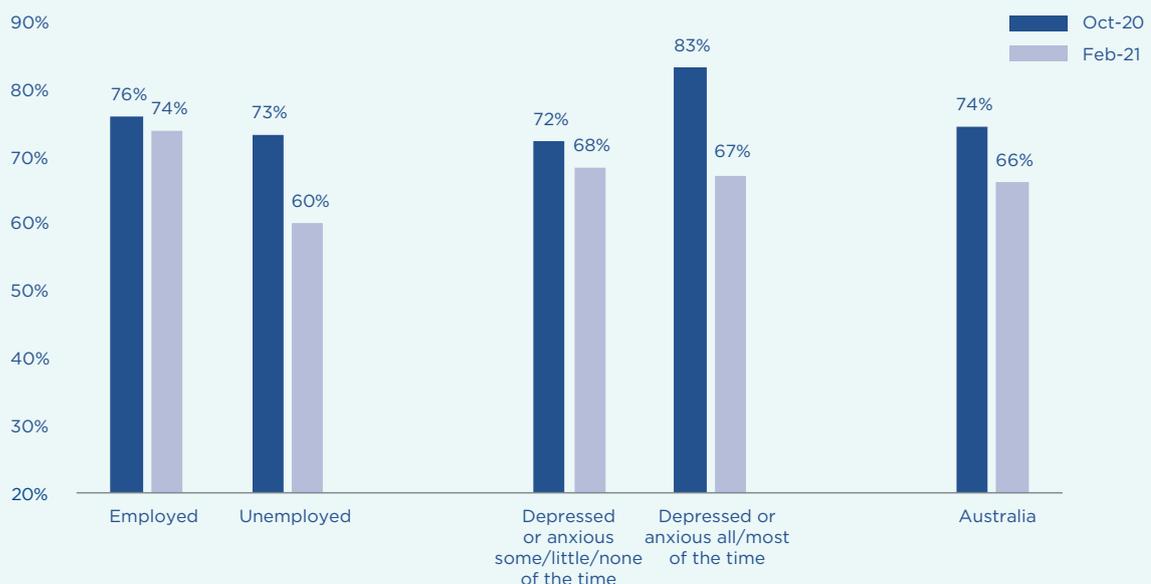
For the employed, the percentage willing to be vaccinated has fallen by 2 percentage points (from 76 percent to 74 percent) but fell by 13 percentage points amongst the unemployed (from 73 percent to 60 percent). Last October there was no statistically significant difference between the employed and unemployed in their willingness to be vaccinated. However, in February 2021 the difference is statistically significant because the unemployed are now less willing to be vaccinated compared to the employed. This could be because in October the unemployed were more concerned about economic and financial stress and now their beliefs about the vaccine are playing a stronger role as vaccine rollout gets closer.

For those who report having depression or anxiety all or most of the time, willingness to take the vaccine has fallen by 16 percentage points (from 83 percent to

67 percent) compared to just four percentage points for those who feel depressed or anxious some, a little or none of the time (Figure 1). The data from last October show that those with high mental distress were *more* willing to be vaccinated compared to those with low mental distress and this difference was statistically significant. But in February 2021 there is now no difference in the willingness to be vaccinated between those with high and low mental distress. This is because the willingness to be vaccinated amongst those with high mental distress has fallen substantially relative to those with low mental distress.

These represent key sub-groups of the population where their opinions about vaccination have changed since last October. Information about the benefits of vaccines needs to be carefully targeted if herd immunity is to be achieved.

Figure 1. The percentage of Australians willing to be vaccinated in October 2020 and February 2021



Source: *Taking the Pulse of Nation* survey Wave 20 (October 2020) and Wave 25 (February 2021), with 1200 respondents in each wave. Results for employment and mental distress are predicted percentages (predicted probabilities x 100) from a weighted logistic regression with 2400 observations and with vaccination (yes/no) as the dependent variable. Independent variables include employment, mental distress, gender, age, rural/metro, State, financial stress, satisfaction with government policy, and the wave (whether the respondent was surveyed in Oct 2020 or Feb 2021). Also included were interaction terms between the wave and each of the other independent variables. These interactions were used to directly test if the proportion willing to be vaccinated in each sub-group was higher or lower in Feb 2021 compared to Oct 2020, while adjusting for any differences in all other independent variables. The differences in percentages between October 2020 and February 2021 were statistically significant only for employment and mental distress.

3 2 in 3 Australians who are willing to be vaccinated are prepared to wait so that others more at risk can be vaccinated first

The federal government has established criteria that will influence who gets the vaccine first, with frontline healthcare workers and the elderly in nursing homes first in the queue to receive the initial 1.4 million doses of the vaccine (Department of Health, 2021). Others will need to wait their turn. Our *Taking the Pulse of the Nation* survey data show that most people seem happy with this. Of those willing to be vaccinated, 65 percent show a willingness to wait their turn so

that priority groups can be vaccinated first, with 35 percent of Australians wanting to be vaccinated as soon as possible. After adjusting for other factors, those employed are more willing to wait their turn compared to those who are unemployed, and those with lower mental distress are more likely to be willing to wait their turn compared with those with relatively high levels of mental distress.

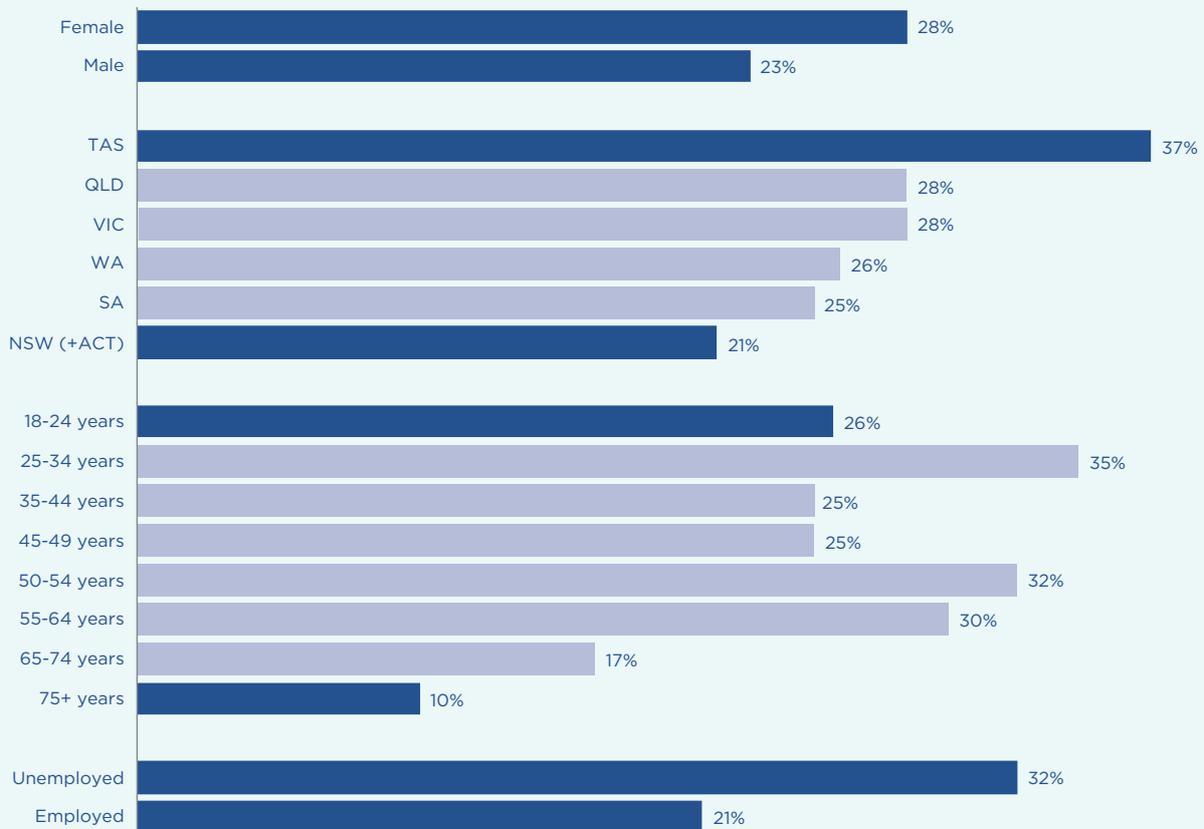
4 1 in 4 Australians do not believe the vaccine works or are worried about side effects and so are not willing to be vaccinated

As more information about the effectiveness of the vaccines comes out, just over one quarter of Australians are not willing or are uncertain about getting the vaccine because of concerns about effectiveness, safety, and side effects. Figure 2 shows the percentage in each population sub-group that do not want the vaccine because of doubts about effectiveness or side effects. Females were more likely than males to hold these beliefs, as well as those from Tasmania compared to New South Wales. Those aged over 18-24 years old also held these beliefs more strongly compared to those aged over 75 years old. Doubts about effectiveness and safety were higher for those who were unemployed compared to the employed. Though there is variation in the

effectiveness and safety of different vaccines, this will continue as new vaccines come onto the market. The main message should be that any approved vaccine is much better than none at all.

A smaller percentage of Australians (7.4 percent) are refusing or are hesitant about the vaccine because they think they are low risk. Those in rural areas, those aged 18-24 years old, those in Western Australia, and those who are dissatisfied with government policy about COVID-19, are more likely to believe they are low risk. For these groups, it is important that communication focuses on the benefits of vaccination for others, not just for themselves.

Figure 2. Percentage of Australians who do not want to be vaccinated because they 'don't believe the vaccine will work/don't trust it' and/or are 'worried about side effects or if the vaccine is unsafe' (February 2021)



Source: *Taking the Pulse of Nation* survey Wave 25 (February 2021), with 1200 respondents. Results are predicted percentages (predicted probabilities x 100) from a weighted logistic regression with whether concerned about effectiveness and safety or not (yes/no) as the dependent variable. Independent variables include employment, mental distress, gender, age, rural/metro, State, financial stress, and satisfaction with government policy. The figure shows only those variables that were statistically significant (in dark blue).

As we move further away from herd immunity, can more people be persuaded to have the vaccine?

Australians, like those in many other countries, are showing an increased hesitancy in vaccine take-up. Our data concur with a systematic review of 126 studies and surveys from 31 countries that showed that between March and October 2020 vaccine hesitancy has increased (Lin et al, 2020; Dodd et al, 2021; Borriello et al, 2021; Seale et al, 2021; Rhodes et al, 2020), as well as a study in Australia comparing March to November 2020 (Atwell, 2021). We show this worrying trend is continuing into 2021.

Without a strong take-up, reaching herd immunity in Australia will be challenging and without herd immunity, life will continue to be dominated by lockdowns and border closures as new cases emerge. Without a strong take-up globally, new variants of the virus will be able to develop in countries with fewer resources to purchase and distribute vaccines, and this can also threaten richer countries where existing vaccines may be less effective against new variants (Fontanet et al, 2021).

The federal Department of Health started a \$24 million media campaign about vaccination at the end of January, and it is crucial that this reaches vulnerable communities, including those most at risk of infection, with lower health literacy, with different cultural backgrounds, and for those most likely to spread infection (Kaufmann, 2021). It is unclear what role State governments are playing in this communication campaign, and whether frontline health workers including GPs and pharmacists will also be playing key roles informing patients. If different levels of government send varying messages about vaccines, confusion and uncertainty in the population could increase.

Any approved vaccine is better than no vaccine at all when attempting to reach herd immunity and avoid lockdowns. Getting vaccinated helps protect you, helps protect others even if you are at low risk, and can stop more deadly variants of the virus developing. As has been the case throughout the pandemic, individuals need to consider the effects of their decisions, whether it be about vaccination, mask wearing, and staying at home when required, on the health and wellbeing of others, as well as the benefits to themselves.

Further Information

Datasets and methods

Data are used from two waves of the *Taking the Pulse of the Nation* survey. Each wave contains responses from 1,200 persons, aged 18 years and over. The sample is stratified by gender, age and location to be representative of the Australian population.

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