

The Optimise Study: Vaccine Confidence

Report 2 | December 2020



REPORT 2 | DECEMBER 2020

The Optimise Study is a partnership between Burnet Institute and Doherty Institute in collaboration with University of Melbourne, Swinburne University of Technology, Monash University, La Trobe University, Murdoch Children's Research Institute, the Centre for Culture Ethnicity and Health, and the Health Issues Centre. The study aims to assess the level of community adherence to government COVID-19 directions, measure the effectiveness of government restrictions, research any unintended consequences of the restrictions, measure transmission dynamics and identify and test the acceptability and feasibility of new interventions to reduce transmission and increase adherence.

Optimise is a longitudinal cohort study that will follow approximately 1000 participants for a 12-month period. Study participants are **not intended to be representative** of the broader population but instead have been **intentionally recruited from key groups** who are considered to be:

- at risk of contracting COVID-19
- at risk of developing severe COVID-19 or,
- at risk of the unintended consequences of the restrictions (see page 6 for a comprehensive list of these key groups).

Participants are then asked to nominate people who play a key role in their lives, and where permission is given, these peoples are also invited to participate in the study.

By establishing a social map, the Optimise Study can be used to assess if key groups or individuals are at higher risk of COVID-19 infection, the unintended consequences of government restrictions or have different attitudes and level of engagement in key COVID-19 interventions such as testing and vaccination. The resulting social map increases our understanding of the interplay between the individual, social and community-level impacts of COVID-19.

Each month we will release findings from the study to provide real-time and rapid advice to policy-makers and the broader community.

Vaccine Confidence

This report draws on the findings from 214 participants who completed the Optimise baseline survey and follow up surveys between 14 September and 1 December 2020. None of the participants had COVID-19 at the time of recruitment, however four people had previously been diagnosed with COVID-19.

214
PARTICIPANTS

SURVEYS
14 SEPTEMBER
- 1 DECEMBER

This report focuses on:

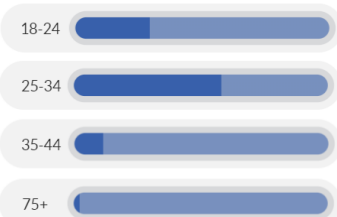
- participants' perceptions of risk to COVID-19 and
- their attitudes towards a COVID-19 vaccine, should it be made available in Australia.

A description of these findings and synergies with other studies is provided on page 4.

To supplement the Optimise cohort findings, we have included insights from a social media metadata analysis which manually analysed social media posts and metadata from Reddit and Twitter. An analysis of this data is provided on page 5.

It is worth noting that these findings reflect a snapshot in time, and further research will explore vaccine preparedness in more detail, including through the Optimise study.

DEMOGRAPHICS OF PARTICIPANTS



58% are aged between **25-34**



74% live in **metro Melbourne**



22% have **children** with a median number of 1 child



6.5% speak a **language other than English** at home



24% have had a **postgraduate education**



42% have a **chronic disease***

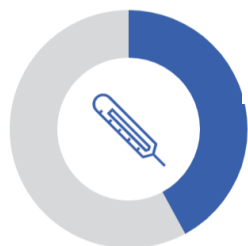


22% are **healthcare workers**



3% work in **manufacturing**

PERCEPTIONS OF COVID-19 DISEASE SEVERITY



42%

Of respondents expect to have a **moderate case of COVID-19** (if they were to contract it).

No chronic disease



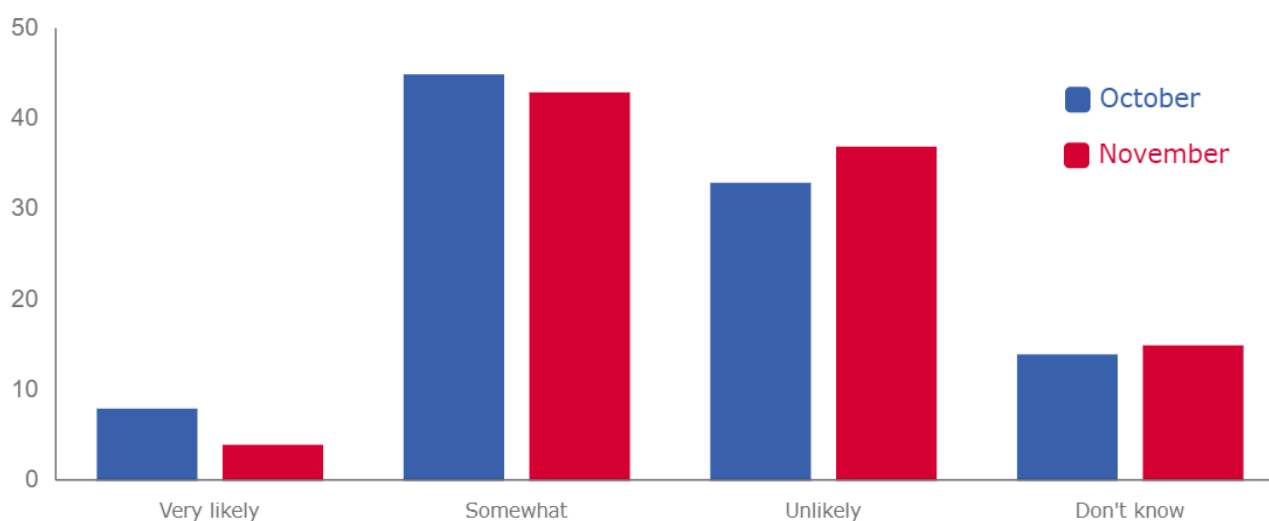
Chronic disease*



Participants in our study with a **chronic disease** are more likely to expect to have a **life threatening** (9%) or very **severe case** (36%) of COVID-19 compared to people without a chronic disease (3% and 7% respectively).

PERCEIVED LIKELIHOOD OF CONTRACTING COVID-19

Respondents were asked about the likelihood of them contracting COVID-19. As case numbers have fallen in Victoria, people's **perceptions of contracting COVID-19 have also trended downwards**.



SEASONAL INFLUENZA VACCINE UPTAKE

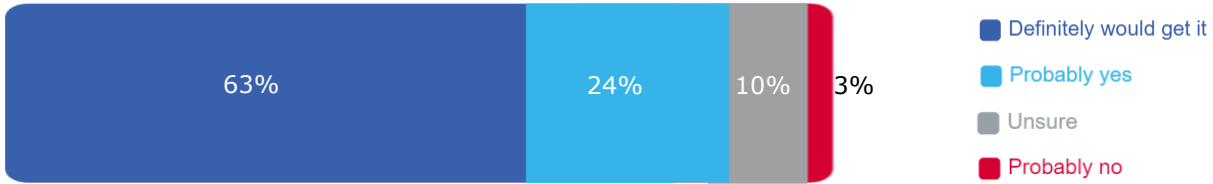
42%

Of our sample had the **seasonal influenza vaccine** in 2020; while 58% had not.

**Chronic disease is self-reported based on the participants' responses to whether they have any medical conditions that are chronic or have ongoing impact on their daily life or medical needs (includes both physical and mental health conditions).*

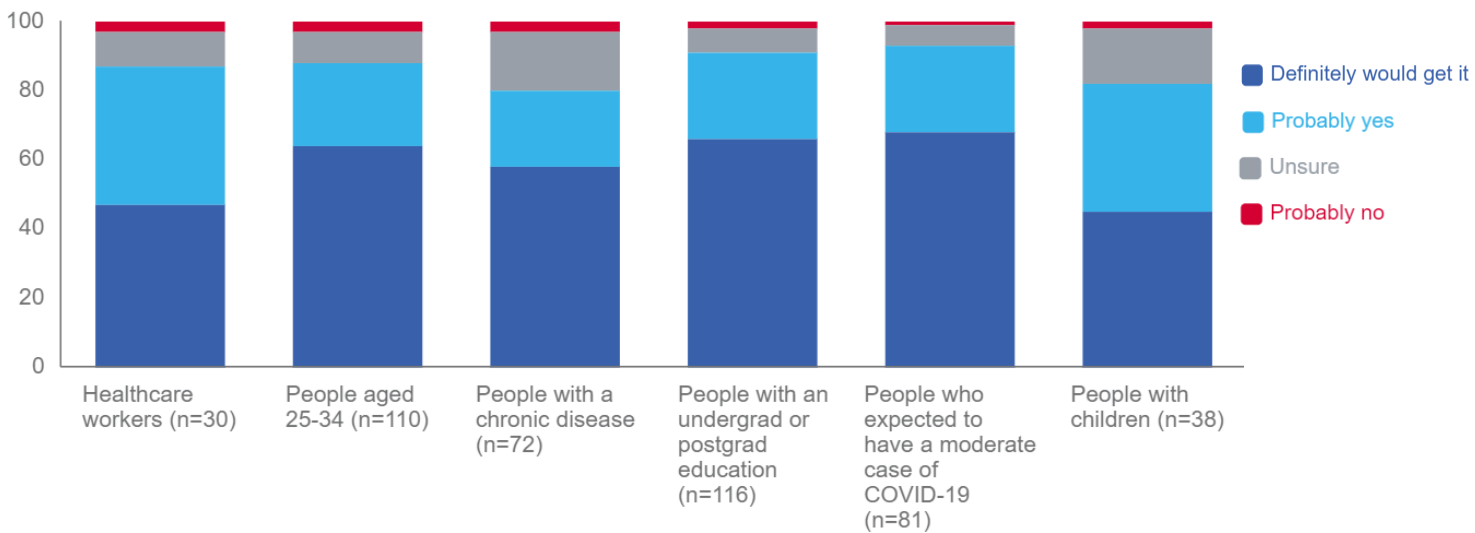
ATTITUDES TOWARDS A COVID-19 VACCINE

In November, when asked if people would get a COVID-19 vaccine if it were to become available, 63% of respondents said they would **'Definitely'** get the vaccine; while 10% were unsure and 3% said they would probably not get the vaccine. No participants said they would 'definitely not' get the vaccine.



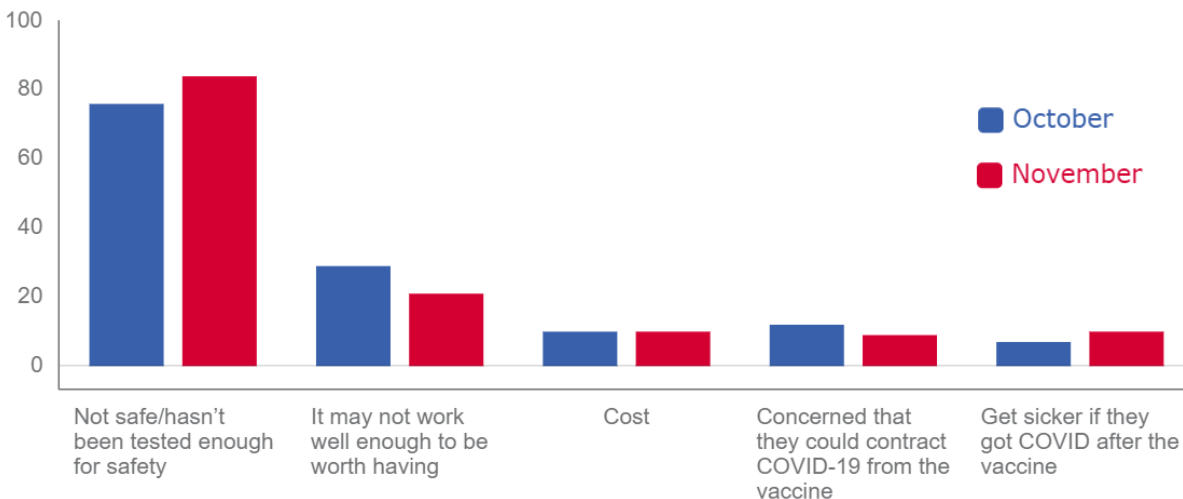
ATTITUDES TOWARDS A COVID-19 VACCINE BY KEY GROUPS

We have provided a breakdown of attitudes towards a COVID-19 vaccine by key population groups to identify groups that may be more concerned about the vaccine.



CONCERNS ABOUT A VACCINE OVER TIME

Of people who did not indicate that they would 'Definitely' get the vaccine (probably yes, probably no, unsure, definitely not), their main concerns related to the **safety** of the vaccine and **whether it works**, with low levels of concern regarding the **cost of the vaccine**, **concerns that they could contract COVID-19 from the vaccine** or that they would have **a worse case of COVID following the vaccine**.



SUMMARY AND IMPLICATIONS

POLICY CONTEXT

Public health measures such as lockdowns, mask wearing, physical distancing, isolation and quarantine have enabled Australia to be in an enviable position with no current community transmission of COVID-19. However, the risk of further resurgences remains until an effective vaccine is available and there is widespread uptake of such a vaccine amongst the community.

VACCINE PREPAREDNESS

As part of the Optimise Study we sought to understand participants' perceptions of risk towards COVID-19 and their attitudes to a vaccine for the virus.

Risk perception

People's perception of risk to COVID-19 is an important indicator of attitudes to risk reduction behaviours such as uptake of a vaccine. In our study, 42% of respondents expected to have a moderate case of COVID-19 if they were to contract it, while 19% expected to have a very severe case and 9% thought they would have a life-threatening case. People with self-reported chronic diseases were more likely to expect to have a very severe case (36%) or life-threatening case (9%) compared to people without a chronic disease (3% and 7% respectively).

Seasonal influenza vaccine uptake

To assess preparedness to get a COVID-19 vaccine, participants were asked whether they got the seasonal influenza vaccine which has been available since March 2020. Of our sample 42% had the seasonal influenza vaccine; while 58% had not. This is lower than in another studies¹ however as our study is not designed to be a representative sample this may be more of a reflection of our sampling strategy.

Attitudes towards a COVID-19 vaccine

Participants were asked about whether they would get a COVID-19 vaccine if it were to become available. Overall, 63% said they would 'definitely' get a COVID-19 vaccine. This was also analysed by key groups and demographic characteristics. While the majority of people within these groups reported that they would 'Definitely' get the vaccine, there was a notable level of people who were

people who were unsure about getting the vaccine unsure amongst people who reported to have a chronic disease (17%) and people with children (16%). Importantly in November no participants said they would 'Definitely not' get the vaccine. These results reflect recent findings from a nationally representative sample of 3,000 adult Australians²; 59% said they will definitely get a COVID vaccine; 29% were uncertain and 6% said they definitely won't get the vaccine once it is available. They identified women, those living in disadvantaged areas, those who reported that risks of COVID-19 were overstated, and those who had more populist views and higher levels of religiosity were more likely to be uncertain or hesitant to a vaccine.

Concerns about a vaccine over time

People who indicated that they would not 'Definitely' get a COVID-19 vaccine, were then asked to indicate their main concerns regarding a potential vaccine. Respondents were most concerned about the safety of the vaccine. This has remained high with 76% in October to 84% in November. People were also concerned about whether a vaccine will work (29% and 21% in October and November respectively). There were low levels of concern regarding the cost of the vaccine, concerns that they could contract COVID-19 from the vaccine or that they would have a worse case of COVID from the vaccine. Such trends are consistent with other research, and reflects an important opportunity to address these concerns.³

RECOMMENDATION

While further research is needed, the Federal Government should commit to improving community education and awareness about the safety of COVID-19 vaccines and addressing common misconceptions or concerns.

References

- ¹ Danchin M, Kaufman J, Williams T, Jos C, Loschiavo K, Loughnan M, Tuckerman J. COVID-Wellbeing Study (2020). The Royal Children's Hospital and Murdoch Children's Research Institute.
- ² Edwards, B., Biddle, N., Gray, M. and Sollis, K. (2020) COVID-19 vaccine hesitancy and resistance: Correlates in a nationally representative longitudinal survey of the Australian population, Preprint.
- ³ Rhodes A, Hoq M, Measey M, Danchin M. Intention to vaccinate against COVID-19 in Australia. *The Lancet Infectious Diseases*. 2020, Sept.

SOCIAL MEDIA INSIGHTS

OVERVIEW

To supplement the Optimise cohort findings, we have utilised social media metadata analysis to manually analyse social media posts and metadata from Reddit and Twitter. We obtained a sample of the top upvoted Reddit threads and retweeted Twitter posts (including: top 20 URLs; top 20 hashtags; top 20 retweets) based on the following search terms: 'vax', 'vaccine', 'coronavirusdownunder', 'Australia', and 'Melbourne'. Reddit returned 1057 hits. Twitter's limited access returned a total of 182 tweets.

FINDINGS

We have provided example tweets and messages grouped by key themes relating to attitude towards vaccines:

Strong support for the roll-out of a COVID vaccine; however, recognition that a vaccine alone may not prevent ongoing COVID transmission entirely and may not do so immediately.

"Well, unless there's a vaccine coming soon, I don't know when/if I'll ever see my parents again."

"I am very worried for people's mental health if they are pinning the idea they can stay inside until the world is magically fixed with a needle shot. Most likely Covid is here to stay in some form or another."

Concern around vaccine safety and preference for the Oxford vaccine and suspicion of Big Pharma vaccines (e.g. Pfizer, Moderna).

"Been life threatening a few times so I'm EXTREMELY wary of a new vaccine. (I'm not anti vax, I'm just legit concerned)."

"I'd prefer no Vax than to inject myself with something from Pfizer. I'll be signing up for the Oxford Vax and that's it."

"I would trust non-profit and a uni compared to a shareholding company Big pharma."

"I am very pro vax, but this vaccine is being rushed because of the havoc Covid is spreading."

"The one question I have is, with all these different vaccines floating around nearing approval, will the public be able to choose which vaccine they receive?"

Concern around vaccination roll-out and compulsory vaccination.

"When Prime Minister Scott Morrison told Melbourne radio station 3AW a COVID19 vaccine would be 'as mandatory as you can possibly make it' there was an immediate backlash from some groups."

"It's already compulsory to get vaccinations to travel to some places though."

"I'm not anti-vax, but don't you see how this could be seen as a fundamental violation of human rights?"

FUTURE REPORTS

In future reports we will be able to incorporate participants' insights from the qualitative interviews conducted as part of the Optimise study and we also plan to conduct a co-design sprint on vaccine preparedness and attitudes.

THE OPTIMISE STUDY

Optimise is a longitudinal cohort study that will follow approximately 1000 participants for a 12-month period. Individuals are recruited via social media, community organisations and the social networks of existing participants. Using a snowball design, participants nominate people who play a key role in their lives, and where permission is given, these peoples are also invited to participate in the study. By establishing a social map, the Optimise Study can be used to assess if key groups or individuals are at higher risk of COVID-19 infection and to understand the interplay between the individual, social and community-level impacts of COVID-19.

Participants are adults living in Victoria and include the following cohorts:

- COVID-19 cases and close contacts
- Healthcare workers
- Aged care workers
- People from culturally and linguistically diverse communities
- People living in regional areas
- People with pre-existing chronic illness
- Young people
- Factory/warehouse/distribution/meat processing workers

Participants are regularly monitored through repeated questionnaires and interviews including:

- initial phone interview
- quantitative surveys, repeated every month
- online diaries for 14 consecutive days and repeated for four days every month
- in-depth Interviews with a subset of individuals at key time points.

Participants receive a small reimbursement for each survey and diary they complete.

KEY OUTCOMES

Transmission Dynamics

- Estimates of social contacts and mixing
- Time from symptom onset to testing
- Daily activities and locations

Unintended consequences

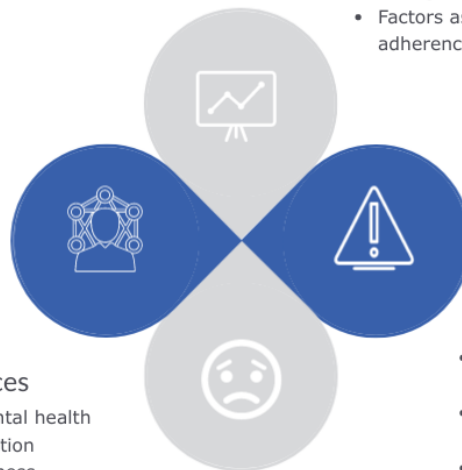
- Impacts on physical and mental health
- Changes in healthcare utilisation
- Changes in social connectedness, household structure
- Changes in economic circumstances
- Challenges experienced while in isolation or quarantine

Adherence

- Adherence to government directions
- Change in adherence over time
- Factors associated with adherence/non-adherence

Effectiveness of government interventions

- Knowledge and understanding of government restrictions
- Uptake of COVID19 testing and reasons for non-testing
- Adoption of risk reduction behaviours
- Acceptability of government interventions
- Changes over time



FUTURE REPORT

The next Optimise reports are due for release in **January 2021**.

We welcome requests for the inclusion of specific indicators and outcomes of interest in future reports. Please email C19.Optimise@burnet.edu.au to make such requests.

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