

Research Insights

How can technology help prevent a second wave of COVID-19?

As economic activities and social interactions increase, attention is turning to how the contact tracing COVIDSafe app can support further easing of restrictions and prevent further outbreaks.

Uptake of the COVIDSafe app

The government enforced lockdown since mid-March 2020 and the practise of social distancing has been very effective in helping reduce and manage the number of new coronavirus (COVID-19) cases in Australia. In May, the number of new daily cases have been maintained at about a dozen on average.¹ The Federal and State Governments introduced a three-step plan for easing restrictions from early May, by slowly opening up schools, allowing larger social gatherings and permitting some recreational activities to resume.

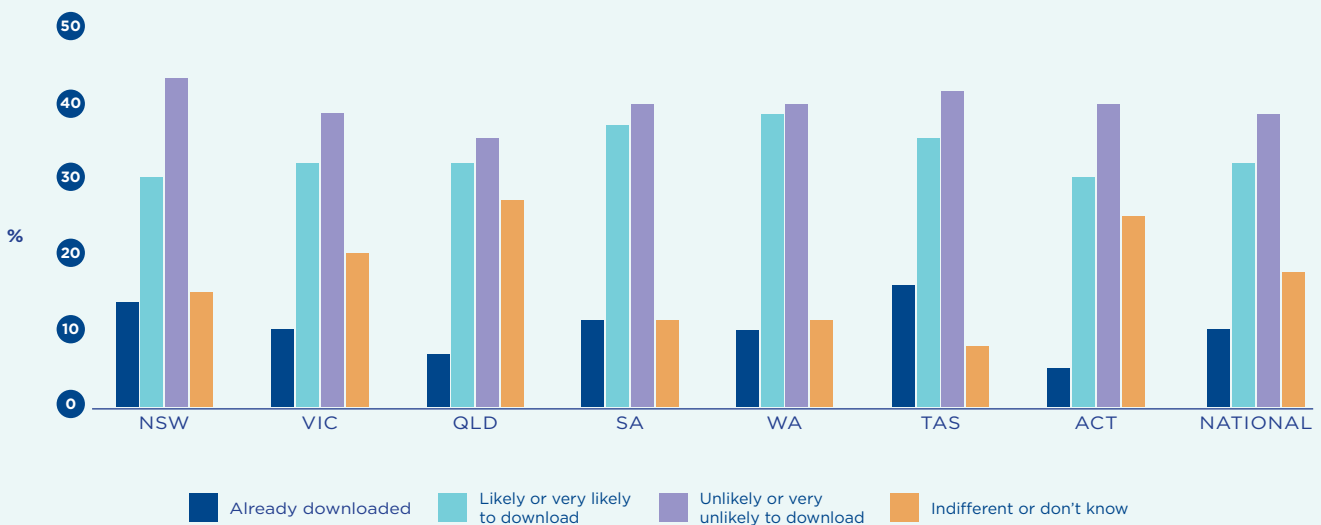
As many countries around the world try to figure out ways to limit the spread of COVID-19, ease restrictions and reopen economies, many are considering some form of a contact tracking application (app). On 26 April 2020, Australia released the COVIDSafe app that collects, via Bluetooth, records of other people with the app who have been in close proximity within the past 21 days. The data can be used to trace the contacts of a user who tests positive to COVID-19 with their consent. Uptake is voluntary and requires a minimum of 40 per cent of the population to download the app in order for it to be effective.^{2,3} As of 15 May 2020, 5.7 million – 23 per cent of Australians – have downloaded the COVIDSafe app.⁴ Australia's COVIDSafe app is similar to the one Singapore implemented which had a 20 per cent uptake by the population in early-April but did not help with limiting the spread of COVID-19.⁵

In some countries, uptake of similar tracing apps is mandatory (e.g. China for the general population and India for government workers). In other countries, more data are used to track people – South Korea uses phone location, CCTV footage and electronic financial data to track confirmed COVID-19 cases, for example.⁵

In the Melbourne Institute's Taking the Pulse of the Nation survey, we asked respondents how likely they are to download the COVIDSafe app developed by the government to trace people who have been in contact with someone who has COVID-19. At the time the survey was conducted (27–30 April 2020), 11 per cent said they had already downloaded the app; 32 per cent said they are likely or very likely to download it but have not done so yet; 39 per cent said they are unlikely or very unlikely to download it; and 18 percent were indifferent or declined to answer.

With the Taking the Pulse of the Nation survey indicating that many Australians are not following through on their intention to download the COVIDSafe app, this Research Insight explores ways in which to encourage uptake of the tracing system that will support further easing of restrictions and prevent further outbreaks.

Figure 1: Likelihood to download the COVIDSafe app, by location (%)



Results based on weekly responses from 1200 Australian adults per week surveyed over the period 27–30 April. The sample is stratified by gender, age and location to be representative of the Australian population.

Key Insights

1 Likelihood to download the COVIDSafe app varies by region

People living in urban cities are more likely to download the app than those living in rural areas. On average, 32 per cent of Australians said they are likely or very likely to download but have not downloaded it yet. The percentages vary a bit by region, with 38 per cent in South Australia and West Australia, 36 per cent in Tasmania, and 30 per cent in all other states (Figure 1).

2 Satisfaction with government policies increases likelihood to download the COVIDSafe app

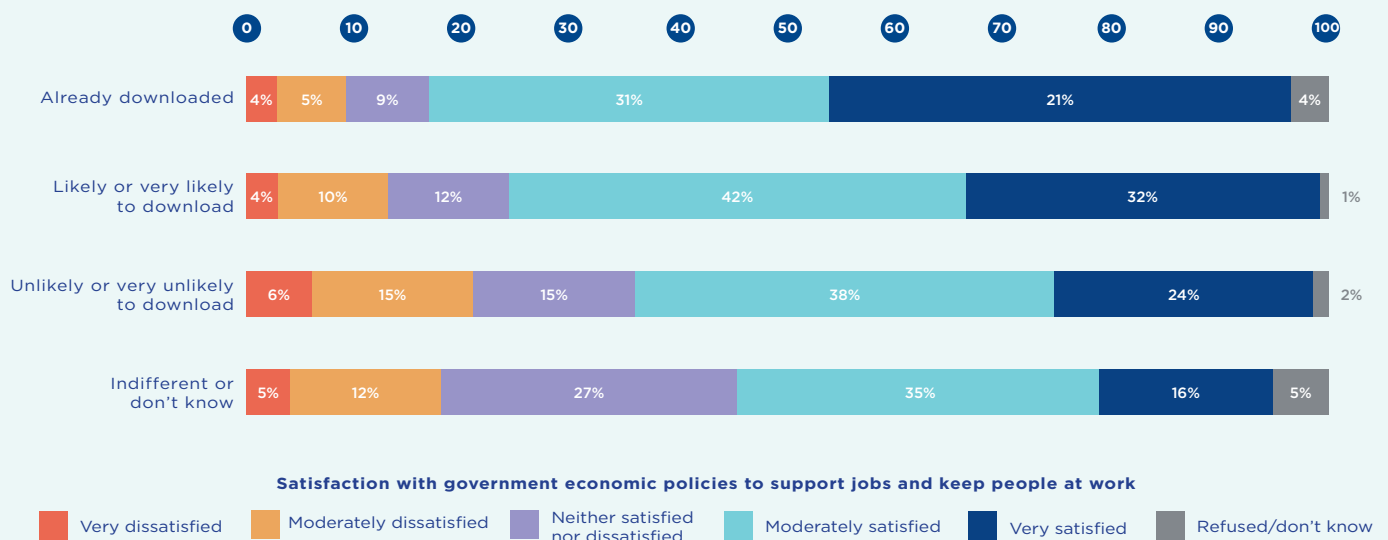
Those who are more satisfied with government economic policies (to support jobs and keep people at work) are more likely to download the COVIDSafe app (Figure 2). The correlation remains strong even after we control for other factors such as the respondent's location, gender, age, employment situation, financial conditions and mental health.

3 Vulnerable people not more likely to download COVIDSafe app

Some individuals are at a greater risk of being affected – economically and health-wise – by COVID-19 but there is no clear evidence that these people are more likely to download the app. One might expect that there are people who might be more interested in downloading the app to protect their health or to help speed up the easing of restrictions, e.g. older or retired people have a higher risk of developing more severe symptoms and face greater risk of fatality; people who are unemployed may want to get back to their regular way of life quickly; and those who think more people in their neighbourhood are not following social distancing guidelines may be more likely to download the app to track their potential contact with infected members of their community. But this is not borne out in survey data.

Once we adjust for all personal characteristics observed in the survey, we see little effects of age, gender, employment, financial distress, mental stress, or social distancing practice on the likelihood of downloading the app.

Figure 2: Likelihood to download the COVIDSafe app, by satisfaction with government policies (%)



Results based on weekly responses from 1200 Australian adults per week surveyed over the period 27-30 April. The sample is stratified by gender, age and location to be representative of the Australian population.

Avoiding a second wave of the COVID-19 pandemic

As Australia and the world are assessing how and when to further ease restrictions, it is important to emphasise a few points to avoid a second wave of the COVID-19 pandemic.

Contact tracing key to preventing further outbreaks

Further easing of restrictions should be supported by continued practise of social distancing and effective tracing of infected people. The COVIDSafe app is Australia's national tracking system, but the uptake rate was only 23 per cent as of May 15 2020,⁴ which may not be enough to effectively trace all infected people and contact others who have been exposed to risk of infection. The Taking the Pulse of the Nation survey indicates that 32 per cent of Australians intend on downloading the app – even if half of those people follow through, it would make the tracking system more effective.

Many other countries are using similar tracing tools. Those with better compliance and enforcement of social distancing, and effective tracing systems are also recording fewer cases of COVID-19 and lower death rates.⁶ Having the ability to trace infected people and contact others who have been in contact with someone who has been diagnosed with COVID-19 is essential to preventing a second wave of the pandemic.

Support app uptake with nudges and timely communication

The government plays an important role in increasing the uptake of the COVIDSafe app. Therefore, the government could work with private companies to encourage downloads of the app by sending useful reminders or targeting those who are at a higher risk of being adversely affected by COVID-19 (e.g. those who have applied for government support payments).

At the beginning of app's rollout, there were concerns about technical issues, privacy and where data are stored. In future, the government can try to overcome these challenges and ease public concerns more quickly. A text message with links to download the app has already been sent to people, but it is also important to send a notification when updates are made or as problems are fixed on the app. More direct communication to clearly explain why the app is needed for community safety, and to address the concerns of skeptical people, would be helpful in overcoming inertia.

Should we make the app a necessary requirement?

Previous research has been conducted on Australians' opinions towards voluntary tracking (similar to the COVIDSafe app rollout) and mandatory tracking with a sunset clause or opt-out policy.⁷ The study showed that more Australians (92%) supported mandatory tracking with an opt-out option than the voluntary tracking (70%). In addition, Australians showed high levels of support for both – voluntary and mandatory – tracking systems, compared to other western countries such as the United Kingdom and the USA.⁷

Harness technology to prevent the spread

There are examples of innovation and new technology that are being adopted in other countries that we can learn from. Some major cities in China have installed automatic temperature monitors in high traffic public areas, such as escalators in shopping centres to automatically alert high temperature as people take escalators. South Korea uses a comprehensive system to track travellers and some major cities in China trace people who use public transportation. Australia might consider adding additional functions to existing smart card ticketing systems (e.g. myki system in Melbourne) used across the country for public transport.

Continue international travel restrictions

As Australia continues to assess how and when to ease the various restrictions in place to prevent the spread of COVID-19, Australia should continue to keep its borders closed from international travels for a while longer. Almost all Australian cases of COVID-19 were acquired overseas – among 7079 total confirmed cases in Australia (as of May 20, 2020) 62 per cent were directly acquired overseas, and an additional 27.5 per cent were contracted locally with a contact of a confirmed case (most likely indirectly acquired overseas).¹ Compared with many other countries, with hundreds of thousands of cases, Australia is doing a great job in containing the pandemic. Given how well Australia is doing, opening up travel to and from other countries should be the last step in easing restrictions.¹ Before Australia opens the door to travellers from other countries, there should be strictly enforced quarantines and effective tracing systems to track travellers.

Further Information

Datasets

This analysis has been drawn from Taking the Pulse of the Nation – Melbourne Institute’s survey of the impact of COVID-19. The aim of the weekly survey is to track changes in the economic and social wellbeing of Australians living through the effects of the coronavirus pandemic whilst adapting to various changes in Federal and State government policies. The survey contains responses from 1200 persons, aged 18 years and over surveyed each week. The sample is stratified by gender, age and location to be representative of the Australian population.

Author

Professor Yuting Zhang

Melbourne Institute: Applied Economic & Social Research, University of Melbourne

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