Australian Government

Report on the operation and effectiveness of COVIDSafe and the National COVIDSafe Data Store

16 May 2020 to 15 November 2020

16 November 2020 to 15 May 2021

JULY 2021

Title: Report on the on the operation and effectiveness of COVIDSafe and the National COVIDSafe Data Store (NCDS)

ISBN: 978-1-76007-436-4

Online ISBN: 978-1-76007-437-1

Publications Number: DT0001804

Copyright

Contents

Minister's Foreword

I present this report on the operation and effectiveness of COVIDSafe and the National COVIDSafe Data Store (NCDS) to both Houses of Parliament as required under Section 94ZA of the *Privacy Act 1988*. This report covers the periods 16 May to 15 November 2020, and 16 November 2020 to 15 May 2021.

On 18 March 2020, in response to the COVID-19 outbreak in Australia, the Governor-General declared that a human biosecurity emergency exists.

As part of the Australian Government response to the pandemic, COVIDSafe and the NCDS were launched on 26 April 2020 to contribute to the efforts to keep the Australian community safe from the spread of COVID-19 through early notification of possible exposure. COVIDSafe is a voluntary, digital solution to automate and supplement state and territory public health operations.

Maintaining the privacy of Australians was a core consideration in the development of COVIDSafe. Strict privacy protections were initially put in place via a determination under the *Biosecurity Act 2015*, and subsequently enshrined in primary legislation via the *Privacy Amendment (Public Health Contact Information Act) 2020,* to give Australians confidence that their private information is safe.

COVIDSafe's operating performance, when measured by cases detected, to a large extent reflects the prevalence of community transmission of COVID-19. With the success of the suppression strategy, only 0.03 per cent of the Australian population were infected at the peak of the pandemic (including those in hotel quarantine).

The app was designed to deal with the potential of greater concentration of infection in the community. The low community transmission in combination with the use of existing, well established tracing processes has limited the need of public health officials to rely on COVIDSafe. Nonetheless, every close contact identified through COVIDSafe was a potential outbreak risk.

For the period 26 April 2020 (the date COVIDSafe was launched) to 15 May 2021, 779 COVIDSafe users, who tested positive for COVID-19, have consented to upload their COVIDSafe data to the NCDS. This has resulted in more than 1.65 million digital handshakes uploaded to the NCDS, and 2,827 potential close contacts were identified from 37,668 encounters.

I appreciate the feedback about COVIDSafe from the technical community and public health officials during its operation. This has informed the continuous improvement of COVIDSafe and the NCDS, to maximise its utility and to optimise functionality.

Given the ongoing uncertainty and the risk of further outbreaks, COVIDSafe remains an important element of the suite of tools available to support manual contact tracing efforts going forward.

I thank the more than 7.6 million Australians that have registered for COVIDSafe for their contribution to help manage the pandemic. I encourage all Australians to download, update and keep the COVIDSafe app active on their devices.

Purpose of this Report

This report discusses the operation and effectiveness of COVIDSafe and the NCDS, for the periods 16 May to 15 November 2020, and 16 November 2020 to 15 May 2021.

The report is delivered to Parliament by the Minister for Health in accordance with section 94ZA of the *Privacy Act 1988* (Act).

Background

COVID-19

COVID-19 is a respiratory disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). COVID-19 was first reported in December 2019 in the city of Wuhan, Hubei Province, in China. The disease has since spread widely around the world, including Australia where the first case was confirmed in January 2020[1]. The World Health Organization declared COVID-19 a global pandemic on 12 March 2020.

As of 7 June 2021, there have been a total of 173,197,589 cases of COVID-19 worldwide, and tragically 3,726,104 deaths.

Australian Government Response to COVID-19

Australian governments acted quickly to implement measures to slow the spread of COVID-19 into the country, and to prepare the health system. Strategies included closure of borders, physical distancing and lockdown provisions, widespread work from home, closure of non-essential businesses, and full or partial closure of schools and tertiary institutions. The health system response included support for testing, securing access to personal protective equipment for frontline workers, expanding intensive care capacity, suspension of non-urgent surgery, implementation of telehealth services and establishment of dedicated respiratory clinics.

In a media statement on 24 March 2020, the Prime Minister noted that the highest priority should be placed on social isolation measures as well as strict and rapid contact tracing of individuals.

Contact tracing is a key strategy to prevent the further spread of COVID-19, and involves identifying, assessing, and managing people who have potentially been exposed to COVID-19. apid identification, testing and quarantining of close contacts of cases through contact tracing helps break chains of transmission by ensuring that infected contacts do not transmit the virus to any other people. [Australian National Disease Surveillance Plan for COVID-19]. The states and territories are responsible for contact tracing and outbreak management within their jurisdictions. Contact tracing is undertaken in line with the COVID-19 National Guideline for Public Health Units which is developed in consultation with the Communicable Diseases Network of Australia and endorsed by the Australian Health Protection Principal Committee (AHPPC).

Launch of COVIDSafe

On 26 April 2020, the Australian Government launched COVIDSafe as a tool to assist state and territory health officials to quickly identify and contact people who may have been exposed to COVID-19. It was developed to complement existing manual contact tracing processes, and to improve the ability of state and territory health authorities to minimise the spread of the virus.

Australia was a world leader in implementing the COVIDSafe sovereign digital response in record time.

[1]Minister Hunt Media Release, First confirmed case of novel coronavirus in Australia, 25 January 2020, https://www.health.gov.au/ministers/the-hon-greg-hunt-mp/media/first-confirmed-case-of-novel-coronavirus-in-australia (accessed 10 December 2020).

Early in the pandemic, the Australian Government saw the opportunity to use digital technology to assist in contact tracing efforts.

The government decided that COVIDSafe would follow a similar approach to the Singaporean Government's TraceTogether app. The Commonwealth Department of Health (department) and the Digital Transformation Agency (DTA) jointly developed the COVIDSafe app.

COVIDSafe, which like TraceTogether, uses Bluetooth® technology on mobile devices to look for other devices with the app installed. COVIDSafe is designed to take note of contact users have with other users and shows potential close contacts to health officials through the Health Portal. These are users who have been within 1.5 metres of a positive case for 15 minutes or more. It is also underpinned by strong privacy safeguards that prevent the application from tracking a user's location or collecting information on their movements.

The challenges at the time of the development of COVIDSafe involved producing a new digital contact tracing tool, for a new virus, and in the context of evolving epidemiological and technological evidence. To do it in a matter of weeks, and under intense public scrutiny to safeguard both public health priorities and individual privacy rights, was a commendable achievement.

Operation of the app and the Data Store

How does the COVIDSafe app work?

The COVIDSafe app uses Bluetooth® to look for other devices that have the app installed. It takes a note of a contact when it occurs, through a digital handshake. The app logs the other user's encrypted user ID, the date, time, Bluetooth® signal strength, proximity of the contact on the user's device, and notes the phone model. This information is then securely encrypted and stored on the device. The COVIDSafe app does not record the user's location or where the interaction occurred.

The app stores contact information on the user's device for 21 days. This timeframe encompasses the potential 14- day incubation period of the coronavirus, plus the time taken to confirm a positive test result. The rolling 21-day window allows the app to note only those user contacts that occur during the coronavirus incubation window. It automatically deletes contacts older than 21 days.

Encrypted information on a user's device cannot be accessed by anyone, including the user. If a user tests positive for COVID-19, they will be asked to consent to upload their digital handshake information to the NCDS. tate and territory health officials can then access the information in the NCDS on an interface called the Health Portal, enabling them to identify and call close contacts and provide tailored advice on next steps, such as getting tested and self-isolating. State and territory health officials must undertake compulsory training and agree to terms and conditions of use to ensure the privacy and security of COVIDSafe app data before they can access the NCDS through the Health Portal.

The diagram at Attachment A provides an overview of the COVIDSafe app functionality. It illustrates the flow of COVID app data from a user's registration to a health official's engagement with the data.

The app captures Bluetooth® handshakes between devices. The COVIDSafe filtering algorithm identifies and provides an assessment of potential close contacts to state and territory Health Officials in the Health Portal.

Communications campaign

A public communications campaign supported the launch of the COVIDSafe app to explain how it helps slow the spread of COVID-19. This campaign consisted of:

- a series of six videos launched from 4 May to 26 June 2020 explaining the app and encouraging citizens to download it to help manage COVID-19, by getting on top of outbreaks quickly, and to ease restrictions;
- a radio campaign (of three advertisements) from 30 April to 17 June 2020 encouraging citizens to download the app to keep us safe and help stop the spread of COVID-19; and
- other social media including posters and social media tiles which could be downloaded for free from my department's website.

In addition, the www.covidsafe.gov.au website was created to support Australians in their use of the COVIDSafe app. It provides help topics, background information, the privacy policy, access to the source code and a COVIDSafe user guide available in 63 languages. Translated resources are available on the health.gov.au and covidsafe.gov.au websites.

The COVIDSafe app and the help topics have been translated into nine languages in addition to English – Arabic, Cantonese, Greek, Italian, Korean, Mandarin, Punjabi, Turkish and Vietnamese. These languages are spoken by over 2 million people in Australia.

To support COVIDSafe, community engagement strategies were developed to reach Culturally and Linguistically Diverse (CALD) groups, Aboriginal and Torres Strait Islander peoples, older Australians, and people with disabilities. A specialist communication manager was commissioned to implement a targeted promotional campaign to increase engagement with the CALD community and provide coordinated, consistent messaging across all jurisdictions.

Privacy

From the beginning, a privacy by design approach was used in the design and build of COVIDSafe. The app is voluntary to download and use, and location information is not collected.

Upon its release, COVIDSafe was supported by interim privacy protections via the *Biosecurity (Human Biosecurity Emergency) (Human Coronavirus with Pandemic Potential) (Emergency Requirements – Public Health Contact Information) Determination 2020*. On 14 May 2020, the Australian Parliament passed the *Privacy Amendment (Public Health Contact Information) Act 2020* to amend the *Privacy Act 1988* (the Act) to provide strong ongoing privacy protections including an oversight role for the Office of the Australian Information Commissioner (OAIC).

Under the Act, COVIDSafe data can be collected, used or disclosed for the purposes of contact tracing by state and territory health authorities, and only to the extent required to do so. The Act also defines other limited circumstances in which COVID app data can used or disclosed (for example investigating or prosecuting a breach of the privacy protections under the Act).

The Act prohibits anyone from requiring a person to download or use COVIDSafe. For example, an employer cannot make downloading or using COVIDSafe a condition of employment. The Act also requires that data held in the NCDS must be kept in Australia, and requires that the NCDS Administrator delete all COVIDSafe data held in the NCDS when COVIDSafe is no longer required, or is no longer likely to be effective as part of Australia's response to COVID-19. The Minister for Health must determine this following consultation with the Commonwealth Chief Medical Officer or the AHPPC.

To provide additional privacy assurance, bilateral agreements with respect to the collection, use and disclosure of COVIDSafe data have been put in place between the Department of Health and all State and Territory health authorities. These agreements set out additional obligations with respect to handling of COVIDSafe data, and provide a framework for a cooperative working relationship between the parties.

Security

The DTA was appointed as the NCDS Administrator under the Act. COVIDSafe data is stored in the NCDS.

Strong cyber security principles underpin the COVIDSafe system to ensure that information remains secure. The DTA has also worked with government experts, academia, industry specialists and the tech community to provide the best security and privacy protections possible for all COVIDSafe users.

Data held on a device is protected through the temporary identifier from the COVIDSafe servers.

The app contains a random unique identifier that identifies users without including any personal information. This forms part of the digital handshake between users.

COVIDSafe data is encrypted end-to end so that only the NCDS can read it. To improve transparency and confidence in the app's security, the DTA made the cryptography specification available to the public.

The DTA has worked to ensure security arrangements were improved as required through continuous rapid enhancements to the app, such as the removal of several Bluetooth® functionality vulnerabilities that malicious actors could have exploited.

Effectiveness of the app and the Data Store

COVIDSafe is designed to complement the manual contact tracing processes undertaken by state and territory health officials.

COVIDSafe has two main roles to identify unique contacts not identified through manual contact tracing, and quickly verify contacts found through manual contact tracing.

It should be noted that the app has identified close contacts that would not have been otherwise identified, and every case found using the app has prevented a further outbreak.

As at 15 November 2020 (for the period 26 April to 15 November 2020), DTA activity statistics for the COVIDSafe app shows that:

- 735 COVIDSafe users, who tested positive for COVID-19, have consented to upload their COVIDSafe data to the NCDS.
- This has resulted in more than 1.45 million digital handshakes uploaded to the NCDS
- 2,579 potential close contacts were identified from more than 35,939 encounters. An encounter is an interaction that includes handshakes that meet the agreed parameters for access by contact tracers (i.e. within 1.5 metres for 15 minutes or more).

As at 15 May 2021 (for the period 16 November 2020 to 15 May 2021), DTA activity statistics for the COVIDSafe app shows that:

- 44 COVIDSafe users, who tested positive for COVID-19, have consented to upload their COVIDSafe data to the NCDS.
- This has resulted in more than 202,110 digital handshakes uploaded to the NCDS.
- 248 potential close contacts were identified from more than 1,729 encounters. An encounter is an interaction that includes handshakes that meet the agreed parameters for access by contact tracers (i.e. within 1.5 metres for 15 minutes or more).

The reason for the increased number of digital handshakes per upload recorded for the later six-month period is attributed to the enhancements introduced following the launch of the Herald Protocol in December 2020 (see the COVIDSafe enhancements section in this report).

DTA activity statistics will differ from jurisdictional reporting about COVIDSafe usage as:

- Many potential close contacts would have already been identified through manual contact tracing processes.
- Some of the potential close contacts identified by the app may not be followed up because of the timing of the contact, as contact tracers are particularly interested in the infectious period (from 48 hours before onset of symptoms until the case is no longer infectious).
- Contact tracers also consider the risk setting or exposure sites when identifying close contacts, and may not use app data that falls outside those settings.

The app is complementary to other tools such as QR code apps, which are location based. By virtue of its design, the app will assist states and territories most in situations where there is large scale community transmission. The relatively low number of cases in Australia and effectiveness of our contact tracing processes has created an environment in which it has rarely been necessary for public health officials to use the app, except to confirm cases identified through manual processes.

The app was deployed in anticipation of wide-spread community transmission (such as has been the experience of other countries), with the aim of enabling quick contact with people who may have come into contact with a person who was COVID-19 positive. It was also deployed to enable the easing of restrictions and opening up the economy.

With the success of the suppression strategy, only 0.03 per cent of the Australian population were infected at the peak of the pandemic with around 8,170 active cases on both 11 and 13 August 2020 (including those in hotel quarantine). This has meant that the app's ability to identify unique close contacts has not been called upon to a significant extent.

NSW successfully accessed the COVIDSafe data to identify 81 close contacts, including 17 contacts that were not identified by manual contact tracing. In one instance, access to COVIDSafe data revealed a previously unrecognised exposure date from a known venue, Mounties. This resulted in the identification of an additional 544 contacts. Two people in this group presented for testing and were subsequently confirmed to have COVID-19. NSW has said that from its experience the app is a useful additional tool to identify contacts in some circumstances.

Victoria has integrated app usage into its contact tracing processes, and has reported that over 1,800 cases said that they have the app. Queensland and South Australia have had very low numbers of community transmission and have not identified additional contacts.

The other states and territories have not had a need to use the app due to low case numbers.

Technology

Australia was one of the first governments to introduce a digital contact tracing solution to assist its contact tracers. The intention was to have a solution that was available to as many people in the community as possible, as quickly as possible, and that supported the contact tracing needs of our state and territory health officials.

COVIDSafe was launched using Bluetooth® Low Energy (BLE) technology. At the time of launch, it was the preferred contact tracing technology option available that met the needs of Australia's contact tracers and maintained high privacy standards.

Many of the international contact tracing apps also used BLE technology, or geo-location technologies. Utilising a BLE solution was especially attractive because user privacy was paramount, so privacy intrusive alternatives (such as a geolocation tracker) were rejected.

BLE technology had not previously been used to perform contact tracing, and its benefits and limitations were uncovered through its use. The DTA's iterative approach to developing COVIDSafe has facilitated the continuous improvement of the app and the Health Portal to address limitations and build on benefits.

There are other digital responses to COVID-19 such as the Exposure Notification Framework (ENF) that was developed by Apple and Google after the launch of COVIDSafe. COVIDSafe and the ENF were designed to support health officials in different ways. The ENF, as the name suggests, focuses

primarily on notifying individuals who may have been exposed to COVID-19. Contact tracers do not necessarily have access to this information. COVIDSafe is designed primarily to assist health officials to personally contact at-risk individuals. It also provides health officials with the relevant data they need to contain the virus, such as the source of infection for positive cases.

When developing and enhancing the app, considerations were made for people with disabilities to access the app. This included testing the app against colour contrast standards, text size, and using screen readers to check voice-prompted interactions for visually impaired people. An independent accessibility audit by Vision Australia has certified COVIDSafe as Web Content Accessibility Guidelines (WCAG) 2.1 AA compliant. This is considered the benchmark for Government digital products.

COVIDSafe Enhancements

The DTA introduced rapid enhancements to the COVIDSafe system to ensure it meets the evolving needs of the COVID-19 response. The DTA delivered 17 updates in quick succession. A list of the key enhancements is at Attachment C to this report.

These enhancements focused on a range of performance, and accessibility features, including updates to the filtering algorithm in the Health Portal to improve the identification of significant close contacts. The enhancements were based upon app user feedback, suggestions from state and territory health officials who use the COVIDSafe data, expert bodies including technology specialists, and vulnerable community representatives. Troubleshooting notifications inform users if there is an issue on their device that is affecting app performance, such as Bluetooth® being turned off. These notifications guide users on how to bring the app back to an active state to ensure the proper functioning of the app.

On 19 December 2020, the DTA released a major COVIDSafe update to introduce the new 'Herald Protocol' to improve the capture of close contacts. The DTA has advised that Herald has improved Bluetooth performance, including while the app is in background mode, particularly on iOS devices. The level of handshake data captured from 739 app uploads for the period 26 April to 27 November 2020 (pre-release of Herald Protocol) totalled 1,495,678 handshakes (about 2,000 handshakes average per upload).

As at 28 February 2021, the number of handshakes captured from an additional 35 app uploads increased, equating to an average of 4,500 handshakes per average upload, pointing to a marked increase in the effectiveness of the app following the launch of the Herald Protocol.

COVIDSafe remains available for deployment in the event of further outbreaks of COVID-19 through community transmission and, due to the introduction of Herald, its effectiveness in better assisting public health officials identify potential close contacts would become more evident.

In addition to the technical improvements and expansion of accessibility to the app for users, the app was improved to assist users further through the pandemic. Daily COVID-19 case statistics were incorporated in COVIDSafe as well as jurisdictions' restriction information.

The Health Portal

The Health Portal was created to support Health Officials' contact tracing processes and has evolved to meet their needs.

State and territory health officials have access to data uploaded to the NCDS from COVID-19 positive users via the Health Portal.

Updates and developments to the Health Portal have been co-designed with Health Officials based heavily on proactive user research and feedback, and the changing dynamics of the pandemic. Feedback was primarily provided through regular discussions between the Commonwealth and jurisdictions (held fortnightly for most of the period of this report), and an AHPPC working group.

State and territory stakeholders have noted that substantial user interface improvements to the Health Portal provide better filters to enable contact tracers to use the information more easily during interviews.

To support surge capacity, the DTA has enabled functionality to facilitate a jurisdiction being able to access COVIDSafe data when undertaking contact tracing in the service of another jurisdiction, but this has not yet been deployed by a jurisdiction.

In addition, the Commonwealth and the jurisdictions have discussed the utility of jurisdictions being able to download or extract the COVIDSafe data in their own systems.

It has been agreed that the functionality will only be put in place where there is sufficient assurance that the data will be deleted when no longer required, and the Commonwealth has been working with the National Archives of Australia and the Council of Australasian Archives and Records Authorities to develop Records Disposal Authorities based on standard wording to facilitate this.

To date, Victoria, Queensland and South Australia have issued these authorities, and work is currently in progress for NSW, NT and Tasmania. The ACT will have its own arrangements consistent with the intent of the standard approach, while WA does not intend to download/extract COVIDSafe data.

Feedback from state and territory public health officials

During the case interviews, contact tracers ask cases whether they are a COVIDSafe user. Contact tracers then proceed to secure consent to upload the cases' data to the NCDS and request the pin to upload the data. If users are in quarantine, this process may be dispensed with, due to the lack of the users' exposure to people in the broader community. Jurisdictions report this process usually happens relatively smoothly and without delays. Once data is uploaded, contact tracers review and validate the app contact information on screen.

A key challenge for the state and territory health officials has been the integration of COVIDSafe into their current contact tracing processes, and this has been a focus of regular discussions with state and territory health officials, who have provided input to the enhancement program for COVIDSafe. As a result, the DTA has made a number of improvements to the Health Portal, to improve useability. A data visualisation tool was recently rolled out in the COVIDSafe Health Portal, based on feedback from state and territory health officials, to enable contact tracers to drill down into specific timeframes more easily and quickly determine who was close to a positive contact and how close they were.

Jurisdictions have reported that in the instance of low community prevalence where close contacts can be identified early and transmission contained, using long established manual contact tracing protocols and procedures tends to be sufficient.

It should be noted that jurisdictions continue to attend training to ensure their contact tracers are able to utilise the app in case of future outbreaks, with 428 trained as at 15 Nov 2020 and a further 95 trained for a total of 523 as at 15 May 2021.

Public engagement

Following the launch of the app, there were 6,061,686 registrations for the app within the first month of operation (26 April to 25 May 2020), and by 15 November 2020 there were 7,176,056 registrations. As at 15 May 2021, there were 7,418,328 registrations of the app.

A number of surveys have found that older people are more likely to download and register for the app, reflecting the greater risks to them from COVID-19[2], while younger people are less likely to download the app due to privacy concerns[3]. To increase the appeal of the app, the DTA has made updates to include additional useful COVID-19 information including localised information on case numbers and restrictions, and improved communication around the effectiveness of the app with targeted communication to targeted age groups.

Research assessing attitudes towards three tracking technologies[4] (telecommunication network tracking, a government app [COVIDSafe], and Apple and Google's Bluetooth exposure notification system), both prior to and following the launch of COVIDSafe, found that acceptance of COVIDSafe was based on perception that it:

- Collected the least sensitive data
- Is the least risky technology, and
- Has more ongoing control

compared with Apple and Google's Bluetooth technology.

Effectiveness of privacy controls

The Department of Health and the DTA have worked closely to monitor the effectiveness of the privacy controls, and to ensure that privacy risks continue to be addressed:

- All of the recommendations in the COVIDSafe Privacy Impact Assessment (PIA) have been completed, and regular updates on progress were provided to the Australian Information Commissioner and Privacy Commissioner.
- Enhancements and improvements are closely scrutinised to ensure that privacy risks are mitigated. A Privacy Assurance Assessment was completed in respect of the collection of diagnostic information to assist users in troubleshooting issues with COVIDSafe, and a PIA was commissioned in relation to the implementation of the new Herald Bluetooth® protocol.
- The Privacy Policy and collection notices are regularly reviewed and updated as necessary.

The Office of the Australian Information Commissioner has commenced an Assessment Program that follows the information lifecycle of personal information collected by COVIDSafe, and this provides further opportunities for relevant entities to review their processes to enhance the handling of personal information in the COVIDSafe system.

In her first report on the privacy protections in the COVIDSafe (for the period from 16 May to 15 November 2020), the Australian Information Commissioner and Privacy Commissioner noted the Office of the Australian Information Commissioner (OAIC) had received 11 enquiries from individuals, no complaints and no notifications of any data breaches[5].

---

[2] Biddle et al (2020) Data trust and data privacy in the COVID-19 period, pages 17 & 18 https://csrm.cass.anu.edu.au/research/publications/data-trust-and-data-privacy-covid-19-period

[3] ABS Household Impacts of COVID-19 Survey - 24-29 June 2020, Table 14.1

https://www.abs.gov.au/statistics/people/people-and-communities/household-impacts-covid-19-survey/24-29-June-2020

[4] Garrett PM, et al. (2021) The acceptability and uptake of smartphone tracking for COVID-19 in Australia. PLoS ONE 16(1): e0244827. https://doi.org/10.1371/journal.pone.0244827

[5] https://www.oaic.gov.au/assets/updates/COVID-hub/COVIDSafe-Report/COVIDSafe-Report-May-Nov-2020.pdf

The Department of Health undertook an update to the COVIDSafe PIA, which has also assisted in informing this report. This assessment did not identify any additional privacy risks that are likely to significantly affect users whose information will be collected, used or disclosed in relation to COVIDSafe or the NCDS. The PIA update confirmed the privacy by design approach to the operation and further development of COVIDSafe, and noted the need for ongoing vigilance to ensure that privacy risks continue to be appropriately addressed.

Conclusion

COVIDSafe's operating record reflects the low prevalence of community transmission of COVID-19 — it has found 37,668 potential encounters (being an interaction between two people who have the COVIDSafe app who have been in contact for 15 minutes or more at 1.5 metres or less) and 2,827 potential unique close contacts (being the person who have had at least one encounter with the positive case). In some cases, the app has identified close contacts that would not have been otherwise identified.

The COVIDSafe app has strengthened Australia's contact tracing response to COVID-19, and it will continue to be an important addition to the suite of tools available to complement existing contact tracing processes going forward.

The Australian Government encourages state and territory health officials to further integrate the use of the data in their contact tracing processes, in conjunction with their use of other tools such as QR code (location-based) apps.

The first six months of operation of COVIDSafe identified some limitations of the BLE technology to perform contact tracing. Several updates to improve app performance and accessibility were rolled out to COVIDSafe throughout the first twelve months to further enhance its operation and Bluetooth® performance, in addition to further enhancements to the health portal to better enable access by public health officials. On 19 December 2020, Australia became the first country to adopt the Herald Bluetooth Protocol in COVIDSafe. Herald has improved Bluetooth® performance, particularly when the app is running in background on iOS devices.

The relatively low number of cases of community transmission in Australia as a result of successful suppression strategies, in combination with existing contact tracing processes, has meant there has been limited need to use COVIDSafe by public health officials. By virtue of its design, the app will assist states and territories going forward in situations should there be large scale community transmission.

In light of the emergence of more highly transmittable variants of COVID-19, if the medical experts believe that a shorter timeframe for a close contact should be considered, then the government will look at that in consultation with the states and territories.

COVIDSafe remains a useful tool to manage the COVID-19 response, in combination with the vaccine rollout. The virus continues to evolve and there are ongoing risks of community transmission outbreaks. Australia's contact tracing processes will remain ready in the case of an outbreak. COVIDSafe has proven useful in identifying potential close contacts within these tracing processes and will continue to do so.

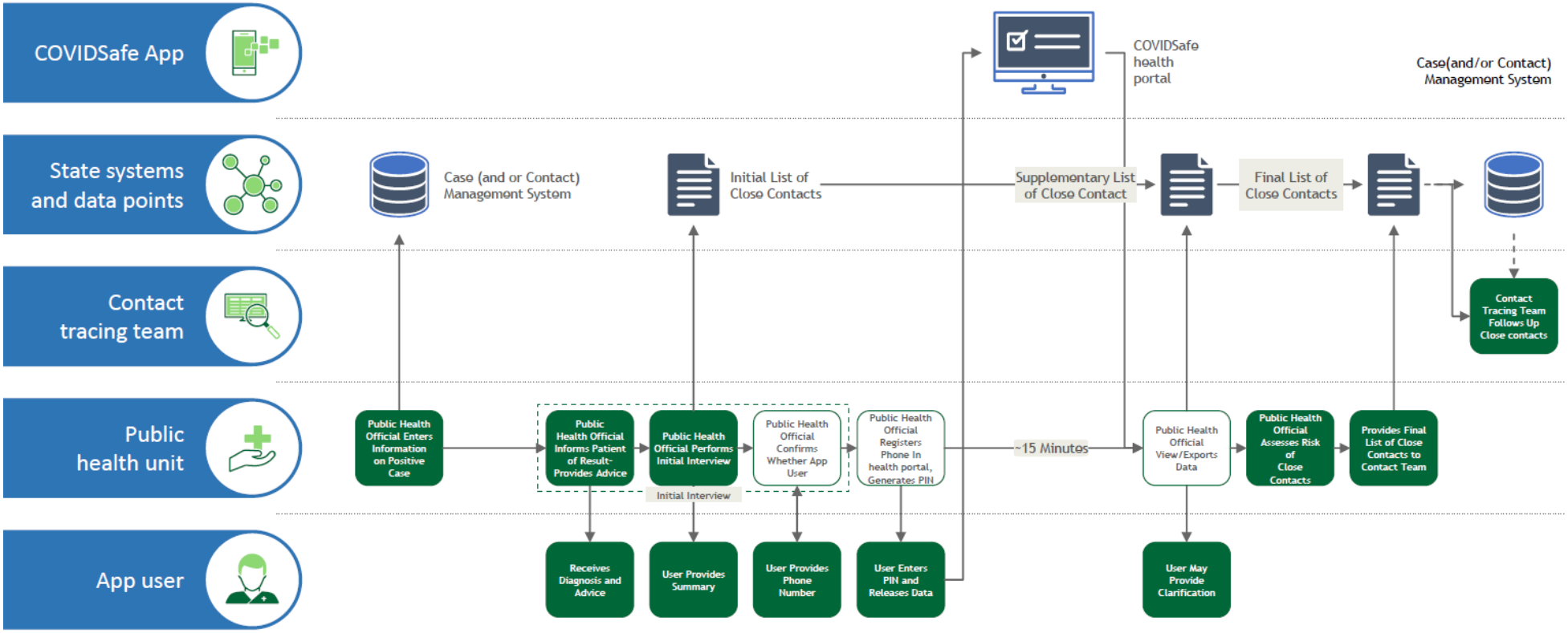
Attachments

Attachment A Overview of COVIDSafe app Data Flow

Attachment B DTA COVIDSafe app activity statistics

Attachment C DTA COVIDSafe Enhancement Release Summary

ATTACHMENT A Overview of COVIDSafe app Data Flow



ATTACHMENT B DTA COVIDSafe app activity statistics

Digital Transformation Agency COVIDSafe Activity Report (from 26 April 2020 to 15 November 2020)

Data descriptor	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL
Uploads by COVIDSafe users who tested positive to COVID-19	105	625	np	np	np	np	np	np	735
Handshakes contained in the uploads	204,899	1,240,388	np	np	np	np	np	np	1,451,560
Encounters contained in the uploads that are within 1.5 metres for 15 minutes or more	9,290	26,012	np	np	np	np	np	np	35,939
Unique potential close contacts generating the uploaded handshakes within 1.5 metres for 15 minutes or more	837	1,687	np	np	np	np	np	np	2,579
Note: np - not published as these relate to a very small number of uploads									

Digital Transformation Agency COVIDSafe Activity Report (from 16 November 2020 to 15 May 2021)

Data descriptor	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL
Uploads by COVIDSafe users who tested positive to COVID-19	20	24	np	np	np	np	np	np	44
Handshakes contained in the uploads	46,254	155,856	np	np	np	np	np	np	202,110
Encounters contained in the uploads that are within 1.5 metres for 15 minutes or more	1,502	393	np	np	np	np	np	np	1,729
Unique potential close contacts generating the uploaded handshakes within 1.5 metres for 15 minutes or more	204	44	np	np	np	np	np	np	248
Note: np - not published as these relate to a very small number of uploads.									

Digital Transformation Agency COVIDSafe Activity Report (Cumulative from 26 April 2020 to 15 May 2021)

Data descriptor	NSW	VIC	QLD	SA	WA	TAS	NT	ACT	TOTAL
Uploads by COVIDSafe users who tested positive to COVID-19	125	649	np	np	np	np	np	np	779
Handshakes contained in the uploads	251,153	1,396,244	np	np	np	np	np	np	1,653,670
Encounters contained in the uploads that are within 1.5 metres for 15 minutes or more	10,792	26,405	np	np	np	np	np	np	37,668
Unique potential close contacts generating the uploaded handshakes within 1.5 metres for 15 minutes or more	1,041	1,731	np	np	np	np	np	np	2,827
Note: np - not published as these relate to a very small number of uploads.									

Key Definitions*

Uploads: Number of unique people who have had their data uploaded to the NCDS.

Handshake: A single Bluetooth exchange between two devices. Contact details such as date, duration, and proximity are collected around the handshake.

Encounter: An encounter is an interaction between two people who have the COVIDSafe app who have been in contact of within 1.5 metres for 15 minutes or more.

Potential Close Contact: Number of potential close contacts identified after the data of a positive case has been uploaded.

ATTACHMENT C COVIDSafe Enhancement Release Summary

Updates to the app since its release:

There have been 17 updates to the app since its release on 26 April 2020.

- 5 May 2020 – First update: interface improvements and rebrand.
- 14 May 2020 – Second update: push notifications reminding users to keep COVIDSafe running became operational.
- 26 May 2020 – Third update: Bluetooth improvements based on Singaporean and UK source code changes, Bluetooth security and malicious beacon fix, push notifications.
- 5 June 2020 – Fourth update: end-to-end encryption, strengthening privacy, enhanced accessibility.
- 12 June 2020 – Fifth update: backwards compatibility increased, international app stores access, accessibility enhancements.
- 19 June 2020 – Sixth update: Norfolk Island and international phone numbers able to register, fixes to a temporary ID bug on iOS devices, permissions, and enhanced accessibility.
- 3 July 2020 – Seventh update: Mandarin, Cantonese, Vietnamese, Arabic and Korean languages added, enhanced accessibility.
- 21 July 2020 – Eighth update: Greek and Italian languages added, enhanced accessibility and improved notifications and security.
- 3 August 2020 – Ninth update to iOS (Android 5 August): Enhanced accessibility, Bluetooth, privacy, and improved notifications.
- 14 August 2020 – 10th update to iOS (Android 22 August): Turkish and Punjabi languages added, privacy enhancements and improved troubleshooting notifications.
- 10 September 2020 – 11th update to iOS (Android 18 September): National, State and Territory cases statistics included in the app.
- 25 September 2020 – 12th update to iOS (Android 26 September): improved functionality for the registration process for users.
- 13 October 2020 – 13th update to iOS (Android 23 October) assistance notifications to help users make sure their app is running.
- 7 November 2020 – 14th update to Android (iOS 11 November) improved a troubleshooting process for users in the rare situation where there is an issue on registration.
- 30 November 2020 – Herald version of COVIDSafe code released for community feedback on Github.
- 19 December 2020 – 15th update introduced the Herald Protocol. This release was updated with a patch on 23 December 2020 that fixed a tech community identified issue.
- 2 February 2021 – 16th update introduced more detailed National, State and Territory COVID-19 case statistics and tech community identified security fixes. This release was updated with a patch on 19 February 2021 that improved battery performance on Android devices.
- 26 February 2021 – 17th update provided the latest restrictions information from states and territories. This release was updated on 17 March 2021 to renew users' unique identifiers that would otherwise have expired on the 12-month anniversary of a user's registration.
- 12 April 2021 – patch to make the privacy policy more visible on homepage, minor bug fixes and changes.