

Western Australian Auditor General's Report



COVID-19 Contact Tracing System – Application Audit



Report 15: 2021-22

18 May 2022

**Office of the Auditor General
Western Australia**

Audit team:

Aloha Morrissey
Kamran Aslam
Michael Chumak
Paul Tilbrook
Jacqueline Richards
Karen Telford

National Relay Service TTY: 133 677
(to assist people with hearing and voice impairment)

We can deliver this report in an alternative format for those with visual impairment.

© 2022 Office of the Auditor General Western Australia.
All rights reserved. This material may be reproduced in whole or in part provided the source is acknowledged.

ISSN: 2200-1913 (print)
ISSN: 2200-1921 (online)

The Office of the Auditor General acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of the Aboriginal communities and their cultures, and to Elders both past and present.

**COVID-19 Contact Tracing System –
Application Audit**

This page is intentionally left blank



**THE PRESIDENT
LEGISLATIVE COUNCIL**

**THE SPEAKER
LEGISLATIVE ASSEMBLY**

COVID-19 CONTACT TRACING SYSTEM – APPLICATION AUDIT

This report has been prepared for submission to Parliament under the provisions of section 25 of the *Auditor General Act 2006*.

Information systems audits focus on the computer environments of entities to determine if these effectively support the confidentiality, integrity and availability of information they hold.

I wish to acknowledge the entities' staff for their cooperation with this audit.

A handwritten signature in black ink, appearing to read 'C Spencer'.

CAROLINE SPENCER
AUDITOR GENERAL
18 May 2022

Contents

- Auditor General’s overview..... 2
- Introduction..... 3
- Background 3
- Conclusion..... 4
- Findings 6
 - WA Health uses personal information from various sources but has not clearly communicated this to the community 6
 - WA Health needs to improve controls to effectively protect citizens’ personal and medical information in PHOCUS 6
 - There is a risk of inaccurate data due to poor data management 8
- Recommendations..... 10
 - Response from WA Health11
- Audit focus and scope 12
- Appendix 1: Form showing minimum personal information collected during case interviews and stored in PHOCUS..... 13

Auditor General's overview

My August 2021 audit report¹ on the SafeWA application explained that to fully understand the application's information security risks, I also needed to review WA Health's Public Health COVID Unified System (PHOCUS). PHOCUS collates highly sensitive personal and medical information of COVID-19 positive individuals, and their close and casual contacts, from multiple sources for contact tracing purposes. This report summarises findings from our audit of PHOCUS.



COVID-19 has presented various challenges for State government entities responsible for planning and responding to the pandemic. The implementation of PHOCUS, WA Health's technology solution to record positive cases (from PCRs and RATs) and trace people exposed to COVID-19, is one such response. WA Health developed and implemented PHOCUS in tight timeframes and in the face of a shifting landscape. The system continues to play a significant role to support WA Health's contact tracing efforts.

I expected to find robust access controls for this system given the sensitive nature of information it contains, and the consequences to people's privacy, freedom of movement and public health measures, if the information is inappropriately accessed or altered. However, our audit found a number of significant weaknesses.

I am concerned that the security and privacy of peoples' highly sensitive medical and personal information has not been protected to the extent the community has a right to expect. WA Health does not adequately log and monitor who has accessed information to detect inappropriate changes or snooping, and has provided an external vendor with inappropriate access to personal and medical information. In the absence of comprehensive privacy legislation in our State, WA Health must ensure their privacy practices protect the confidentiality of information stored in PHOCUS and are consistent with the Commonwealth *Privacy Act 1988*. Similar concerns were raised in my *SafeWA – Application Audit* report².

Also concerning, is that WA Health has told the community little about the types of personal and medical information PHOCUS collects (about positive cases, close and casual contacts, and travellers) to support contact tracing, and that this information is stored indefinitely. This lack of transparency can lead to unintended consequences, including erosion of trust in government institutions.

It is encouraging that WA Health prioritised and addressed many of the audit's findings during the audit and has agreed to all recommendations. Our recommendations will help to protect, not only information in PHOCUS, but future information, if the system is used for other diseases. In any emerging crisis, government responses should consider impacts on trust and confidence in government and the importance of upholding the universal human right to information privacy.

¹ Auditor General for Western Australia, [SafeWA – Application Audit](#), Report 2: 2021-22, August 2021.

² *ibid*.

Introduction

This audit assessed WA Health's COVID-19 contact tracing application, the Public Health COVID-19 Unified System (PHOCUS). We reviewed key controls and processes to obtain reasonable assurance that the confidentiality, integrity and availability of information generated by and stored in PHOCUS was appropriate, including controls over access by third party vendors and their staff. We performed our audit testing between September 2021 and March 2022.

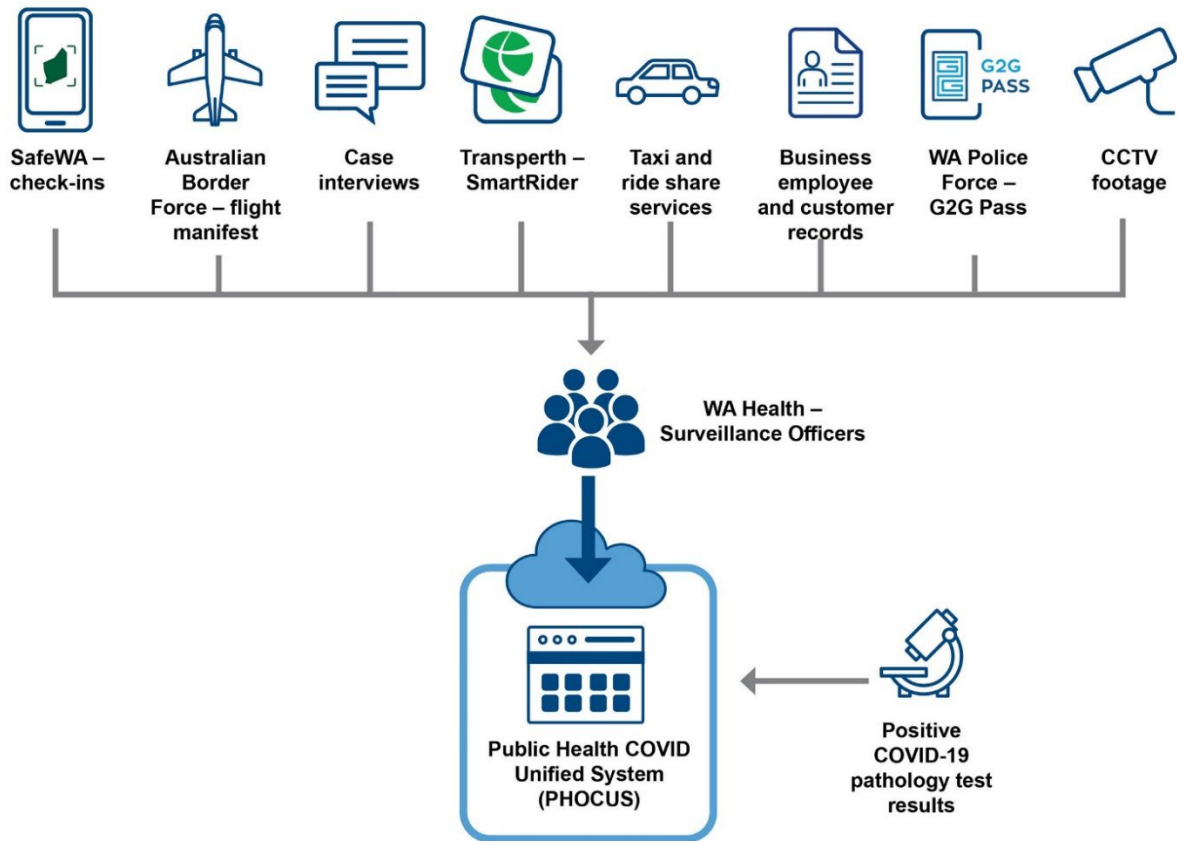
This audit follows our August 2021 report, *SafeWA – Application Audit*³. In that report we noted that we were not able to review the information security risks associated with SafeWA without looking at PHOCUS and would prepare a separate report to Parliament on PHOCUS.

Background

In response to the COVID-19 pandemic, Health Support Services (HSS), on behalf of WA Health, engaged third party vendors to implement PHOCUS in April 2020. The system was delivered under significant time pressures along with other COVID-related IT solutions, and after an assessment that existing systems were not suitable. WA Health also performed a security assessment of PHOCUS in October 2020 and addressed the identified weaknesses in late 2021.

PHOCUS is a cloud-based application, which collates information from multiple sources for COVID-19 positive individuals and their close and casual contacts for contact tracing. Figure 1 shows some of the information sources.

³ Auditor General for Western Australia, [SafeWA – Application Audit](#), Report 2: 2021-22, August 2021.



Source: OAG

Figure 1: PHOCUS accesses and stores data from a variety of sources

WA Health surveillance officers use PHOCUS to carry out positive case and contact interviews, daily monitoring of symptoms and to arrange testing. PHOCUS stores all actions associated with COVID-19 positive individuals, including case interviews, phone calls, text messages, emails and legal documents. Appendix 1 shows the minimum personal information collected from case interviews and stored in the system. This includes an individual's pathology results, exposure history, symptoms and existing medical conditions. It may also include details of medications and other personal information provided by the individual to WA Health or recorded in case notes.

As at March 2022, PHOCUS held information about 128,600 positive people, 41,400 close and casual contacts, and 50,400 travellers.

By May 2022, WA Health had spent over \$2.8 million for PHOCUS development, support and cloud infrastructure (including automation enhancements so WA Health can re-use PHOCUS for other infectious diseases).

Conclusion

PHOCUS continues to play an important role in supporting WA Health's COVID-19 contact tracing efforts. However, WA Health has provided limited information to the community about what personal information they collect, including from other government and non-government entities, to help with contact tracing. They need to improve controls to effectively protect the confidentiality of peoples' personal and medical information stored in PHOCUS. In the absence of State privacy legislation, and consistent with the Commonwealth *Privacy Act 1988*, people have a right to expect that WA Health will protect the privacy of their

information. In so protecting, WA Health will build trust and confidence in government and uphold the universal human right to information privacy.

A third party vendor has unnecessary and excessive access to peoples' personal and medical information that was not encrypted⁴ or masked to reduce the risk of unauthorised access and disclosure. Further, the lack of data access logs and monitoring means WA Health would not know if information had been inappropriately accessed or by whom. This is of significant concern as inappropriate changes to a person's COVID-19 status in the system could result in incorrect decisions about whether or not they need to isolate, with consequential social and economic impacts.

Contracts with third party vendors lack important security requirements, which present risks to the confidentiality and integrity of personal and medical information in PHOCUS. WA Health's oversight of their main PHOCUS vendor is not informed by a contract management plan. This may impact decision-making about the extent and nature of ongoing support for the system.

WA Health has continued to address weaknesses identified during the audit. This includes automation of inefficient manual data handling processes, encryption and masking of personal and medical information, logging and monitoring of user accounts and profiles, and inclusion of security breach disclosure requirements in vendor contracts.

⁴ Data encryption is where data appears unreadable to an unauthorised person.

Findings

WA Health uses personal information from various sources but has not clearly communicated this to the community

There is limited information available to the community that WA Health uses personal information from a variety of sources, including information initially collected by other State entities for different purposes, to support contact tracing (Figure 1), and stores it indefinitely. This includes information about positive cases, identified close and casual contacts, and travellers. Lack of transparency about the variety of information accessed (and from which sources, including government entities) to assist in contact tracing efforts could erode public trust in government institutions.

WA Health decides what information sources to access to help with contact tracing. For example, they used CCTV footage on a case by case basis and obtained Transperth SmartRider data between December 2021 and January 2022 during the 'backpacker Mess Hall Delta outbreak'.⁵ Information about travellers into WA was consistently recorded in PHOCUS throughout the pandemic so that WA Health could monitor their quarantine status and COVID-19 symptoms.

We previously raised a related transparency issue in our *SafeWA – Application Audit* report⁶ in August 2021. During that audit we identified that the WA Police Force had accessed venue check-in data for policing purposes, contrary to the publicly stated purpose of the data only being used for contact tracing. Legislation was subsequently amended to prevent this from recurring with SafeWA data. However, the WA Police Force has also acknowledged it accessed G2G Pass data on 22 occasions during serious investigations using their policing access rights.⁷

WA Health needs to improve controls to effectively protect personal and medical information in PHOCUS

We expected to find robust access controls for this system given the sensitive nature of information it contains, and the consequences to people and public health contract tracing efforts if the information is inappropriately accessed or altered. We found a number of significant weaknesses, as outlined below, that must be addressed to protect the information in PHOCUS and for any future use of the system for other diseases.

External vendor has ongoing access to personal and medical information

WA Health granted a third party (non-clinical) software vendor full access to information in the PHOCUS production environment. This includes peoples' identifiable medical information and conditions such as asthma, liver disease, cardiac disease, pregnancy and medications (Appendix 1), and other information provided during case interviews. While WA Health approves third party access, it is good practice to limit access to sensitive information and only provide software vendors just-in-time⁸ access and, where appropriate, access only to masked data in non-production environments. This reduces the risk of unauthorised use and disclosure of personal and medical information. WA Health advised us they had assessed

⁵ ABC News, [WA records one new local case of COVID-19 following Perth Mess Hall rave](#), 26 December 2021.

⁶ Auditor General for Western Australia, [SafeWA – Application Audit](#), Report 2: 2021-22, August 2021.

⁷ Parliamentary Question 197 Legislative Council 22 March 2022.

⁸ Just-in-time access provides privileges for a predetermined period of time, on a needs basis to troubleshoot, upgrade or patch applications and systems.

and balanced the risks of ongoing vendor access to medical information against the need to develop the system quickly.

Data encryption and masking was not used to protect personal and medical information

WA Health only encrypted data in PHOCUS' test environment. The production database, accessible to PHOCUS contractors and a third party vendor, did not use encryption to protect personal and medical information (for example, names, dates of birth and medical histories). The confidentiality of information may be compromised when appropriate database security controls are not in place. This could result in inappropriate disclosure of information and reputational damage to WA Health. During the audit, and following audit enquiries, WA Health implemented encryption to personal and medical information in the production environment.

Although some information was masked⁹ in the test environment, information captured by the G2G application was not. As a result, users could access travel information, which included personally identifiable information. It is better practice to mask information in test environments to reduce the risk of its unauthorised access and disclosure. Following audit enquiries, WA Health implemented masking to all information in PHOCUS' test environment.

Access to personal and medical information is not adequately logged

WA Health did not keep logs of user 'view' access to information in PHOCUS. Only 'edits' (changes or deletions) to information in the system were logged but WA Health did not monitor these logs for inappropriate activity. WA Health will not know if personal or medical information is inappropriately accessed (viewed or edited by WA Health staff or their third party vendors). Malicious activity may go undetected if access to information is not adequately logged and monitored. Following our audit enquiries, WA Health advised us they have now implemented a process to monitor edit access (data changes), but had not implemented a process to log view access (to detect snooping) due to perceived system performance issues, and their staff remained bound by the *Acceptable Use of Information and Communications Technology Policy*.

Former vendor's access was not revoked

Privileged access rights to PHOCUS were not revoked in line with WA Health's requirements. Two system administrator accounts, belonging to a former third party vendor, could be used to gain access to both the production and test environments more than 12 months after the end of the vendor contract. This is because the accounts were still linked to the vendor's email address and could be used to reset those account passwords. Following audit enquiries, WA Health assessed the impact on PHOCUS availability and removed the vendor's email address. WA Health also informed us that their internal review did not find any emails sent to these addresses.

There is an increased risk of unauthorised access and changes to PHOCUS system if accounts of former users are not revoked. WA Health's *User Access & Password Standard* requires users (privileged and non-privileged) who resign or are terminated to have their account access immediately revoked. During the audit WA Health implemented an access review process to deactivate PHOCUS accounts in line with the standard.

Furthermore, a significant number of users had privileged access rights to PHOCUS. There were 14 users in the production and 57 in the test environment that had system administrator

⁹ Data masking is a technique which copies and conceals sensitive information to protect the privacy in non-production environments. These environments are generally used for testing and development activities.

rights. This allowed vendor staff to manage user accounts, view and modify data, customise the application and carry out other high impact operations within PHOCUS.

Controls on file uploads and sharing are inadequate

The file upload function in PHOCUS was not restricted to pathology results and other essential documents. Malicious files, such as executables¹⁰ and JavaScript¹¹ code, could be uploaded to compromise the confidentiality, integrity and availability of PHOCUS and adversely impact WA Health's contact tracing ability. WA Health had plans to implement a cloud-based scanner to check files uploaded to PHOCUS for malware, but, at the time of our audit, it was only available in the test environment.

There were no data loss prevention controls in place to prevent unauthorised sharing of personal and medical information in PHOCUS, and WA Health did not monitor documents shared with external and unauthenticated parties. Poor controls can result in unauthorised disclosure of sensitive information and reputational damage to WA Health.

During the audit and following our enquiries, WA Health implemented blacklisting to prevent some types of files being uploaded and shared, and introduced malware scanning capability into the production environment.

Key security requirements are missing from contracts with third party vendors

Contracts between HSS and its PHOCUS third party vendors lack important contract requirements. Contracts do not include:

- background screening requirements for vendor staff accessing or maintaining PHOCUS and its infrastructure
- information and cybersecurity incident disclosure requirements
- the right to audit the security profile of vendors.

The absence of these contract requirements increases the risk of unauthorised access to sensitive personal and medical information in PHOCUS. There is also a risk that WA Health may not be notified of security incidents that affect PHOCUS, such as data breaches. During the audit and following our enquiries, HSS amended some vendor contracts to include security breach disclosure requirements and the right to audit the security profile of vendors.

There is also no contract management plan for the main third party vendor contract, which would highlight shortfalls in the scope of support services required. Without the plan, WA Health cannot determine if they receive agreed services to achieve desired outcomes. A contract management plan is a requirement of WA Health's *Procurement Procedures*. The current contract will cease on 30 June 2022 and WA Health is yet to decide the extent and nature of any ongoing support that will be required.

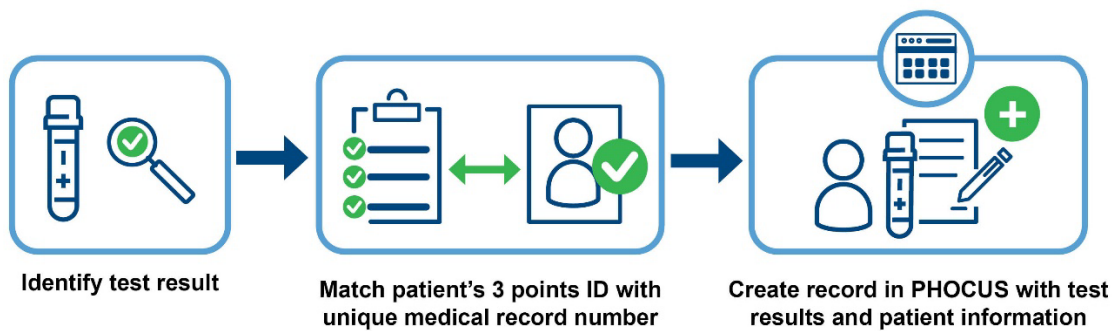
There is a risk of inaccurate data due to poor data management

Manual data entry processes increased the risk of errors

Linking COVID-19 pathology results with people and then creating individual patient records in PHOCUS involved a lengthy manual process (Figure 2). Manual data entry processes were inefficient and prone to increased errors, especially as large datasets were involved.

¹⁰ Executable files are set of instructions to achieve a task or transaction.

¹¹ JavaScript is a popular web programming language.



Source: OAG

Figure 2: Manual process of adding patient records to PHOCUS

For example, on 29 June 2021, WA Health reported administering (and notifying) over 18,000 pathology results in a single day. A subset of positive cases would have been manually registered in PHOCUS. As positive case numbers grow so will inefficiencies and errors.

WA Health had plans to automate linking of pathology results to individuals, to address scaling and data quality issues. This occurred approximately 20 months after PHOCUS was implemented. While we acknowledge that WA Health have been under considerable pressure to deliver various systems in response to the COVID-19 pandemic, data integrity and confidentiality of information in PHOCUS should remain a priority of the highest order.

We also found a small number of inconsistencies in data. Three COVID-19 positive individuals were recorded as 'invalid' or 'cancelled' in the data warehouse but were correctly recorded as positive in PHOCUS as per pathology test results. The data warehouse collects information from different sources for analysis and reporting. Although small in number, WA Health should continue to manage data quality and address the root cause of inconsistencies that influence public health isolation requirements, and the State's COVID-19 decision making and reporting. Additionally, WA Health is aware that contact records are duplicated when data is imported into PHOCUS and has a process to remove these duplicates.

Recommendations

WA Health should:

1. improve transparency to the community around the sources they collect personal information from and how it is used

Entity response: Agreed

Implementation timeframe: The *Public Health Act 2016* section 134c, provides the Department of Health (the Department) with the power to request external data sources; 'information about any circumstances in which the exposed person may have exposed another person to the notifiable infectious disease'. The Department will update the publicly available SafeWA terms and conditions to include notification that other data sources may be used.

2. protect the confidentiality, integrity and availability of peoples' personal and medical information in PHOCUS through:
 - a. restricting access to medical records to only those individuals that require it
 - b. data encryption and masking
 - c. effective user access controls
 - d. logging and monitoring of view and edit access
 - e. restricting file uploads to only approved types

Entity response: Agreed

Implementation timeframe:

- a, c. Access is already restricted and is granted via user provisioning processes including agreement to the WA Health User Acceptance Policy.
 - b. Data encryption in the PHOCUS production environment was complete on 31 October 2021. Data obfuscation was implemented in the user acceptance testing environment on 26 November 2021.
 - c. User access controls are in place.
 - d. A process to monitor and respond to user activity was strengthened by Health Support Services (HSS) and the Department during the audit period. HSS will assess options to log and monitor view access and prepare an associated plan by July 2022.
 - e. File uploads were restricted on 29 November 2021 via a blacklist through the vendor, in accordance with industry best practice.
3. continue to improve data quality processes, including resolution of COVID-19 result inconsistencies across different systems

Entity response: Agreed

Implementation timeframe: The Department will continue to improve data quality processes as per standard continuous improvement. The inconsistencies identified were errors from private pathology labs that were not used for operational contract tracing purposes and posed no risk to the public.

4. address existing and emerging risks in vendor contracts and where appropriate develop contract management plans.

Entity response: Agreed

Implementation timeframe: HSS strengthened its agreements with vendors in December 2021 to include security breach notification and right to audit. HSS will continue to monitor and address risks associated with vendor contracts, and ensure all contracts have a contract management plan in place.

Response from WA Health

The Department of Health (the Department) and Health Support Services (HSS) implemented PHOCUS in a short timeframe to support contact tracing for the management of COVID-19 cases. HSS implemented PHOCUS concurrently with four other large scale COVID-19 applications. Since April 2020, PHOCUS has been continually improved and enhanced to meet operational needs and best practice. PHOCUS has been extremely effective in supporting the State Government's management of COVID-19 through the Test, Trace, Isolate and Quarantine public health strategy.

The Department and HSS accepts all recommendations and note the report highlights many historic items that have largely been previously addressed or were issues where existing controls were strengthened. No breach of privacy has occurred in relation to the system, continuous data cleansing and quality checking is undertaken, no inaccuracies in case status impacting management were found and no inappropriate use of the system was recorded. This demonstrates the robustness of PHOCUS and that the data is well managed and secure.

The Department and HSS also believe the issues raised were appropriately managed given the need to balance speed of development, resource demands for other COVID-19 applications and application quality. For example, the finding related to third party vendor access only pertains to one system administration email account and five external vendor staff (at the time of the audit), all who agreed to comply with the same confidentiality and Acceptable Use Policy as WA Health employees. The Department and HSS is pleased the audit demonstrated the effectiveness of the Department and HSS' data management processes and our ability to maintain the integrity of PHOCUS data.

Audit focus and scope

Each year we review a selection of important software programs (applications) that public sector entities rely on to facilitate their key business processes. Applications help entities to perform important routine functions (such as finance, human resources, case management, licensing, billing and service delivery) and those functions that are unique and essential to them. If applications and their related processes are not managed appropriately, stakeholders including the public, may be affected.

Our application audits focus on people, process, technology and data. We follow data from input and processing through to storage, handling and outputs.

We review key controls that ensure information is complete, accurately captured, processed and maintained. Failures or weaknesses in these controls can result in loss or inappropriate use or disclosure of information, service delivery delays and disruptions, and increase the risk of fraud and financial loss.

Our tests may highlight weaknesses in control design or implementation that increase the risk that an application's information may be susceptible to compromise. While our tests are not designed to identify if information has been compromised, we may become aware of instances during an audit.

This was an independent audit, conducted under section 18 of the *Auditor General Act 2006*, and in accordance with Australian Auditing and Assurance Standards. The approximate cost of undertaking the audit and reporting was \$104,000.

Appendix 1: Form showing minimum personal information collected during case interviews and stored in PHOCUS



Public Health Operations
Public Health Emergency Operations Centre

COVID-19

PHOCUS Downtime Form – Case

If PHOCUS is unavailable this form may be used to record information from interviews and later transcribed into PHOCUS. This form does not completely replicate all fields within a PHOCUS Record but the minimum for immediate management and decision making only. Further information may be collected at subsequent interviews. This document follows on from the creation of Entity and Record documents and is applicable to individuals who have been identified as a Confirmed Case of COVID-19.

RECORD - Personal Details		<input type="checkbox"/> Details confirmed
First Name	Surname	
Status	Date of Birth (dd/mm/yyyy)	Age
Mobile	Patient URMN	
Email	Primary Language	
Person		<input type="checkbox"/> Interviewed
Case Assessment		
Case No.	Checklist: <input type="checkbox"/> Advise patient to phone ahead to GP/ED if conditions decline, symptoms change and/ or requires medical attention <input type="checkbox"/> Advise person to remain isolated at home while symptomatic (usual management of influenza like illness) <input type="checkbox"/> Manage as per influenza-like illness or respiratory illness <input type="checkbox"/> Advise patient to remain isolated for 14 days if they have travelled to mainland China (excluding Hong Kong and Macau) <input type="checkbox"/> GP to monitor for clinical updates from CDC	
Notification Time:		
Notification Date:		
Notification Received Date		
Variant Strain	Case Status: <input type="checkbox"/> Confirmed <input type="checkbox"/> Confirmed - Non-WA <input type="checkbox"/> Historical <input type="checkbox"/> Suspect <input type="checkbox"/> Case Definition Not Met <input type="checkbox"/> Under Investigation	
Isolation Start Date	Initial PCR Result <input type="checkbox"/> None <input type="checkbox"/> Strong <input type="checkbox"/> Moderate <input type="checkbox"/> Weak <input type="checkbox"/> Very Weak <input type="checkbox"/> Not Detected	
Deceased <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not asked/Not eligible	Consent PHOps to use COVIDSafe Data? <input type="checkbox"/>
Exposure History		
Index Case – Name		
Country of Acquisition		
Place of Acquisition		

Place of Acquisition - NNDSS field	<input type="checkbox"/> Australia - postcode known	<input type="checkbox"/> Australia - postcode unknown	<input type="checkbox"/> Australia, State/Territory known but postcode unknown
	<input type="checkbox"/> Overseas - country known	<input type="checkbox"/> Overseas - country unknown	<input type="checkbox"/> No information / not followed up
Case Found By:		Exposure Setting:	
<input type="checkbox"/> Clinical presentation <input type="checkbox"/> Contact tracing/Epidemiological investigation <input type="checkbox"/> Contact tracing/ Epidemiological investigation via COVIDSafe <input type="checkbox"/> Screening (excluding antenatal) <input type="checkbox"/> Clinical and epidemiology <input type="checkbox"/> Antenatal screening		<input type="checkbox"/> Aged care facility <input type="checkbox"/> Correctional facility <input type="checkbox"/> Educational setting <input type="checkbox"/> Healthcare facility <input type="checkbox"/> Household setting <input type="checkbox"/> Military setting <input type="checkbox"/> Other workplace setting <input type="checkbox"/> Residential care facility <input type="checkbox"/> Travel (with case) <input type="checkbox"/> Under investigation <input type="checkbox"/> No likely exposure setting identified <input type="checkbox"/> Other setting <input type="checkbox"/> Unknown	
Source of infection:			
<input type="checkbox"/> Overseas acquired <input type="checkbox"/> Locally acquired - Contact of a case or in a known cluster <input type="checkbox"/> Locally acquired - Contact not identified <input type="checkbox"/> Locally acquired - Contact not identified, interstate travel - investigation ongoing <input type="checkbox"/> Locally acquired - Contact not identified <input type="checkbox"/> Under initial investigation			
Occupation			
Occupation Type:		Health Care Worker? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Occupation Location:		Currently working in WA? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Other Occupation Details:		Work involves patient contact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Select at risk occupation		<input type="checkbox"/> Health Care Worker <input type="checkbox"/> Aged Care Worker <input type="checkbox"/> Early Childhood Educator <input type="checkbox"/> School Teacher/ Staff <input type="checkbox"/> Military Personnel <input type="checkbox"/> Correction Facility <input type="checkbox"/> School <input type="checkbox"/> Distribution Centre <input type="checkbox"/> Uber/ Taxi <input type="checkbox"/> Food Processing Facility <input type="checkbox"/> None <input type="checkbox"/> Unknown <input type="checkbox"/> Other Occupation _____	
Worked in incubation period?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Worked in infectious period?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Work involves patient contact?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Health			
Assessment			
Pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No		Gestation (weeks)	Medications
Additional Pregnancy Notes			

Symptoms					
Asymptomatic?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Symptom onset date		
Acute Respiratory Distress Syndrome	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Arthralgia (joint pain)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Conjunctivitis	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Cough	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Diarrhoea	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Fatigue	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Headache	<input type="checkbox"/> Yes	<input type="checkbox"/> No	History of fever	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Loss of appetite	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Loss of smell	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Loss of taste	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Malaise	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Measured fever ($\geq 37.5^{\circ}\text{C}$)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Myalgia (muscle pain)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Nausea	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Pneumonia/ Pneumonitis	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Rhinorrhoea (runny nose)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Shortness of breath	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Sore throat	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Vomiting	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other symptoms <i>Please detail:</i>	<input type="checkbox"/> Yes	<input type="checkbox"/> No			
Comorbidities					
Asthma	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Cardiac Disease	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Chronic Respiratory Condition	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Diabetes	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Immunosuppressive	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Liver Disease	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Neurological Disorder	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Obesity	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Pregnant	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Renal Disease	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Other	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Other Comorbidities:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
None	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Unknown	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Clinical Notes (<i>Including Other Symptoms</i>)					
Testing					
Has this person been tested?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
Vaccinations					
Has received a COVID-19 vaccine dose?			<input type="checkbox"/> Yes <input type="checkbox"/> No		
Brand	<input type="checkbox"/> CanSino Biologics	<input type="checkbox"/> Covishield (India)	<input type="checkbox"/> Moderna		
	<input type="checkbox"/> Sinopharm / BIBP	<input type="checkbox"/> Sinovac Biotech	<input type="checkbox"/> Pfizer / BioNtech		
<input type="checkbox"/> Novavax	<input type="checkbox"/> Sputnik V	<input type="checkbox"/> Janssen (Johnson & Johnson)	<input type="checkbox"/> AstraZeneca / University of Oxford		
Country where vaccinated:					
Information Source	<input type="checkbox"/> Self/ parent recall only	<input type="checkbox"/> Australian Immunisation Register (AIR)			
Written/electronic record from			<input type="checkbox"/> Other (<i>please specify</i>)		
<input type="checkbox"/> an overseas health provider or government					
<input type="checkbox"/> an Australian healthcare provider (not AIR)					

Travel	
Returned Traveller COVID-19 Questions	
Date of arrival in WA	Flight / Seat number:
International Travel in past 14 days? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Countries Travelled in last 14 days?	
City/ Province Where Travelled:	
Quarantine	
In Quarantine when first tested positive <input type="checkbox"/> Not in Quarantine <input type="checkbox"/> Quarantine - Home <input type="checkbox"/> Quarantine - Government managed hotel or facility <input type="checkbox"/> Quarantine - Industry managed hotel or facility <input type="checkbox"/> Quarantine - Other (specify below) <input type="checkbox"/> Quarantine - Not specified	State of Residence Returned traveller (tick one only) <input type="checkbox"/> Exempt at home/non-SHICC <input type="checkbox"/> In SHICC hotel SHICC Quarantine Hotel:
Quarantine/Isolation Status <input type="checkbox"/> Cleared case/completed close contact <input type="checkbox"/> Case Pending Symptoms <input type="checkbox"/> Deceased	
Quarantine Other:	
Hotel room number or exempt address:	Isolation details:
Movements	
Incubation Period	
Incubation Period - start date	<input type="checkbox"/> General movements recorded in case notes <input type="checkbox"/> Key movements recorded in Track & Trace
Infectious Period	
Infectious Period - start date	<input type="checkbox"/> General movements recorded in case notes <input type="checkbox"/> Key movements recorded in Track & Trace
Movements	
Track and Trace	
Event Name (Flight number, date, departure airport)	
Address: Perth Domestic Airport Public Viewing Area <input type="checkbox"/> Yes <input type="checkbox"/> No	
Starting Time: (Flight arrival time)	
Daily Monitoring	
Daily Monitoring Details	
Daily Monitoring Required? <input type="checkbox"/> Yes <input type="checkbox"/> No	Daily Monitoring Consented? <input type="checkbox"/> Yes <input type="checkbox"/> No

How will the person be daily monitored? <input type="checkbox"/> SMS <input type="checkbox"/> Email <input type="checkbox"/> Call (only use if absolutely necessary)		Daily Monitoring Start Date:
Next Steps		
Completed Case Notes	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Case email sent	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Risk Assessment completed and uploaded to PHOCUS	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Risk Assessment emailed to HealthandWellbeing@health.wa.gov.au	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Completed by		
Name:		Signature
Designation:		Date:
Case Notes		
Initial Case Interview		
Incubation Period Dates & Movements		

Case Notes
Infectious Period Dates & Movements

Source: Department of Health

This page is intentionally left blank

This page is intentionally left blank

This page is intentionally left blank

Auditor General's 2021-22 reports

Number	Title	Date tabled
14	Audit Results Report – Annual 2020-21 Financial Audits of State Government Entities Part 2: COVID-19 Impacts	9 May 2022
13	Information Systems Audit Report 2022 – State Government Entities	31 March 2022
12	Viable Cycling in the Perth Area	9 December 2021
11	Forensic Audit Report – Establishment Phase	8 December 2021
10	Audit Results Report – Annual 2020-21 Financial Audits of State Government Entities	24 November 2021
9	Cyber Security in Local Government	24 November 2021
8	WA's COVID-19 Vaccine Roll-out	18 November 2021
7	Water Corporation: Management of Water Pipes – Follow-Up	17 November 2021
6	Roll-out of State COVID-19 Stimulus Initiatives: July 2020 – March 2021	20 October 2021
5	Local Government COVID-19 Financial Hardship Support	15 October 2021
4	Public Building Maintenance	24 August 2021
3	Staff Exit Controls	5 August 2021
2	SafeWA – Application Audit	2 August 2021
1	Opinion on Ministerial Notification – FPC Arbitration Outcome	29 July 2021

**Office of the Auditor General
Western Australia**

7th Floor Albert Facey House
469 Wellington Street, Perth

Perth BC, PO Box 8489
PERTH WA 6849

T: 08 6557 7500
E: info@audit.wa.gov.au
W: www.audit.wa.gov.au



[@OAG_WA](https://twitter.com/OAG_WA)



Office of the Auditor General for
Western Australia