Management of COVID-19 outbreak in hospital settings

Guidance – version 1.0 – 12 November 2021

Note: Knowledge about COVID-19 is evolving therefore Queensland Health will continue to review and update this guidance as new information becomes available.
Approval and implementation

Document custodian:
Covid-19 Division

Approving officer:
Assistant Chief Health Officer, COVID-19 Incident Management

Approval date: _________________

Version control: Revised document

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<th>Changes</th>
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Approved by COVID System Response Group

Date

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Jane Hancock
COVID Health System Response Lead
Chair, COVID System Response Group
1 Introduction

Successful control of outbreaks of COVID-19 in high-risk institutional settings such as hospitals necessitates rapid implementation of outbreak control strategies as well as an institutional system response with well-defined governance, clear communications and robust processes for data collection and management.

This document provides incident-specific guidance on the management of an outbreak of COVID-19 in a Queensland Health hospital setting following the identification of a confirmed case of COVID-19 in a person associated with the facility, indicating potential hospital and/or community transmission.

Management may include exposure assessment for healthcare workers (HCW), patients and all types of visitors in hospitals to inform risk management and public health action such as contact tracing. The document sets out guidance on the roles and responsibilities of relevant teams during the phases of the investigation, which may include:

- establishment of governance structures including an incident management team with appropriate stakeholder representation, which is tasked with incident oversight and the development and maintenance of an incident-specific outbreak control plan
- establishment of reporting arrangements
- an initial rapid assessment to enable identification, assessment and quarantine of those HCW, patients and visitors who are most likely to be close contacts
- implementation of restrictions and service closures while a more thorough outbreak investigation and response occurs
- a more detailed contact assessment to guide subsequent actions, which may include application of work restrictions for asymptomatic HCW contacts.

These actions take place in accordance with:

- Queensland Health Disaster and Emergency Incident Plan (QHDISPLAN)
- Queensland Health Public Health Subplan
- Health Service Directive Declaration and Management of a public health event of state significance
- existing HHS and/or facility disaster and incident management plans
- Queensland Health Guideline for the management of outbreaks of communicable diseases in healthcare facilities
- Queensland Health Interim infection prevention and control guidelines for the management of COVID-19 in healthcare settings
- Coronavirus Disease 2019 (COVID-19) CDNA National Guidelines for Public Health Units
- COVID-19 SoNG supplement and operating protocols for Public Health Units in Queensland

The recommendations are based on currently available information about COVID-19. The recommendations might not anticipate every potential scenario. Expert clinical judgement based on all available information should be used to summarise exposure risk, assign contact category and determine the need for work restrictions, quarantine and other measures such as testing.
2 Scope

Confirmed acute COVID-19 cases are managed under recommended transmission-based precautions in a number of Queensland Health facilities. This document focuses specifically on investigation and management of COVID-19 incidents within hospital facilities which pose a potential transmission risk, including:

- a previously unidentified case, cluster or outbreak has been identified involving staff, patients or visitors of a Queensland Health hospital setting
- a scenario where a breach of precautions is suspected or confirmed when managing known cases.

The guidelines are applicable to management of incidents associated with a private hospital setting.

Out of scope for this document is the management of cases, clusters or outbreaks in other healthcare settings such as general practices.

3 Governance

The roles and responsibilities outlined below are in accordance with the Queensland Health Disaster and Emergency Incident Plan (QHDISPLAN) and the Queensland Health Public Health Subplan.

3.1 Role of the State Health Coordinator

Under the Public Health Subplan, the Director-General has appointed the Chief Health Officer (CHO) as State Health Coordinator (SHC) to coordinate and lead the Queensland Health response to COVID-19. The SHC (CHO) is responsible for providing strategic leadership across Queensland Health, non-government health services, local and state government agencies and the Queensland community on the Queensland Health response including the management of public health risk.

The Health Service Directive for the management of public health events of state significance has been activated since 20 January 2020, requiring all Hospital and Health Services (HHS) to follow the direction of the CHO for the COVID-19 response.

3.2 Role of the SHECC

The State Health Emergency Coordination Centre (SHECC) is the peak emergency coordination centre, tasked with ensuring a coordinated response to COVID-19 and effective and efficient integration with other agencies.

Functions of the SHECC include:

- supporting activities of HHS Health Emergency Operation Centres (HEOCs)
- conducting intelligence activities to prioritise allocation of department resources
• receiving, collating and distributing situation reports
• coordinating information and situational awareness
• receiving and managing requests for assistance from HHSs
• undertaking planning and logistics tasks.

3.3 Role of the State PHIC and the COVID-19 IMT

As the COVID-19 response requires state coordination of the public health function, the SHC has appointed a State Public Health Incident Controller (SPHIC) and established the COVID-19 Incident Management Team (COVID-19 IMT). The SPHIC reports to the State Health Controller (CHO).

Functions of the COVID-19 IMT include:
• providing technical/specialist expertise to the SHECC including state-wide public health risk assessment
• providing specialist infection control guidance, advice and direction to SHECC, the HHS, infection prevention and control practitioners state-wide and to other internal and external committees and stakeholders in consultation with the Statewide Infection Clinical Network (SICN)
• supporting and, where requested, advising core public health services throughout the state
• providing operational leadership and facilitating the coordination of public health resources in Queensland to respond to COVID-19 incidents including complex cases, clusters, outbreaks and incidents in which a public health unit (PHU) requires support from other PHUs, the Health Contact Centre or the contact tracing hub QTrace
• developing and monitoring implementation of strategies associated with the management of COVID-19 incidents
• liaising with other state and national agencies, industry and other stakeholders as required to ensure a planned, efficient and effective public health response.

3.4 Roles and responsibilities of the HHS

3.4.1 HHS Chief Executives

HHS Chief Executives are responsible for:
• putting plans in place to manage COVID-19 incidents within their gazetted area
• ensuring relevant staff are adequately trained and resourced to execute plans to manage COVID-19 incidents within their gazetted area
• complying with relevant health service directives and disaster and emergency incident plans
• implementing the department’s planned and emerging strategies to manage COVID-19 incidents
• consider health and wellbeing requirements of staff during hospital outbreak, refer to COVID-safe workplaces (health.qld.gov.au) for more information. Early consultation with your local HR Branch may positively influence staff management.
3.4.2 HHS HEOCs

HEOCs are stood up to provide incident management support structures and functions, especially when the incident is prolonged and protracted response. HEOCs are responsible for implementing planned and emerging strategies to manage health incidents.

Functions of the HEOC include:
- coordination of activities and support for the local incident response
- management of resources, including accessing contact tracing officers (CTOs)
- development and maintenance of situational awareness and reporting upwards to SHECC
- liaison with other agencies as required
- ensuring an Outbreak Control Team (OCT) is stood up to manage an outbreak/cluster in a hospital setting.

3.4.3 Outbreak Control Team

The role of the Outbreak Control Team (OCT) is to lead and coordinate the management of the outbreak in the hospital, including identifying and requesting through the HEOC the resources required to manage the incident.

The OCT Incident Controller is responsible for identifying the resources required to achieve rapid case investigation, contact tracing and workplace exposure risk assessment (refer to the current CDNA SoNG), including ensuring sufficient resources to implement a timely and efficient response. This includes:
- sufficient contact tracing capacity. The Incident Controller will liaise with the HEOC to ensure sufficient numbers of staff trained in contact tracing in both the hospital and PHU context are able to be rapidly deployed and appointed to support the outbreak response.
- sufficient data collection and management capacity. The Incident Controller will liaise with the HEOC to ensure sufficient numbers of operational, administrative and data management specialist staff to collate accurate information are rapidly deployed to support contact tracing (e.g. lists of potential contacts with identifying information and contact details, drawn from shift rosters, allocation lists, visitor lists etc.).
- sufficient communications and HR capacity.

Where additional resources from outside of the HHS are required, the HEOC should submit an urgent request for these resources through SHECC, noting the actions they have taken to access these resources internally.

The OCT is responsible for formulating and implementing an operational response plan that clearly assigns key activities to relevant areas. It is possible there may be concurrent public health action required to manage community transmission risks associated with the incident.

The OCT is responsible for ensuring the appropriate identification and follow-up and management of all patients, including discharged patients that were inpatients during the infectious period, staff, contractors, volunteers and visitors.

The OCT is responsible for the follow-up and management of inpatients, hospital staff and hospital volunteers.
The OCT will advise the PHU of all identified discharged patients, contractors and visitors that require PHU follow-up and management.

The OCT is responsible for ensuring all persons identified as close contacts are referred to the public health for any relevant public health action.

An OCT Incident Controller is appointed by the HEOC with membership that should include at a minimum:

- Chief Operating Officer or delegate  
  (participation may depend on size/nature of incident)
- HHS COVID-19 Incident Controller or delegate
- Executive Director Medical Services or delegate
- Executive Director Nursing and Midwifery Services or delegate
- Executive Director Human Resources or delegate
- Representative/s from the Infection Prevention and Control (IPC) Unit
- Infectious Diseases Physician if available in HHS
- HHS or Pathology Queensland microbiologist
- HHS Public Health Unit (medical and nursing representation)
- Data Coordinator and/or Clinical Data Manager
- Operational services representative
- HHS communications team representative
- SHECC liaison officer
- Representative from COVID-19 IMT
- Representative from SICN
- QAS liaison officer
- Representative from Aboriginal and Torres Strait Islander Health Service.
- Occupational health and safety representation

### 3.4.4 Roles of specialist teams within HHS

Infection Prevention and Control teams (IPC) and PHUs within the HHS are critical to incident or outbreak management. The HHS has oversight of the capability, capacity and competing priorities of these teams. Membership of infection control specialists on the OCT allows priority determination of specific infection control activities required to support the response. When managing a hospital outbreak the following may be considered as a general guide.

**The hospital Infection Prevention and Control Unit (IPC Unit) should:**

- nominate a staff member from the IPC Unit to participate in the OCT
- establish an ICP unit roster (with contact details) to ensure the OCT has an IPC contact at all times (in hours and after hours) for the duration of the incident
- work with the PHU and other members of the OCT to facilitate initial rapid assessment to enable identification, assessment and quarantine of those HCW, patients (including discharged patients) and visitors who are most likely close contacts
• with the CTOs assigned to the response and/or other relevant members of the OCT, lead a detailed assessment of potential exposures and sources of transmission risk to guide ongoing outbreak control actions across the facility, utilising all relevant sources of information
• investigate whether the infection may have been acquired within the health service.

The PHU should:
• investigate and notify to COVID-19 IMT all cases as outlined in the Coronavirus Disease 2019 (COVID-19) CDNA National Guidelines for Public Health Units
• undertake an initial rapid assessment in liaison with the IPC team, including the use of an Expert Advisory Group (EAG) as necessary
• provide preliminary notification to the HEOC to trigger declaration of an incident and initiation of response
• oversee information data management regarding cases and contacts
• oversee the management of contacts in the community, including discharged patients, visitors and contractors once handed over by OCT
• provide a public health liaison officer to participate in the OCT
• identify and provide contact details for the PHU lead and liaison officer to the OCT
• provide ongoing support as required for the OCT
• be responsible for issuing quarantine directions to all relevant contacts, including hospital inpatients and staff.

3.5 Role of Expert Advisory Groups

Expert Advisory Groups (EAG) can be convened to review available evidence, assess transmission and public health risk and provide expert advice on strategies and actions required to control the incident and public health risk. Participants may include representatives from the local IPC and PHU, plus COVID-19 IMT, Infectious Disease Physicians and Public Health Physicians from other HHS and representative/s from SICN. It is useful for HEOC and SHECC to also attend.
4 Preparedness

Preparedness is critical in assisting to minimize the consequences of a COVID-19 incident or outbreak in a hospital and ensuring an effective and timely operational response and recovery. Refer to the QHDISPLAN for further detail on the following key elements of preparedness:

- Planning
- Community engagement
- Capability integration
  - Training and education
  - Exercising
  - Lessons management
  - Incident-specific situation awareness.
- Staff HR/information systems are to update with correct staff details and able to be accessed urgently 24 hours a day, 7 days a week.
5 Contact tracing legislative requirements

Contact tracing functions must be performed by appointed CTOs

Public servants performing contact tracing functions to inform the public health management for notifiable conditions must be appointed as CTOs to require people to provide information as per Chapter 3 of the Public Health Act 2005 (Qld) (the Act). This allows contact tracing data to be included as notifiable conditions information in the Notifiable Conditions Register and to be shared and reported on to inform the public health response.

If the employee is not appointed under the Act as a CTO and they perform contact tracing functions, all information must be obtained voluntarily and with informed consent of the case and/or contact. To protect the person’s privacy, all employees must follow the privacy principles in the Information Privacy Act 2009 (Qld). This includes the requirement to provide advice in relation to the purposes for which personal information is collected, held, used and disclosed, before, or at the same time as the information is collected. Relying on the case providing information voluntarily could provide a barrier to the rapid containment of an outbreak in a hospital setting.

Appointed CTOs are able to undertake the following:

- case investigation to ascertain exposure and infectious periods in relation to the facility
- investigation of potential source of infection
- contact tracing in the community
- contact tracing in the facility
- workplace exposure risk assessment for all potential contacts in the facility
- identifying, informing and managing close contacts including referrals for the issuance of quarantine directions, implementing follow-up and monitoring testing compliance and results
- identifying, informing and managing all case contacts
- capturing all necessary information in relation to cases and contacts, including adverse outcomes
- maintaining privacy and confidentially in accordance with the Public Health Act 2005, Hospital and Health Boards Act 2011 and the Information Privacy Act 2009.
6 Incident response

6.1 Case investigation and notification

The PHU will interview confirmed COVID-19 cases to:

- confirm they are associated with the outbreak
- ascertain date of onset of illness, infectious period and exposure period
- identify contacts in the household and broader community
- identify possible exposure source/s.

If the case movement investigation determines that there is no risk to the healthcare facility, details about their illness should not be disclosed to that facility.

If the case is found to have been infectious whilst in the hospital setting, the PHU will:

- ensure the case is aware that the hospital will be notified and an appointed Contact Tracing Officer (as per OCT) may contact them to gather more information to identify contacts in the hospital setting as per the Guideline on management of outbreaks of communicable diseases in healthcare facilities
- urgently advise the COVID-19 IMT of the case and potential incident
- urgently notify the HHS HEOC or equivalent.

6.1.1 Initial assessment and response

The PHU is responsible for liaising with the IPC or, where established, other relevant member of the OCT to identify the known facts of the incident. The OCT will undertake an initial rapid assessment regarding transmission risk within the facility and provide recommendations to the HHS regarding urgent actions and interim control measures. An EAG may be useful for this purpose and a summary of evidence available to the EAG and decisions should be minuted and provided to the HHS HEOC.

Urgent actions may include:

- immediate removal of high exposure risk HCW and management of high exposure risk patients and visitors
- implementation of restrictions and service closures in areas of potential transmission risk.

6.2 Declare incident and activate the outbreak control plan

Triggers to declare an incident include:

- a previously unidentified case, cluster or outbreak involving staff, patients or visitors of a Queensland Health hospital setting
• a scenario where a breach of precautions is suspected or confirmed when managing known cases.

In public sector facilities, the HHS must activate and implement its outbreak control plan (OCP) in accordance with the Queensland Health Guideline for the management of outbreaks of communicable diseases in healthcare facilities.

The OCT is to be stood up as soon as the incident is declared.

6.3 Manage the outbreak

The HHS is responsible for an immediate and proactive approach to managing the outbreak. Local investigation and assessment of contacts should be initiated within four hours of notification to the health service.

6.3.1 Detailed contact assessment

A more detailed contact assessment to guide subsequent actions should commence to enable identification and exposure assessment of all individuals who may be at risk. This should be informed by the Work Permissions and Restrictions Framework for Workers in Health Care Settings.

The IPC leads this assessment which includes:

• confirm the timeline for the case, including exposure and infectious periods
• compile a map of what is known regarding movements of the case during the infectious period and identify areas of uncertainty
• from this information, establish the times and places of concern where transmission may have occurred within the facility, and, where relevant, define an enclosed space
• review and confirm definitions for high-risk and low-risk close contacts and casual contacts. Note that assessment of high and low risk includes both exposure risk and the consequential risk of forward transmission (e.g. household transmission to people who work in high risk settings).
• assess exposure risks for all possible contacts including but not limited to medical, nursing, allied health, paramedic, pharmacy, cleaners and food services, pathology, pastoral care, security (internal and Qld Police Service), contractors, students, administrative staff, volunteers and visitors
• all staff on relevant and overlapping shifts in the relevant geographical workspace/s should be regarded as potentially at risk and requiring assessment.
  − Potential sources of information might include shift rosters, patient allocation lists, patient documentation, list of staff attending education session, and tearoom logs, in addition to interviews with the case and potential contacts. Line managers are a key source of information and contact point for staff.
  − In addition to face-to-face contact during the course of patient care, other settings such as tearooms, shared work areas, staff working across different areas, changing rooms and bathrooms should be considered as potential locations where transmission may occur.
− This may involve review of medical records, electronic medical records, rostering systems, staff swipe card records and other workplace registers (e.g. tearoom registers) to thoroughly determine case movements throughout the facility.

- implement initial restrictions and service closures. These should be conservative and can be scaled back as further information emerges.

Note that in the course of the investigation, several interviews with the case may be necessary. In the event of multiple confirmed cases, each individual case will require a thorough investigation.

The OCT should confirm to the SHECC that processes are in place to follow up staff, patients, visitors and contractors as per the details below.

All information is to be collated using the minimum data set (Appendix C). Summary data should be included in the daily situation report.

6.3.2 HCW contacts

The OCT will ensure HCWs are managed in accordance with the recommendations contained in the current CDNA SoNG and the Work Permissions and Restrictions Framework for Workers in Health Care Settings

Any HCW determined have been exposed a COVID-19 case, be assessment and managed using the following tools:

- A risk assessment regarding the exposure should be undertaken guided by Table 1 (Work Permissions and Restrictions Framework for Workers in Health Care Settings), determining risk in fully vaccinated staff, based on PPE used and level of risk exposure;

- Work restrictions should be applied, guided by Table 4 (Work Permissions and Restrictions Framework for Workers in Health Care Settings), summarised here:
  o Low Risk Exposure – continue to work, wear a surgical mask at all times at work, leave work and get tested if develop symptoms
  o Low to Moderate Risk Exposure - continue to work, wear a surgical mask at all times at work, test on day 2,5,13
  o Moderate Risk Exposure : leave work and isolate until negative day 2 test, wear surgical mask and avoid common areas at work, +/- surveillance testing, day 5 and day 13 test
  o High Risk Exposure: leave work immediately and isolate day 2 and day 5 tests, consider return to work with additional measures if day 5 test negative. May return to work at a single site, with additional surveillance testing; daily saliva tests and; RT-PCR retest day 9 and 13. Wear a surgical mask at all times at work, leave work and get tested if develop symptoms.

In all scenarios staff should be advised that in the event they develop symptoms they should immediately leave work and get tested.

Following the initial exposure assessment, the PHU will be provided with the HCW contact spreadsheet/details.

Contact tracing of Pathology Queensland staff and contractors

Contact tracing for workers in the laboratory services should be undertaken by the relevant HHS where the affected service is located.

If the affected laboratory service is physically located within a hospital campus, the OCT should coordinate contact tracing laboratory services workers.
If the affected laboratory service is not physically located within a hospital campus, then the PHU where the service is located should coordinate contact tracing of laboratory services workers.

6.3.3 Inpatient contacts

The OCT chair will direct the relevant areas of the hospital to manage close contacts as follows:

- isolate close contacts in a single room or as directed by the hospital IPC Unit, in accordance with the direction and recommendations contained in the Queensland Health Interim infection prevention and control guidelines for the management of COVID-19 in healthcare settings
- verbally advise close contacts that they have been identified as a close contact and will be required to quarantine for 14 days from their last known contact with the case and should be tested if they become symptomatic at any time
- verbally advise close contacts about symptoms and further testing. Post-exposure testing will follow current CDNA/state guidelines.
- verbally advise close contacts that they will be issued with a quarantine direction by the PHU
- provide close contacts with information (verbally and in fact sheets) regarding quarantine requirements
- when ready for discharge, assess close contacts regarding a suitable location for quarantine and potential risks to their household, including household contacts who may be at higher risk or work in a high-risk setting. The public health management of contacts and quarantine will be determined on a case-by-case basis in consultation with the PHU and an expert advisory group, if necessary.

6.3.4 Contacts who are visitors, contractors and discharged patients

The PHU will assume responsibility of contact tracing of visitors, contractors and discharged patients, once handed over by the OCT. The PHU will direct the contact tracing staff allocated to the incident to follow-up visitors, contractors and discharged patients determined to be close contacts to ensure they are:

- verbally advised that they have been identified as a close contact and will be required to quarantine for 14 days from their last known contact with the case and should be tested if they become symptomatic at any time
- assessed regarding a suitable location for quarantine and potential risks to their household, including household contacts who may be at higher risk or work in a high-risk setting. The management of these will be determined on a case-by-case basis in consultation with the PHU and an expert advisory group, if necessary.
- verbally advised about symptom monitoring and further testing. Post-exposure testing will follow current CDNA/state guidelines.
- verbally advised that they will be issued with a quarantine direction by the PHU and advice on quarantine exit testing requirements
- provided information (verbally and in fact sheets) regarding quarantine requirements.
6.3.5 Implement other control measures

Other control measures may include:

- enhanced infection control procedures
- additional audit and monitoring of infection control procedures
- restrictions including non-essential visitors and staff; staff movements within the facility
- service closures.

6.4 Oversee logistic and human resource aspects of the response

The OCT is responsible for:

- implementing interim restrictions and service closures while a more thorough outbreak investigation and response occurs
- ensuring that appropriate industrial/human resource processes are in place to support staff determined to be close contacts and required to quarantine
- developing a communications strategy for both internal and external communication, e.g. planning virtual town hall meetings with staff in quarantine to capture a large group collectively to answer questions and discuss concerns. These meetings should include adequate representation of staff who are best placed to provide advice.

6.5 Information data management

To enable contact tracing to commence as soon as practicable following an exposure to a confirmed case, the OCT is responsible for ensuring that the HHS is able to readily collate contact information for potential contacts, which include employees, contractors, volunteers, students, inpatients and visitors.

The PHU will:

- provide the OCT with the following documents and information:
  - the case and contact data collection tool with the fields required for data entry and follow-up (Appendix C)
- provide oversight for information data management, including the urgent collection of minimum data sets to facilitate rapid contact tracing and data quality (Appendix C).

The OCT will oversee the establishment of a Data Management Cell with a Data Coordinator supported by the HHS data lead (likely the Data Manager) and the PHU Data Lead (likely the Epidemiologist), with a team comprising operational and administrative staff. This cell will:

- record information about potential contacts using the COVID-19 contact investigation minimum data set (Appendix C). The minimum data set is critical as it allows the information to be
directly uploaded into the Notifiable Conditions System (NoCS) and immediately accessed by the relevant Contact Tracing Officers.

- as soon as practicable, provide a minimum data set to allow contact tracing to commence. The essential minimum data required includes:
  - given name
  - surname
  - phone number
  - email (where no phone number is available).

- provide dates of birth and addresses for all identified potential contacts. Date of birth allows the PHU/OCT to perform data matching in NoCS to follow up testing of contacts. Note: Dates of births, addresses and exposure dates can be provided after the initial minimum data set is provided to the PHU/OCT. This will ensure that there are no delays in the commencement of contact tracing.

- provide information on visitor movement extracted from the Check In Qld app, with a focus on QR codes associated with specific areas of interest. This will also include records of those visitors who don't have access to the app. It is the HHS responsibility to ensure that all visitors register via this application for every visit. The HHS must ensure that all visitors that do not have access to the application are accurately captured in the data set (including name, mobile number and email address) and are able to be accessed immediately when required.

6.6 Reporting and communications

The OCT is responsible for the provision of situation reports to the SHECC and the SHC, which will be the CHO (or Deputy CHO), at the frequency requested by the SHC.

6.7 Contact tracing, quarantine and follow-up

The OCT will work with the IPC and PHU to assign contact tracing and follow-up for all specific groups e.g. staff, inpatients, visitors, discharged patients and:

- ensure good information flow between contact tracers in the hospital and the PHU through appropriate information sharing processes
- maintain contact information utilising the agreed line listing and ensure data is entered into NoCS as soon as possible. NoCS is a cloud-based system that supports the surveillance, monitoring, management and control of notifiable conditions
- maintain oversight of contact tracing outcome data including quarantine and testing data
  - Emergency Officers (general), usually situated in the local PHU, will issue quarantine directions together with written information regarding quarantine to all close contacts.
- confirm mechanism for follow-up of all contacts in quarantine, including symptom checks, compliance checks and testing
- developing reporting lines regarding hospital contact/s in quarantine who develop COVID-19 symptoms, including identified HCW or other staff.
Contact tracing workflow

1. Hospital uses templated worksheet to record minimum dataset for all potential contacts and provides this to the PHU.
2. EpiCOVID uploads worksheet into NoCS and creates a Group Event.
3. CTOs make initial contact with contacts, undertake exposure assessment, categorise contacts accordingly, undertake quarantine accommodation assessment and commence quarantine process.
4. Contacts are provided email/fact sheet/testing requirements.
5. Accommodation requests are forwarded to the HEOC.
6. Hospital completes the templated worksheet and hands it over to PHU/EpiCOVID on SharePoint.
7. EpiCOVID uploads worksheet into NoCS.
8. PHU issues quarantine direction to contacts.
9. EpiCOVID reconciles Day 12 test results and provides report to OCT.
10. OCT ensures all close contacts meet release from quarantine criteria, including exit testing. Hospital OCT is responsible for inpatients and hospital staff. PHU is responsible for discharged patients, visitors and contractors.
11. OCT refers contact to PHU if quarantine direction extension is required.

7 Incident closure

Declare the incident/outbreak over, debrief and report in accordance with existing incident management guidance and good practice. Provide a final report to the SHECC and COVID-19 IMT. Share and implement learnings.
Appendix A: Example healthcare worker COVID-19 occupational exposure assessment form

The following example occupational exposure assessment form has been developed to assist in identifying occupational sources of COVID-19 infection in healthcare workers (HCW). This is an example form only.

Any personal information collected by Queensland Health must be handled in accordance with the Information Privacy Act 2009. All personal information that is collected must be securely stored and only accessible by authorised Queensland Health staff.

Part 1: COVID-19 exposure assessment

<table>
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<th>Details of case interview</th>
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<tr>
<td>Name of interviewer:</td>
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<tr>
<td>Interview date:</td>
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<tr>
<td>Interview phone number:</td>
</tr>
<tr>
<td>PHU contact details:</td>
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</tbody>
</table>

A. Has a potential source of COVID-19 infection been identified from contact tracing performed by the PHU? □ Yes □ No

B. In last 14 days prior to onset of symptoms (or 14 days prior to testing if asymptomatic), did the HCW have any potential workplace contact with a confirmed COVID-19 case? □ Yes □ No

If answer is Yes to question A, liaise with the PHU for likely COVID-19 exposure and the need to investigate possible workplace exposure.

If answer is No to question A, proceed to question B.

If answer is Yes to question B, proceed to Part 2 of the exposure assessment form.

If answer is No to question B, refer the case to the PHU.

Part 2 of this assessment tool will assist in gathering information regarding workplace exposure.

Part 2: HCW occupational exposure information

Collect information for the 14 days prior to illness onset (or in the case of asymptomatic HCW, the 14 days prior to their specimen collection date) for each facility where the HCW has worked.
## Healthcare worker case demographic information

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<th>Last name:</th>
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<td>First name:</td>
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**Sex:**
- [ ] Male
- [ ] Female
- [ ] Prefer not to answer

**Home address:**

**Mobile phone number:**

**Private email address:**

**Other phone number:**

**Payroll number:**

### Facility 1 details

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<th>Facility name</th>
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**Healthcare worker category**
- [ ] Medical doctor
- [ ] Nurse
- [ ] Allied Health, please specify: ____________________
- [ ] Paramedic
- [ ] Aged care worker
- [ ] Student
- [ ] Laboratory scientist
- [ ] Aboriginal health worker
- [ ] Patient support officer
- [ ] Food service staff
- [ ] Dental clinician, please specify: ____________________
- [ ] Other non-clinical, please specify: ____________________
- [ ] Other healthcare role, please specify: ______________
- [ ] Unknown, please specify: ____________________

**Healthcare facility type**
- [ ] Hospital
- [ ] Geriatric rehabilitation unit
- [ ] Aged care facility
- [ ] COVID-19 respiratory testing clinic
- [ ] General practice
- [ ] Other healthcare setting
- [ ] Queensland Ambulance Service
- [ ] Laboratory
- [ ] Unknown, please specify: ______________

**Usual work location in the facility**

Tick all that apply:
- [ ] COVID-19 treatment ward
- [ ] Fever clinic
- [ ] Infectious diseases unit
- [ ] Respiratory ward
- [ ] Outpatients
- [ ] Emergency
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<th>Yes</th>
<th>No</th>
<th>Other, specify:</th>
</tr>
</thead>
<tbody>
<tr>
<td>General medical ward</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensive care unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleaning/porterage services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laboratory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other, specify:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Have you worked in any other area of the facility other than your usual work area/s in the 48 hours before the onset of symptoms, or after the onset of symptoms?

- Yes
- No
- If yes, please specify:

Have you worked in another facility?

- Yes
- No
- If yes, please collect information regarding the additional facilities on a new table.

Is there a designated COVID-19 ward in the facility?

- Yes
- No

Have you worked in the designated COVID-19 ward in the 14 days before your symptoms commenced or your positive result?

- Yes
- No

Do staff from the COVID-19 ward mix with staff from other areas, e.g. tearoom facilities, fatigue relief?

- Yes
- No
- If yes, provide further details:
  - ______________________________________
  - ______________________________________
  - ______________________________________

---

**Healthcare worker case interactions with COVID-19 patients**

In the 14 days before your symptoms commenced or your positive result, please list the dates you have had interactions with a COVID-19 case

- Date (DD/MM/YYYY): ___/___/______
- Date (DD/MM/YYYY): ___/___/______
- Date (DD/MM/YYYY): ___/___/______

- Not known

**UR number of patient (if know)**

Name of facility where this interaction occurred

(for multiple facilities, please collect this data separately for each)

Did you have interactions with multiple COVID-19 cases in this facility?

- Yes
- No
- If yes, please provide the number of patients (approximate if exact number unknown): ________________________
### Healthcare worker case interactions with COVID-19 positive colleagues

In the 14 days before your symptoms commenced or your positive result, please list the dates you have had interactions with a COVID-19 positive colleague

<table>
<thead>
<tr>
<th>Date (DD/MM/YYYY): <em><strong>/</strong></em>/______</th>
<th>Date (DD/MM/YYYY): <em><strong>/</strong></em>/______</th>
<th>Date (DD/MM/YYYY): <em><strong>/</strong></em>/______</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Not known</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name of facility where this interaction occurred
(for multiple facilities, please collect this data separately for each)

Please list any locations in the facility of this interaction e.g. during patient care, tearoom, nurses’ station, clean utility, canteen etc

### Activities and procedures the healthcare worker was involved with COVID-19 patients in the facility

*Please complete a new table for each facility where relevant.*

<table>
<thead>
<tr>
<th>Facility name</th>
<th>Facility address</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Did you provide direct care to a confirmed COVID-19 patient?

- □ Yes □ No □ Unknown

Did you have face-to-face contact (<1.5 metre) with a confirmed COVID-19 case in the facility?

- □ Yes □ No □ Unknown

Were you present when any aerosol-generating procedures were performed on the patient?

- □ Yes □ No □ Unknown
  If yes, please select all which apply.

- □ Tracheal intubation and extubation
- □ Ear nose throat surgery
- □ Open airway suctioning
- □ Tracheotomy
- □ Bronchoscopy
- □ Intercostal catheter insertion
- □ Procedures in the oral cavity or respiratory tract involving high-speed devices (surgical or post-mortem)

- □ Other respiratory interventions:
  - o High-flow nasal oxygen
  - o Administration of aerosolised/nebulised medication
  - o Manual ventilation
  - o Non-invasive ventilation
  - o Induced collection of sputum
### Infection prevention and control measures used by case during healthcare interactions

When applicable for the following questions, please quantify the frequency with which you wore PPE:

- **Always:** > 95% of the time
- **Most of the time:** 50% to 95% of the time
- **Occasionally:** 20% to 49% of the time
- **Rarely:** less than 20% of the time

<table>
<thead>
<tr>
<th>Measure</th>
<th>Always</th>
<th>Most of the time</th>
<th>Occasionally</th>
<th>Rarely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single-use gloves</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Surgical mask</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Fit checked P2/N95 respirator</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Eye protection such as face shield, visor, goggles</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Disposable long-sleeved impermeable gown</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

- Disconnecting / reconnecting the patient from a closed-circuit ventilator
- Inadvertent disconnection of ventilator circuits e.g. during turning critically ill patients to the prone position
- Dental procedures, including use of triplex syringe, high and low speed drilling and ultrasonic scaling (this is not an exhaustive list), please specify:
  - □ Other (specify):

**Were you present when a confirmed or suspected COVID-19 case was displaying challenging behaviours (e.g. yelling, coughing, spitting)?**

- □ Yes □ No

**Did you have direct contact with the environment where the confirmed COVID-19 patient was cared for (e.g. bed, linen, medical equipment, bathroom etc.)?**

- □ Yes □ No

**If yes to the question above, was PPE worn?**

- □ Yes □ No
<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disposable plastic apron</td>
<td>□ Always</td>
</tr>
<tr>
<td></td>
<td>□ Most of the time</td>
</tr>
<tr>
<td></td>
<td>□ Occasionally</td>
</tr>
<tr>
<td></td>
<td>□ Rarely</td>
</tr>
<tr>
<td>Was there a PPE observer present during fitting and removal?</td>
<td>□ Yes</td>
</tr>
<tr>
<td></td>
<td>□ No</td>
</tr>
<tr>
<td>If yes to the above, were any PPE fitting and removal breaches recorded?</td>
<td>□ Yes</td>
</tr>
<tr>
<td></td>
<td>□ No</td>
</tr>
<tr>
<td>List the average period of time that PPE was worn for continuous periods when providing care for patients with suspected or confirmed COVID-19.</td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Healthcare COVID-19 exposure assessment definitions

Purpose

The definitions below may be used for local healthcare infection surveillance programs and will provide a consistent approach to surveillance between facilities. This document aims to assist the person undertaking an exposure assessment to understand exposure terminology.

These definitions are not intended to replace individual clinical assessments by treating clinicians for the purpose of patient care (including of HCW), nor determination of whether an individual HCW is eligible for WorkCover.

Part 1: COVID-19 infection

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the infective agent that causes coronavirus disease 2019 (COVID-19). The infectious period is still being determined, however, there are multiple studies suggesting that pre-symptomatic, and possibly asymptomatic, transmission occurs 1-3 days before symptom onset. The average incubation period is 5-6 days with an upper limit of 14 days, but some people can be infectious much earlier following the exposure. As a precautionary approach, cases are considered infectious from 48 hours prior to onset of symptoms.

COVID-19 may present with one or more of the following symptoms.

- fever
- cough
- headache
- sore throat
- fatigue
- shortness of breath
- myalgia
- anosmia
- dysgeusia
- rhinorrhoea
- chills
- vomiting
- chest pain
- diarrhoea
- conjunctivitis.
Part 2: Likely place of acquisition

Healthcare acquisition

The following criteria should be met to define a confirmed case of healthcare-acquired COVID-19:

- Laboratory confirmation of acute SARS-CoV-2 infection.
- There is no plausible community exposure and is not a resident of, and has not been to, an area with community transmission.

AND
- There has been at least one confirmed COVID-19 case in the healthcare setting within the previous 14 days.

AND

For inpatients:
Symptom onset is within 14 days of admission and up to 14 days after discharge (if asymptomatic, use first positive specimen collection date as onset date).

For HCW:
- The HCW worked in a healthcare setting at any time during the 14 days prior to symptom onset
  
  AND
- cared for COVID-19 patients in any area of the healthcare setting
  
  OR
- shared communal areas (such as tea rooms or office space) with other staff.

For visitors, contractors and discharged patients:
- The person was in a healthcare setting at any time during the 14 days prior to the symptom onset
  
  AND
- had contact with COVID-19 patients in any area of the healthcare setting
  
  OR
- shared communal areas (such as tea rooms, office space) with other staff in an area of the healthcare setting with at least one confirmed COVID-19 case within the previous 14 days.

Probable healthcare acquisition

The following criteria should be met to define a probable case of healthcare-acquired COVID-19:

- Laboratory confirmation of acute SARS-CoV-2 infection.
- There is no plausible exposure in the community.
For inpatients:

AND

- symptom onset up to 14 days after discharge (if asymptomatic, use first positive specimen collection date as onset date)

For HCW:

- symptom onset (if asymptomatic, use first positive specimen collection date as onset date) up to 14 days after either:
  - having cared for COVID-19 patients in any area of the healthcare setting
  - having shared communal areas with other staff in an area of the healthcare setting with at least one confirmed COVID-19 case within the previous 14 days.

For visitors, contractors and discharged patients:

- had contact with COVID-19 patients in any area of the healthcare setting
  OR

- shared communal areas with other staff in an area of the healthcare setting.

Community acquisition

The following criteria should be met to define a confirmed case of community-acquired COVID-19:

- Laboratory confirmation of acute SARS-CoV-2 infection.
- There is no known healthcare exposure within the previous 14 days.
Appendix C: COVID-19 contact investigation minimum data set

The below contact investigation requirements have been developed to assist in identifying close and casual contacts of a confirmed COVID-19 case in a hospital setting.

- The information about potential contacts must be recorded using the below outlined minimum data set. This will allow the data to be quickly uploaded into NoCS. Once the data is in NoCS all contact investigations for the potential contact can be recorded and testing can be monitored.

- As soon as practicable, the OCT must provide the PHU with a minimum data set to allow contact tracing to commence. The minimum data required includes:
  - given name
  - surname
  - phone number
  - email (where no phone number is available).

- The OCT should also provide dates of birth, residential addresses and exposure dates, if available, for all employees, contractors, volunteers, students and inpatients identified as potential contacts.

- If dates of births, residential addresses and exposure dates are not readily available, the information can be provided after the initial data set is provided. This will ensure that there are no delays in the commencement of contact tracing. To avoid time delays in the provision of this information it is recommended that HHSs, as part of their COVID-19 outbreak preparedness, establish pathways within the organisation to access this information quickly.

- It is important that if a person is known by another name that the other name is recorded in the data set, for example, the person goes by their maiden name at work and uses their married name otherwise. It is particularly important if the person uses a different name on their Medicare Card. Recording other names in the data set will ensure that test results can be readily monitored in NoCS.

- Any personal information collected by Queensland Health must be handled in accordance with the Information Privacy Act 2009. All personal information that is collected must be securely stored and only accessible by authorised Queensland Health staff.
Appendix D: Algorithm

QUARANTINE HOTEL REFERRAL ALGORITHM

Close contact lives alone OR has access to own living area*

Yes

High-risk people in the house??

Yes

Ensure complete separation and provide education OR refer to hotel quarantine/quarantine entire household if concerns

No

No referral

No

Person consents to hotel accommodation?

Yes

Direct referral to hotel quarantine OR quarantine entire household if hotel quarantine not available

No

Quarantine entire household

* Own living area = own bedroom and bathroom and NO cross-over in common areas
** High-risk people = HCW, RACF worker, elderly person, person who currently has a compromised immune system
## Appendix E: Definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close contact</td>
<td>Please refer to the CDNA guidelines for the current definition of close contact.</td>
</tr>
<tr>
<td>Contact tracing</td>
<td>Contact tracing is the process of identifying relevant contacts of a person (the case) with a notifiable condition and ensuring that they are aware of their exposure; the risk of acquiring COVID-19 infection; and any public health actions that are recommended or required under public health legislation, which may include quarantine.</td>
</tr>
<tr>
<td>Contact tracing officer</td>
<td>The <strong>Public Health Act 2005 (Qld)</strong> requires that only appointed Contact tracing officer(s) undertake contact tracing functions and exercise a power under the legislation. Thus, it is considered crucial that anyone conducting contact tracing functions under the <strong>Public Health Act 2005 (Qld)</strong> is appointed as a CTO. Any reference to a contact tracing officer means a CTO appointed under Section 90 of the <strong>Public Health Act 2005 (Qld)</strong>.</td>
</tr>
<tr>
<td>Emergency officer</td>
<td>Emergency officers (general) is a person appointed under the Act to undertake certain duties. The appointed person may give a person a direction to stay at or in a stated place for a stated period of not more than 14 days (periods beyond this require a new direction). An emergency officer (general) may also give a person a direction if the emergency officer (general) reasonably believes the direction is necessary to assist in containing, or to respond to, the spread of COVID-19 within the community.</td>
</tr>
<tr>
<td>Healthcare worker</td>
<td>For the purpose of this guideline a healthcare worker (HCW) is a worker* who has direct or indirect contact with patients or infectious materials, including but not restricted to doctor, nurse, patient support officer, paramedic, laboratory technician, pharmacist, administrative staff, housekeeping. The definition of worker* is as per the <strong>Work Health and Safety Act 2011 (QLD)</strong> Section 7.</td>
</tr>
<tr>
<td>Outbreak in a healthcare facility/setting</td>
<td>A single confirmed case of COVID-19 in a patient (not managed under recommended transmission-based precautions), staff member or visitor of a hospital where the exposure is suspected to have occurred in the hospital is classified and defined as an outbreak trigger. This applies to inpatients and outpatients, clinical and non-clinical staff and attendees of a hospital, such as visitors or external consultants. An outbreak may be confined to any area of the facility or the entire facility and a scaled response can be implemented accordingly.</td>
</tr>
</tbody>
</table>