

Triggers for Escalation Following Detection of Infection Outbreaks or Clusters

Summary This Guideline has been developed to support NSW public healthcare facilities with effective and timely escalation of information on outbreaks or clusters of healthcare associated infections, multidrug-resistant organisms (MRO) and/or non-MROs

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TRIGGERS FOR ESCALATION FOLLOWING DETECTION OF INFECTION OUTBREAKS OR CLUSTERS

PURPOSE

This Guideline has been developed to support NSW public healthcare facilities with effective and timely escalation of information on outbreaks or clusters of healthcare associated infections, multidrug-resistant organisms (MROs) and/or non-MROs.

KEY PRINCIPLES

NSW public healthcare facilities must have written procedures that address the outbreak management requirements for common communicable diseases and MROs (e.g. gastroenteritis, influenza, Carbapenemase-producing *Enterobacterales*) and identify delegations of responsibility during the outbreak ([Infection Prevention and Control Policy](#)).

A framework for escalating outbreaks and clusters with effective and timely management will ensure minimal impact and when adhered to guide future assistance.

This Guideline provides a tool to assist NSW public healthcare facilities with developing local escalation frameworks or protocols that are tailored to their needs and available resources.

USE OF THE GUIDELINE

Chief Executives should ensure that

- This Guideline is implemented in healthcare facilities where there is or may be a risk of an outbreak or cluster of infection
- Health workers are made aware of the escalation process for outbreaks and clusters of infection
- There is adequate resourcing for the response to an outbreak or cluster of infection.

Health workers should escalate outbreaks or clusters of infection as per the local escalation framework or protocol.

REVISION HISTORY

Version	Approved by	Amendment notes
October-2019 (GL2019_013)	Deputy Secretary, Population and Public Health	New Guideline

ATTACHMENT

Triggers for Escalation Following Detection of Infection Outbreaks or Clusters: Guideline

**Triggers for Escalation Following Detection of Infection
Outbreaks or Clusters**



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1 BACKGROUND

1.1 About this document

From time to time NSW public healthcare facilities may experience cases or clusters of infection that are suspected to be person-to-person spread, and due to their nature may threaten the health of patients, visitors and health workers.

A trigger is a point at which the incidence of a particular infectious organism is higher than would be normally expected. A trigger is not necessarily an outbreak. Some triggers may be outbreaks but some will be natural variation in the incidence of an organism. Triggers are signals to alert the infection prevention and control team and the hospital executive that additional infection prevention strategies and resources may be necessary to ensure patient safety.

For example an increase in incidence of:

- Multidrug-resistant organisms (MROs), such as Carbapenemase-producing *Enterobacterales* (CPE) or a single case of *Candida auris* or unexpected number of non-MROs such as *Serratia marcescens*, *Pseudomonas aeruginosa* or *Clostridium (Clostridioides) difficile*
- Outbreaks of notifiable communicable diseases, such as influenza or acute gastroenteritis

Smaller facilities with a lower incidence of infections should consider one case significant and should review their infection prevention and management strategies and escalate as appropriate.

The main goal of managing an increased or unexpected incidence of transmission or an outbreak or a cluster is to prevent further transmission and to identify factors that may have contributed to the increased incidence. This allows for the development and implementation of measures to contain the current increased incidence and prevent future outbreaks or clusters.

If a facility detects an unusual increase in MRO or non-MRO incidence and enters a trigger phase, effective management of this incidence requires timely escalation of information to the appropriate management level (1, 2). This will facilitate:

- Formation of an Incident or Outbreak Management Team, which should include a senior facility manager
- Initiation of an interdisciplinary approach for the creation of comprehensive and evidence based strategies
- Adequate resourcing of an operational infection prevention and control response
- Management, redirection and allocation of additional resources where required
- Briefing of senior managers and executives of the healthcare facility, Local Health District/ Specialty Health Networks (LHD/SHN), local Public Health Unit (PHU), Clinical Excellence Commission (CEC), Health Protection NSW and NSW Ministry of Health (MOH)

- Development of appropriate and consistent internal and external communications.

The purpose of this Guideline is to enable timely escalation of information to the appropriate level. These procedures should include a documented process with triggers, response required for escalation, responsibility and timeframes. The procedures should include a process for an after-hours response – e.g. ability to call back an on-call Infection Prevention and Control Professional or on-call Infectious Diseases/Clinical Microbiology specialist.

The procedures should enable NSW public healthcare facilities to understand the number, type and impact of increased incidence of infection, outbreaks or clusters and communicate this information to relevant stakeholders. If an outbreak or cluster has potentially state-wide implications this should include the NSW Ministry of Health and the Clinical Excellence Commission¹.

1.2 Key definitions

Trigger point: At which the incidence of a particular infectious organism is higher than would be normally expected for a healthcare facility, and the facility detects an increase in cases from surveillance data or transmission has occurred between cases.

Outbreak: is the occurrence of disease exceeding the expected level for a given population within a specific timeframe. This includes single cases of some diseases not previously seen or those that have previously been eliminated.

Cluster: A disease cluster is an unusually high incidence of a particular microorganism occurring in close proximity in terms of both time and geography. A closely grouped series of events or cases of diseases that fulfils the definition of a case – e.g. two or more surgical site infections from the same surveillance period or theatre session of the same type of surgery.

2 IMPACT OF AN OUTBREAK OR CLUSTER

2.1 Impact of an outbreak on healthcare facilities in NSW

An infectious outbreak or cluster that requires escalation poses potential or realised impacts on a healthcare facility's service capacity. Examples of how services may be impacted by an infection outbreak or cluster include:

- Increased patient morbidity and/or mortality
- Disruption to planned service provision
- Increased surgery wait lists
- Disruption to patient flow within the healthcare facility, or ambulance bypass
- Disruption to specialised clinical services with potentially state-wide implications
- Demand for additional resources for

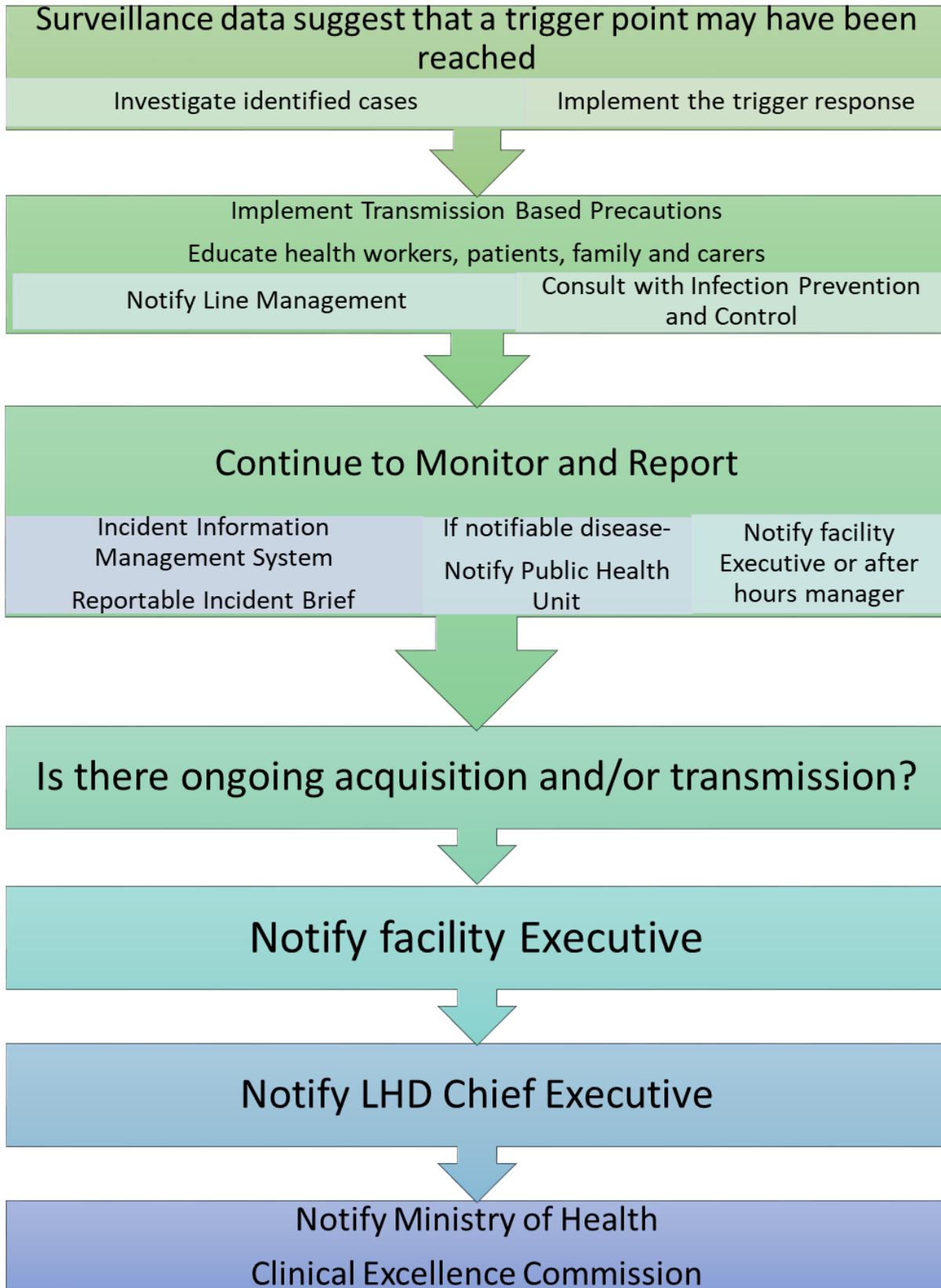
¹ This refers primarily to outbreaks or clusters in Neonatal Intensive Care, Intensive Care, Haematology, Burns, Spinal, Transplant.

- Environmental cleaning frequency and staffing
- Consumables – e.g. personal protective equipment (PPE), chemicals, disposable equipment
- Pathology testing
- Increased sick leave if health workers affected (and potential effects on their family)
- Increased length of stay (including additional costs for treatment, diagnostics and care)
- Public confidence (i.e. media)
- Patient's family, caregiver or loved ones.

The seriousness of this impact can be categorised as (3):

- **Serious:** Complete loss of service or output
- **Major:** Major loss of agency / service to users
- **Moderate:** Disruption to users due to agency problems
- **Minor:** Reduced efficiency or disruption to agency working
- **Minimum:** No loss of service.

Figure 1: Trigger Response Flow chart



3 TRIGGERS FRAMEWORK

Table 1 - Guide to Escalation

ESCALATE FROM	TRIGGERS TO ESCALATE AN OUTBREAK OR CLUSTER	POSITION TO ESCALATE TO	POSSIBLE COMMUNICATION METHODS	TIMEFRAME
Affected clinical area to notify nominated healthcare facility executive or after hours manager	<ul style="list-style-type: none"> • Patient to patient transmission of significant MRO or non-MRO • Patient and/or staff acquisition of a notifiable disease – e.g. measles, pertussis, TB etc • Notifiable disease outbreak declared • Any potential to impact on patient flow or services at facility level • Significant patient deterioration related to this outbreak or cluster – e.g. transfer to ICU • MRO incidence above background rates/numbers in a specific clinical area • Increase in invasive infections from MROs or other significant organisms – e.g. bacteraemia (cluster) <p>Resource implications – e.g. additional cleaning, screening, staffing, hours for education</p>	<p>Healthcare facility executive (nominate executive responsible) - include both business and after hours</p> <p>Notification to Public Health Unit of notifiable disease including outbreaks</p>	<p>Phone or face-to-face followed by a succinct report / Internal brief, IIMS submission</p> <p>Communication to other key services may include Staff Health, Public Health Units, Pharmacy, Environmental Services, NSW Ambulance, Clinical Products and Pathology</p>	<p>Immediate or as soon as practical</p>
Nominated healthcare facility executive to notify LHD/SHN nominated executive	<ul style="list-style-type: none"> • Significant changes in morbidity or mortality of patients related to the suspected or known outbreak or cluster 	<p>Facility executive to LHD/SHN Chief Executive</p> <p>(nominate executive responsible to notify Chief</p>	<p>Phone call</p> <p>Brief or other succinct report, IIMS submission</p>	<p>Depending on the severity of the incident within 24 hours of notification</p>

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ESCALATE FROM	TRIGGERS TO ESCALATE AN OUTBREAK OR CLUSTER	POSITION TO ESCALATE TO	POSSIBLE COMMUNICATION METHODS	TIMEFRAME
	<ul style="list-style-type: none"> Multiple clinical departments/units/wards staff affected and impacting local service provision at facility and/or district level 	Executive) include both business and after hours		
LHD/SHN nominated executive to notify Ministry of Health and Clinical Excellence Commission	<ul style="list-style-type: none"> Impacts on patient flow and state-wide services – e.g. Level 1 NICU Potential for media interest Patient death(s) related to suspected or known outbreak or cluster Increasing number of cases despite control measures – unable to be controlled New or emerging pathogen – e.g. <i>Candida auris</i>, Ebola An outbreak warranting a Reportable Incident Brief (RIB) 	<p>Director, Patient Safety (CEC)</p> <p>Chief Health Officer via Brief²</p>	<p>Brief to Ministry of Health</p> <p>Phone</p> <p>Email</p> <p>RIB</p>	Depending on the severity of the incident within 24 hours of notification

² A RIB may also be required as part of incident management system for SAC 1 or SAC 2 incidents.

4 REFERENCES

1. NSW Health. Infection prevention and control policy. NSW, Australia: NSW Government; 2017.
2. Clinical Excellence Commission. Infection prevention and control practice handbook. Sydney, Australia: Clinical Excellence Commission; 2016.
3. NSW Health. Incident Management Policy. Sydney, Australia: NSW Government; 2019.