Infection Control Management of Reportable Incidents

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Summary  Policy for use in event of a critical infection control incident.
Author Branch  Health Protection
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Applies to  Area Health Services/Chief Executive Governed Statutory Health
           Corporation, Board Governed Statutory Health Corporations, Affiliated
           Health Organisations, Community Health Centres, Dental Schools and
           Clinics, Government Medical Officers, NSW Ambulance Service, Ministry
           of Health, Private Hospitals and Day Procedure Centres, Private Nursing
           Homes, Public Health Units, Public Hospitals
Distributed to  Public Health System, Community Health Centres, Dental Schools and
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               Ambulance Service, Ministry of Health, Public Health Units, Public
               Hospitals, Private Hospitals and Day Procedure Centres, Private Nursing
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Director-General

This Policy Directive may be varied, withdrawn or replaced at any time. Compliance with this directive is mandatory
for NSW Health and is a condition of subsidy for public health organisations.
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CIRCULAR

Management of Reportable Infection Control Incidents

This Circular should be read in conjunction with:
Circular 97/58: Incidents Reportable to the Department;
Circular 97/97: Critical Incident Manual: Policy and Guidelines …Minimising and
Managing Critical Incidents in NSW Public Health Care Facilities;
Circular 99/87: Infection Control Policy; and
Circular 99/88: Health Care Workers Infected with HIV, Hepatitis B or Hepatitis C.

The following information should be brought to the attention of all staff.

CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glossary</td>
<td>1</td>
</tr>
<tr>
<td>1. Introduction</td>
<td>2</td>
</tr>
<tr>
<td>2. Reportable Infection Control Incidents</td>
<td>2</td>
</tr>
<tr>
<td>3. Incidents Requiring Consideration by the NSW Blood Borne Viruses Advisory Panel</td>
<td>3</td>
</tr>
<tr>
<td>4. The Risk of Transmitting Infection</td>
<td></td>
</tr>
<tr>
<td>4.1 Potentially Contaminated Instruments/Equipment</td>
<td>3</td>
</tr>
<tr>
<td>4.2 Infected Health Care Workers</td>
<td>4</td>
</tr>
<tr>
<td>5. Liaison between Public Health Units and Health Care Complaints Commission</td>
<td>4</td>
</tr>
<tr>
<td>Appendix 1</td>
<td></td>
</tr>
<tr>
<td>Suggested Format for Conducting an Assessment of Infection Control Breaches Relating to Reprocessing of Used Instruments and/or Equipment</td>
<td>5</td>
</tr>
<tr>
<td>Appendix 2</td>
<td></td>
</tr>
<tr>
<td>Suggested Format for Conducting an Assessment of Infection Control Breaches Relating to Performance of Exposure Prone Procedures by HCWs Positive for Blood Borne Viruses</td>
<td>7</td>
</tr>
<tr>
<td>References</td>
<td>10</td>
</tr>
</tbody>
</table>

Michael Reid
Director-General

Distributed in accordance with circular list(s):

A 54  B 5  C 50  D 5  E 5
F 10  G 34  H 44  I 5  J 34
K 9  L 3  M 10  N 10  P

In accordance with the provisions incorporated in the Accounts and Audit Determination, the Board of Directors, Chief Executive Officers and their equivalents, within a public health organisation, shall be held responsible for ensuring the observance of Departmental policy (including circulars and procedure manuals) as issued by the Minister and the Director-General of the Department of Health.
Glossary

EPPs  Exposure prone procedures. Those procedures where there is potential for contact between the skin (usually finger or thumb) of the HCW and sharp surgical instruments, needles or sharp tissues (splinters/pieces of bone/tooth), in body cavities or in poorly visualised or confined body sites including the mouth. Procedures which lack these characteristics are unlikely to pose a risk of transmission of blood borne viruses from infected HCW to patient. Provided they are not conducted in poorly visualised or confined body sites the following procedures are not considered to be exposure prone - oral, vaginal or rectal examinations that do not involve sharp instruments, phlebotomy; administering intramuscular, intradermal or subcutaneous injections; needle biopsies; needle aspirations, lumbar punctures; venous cutdown and angiographic procedures; excision of epidermal or dermal lesions; suturing of superficial skin lacerations; endoscopy; placing and maintaining peripheral and central intravascular lines, nasogastric tubes, rectal tubes and urinary catheters; acupuncture; other procedures that do not involve sharps; or procedures where the use of sharps is superficial, well visualised, and administered to compliant or anaesthetised patients where it is very unlikely that a HCW skin injury would result in exposure of a patient to the HCW’s blood or body substances.

HBeAg  Hepatitis B e antigen - marker of high level of infectiousness.

HBsAg  Hepatitis B surface antigen - indicates current infection with HBV with potential to infect others.

HBV  Hepatitis B virus.

HBV DNA  Hepatitis B virus genetic material - marker of high level of infectiousness.

HCV  Hepatitis C virus.

HCW  Health care worker. Persons, including students and trainees, whose activities involve contact with patients or with blood or body fluids from patients.

Health care facility  All publicly funded public hospitals, licensed private hospitals and nursing homes, community health services, dental clinics, day procedure centres etc.

HIV  Human immunodeficiency virus.

Invasive procedure  Includes one or more of the following: surgical entry into body tissue, cavities or organs; surgical repair of injuries; cardiac catheterisation and angiographic procedures; vaginal or caesarean delivery or any other obstetric during which bleeding may occur; and the manipulation, cutting, or removal of any oral or peri-oral tissue, including tooth structure, during which bleeding may occur. Exposure prone procedures form a subset of invasive procedures.

PCR  polymerase chain reaction.
1. Introduction

NSW Health is committed to providing a safe environment for health care workers (HCWs) and consumers of health services in NSW. Infection control breaches are of concern because of their potential to result in transmission of infection.

This Circular contains policy guidelines for use in the event of a critical infection control incident. It has been developed in accordance with the following principles:

- registered medical practitioners, nurses, podiatrists, dentists, dental technicians and physiotherapists are compelled under their respective registration Acts to comply with a minimum standard of infection control practice;
- HCWs who perform exposure prone procedures are required to know their hepatitis B virus (HBV), hepatitis C virus (HCV) and human immunodeficiency virus (HIV) status. HCWs who are hepatitis B virus e antigen (HBeAg) positive or HBV DNA positive or HCV polymerase chain reaction (PCR) positive or HIV positive must not perform exposure prone procedures; and
- individual and institutional HCWs have a common law duty of care to their patients.

This Circular must be used by health care facilities as the basis for developing detailed local guidelines relevant to their individual setting and in accordance with Circular 97/97: Critical Incident Manual: Policy and Guidelines …Minimising and Managing Critical Incidents in NSW Public Health Care Facilities.

Private health care facilities where medical or health services are delivered are advised to adopt this policy unless they already have equivalent policy in place on this issue.

2. REPORTABLE INFECTION CONTROL INCIDENTS

The first line of protection from transmission of infection in the health care setting is compliance with Circular 99/87: Infection Control Policy and Circular 99/88: Health Care Workers Infected with HIV, Hepatitis B or Hepatitis C.

Control of infection involves a range of practices. These include simple measures such as hand washing to prevent transmission of infectious disease/conditions spread by direct contact. More sophisticated measures, such as the use of appropriate protective apparel prevent transmission of diseases spread by the blood borne route whereas cleaning, disinfection and sterilization are used to render equipment and instruments safe for use.

To determine whether an infection control breach constitutes a reportable incident, Area Health Services and licensed private health care facilities should consider Circular 97/58: Incidents Reportable to the Department and the following issues:

- the nature of the incident;
- the likelihood of the incident affecting public health or safety;
- the likelihood of the source patient/equipment being infectious;
- the likelihood, according to current scientific literature and knowledge of disease transmission, of the incident resulting in transmission of an infectious agent;
- the facility’s legal and policy obligations to report such an incident;
- the public health benefit of reporting the incident;
- the need for a coordinated response by the Department; and
• the likelihood of the incident being of concern to the community.

The format of briefing materials prepared in response to reportable infection control incidents should be in accordance with the specifications outlined in Section 3.3 Format of the Briefing of Circular 97/58: Incidents Reportable to the Department.

3. INCIDENTS REQUIRING CONSIDERATION BY THE NSW HEALTH BLOOD BORNE VIRUSES ADVISORY PANEL

The decision to refer an incident to the NSW Health Blood Borne Viruses Advisory Panel will be made by the Department. Reportable infection control incidents which may be referred to the Department's Blood Borne Viruses Advisory Panel include incidents which involve:

• investigation of any acute illnesses due to blood borne pathogens that are likely to have been transmitted in a health care facility; or

• the performance of exposure prone procedures by any health care worker who is HBeAg positive or HBV DNA positive or HIV positive or HCV PCR positive; or

• insufficient reprocessing, ie. inadequate temperature or time, of instruments or equipment where levels of bio-burden are sufficient to cause transmission of infectious disease and the item enters or is capable of entering sterile tissue.

In cases where there is doubt about whether an incident should be referred, advice may be sought from the Area Public Health Unit Director or their delegate and/or the Department's Private Health Care Branch in the case of licensed private health care facilities.

Refer to Circular 99/88: Health Care Workers Infected with HIV, Hepatitis B or Hepatitis C – Appendix 2, for the Terms of Reference for the NSW Health Blood Borne Viruses Advisory Panel.

4. THE RISK OF TRANSMITTING INFECTION

4.1 POTENTIALLY CONTAMINATED INSTRUMENTS/EQUIPMENT

The risk of transmitting infection from cleaned, but inadequately disinfected or sterilized equipment or instruments is low irrespective of whether surgery is clean, clean-contaminated, contaminated or dirty\(^1\). Reporting to the Department, management and remedial action relating to these types of incidents should be undertaken at a local public hospital level and coordinated by a senior delegate of the Area Chief Executive Officer (CEO) such as the Infection Control Practitioner, Public Health Unit Director or the Department’s Private Health Care Branch staff in the case of licensed private health care facilities. Departmental involvement may be appropriate depending on the nature of the incident, especially if tracing is necessary.

4.2 INFECTED HCWS

The risk of provider-to-patient transmission of HIV is extremely low.\(^2\) A recent review of data relating to 22,759 patients receiving care from 53 HIV positive HCWs suggests that the probability of transmission of HIV is “below the threshold of detection by even very intensive surveillance methods.”\(^2\) To date there is only one report of probable accidental HIV transmission to a patient from a surgeon performing an exposure prone procedure.\(^3\)

HBV is the most readily transmitted of the blood borne viruses with several reports detailing provider-to-patient infection.\(^4\)\(^5\)\(^6\)\(^7\)
Transmissions of HCV to patients from an obstetrician and gynaecologist and two cardiothoracic surgeons have recently been reported.\textsuperscript{8,9,10} Recent reports of HCV infectivity suggest that if a person is HCV PCR negative the probability of transmission is low.\textsuperscript{11}

Appendix 1 outlines a suggested format for conducting an assessment of infection control breaches relating to reprocessing of used instruments and/or equipment.

Appendix 2 outlines a suggested format for conducting an assessment of exposure prone procedures performed by a HCW who is either HBeAg positive or HBV DNA positive or HIV positive or HCV PCR positive.

5. LIAISON BETWEEN PUBLIC HEALTH UNITS AND HEALTH CARE COMPLAINTS COMMISSION

This section should be read in conjunction with the following documents:

- Circular 94/74: Management of Complaints about Health Services and Health System; and

NSW Health considers that potential breach of public health standards is primarily the responsibility of NSW Health in enforcing the Public Health Act 1991. As such, the Health Care Complaints Commission (HCCC) will refer such matters to the Area Health Service CEO to consider and (where necessary) investigate under the Public Health Act 1991.

However, Area Health Services are reminded that under the Health Care Complaints Act 1993, the HCCC has an obligation to investigate a complaint which:

- raises a significant issue of public health and safety; or
- raises a significant question as to the appropriate care or treatment of a client by a health service provider; or
- provides grounds for disciplinary action against a health practitioner; or
- involves gross negligence on the part of a health practitioner.

Where matters falling within the above categories come to the attention of a public health unit, they should be referred by the CEO of the Area Health Service to the HCCC. An Area Health Service may liaise with the HCCC about their respective roles in referring and investigating such matters.
APPENDIX 1  SUGGESTED FORMAT FOR CONDUCTING AN ASSESSMENT OF INFECTION CONTROL BREACHES RELATING TO REPROCESSING OF USED INSTRUMENTS AND/OR EQUIPMENT

When there is evidence that a patient may have undergone surgery with inadequately reprocessed equipment or instruments, the steps set out below should be taken to determine the extent of the problem. There are serious legal, human and financial implications of look-back exercises to identify and test patients on whom inadequately reprocessed equipment or instruments were used. Management of confidentiality is an important component of investigation of infection control breaches.

Goals
Set local goals to:
• prevent a repeat of the incident;
• identify the extent of the problem; and
• maintain confidentiality of individual(s) involved.

Method
Take the following steps:
1. The HCW who identifies a potential breach should immediately advise their supervisor, who should in turn ensure that the Area CEO or Licensee and Director of Nursing in private health care facilities are advised of the incident.
2. Form an advisory group to manage the investigation. It may be pertinent that the Area CEO or Licensee and Director of Nursing in private health care facilities identify permanent members of an infection control incident advisory group so that staff immediately know who to contact in their facility. The group should include at a minimum a senior delegate of the CEO, Public Health Unit Director or their delegate, Infection Control Practitioner, Manager Sterilizing Services, Microbiologist/Infectious Diseases Physician. While it may not be appropriate for small private facilities to establish their own advisory group, the Licensee and Director of Nursing should make arrangements for provision of expert advice.
3. Cancel procedures involving instrumentation that is potentially inadequately reprocessed until safe-operating parameters can be confirmed.
4. Review the level of reprocessing of any stored instruments that may have been exposed to inadequate levels of reprocessing.
5. Recall any inadequately reprocessed instruments or equipment.
6. Undertake preliminary interview(s) with staff who reported the incident to establish whether the breach is potentially significant and if further investigation or action is required.
7. Pending the results of Step 6 consider the likelihood of disease transmission based on the current best available evidence of transmission in similar circumstances. The advisory group membership identified in Step 2 should be consulted by the Chairperson of that facility’s infection control committee.
8. If the incident involves surgery, pending the results of Steps 5-6, get a listing of all patients operated on immediately prior to and following the case(s) in question.
9. For each patient establish name, diagnosis, nature of procedure, and whether or not they are known to be infected with, or infectious for, any blood borne virus.
10. Pending the results of Steps 7-8 consider preparation of formal advice to the NSW Health
Department as per Circular 97/58: Incidents Reportable to the Department. Private health care facilities are obliged to notify the Private Health Care Branch of any incident.

11. Start an education process on reprocessing of used equipment and instruments to all staff.
12. Undertake a targeted infection control audit.

These steps are necessary to:
- verify the problem;
- reassure the patient population;
- inform management; and
- set priorities for any additional subsequent investigation.

Retrospective Activities
Review the relevant records and conduct interviews with appropriate personnel to establish that prior to the incident under investigation, safe standards of reprocessing can be guaranteed.

These steps are necessary to:
- establish if the problem is new or ongoing; and
- evaluate the intensity/seriousness of the problem.

RISK OF TRANSMISSION
Available data suggest that the risk of a blood borne pathogen being transmitted from an improperly processed instrument is negligible provided adequate cleaning of the instrument was performed.

Look-Back Exercises
In general, look-back exercises are not warranted if adequate cleaning of instruments occurred and the instruments did not enter sterile sites, or the population exposed had a relatively low prevalence of blood borne pathogens indicating that the risk of exposure is negligible. However, assessment is needed on a case by case basis. Where a look-back exercise is thought necessary, a risk-based approach should be considered ie. those persons who are at highest risk of infection should be assessed first. Where there is no evidence of transmission in that group, further look back is unnecessary.

Dealing with the Media
Refer to Circular 97/58: Incidents Reportable to the Department in relation to management of media issues.
APPENDIX 2 SUGGESTED FORMAT FOR CONDUCTING AN ASSESSMENT OF INFECTION CONTROL BREACHES RELATING TO PERFORMANCE OF EXPOSURE PRONE PROCEDURES BY HCWS POSITIVE FOR BLOOD BORNE VIRUSES

When there is evidence that a HBeAg, HBV DNA, HCV PCR or HIV positive HCW has performed an exposure prone procedure the following steps should be taken to determine the extent of the problem. There are serious legal, human and financial implications of look-back exercises to identify and test patients on whom the infected health care worker performed invasive procedures. Management of confidentiality is an important component of investigation of infection control breaches.

In the event that local resolution is not possible the case should be referred to the NSW Health Blood Borne Viruses Advisory Panel. Refer to Circular 99/88: Health Care Workers Infected with HIV, Hepatitis B or Hepatitis C - Appendix 3, for the protocol for accessing the NSW Health Blood Borne Viruses Advisory Panel in relation to infected HCWs.

Goals
Set local goals to:

- prevent a repeat of the incident(s);
- identify the extent of the problem;
- maintain confidentiality of infected person and individual(s) involved; and
- identify exposed persons who could benefit from early identification and management of blood borne infections.

Method
Take the following steps:

1. The HCW should advise their supervisor, who should in turn ensure that the Area CEO or Licensee and Director of Nursing in private facilities are advised, with due regard to confidentiality of the identity of the individual(s) involved.

2. In cooperation with the HCW, review their medical history.

3. Assess the HCW’s infection control practices and compare them with the practices of other HCWs and those recommended in the NSW Health Department Infection Control Policy. This includes reviewing operating room practices and collecting information on occupational exposures, surgical procedures and infection control precautions eg double gloving.

4. Review the disinfection and sterilizing procedures of the facility.

5. Confirm that there is no record or recollection of the HCW sustaining an inadvertent percutaneous injury or other injury during the course of any exposure prone procedure.

6. Pending the results of Steps 1-4 consider preparation of formal advice to the NSW Health Department as per Circular 97/58: Incidents Reportable to the Department.

7. Convene a meeting of relevant stakeholders to discuss the problem and plan resolution. Stakeholders should include at a minimum the Chair of the Infection Control Committee, Infection Control Practitioner, Microbiologist/Infectious Disease Physician (if not the Chair of the Infection Control Committee), Manager Sterilizing Services, Risk Manager, Public Health Unit Director or their delegate and Clinical Services Director for the Area/facility. Progress notes should be recorded and kept to inform hospital management and the local
infection control committee.

8. Acknowledge that a HCW infectious for a blood borne virus has performed exposure prone procedures and initiate reporting of the incident as per the recommendations of Circular 97/58: Incidents Reportable to the Department.

9. Consider liaison with local Area Public Affairs and the Department’s Health Public Affairs to develop a media response in collaboration with relevant experts.

10. Start an education process on Standard Precautions, EPPs and the use of protective apparel for relevant staff of all shifts, as long as this will not risk breaking the HCW’s confidentiality.

11. Undertake a targeted infection control audit.

12. Monitor and review ongoing quality of sterilizing services, reports of percutaneous exposures and promote vaccination of staff against HBV.

These steps are necessary to:
- verify the problem;
- reassure the patient population;
- inform management; and
- set priorities for any additional subsequent investigation.

Identification and testing of patients (ie. a look-back exercise) on whom the infected HCW performed exposure prone procedures while infectious should only be conducted on the advice of the NSW Health Blood Borne Viruses Advisory Panel. Criteria which may influence the NSW Health Blood Borne Viruses Advisory Panel to recommend a look-back would be dependent on:

- the nature of the virus;
- whether there is sufficient divergence by the HCW from routine infection controls ie. use of protective apparel, adequate reprocessing of instruments; or
- whether the HCW recalls or has reported sustaining a percutaneous injury during the performance of any surgical procedure where the patient’s skin integrity is breached or mucosa is exposed.

In the event of a look-back exercise being initiated hospitals should seek assistance from relevant local counselling and follow-up resources which may include the Public Health Unit and/or specialist Sexual Health Service staff.

Retrospective Activities

Review the relevant records and conduct interviews with appropriate personnel to establish that prior to the incident under investigation, safe standards of practice and reprocessing can be guaranteed.

These steps are necessary to:
- establish if the problem is new or ongoing; and
- evaluate the intensity/seriousness of the problem.

Look-Back Exercises

Available evidence indicates that there is negligible risk of the transmission of HIV from HCW to patients. In general, look-back exercises are not indicated when the HCW is HIV positive or
HCV positive PCR negative, if no breaches in infection control have been documented.

For HCWs who are HBeAg and/or HBV DNA positive or HCV PCR positive where careful assessment reveals good infection control practices and no injuries have been reported, it is unlikely that a look-back exercise is warranted.

A look-back exercise may be warranted, after consultation with the NSW Health Blood Borne Viruses Advisory Panel in other circumstances, eg:

- breach of contemporary infection control measures;
- reported exposure to the patient of the HCW’s blood or body fluids (eg. via sharps injury); or
- two or more patients with blood borne pathogen infections are reported whose common exposure includes contact with the HCW in question.

In general, where a look-back exercise is thought necessary, a risk-based approach should be considered ie. those persons who are at highest risk of infection should be assessed first. Where there is no evidence of transmission in that group, further look back is unnecessary.
References


