

**Safety Advocate** informs about incidents or sentinel events that have been reported to public and private health care organisations in NSW, Australia and overseas.

It describes the common underlying causes of the events, suggests steps to prevent occurrences in the future and provides information sources to assist organisations in reviewing and updating their own systems.

*“A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury and includes any process variation for which a recurrence would carry a significant chance of a serious adverse outcome. Any event that could have the chance of an adverse outcome is known as a ‘near miss’.”*

NSW Health (2001) *The Clinician's Toolkit*  
– For Improving Patient Care, p4/6

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## Sterilisation and disinfection

NSW has had an *Infection Control Policy* since 1991. A key aim of this policy is to improve patient safety through defining best practice infection control and providing practical measures that will reduce the opportunity for transmission of healthcare associated infections (HAIs).

The NSW Infection Control Advisory Group (ICAG) and the NSW Health Department's AIDS & Infectious Diseases Branch (AIDB) play key roles in implementation of the *Policy*. ICAG's role is to make recommendations regarding systemic and local change to improve patient safety. AIDB's role is to assess incidents and provide advice on the public health implications and to risk manage the sentinel events. This *Safety Advocate* is dedicated to describing:

- some of the factors that may result in failure of sterilisation and disinfection
- existing and future Departmental products and services
- recommendations to improve patient safety.

### Factors that may result in sterilisation/disinfection failures

**Events** that may contribute to failure of sterilisation and disinfection include:

- inadequate reprocessing of 'loan' instruments because staff were unaware of the internal structure or mechanisms of individual instruments or the recommended practice for using a specific disinfectant or sterilising process
- confusion regarding packaging and labelling
- inappropriate use of automated machines
- insufficient periods of time for reprocessing
- inability of staff to check physical, chemical or biological indicators for sterilisation
- use of an unregistered solution for disinfection.

**Common factors** found to be associated with the breakdown of sterilisation and disinfection include:

- use of inexperienced or untrained staff
- inadequate training regarding the introduction of new instruments, equipment or methods of work
- absence of the appropriate operating manual for specific instruments, equipment or machinery
- disregard or deviance from manufacturers' instructions.

It is expected that health care organisations will become familiar with and use the information from the **Safety Advocate** to:

#### **Plan**

Plan the changes by reviewing and considering the information, if appropriate to the organisation's services.

#### **Do**

Test the planned changes when designing or redesigning relevant systems.

#### **Study**

Study these systems in light of information in the **Safety Advocate** and the results of the testing.

#### **Act**

Act on relevant suggestions or reasonable alternatives or provide a reasonable explanation for taking no action.

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## **Strategies to reduce occurrence**

Possible strategies that a health care facility could adopt to reduce infection control incidents include:

- Ensuring that reprocessing policy and procedures are in place and that staff compliance is monitored regularly with appropriate interventions. The key elements of the facility's policy and procedure must comply with the *NSW Health Infection Control Policy* and with the infection control standards regulated in the *Medical Practice Act*, the *Nurses Act*, the *Physiotherapists Act*, the *Dentist Act*, the *Dental Technicians Act* and the *Podiatrist Act*.
- Requiring all staff involved in reprocessing to demonstrate understanding and application of the principles of reprocessing ie. cleaning, disinfection or sterilisation of instruments or equipment takes into account the intended use of the instrument in patient care. Refer to the *Infection Control Policy* for details on recommended reprocessing of instruments and equipment.
- Emphasising the importance of cleaning as the necessary first step of any disinfection process. Cleaning is a form of decontamination that renders the instrument safe to handle or use by removing organic matter, all of which interfere with microbial inactivation. The physical action of scrubbing with detergents and rinsing with water removes large numbers of microorganisms from the instrument. If the surface is not cleaned before further reprocessing, then the success of the sterilisation or disinfection process is compromised.
- Improving quality assurance and ensuring strict adherence to written procedures, for example health care facilities must check and document reprocessing parameters such as chemical and biological indicator results. This documentation should also include whether one of the reprocessing phases was skipped or its process aborted before completion.

The Department has developed and/or implemented a number of strategies to respond to infection control critical incidents. They include:

- commissioning the development of core sterilising /reprocessing competencies to define the minimum standard for reprocessing instruments and equipment
- formation of the NSW Sterilising Network Group to provide advice and consider specific cases and specific recommendations if necessary
- regular inter-committee reporting of Infection Control critical incidents – to share the knowledge amongst staff and sites
- proposed publication of specific cases and regular reporting in the NSW Public Health Bulletin to raise awareness in public and professional arenas
- participation by the Department in development of relevant national products eg. Australian Standards
- development of a system to monitor infection control program quality and outcomes.