

# Infection Prevention and Control Practice Standard

## Foreword

### Standards Framework

The Dental Council (the “Council”) is legally required to set standards of clinical competence, cultural competence and ethical conduct to be observed by all registered oral health practitioners (“practitioners”)<sup>a</sup>. This means that compliance to the Council’s standards by practitioners is mandatory.

The Council has established a Standards Framework which defines the ethical principles, professional standards and practice standards that all practitioners must meet.

There are five ethical principles that practitioners must adhere to at all times.

Practitioners must:

- put patient interests’ first
- ensure safe practice
- communicate effectively
- provide good care
- maintain public trust and confidence.

Each of the five ethical principles is supported by a number of professional standards which articulate what a practitioner must do to ensure they achieve the ethical principles. The professional standards are, in turn, supported by practice standards which relate to specific areas of practice that require more detailed standards to enable practitioners to meet the professional standards and ethical principles.

A copy of the Standards Framework is available on the [Dental Council's website](#).

### Compliance

The standards set by the Council are minimum standards which are used by the Council, the public of New Zealand, competence review committees, professional conduct committees, the Health and Disability Commissioner, the Health Practitioners Disciplinary Tribunal and the courts, to measure the competence, performance and conduct of practitioners.

A failure to meet the Council’s standards and adhere to the ethical principles could result in Council involvement and may impact on the practitioner’s practice.

Sometimes factors outside of a practitioner’s control may affect whether or not, or how, they can meet the standards. In such circumstances, practitioners are expected to adhere to the ethical principles, demonstrate insight and use their professional judgement to determine appropriate behaviour.

Practitioners must be able to justify their behaviour when this is contrary to the standards, and document their reasons.

<sup>a</sup> Oral health practitioners include dentists, dental specialists, dental hygienists, dental therapists, clinical dental technicians, dental technicians, and orthodontic auxiliaries.

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## Introduction

This introduction provides commentary on the Infection Prevention and Control Practice Standard, and does not form part of the practice standard.

The Infection Prevention and Control Practice Standard contains:

- The Dental Council *standards* ('standards') related to infection prevention and control that all registered oral health practitioners<sup>1</sup> ("practitioners") **must** meet. These are presented in the numbered coloured boxes -

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The standards that practitioners must meet.

and

- *Guidance* which describes the actions and behaviour that enable practitioners to meet the minimum standards. If a practitioner does not follow the guidance, they must be able to demonstrate to the Dental Council ('the Council') that they meet the standards
- This is presented in the grey-shaded boxes directly following the relevant standard -

### Guidance

- The actions and behaviour that enable practitioners to meet the minimum standards.

The practice standard is presented in five parts:

- I: Standard precautions
- II: Reprocessing of reusable items
- III: Performance testing, maintenance and validation
- IV: Blood or body fluid exposure procedures
- V: Documentation and education.

Some introductory comments appear throughout the practice standard to give added context to particular standards. Those comments do not form part of the standards.

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<sup>1</sup> Dentists, dental specialists, dental hygienists, dental therapists, clinical dental technicians, dental technicians and orthodontic auxiliaries

## Duty of patient care

The Health and Disability Commissioner Code of Rights provides that every consumer has the right to have services provided with reasonable care and skill<sup>2</sup> and that comply with legal, professional, ethical, and other relevant standards<sup>3</sup>.

In accordance with the ethical principles of the Standards Framework, practitioners have a responsibility to put their patients' interests first, and to protect those interests by practising safely and providing good care.

A key element of safe practice is preventing the transmission of disease-causing (infectious) agents, such as bacteria, viruses and fungi, among all individuals in the practice environment. The routine use of infection prevention and control measures, and an understanding of how infectious agents are transmitted, are critical in preventing this transmission and essential in ensuring patients receive safe care.

Practitioners have a clear responsibility to treat patients fairly and without discrimination. They must not discriminate against patients by refusing or compromising care on the grounds of a known or suspected infectious condition.

Practitioners also have an ethical obligation to address known failures or risks to patients in relation to infection prevention and control. Inform the patient, in a timely manner, about a serious breach in the infection prevention and control measures, even if that event caused no harm to that patient. Ensure the patient is aware of the Code of Health and Disability Consumers' Rights, and inform them of relevant complaints procedures.

## Purpose

The purpose of the Infection Prevention and Control Practice Standard is to set minimum standards that must be observed by all practitioners to:

- eliminate or reduce the number and quantity of infectious agents in the oral health practice environment; and
- prevent the transmission of infectious agents from any person within the practice environment to another, and from one item or location to another item, location or person.

The standards are aligned with the requirements of the Standards New Zealand standards on reprocessing of reusable medical equipment and instruments, specifically with *AS/NZ 4815:2006 Office-based health-care facilities - Reprocessing of reusable medical and surgical instruments and equipment, and maintenance of the associated environment* and the *AS/NZ 4187:2014: Reprocessing of reusable medical devices in health service organisations*.

Please note that the Council's Transmissible Major Viral Infections Practice Standard must be read in conjunction with the Infection Prevention and Control Practice Standard.<sup>4</sup>

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<sup>2</sup> Right 4(1) Health and Disability Commissioner Code of Health and Disability Services Consumers' Rights Regulations 1996

<sup>3</sup> Right 4(2) Health and Disability Commissioner Code of Health and Disability Services Consumers' Rights Regulations 1996

<sup>4</sup> The Transmissible Major Viral Infections Practice Standard relates to the prevention of transmission of hepatitis B, hepatitis C and the human immunodeficiency virus (HIV) from an oral health practitioner to a patient.

## Duty of compliance

Practitioners have a legal responsibility to meet the standards contained in this practice standard.

Practitioners must ensure that:

- their own clinical practice related to the prevention and control of infection meet the standards; and
- these standards are fully met in the practice<sup>5</sup> in which they work.

Where practitioners delegate responsibility for infection prevention and control associated tasks, practitioners remain accountable.

When reusable items are processed in a central sterilisation unit or external facility, practitioners must assure themselves that the processes used meet the standards.

The guidance provided in this document reflects current infection prevention and control knowledge and accepted good practice in healthcare settings; and describe actions and behaviour that enable practitioners to meet the standards.

If a practitioner does not follow the guidance they must be able to demonstrate to the Council that they meet the standards.

There are various actions the Council can take in the event of a practitioner's non-compliance with the standards. The action taken would depend on the individual circumstances of non-compliance.

## Non-registered staff and students

The Council strongly recommends that all students<sup>6</sup> and non-registered clinical staff follow the Infection Prevention and Control Practice Standard to minimise the risk of transmission of infectious agents to patients and practice staff.

Practitioners are responsible for ensuring that personnel involved in infection prevention and control activities are educated and trained to enable them to correctly perform the required tasks.

## Vaccination

Vaccination is a key means of establishing immunity to a number of common infectious diseases, thereby reducing the risk of acquiring and further transmitting the disease.

The Council strongly recommends that all oral health practitioners, students and non-registered staff follow Ministry of Health immunisation guidelines to establish immunity against the common infectious diseases, relevant to their practice environment.<sup>7</sup>

Recommendations related specifically to vaccination against hepatitis B are contained in the Council's Transmissible Major Viral Infections Practice Standard.

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<sup>5</sup> The "practice" is defined as all settings in which registered oral health practitioners perform activities associated with their scope of practice.

<sup>6</sup> Students enrolled in Council-accredited programmes of study.

<sup>7</sup> Ministry of Health immunisation guidelines can be accessed at: <http://immunisation.book.health.govt.nz/>

## Acknowledgements

The Infection Prevention and Control Practice Standard is founded on a number of different sources, including the Australian/New Zealand Standards related to reprocessing of reusable medical devices<sup>8</sup>; the New Zealand Dental Association's code of practice and the Australian Dental Association's guidelines; and other international guidelines/standards. It has been developed in consultation with a working group comprised of subject-matter experts and New Zealand registered oral health practitioners.

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<sup>8</sup> AS/NZ 4815:2006 Office-based health-care facilities - *Reprocessing of reusable medical and surgical instruments and equipment, and maintenance of the associated environment* and the AS/NZ 4187:2014: *Reprocessing of reusable medical devices in health service organisations*

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# Infection Prevention and Control Practice Standard

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# Part I:

## Standard precautions

Standard precautions are designed to reduce the risk of transmission of disease-producing agents from blood, body fluids and secretions (for example, saliva), mucous membranes and non-intact skin.

Infection prevention and control measures commonly regarded as standard precautions include: hand hygiene; personal protective equipment; safe management of sharps; safe disposal of waste; and environmental controls.

Standard precautions are practised routinely on the assumption that all patients are potentially infective, regardless of whether or not they have a known infectious condition.

Particular infectious conditions may require measures additional to standard precautions, termed transmission-based precautions, to minimise the risk of transmission of the infectious agent. Of particular concern are those conditions with agents transmitted by the airborne route, such as active tuberculosis, measles, chickenpox (varicella) and viral influenza.

## Hand hygiene

Hand hygiene is aimed at reducing the number of micro-organisms on hands and is the single most important measure for preventing the transmission of micro-organisms. The term hand hygiene includes both hand washing with liquid soap and the use of an alcohol based hand rub (ABHR).

The use of an ABHR is the preferred method of hand hygiene in health care settings when hands are visibly and clinically clean (no visible bioburden). Hand washing is the advised method when hands are visibly dirty or contaminated with proteinaceous material, blood or other body fluids.

The World Health Organization describes the '5 moments of hand hygiene' in dental care as:

1. Before touching a patient
2. Before clean/aseptic procedure
3. After body fluid exposure risk
4. After touching a patient
5. After touching patient surroundings.

An illustrated version is provided as Appendix A. These principles are applied in the guidance provided below.

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You must apply proper techniques for hand washing and use of alcohol based hand rub at the correct times; and routinely practise other hand hygiene protective measures.

### Guidance

#### Proper hand hygiene techniques

- Proper hand hygiene techniques are described in the World Health Organization's guidelines for hand washing and ABHR use. Refer to Appendix B for illustration of techniques.
- Ensure your forearms are uncovered while practising hand hygiene techniques.

#### Hand washing

- Wash your hands with a liquid soap, appropriate for use in a healthcare setting, at the following times:
  - When your hands are visibly dirty or contaminated with proteinaceous material, blood or other body fluids.
  - At the beginning and end of each clinical session.
  - After a toilet break.
- When washing your hands, use sinks dedicated for hand washing purposes that are fitted with non-touch tapware, or employ a non-touch technique. After hand washing, dry your hands using single-use linen or disposable paper towels (not using an air-dryer).

### Alcohol based hand rub

- When your hands are visibly and clinically clean use an ABHR, specified for use in health care settings, at the following times:
  - Before and after every patient contact.
  - Before gloves are put on and after they are taken off.
  - On entering and leaving the instrument reprocessing areas.
  - After hands inadvertently touch contaminated environmental surfaces, instruments or other equipment.
- Apply the volume of ABHR specified by the manufacturer to dry hands, and leave your hands to dry naturally; do not dry them with linen or paper towels.

### Other hand hygiene protective measures

- Follow the measures below to prevent transmission of infection. Damaged skin harbours higher numbers of micro-organisms than intact skin, consequently the risk of skin infection and transmission of infection to others increases:
  - Cover superficial cuts or open skin lesions with a waterproof dressing, even if gloves are worn over the affected area/s.
  - Refrain from direct patient contact if you have an exudative lesion or weeping dermatitis on the lower arms, hands or face that cannot effectively be dressed to prevent transmission, until the condition is resolved.
  - Use an aqueous based hand moisturiser regularly to maintain skin health; compatible with the hand hygiene products used.
- Follow the measures below to minimise the presence and growth of micro-organisms, to allow for optimal hand hygiene, and to maintain the correct fit and integrity of gloves:
  - Keep fingernails short and clean.
  - Refrain from wearing nail polish, nail jewellery, artificial nails, and jewellery on the hands or arms.

### Personal protective equipment

Personal protective equipment (PPE) is a collective term for the clothing and equipment worn by health practitioners which acts as a barrier to protect their own tissues from exposure to potentially infectious material. PPE includes: gloves; masks; protective eyewear; outer protective clothing; and enclosed footwear.

The use of dental handpieces, sonic and ultrasonic instruments and air/water syringes produces large quantities of aerosols, with an associated risk of airborne transmission of infectious micro-organisms.

You must ensure personal protective equipment is used properly during all procedures and activities when contact with blood or saliva is possible, and/or when aerosols, splashes or sprays are generated.

## Guidance

### Use of PPE

- Wear appropriate PPE for any procedure or activity associated with a risk of contamination.

### Gloves

- Wear properly fitting disposable gloves for all patients.
- Use a new pair of gloves for each patient.
- Replace gloves as soon as possible if they become soiled or damaged, do not wash gloves as this may damage glove integrity.
- For general dental procedures, wear non-sterile examination gloves that comply with AS/NZS 4011; or, when a sterile field is required, wear sterile gloves that comply with AS/NZS 4179.

### Masks

- Wear a fluid-resistant mask that meets, at minimum, AS/NZS 4381.
- Fit and wear your mask in accordance with the manufacturer's instructions, ensuring an adequate seal around both the nose and mouth. Avoid touching the front of the mask during patient treatment.
- Change your mask between patients and when damp or visibly contaminated during treatment. Remove by touching the strings and loops only, and discard immediately after use.
- Remove gloves, masks and protective eyewear before moving from a contaminated zone to a clean zone in your practice setting (refer to *Environmental controls* introductory comments to determine the contaminated and clean zones within your practice).
- When donning and removing personal protective equipment use sequencing that minimises the spread of contamination.

### Protective Eyewear

- Wear protective eyewear that is fit for purpose, and is optically clear and distortion free.
- A face shield may be used as an alternative to protective eyewear. Wear a mask with the face shield to provide protection against inhalation of micro-organisms.
- Supply your patient with protective eyewear before commencing treatment, and ask them to wear it during treatment.
- Clean protective eyewear following patient treatment.

### Outer protective clothing

- Wear outer protective clothing (for example, gowns, tunics) over your street clothing or uniform. Outer protective clothing is to be made from material that does not permit blood or other potentially infectious materials to reach clothes or skin underneath.
- Change outer protective clothing: as soon as possible when visibly soiled or wet, when exposed to contaminated aerosols for prolonged periods of time, and at least daily.
- Change long sleeved outer protective clothing at least between patients.
- Remove outer protective clothing before leaving the treatment area for: a break involving eating and/or drinking, a toilet break, and before leaving the practice premises.
- Launder reusable outer protective clothing in a commercial laundry that provides services for healthcare settings, or domestically as a separate load (not overloaded) at the hottest temperature the fabric can tolerate.
- Place disposable outer protective clothing in the controlled waste after use, unless it is contaminated with blood to the extent that it qualifies as hazardous waste (refer to *Safe disposal of waste*).

### Footwear

- Wear enclosed footwear that will protect your feet against injury from sharp objects.

## Safe management of sharps

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You must ensure the safe handling and disposal of sharps.

### Guidance

#### Safe handling of sharps

- You are responsible for the immediate disposal of a single-use sharp item you have used, or rendering it safe for disposal later (for example, recapping a needle).
- Follow safe practices to minimise the risk of sharps injury, including:
  - using a single handed technique or a recapping device for re-sheathing of needles
  - not passing sharp instruments between staff members, for example, scalpels and scalers
  - using a lidded puncture resistant container, cassette or covered tray to transport sharps from the point of origin to the reprocessing area.

#### In the event of a sharps injury

- In the event you are exposed to a patient's blood or body fluid, for example, if you sustain a contaminated sharps injury outside the patient's mouth, follow the procedure described under standard 22.
- Follow the procedure detailed in the Council's Transmissible Major Viral Infections Practice Standard in the event you sustain a sharps injury in the patient's mouth.

#### Safe disposal of sharps waste

- Handle sharps waste carefully and dispose of it in a clearly labelled yellow, rigid walled, puncture and leak resistant sharps container that complies with AS/NZS 4261:1994. Sharps waste includes: local anaesthetic cartridges, needles, scalpel blades, endodontic files, matrix bands and stainless steel burs.
- Use sharps containers in accordance with manufacturer guidelines, i.e. not overfilled, and close before collection.
- Locate sharps containers close to the origin of the sharps waste, and in the reprocessing area, in a way that makes them inaccessible to unauthorised persons at all times.
- Use an authorised hazardous waste contractor to dispose of sharps containers.

## Safe disposal of waste

The standards for the safe disposal of healthcare waste are specified in NZS 4304:2002 *Management of healthcare waste*.

NZS 4304:2002 categorises healthcare waste as:

- 'Hazardous' – waste that poses a threat to the health and safety of staff, public or to the environment.
- 'Controlled' – waste that is recognisable as coming from a healthcare facility, which may be contaminated or soiled with potentially infectious body fluid that is not expressible under compaction; or is not infectious but may be considered culturally or aesthetically offensive.
- 'Non-hazardous' – any waste not classified within the categories of hazardous waste or controlled waste (i.e. general and re-cycle waste).

Variation in interpretation and application of the NZS 4304:2002 standards may occur, depending on local council requirements, facilities and organisational policies.

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You must ensure the safe handling and disposal of hazardous and controlled waste.

### Guidance

- Wear appropriate personal protective equipment when handling hazardous and controlled waste, for example, protective eyewear, gowns, masks and gloves; and perform hand hygiene afterwards.
- Separate waste at its point of generation into: hazardous, controlled or non-hazardous.
- Remove waste from the practice environment frequently.

## Safe disposal of hazardous and controlled waste

- Guidance for the collection and disposal of hazardous and controlled waste is provided below, however it is recommended that practitioners develop their waste disposal procedures following reference to local council policies for disposal of healthcare waste.

Hazardous waste	Collection and disposal requirements
Sharps waste	Refer to Standard 3 guidance "Safe disposal of sharps waste"
Non-sharps waste (further categorised as infectious, cytotoxic, radioactive, hazardous, and body parts), examples in the dental environment:	
Human tissues, laboratory specimens	Place in biohazard bags or containers Store in a restricted access area
Material or solutions containing expressible, or free-flowing, blood or body fluids	Bags/containers to be collected and disposed of by an authorised hazardous waste contractor.
Amalgam waste (scrap, extracted teeth restored with amalgam, amalgam capsules)	Store under radiographic fixer solution or water, in a sealed container (Note: used amalgam capsules can be stored dry) Store in a restricted access area Containers to be collected and disposed of by an authorised recycling contractor Do not dispose of amalgam waste with other hazardous waste.
Chemicals (radiographic developer and fixer), and pharmaceuticals	Store in separate, sealed, labelled, plastic containers in a restricted area Seek advice from the local council authority regarding appropriate disposal.
Controlled waste	Collection and disposal requirements
<i>Examples:</i> used gloves, masks, disposable gowns and aprons, used cotton rolls and gauze	Place in a leak proof bag Seek advice from the local council authority regarding appropriate storage and disposal.

- Clean an extracted tooth of visible blood and saliva before returning it to the patient. If the tooth is not wanted by the patient, dispose of it as controlled waste.

## Environmental controls

A contaminated zone is any area that is, or has the potential to be, contaminated with potentially infectious material (blood, saliva, etc.). A clean zone is any other area within the practice environment.

The typical zones of contamination in the practice environment are:

- The primary clinical working area within the patient treatment area - typically including work surfaces, materials, instruments and equipment (for example, the dental chair, cuspidor, operating light and radiographic equipment).
- The area where contaminated patient appliances and impressions are received and decontaminated.
- The zone in the reprocessing area where instruments and equipment are handled and decontaminated.

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You must ensure you minimise the degree and extent of contamination within a contaminated zone, and the spread of contamination from a contaminated to a clean zone.

### Guidance

- Clearly demarcate the contaminated and clean zones within your practice environment.
- Situate clinical notes, computers and x-ray viewers outside the contaminated zone. If limitations in your practice environment make it impossible to locate computers and x-ray viewers outside the contaminated zone, use barrier protection for these items.
- Employ measures aimed at reducing the extent of contamination within the contaminated zone, as appropriate, for example, high volume evacuation systems, use of rubber dam, and pre-procedural antiseptic mouth rinses.
- Employ measures aimed at preventing the spread of contamination from the contaminated zone to a clean zone. These include:
  - Anticipating treatment needs before commencing treatment, so materials can be pre-dispensed from clean storage areas and all necessary instruments are readily available within the contaminated zone (critical items must remain packaged until point of use).
  - Not touching surfaces, equipment, stored instruments and materials in the clean zone, with contaminated gloves or hands.
  - Ensuring all drawers remain closed when aerosols are being generated during patient treatment.
- If you need to obtain materials or instruments from within the clean zone during a procedure, do so in a manner that does not cause contamination of the clean zone. This can be achieved by either removing your contaminated gloves and practising the appropriate hand hygiene techniques, or using transfer tweezers or over-gloves to obtain the required items from the clean zone.
- Maintain the sterility of critical items when surgical procedures are performed by using sterile gloves, placing sterile instruments on a sterile surface, e.g. disposable sterile surgical drapes or sterile metal trays on bracket tops, and maintaining an aseptic non-touch technique.

- Consider all surfaces and items within the contaminated zone as contaminated once patient treatment has commenced. After treatment clean the work and equipment surfaces, and either dispose of, or reprocess the remaining items appropriately (refer to *Part II: Reprocessing of reusable items*).

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You must ensure you achieve and maintain a safe and clean clinical environment by means of: effective cleaning of all surfaces, equipment and instruments; and maintaining safe waterlines and water quality.

## Guidance

### Cleaning of surfaces in the contaminated zone

- Clean work and equipment surfaces in the contaminated zones with a suitable clinical detergent - use in accordance with manufacturer's instructions, and dry surfaces with a low-lint cloth or disposable paper towel.
- Clean work and equipment surfaces in the contaminated zones at the following times:

Patient treatment area	Immediately after each patient treatment
Area where contaminated items are received and decontaminated	Immediately after decontamination of items, or when visibly soiled
Reprocessing area	After loading the steriliser, or when visibly soiled

- Clean and disinfect work and equipment surfaces that are visibly soiled with blood with an intermediate or low - level disinfectant.<sup>9</sup> Guidance for the management of blood and body fluid spills is provided as Appendix C.
- Achieve effective disinfection by following the product manufacturer's instructions for use, including the required contact time.

When effective disinfection can be achieved it may be used between patients and/or at the beginning and end of a treatment session or day. Disinfection of work and equipment surfaces in the contaminated zone, following effective cleaning between patients is not routinely required.

- Barrier protection (plastic 'fitted' sleeves or disposable adhesive wrap) may be used for surfaces and equipment within the contaminated zone. This includes, but is not limited to:
  - The operating light handle, the bracket table and handle.
  - The x-ray head, intra-oral camera.
  - Tubing for suction, triplex syringes and hand pieces.

<sup>9</sup> Intermediate (EPA- registered hospital disinfectant with tuberculocidal claim); Low level EPA- registered hospital disinfectant with an HBV and HIV label claim. (EPA = U.S. Environmental Protection Agency)

- Dispose of barrier protection after each patient treatment, clean surfaces and/or equipment that have been barrier protected, and place new barrier.
- Use sealed, non-slip and washable materials for floor coverings in all clinical treatment and reprocessing areas.

#### Cleaning of surfaces in the clean zone

- Clean the work surfaces in the clean zones of the patient treatment areas and instrument reprocessing area at the end of each session with a suitable clinical detergent, or when visibly contaminated.
- Maintain the remaining clean zones in the practice environment in a clean condition, and clean them at least weekly. Household cleaning procedures are sufficient for these areas.

#### Waterlines and water quality

- All dental equipment with waterlines that deliver water to any devices that enter the patient's mouth (such as handpieces, scalers and air/water syringes) are to be fitted with an anti-retraction valve to minimise backflow of contaminated fluids from the oral cavity.
- Flush air and waterlines for at least two minutes at the start and end of each day, and for 30 seconds between patients.
- Clean and disinfect waterlines according to the manufacturer's directions.
- Assure yourself that the water within your oral health practice environment is safe to drink; information on the quality of water may be obtained from the local water authority. The use of distilled water or water treated by reverse osmosis (RO), in an independent water supply (fitted bottle) system, is recommended for dental units.

## Transmission-based precautions

Transmission-based precautions are infection control measures used in addition to standard precautions when a patient has a known or suspected infectious condition, transmitted by the airborne, droplet or contact route, which cannot be effectively contained by standard precautions alone, e.g. tuberculosis, measles, chickenpox (varicella), mumps, and MRSA infection.

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You must follow appropriate transmission-based precautions, in addition to standard precautions, when the patient has an infectious condition that cannot be contained by standard precautions alone and treatment cannot be postponed; or refer appropriately.

### Guidance

- Update the medical history for each patient at each interaction to determine if the patient has a known or suspected infectious condition that cannot be effectively contained by standard precautions alone.
- When transmission-based precautions are indicated postpone treatment when possible until the patient is no longer infectious.

- When treatment cannot be postponed, provide appropriate transmission-based precautions in addition to standard precautions, or refer appropriately.
- Examples of transmission-based precautions are listed in Appendix D; appropriate selection is based on the route of transmission of the particular infectious agent.

## Contaminated items for dispatch

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You must ensure contaminated items are properly decontaminated, packaged and labelled before dispatch, to limit the risk of transmission between patients, practice members and/or the public handling the contaminated item.

### Guidance

- Clean, package and sterilise instruments for repair, for example handpieces, before dispatching for repair or maintenance.
- Place biological specimens in a sturdy, leak-proof container labelled with the biohazard symbol; and then, package the leak-proof container in a sealed container labelled with the biohazard symbol, to prevent any leakage during transport.
- Clean and disinfect items for dispatch between a dental laboratory and another dental practice, for example impressions and appliances, as follows:

Action	Appropriate procedure
Practice sending item to laboratory	Practice cleans the item with an appropriate clinical detergent
Laboratory accepting item	Laboratory cleans and disinfects with appropriate solutions to protect integrity of material
Laboratory sending item to practice	Laboratory cleans the item with an appropriate clinical detergent
Practice accepting item	Practice cleans and disinfects the item with appropriate solutions to protect integrity of material

- Once cleaned, place items in a sealed plastic bag; label to indicate “cleaned”; and then place in a clean, rigid container for transport.

## Modification of dental appliances

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You must ensure the appropriate handling of equipment and materials used in the repair or modification of dental appliances which have been in contact with the patient's mouth.

### Guidance

- Before re-use, manually and/ or ultrasonically clean and disinfect all reusable items and/or equipment used in the repair or other modification of a dental appliance which has been in contact with a patient's mouth, for example, mops, brushes, wheels and adjustment burs<sup>10</sup>. Use new cleaning solution, and discard used solution immediately after use.
- Discard, after use, any material used in the finishing/polishing of a dental appliance which has been in contact with a patient's mouth, for example, pumice or similar alternative products. Where the finishing/ polishing material is only used on newly fabricated dental appliances repeated use of the finishing/polishing material is acceptable.

<sup>10</sup> Where a steriliser is immediately accessible, sterilise adjustment burs.

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## Part II: Reprocessing of reusable items

Reprocessing refers to the procedures that are carried out to ensure a contaminated reusable item is made safe for re-use and includes, as appropriate for the item's intended use:

- Cleaning
- Disinfecting
- Sterilising
- Packaging
- Safe storage.

## Reprocessing of reusable items

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You must ensure you use reprocessing procedures appropriate for the intended use of contaminated reusable items.

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You must discard single-use items after use on the patient.

### Guidance

- Classify reusable items according to the risk of transmission of infectious agents associated with their intended use, consistent with the Spaulding classification system.

**Note: Classification of items may change depending on the intended use of the item**, for example, dental tweezers, periodontal instruments and ultrasonic scaler tips may be classified as critical or semi-critical.

- Reprocess reusable items as follows:

Classification	Definition and dental related examples	Reprocessing procedures
Critical items	Enter into normally sterile tissue, the vascular system or body cavity. <i>Examples:</i> dental forceps and elevators, surgical instruments and surgical burs, instruments used in implant surgery, implantable items, endodontic files.	Clean, package before sterilisation, sterilise in a steriliser with a drying cycle and store in a manner that maintains sterility until point of use.  Critical items require batch control identification (refer to standard 14).
Semi-critical items	Contact intact mucous membranes or non-intact skin but do not enter the tissues. <i>Examples of solid semi-critical items:</i> mouth mirrors, dental probes, restorative instruments, sterilisable impression trays. <i>Examples of hollow semi-critical items:</i> air/water syringe tips, sterilisable suction tips, all handpieces.	Clean and sterilise before re-use. Items are not required to be sterile at point of use; packaging prior to sterilisation is not required.
Non-critical items	Contact intact skin but not mucous membranes. <i>Examples:</i> bib chains, protective eyewear	Clean items before re-use. In addition to cleaning, items may be disinfected. Sterilisation of non-critical items is not required.

➤ Treat the following items as single-use items:

- Items designated as single-use by the manufacturer.
- Small and/or sharp items that are difficult to clean in a safe and verifiable manner, including matrix bands, endodontic reamers, barbed broaches and files (with the exception of nickel-titanium files if the verified process for cleaning is routinely followed, refer Appendix E).
- Steel burs, due to oxidation as a result of sterilisation.

## The reprocessing area

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You must ensure an appropriate reprocessing area is designated with distinct areas for reprocessing procedures which facilitates contaminated to clean reprocessing flow.

### Guidance

➤ Establish a reprocessing area which is ideally separate from the patient treatment area and has:

- sufficient bench space to allow for all reprocessing activities and associated equipment
- adequate ventilation and light
- smooth bench surfaces for easy and effective cleaning
- a sink for cleaning contaminated instruments, deep enough to submerge the items for cleaning
- a separate facility for hand washing
- covered storage areas for reprocessing supplies; separate from the storage area for sterilised items.

The preferred reprocessing area layout is provided in *Supplementary Information (i)*.

- Where it is not possible to establish a reprocessing area which is separate from the clinical treatment area/s, establish a reprocessing area as far away from the contaminated zone as possible within the treatment area.
- Establish distinct areas in the reprocessing area for the following reprocessing procedures:
- Receiving and cleaning of contaminated items
  - Drying and inspecting of items
  - Packaging
  - Sterilisation
  - Cooling of sterilised items awaiting storage or dispatch.

### Guidance

- Cleaning is the removal of contaminants and can be performed manually, or with the use of automated cleaners (for example ultrasonic cleaners and instrument washer/disinfectors), or a combination.
- Automated cleaning is the preferred cleaning method.
- Clean items as soon as possible following use to prevent contaminants from drying on the items. Avoid the use of colour coded tapes on items for identification – they may compromise the cleaning and sterilisation processes.
- Use heavy duty gloves, a mask, impermeable outer protective clothing and eye protection during cleaning of contaminated items, to protect from splashing and potential injury.
- Rinse items under running water after manual and ultrasonic cleaning to remove any cleaning solution residue.
- Inspect items after cleaning and drying to ensure all contaminants are removed.

#### Ultrasonic cleaners

- Follow the manufacturer's instructions for the operation of the ultrasonic cleaner to ensure the effective removal of contaminants.
- Remove gross contaminants from items before placing in an ultrasonic cleaner.
- Operate the ultrasonic cleaner with the lid in place.
- Change the cleaning solution at least daily, or more frequently if visibly contaminated.

#### Instrument washer-disinfectors

- Follow the manufacturer's instructions for the operation of the instrument washer/disinfector to ensure the effective removal of contaminants. Monitor the cleaning and disinfecting process as follows:
  - Undertake continuous performance checks for correct functioning of the equipment, i.e. water pressure, temperature, flow and action in accordance with the manufacturer's specifications.
  - Undertake continuous performance checks for cleanliness of items.
  - Check for each cycle that the time maintained at the thermal disinfecting temperature was not less than specified, and document this.

**Note:** Disinfection is not a required step in the safe reprocessing of critical or semi-critical items.

### Manual cleaning

- Immerse contaminated items in a dedicated instrument-cleaning sink that is filled with a solution of warm water and a mildly alkaline, low-foaming cleaning agent intended for cleaning reusable items.
- Use non-abrasive cleaning methods, including an appropriately sized instrument brush, cleaned after each use in warm water and stored dry. Instrument brushes with metal bristles are not recommended.
- Keep items fully submerged in the cleaning solution while cleaning to minimise aerosol risk, when manufacturer's instructions permit.
- If the water becomes heavily soiled, replace the cleaning solution and repeat the cleaning procedure.
- Carry out a final rinse in a clean sink using water that is safe to drink.

### Drying of items

- Use low-lint cloths, or a drying cabinet for drying items.

## Packaging

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You must ensure all critical items are packaged and labelled with batch control identification information before sterilisation.

### Guidance

- Use single-use packaging materials specified for use in sterilisation.
- Before sterilising, seal wrapped packs using steriliser tape and seal bags by heat sealing, or use self-sealing pouches. Do not use domestic adhesive tape, staples, rubber bands or pins as these can compromise pack integrity.
- Package sharp items in a manner to prevent perforation of the pack. Tip protectors for sharp items may be used.
- Open and unlock items with hinges or ratchets, and disassemble multi-part instruments, to ensure steam contacts all parts.
- Label the outside of the pack of all critical items, before sterilisation, with the following batch control identification information:
  - Steriliser identification number or code, if there is more than one steriliser in use.
  - Date of sterilisation.
  - Cycle or load number.

- Batch control identification (tracking/tracing) links the reprocessed critical item/s to a particular sterilisation cycle with documented performance data demonstrating sterilisation parameters were met. Document the batch control identification information in the record of the patient on whom the sterilised critical item/s is used.

## Steam sterilisation

- 15** You must ensure all reusable critical and semi-critical items are sterilised using a steam steriliser with an appropriate cycle type, equipped with a data recording device<sup>11</sup> and/or printer.

**Proviso:** Dental practices sterilising ONLY solid, unpackaged semi-critical items, with a steriliser not capable of being fitted with a data recording device and/or printer, will be required to have a data recording device and/or printer at the time of purchasing a replacement steriliser.

Dental practices sterilising critical, and/or semi-critical, solid and hollow items will be required to have a data recording device and/or printer by 1 May 2018.

- 16** You must ensure all packaged items are processed in a steam steriliser with drying capability.

- 17** You must ensure the integrity of the sterilisation process through proper use of the steriliser and monitoring of each sterilisation cycle.

## Guidance

### Sterilisation cycle types

- Use a steam steriliser capable of performing a cycle type/s that is appropriate for reprocessing reusable critical and semi-critical items, as described below:
  - N type cycles – capable of sterilising unwrapped, solid items only<sup>12</sup>.
  - B type cycles - capable of sterilising wrapped and unwrapped items, including porous and hollow items that do not exceed the specifications of Hollow load Type A\*.
  - S type cycles – capable of sterilising unwrapped solid items and at least one other of the following load types, as specified by the manufacturer:
    - Porous items
    - Small porous items
    - Hollow load Type A\*
    - Hollow load Type B\*

<sup>11</sup> Data recording devices may include process recorders, data loggers or electronic storage devices.

<sup>12</sup> Dental handpieces are not solid items

- Single layer wrapped items
- Double wrapped items.

\* Refer to Appendix F for definition

### Use of the steriliser

- Load and operate the steriliser according to the manufacturer's instructions to ensure steam can circulate freely and touch all item surfaces.
- Include a Class 1 chemical indicator<sup>13</sup> in every load, except when unwrapped items are sterilised in a steriliser without a data recording device and/or printer – when a class 4,5 or 6 chemical indicator is required.
- Unprocessed items are not to be stored in the steriliser.

### Monitoring of sterilising cycles

- Inspect the data record at the end of each sterilisation cycle to check that all required physical parameters (time, temperature and pressure) have been met at the required values, as an indicator that the steriliser has functioned satisfactorily. Document accordingly.
- Where a steriliser does not automatically record sterilisation cycle monitoring data use a Class 4, 5, or 6 chemical indicator for every load<sup>14</sup>; Class 5 or 6 preferred.
- Check at the end of each cycle that the chemical indicator has undergone the required colour change indicating the parameters have been met (Class 1, or Class 4, 5 or 6, as applicable).
- Document your observations.
- If failure of any parameter is detected, consider the sterilisation cycle unsatisfactory. Remove the load, allow the load to cool before re-packaging for re-sterilising later, document as a failed cycle and repeat the sterilisation cycle with an empty chamber. If the second cycle is unsatisfactory, do not use the steriliser again until it has been repaired and approved for use by a qualified technician.

### Unloading and checking the completed load for release

- Allow the steriliser to complete its entire cycle, including drying, before removing the load.
- In addition to having checked that all physical parameters have been met, and chemical indicators have undergone the required colour change, check the load is dry and packaging and seals are intact before releasing the load for re-use. Consider the load non-sterile if these criteria are not met for any item, allow to cool, re-package and re-process the complete load.
- Use cooling racks for cooling sterilised items, to avoid condensation. Do not force-cool items.

<sup>13</sup> A Class 1 chemical indicator is a 'process indicator'. It indicates whether an item has been exposed to the sterilisation process and identifies 'processed' vs 'unprocessed' items.

<sup>14</sup> See Appendix G for classes of chemical indicators and usage requirements.

### Dry heat sterilisation

- Use dry heat sterilisation only when steam sterilisation is deemed unsuitable by the manufacturer of the item.

### Cold sterilisation

- Use cold sterilisation for only semi-critical items that cannot withstand steam sterilisation and are not available as single-use items.
- Select an EPA-approved product with sterilisation capability and follow the manufacturer's instructions to achieve sterilisation of items.

## Storage

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You must ensure stored critical items maintain their sterility until point of use, and semi-critical and non-critical items are protected from contamination before re-use.

### Guidance

- Store items in a clean, dry, dust-free environment outside the contaminated zone, and handle minimally before use.
- Before using a packaged item, check the integrity of the pack. If there is evidence of damage or the package is open or wet, re-package and re-sterilise the item before re-use.

## **Part III: Performance testing, maintenance and validation**

Performance tests are undertaken to establish whether or not reprocessing equipment is functioning correctly.

Maintenance requirements are preventive measures undertaken to ensure the reprocessing equipment continues to function appropriately, and include those recommended by the manufacturer and AS/NZS 4815:2006 requirements.

The purpose of validation is to objectively prove the capability of the reprocessing equipment and associated processes to consistently yield a product that meets specific requirements. For example, for sterilisers, the product is sterilised and dry; for instrument washer-disinfectors, the product is cleaned, disinfected and dry.

You must ensure appropriate performance tests are conducted for reprocessing equipment at the correct times.

Guidance

➤ Carry out the performance tests below, as applicable, and record the results:

For steam sterilisers:  
Perform the following steriliser performance tests before the first cycle of each day, in the order listed below:

Type B cycle	<p><b>Leak rate test</b> - tests the security of seals and the integrity of the chamber and drain of the steriliser. This may be performed weekly if the steriliser incorporates automatic air leak detection, and daily if not; and</p> <p><b>Air removal (vacuum) and steam penetration tests</b> – use a Class 2 chemical indicator<sup>15</sup>, for example, Bowie-Dick type test or Helix test that is appropriate for the steriliser.</p>
Type S cycle	When the steriliser has cycles capable of processing hollow loads, perform <b>air removal and steam penetration tests</b> using a Class 2 chemical indicator as specified by the manufacturer.

For ultrasonic cleaners:  
Perform a function test (aluminium foil test or other appropriate test, for example, ceramic disc pencil test) after de-gassing, each day before use.

For instrument washer-disinfectors:  
Perform a chemical dosing volumetric test, as specified by the manufacturer, quarterly.  
A cleaning efficacy (soil) test is recommended to be performed quarterly, to confirm the efficacy of the cleaning process.

<sup>15</sup> Refer to Appendix G

You must ensure reprocessing equipment is appropriately cleaned and daily maintenance checks are performed; and planned preventative maintenance is carried out at least annually.

### Guidance

- Perform the following cleaning procedures and daily maintenance checks:

Reprocessing equipment	Cleaning procedures	Daily maintenance checks
Steam steriliser	Damp dust external surfaces daily. Clean steriliser chamber and loading shelves weekly when cold. Drain water reservoir as specified by the manufacturer.	Check: <ul style="list-style-type: none"> <li>• Steriliser floor is free of debris.</li> <li>• Chamber drain is clear.</li> <li>• Recording devices are functioning correctly.</li> <li>• Door gasket is undamaged.</li> <li>• Water level.</li> </ul>
Ultrasonic cleaner	Clean internal and external surfaces daily. Empty tank at least once a day. Leave clean and dry at the end of the day.	Continuously check for the correct functioning of switches, gauges and lights. Check filters, where present, and base plates.
Instrument washer-disinfector	Clean jets, filters, doors, door gaskets/seals and external surfaces daily.	Check jets, filters, doors, door gaskets/seals and external surfaces daily. Check the levels of cleaning agents daily.

- Establish a programme of planned preventative maintenance for each piece of reprocessing equipment based on the manufacturer's recommendations and the equipment's performance record. This may require planned preventative maintenance to be carried out more frequently than the minimum annual requirement.

## Validation

The three stages of validation are summarised below:

Stages of Validation		Function
Installation Qualification (IQ)	IQ and OQ are collectively termed <i>Commissioning</i> at a first installation; and <i>Re-commissioning</i> when subsequently required.	<p>Demonstrates that equipment associated with a particular reprocessing activity has been <i>supplied and installed</i> in accordance with its specifications.</p> <p>IQ also applies to the services and environment required for the equipment (for example, water, steam).</p>
Operational Qualification (OQ)		<p>Demonstrates the capability of the reprocessing equipment to <i>deliver</i> the process that has been defined by the equipment manufacturer.</p> <p>For sterilisers, the tests conducted during OQ usually consist of manufacturer recommended performance tests and heat penetration tests (to find the “cold spots” in the chamber) with the steriliser in an unloaded state.</p> <p>Tests performed may include a ‘Heat Distribution’ test</p>
Performance Qualification (PQ)		<p>Demonstrates that the equipment <i>consistently operates</i> in accordance with predetermined criteria and the processes consistently yield a product that meets the specified requirements for the item.</p> <p>The PQ stage of validation for sterilisers aims to prove the efficacy of the sterilisation process for loads typically processed in the practice by running a reference load, collecting data, and inspecting the completed load to demonstrate:</p> <ul style="list-style-type: none"> <li>• specified critical physical parameters have been met within the load;</li> <li>• microbiological lethality is achieved; and</li> <li>• the load is dry.</li> </ul> <p><b>Annual performance re-qualification</b> is performed at 12 monthly intervals to prove the reliability of a reprocessing process on an ongoing basis. This is a modified PQ process that mirrors all the normal PQ process steps, without using sensors or self-contained data loggers to measure temperature and pressure. It may be performed by trained practice staff, provided maintenance and calibration has been recently performed by a qualified contractor.</p>

You must ensure all validation stages (IQ, OQ and PQ), and annual performance re-qualification, are properly performed on-site for each steriliser and instrument washer-disinfector at the correct times, and by the appropriately trained personnel.

### Guidance

- Perform validation (IQ, OQ and PQ) when:
  - New, loan, replacement or repaired reprocessing equipment is installed in the practice.
  - Monitoring, performance testing and performance re-qualification records indicate unacceptable deviation(s) from data determined during the last validation.
- All stages of validation (IQ, OQ and PQ) are performed by a qualified contractor with the appropriate training and equipment to meet ISO17665 standard for sterilisers, and ISO15883 standard for instrument washer-disinfectors. PQ must always be performed in conjunction with a practice staff member/s to ensure the authenticity and reproducibility of the sterilising, and washing/ disinfecting, processes within the practice.
- Perform only PQ when new or modified items, packaging or loading configurations are introduced - unless equivalence to a previously qualified load/items; packaging; or loading pattern has been demonstrated.
- Perform annual performance re-qualification 12 months following validation or PQ, and annually from then on.
- Annual performance re-qualification can be performed by an appropriately trained practice staff member/s responsible for reprocessing activities within the practice.
- Confirm the calibration status of the reprocessing equipment before PQ, and annual performance re-qualification, to verify the accuracy of the measurements to be taken; calibration may be aligned with the annual servicing and maintenance requirements for sterilisers and instrument washer-disinfectors.

- Follow the processes below for performance qualification (PQ) and annual performance re-qualification of the sterilising process:

Performance qualification (PQ); as part of validation or when introducing new or modified items, packaging or loading configurations	Annual performance re-qualification
<ul style="list-style-type: none"> <li>• Select the cycle types to be tested.</li> <li>• Determine a load that is representative of loads routinely sterilised in the practice and relevant to the cycle type.</li> <li>• Include a challenge/ reference pack in the load - representing the set of items/ pack that is hardest to sterilise in terms of density and size, relevant to the practice.</li> <li>• Prepare/ package the load in an identical manner to that practised routinely.</li> <li>• Place sensors or self-contained data loggers to measure temperature and pressure in specified locations in the load.</li> <li>• Place biological indicators alongside packs containing sensors, or adjacent to self-contained data-loggers. Include chemical indicators (Class 5 or 6), if used as part of the normal sterilising process.</li> <li>• Run the cycle and collect data.</li> <li>• On completion of the cycle, check the load is dry and the chemical indicators have changed colour.</li> <li>• After cooling, remove packaging and biological indicators to be cultured.</li> <li>• Repackage the load in an identical manner to the first test cycle, and repeat the process twice more without interruption.</li> </ul>	<ul style="list-style-type: none"> <li>• Perform the same procedure as for PQ, excluding the placement of sensing devices for temperature and pressure, provided maintenance and calibration has been recently performed by a qualified contractor.</li> </ul>

- Follow the processes below for performance qualification (PQ) and annual performance re-qualification of the cleaning and disinfecting process using an instrument washer disinfectant:

Performance qualification	Annual performance re-qualification
<ul style="list-style-type: none"> <li>• Select the cycle types to be tested for each carriage type used.</li> <li>• Determine a load that is representative of the loads routinely cleaned and disinfected in the practice.</li> <li>• Prepare/ package the load in an identical manner to that practised routinely.</li> <li>• Run three consecutive cycles, while simultaneously performing: <ul style="list-style-type: none"> <li>○ Thermometric testing to confirm that disinfection parameters are acceptable (performed by a qualified contractor)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• A cleaning efficacy (soil) test provided maintenance and calibration has been recently performed by a qualified contractor.</li> </ul>

<ul style="list-style-type: none"><li>○ A cleaning efficacy (or soil) test to confirm the ability of the equipment to yield a clean product.</li><li>• Perform a chemical dosing volumetric test, as specified by the manufacturer.</li></ul>	

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## Part IV: Blood or body fluid exposure procedures

A blood or body fluid exposure is defined as any instance when a contaminated object or substance breaches the integrity of skin or mucous membranes, or comes into contact with the eyes.

This could include:

- Penetrating injuries to the skin (for example, an exposure prone procedure accident or a contaminated sharps injury, commonly caused by needles, sharp instruments and scalpel blades.
- An injury where the integrity of the skin is compromised (for example, cut, open wound or abrasion), and the skin comes into direct contact with blood, or body fluids contaminated with blood.
- Bites or scratches caused by patients.
- Direct contact between the mucous membranes of the mouth, nose or eyes with blood or body fluids.

## Blood or body fluid exposure procedures

Oral health practitioners and staff are at most risk of penetrating injuries to the skin (sharps injury). This type of blood or body fluid exposure carries the greatest potential risk of transmission of blood-borne viruses, of which hepatitis B, hepatitis C and human immunodeficiency virus (HIV) are the main concern; collectively termed transmissible major viral infections (TMVIs).

A sharps injury can occur to a practitioner in the following general circumstances:

- When performing an exposure prone procedure (EPP)<sup>16</sup>; resulting in exposure of the patient to the blood of the practitioner.
- When handling sharps outside the patient's mouth. Contaminated sharps are of most concern due to the potential risk of TMVI infection (staff are also at risk).

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You must, in the event of an exposure to blood or body fluid, immediately stop working and apply first aid care; and follow appropriate procedures to minimise the risk of transmission of an infectious agent to yourself and/or the patient.

- Apply **first aid care** to a practitioner or staff member following a blood or body fluid (BBF) exposure, as follows:
  - If it is a penetrating injury: allow the wound to bleed, and clean it thoroughly with soap and lukewarm water. There is no benefit in squeezing the wound.
  - If the exposure involves mucous membranes or conjunctiva: flush with normal saline or water (remove contact lenses after flushing the eye and clean normally).
- In the event a **patient is exposed to your blood as a result of injury to yourself** (typically while performing an EPP), the procedure you must follow is detailed in the Council's Transmissible Major Viral Infections Practice Standard.
- In the event **you are exposed to a patient's blood or body fluids**, for example, from a contaminated sharps injury occurring outside of the patient's mouth, you must follow the procedure below:
  - Undergo testing the same day, if possible, to determine your serological status for HBV, HCV and HIV at the time of injury; and
  - Request the source patient undergo testing the same day, if possible, to determine his/her serological status for HBV, HCV and HIV at the time of injury; and
  - If the patient refuses testing, respect the patient's refusal and document it; and
  - Promptly seek medical advice regarding the likelihood of transmission of an infectious agent (based on the nature of the exposure and the known medical status of the patient); and the appropriateness of post-exposure prophylaxis. Initial medical consultation may result in referral to a specialist medical practitioner/s for advice; and
  - Document the incident, recording the:
    - name of the practitioner exposed or injured

<sup>16</sup> EPP is the simultaneous presence of a health-care provider's hands and a needle or to other sharp instrument or object (e.g. bone spicule or tooth), in a poorly visualised or highly confined anatomic site, including the mouth.

- date and time of injury or exposure
  - nature of injury or exposure, and how it occurred
  - name and details of the source patient
  - actions taken including, who was informed and when
  - the patient's refusal or consent to undergo testing.
- Complete relevant Accident Compensation Corporation forms.
- Undergo follow up testing at one month, three months and six months following exposure, if required.

Information only:

If the source patient is infected with HBV and you are not immune to HBV, it would likely be recommended that you receive a single dose of hepatitis B immunoglobulin within 48-72 hours and start a course of HBV immunisation.

If the source patient is infected with HIV, and the specialist medical practitioner advises post-exposure prophylaxis, you can expect this to be administered within 24-36 hours after exposure (and preferably within 2 hours).

There is no effective post-exposure prophylaxis for HCV. However early pre-emptive therapy may be offered if you receive a positive test result for HCV RNA following testing at 1 month post-exposure.

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## Part V: Documentation and Education

“Practice specific procedures” are the activities to be performed as infection prevention and control measures within a specific practice.

Refresher training may be delivered in-house by an appropriately experienced, nominated staff member or an external provider.

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You must ensure practice specific procedures that reflect and comply with this practice standard are documented, and infection prevention and control records are kept and readily accessible.

### Guidance

#### Practice specific procedures

- Review practice specific procedures every two years, or sooner if issues are identified with the specifications or implementation of the procedures, to ensure they remain relevant to your practice and meet the standards.
- Follow practice specific procedures consistently to ensure the quality and reliability of infection and prevention control measures.

#### Infection prevention and control records

- Keep the following infection prevention and control records for a minimum of 10 years, either as hard-copy or electronic records, and protect the confidentiality of this information:

##### A. i Monitoring records for sterilisation cycles

For every cycle (even those that do not contain critical items), record the:

- Date
- Sterilisation identification number or code (if there is more than one steriliser in use)
- Cycle or load number
- Exposure time and temperature (if this is not recorded automatically)
- Result of the steam steriliser physical parameter readouts or printout for that cycle
- Result of chemical indicators used in the cycle
- Result of checking the load for dryness and integrity of packaging
- Signature or name of the person who checked the steriliser readouts and chemical indicator/s and confirmed the load met the required criteria for release.

##### ii Monitoring records for instrument washers-disinfectors

- Result of checking for each cycle that the time maintained at the thermal disinfecting temperature was not less than that specified for the cycle
- Signature or name of the person who has checked the readings on the instrument washer-disinfector

#### B. Performance testing records for sterilisers, ultrasonic cleaners and instrument washer-disinfectors

Record the results of performance tests, along with the signature or name of the person who checked and entered the result:

##### **For sterilisers:**

- Result of daily (or weekly) leak rate test (for B class cycle types)
- Result of daily air removal and steam penetration tests.

##### **For ultrasonic cleaners:**

- Result of daily function test (aluminium foil test or other appropriate tests).

##### **For instrument washer-disinfectors:**

- Result of quarterly soil test.
- Result of quarterly chemical dosing volumetric test.

#### C. Maintenance records for sterilisers, ultrasonic cleaners and instrument washers-disinfectors.

Record the following for each piece of reprocessing equipment:

- The date preventative servicing and maintenance was performed
- The date any additional repairs and maintenance were performed.

#### D. Validation records

##### **For sterilisers, record:**

- The dates when IQ, OQ and/or PQ are performed
- The dates annual performance re-qualification is performed
- Calibration reports, at IQ, OQ and/or PQ and before annual performance re-qualification
- Validation reports that include outcomes of the IQ, OQ and PQ processes, a microbiological report and physical performance data
- PQ reports that include the outcome of the PQ process, a microbiological report and physical performance data
- Annual performance re-qualification reports that include the outcomes of annual performance re-qualification and a microbiological report.

##### **For instrument washer-disinfectors, record:**

- The dates when IQ, OQ and/or PQ are performed.
- The dates annual performance re-qualification is performed.
- Calibration reports, at IQ, OQ and/or PQ and before annual performance re-qualification. .
- Validation reports that include outcomes of the IQ, OQ and PQ processes, physical performance data and result of cleaning efficacy and chemical dosing volumetric test.
- PQ reports that include the outcome of the PQ process, physical performance data, and result of cleaning efficacy and chemical dosing volumetric test.

- Annual performance re-qualification reports that include the outcome of annual performance re-qualification and the result of the cleaning efficacy test.

**Note:**

**All of the reports, with the exception of the performance re-qualification reports for sterilisers and instrument washer-disinfectors, are to be produced by the qualified contractor.**

#### E. Immunisation status records

Maintain immunisation status records for dental staff (including practitioners) and specifically record whether or not an individual has been vaccinated for HBV. Recording this information is intended to assist the safe management of the staff member in the event of a sharps injury.

**Note:** Every staff member can choose whether or not to receive vaccination against the common infectious diseases.

#### F. Education and training records

Record the dates, persons attending, and topics covered for:

- Education and training of non-registered staff, at orientation; and
- Staff and practitioner refresher training.

#### G. Incident records

Document the following information in occupational health and safety incident records:

- Name of the practitioner (or staff member) exposed or injured
- Date and time of the injury or exposure
- Nature of the injury or exposure, and how it occurred
- Name and details of the patient (as the source, or the person exposed in the case of a BBF exposure incident)
- Actions taken, including who was informed and when
- The patient's refusal or consent to undergo serological testing; or to seek medical advice (as applicable to the incident)
- Completion of the relevant Accident Compensation Corporation forms
- Completion of follow up testing at one, three and six months for practitioners (if applicable).

#### H. Critical item tracking records

- When a sterilised critical item is used on a patient, the batch control identification information is to be entered on the patient's record.

➤ Back up electronic records on a regular basis.

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You must be knowledgeable on infection prevention and control measures and refresh your knowledge at least annually.

### Guidance

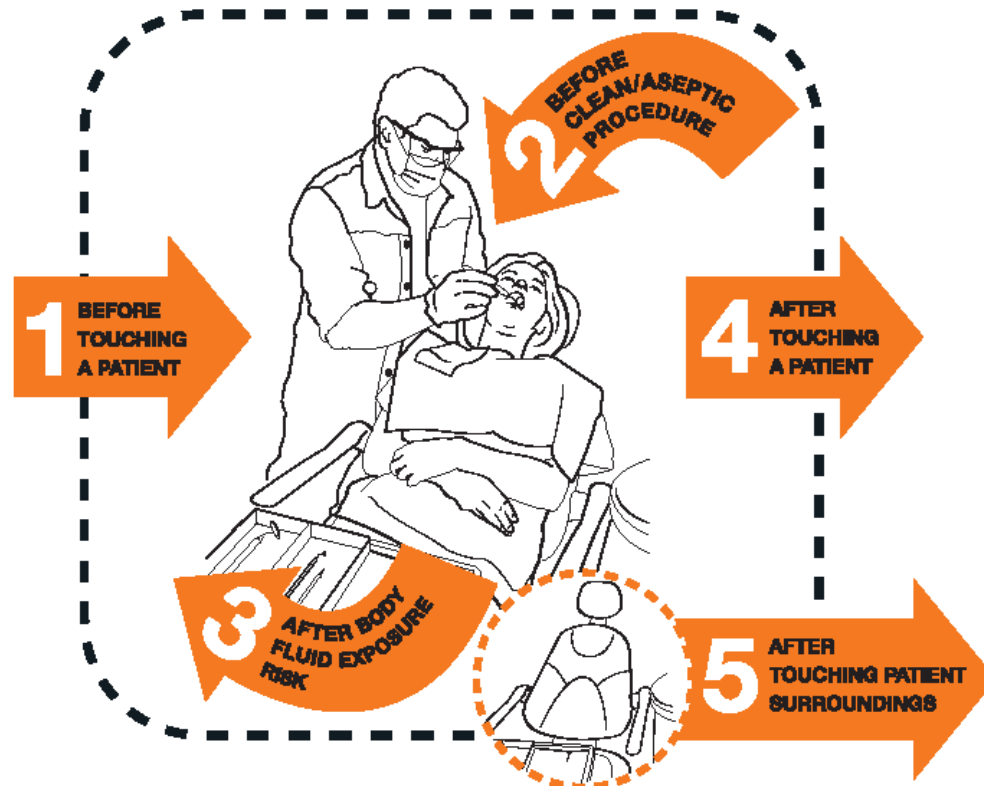
- When starting in a new practice familiarise yourself with the infection prevention and control measures in your workplace, i.e. the 'practice specific procedures'.
- Re-familiarise yourself with the 'practice specific procedures' of the practice in which you work, at least annually, and participate in refresher training when appropriate.
- Refresher training may be delivered in-house by an appropriately experienced, nominated staff member or an external provider.

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# Appendices

# Your 5 Moments for Hand Hygiene

## Dental Care



<b>1</b>	<b>BEFORE TOUCHING A PATIENT</b>	<b>WHEN?</b>	Clean your hands before touching a patient.
		<b>WHY?</b>	To protect the patient against harmful germs carried on your hands.
<b>2</b>	<b>BEFORE CLEAN/ASEPTIC PROCEDURE</b>	<b>WHEN?</b>	Clean your hands immediately before performing a clean/aseptic procedure.
		<b>WHY?</b>	To protect the patient against harmful germs, including the patient's own, from entering his/her body.
<b>3</b>	<b>AFTER BODY FLUID EXPOSURE RISK</b>	<b>WHEN?</b>	Clean your hands immediately after a procedure involving exposure risk to body fluids (and after glove removal).
		<b>WHY?</b>	To protect yourself and the environment from harmful patient germs.
<b>4</b>	<b>AFTER TOUCHING A PATIENT</b>	<b>WHEN?</b>	Clean your hands after touching the patient at the end of the encounter or when the encounter is interrupted.
		<b>WHY?</b>	To protect yourself and the environment from harmful patient germs.
<b>5</b>	<b>AFTER TOUCHING PATIENT SURROUNDINGS</b>	<b>WHEN?</b>	Clean your hands after touching any object or furniture in the patient surroundings when a specific zone is temporarily and exclusively dedicated to a patient - even if the patient has not been touched.
		<b>WHY?</b>	To protect yourself and the environment from harmful patient germs.



**World Health Organization**

**SAVE LIVES**  
Clean Your Hands


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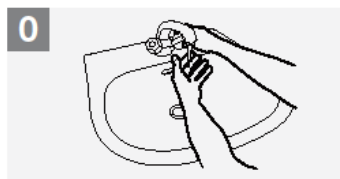
WHO acknowledges the Ministry of Health of Spain and the Hospital Universitario de Gernika (Infection Control programme) for their active participation in developing this material.

March 2012

# How to Handwash?

WASH HANDS WHEN VISIBLY SOILED! OTHERWISE, USE HANDRUB

 **Duration of the entire procedure: 40-60 seconds**



**0** Wet hands with water;



**1** Apply enough soap to cover all hand surfaces;



**2** Rub hands palm to palm;



**3** Right palm over left dorsum with interlaced fingers and vice versa;



**4** Palm to palm with fingers interlaced;



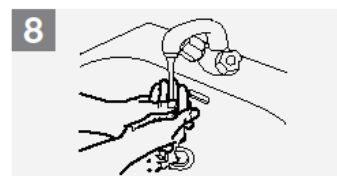
**5** Backs of fingers to opposing palms with fingers interlocked;



**6** Rotational rubbing of left thumb clasped in right palm and vice versa;



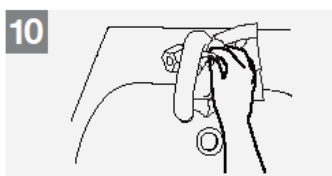
**7** Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



**8** Rinse hands with water;



**9** Dry hands thoroughly with a single use towel;



**10** Use towel to turn off faucet;



**11** Your hands are now safe.



**World Health Organization**

**Patient Safety**

A World Alliance for Safer Health Care


**SAVE LIVES**  
**Clean Your Hands**

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May 2009

# How to Handrub?

**RUB HANDS FOR HAND HYGIENE! WASH HANDS WHEN VISIBLY SOILED**

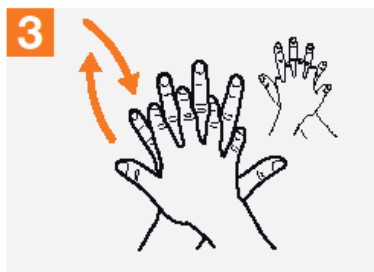
 **Duration of the entire procedure: 20-30 seconds**



Apply a palmful of the product in a cupped hand, covering all surfaces;



Rub hands palm to palm;



Right palm over left dorsum with interlaced fingers and vice versa;



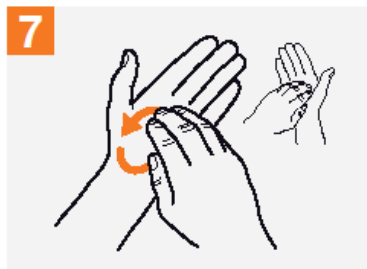
Palm to palm with fingers interlaced;



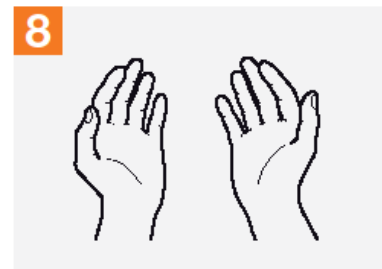
Backs of fingers to opposing palms with fingers interlocked;



Rotational rubbing of left thumb clasped in right palm and vice versa;



Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa;



Once dry, your hands are safe.



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May 2009

## Appendix C: Management of blood and body fluid spills

All blood and body fluid spills are potentially infectious, guidelines for their safe management are below<sup>17</sup>.

- Deal with the blood or body fluid spill promptly, wearing personal protective equipment appropriate to the task, e.g. gloves, disposable aprons, protective eyewear and masks.
- The approach to managing the spill will depend on its size and nature, and the surface involved:

Small spills (up 10cm diameter)	Large spills (greater than 10cm diameter)
Isolate the area containing the spill	Isolate the area containing the spill
Wipe up spill immediately with disposable absorbent material, e.g. disposable paper towel	Contain the spill by covering the area of the spill with an absorbent clumping agent and allowing to absorb
Place contaminated absorbent material into impervious plastic bag or container, and dispose of immediately and appropriately	Use disposable scraper and pan to scoop up absorbent material and any unabsorbed blood or body fluid substances
Clean the area with warm clinical detergent solution, using a disposable cloth or sponge	Place all contaminated items into impervious container or plastic bag, and dispose of immediately and appropriately
Disinfect the area with an intermediate disinfectant <sup>18</sup> appropriate for the surface (use diluted sodium hypochlorite on hard/vinyl surfaces – household bleach); and allow to dry	Mop the area with warm clinical detergent solution
Perform hand hygiene procedures	Disinfect the area with an intermediate disinfectant <sup>17</sup> appropriate for the surface (use diluted sodium hypochlorite on hard/vinyl surfaces- household bleach); and allow to dry
	Perform hand hygiene procedures
Note: For spills of large spills on carpeted areas or upholstery, it may be necessary to use a commercial cleaning company.	

- Fully-equipped spill kits containing protective equipment, waste bags, detergents and absorbable material are commercially available.

<sup>17</sup> Adapted from the Australian guidelines for the prevention and control of infection in healthcare (2010)

<sup>18</sup> Intermediate (EPA- registered hospital disinfectant with tuberculocidal claim)

## Appendix D: Transmission-based precautions

Contact Precautions	Droplet Precautions	Airborne Precautions
<p>For patients with:</p> <ul style="list-style-type: none"> <li>Antibiotic-resistant organisms (e.g. MRSA infection)</li> <li>Acute vomiting and/or diarrhoea</li> <li>Uncontained drainage</li> <li>Conjunctivitis</li> </ul>	<p>For patients with:</p> <ul style="list-style-type: none"> <li>Pertussis</li> <li>Mumps</li> <li>Rubella</li> <li>Meningitis, aetiology unknown and meningococcal</li> </ul>	<p>For patients with:</p> <ul style="list-style-type: none"> <li>Pulmonary tuberculosis</li> <li>Measles</li> <li>Chickenpox</li> </ul>
<ul style="list-style-type: none"> <li>Acute respiratory Infection (e.g. croup, RSV, common cold, influenza, bronchiolitis, pneumonia, acute exacerbation of asthma)</li> </ul>		
Patient Identification and Management		
<ul style="list-style-type: none"> <li>Identify at reception/during history taking</li> <li>Separate symptomatic patients from other patients in waiting room</li> </ul>	<ul style="list-style-type: none"> <li>Identify at reception/during history taking</li> <li>Surgical mask for patient</li> <li>Escort patient into single room</li> <li>Respiratory etiquette</li> <li>Post alert at entrance room</li> </ul>	<ul style="list-style-type: none"> <li>Identify at reception/during history taking</li> <li>Surgical mask for patient</li> <li>Escort patient into single room with door and close – open window in room, if applicable</li> <li>Place alert at entrance to room</li> </ul>
Response		
<p><i>Standards precautions:</i></p> <ul style="list-style-type: none"> <li>Hand hygiene</li> <li>Gloves for any contact</li> <li>Gown, if soiling is likely</li> </ul> <p><i>Transmission-based precautions:</i></p> <ul style="list-style-type: none"> <li>Clean and disinfect the equipment and surfaces that the patient contacted with an intermediate level disinfectant<sup>19</sup> after patient leaves</li> </ul>	<p><i>Standards precautions:</i></p> <ul style="list-style-type: none"> <li>Hand Hygiene</li> <li>Surgical face mask and eye protection for any contact</li> </ul> <p><i>Transmission-based precautions:</i></p> <ul style="list-style-type: none"> <li>Clean and disinfect equipment and surfaces that the patient contacted with an intermediate level disinfectant after patient leaves.</li> </ul>	<p><i>Standards precautions:</i></p> <ul style="list-style-type: none"> <li>Hand hygiene</li> </ul> <p><i>Transmission-based precautions:</i></p> <ul style="list-style-type: none"> <li>N95 respirator if patient has suspected or confirmed pulmonary tuberculosis</li> <li>Respirator not required for chickenpox/measles if health care worker is immune. Only immune staff to provide care.</li> <li>Clean and disinfect equipment and surfaces that the patient contacted with an intermediate level disinfectant after patient leaves</li> </ul>

Adapted from Public Health Ontario *Infection Prevention and Control for Clinical Office Practice*

<sup>19</sup> Intermediate (EPA- registered hospital disinfectant with tuberculocidal claim)

## Appendix E: Cleaning procedure for nickel-titanium files

Nickel-titanium files may be sterilised and re-used if a validated process is used to clean them before sterilising<sup>20</sup>.

The process below is a validated cleaning process for nickel-titanium files:

- Immediately after use, remove the stoppers and insert the files into a scouring sponge soaked with 0.2% chlorhexidine gluconate aqueous solution.
- Use 10 vigorous in-and-out strokes in the sponge to clean the file.
- Soak the files in a suitable enzymatic cleaning solution for 30 minutes.
- Ultrasonically clean the files for 15 minutes in the enzymatic cleaning solution.
- Drain and rinse in running water for 20 seconds.
- Steam sterilise the files.

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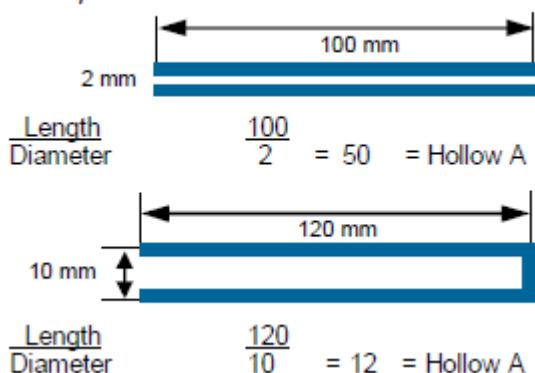
<sup>20</sup> Adapted from: Parashos P, Linsuwanont P, Messer HH. 'A cleaning protocol for rotary nickel-titanium endodontic instruments' *Aust Dent J* 2004; 49 (1):20-27.

## Appendix F: Hollow A and Hollow B definitions

### Hollow A

- Single ended open space where the ratio of length to diameter of the cavity is greater than or equal to 1 and less than or equal to 750 ( $1 \leq L/D \leq 750$ ) and where the length of the cavity is not greater than 1500mm ( $L \leq 1500\text{mm}$ ) and
- Double ended open space where the ratio of length to diameter of the cavity is greater than or equal to 2 and less than or equal to 1500 ( $2 \leq L/D \leq 1500$ ) and where the length of the cavity is not greater than 3000mm ( $L \leq 3000\text{mm}$ ) and which is not hollow load B.

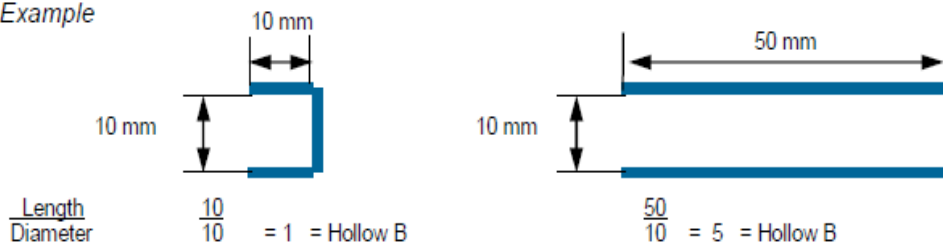
#### Example



### Hollow B

- Single ended open space where the ratio of length to diameter of the cavity is greater than or equal to 1 and less than or equal to 5 ( $1 \leq L/D \leq 5$ ) and where the diameter is greater than or equal to 5mm ( $D \geq 5\text{mm}$ ) and
- Double ended open space where the ratio of length to diameter of the cavity is greater than or equal to 2 and less than or equal to 10 ( $2 \leq L/D \leq 10$ ) and where the diameter is greater than or equal to 5mm ( $D \geq 5\text{mm}$ ).

#### Example



Definitions from EN 13060:2004, examples sourced from [www.stshealth.co.au](http://www.stshealth.co.au):

## Appendix G: Chemical indicators

Chemical indicators provide information about conditions in the steriliser in the locations where they are placed and show that specific sterilisation parameters have been reached by changing colour. They do not prove sterility.

Chemical indicators vary in their sensitivity, for example, Class 1 chemical indicators are only sensitive to changes of temperature, whereas Classes 5 and 6 are sensitive to variables such as temperature, time and water (steam).

Chemical indicators are classified according to their sensitivity and intended use, they have no hierarchical significance.

Class 1	<b>Process indicators</b> – indicate exposure to the sterilisation process and so differentiate between processed and un-processed loads.  Examples: tape and labels indicated for steam sterilisers; indicator integrated into paper/ plastic sterilisation packaging.
Class 2	<b>A specific test</b> – either a Bowie-Dick-type test or a helix process challenge device: <ul style="list-style-type: none"><li>• Bowie- Dick type test (flat pack) – required for porous loads (for example, cotton rolls, gauze packs for post-extraction).</li><li>• Helix test (coil) – required when the steriliser is used to process solid or hollow loads.</li></ul>
Class 3	<b>Single-variable indicator</b> - react to a single sterilising parameter and only used in dry sterilisation processes
Class 4	<b>Multi-variable indicators</b> - designed to react to two or more sterilising parameters (for example, time and pressure) at the values of the parameter stated by the manufacturer.
Class 5	<b>Integrating indicators</b> - designed to react to all sterilisation parameters stated by the manufacturer. They are generated to be equivalent to the performance requirements for biological indicators.
Class 6	<b>Emulating indicators</b> - designed to react to all sterilisation parameters for specified cycles.  This means a range of Class 6 chemical indicators will need to be available; each applicable for use with only one specific combination of time and temperature.

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# Supplementary Information

Dental Council  
Te Kaunihera Tiaki Niho

(i) Suggested layout for the reprocessing area<sup>21</sup>

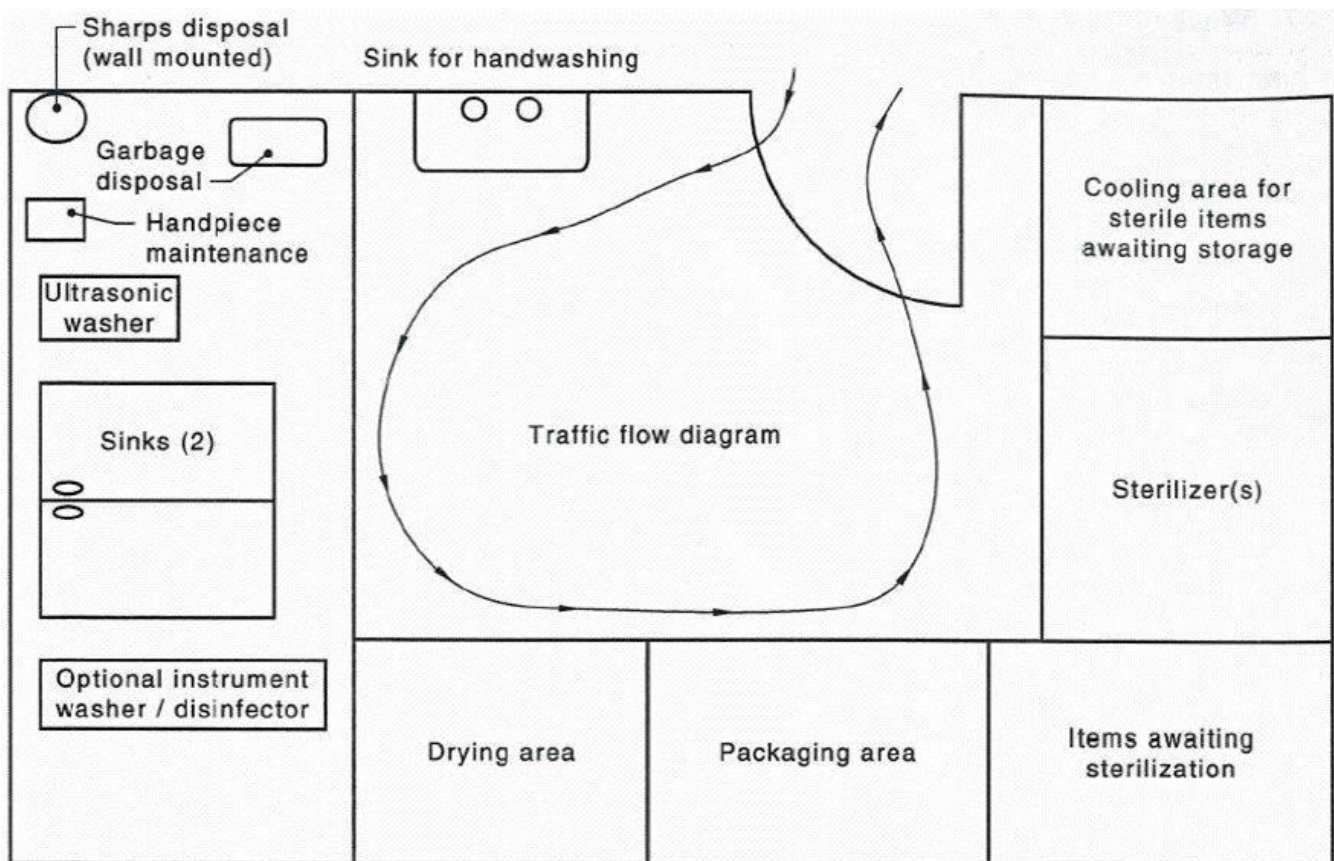


FIGURE 1.1 SUGGESTED LAYOUT FOR A REPROCESSING AREA

Modified from Cleaning, Disinfection, Sterilisation. A guide for office based practice (Lohead, L (2006))

<sup>21</sup> Used with permission from L Lohead, 2015