

SOP 11 Cleaning and disinfection of patient care equipment and domiciliary care

11.1 Procedures for disinfection when taking and processing X-ray films

11.1.1 Taking an x-ray:

- Ensure that the radiographic film/intra-oral sensor to be used is covered with a protective barrier. Those films that do not come with a manufacturer's infection control barrier must be covered with a suitable barrier.
- All equipment must be prepared in advance with suitable barriers. These barriers must be changed after each patient. X-ray holders must be reprocessed after each patient
- Staff should receive training on how to clean and disinfect as appropriate all parts of the x-ray machines used in the clinic according to the manufacturer's instructions. This is particularly important as new complex equipment such as cone beam technology has been introduced into some clinics.

Areas of potential contamination to be noted are:

Intraoral x-ray equipment	Extra-oral x-ray equipment:
<ul style="list-style-type: none"> • The cone of the x-ray machine. • The back of the head of the machine. • A point on the arm of the machine and any other areas used to position equipment. • The hand control. 	<ul style="list-style-type: none"> a) The bite fork b) The hand control c) Head supports d) Ear rods e) Nose bar

Table 12: Areas of potential contamination on x-ray equipment

- After use, these areas should be decontaminated using a combined detergent/disinfectant wipe.
- If used, the thyroid collar should be cleaned and disinfected with a combined detergent/disinfectant wipe.
- A sterile x-ray holder must be used for each patient and this must be decontaminated and sterilised after each patient as per HSE decontamination protocols.
- Clean remainder of machine as per manufacturer instructions.

11.1.2 Processing an x-ray film:

- The film hygiene barriers must be removed outside of the processor and disposed of as healthcare risk waste.
- X-ray developer and fixer must be changed regularly and log of changes kept. The used developer and fixer must be stored safely and collected by an authorised waste disposal company.
- Do not mix developer and fixer fluid in the same waste container.
- Intra-oral digital sensors/plates should be cleaned and disinfected as per the manufacturer instructions (do not use a combined wipe).
- The uncontaminated film is then ready for processing.

11.1.3 Taking an OPG:

- The mouth prop must be either covered with a suitable single use barrier or reprocessed between patients. Follow manufacturer's instructions.

11.2 Mixing surfaces including glass slabs

- Glass slabs and dappen dishes do not survive well with sterilising, they can chip and break. Single use dappen dishes and paper mixing pads should be used where possible.
- Where glass slabs are used, an autoclaved slab must be used for each patient. This must be cleaned and autoclaved after use. Removal of excess cement at the point of use is essential to facilitate the cleaning process.
- Mixing spatulas must be reprocessed after each patient.
- Where paper pads are used, the material can be mixed on the pad, the sheet must then be removed, presenting the material to the operator on a single sheet and disposed of after use.

11.3 Amalgam carrier/dappen dishes

- An autoclaved amalgam carrier must be used for each patient. Amalgam carriers should be reprocessed in accordance with manufacturer's instructions.
- A disposable dappen dish must be used for each patient.
- All excess amalgam must be removed from both the amalgam carrier and the dappen dish and disposed of in a designated amalgam waste container.
- The dappen dish and the amalgam capsule must be disposed of in a labelled designated amalgam waste container.
- The amalgam carrier must be cleaned in the washer disinfectant/ ultrasonic cleaner prior to sterilisation.

11.4 Impressions, trays and laboratory work disinfection

- All impressions and all stages of laboratory work and dentures must be cleaned and disinfected before being sent to the laboratory and on returning from the laboratory prior to placing in the patient's mouth.
- Separate disinfection baths (solution 1:10 dilution of sodium hypochlorite solution) should be used for incoming and outgoing laboratory work.
- All impressions must be rinsed with cold water to remove saliva and blood. Do not splash excessively as droplet splatter may carry microorganisms.
- Any heat tolerant items used for laboratory work e.g. face-bows should be cleaned, decontaminated and sterilised after use on a patient.
- A Disinfection Record form must be completed for each patient and attached to lab-work docket. Refer to Appendix XV for Sample Disinfection Record

11.4.1 Zinc oxide eugenol, silicone and elastomeric impressions:

- Disinfect by immersion in sodium hypochlorite solution (1:10 dilution) for at least 10 and not more than 20 minutes. Solution should be made up fresh for each session and emptied at the end of the clinical session. Leave bath to dry.
- Do not splash excessively as droplet splatter may carry microorganisms.
- Rinse thoroughly and gently agitate to remove any residual disinfectant.
- Place in the laboratory bag for collection. A completed disinfection form must be attached to the bag.

11.4.2 Alginate impressions:

- Rinse the impression carefully under running water to remove debris and place in sodium hypochlorite solution (1:10 dilution) for 10 minutes.
- Rinse the impression again under running water, wrap in wet gauze/paper towel and bag. A completed Decontamination Record form must be attached to the bag. Do not staple through the body of the bag.

11.4.3 Impression trays:

- Single use disposable trays must not be reused.

11.4.4 Metal frame dentures/removable orthodontic appliance:

- Place the metal frame denture/appliance in sodium hypochlorite (1:10 dilution) for 2-3 minutes (but no longer) to avoid metal corrosion
- Rinse thoroughly with water and agitate to remove residual disinfectant.
- Place in the laboratory bag for collection and attach a completed Decontamination Record form to work docket.

11.4.5 Incoming laboratory appliances (including orthodontic appliances)

- Incoming lab made appliances/dentures must be disinfected before delivery to patient by immersing in hypochlorite solution (1:10 dilution) for 2-3 minutes and rinsed thoroughly with water afterwards. A separate disinfection bath should be used for outgoing and incoming laboratory work.
- Trimming of acrylic orthodontic appliances or dentures that have been worn already by the patient: Prior to trimming, disinfect appliance in 1:10 solution for 2-3 minutes and rinse thoroughly with water afterwards. Then trimming can proceed.

11.4.6 Stone working models

- Avoid contact between the stone model and contaminated appliances.
- If contact is unavoidable, the working stone model should be covered with a suitable barrier.

11.4.7 Clinical Photography

- Remove gloves and carry out hand hygiene before handling clinical cameras.
- A sterilised set of cheek retractors, mouth mirrors and retraction forks should be used for each patient when taking clinical photos.
- To prevent fogging of the mouth mirror, hold the mirror under running warm water for a few seconds and dry with paper towel, before placing into the patient's mouth.
- Cheek retractors, mouth mirrors and bite forks are sent for decontamination and sterilisation after each patient.

11.5 Domiciliary care and school screening

- In providing care in these settings standard precautions will apply. These include wearing gloves and other protective clothing and performing hand hygiene techniques.
- Dental staff will need to carry all necessary equipment with them. Instruments and materials must be carried in a sealed clean container to prevent damage or spill.
- After use the instruments must be placed in a rigid container within another rigid sealed container (marked contaminated) for transport back to the surgery for cleaning and reprocessing. Cement should be wiped/removed and instruments should be kept moist or sprayed with enzymatic foam to prevent hardening of debris before transport back to the clinic.
- Waste should be segregated at the point of use. General waste should be disposed of on-site. Contaminated waste must be placed in designated containers and transported back to the clinic for appropriate disposal.

Appendix XV Sample Disinfection Records

Sample Disinfection Record
From: <i>[Dental Practice Details]</i>
All dental impressions and appliances from the above dental practice have been disinfected by immersion in <i>[specify agent, duration]</i>
Signed: _____ Date: _____

Sample Disinfection Record
From: <i>[Dental Practice Details]</i>
All handpieces and other instruments from the above dental practice have been decontaminated by <i>[specify method used to clean and sterilize]</i>
Signed: _____ Date: _____