Decontamination Into Practice

Introduction

The growing awareness of the risk of person-to-person transmission of variant Creutzfeldt-Jakob disease (vCJD) via surgical instruments prompted a review in 2001 of how used instruments were being decontaminated in all healthcare settings in Scotland, including dental practices. In response to this, the Scottish Executive Health Department established a group headed by John Glennie (‘The Glennie Group’) that drew up a framework for improvements in decontamination processes. This identified the technical requirements, legislation and standards that now govern decontamination. Some of these documents were written primarily for the acute sector health service and historically have not been easily accessible or well publicised to primary care dental services.

In 2004 a survey within general dental practices in Scotland, conducted by the NHSScotland’s Sterile Services Review Group, identified a need for more-detailed practical guidance on the implementation of technical requirements for effective decontamination. The survey also highlighted the importance of improving cleaning of instruments prior to sterilization to minimise the risk of the potential transmission of vCJD or infective agents via surgical instruments. Therefore, the Scottish Dental Clinical Effectiveness Programme (SDCEP) convened a Guidance Development Group to provide guidance on decontamination that is specifically for dental teams working in primary care. Further details about SDCEP and the development of this guidance are given in Appendix 1.

Scope of this Guidance

‘Decontamination Into Practice’ is a series of documents that provides advice on different aspects of instrument decontamination. In addition, advice that relates to the whole decontamination process is provided in the appendices. The series is based on existing standards and guidance such as Scottish Health Technical Memoranda (SHTM) 2010 and 2030 and Local Decontamination Unit Guidance from Health Protection Scotland (HPS), and presents this information in a form that is more readily understandable to all members of the dental team. ‘Decontamination Into Practice’ aims to facilitate improvements in decontamination practice and help the evolution towards compliance with relevant statutory and mandatory requirements and standards. It includes advice to help primary dental care providers choose appropriate options for their needs, increase their awareness of the maintenance requirements for decontamination equipment and help protect them if, for example, decontamination fails as a result of equipment malfunction or human error.

Statement of Intent

‘Decontamination Into Practice’ presents advice that is based on a careful consideration of the legislation and national guidance that is currently in effect in Scotland, and has been developed through consultation with experts and end-users. As advice, it does not override the individual responsibility of the health professional to make decisions appropriate to the individual dental practice.
**Implementation**

Changes in procedures take time and planning. Some of the advice for good practice within the ‘Decontamination Into Practice’ series is straightforward to put into place. Other recommendations will need much more consideration and time to implement, with careful forward planning of developments for premises. For example, if you are considering installing a washer-disinfector in the future, it is essential to set aside enough space to include its associated dedicated water supply, power and drainage. Some planned phasing out of current equipment can help to facilitate change in a controlled way.

The SDCEP Guidance Development Group acknowledges that there are undoubtedly resource implications, both human and financial, in implementing any changes. At every stage in considering guidance the Group has been mindful of these. The various NHS stakeholders have been contacted by the Group to ensure that they are aware of these issues for their future planning of services.

In the wider arena, several other related initiatives are ongoing. For example, the Scottish dental schools are actively developing new undergraduate programmes in decontamination and NHS Education for Scotland and HPS are developing educational packages that are suitable for existing dental team members. Furthermore, a dental version of the Cleanliness Champions package (www.nes.scot.nhs.uk/hai/programme.htm) is available to all dental professionals in Scotland and a new infection control learner guide entitled ‘Maintain Infection Control in Dental Practice’ is being used as part of the Dental Nurse Education Scotland Programme. A revised version of this learner guide, which provides up-to-date guidance in line with SDCEP advice, is now available for pre-registration dental nurses on accredited training programmes; copies have also been distributed to all NHS dental practices in Scotland for information.

Decontamination provision and its associated guidance are constantly evolving as new information and equipment become available. Contact details of organisations that can provide the latest information are provided in Appendix 5. A list of references is also provided and direct links to the most up-to-date web-based resources are available on the ScottishDental website: www.scottishdental.org/decontam.
Decontamination of Instruments – an Overview

Decontamination is the process by which re-usable items are rendered safe for further use and for staff to handle. Decontamination is required to minimise the risk of cross-infection between patients and between patients and staff. Decontamination of instruments (also known as reprocessing) is a complex process that involves several stages, including cleaning, disinfection, inspection and sterilization. The diagram below summarises how the individual stages ideally link together to complete the process of instrument decontamination.

- Location
- Facilities
- Equipment
- Management
- Policies & procedures

Acquire → Clean → Disinfect thermally if a WD is available → Steam sterilize unwrapped → Steam sterilize in vacuum sterilizer → Package → Inspect → Repeat cleaning if necessary → Acquire

Use → Transport → Store → Package

It is important that each stage of the process is carried out correctly to enable instruments to be decontaminated effectively. Note that:
Disinfection after cleaning reduces the number of viable microorganisms on instruments making them safer to handle. It is not acceptable to use chemical disinfectants to disinfect instruments (unless this is specifically recommended by the manufacturer) and therefore thermal disinfection is necessary. However, it is recognised that at present thermal disinfection cannot be performed within most dental practices because this requires a washer-disinfector (WD).

After sterilization, whether instruments can be stored before use depends on the type of sterilizer and the procedures the instruments are used for.

Some instruments cannot be steam sterilized. In these cases decontaminate according to the manufacturer’s instructions.

If sending instruments for repair or disposal, ensure they are decontaminated first.

All stages depend on the location of the decontamination area, the available facilities (space and resources), equipment and instruments, management of the process, and the practice policies and procedures for decontamination.

As effective decontamination cannot be verified simply by visual inspection, the only way to ensure that the required level of decontamination is consistently achieved is to manage and document the process properly. This requires:

- clutter-free facilities with sufficient space;
- segregated clean and dirty areas;
- equipment that is fit for purpose and subject to periodic maintenance and testing (including calibration) and annual re-validation;
- instruments that are compatible with available decontamination processes;
- training of staff in all decontamination procedures used in the practice;
- proper supervision and support of staff during decontamination procedures;
- comprehensive documentation for decontamination procedures, processes, equipment and staff training.