

De-mystifying decontamination

Christine Bowness gives advice on HTM 01-05 guidelines.

The regulatory regime for infection control in the dental profession is undergoing a period of rapid change, so it's not surprising there is a considerable amount of confusion in many surgeries.

Upgrading instrument decontamination equipment represents a significant investment and dentists want to be assured the model they buy will comply with the new best practice requirements. So, as with so many aspects of running a busy dental practice, this means finding a balance between achieving the required level of washing/sterilization whilst maximising throughput, all at a reasonable cost.

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It is worth remembering most NHS primary care trusts have funding available to assist with meeting the capital cost of purchasing new infection control equipment.

The best solution for most dental practices is to use the latest generation of washer disinfectant in combination with an autoclave that



● A new generation vacuum autoclave showing how pouched instruments are accommodated.

can run in vacuum and non-vacuum mode, and incorporates a drying cycle.

Whilst there are a number of alternatives available on the market, only washers that conform to EN15883, HTM20/30 (UK) and the medical devices directive (93/42/EEC) will comply. All equipment must be CE marked. Under the new guidelines, autoclaves must conform to BS/EN 13060. It should be safe to assume equipment designed and manufactured in the EU conforms to these standards but this is not necessarily the case for equipment made elsewhere.

Most dentists will use vacuum autoclaves in line with the manufacturers' standards for the sterilisation of pouched, hollow and porous instruments. They may also

choose a non-vacuum cycle autoclave which should be used to sterilize non-wrapped, solid items only.

The other significant development has focused on the adoption of washer disinfectors. The new standards cover a number of key features that the latest generation of washer disinfectors has to incorporate. These cover washer design and operation and in particular they show why the old practice of manual instrument washing is no longer acceptable.

EN 15883/HTM 2030: All washer disinfectors must conform to this standard.

BS EN 1717 UK Water Byelaws: These regulations cover the need for stricter infection control by requiring

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cross infection control



● A purpose built washer disinfectator.

That a Type AA air gap is included in all washer disinfectors to offer greater protection against pollution by backflow.

Periodic validation tests: All washers are required to incorporate a thermocouple entry port to independently validate the required wash temperature has been reached for the required time, thus ensuring full disinfection.

Independent process verification: A

key requirement of the new standard is the inclusion of an independent monitoring system with software on two independent boards to validate the effectiveness of the cycle or the reasons for failure. Equipment with independent monitoring using only a single board is not compliant.

Moisture left on instruments after washing compromises the autoclave process.

Detergent dose measurement: A system should be incorporated to ensure the cycle will automatically shut down if there is insufficient detergent. Auto dosing

machines are favoured in the new standards because of this.

Recordable data: A printer, data-logger or PC interface is required to provide evidence of successful cleaning.

Dental hand-piece cleaning: One of the primary purposes of a washer is to ensure consistently effective disinfection. This applies particularly to hollow instruments, as they are more likely to collect debris.

Drying: All designs have to incorporate a forced air drying process. This is important to ensure water droplets are removed from the instrument allowing immediate preparation for sterilisation. Moisture left on instruments after washing compromises the autoclave process as steam will not displace water droplets and so proper sterilisation cannot be assured.

'Hands-free' loading: The guidelines express a preference for a design which incorporates trays containing instruments to be placed directly in the washer (as opposed to manual vertical stacking). This ensures minimal human contact and significantly reduces the likelihood of sharps and other injuries. ■

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