Decontamination – it’s the detail that counts

This note sets out in a practical way tips on how to bridge the gap between the idealised expectation of HTM 01-05 and the reality of the limited space available in typical dental practices for LDU development. The perfect LDU lecture presentations with miles of worktop often don’t translate into the reality of compromise when back at home base.

A person to advise for confidence is needed to develop a vision of the facility, starting with a compromise to demonstrate to any audit that at first you care, and have a planned schedule which you can prove.

Origins
Where did it all start – in Brussels? Or was it Maidstone effect where C.diff claimed around 90 hospital patients. With the national hospital audit, central government was eventually bound to run scared of the political risk of upsetting the voting families with relatives in hospital and long term care. Dentistry is not alone. All other practices will be drawn into the surveillance net from podiatrists right down to tattooists and for an overview of what HTM 01-05 will bring, the concise ‘one pager’ in the British Dental Journal December 2008 issue is worth a read. It will focus the mind well, and leave no doubt that it’s here to stay.

Back to the worktop
Around the process room there are 14 steps, each with transfer space in between. Perhaps the exception is an ultrasonic unit to deal with setting compounds as the new school of thought is to remove residue immediately in the treatment area, keep used instruments moist to avoid drying out and load into the automatic washer with the least delay.

Washer Disinfector
The prime purpose of the washer is to protect staff and the sterilisation process by reducing carry over of soil. The hot water disinfection which follows the wash cycle protects the practice staff working in the LDU who look after instrument transfer to the steriliser. There are single or double wash arms available. There is some talk of introducing pure water rinse in the washer chamber. Water conditioning additives are used in the washer to help remove surface soil and re-active enzymes. Practices already using washers speak of the consistency of cleanliness and ‘gleam’ without blochiness.

Clausal water from reverse osmosis
This clinical-quality water is created from tap water in a ‘posh’ filter membrane system with the nickname of R/O – reverse osmosis – and is used as a clean supply to the steriliser. This water is fresh for each sterilisation cycle and dumped to drain after each use.

The steriliser
In the steriliser chamber air pockets prevent steam molecule access. The vacuum feature dilutes trapped air in tube or crevasse prior to the autoclaving temperature cycle. The vacuum cycle also assists moisture removal and drying. For pouching vacuum is essential using a closed pouch in the whole cycle.

Data logging
What about records? As an essential part practice procedures the cycle statements for the washer and steriliser can be paper or paperless – valuable evidence for your own assurance of correct working to deal with client criticism and not forgetting the routine audits soon to come.

Space-saving tower
These accoutrements – R/O, washer, steriliser, and recorder – go to make up the hardware for safe decontamination. They are bulky and need bench top space. To retrieve this valuable space is worth the consideration to stack the washer and steriliser in a vertical tower with printers and R/O water – saving around 1500mm of worktop.

Any of your existing equipment could also be rehoused in a tower and printers added for facility upgrade. The wheeled unit can be moved for cleaning and simply couples to services for power, water, and a hook drain.

Transfer boxes
A very useful box transfer and storage facility will also help is the jigsaw of small areas. They are coloured green and red with lids and are stackable with a small footprint.

Matching the workload
What about capacity sizing to deal with average and peak loads. For very large practices the speed and capacity, the infection control tower, single or duplicated will serve a wider range of practice size. The single tower for decontamination will size well for the single chair upwards saving the space of spread about separate units.

LDU room detail
And the LDU room itself! There is a lot of detail to make this a safe haven for the physical routines of decontamination. The older the premises, the greater the risk of hidden anti-infection devices the greater the jigsaw of sound decontamination without compromising patient and staff safety.

The style of new furniture is important – to be designed for infection control. DIY type is not safe. Totally moulded doors, shelves and cabinet walls, are a priority. Worktops must be continuous without joints and double postformed. Space above wall cabinets should be closed up to the ceiling and wall and ceiling surfaces clad with PVC extrusions and a tanked floor with altro type covering to complete the cocoon for easy wipe-down routines.

And your best friend?
The silicone sealant gun to close bug traps of such as toe boards and worktop runs as well as air leakages. What on earth is all this going to cost! There is no golden rule. Individual area assessment, with debate to refine to joint opinion, will yield the best safe layout. The smalller the greater the jigsaw for sound decontamination without compromising patient and staff safety.

What next?
Find a competent LDU adviser who understands the complete picture and your problems may well be halved.

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