Eliminating risk

Kathy Porter describes common cross infection threats in a dental setting

Battle strategy

Richard Maguire discusses the importance of minimizing instances of cross infection

Implementing IC systems

Clive Gibson looks at creating a completely decontaminated environment in the surgery

European view on infection control

Dental Tribune looks at AESIC, a new organisation focusing on infection control, and speaks to one of the founding members about its aims and aspirations.

Infection control in the dental setting is a fundamental topic in terms of patient safety and regulatory compliance. However, in a European context, it is very difficult to have a consensus across the member states as each country has its own directives.

This is where the Association for European Safety & Infection Control in Dentistry (AESIC) comes in. Recently established, AESIC is a European organisation for information on infection prevention, infection control and hygiene within dentistry. The AESIC mission statement is to be the leading European source of information on safety, infection prevention and infection control for academia, corporations, policy-makers and clinicians alike.

Even though the organisation is still in its infancy, it is bringing together the leading minds in the arena of infection control to campaign for consistency in infection control policy across the European member states. One such mind is Mikael Zimmerman, one of the founding academics behind quality assurance in Swedish dentistry. He is the author of more than 50 papers on cross infection control and has on several occasions been an advisor to the Swedish Foreign Ministry on hygiene and infection control. Mikael has also worked as advisor to the Swedish Armed Forces in the development of the new Medical Care System to be used by The Nordic Battle Group.

Speaking to Dental Tribune about the founding of AESIC, Mikael was very pleased with how the organisation was shaping up. “We have been talking about the need for a European organisation to focus on infection control for several years—we have been meeting and talking to industrial companies and academics about the idea for a while. Infectious diseases are a very big issue and healthcare associated infections are a big issue. And maybe the biggest issue of all is the development of antibiotic resistance and we have a lot of European norms giving us information about what infection control ought to be in all 27 member countries. And although we have many common norms and directives, there are also 27 different national recommendations. “It is a bit strange that we can’t get European countries to work together on the issue of infection control and antibiotic resistance so we thought that AESIC was a good idea to get some common ground where we can start the discussion—what do we agree about?”

Mikael calls AESIC an ‘interimistic’ association as although it now exists, AESIC won’t be fully established until its first meeting in November. Of course both of them think we need to go further. "It is a common issue for all of us and at the centre of it is the patient. All of us should be working together to get everything as safe and as good as we can for the patient.”

To get the association off the ground, AESIC has eight founding members from dental industry: • Durr Dental AG • Henry Schein • Hu-Friedy Manufacturing BV • Nitram Dental a/s • ScioGen GmbH • Schülke + • Smile-On Ltd • W&H Buermosch GmbH

With this in place, it has allowed AESIC to find other partners as well as being the recruitment process for members. To help with this all of the eight founding members will receive a specific number of free membership places to distribute to customers, partners and anyone who could benefit from and participate to the organisation.

Mikael told DT about the various events and means of communication AESIC is setting up for members: “We have established our website—www.aesic.eu. Our plan for that is that it will be the number one resource for information and advice for infection control for everyone involved in dentistry across Europe. “We have also established an e-newsletter—it’s still in its very early stages, but we have had good feedback from subscribers so we know we are going in the right direction.”

Mikael added: “The most important thing this year is the meeting in November: we are planning on top of taking many board members and formulate a constitution that we will run a one-day conference with a clinically-oriented topic on기 half of the day. Of course both of them will focus on getting very good for the patient. We will try to bring in key opinion leaders and discuss what is the state of the art in infection control and where do we need to go further?”

To find out more about AESIC and to become a member, go to www.aesic.eu.

Are your disinfection solutions HTM 01-05 compliant?

PROBLEM... BDA Advice Sheet A12, “Infection Control in Dentistry” states “Alcohol… binds to blood protein and stainless steel; it should therefore be avoided”...

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PROBLEM... HTM 01-05 states that “no currently available single method or device will completely eliminate biocontamination of dental unit water lines or exclude the risk of cross-infection”...

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PROBLEM... A12 asks, “what cleaning agents are recommended – do they comply with COSHH and Health & Safety requirements?”

BDA Advice Note 58 lists the hazardous substances & risks to health of many products commonly used in dental practices.

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Simple Ideas for eliminating the risk of cross-infection

Kathy Porter, Senior Dental Nurse (Decontamination) at Birmingham Dental Hospital, describes the common cross infection threats faced by everyone in the dental practice and “Best Practice” for eliminating them.

The Chain of Infection

The Chain of Infection was first described by Starr and Clayton-Kent in 2004. It consists of the source of the infection, the mode by which it is spread, the person at risk and any potential points of entry. The easiest way to break this chain is by interrupting the mode by which it is spread.

Because hands represent the most important vector for the transmission of infection between patients and members of the practice team, the single most effective way to prevent the spread of pathogenic microorganisms within any clinical environment is effective hand washing. This should be performed for at least two minutes when entering and leaving the clinical area, between patients, after visiting the toilet, when changing gloves and whenever one’s hands are visibly soiled. Alcohol gels can be used on visibly clean hands, but if not completely dried they cause a build up. Therefore, they should never be used solely, as an alternative to effective hand washing with soap and water, and it is never acceptable to wash or gel gloves with a view to reusing them. Gloves should always be replaced in between patients.

Best Practice for hard surfaces

Ideally, all basic decontamination processes for small items of equipment etc should take place away from other activities, preferably in two dedicated decontamination rooms with a clearly defined route from dirty to clean. This is not possible for larger items of equipment, fixtures and furnishings however. Therefore, wherever possible, any work surfaces and equipment should be impermeable and easily cleanable. The work surfaces and floor coverings should be continuous, non-slip and ideally seamless. Wherever possible, carpets should be avoided within any clinical or associated areas. Going should be used between the floors and walls to prevent any dust and dirt accumulating in corners and crevices, with any unavoidable joins welded or sealed shut.

A thorough and effective cleaning protocol can be easily based upon utilising simple techniques employing disposable cloths moistened with either clean water or a suitable alcohol-based or alcohol-free disinfectant. Alcohol-free wipes are particularly suitable for alcohol susceptible surfaces eg the leather and synthetic upholstery of dental chairs, plastics, vinyls etc. Wherever possible, cleaning using dry cloths should be avoided because this creates dust, which can form another hazard.

Should any blood contamination occur, one per cent sodium hypochlorite with a yield of 1,000 ppm free chlorine is recommended (unless the PCT policy advises something else). However an even higher free chlorine yield of 10,000 ppm is better still. Contact times should be reason­ably prolonged and instigated as quickly as possible. Care should be taken to avoid corrosive damage to metal fittings etc. Use of alcohol within the same cleaning process is not recommend­ed because it binds blood and protein to metal surfaces.
tential sources of infection and transmission routes within their practices, and adopt appropriate protocols to break the chain. To ensure these protocols are actioned properly it is vitally important that all new staff members are thoroughly trained in this essential component of practice life. This training should be accurately documented, along with the practice infection control policy, and made available for external audit upon request. Both the policy and the training must be updated and reviewed regularly, at least once a year, and these reviews documented too. Correct implementation of these protocols should also be monitored regularly to ensure that standards are maintained throughout the practice. This should involve undertaking audits and assessments which should be retained for inspection if requested. All of these audits should be carried out in compliance with appropriate local PCT policies.

The pictures used to illustrate this article show examples of some of the many products available in this field. The author does not endorse these or any other product, this must be a decision made by the user.

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Cleaning up

One way of making sure infection control procedures are carried out properly is to delegate the management of the process to a company dedicated to providing a guaranteed decontamination service. Ken Turley explains

Infection control is an essential element of any modern dental practice. It is also part of the duty of care: there is a legal obligation to ensure that when a patient consents to dental treatment they receive a standard of care that puts them above any reasonable risk of contamination.

As practice managers will be aware, staff have a statutory duty of care to ensure that all instruments and equipment are safe for use, have undergone a thorough process of cleaning/disinfection, sterilisation and storage, and that any instrument is free from contamination from blood or other body fluids.

The practice’s infection control policy, which all staff should be familiarised with and guided by at all times, forms the basis of a training and reference guide for staff, particularly during their inductions. There should also be a nominated lead member of staff responsible for infection control and decontamination. If the practice has yet to draft their Infection Control policy, it is advised to consult with an expert provider of decontamination services who can help formulate the document correctly.

Follow the rules

Within the policy, the correct procedure for decontamination of instruments should be recorded. There is the need for a clearly defined cycle that ensures reusable items are rendered safe for further use and for staff to handle: this method of reprocessing is detailed in the HTM 01-05 document. It is essential that there is a systematic approach to this process by having clear ‘dirty’ and ‘clean’ zones in the surgery to avoid the cross contamination of used instruments with clean ones.

HTM 01-05 states that, wherever possible, disposable items should be used. Single use items will be clearly marked as such, and reusing such items can seriously affect their safety, performance and effectiveness. Instruments that are difficult to clean, such as matrix bands, saliva ejectors, aspirator tips and three-in-one tips should be considered for replacement by single-use items if appropriate.

Where single-use items are not practical, instruments and appliances must be processed using the correct procedure. This is the only way of ensuring the equipment is free of any possible contamination and therefore safe to use.

The decontamination process

Any instrument contaminated with blood or saliva must be completely clean before it can be sterilised. Manual cleaning is considered to be unsuitable, primarily because of the lack of reproducibility of the conditions. There is, however, still the need for manual inspection after the decontamination process has been completed, to ensure the instruments have been successfully reprocessed.

Washer disinfectors are considered to be the best solution to the cleaning process because they offer a validated, controlled and efficient process of cleaning instruments compared with manual cleaning and most ultrasonic baths. These machines are fully automated and provide a reproducible and validated cycle of cleaning and disinfection. Always consult with a reputable manufacturer on type, requirements, installation etc to ensure you have the right machine and that you and your team fully understand how to gain the most from their use.

Careful loading of the instrument is required, as incorrect loading will inhibit the machine’s ability to clean effectively:

- Do not overload instrument carriers or overlap instruments.
- Open instrument hinges and reusing such items can seriously affect their safety, performance and effectiveness.

The HTM 01-05 document states that, wherever possible, disposable items should be used!

About the author

Ken Turley is the managing director of the YoYo Dental Group. Following a 17-year military career, Ken worked globally in the telecomms industry until 2003 when he became the managing director of Softphone, a 35-year-old hospital autoclave company providing decontamination equipment which he later acquired and re-branded as YoYo in 2006.