RICHMOND
DENTAL SUITE

Practice Infection Control Policy

Infection control is of prime importance in this practice. Every member of the clinical staff will receive training in all aspects of infection control, including decontamination of dental instruments and equipment as part of their induction programme and through regular update training (at least annually).

All practice staff must be aware of the procedures required to prevent the transmission of infection and should understand why these are necessary. Regular monitoring of our procedures is essential and the infection control policy for the practice is reviewed regularly and updated when necessary (at least annually or sooner if changes are made to our protocols). All new clinical staff are appropriately trained in infection control procedures and their training will equip staff to understand:

- how infections are transmitted
- the practice policy on decontamination and infection control
- what personal protection equipment is, what is required and when to use it
- what to do in the event of accidents or personal injury

The following policy describes the routines for our practice, which must be followed at all times. If there is any aspect that is not clear, please ask the practice owner or the decontamination lead. Remember, any of your patients might ask you about this policy, so make sure you understand it.

Accepting Patients for Treatment

Patients will **NEVER** be refused treatment on the grounds that they have an infectious disease. Patients who have infections may be unaware or may be unwilling to disclose it, therefore any patient should be considered a potential carrier and practice policies to avoid cross-infection should be followed at all times. If a patient has AIDS or the infective stage of TB the treating practitioner may obtain specialist advice and may make schedule adjustments before starting a treatment.

Medical History

A thorough medical history is taken at the patient's first appointment. A medical history form is issued, completed and signed by the patient and discussed with the practitioner to ensure the patient has fully understood and fully answered all the questions. For future appointments, patients will be asked about any changes or additions to their medical history and their records updated with any changes.

Patients are then asked to review their medical history form on the Clinipad every six months. Confidentiality is a priority for all patient information and especially medical and treatment information.

Minimising Blood Borne Virus Transmission

All clinical staff must be immunised against hepatitis B; records of hepatitis B will be held securely in the staff folder to ensure confidentiality is maintained. For those who do not seroconvert or cannot be immunised, advice will be sought on the appropriate course of action.

Staff identified as being at risk of exposure to blood borne viruses will be required to undergo an occupational health examination. This will be provided by:

Kingston Hospital
Galsworthy Road
Kingston Upon Thames
Surrey
KT2 7QB

Tel: 020 8546 7711

Records of these examinations will be held securely in the staff folder to ensure confidentiality is maintained.

In the event of an inoculation injury you should stop anything that you were doing, the wound should be allowed to bleed, washed thoroughly under running water and covered with a waterproof dressing, in accordance with the practice policy. The practice policy for dealing with inoculation injuries is attached.

All inoculation injuries must be reported to **Dr Antimos Ouzounoglou** who will assess whether further action is needed (seeking advice, as appropriate) and maintain confidential records of these injuries, as required under current health and safety legislation. Advice on post-exposure prophylaxis can be obtained from:

Kingston Hospital: Tel: 020 8546 7711

Ealing Hospital Occupational Health Department: Tel: 020 8967 5000

Instrument Tray Set Up & Management

When laying out instrument trays or filling view packs these are the sets of instruments that are prepared:

Examination Tray	Treatment Tray	Hygiene Tray
Mirror Probe Williams Probe Tweezers	Mirror Probe 2 x Tweezers Flat Plastic Ball Burnisher Miller's Forceps	Mirror Probe Williams Probe BPE Probe Tweezers Sickle Scaler

		Ultrasonic Scaler Tip in Torque Wrench Ultrasonic Scaler Slow Handpiece 7 pouched kits in the room

Decontamination of Treatment Areas

What and how areas are cleaned and dried at the end of each session include:

Aspirator
Aspiration of water and Orotol non-foaming diluted according to manufacturer's instructions, daily.
Aspiration of water and MD555 diluted according to manufacturer's instructions, weekly.

Spittoon
Allow water to run for 30 seconds then MD 555 non-foaming surfactant is poured around and into the spittoon. This is followed by running water for a further 30 seconds.

Computer Keyboards
Surgery keyboards are washable.

They should be wiped clean and at the end of every session and washed with water and detergent (please check manufacturer's instructions) and dried **monthly**.

Keyboards used are currently wiped using **Unodent Surface Disinfectant Wipes – Alcohol Free** after each patient.

Also: Taps, Drainage Points, Splash Backs, Cupboard Doors and Sinks

Decontamination of Instruments & Equipment

Single use instruments and equipment must be identified and disposed of safely and **never** reused.

This symbol identifies single use items:

It is the responsibility of the Dental Surgeon and Nurse to ensure that single-use devices are used only in the way directed by the instructions.
It is the responsibility of the Dental Nurses to safely dispose of single-use devices immediately after use and not to reprocess such devices or to make them available for reuse.

All **re-usable instruments** must be decontaminated after each use to ensure they are safe. Heavy duty gloves, plastic aprons and eye protection must be worn when cleaning used instruments.

Before being used, all **new dental instruments** must be decontaminated fully according to the manufacturer's instructions and within the limits of the facilities available at the practice (unless specifically mentioned on the packaging that they are sterile). Those that require manual cleaning must be identified. Wherever possible, the practice will purchase instruments that can withstand automated cleaning processes using a washer-disinfector or an ultrasonic cleaner. The practice policy for new instruments is attached.

A separate decontamination room is available within the practice

Instruments are kept in surgeries in a **Pink 'DIRTY'** instrument box and the contents are kept moist until the nurse transfers them to the decontamination area for reprocessing. Instruments should be reprocessed as soon as possible after being used. The practice procedure for transferring used instruments and equipment is included.

Staff will be appropriately trained to ensure they are competent to decontaminate existing and new reusable dental instruments. Records of this training are kept safely into the staff folder.

Endodontic instruments such as reamers and files are single use instruments and they will be disposed as sharps after each use.

Decontamination – Dental Impressions and Laboratory Work

The responsibility for cleaning and disinfecting dental impression and appliances prior to dispatch to the laboratory lies solely with the dental practice (COSHH Regulations 1999). To maintain infection control it is vital that dental impressions, prostheses work and orthodontic appliances etc are disinfected correctly before being sent to the lab and before placing in a patient's mouth. Uncertainty of impression disinfection risks the health of the receiving dental technician and potential repeat disinfection of an already disinfected impression can have detrimental consequences for its dimensions.

- Once an impression has been taken, immediately remove from the patient's mouth and rinse it under running water to remove any visible debris until visibly clean.
- Place in the disinfectant solution bath for 10 minutes (refer to manufacturers guidelines). The practice uses **Perform I-D** powder which is mixed with water to produce a disinfectant solution. Always check the manufacturer's instructions before use to ensure the correct dilution.
- Remove the impression from the bath solution wearing gloves and rinse thoroughly under running water to remove any disinfectant solution.
- If it is an alginate impression, wrap it in a damp tissue or gauze to ensure it doesn't undergo dimensional change and place it in an air tight bag (if left immersed in water for too long the impression expands and if allowed to dry out it will shrink).
- If it is an elastomer impression blow dry using a triple syringe and place in an air tight bag. Store this work at room temperature or below (in the clinical fridge) before transportation.
- When work is being sent out to the lab the practice needs to indicate that the decontamination process has been used and this can be done either by a label affixed to the package or written on the lab sheet. Here we

label as 'disinfected' before being sent to the laboratory and the initials/ signature of the person disinfecting the work should also be added.

- The disinfectant solution should be changed after each session (AM/PM) or sooner if it gets visibly dirty.

- When work is received from the lab, the appliances need to be disinfected before they are placed in the patient's mouth. This should be done according to the material or device's manufacturer instructions. There will be **separate disinfection baths for incoming and outgoing lab work.**

- Work being received from the laboratory must also be labelled as disinfected.

- **Immersion** is the **preferred method** because every surface is disinfected, the impression is submerged throughout the contact time and can be left submerged according to the manufacturer's guidelines without the need for constant checking.

- **Sprays are NOT preferred** because they produce aerosols, it doesn't guarantee all areas are covered and contact time is difficult to judge. Also, the impression must not dry out during the process.

Dealing with Spillage or Potentially Infected Body Fluids

If there is a spill of blood or other potentially infected body fluid the following actions must be taken as soon as possible:

- Inform all staff and patients in the immediate vicinity that a spillage has occurred
- Ventilate the area
- Notify the registered manager (Dr Antimos Ouzounoglou)
- Display hazard notice
- Remove unaffected equipment and items to ensure spillage is easily accessible for cleaning
- Locate the spillage kit – Small x-ray room, behind the door
- Wear a mask, disposable plastic apron, protective eye wear and protective gloves
- Sprinkle a sachet of coagulating granules over the spillage and wait for the gel to form
- Remove using the scoop and scraper from the kit – dispose in orange bag
- A disinfectant solution is made up freshly using chlorine tablets and it should contain not less than 1000pm – ideally 10,000ppm available chlorine (1 tablet in 100ml water)
- Care should be taken to avoid corrosive damage to metal fittings etc
- Hypochlorite solution should be poured onto some tissues to soak them and left for at least 10 min

- More tissue should be used to absorb the hypochlorite solution
- Collect any tissues used and place them in a sealed bag in the clinical waste bin
- Wipe the area with hypochlorite solution afterwards (do not use alcohol disinfectant when dealing with blood spillage)
- Dispose of waste (including worn PPE) in the orange infectious waste bag
- Wash hands according to practice procedure and disinfect using alcohol rub

Any accident has to be immediately reported to Dr Antimos Ouzounoglou. Notes of any spillage incident have to be recorded in the accident book, which is kept at Reception.

Laboratory Infection Prevention

There is a laboratory infection prevention questionnaire which was sent out to all our dental labs to ensure labs are using appropriate disinfection and sterilisation methods and to inform them that lab work is disinfected before dispatch.

Equipment or Instruments Sent for Repair

Items are cleaned and disinfected and if appropriate sterilised before sending for repair. Items will be labelled as disinfected or sterilised, as appropriate and initials of the person performing the disinfection/ sterilisation also added on the label.

X-Ray Equipment

X-ray film sleeves will be handled with gloves. Care is taken not to touch the actual film with the gloved hand. Film sleeves are disposed of in the clinical waste bin. Single use covers and barrier envelopes are used on digital x-ray film. On removing the single use cover, equipment is disinfected according to manufacturer's instructions.

Posting Specimens

Diagnostic specimens are posted according to regulations using the Royal Mail Post Office Service Safebox, which holds up to 50ml Safeboxes. Can be sent by Special Delivery or 1st Class postage.

The minimum quantity of Safeboxes in a pack is **12**, which costs approx £**72** for first class posting or £**118** for special delivery posting.

Safeboxes are ordered by calling **08457 782 677**. Visit the Royal Mail website for further information.

Cleaning

Washer-Disinfector – *NOT CURENTLY IN USE* – Please go directly to ULTRASONIC CLEANERS

Washer disinfectors are best practice and offer the best option for the control and reproducibility of cleaning with a process that can be validated. Dentists should plan, where possible, to install a validated washer-disinfector to remove the need for manual cleaning. There are a number of different models that meet current requirements. The size, model and type chosen should be considered against the workload and together with the availability of space. The fitting and plumbing of washer disinfectors must comply with the requirements of the Water Supply (Water Fittings) Regulations 1999. Further details can be found on the WRAS website. A typical washer-disinfector cycle includes five stages:

1. Flush - removes gross contamination using a water temperature of less than 45OC
2. Wash - removes remaining soil using detergents specified by the manufacturer
3. Rinse(s) - removes detergents
4. Thermal disinfection - temperature raised for required time: 80OC for 10 minutes or 90OC for 1 minute, for example
5. Drying - heated air removes residual moisture.

The manufacturer's instructions for use should be followed, including recommendations for detergents and/or disinfectants and instrument loading. Staff must be trained how to use it and how to perform daily tests. Records of training must be maintained.

Washer-disinfectors must be loaded correctly to ensure effective cleaning. This involves:

- not overloading instrument carriers or overlapping instruments
- opening instrument hinges & joints fully attaching instruments requiring irrigation to the irrigation system correctly, ensuring filters are in place if required (e.g. for hand-pieces).

- Washer-disinfector logbooks and records should include cycle parameters and details of routine testing and maintenance. Automated data-loggers or interfaced small computer-based recording systems can be used, provided the records are kept securely and replicated (to guard against fading). Records should be kept for at least two years.

Ultrasonic Cleaners

Evidence supports the use of ultrasonic cleaners as an effective means of cleaning dental instruments and reduces contact with contaminated instruments, however their use is optional.

Where used, the cleaner must be operated and maintained according to manufacturer's recommendations with the required checks and testing recorded on the ultrasonic cleaner log book.

- Fill the ultrasonic bath with **Gigazyme** solution diluted according to manufacturer's instructions to the required level.

- Change the solution after every clinical session or sooner if it becomes contaminated.

- Open joints and hinges of instruments and fully dissemble them, if needed. Note some instruments such as hand pieces are unsuitable for ultrasonic cleaning, please refer to the manufacturer's instructions.

- Prior to using the ultrasonic cleaner, immerse instruments in cool (below 45^0 C – use thermometer) RO water/ distilled water/ suitable potable water with **Gigazyme** in the dedicated sink and using an autoclavable long handled nylon bristle brush scrub the instruments under water to remove some of the blood and visible soil.

- Take care to avoid any splashing.

- Place instruments in the suspended basket and not on the floor of the cleaner (avoid overloading and overlapping instruments) and fully immerse them into the bath with cleaning solution. Please use the special basket for burs and small instruments.

- Delicate instruments may need a custom basket.

- Close the lid and set the timer for 3 minutes at 100% power (or 6 minutes at 50%) and do not open until the cycle is complete.

- When cycle is complete check that it has been successful, drain the basket, rinse instruments by submerging in RO water/ distilled water/suitable potable water in the **rinsing only sink** to remove residual detergent. Drain after each batch.

- Visually inspect the items with an illuminated magnifier. Pay extra attention to serrated surfaces such as mosquito forceps, jaws of extraction forceps and hinges. If necessary re-clean items. If damaged, blunt, bent or rusted, discard.

- Lubricate any relevant items prior to sterilisation, with dedicated **'pre-sterilisation'** lubricant (non-oil).

- Instruments that are going to be wrapped, should be dried first using a single use non-linting cloth and sterilised soon after ultrasonic cleaning.

- Dispose of cleaning cloths as clinical waste.

- At the end of each day, the ultrasonic cleaner must be emptied, cleaned and wiped dry. Leave lid off overnight.

- Carry out daily, weekly, quarterly tests as required and record results in the ultrasonic log book located in the **decontamination room.**

Manual Cleaning

Compared with other cleaning methods, manual cleaning carries a greater risk of inoculation injury. It is however, important for practices to have the facilities, documented procedures and trained staff to carry out manual cleaning in conjunction with other cleaning method - needs to be documented as part of induction programme. Where manual cleaning is carried out, the parameters should be controlled as much as possible to reduce variability in cleaning. A dirty-to-clean workflow should be maintained throughout. Two sinks are

needed - one for cleaning and one for rinsing with separate areas for setting down dirty and clean instruments.

- Manual cleaning must be carried out in dedicated sinks that are not used for any other purpose
- Wash your hands following the correct procedure
- Wear appropriate PPE: thick rubber gloves, work wear, single use plastic apron, full coverage shoes, facemask and eye protection
- Prepare sinks, equipment and setting down areas.
- Fill the manual cleaning sink with water and detergents specifically made for the manual cleaning of instruments and mix with water to the correct concentration (as specified by the manufacturer). The temperature should not exceed 45C at any time. A thermometer will be used each time manual cleaning is performed to ensure that the solution is kept at the correct temperature throughout the day. The detergent we use in the practice for manual cleaning is **Gigazyme.**
- Dismantle/ open hinged instruments
- Fully submerge the items to be cleaned and keep them immersed during cleaning (unless manufacturer recommends otherwise) with any sharp end pointing away from you
- Agitate/scrub using a long-handled nylon bristle brush
- Take care to avoid splashing or the creation of aerosols
- Maintain a dirty to clean workflow
- Rinse with RO water/ purified water/ suitable potable water using a **separate, rinsing only sink. Instruments need to be submerged and water changed after each batch.**
- After rinsing, drain and if items are to be wrapped for the vacuum autoclave, they must be dried first using a single use disposable non-linting cloth immediately
- Visually inspect the items with an illuminated magnifier: pay extra attention to serrated surfaces such as mosquito forceps, jaws of extraction forceps & hinges. If necessary re-clean items. If damaged, blunt bent or rusted, discard.
- Lubricate any relevant items prior to sterilisation, with dedicated 'pre-sterilisation' lubricant (non-oil)
- Dispose of cleaning cloths as clinical waste
- Wash heavy-duty gloves with hot water and detergent to remove visible soil, leave to dry fingers down and replace them regularly (weekly)
- Long handled brushes should be left to dry with bristles up and replaced weekly.

Instrument Inspection and Function Testing

After cleaning, instruments should be inspected for cleanliness & checked for wear or damage before sterilisation.

- A magnifying glass with task lighting is required.
- If there is residual contamination, the instrument should be rejected and re-cleaned.
- Working parts should move freely and joints should not stick.
- The occasional use of a non-oil-based lubricant may be necessary where hinges are stiff.
- The edges of clamping instruments should meet with no overlap or rough edges.
- The edges of scissors should meet to the tip and move freely across each other with no overlap or rough edges.
- All screws on jointed instruments should be tight.
- Instruments found to be faulty or damaged should be taken out of use. If they are to be sent for repair, they should be decontaminated fully (cleaned and sterilized) and labelled 'decontaminated' before dispatch.
- Equipment that cannot be sterilized must be thoroughly cleaned and disinfected in accordance with the manufacturer's instructions.

Cleaning Dental Hand-Pieces

Dental hand-pieces must be reprocessed after each use. Where the manufacturer confirms that a handpiece can withstand cleaning in a washer-disinfector and the washer-disinfector can be adapted to clean handpieces, this method is preferred. Dedicated hand-piece-cleaners can be considered where a washer-disinfector is not recommended.

Commercial products for decontaminating handpieces can be used where the product can be shown to reduce the risk of infection transmission or the process can be validated. The manufacturer's recommendations for lubrication should be followed. Separate canisters of lubricant should be used for unclean and cleaned hand-pieces.

OUR PRACTICE USES A W&H CLEANING AND LUBRICATING MACHINE AND HANDPIECES ARE ALWAYS OILED BEFORE POUCHING AND STERILISING. The automatic rotational lubrication ensures optimum distribution of the oil and that an even film of lubricant is created. Dirt particles are loosened and removed.

Sterilisation

Autoclave x1 + Data Logger =

x1 Melag Vacuklav 31 B+ (SN: 1431-B1745) Automatic Class B Vacuum Steam Steriliser

Instruments Processed in Vacuum Sterilisers

Instruments sterilised in a vacuum steriliser using a vacuum cycle may be packed either singly or as sets prior to processing.

Packaging must be specifically approved for use in a small vacuum steriliser by the manufacturer and conform to BS EN ISO 11607. HTM01-05 currently permits that any pouched instruments (providing the pouch is not damaged) can be kept for a **maximum of 1 year** before further sterilisation is required.

Instruments Processed in a Non-Vacuum (N Type) Sterilisers

Instruments processed in a non-vacuum (N Type) steriliser, or a non-vacuum cycle on a Type B or Type S (vacuum) steriliser, should never be packed before processing and may be packed immediately after removal from the steriliser.

Instruments must be completely dry before packaging and should be dried if necessary, using non-linting cloths. Instruments can be stored as follows:

Dry and Unwrapped: Stored in a **surgery**: For **a maximum of 1 day**
Dry and Unwrapped: Stored in a **non-clinical** area: **For a maximum of 1 week**
Dry and Wrapped: Stored: **For a maximum of 1 year**

Instruments Used Immediately After Processing in a Steriliser

When instruments are intended for use on the same day that they are removed from the steriliser, there is no requirement to pack them. However packaging instruments continuously enhances patient perception that decontamination procedures are being adhered to.

Any instruments unused at the end of the day **must** be fully re-processed and **cannot be packaged for storage.**

Sterilisation Checks, Tests & Record Keeping

Before use each day:

- Clean the rubber door seal with a clean, damp non-linting cloth
- Check the chamber and shelves for cleanliness and debris
- Fill the reservoir with freshly distilled or RO water
- Turn on the power source.
- Daily tests and housekeeping tasks should then be carried out and the results recorded in the logbook.

Logbook Records Should Show:

- Vacuum Test – First thing on Monday morning – no water, empty chamber
- Steam penetration test (vacuum sterilizers only) – Helix Test – first thing daily (on Monday after Vacuum) – add water, empty chamber except for tray with Helix Test

- Automatic control test (all sterilizers) – For Melag 31B the interaction of sterilisation-relevant parameters is continually monitored by the electronic parameter control. If the parameters exceed defined limit values the autoclave outputs warning messages or error messages. If necessary, it aborts the program with a corresponding notice.
- Records of regular checks must be maintained to demonstrate compliance for **at least two years**
- A sterilizer that fails to meet any of the test requirements should be **withdrawn from service** and advice sought from the manufacturer and/or maintenance contract
- Sterilizers should be commissioned when first purchased to ensure that they are appropriately calibrated and functioning correctly.
- Validation before use by a Competent Person (Decontamination) or service engineer is needed to demonstrate that the right conditions for sterilization are achieved
- Equipment must be properly maintained according to the manufacturer's instructions and periodically examined by a competent person.

Storage of Sterilised Instruments

- Perform hand hygiene and new gloves will be worn before handling unwrapped sterilised instruments
- Instruments stored this way must be in an environment where they are protected against excessive heat and where conditions remain dry

Storing Unwrapped Instruments in a Clinical Area

- Following sterilisation, unwrapped instrument must only be stored for up to 1 day (24 hours) in a clinical area.
- Instruments must not be stored on open work surfaces
- They must be protected from contamination in racks placed in cupboards as far as possible from dental chair
- All unwrapped instruments stored and unused within 24 hours are re-processed

Unwrapped Instruments in a *'Non' - Clinical Area

- A *non-clinical area is a designated clinical area **not** in current use or in a clean area of a separate decontamination area
- Following sterilisation, unwrapped instruments can be stored for up to 1 week in **non-clinical areas only**

- Affix a label with the cycle number, the expiry date (up to one week in the future) and the signature of the staff member
- Instruments must not be stored on open work surfaces, they must be protected from contamination in covered trays

Wrapped Instruments

- Instruments wrapped before sterilisation with a vacuum autoclave or after sterilisation with a non-vacuum autoclave can be stored for **up to one year**
- Storage must be protected against the possibility of exposure to contaminated aerosols
- Commonly used instruments are dealt with on a **first in first out basis**
- Before using instruments check that:
    1. If packed, the packaging is intact and indicates that sterilisation has taken place.
    2. The expiry date has not passed. If it has, please send for re-processing.
    3. Use the instruments with the earliest date first.
    4. There is no visible soil and if in a covered container, the instruments have remained covered.

Zoning of Work Areas, Surfaces & Equipment

Areas that could be contaminated during treatment procedures should be identified and planning carried out with reviews to keep these areas to a minimum.

Contaminated areas are decontaminated in between patients. The patient treatment area should be cleaned after every session using **Unodent Wipes – Alcohol Free** even if the area appears uncontaminated.

Between patient treatments, the local working area and items of equipment must also be cleaned using **Unodent Wipes – Alcohol Free.** This will include work surfaces, dental chair, inspection light and handles, hand controls, delivery units, curing light, spittoons, aspirators and x-ray units and controls. Other equipment that may have become contaminated must also be cleaned.
If any surfaces are difficult to clean they must be protected with a single use barrier as well as being decontaminated in between patient.

Keep worktops clear of clutter, clean with alcohol-free wipes and dry with single use paper towels.

In addition, cupboard doors, other exposed surfaces (such as dental inspection light fittings) and floor surfaces within the surgery should be cleaned daily

Hand Hygiene

The practice policy on hand hygiene must be followed at all times. The full policy is attached; a summary is included here.

- Nails must be short and clean and free of nail art, permanent or temporary enhancements (false nails) or nail varnish. Nails can be cleaned using a blunt 'orange' stick.
- Jewellery such as watches, dress rings, bracelets may not be worn by clinical staff
- Wash hands using liquid soap between each patient treatment and before donning and after removal of gloves. Follow the hand washing techniques displayed at each hand wash sink. Scrub or nail brushes must not be used; they can cause abrasion of the skin where micro-organisms can reside. Ensure that paper towels and drying techniques do not damage the skin.
- Antibacterial-based hand-rubs/gels can be used instead of hand-washing between patients during surgery sessions if the hands appear visibly clean. They should be applied using the same techniques as for hand washing. The product recommendations for the maximum number of applications should not be exceeded. If hands become 'sticky', they must be washed using liquid soap.
- At the end of each session and following hand washing, apply the hand cream where provided to counteract dryness. Do not use hand cream under gloves; it can encourage the growth of micro-organisms.

Clinical Waste Disposal

The dental team is responsible for ensuring that waste is:

- Correctly segregated
- Bags are not over filled (should be no more than 3/4 full)
- Stored safely and securely on the premises
- Packaged appropriately for transportation
- Described accurately and fully on the accompanying documentation when removed
- Transferred to an authorised person to an authorised waste site
- Appropriately registered for hazardous waste (if the practice produces more than 500kg of hazardous waste per year)

All clinical healthcare waste is classified as 'infectious' waste and placed in orange sacks with security tags and placed in the **clinical waste yellow bin** located **outside the back door** for collection by **Initial Medical Services**.

Clinical waste sacks must be no more than three-quarters full, have the air gently squeezed out to avoid bursting when handled by others, labelled according to the type of waste and tied at the neck, not knotted.

Sharps waste (needles and scalpel blades etc) must be disposed of in Yellow UN-type approved puncture-proof containers (to BS 7320) and labelled to indicate the type of waste. Sharps containers must be disposed of when no more than two-thirds full.

Clinical waste and sharps waste must be stored securely in the areas provided before collection for final disposal by the registered waste carrier appointed by the practice. The waste carrier holds a certificate of registration with the Environment Agency.

Dental amalgam and developer and fixer solutions must be disposed of as hazardous waste by the registered waste carrier appointed by the practice. NOT USED IN OUR PRACTICE

At each collection of waste, the waste carrier issues a consignment note, which is retained by the practice. Consignment notes should be given to the practice manager / owner who will retain this information within the practice waste management folder.

All staff involved in handling clinical waste must be vaccinated against hepatitis B. All relevant staff will be trained in the handling, segregation and storage of all healthcare waste generated in the practice. – should be part of induction!

PPE - Personal Protective Equipment

Training in the correct use of PPE is included in the staff induction programmes. Staff receive updates in its use and when new PPE is introduced into the practice.

PPE includes protective clothing, disposable clinical gloves, plastic disposable aprons, face masks and eye protection. In addition, household gloves must be worn when handling and manually cleaning contaminated instruments. Footwear must be fully enclosed and in good order.

Removing PPE - Depending on the type of PPE worn, it should be removed in the following order:

- **Gloves** – ensure gloves end up inside out and that the hands do not become contaminated. When removing PPE, gloves are removed first. If contaminated, wash hands thoroughly before removing any other PPE. The use of gloves does not replace the need for hand hygiene procedures.
- **Plastic disposable apron** - by breaking the neck straps and gathering the apron together touching the inside only.
- **Face and eye protection** - taking care not to touch outer surfaces.
- **Face mask** – by breaking the straps or lifting over the ears, avoiding touching the outer surface of the mask. Never allow mask to hang around neck.
- Wash hands thoroughly

Gloves

The disposable clinical gloves used in the practice are **non-sterile, low allergy, powder free, latex free**, **nitrile gloves.**

Anyone developing a reaction to protective gloves or a chemical must inform the practice owner/ manager immediately.

Clinical gloves are single-use items and must be disposed of as clinical waste after use on each patient or if they become damaged. Long or false nails may damage clinical gloves, so nails should be kept short. Jewellery such as watches, dress rings, bracelets may not be worn by clinical staff. Alcohol rubs/gels must not be used on gloved hands, nor should gloves be washed.

Domestic household gloves should be worn for all decontamination procedures (as well as long plastic disposable aprons and protective eyewear). After each use, they should be washed with detergent and hot water to remove visible soil and left to dry. These gloves should be replaced **weekly** or more frequently if worn, torn, damaged, or if they become difficult to clean.

Plastic Aprons

Plastic aprons should be worn during all decontamination processes. Aprons are single use and should be disposed of as clinical waste. Plastic aprons are removed by breaking the neck straps and gathering the apron together by touching the inside surfaces only.

Face and Eye Protection

Face masks must be worn when treating patients, cleaning instruments and clearing up spillages of hazardous materials. They are removed without touching the outer surface by breaking the straps or lifting over the ears. They are single use items, changed after each patient, each decontamination procedure and/ if they become wet or soiled and must be disposed of as clinical waste.

Protective eyewear must be worn during treatment, during decontamination and whilst clearing up spillages of hazardous materials as there is a risk of contaminated fluids splashing onto the face and in the eyes.
A visor or face shield should be worn to protect the eyes; spectacles do not provide sufficient protection. Eye protection may be reused if cleaned according to the manufacturer's instructions when it becomes visibly dirty and/or at the end of each session. Disposable visors should be used wherever possible.

Patients should always wear protective eyewear during treatment. If patient eyewear is to be reused it must be cleaned in accordance to the manufacturer's instructions.

Clinical Uniforms/ Protective Clothing

Protective clothing becomes contaminated during operative and decontamination procedures. Protective clothing/ uniforms worn in the surgery and for decontamination **must not be worn outside the practice** premises. Outdoor clothing **must not be worn whilst treating patients**. Changing and storage facilities are provided in the **staff room/ changing area.**

Clinical clothing should be clean at all times and freshly laundered. Clean clinical uniforms/ clothing must be worn each day and changed additionally if they become soiled.

Uniforms must be washed at **60C or above** with a suitable detergent to reduce any potential microbial contamination.

Short sleeves uniforms allow the forearms to be washed easily and clinical (practice specific) footwear should be worn and must be in good, clean condition. Shoes must be enclosed (no holes to prevent needle stick / injury) and washed **regularly** in a suitable detergent/ antibacterial solution and disposable plastic aprons should also be worn during this process.

Blood Spillage Procedure

Spillages of blood occur rarely in dentistry, although there might be occasions when a surface becomes **grossly contaminated** with blood or blood/ saliva. In these situations, the area should be saturated with 1% sodium hypochlorite with a yield of at least 1000 ppm free chlorine. Allow contact for a minimum of 5 minutes before using disposable cloths to clean the area. The cloths used for cleaning should be disposed of as clinical waste.

If blood is spilled – either from a container or as a result of an operative procedure – the spillage should be dealt with as soon as possible. The spilled blood should be completely covered either by disposable towels, which are then treated with sodium hypochlorite solution or sodium dichloroisocyanurate granules, both producing 10,000 ppm chlorine. Good ventilation is essential. At least 5 minutes must elapse before the towels etc are cleared and disposed of as clinical waste.

Appropriate protective clothing must be worn when dealing with a spillage of blood: household gloves, single use plastic apron and protective eyewear. Care should be taken to avoid unnecessary contact with metal fittings, which can corrode in the presence of sodium hypochlorite. **The use of alcohol in the same decontamination process should be avoided.**

Facilities Cleaning

Areas of the practice are cleaned in line with HTM01-05 procedures.

Practice cleaning services are provided by: **our self-employed cleaners.** Cleaning tasks checklist is attached.

Cleaning equipment is stored in the **cleaner's cupboard and area.**

Records of cleaning protocols and audit checks are retained by the practice owner/ manager in the **Cleaners Folder** located on **reception.**

Immunisation

Each practice should have access to an Occupational Health services department who will be able to provide advice on the appropriate vaccination requirements of all clinical staff**. All those involved in clinical procedures and decontamination must be vaccinated against hepatitis B.**

Provision of the vaccination does not fall under the category of services that PCTs have to provide NHS contracted or private practices; therefore, they are entitled to charge for this provision. The cost of vaccinating employees must be met by the employer. General Medical Practitioners can refuse to provide the vaccination and have been encouraged to do so; therefore, it is increasingly unlikely that this service will be available from them.

Employers must hold documentary evidence to demonstrate that all relevant members of the dental team have been immunised and their responses to the vaccine checked; post vaccination blood test results will show whether an adequate level of immunity has been achieved. The consent of the employee must be obtained before the occupational health department or the GMP is approached. Any information provided is confidential and should be stored appropriately.

Registration as a dental care professional (DCP) with the General Dental Council includes the completion of a health certificate as part of the application. The health certificate can be completed by a GDC registered dentist if they have worked with the DCP for at least 12 months, or by a medical practitioner (e.g. doctor or occupational health service). Assessing an applicant's fitness will include having evidence of immunisation for hepatitis B and tuberculosis. Where documented evidence of tuberculosis immunisation is not available evidence in the form of an appropriate scar is acceptable.

If an inoculation injury is sustained before completion of the course, follow up action, including boosters and tests for hepatitis B markers, is essential. The hepatitis B vaccine is effective in preventing infection in individuals who produce specific antibodies to the hepatitis B surface antigen (anti-HBs). Antibody responses to the hepatitis B vaccine vary widely between individuals. It is preferable to achieve anti-HBs levels of above 100mIU/ ml, although levels of 10mIU/ml or more are generally accepted as enough to protect against infection. Protection against infection is maintained even if antibody concentrations at the time of exposure have declined. Antibody titres should be checked one to four months after completion of a primary course of the vaccine.

Responders with anti-HBs levels ≥100mIU/ml do not require any further primary doses; once a response has been established further assessment of antibody levels is not indicated. **A single booster dose at around five years after primary vaccination is recommended for all health care workers who have contact with blood, blood stained fluids and patients' tissues.**

Pre- and post-testing at the time of this booster is not required if the individual responded to the primary course of vaccine. Responders with anti-HBs levels of 10 to 100mIU/ml should follow advice from the local occupational health department/medical practitioner on improving and managing their response.

Immunisation - Non-responders

An antibody level below 10mIU/ml is classified as a non-response to the vaccine and testing for markers of

current or past infection is required. Those identified as non-responders should undergo a repeat course of vaccine, followed by retesting one to four months after the second course. Those who still have anti-HBs levels below 10mIU/ml and who have no markers of current or past infection, will require hepatitis B immunoglobulin for protection if exposed to the virus.

It is useful to consider non-responders to the hepatitis B vaccination in relation to other infections that cannot be vaccinated against, such as hepatitis C and HIV. There is a 30% chance of a non-immunised individual developing hepatitis B infection after exposure to infected blood. This compares with 3% for hepatitis C & 0.3% for HIV. Although hepatitis C and HIV are not transmitted as readily as hepatitis B, there is still a real risk of transmission and healthcare workers are dependent on effective barrier techniques for protection.

New staff who are not immunised should undergo a course of vaccination as soon as possible. Chairside assisting can begin after the first vaccination as long as a risk assessment of their duties has been carried out and the appropriate controls identified have been put in place.

Immunisation - Pregnancy

Immunisation during pregnancy is not recommended but should not be withheld from a pregnant woman in a high-risk category. Dental healthcare workers are not generally regarded as being at high risk but individual advice should always be sought from the local Occupational Health Department.

Where an employee who is involved in clinical duties becomes pregnant and is not immunised against hepatitis B, the employing dentist must assess the possible risks - both to the employee and to the unborn child.

Redeployment for the duration of the pregnancy may be advisable depending on the particular duties of the employee or the type of dental practice. In extreme circumstances, it may be necessary to suspend the employee on full pay until maternity leave starts. Further advice on individual situations should be obtained.

Immunisation - Pregnancy - Risk assessment

When carrying out a risk assessment for an employee who is not yet immunised or has not responded to the vaccine, it is important to identify those areas where the employee might be at risk and where barrier techniques alone are inadequate. The obvious risks are those that may result in an inoculation injury - a puncture wound from a used instrument or a splash to the eye or eye injury involving infected material.

RICHMOND
DENTAL SUITE

Clinical Waste Management Table

Type of Waste	Containers / Storage / Disposal Co
Clinical Waste **Infectious or potentially infectious waste**	**Orange Bags - Tied Using Security Tags ideally with the Practice Postcode Detailed** **Supplied by Initial Medical Services Ltd**
Pharmaceutical / Medicine Waste	**Currently taken to Boots pharmacy for disposal**
Extracted teeth containing amalgam	**Medium White container labelled Amalgam Waste with Red Lid** **Supplied by Initial Medical Services Ltd**
Sharps	**Yellow Clinical Sharps Bins with yellow lid (1 in each surgery)** **Supplied by Initial Medical Services Ltd**
Study Models / Gypsum	**Medium White container** **Supplied by Initial Medical Services Ltd**
Lead Foil	**N/A**
Fixer / Developer	**N/A**

RICHMOND
DENTAL SUITE

Other Waste Management Table

Type of Waste	Containers / Storage / Disposal Co
Feminine Hygiene	**Sanitary Waste Bins in each toilets x 2 Supplied by Initial Medical Services Ltd**
General Waste	**Black Bin Bags - Supplied by the practice** **Collectively all bags are then put into General Waste First Mile Bags - Supplied by First Mile**
Mixed Recycling	**Mixed Recycling bags supplied by First Mile**
Printer Used Toner Cartridges	**Send off to Red Bus Cartridges** **Pre-Paid labels supplied by company when ordering a new one.**

Safe Handling of Sharps

- Cover any cuts or grazes on the skin with a waterproof dressing
- Always wear gloves when handling sharps and follow the hand hygiene guidelines
- Never leave sharps lying around
- Never pass sharps directly from hand to hand
- Sharps containers should be located as close to the clinician as practically possible, each surgery should have one
- Ensure that sharps containers are placed out of reach to the general public and especially children and vulnerable adults and that unauthorised persons are unable to gain access to them
- Do not put sharps with dressings, tissues or other items that may hide them from view
- Sharps should be placed on a level surface above waist level but below shoulder height. Never put sharps containers on the floor as this will increase the likelihood of spillages
- Do not expose sharps containers to excessive temperatures
- Do not put sharps in an open container for subsequent disposal, put them straight into the sharps container.
- The primary user of the sharp should personally dispose of them immediately after use and never passed to another staff member for disposal
- Used needles must not be bent or broken before disposal and must not be recapped manually
- Do not rush when handling sharps, even in an emergency situation
- If you drop a sharp pick it up immediately with forceps
- Do not dispose of sharps with other clinical or general waste
- Do not put your hand into a sharps container or attempt to retrieve items / attempt to press down items to create more room in the container
- Removable scalpel blades are not used in this practice
- Do not fill the containers above the manufacturers marked line
- Always handle sharps containers with extreme care and always carry used containers by the handle, holding them away from you

- Do not place used sharps containers ready for disposal into any clinical waste bags
- Container collection and disposal is done by **Initial Medical Services**

Inoculation Injuries - Including Needlestick Injuries

In dentistry it is necessary to work with sharp instruments such as needles, scalpels etc. The safety at work of all members of our dental team is a priority. Our practice policies and procedures for the decontamination of instruments and equipment should be followed routinely. The practice also conducts risk assessments where required, training and introduces control measures to minimise the risk of injury. If you have any questions or concerns about any of the policies or protocols, please speak to the practice owner or manager.

An inoculation injury is a blood or bodily fluid contamination incident, which occurs when one person is exposed to blood or the bodily fluid of another person. The definition of an inoculation injury includes all incidents where a contaminated object or substance breaches the integrity of the skin or mucous membranes or comes into contact with the eyes. The following are typical examples:

- sticking or stabbing with a used needle or other sharp instrument
- splashes with a contaminated substance to the eye, mouth or other open lesion
- contamination of a broken skin surface such as cuts, grazes, bites or scratches

The World Health Organisation states: "Healthcare workers are at increased risk of infection with blood borne pathogens because of occupational exposure to blood and other bodily fluids. Most exposures among healthcare workers are caused by percutaneous injuries with sharp objects contaminated with blood or bodily fluids. These include needles, scalpels, lancets and broken glass. The pathogens most commonly transmitted to healthcare workers in occupational settings are hepatitis B and C viruses (HBV, HCV) and the human immunodeficiency virus HIV".

The Health Protection Agency stated in 2008: "The risk of infection following a percutaneous injury, especially deep penetrating injuries involving a hollow bore needle or device visibly contaminated with blood has been estimated at 1 in 3 for Hep B and 1 in 30 for Hep C and 1 in 300 for HIV.

I've Had an Inoculation Injury - What do I do?

- Stop what you are doing. Inoculation injuries must be dealt with promptly and correctly.
- Remove any gloves
- Encourage/ allow the wound to bleed and then wash thoroughly with running tap water. Do not scrub or try to suck the wound.

- Dry by dabbing the area with a paper towel and cover with a waterproof plaster (if not allergic to them)
- If you have had a splash to the eye, ask a colleague to help you rinse the eye for 1 minute. The kit is found next to the sink in Emergency Equipment Room
- If you wear contact lenses, remove them from the affected eye before irrigating it
- If the injury occurs whilst with a patient, advice the patient about the incident and ask them to remain in the surgery and check medical history. Once checked, contact Occupational Health at Kingston Hospital on **020 8546 7711** or Ealing Hospital on **020 8967 5000**. If not available, contact your nearest A&E. All practices should have formal links with their local occupational health service, so that management of sharps injuries is undertaken promptly and according to accepted national protocols.
- When local advice is not available, advice can also be sought from:

  Health Protection Agency Centre for Infections
  61 Colindale Avenue
  London NW9 5EQ

  Tel: 020 8200 4400 / Email: infections@hpa.org.uk
- Report the incident to the practice owner
- Make a full record of the incident in the accident book, including details of who was injured, how the incident occurred, what action was taken, which dentist was informed/ when and (if known) the name of the patient being treated while having the incident. Both the injured person and the dentist in charge should countersign the record.

Decontamination Lead: ***Someone at the practice had an inoculation injury - What do I do?***

- The decontamination lead should contact the local Occupation Health Department at Kingston Hospital / Ealing Hospital or nearest A&E
- If necessary, question the patient, who should be kept in immediate contact until the Occupational Health expert has been consulted. Questions to ask include any previous diagnosis of HIV infection, Hep B or Hep C and having a potential high risk to possible HIV infection
- Ensure Post Exposure Prophylaxis (PEP) is started within the hour (if necessary) plus health surveillance or follow up actions, as required
- Notify the Health & Safety Executive (HSE) if there has been HIV or other reportable exposure
- Investigate the circumstances that led to the injury, take actions and arrange for training to minimise the risk of recurrence

Key Steps in Managing Inoculation Injuries

- Regularly review the regulations and other guidance on sharps, inoculation injuries and infection prevention/ control. Every 6 months is advisable or sooner if procedures/ protocols change.
- Check your arrangements to ensure Post Exposure Prophylaxis (PEP) is available within the hour, if necessary, with your local occupation health services
- Have a procedural poster clearly displayed in the decontamination area(s) and other staff areas
- Ensure the team are aware of what to do in the event of an injury and how to prevent it in the first place, through annual team training and discussions at team meetings

Spillage and Splashes General Guidance

Spillage and splashes within a dental practice are inevitable at some point. Careful planning and protocols are required to ensure that these incidents are dealt with in a consistent & effective way that protects the patient, team members and the practice.

Practices are required to have the following in place:

- Written Policies & Procedures for Dealing with Spillages & Splashes
- Appropriately Trained Staff for Dealing & Disposing of Bodily Fluids or Hazardous Products
- Staff Training Programme for Ensuring the Team Know Where Spillage Kits are Kept, How They are Used & Reporting Procedures

Under fundamental standards regulation 12 section 2:b

- Practices must do all that is reasonably practicable to mitigate (reduce) risks
- Adopt control measures to make the risk as low as is reasonably possible
- Review methods and measures and make amendments as part of an ongoing management process and at least formally annually
- Use risk assessments concerning health, safety and welfare of people using their services to cover premises, equipment, staff training, processes and practices
- Spillage kits need to contain equipment and chemicals required to effectively remove a spillage. Kits should be regularly checked to ensure used contents are replaced and contents have not expired. The minimum contents a general spillage kit should contain are: (Contents vary for Specific Spillage Kits)

1. Disposable plastic apron
2. Cardboard scoop
3. Gloves
4. Eye protection
5. Clinical waste bag
6. Sodium dichloroisocyanurate granules which are sprinkled over the spillage to coagulate it, aiding the removal using the scoop provided **or**
7. Disinfectant cleaner with clear instructions for use **(containing no less than 1000ppm & preferably 10000ppm of chlorine when cleaning blood spillages)**
8. Practice should ideally also have an eye wash station to deal with splashes to the eyes. It is always advisable to get medical attention in such circumstances. In the absence of an eye wash station facility the practice first aid box must contain an eye wash product, ensure this product has not expired as part of the **weekly** first aid kit contents checks.

Eye Wash Station Kit Contents:

Sterile Saline Eye Wash Solution Bottles (x2)

Sterile Eye Dressings

Ideally Wall Mounted and Quick Release

Sharps Spillage Procedure

The most senior member of staff available should stay by the spillage to keep others away from the spillage area.

Find the nearest staff member and instruct them to bring the **Sharps Spillage Kit,** which contains:

- Heavy Duty Gloves
- Dust Pan
- Rigid Piece of Straight Cardboard or Plastic
- Spare Sharps Container (unassembled), container should be larger than containers used in the practice as it must be large enough to place the type of Sharps container used in the practice into it

The more senior staff member should wear heavy duty gloves and gently ease the loose sharps onto the dustpan using the rigid card or plastic.

Place the spilled sharps into the spare sharps container and assemble the lid.

This procedure must be carried out with extreme caution.

In the case of a single discarded sharp, if the sharp is fully visible, the senior staff member may feel able to pick it up safely with tweezers and place it into a sharps container. If not, follow the same procedures above.

If the sharps container has been overfilled and cannot be closed, do not retrieve items from it under any circumstances. Instead wear heavy duty gloves and place it into the larger, unassembled, spare sharps container as part of the spillage kit. Then carefully assemble and lock the outer container.

Safer Sharps

The term 'safer sharp' means medical sharps that incorporate features or mechanisms to prevent or minimise the risk of accidental injury. For example, a range of syringes and needles are now available with a shield or cover that slides or pivots to cover the needle after use.

The Health & Safety Executive (HSE) has published guidance on the Health and Safety (Sharp Instruments in Healthcare) Regulations 2013 which applies from 11 May 2013. The Sharps Regulations require that the following risk control measures are put in place:

- avoid (as far as is reasonably practicable) the use of sharps;
- when sharps are used, 'safer sharps' are used where it reasonably practicable to do so;
- needles are not capped / re-sheathed after use unless the risk is effectively controlled by use of a suitable appliance, tool or other equipment
- sharps are disposed of safely – written instructions are available and clearly marked and secure containers are located close to areas where medical sharps are used.
  Traditional, unprotected medical sharps must be substituted with a 'safer sharp' where it reasonably practicable to do so. When deciding if it is reasonably practicable to substitute traditional unprotected sharps for 'Safer Sharps' the following factors should be considered:

    - the device must not compromise patient care
    - the reliability of the device
    - the dentist, hygienist or therapist should be able to maintain appropriate control over the procedure
    - other safety hazards or sources of blood exposure that use of the device may introduce;
    - ease of use (taking into account the existing clinical practices commonly in use by dental professionals but not assuming custom and practice is safest)
    - is the safety mechanism design suitable for the application? The following factors are relevant:

- if activation of the safety mechanism is straightforward, it is more likely to be used;
- if the safety mechanism is integral to the device (i.e. not a separate accessory) it cannot be lost or misplaced
- for many uses a single-handed or automatic activation will be preferable
- an audible, tactile or visual signal that the safety mechanism has correctly activated is helpful to the user and the safety mechanism is not effective if it is easily reversible.

If a suitable 'safer' sharp is not available or is not reasonably practicable (see above), the dentist, hygienist or therapist must still ensure that safe procedures for working with and disposal of the sharp are in place. Needles must not be recapped after use unless a risk assessment has been conducted and objectively concludes that recapping is required to control a risk – this could be a risk to the dentist, dental care professional or patient (e.g. to reduce the risk of contaminating a needle used to deliver or top-up local anaesthetic). If a risk is identified, then recapping must only be done with an appropriate device to control the risk of injury (for example needle blocks or syringes with retractable sheaths).

Decontamination Staff Roles and Responsibilities

Each practice should establish its own systems for decontamination – identifying who is responsible for what. The following guide outlines the areas that need to be considered and should help identify the most appropriate person to assume particular responsibilities. Some people within the practice will assume more than one role and certain roles will be undertaken by people external to the practice.

Internal Appointments

Registered Manager has overall responsibility for decontamination equipment and staff appointments within the practice. In our practice, this is **Dr Antimos Ouzounoglou.**

Decontamination and Infection Control Lead has responsibility for infection control and decontamination; relevant experience and authority are therefore essential. It could be an employee of the practice or be part of a service provided by the PCT. In our practice this is **Edita Suhajdova.**

Designated Person provides the interface between the practice and external services (service engineers, for example). In our practice this is **Dr Antimos Ouzounoglou.**

User has day-to-day responsibility for the management of the decontamination equipment and processes and for ensuring that those operating and testing decontamination processes are suitably trained and competent. This role can be combined with another of the internal appointments as the responsibilities may overlap. In our practice this is **Edita Suhajdova.**

Operator carries out the daily and weekly periodic tests and operates the decontamination equipment.

External Appointments

Authorising Engineer (decontamination) provides guidance and advice on decontamination, especially in relation to implementing HTM 01-05. The Institute of Healthcare Engineering and Estate Management holds a voluntary register of suitable people (www.iheem.org.ok/authorising/decontamination.php).

Competent Person (decontamination) is responsible for servicing, testing and maintaining decontamination equipment in the practice. It could be someone employed by the practice or provided by the PCT.

Competent Person (pressure vessels) ensures the safety of pressure vessels (including autoclaves) and provides the Written Scheme of Examination (a legal requirement).

Service Engineer services and tests decontamination equipment and may also undertake required validation tests for approval by the Authorised Engineer (decontamination) or the Authorised Person (decontamination).

Decontamination - Instruments and Equipment - Overview of Best Practice

A systematic approach to the decontamination of instruments after use can help to ensure that dirty instruments are segregated from clean.

All surfaces and equipment should be impervious and easily cleanable.

Work surfaces and floor coverings should be continuous, non-slip and where possible, without joints.

Smooth work surfaces without crevices made of non-porous materials such as stainless steel or laminate will facilitate cleaning.

There must be no inaccessible areas where moisture or soil can accumulate;

Good lighting will minimise the risk of sharps injury and enable inspection of cleaned instruments.

Area must have efficient ventilation.

Work benches need to be of a standard height and storage cupboards located at heights that minimise bending over or stretching overhead.

Sinks must be deep enough and taps provided with anti-splash devices to prevent splashing.

Ideally there should be several sinks - one for hand washing and one for washing contaminated instruments.

Both hot and cold water taps should ideally be non-touch or electronic in operation and liquid hand wash dispensers should also be automated or operated by elbow, knee or foot.

Waste bins must be foot operated.

Sufficient drawers, cupboards and shelves to keep work benches as clutter-free as possible and to facilitate storage of sterilised packages as well as general items such as labelling guns, logbooks, cleaning agents and self-sealing bags.

Sufficient bench space is needed for drying and packaging areas to enable efficient work practices; and a cooling area for sterile items awaiting storage. This is essential to prevent damage to packs.

Decontamination - Separation & Disposal of Single Use Instruments

Single use instruments should be separated from other contaminated instruments and should be immediately disposed of in the appropriate way as follows:

- Single use syringes (should be discarded as a whole – do not remove needle), needles, scalpels, sutures, endodontic reamers and files, matrix bands etc should be placed in the yellow Initial sharps bin

- Used and partially use anaesthetic cartridges should be placed in the yellow Initial sharps bin (yellow bin with yellow lid for sharps contaminated or containing medicines/ anaesthetic)

- Bibs, disposable visors, plastic cups, gloves, masks, paper towels etc should be placed in the orange clinical waste bin

Decontamination - New Instruments

Before being put into use, **all new dental instruments** should be decontaminated fully according to the manufacturer's instructions (unless manufacturer specifies that they are sterile). Where possible, the practice will purchase instruments that can withstand automated cleaning processes using a washer-disinfector or an ultrasonic cleaner.

The following procedure should be followed for all new instruments:

- identify instruments that can withstand cleaning in a washer-disinfector or ultrasonic cleaner and those that require manual cleaning

- instruments and equipment that cannot be immersed in water (for example, electrical equipment) should be cleaned according to the manufacturer's instructions. If recommendations include wiping with a detergent solution, a clean non-lint cloth should be used. Following this, a damp non-lint cloth should be used to remove residues of detergent. The instrument should then be dried

- if disinfection with alcohol is recommended, the instrument or equipment should be cleaned with detergent first as described above before applying alcohol to disinfect

- those instruments that consist of more than one component should be dismantled before cleaning, following the manufacturer's instructions for dismantling

- training will be provided to ensure that all staff involved in decontamination are competent to decontaminate new instruments introduced into the practice as well as instruments currently in use

Decontamination - Contaminated Instruments

At the end of each patient treatment, all instruments on the instrument tray (used or unused) must be regarded as contaminated and require decontamination. The dental nurse should therefore consider carefully which instruments are placed on the instrument tray to reduce the number of instruments that need to go through the contamination cycle.

The practitioner should remove cements and other hard materials from instruments before setting. The aim is to then dismantle and clean instruments as soon as possible after use. If this cannot be performed immediately, instruments are dismantled and stored in the Pink dirty transport container which is a rigid, leak proof container that has a tight fitting lid and covered with potable water (i.e. of drinking water quality) to maintain humidity until cleaning can be carried out.

Contaminated instruments must be taken into the dirty zone in a safe and calm manor to reduce any risk of tripping etc. A dirty to clean workflow should be maintained so that the risk of used instruments coming into contact with decontaminated instruments is minimised. Remember, instruments must pass in one direction only, from contaminated to clean.

The decontamination area should be wiped down after each decontamination cycle or after each patient.

Trays of instruments, when removed from the steriliser, should be placed on racks and not directly on the bench to prevent damage from water condensation under the cooling packages.

Sterilised instrument / trays not pouched, at the end of the day (within 24hours after sterilisation), must be decontaminated before use, therefore keeping to a minimum the instruments put onto trays at the start of the day will reduce the decontamination workload.

Processed instruments must not be stored in an area where contaminated instruments are held or cleaned or where there is a possibility of contamination from organisms carried in droplets or aerosols.

Taking Instruments to the Separate Decontamination Area

Safely transport instruments for decontamination as soon as possible after use to the decontamination area. They are also easier to clean if they are decontaminated soon after use.

The contaminated instruments should be carried with gloved hands to the cleaning area and placed on the worktop in the 'dirty zone' of the sterilising area. The gloves must then be taken off and hands washed.

The containers used to transport instruments should be designed in a way to protect both the instruments and the handler. Containers should be: 1. Rigid. 2. Easy to clean. 3. Able to be closed securely 4. Leak proof

Ensure these containers are **clearly labelled** as containing contaminated instruments to reduce any inadvertent reuse of contaminated instruments.

If using instruments outside of the practice for example when attending another practice, the labelled transport container must not be left on view or unattended within the transport vehicle.

A record that dental instruments were transported, with the date and what vehicle used should be kept.

If there is no dentist travelling with the instruments then the time of dispatch and the intended recipient should also be recorded.

Records should be positioned for ease of retrieval within the vehicle used and should also carry a contact telephone number.

Some water / foam should be used to keep the contents moist, which helps with the cleaning process later on as soil is less likely to become dried on.

Dirty instruments should be stored for the least time possible.

Hand Hygiene Policy

1. Hand hygiene is carried out at the following key stages:

   Before and after each treatment session
   Before and after removal of PPE
   Following manual cleaning of dental instruments
   Before contact with instruments that have been autoclaved
   After cleaning or maintaining decontamination devices used for dental instruments
   After completion of decontamination work

2. Nails must be short, clean, smooth and free of nail varnish and false nails / nail art.

3. Hand and wrist jewellery should be removed prior to any clinical session (items can be worn on a neck chain instead) and skin abrasions will be covered with waterproof plasters

4. You must never use: bars of soap, scrub or nail brushes or alcohol impregnated wipes used for cleaning

5. Separate clinical sinks for hand washing are provided in each surgery and decontamination room. The practice has normal sinks, which currently the CQC considers adequate. Best practice advice on sinks can be found below

6. Liquid soap and antimicrobial hand rubs are sited on or adjacent to the hand washing sink, which the CQC currently considers as adequate. Refillable hand wash containers are not used at the practice as bacteria can multiply within the container and act as a potential source of contamination. Best practice advice on soap dispensers can be found below.

7. A “bare below elbow” policy should be adopted at all time to ensure effective hand hygiene.

8. Wet hands with warm water and apply a mild liquid soap for 40-60 seconds (If surgical hand wash is to be performed, the duration of washing hands, wrists and forearms should be 2-3 minutes)

9. Antimicrobial hand rubs conforming to BS EN 1500 standards can be used on visibly clean hands as an alternative to washing at the appropriate times. Hands are to be rubbed using the correct technique detailed on the hand hygiene poster for about 20-30 seconds until dry

10. Liquid soap dispensers and antimicrobial hand rub nozzles should be kept clean

11. Posters depicting appropriate hand washing techniques are displayed next to all hand washing facilities

12. Dry hands carefully, using the disposable towels provided, to avoid damaging the skin. Dispose of towels in the foot-operated or sensor-operated waste bin

13. At the end of a session, use the hand cream provided to counteract dryness. Hand cream should not be used under gloves as it encourages the growth of microorganisms

14. Alcohol-based skin-disinfectant hand-rubs / gels can be used on visibly clean hands in conjunction with a good hand-rub technique

15. Follow the manufacturer's instructions for the maximum number of applications for hand-rubs/gels before hand-washing is required. Repeated applications lead to a build-up of the product on the hands; if hands become sticky, wash as normal using a proper hand-hygiene technique

Hand Hygiene - Additional Best Practice

Hand washing protocols are displayed next to all hand washing facilities

Wall mounted liquid soap and antimicrobial hand rub dispensers are placed above or adjacent to all hand washing sinks

Hand washing sinks should not have a sink plug or overflow and have a sensor or lever operated mixer tap

Hand washing sinks should not have taps that discharge directly into the drain aperture

There is a wall mounted paper towel dispenser next to all hand washing sinks

HIV Infection

In dentistry, the risk of acquiring HIV infection following an inoculation injury is very low. If, however, the injury is risk assessed as significant for transmission of HIV and the source patient is HIV infected, post exposure prophylaxis (PEP) should be commenced as soon as possible after the incident and ideally **within the hour.**

Local Access to HIV antivirals is available at Kingston Hospital or Ealing Hospital

CJD / vCJD

Guidance on the prevention of transmission is available in Transmissible Spongiform Encephalopathy Agents: safe working and the prevention of infection produced by the Advisory Committee on Dangerous Pathogens (December 2003) and supplemented by a letter from the Chief Dental Officer, England (February 2005). Both are available on the Department of Health & BDA websites.

CJD and related conditions raise new infection control questions: 'prions', the infectious agents that cause them, are much more difficult to destroy than conventional micro-organisms, so optimal decontamination standards need to be observed. All instruments must be thoroughly cleaned before autoclaving, in order to remove as much matter as possible. Patients with vCJD or CJD, or identified as 'at-risk' of vCJD for public health purposes, (or their relatives) **should not be refused** routine dental treatment.

MRSA

No additional infection control precautions are necessary for the dental treatment of patients colonised with Meticillin-resistant Staphylococcus aureus (MRSA). However, members of the dental team known to be colonised with MRSA should not undertake or assist with invasive procedures. A clinical microbiologist or communicable disease physician will be able to provide treatment to eradicate the MRSA colonisation.

Tuberculosis

The incidence of all forms of tuberculosis (TB) is rising and now approximately one third of the world's population is infected. The disease is spread by droplets or by direct contact and has been transmitted by dental procedures. Although Mycobacterium tuberculosis is the usual cause of TB, other species of mycobacterium can also cause the disease. The infection control procedures described in this document should be adequate protection against transmission of TB. Staff infected with TB should seek guidance from their local occupational health services.

Herpes Simplex

Herpes simplex virus type 1 (HSV-1) is usually associated with infections of the lips, mouth and face. It is the most common virus and is usually associated with childhood. HSV-1 often causes lesions such as cold sores in and around the mouth and is transmitted by contact with the lesion and infected saliva. By adulthood, up to 90% of individuals will have antibodies to HSV-1. The herpes virus can reside in the body for years, appearing only as a cold sore when something provokes it, for example, illness, stress, hormonal changes and sun exposure.

Individuals usually experience a tenderness, tingling or burning before the actual sore appears, initially as a blister which subsequently crusts over.

All stages of a herpes virus infection can be contagious although fluid-filled vesicles are much more infectious than other stages of the herpes infection. Ideally, dental treatment should not be undertaken but the decision lies with the individual clinician - bearing in mind that:

- the herpes simplex virus is highly infectious and easily transmitted
- manipulation of the facial and oral tissues can exacerbate the condition and cause breakdown of the lesion and bleeding
- spread of the virus to other areas of the skin can cause significant problems (new primary lesions, for example); infection of the eyes is a rare but significantly serious complication.

A patient requiring urgent dental care should not be denied it but until the herpetic lesions are healed, the dental team should take care to prevent the spread of the virus. Reactivation of oral herpes can occur within three days of major dental treatment (root canal treatment or surgery, for example). Dental treatment may also cause intraoral recurrent herpes in the oral soft tissue (mucosa) adjacent to the teeth.

Children are particularly vulnerable before they develop antibodies to HSV-1, so extra care must be taken to avoid spreading the virus to other areas of the child's mouth and face. Gloves, mask and eye protection are essential when treating a child with an active infection.

Influenza

Influenza is a respiratory illness characterised by rapid onset of a wide range of symptoms including fever, cough, headache, sore throat and aching muscles and joints. It has an average incubation time of two to three days and people are most infectious soon after they develop symptoms.

Transmission is through close contact with an infected coughing or sneezing person. Hand washing (with soap and water or alcohol hand rub) and environmental cleaning will deactivate the virus and help control spread through contact.

The main measures for containing the infection include:

- standard infection control measures and droplet precautions
- a 'stay at home' approach for anyone with flu-like symptoms
- separating flu-infected patients from well patients when dental care is needed
- preventing symptomatic visitor's (accompanying well patients, for example) from attending the practice.

The Department of Health has issued specific guidance for dental practices on what to do in the event of pandemic flu, which is available at http://www.wsldc.co.uk/wp-content/uploads/2013/02/Dentists-DH_0877351.pdf

Additional Policies & Procedures

Latex – OUR PRACTICE USES ONLY SINGLE USE NITRILE GLOVES

Natural rubber latex (NRL) is a durable flexible material composed of natural proteins and added chemicals. NRL is present in gloves and may also be present in other devices.

Latex allergy results from a reaction to one or more of the components of NRL or residues from the manufacturing process. Allergic reactions can vary in severity from a localised allergic rash to rare cases of anaphylaxis. Further information is provided in the accompanying guidance notes.

Latex - Policy Statement

The practice recognises its responsibility under the Health & Safety at Work etc. Act 1974, the Management of Health & Safety At Work Regulations 1992 (Revised 1999) and the COSHH Regulations 2002, to ensure adequate procedures are in place to reduce the risk of staff developing an allergy to latex by reducing

exposure to NRL to as low a level as reasonably practicable.

NRL gloves should only be used where risk assessment indicates that there is no suitable alternative. Where NRL gloves are identified as necessary, they must be powder-free and have low levels of extractable protein.

Prevention, identification and management of latex allergy in staff:

- ensure that NRL gloves are only used where risk assessment indicates that there is no suitable alternative
- ensure that only powder free gloves that have low levels of extractable protein are purchased
- ensure that staff are aware of the risk of latex allergy and the need to report any adverse reaction
- inform the Occupational Health Service of employees using NRL to ensure inclusion in the health surveillance programme

Employees have a responsibility to:

- only use NRL gloves where risk assessment indicates that there is no suitable alternative
- report to the Practice Manager any suspected reaction to latex products

Reactions to Latex Gloves

Irritant Contact Dermatitis: This is the most common reaction to latex gloves, as a result of direct skin contact AND the build up of perspiration causing a moist environment. Irritation is often exacerbated by frequent hand washing. This is not an allergic reaction, but may result in dry itchy skin on the hands. The condition normally resolves once contact is discontinued. Good skin care can reduce the risk of skin problems.

Allergic Contact Dermatitis (type IV reaction): This is a less common reaction and results from hypersensitivity to residues of accelerating agents used in latex glove manufacturing. This type of reaction is often delayed, occurring several hours after contact with latex. It is usually localised, resulting in a rash on the back of the hands and between the fingers. There may be blisters present.

Immediate Hypersensitivity (type I reaction): This is an allergic reaction to naturally occurring protein residues found in NRL. This type of reaction occurs within 5 - 30 minutes of exposure. There is generally localised swelling and itching; however, a more general reaction may occur. This could include itchy eyes, runny noise and sometimes wheezing, chest tightness or asthma. In rare cases, exposure of a sensitised individual may result in **anaphylaxis**, a life-threatening condition.

Latex - Early Reporting of Symptoms

Any member of staff or patient who develops symptoms of irritation or suspected allergy to gloves or other latex products should immediately report this to their clinician/ manager, to enable investigation, diagnosis and appropriate advice on work activities.

http://www.hse.gov.uk/healthservices/latex/

Legionella Policy

Legionnaires' disease is a potentially fatal form of pneumonia which can affect anybody, but which principally affects those who are susceptible because of age, illness, immunosuppression, smoking etc. It is caused by the bacterium Legionella pneumophila and related bacteria. Legionella bacteria can also cause less serious illnesses which are not fatal or permanently debilitating. The collective term used to cover the group of diseases caused by legionella bacteria is legionellosis.

Symptoms of Legionnaires Disease

Legionella is a naturally occurring organism widely dispersed in nature. Symptoms are similar to the symptoms of flu and include, high temperature, feverishness and chills, cough, muscle pains, headache, pneumonia, diarrhoea and signs of mental confusion.

If you develop the above symptoms and think it may be legionnaire's disease, you must see your GP immediately and report the outcome to the practice owner, practice manager and clinical lead.

Legionella - Background and Scope

As legionella is naturally occurring organism there is a constant risk of the bacteria entering the building services of our properties and due to the size and complexity of the property under our control naturally increases this likelihood.

What must not be accepted and neither will the Law allow us to accept, is that if it should enter our buildings, due to a fault in design or maintenance, the bacteria may find favourable conditions for growth, multiplication and possibly ultimately infection of people by being conveyed in aerosols created by our building services.

The aim of this Policy is to introduce a structured Procedures and Reporting Schedule, for the Management and Control of Legionellosis, including Legionnaires Disease, in compliance with current Guidelines (HTM's, HGN's, Model Engineering Specifications & Approved Codes of Practice), Legislation and Water Supply Regulations.

As required by the Health & Safety Commissions (2000) Approved Code of Practice (L6):

- identify and assess sources of risk
- prepare a scheme for preventing, reducing or controlling the risk
- implement, manage and monitor precautions
- keep records of the precautions implemented

Legionella Statement of Policy - Items

1. The practice accepts its responsibility under the Health & Safety at Work etc. Act 1974 and the Control of Substances Hazardous to Health Regulation 2002 (as amended), to take all reasonable precautions to prevent or control the harmful effects of contaminated water to residents, patients, visitors, staff and other persons working at or using its premises.
2. Identify and assess the risk of Legionella resulting from work activities to include breakdowns and abnormal situations. Legionella risk assessments are conducted every 2 years, currently we use a company called **The First Principle**
3. Develop, implement and maintain appropriate and suitable Management Systems, Personnel Training Programmes and plant treatment procedures.
4. Develop and maintain adequate records in order to demonstrate compliance with best practice and fulfil legal obligations.
5. Dip slide testing from the dental equipment is conducted **quarterly** by the clinical team.
6. **Bioclear Daily** is the current concentrated liquid we use for the continuous decontamination of process water.
7. Ensure compliance with this policy.

Legionella Statement of Responsibilities - Employer's Duties

Practice employers have a general duty under The Health & Safety at Work Act etc. 1974 to ensure so far as is reasonably practicable, the health, safety and welfare of all their employees. HSWA 2(1) requires employers to:

- provide and maintain plant and systems of work that are safe and free from health risks
- make arrangements for ensuring safety and the avoidance of health risks in connection with the use, handling, storage and transportation of articles and substances (HSWA 2(2)b)
- provide a safe working environment (HSWA 2(2)e)
- those in control of premises must ensure that they are safe and that any plan or substance do not endanger health of all persons at work & the general public (HSWA 4)
- If there is a case of legionnaires disease that may have been acquired at the practice, the practice owner will report it to the Health & Safety Executive

Legionella - Employees Duties

- Under Section 7 of the Health & Safety at Work Act etc. 1974 employees have a duty to take reasonable care for their own health & safety and of that of others who may be affected by their acts or omissions at work. Section 7 also requires the employee's co-operation with their employer to enable the employer to comply with statutory duties for health & safety.

- Employees should correctly use all work items provided by their employers, in accordance with their training and the instructions they receive to enable them to use/operate the items safely.

- Employers or those they appoint (eg. under Regulation 6) to assist them with health & safety matters therefore need to be informed, without delay, of any work situation which might present a serious and imminent danger. The danger could be to the employee concerned or a result of the employee's work to others.

  Employees should also notify any shortcomings in the health & safety arrangements, even when no immediate danger exists, so that employers in pursuit of their duties under the HSWA Act and other statutory provisions can take such remedial action as may be needed.

Dental Unit Water Lines (DUWLs)

Legionella bacteria and other organisms live in water supplies, some are completely harmless, whilst others such as Mycobacteria spp and Pseudomonads can cause disease.

Water companies are required to keep them within the very strict limit of 100 Colony Forming Units (CFUs). Research reveals that bacterial counts in waterlines can be colossal; one study showed colony sizes of 19,500 CFUs compared to 100 CPUs in the drinking water supplies. Remember, water in dental waterlines is going into patients' mouths, comes into contact with open wounds as a result of oral surgery and is swallowed by patients. There is also potential for occupational risk to the dental team from exposure to contaminated dental unit waterlines aerosols. Likewise, vulnerable patients such as those suffering from chronic respiratory diseases, alcoholics, diabetics and immuno-compromised patients may potentially be at increased risk of respiratory infection or colonisation from inhaling contaminated aerosols during dental treatment.

The majority of dental units will harbour biofilm, a source of microbial contamination for the water produced by the unit, so the water will **not** be potable (i.e. of drinking water quality).

These organisms are part of ' biofilms' which form rapidly in dental waterlines because:

- there is a source of nutrients for the bacteria
- 'plasticisers' present in the plastic tubing of the waterlines system
- warmish water (ambient temperatures in surgeries can be quite high)
- water in the system can remain stagnant overnight and at weekends.

Dental Unit Waterlines (DUWL) can be contaminated by microbes coming from three different sources:

- Incoming mains water which is a possible source of legionella and mycobacteria spp.
- Suck-back of oral bacteria via the dental hand piece.
- From hands and the surgery environment during filling and handling of the self-contained water bottles.

Contaminated water is a potential hazard to both patients and surgery staff and may harbour potentially pathogenic organisms. The self-contained water supplies (bottled water system) used with dental care systems should be freshly distilled or RO water.

Certain systems recycle water back to a storage facility. Where this is done, repurification will be necessary at each cycle. If self-contained water bottles are not used, a Type A air gap should separate the DUWLs from the mains water supply. Such arrangements should be subject to consideration of local water quality, particularly where hard water is used.

All water lines should be fitted with anti-retraction valves to help prevent contamination of the lines but these valves cannot be relied upon to prevent infected material being aspirated back into the system.

Key Disease Causing Microbes in DUWLs

A variety of organisms are found in DUWL including bacteria, fungi and protozoa. Of particular concern to health are the respiratory disease causing bacteria such as legionella spp, atypical mycobacterium spp and pseudomonas species.

The high-speed rotation of the air turbine aerosolises the DUWL microbes providing a route of transmission particularly for respiratory bacteria. Contaminated aerosols can be inhaled (portal of entry described in the chain of infection) by both the dental team and patients during treatment. The dental team is exposed to contaminated aerosols on a daily basis over the long term and patients are exposed in the short term during treatments.

The overall microbial quality is also of importance as high levels of bacteria in DUWL have been associated with occupational asthma in dentists.

Patients, including those who may be of increased susceptibility to legionella, are likely to be exposed to aerosols during the course of their dental treatment and the water which produces that aerosol is likely to be above 20°C, it is essential that the biofilm and bacteria including legionella are not allowed to proliferate in the water system.

Biofilm Formation in the Dental Unit Waterlines

In DUWL that are not treated with a biocide such as disinfectant, Sterilox or a UV light system, the contaminating bacteria are able to multiply and form a biofilm on the inner surface of the DUWL.

Biofilms form rapidly and within a week start shedding large numbers of bacteria into the waterline.

A combination of factors promotes biofilm formation:

- DUWL are made of micro-bore tubing that has a large surface area to volume ratio.
- Overnight stagnation.
- Relatively low levels of water usage.
- When not in use Dental Unit Waterlines (DUWL) are a dead leg on the plumbing system.
- Unused or sporadically used outlets.

CQC - DUWL's Mandatory Requirements

- All systems require a risk assessment, however not all systems will require elaborate control measures.

- All premises are required to have a written waterline management scheme and legionella risk assessment.
- These schemes should be written by experienced and competent people. A competent person is someone with the necessary skills, knowledge and experience to carry out this function.

- The registered manager must ensure that all the recommendations of the written scheme and risk
- assessment are implemented

- Water and air lines must be fitted with anti-retraction valves in accordance with EU regulations

- It is mandatory to control Legionella within the dental waterline system, but there is no one single
- system of treatment which is 100% effective.

DUWL Quality & Management

Water quality in dental premises is regulated under the 'Code of Practice: Legionnaires disease', 'The Control of Legionella Bacteria in Water Systems (L8)', 'HTM 01-05' (England & Northern Ireland) & 'WHTM 01-05' (Wales), & 'HTM 04-01'.

Water supply to dental unit waterlines (DUWL) should be of drinking water quality with a total viable count (TVC) expected to be between 100 - 200 cfu/ml of bacteria.

A separate supply of sterile water or saline should be used to cool rotary instruments used during minor oral surgery in order to prevent surgical wound infections.

As DUWL can be contaminated via three different routes, a variety of methods are required to prevent contamination and biofilm formation.

CQC - DUWL Recommended Practice

How should dental waterlines be maintained?

A variety of products are available to disinfect waterlines and they should be used daily according to manufacturer's instructions. Not all products completely remove biofilm so regular dosing according to manufacturer's instructions is required to control the bacterial count. These products can be used daily (with practice staff making up the required amount for the bottle at the side of the unit) or with a dosing device. However, with all these products, the default position is the dental chair unit manufacturer's instructions; there may be manufacturers who don't recommend their use. In tandem with using these products, waterlines should be regularly flushed.

A typical regime is as follows:

- To reduce microbial accumulation, run water through all the water lines for 2 – 3 minutes at the start of each session and 20 – 30 seconds between every patient. Checklists are useful to ensure compliance and provide auditable evidence.
- At the end of the day, the bottle should be disconnected, emptied, rinsed and stored inverted clean to dry overnight. (Alrpon protocols differ however, please see our practice methods below)
- Isolate the water supply from the mains water by using an independent bottled water system on the unit.
- Fill the bottle with freshly distilled / reverse osmosis water at the start of each day (if bottled water is used this must be from a previously unopened bottle).
- Do not fill bottles with tap water as this will introduce opportunistic respiratory bacteria into the waterline and rapidly lead to biofilm formation.
- Do dental water lines require routine microbiological monitoring? Apart from situations where there are taste or odour problems, microbiological monitoring for total viable counts is not considered to be necessary.
- How often should the water be tested for Legionella? This depends on the system in place and the outcome of the risk assessment.
- Currently this practice instructs a Legionella Water Supply Risk Assessment Report **every 2 years**
- How often should the temperature of the system be checked? This depends on the outcome of the risk assessment and the components of the system.

Methods of Maintaining Water Quality

Our Practice Methods

The water used in our dental units is delivered by a bottled distilled water/ RO water and bio-film remover, Bioclear Daily. Waterlines are flushed for 2-3 minutes at the beginning and the end of the day or after prolonged periods of non-use such as lunch times. In between patients they are flushed for 30 seconds.

Other / Additional Methods / Guidance

DUWLs should be flushed for at least two minutes at the beginning of the day and for 20-30 seconds between patients to reduce the microbiological counts in the water delivery tube. No currently available single method or device will completely eliminate bio contamination of DUWLs or exclude the risk of cross-contamination.

The manufacturer's instructions should be followed for the periodic disinfection of water lines. Introducing chemical treatments into the dental unit is best achieved via a water reservoir (bottled water system), which can be fitted retrospectively, if not fitted at the time of purchase. The water bottles should be removed, flushed with distilled/ RO water, left to dry overnight and stored inverted.

- In order to prevent back-siphonage of clinical material into the municipal water supply, all dental equipment that is supplied by mains water must have a 'Type A' air gap separating it from the mains water.
- A legionella risk assessment should be carried out on the DUWL.
- The following combination of methods are used to maintain drinking water quality in the DUWL:
- Flush the DUWL at the start of every day for two minutes and between patients for 20-30 seconds.
- Manufacturer guidelines should be followed for the end of day procedure.
- Flushing reduces the number of free-floating bacteria but has no impact on biofilm formation. Therefore, flushing is insufficient on its own to control the bacterial count in the DUWL.
- Use continuous or short purges of disinfection with a biocide (daily or weekly according to the manufacturer's instructions). Only use a product that is compatible with your dental chair.
- Service and maintain dental hand piece anti-retraction valves and DUWL waterlines check valves.
- Use distilled or reverse osmosis water in the self-contained water bottle. Tap water is to be avoided as this will introduce respiratory bacteria into the DUWL.
- Disinfect reservoir bottles with a biocide before refilling to prevent biofilm formation in both the bottle and the waterlines.
- Drain down the DUWL at the end of the day. Self-contained water bottles should be removed, disinfected with a compatible biocide, flushed with distilled or reverse osmosis water and left open inverted to air dry. Store inverted overnight.
- If you are using a system where the manufacturers don't recommend the removal of the bottle then this advice should be followed.
- Flush dental chairs and taps that are not used, or sporadically used, at least twice a week.
- Where a control scheme is put into place it is essential that the control measures are validated to ensure that they are effective and that ongoing monitoring takes place to verify their continued effectiveness. Monitoring for microbiological parameters such as the heterotroph count can be useful for validation.
- In accordance to HTM 01-05 & WHTM 01-05 "All microbiological measurements should be by approved methods and / or be carried out by United Kingdom Accreditation Service (UKAS) accredited laboratories. The bacterial standard required for the water being used in the DUWL being that for drinking water quality.
- The frequency of these checks in a dental practice is to be risk assessment led. The frequency for legionella in cooling water for example is quarterly and this might be considered a reasonable frequency for dental systems. TVCs taken at the same time could be used to help reassure the responsible person that the hygiene regime is adequately maintaining the water quality within normal drinking water parameters. Should legionella or other bacteria be found then the correct response (borrowing from 'L8' principles) might be to: Check the regime. Undertake a sterilisation – using a method written specifically for the dental practice

Practice Water

The practice potable water (drawn from the mains) is soft, less than 50mg/L as $CaCO_3$

All taps are flushed on Monday morning or following a holiday before the first morning session for two minutes.

Routine monitoring of water temperatures and quality is carried out by **the lead nurse.**

Legionella risk assessments are conducted every 2 years, currently we use a company called **The First Principle**

Mercury Handling & Spillage Procedure

Mercury Guidance

Mercury is a **hazardous** substance and employers must prevent their staff from unnecessary exposure to it.

Mercury is a major component of dental amalgam. The average dentist uses 1-1.50 kilos of mercury per annum. Mercury vaporises at room temperature and can be absorbed into the body through inhalation or contact with the skin. The surgery must be well-ventilated and protective gloves worn to reduce skin contact.

Waste amalgam and waste mercury should be stored in containers provided for that purpose. Arrangements for the collection of waste amalgam are made by **Initial Medical Services** our appointed waste collection agent. Waste amalgam must never be sent through the post.

The HSE recommends that all staff regularly exposed to mercury metal and its vapours should undergo regular monitoring. The simplest form of monitoring is urinalysis to measure the concentration of mercury present in the urine using atomic absorption spectroscopy.

Wherever possible safer alternatives to mercury should be used. Where not practicable, it should be used in a safer form. Pre-proportioned amalgam capsules should be used routinely.

All those involved with handling mercury in any form should understand its potential hazards and receive training in the safe handling procedures to deal with mercury spills, including the safe disposal of contaminated materials.

OUR PRACTICE DOES NOT USE AMALGAM. Waste amalgam from the removal of old fillings is caught by high volume aspiration and in the spittoon by a fitted amalgam separator. Extracted teeth containing amalgam fillings are disposed of in the white box with red lid, collected by Initial.

Practice Owner: **Antimos Ouzounoglou**
Decontamination Lead/ Infection Control Lead: **Edita Suhajdova**

Policy Review

This policy and the policies referred to within will be reviewed at regular intervals to ensure their currency and amended as required by changes within the practice and legal and professional requirements

Updated: January 2019
Next Review: January 2020