

NHS DENTIST INFECTION CONTROL POLICY

Incorporating the Waste policy/Training protocol for Infection Control/Hand Hygiene policy/Water policy/Cleaning routines

This document must be read in conjunction with the following documents:-Job description for a cleaner and central sterilisation at NHS Dentist

HTM 01-05 1.32: “It is important to remember that this is a working document; changes to it may be necessary as new evidence around the methodology of decontamination becomes available”. Chief Dental Officer.

Infection control is of prime importance in this practice. It is essential to the safety of our patients, our families and us. Every member of staff will receive training in their general induction and then in their specific induction/training when they start working with NHS Dentist in all aspects of infection control and the following **must** be adhered to at all times. If there is any aspect which is not clear, in the first instance ask the head nurse and if still unclear speak to the principal dentists or practice manager. Training will be ongoing.

- 1. The clinical responsibility is the principal dentists’ and the administrative, validation and training responsibility is the management teams, headed by Dr Nancy Yousef (NY) who assumes the role of registered manager. Day to day responsibility is delegated to the head nurse (decontamination lead/user)**
- 2. Universal precautions** are applied at NHS Dentist. This means that every clinical member of staff must assume that every patient could have an infectious disease and act accordingly. In this way, we cover all eventualities, every patient is treated the same way and the risk of cross infection is reduced to the barest minimum.
- 3. Ensure patients see the proof of our infection control.** Open sealed pouches in front of them, ask them to use the disinfectant on their way into and out of the surgery, let them see you cleaning and disinfecting machinery. It is important that they see how they benefit from our work and the enormous effort the staff put in to infection control. This is an area that rightly worries patients – let us reassure them.
- 4. All infection control precautions apply to contact with:**
All body fluids, secretions and excretions (except sweat) regardless of whether they contain blood, non-intact skin or mucous membranes – Remember this could be in the form of an aerosol.
- 5. All staff must** be immunised against diphtheria, hepatitis B, pertussis, poliomyelitis, rubella, TB and tetanus and their hepatitis B seroconversion checked. For those who do not seroconvert, medical advice and counselling is required. This also applies to those who cannot be immunised because they are immunosuppressed, for example those taking steroids for asthma. Some staff need to have their immunity to Hepatitis B checked every five years if they have not reached a post-op titre of more than 100 international units per millilitre as a booster will probably be required. Staff who do not reach a minimum of 30 IU/ml will be unlikely to be able to work in a clinical environment for their own safety. It is strongly recommended that all staff are immunised annually against influenza, have the MMR and varicella if non-immune (chicken pox)
- 6. Staff who test positive for Hepatitis B or C or HIV who have clinical duties need to demonstrate that they are on combined anti-retroviral treatment, must have achieved undetectable levels of the virus, and be subject to regular monitoring.**

7. The practice provides protective clothing (PPE), gloves, eyewear, aprons and masks, which must be worn by dentists, nurses and hygienists/therapists during all clinical procedures and during cleaning of and contact with instruments. Visors and masks should be worn together for optimum protection and cleaned with alcohol between patients. All disposal items should be used only once and disposed off in clinical waste.
8. Patients must be asked to put on glasses and disposable bib. Glasses to be cleaned in between patients with water and detergent or disinfectant spray and bibs will be disposed off.
9. High vacuum suction MUST be put on BEFORE drilling starts, this reduces the aerosol plume by 90%.

10. PPE – Personal Protective Equipment

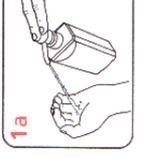
- a. Gloves must fit snugly, not be powdered and be CE marked. They must be worn throughout all decontamination processes and changed at the completion of each procedure.
 - b. Aprons must be worn throughout all decontamination processes and changed at the completion of each procedure.
 - c. Visors/protective goggles must be cleaned after every procedure with detergent and water or disinfectant spray They must be worn throughout all decontamination processes and changed at the completion of each procedure.
 - d. Shoes should be closed, clean, tidy and used only for clinical procedures.
 - e. Face masks are single use.
11. The procedure for removing protective equipment is as follows:-
- Gloves – remove gloves turning inside out, wash hands if visibly contaminated
 - Apron – rip straps at back, folding down over front of apron, rip straps around waist and gather together, not touching the outside of the apron.
 - Mask – rip straps and turn inside out, not touching the outside of the mask
 - Visor/goggles – take off without touching the outer surface.
 - Wash and dry hands
12. Clinical clothing worn in surgery should not be worn outside the practice premises. Staff must change at the practice using the facilities provided and must not arrive or leave in clinical clothing. Uniform should be clean every day, unmarked and must be washed as recommended by manufactures. Please note that ironing uniform also forms part of the sterilisation process. Clinical tops should be short sleeved.

HANDWASHING PROTOCOL

13. The hand washing technique to be followed is the Ayliffe technique. Hand hygiene means rubbing and washing the hands, wrists and forearms.
 14. Handwashing must take place in a basin designated for handwashing. This can be a bowl that is dedicated to handwashing used in a basin designated for washing instruments, but this is not to be encouraged.
15. Handwashing protocols

HAND CLEANING TECHNIQUES

How to handrub? WITH ALCOHOL HANDRUB



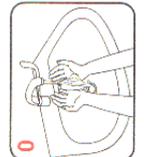
1a



1b

Apply a small amount (about 3ml) of the product in a cupped hand, covering all surfaces

How to handwash? WITH SOAP AND WATER



0



1

Wet hands with water

Apply enough soap to cover all hand surfaces



2

Rub hands palm to palm



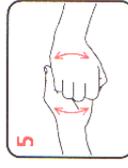
3

Rub back of each hand with the palm of other hand with fingers interlaced



4

Rub palm to palm with fingers interlaced



5

Rub with backs of fingers to opposing palms with fingers interlocked



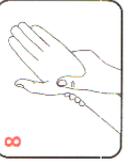
6

Rub each thumb clasped in opposite hand using rotational movement



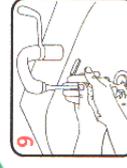
7

Rub tips of fingers in opposite palm in a circular motion



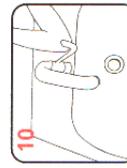
8

Rub each wrist with opposite hand



9

Rinse hands with water



10

Use elbow to turn off tap



11

Dry thoroughly with a single-use towel

20-30 sec

Once dry, your hands are safe



12

Your hands are now safe

40-60 sec

Adapted from WHO World Alliance for Patient Safety 2006

16. The drying of hands is as important as careful washing of hands. Dry hands with disposable hand towel thoroughly. This towel is not clinical waste.

17. Nail brushes should not be used but nails can be cleaned by using a blunt orange stick. Bar soap should not be used.
18. A new pair of gloves should be used for each patient or after a glove has been taken off for any reason. Cuts/grazes must be covered with waterproof plasters. Nails must be kept short and clean. Please remove jewellery and watch on hands and wrists when treating patients. Nail polish, nail art and false nails should not be used. Gloves must be removed when leaving the surgery, taking things out of drawers, or using the phone. Computer keyboards in the surgeries are washable as are the mice and must be cleaned by the nurse between patients.
19. It is a requirement that all clinical staff use the provided hand cream at the end of each session. This helps to keep your hands in good condition and reduces the risk of rough skin breaking through gloves, chapping, cuts and whitlows. This is not optional.
20. Anyone developing a reaction to a chemical or the gloves must inform NY immediately.
21. Foot operated waste bins should be used.

DECONTAMINATION PROCESS -

Please refer to Central Sterilisation Protocol – this policy must be read in conjunction with Central Sterilisation Protocol.

22. Before sterilisation, surgery nurses should carefully and immediately pick up the dirty instruments and put them on the metal instrument trays (Htrays) which will soak in *water and detergent* (“*Gigazyme Plus 3*” *Enzymatic Solution*, specifically formulated for cleaning of instruments) in the container. This will remove the protein and stop blood and cement (if present) from hardening. The solution must cover them completely in the container in the surgery. Ensure the water temperature is correct – check the detergent instructions. All cement must be wiped off by the surgery nurse immediately.
23. The CSO (Central Sterilisation Officer) will collect the contaminated instruments. Instruments to be used the same day may be returned to the surgery unpouched.
24. Single use items must not be re-used. Endodontic reamers, rotary files and hand files, matrix bands, 3 in 1 tips, aspirator tips, saliva ejectors and insert trays are all single use.
25. Dental impressions will be rinsed immediately after removal from the mouth under running water until visibly clean and disinfected using Eurosept Max impression and labelled as “disinfected” before being sent to the laboratory. This will be done in the surgery.
26. All instruments that **could have been potentially** contaminated must be sterilized.
27. All handpieces must be disinfected and sterilised after each patient.
28. Any unpouched instruments that will not be used by the end of the day must be returned for processing in the last daily collection. Nurses must calculate how many instruments they will need for the appointments booked for the remainder of the day.
29. Sterilized instruments that are used frequently throughout the day in the surgeries may be stored in drawers that are kept shut so that the instruments are covered in their trays. Unpouched instruments that are not used the same day will be re-sterilised at the end of the day if not pouched.

30. Loose instruments which are sealed in pouches may also be kept in the surgery for as long as 1 year. It will be the responsibility of the nurse in charge of the surgery to ensure that pouches are used within 1 year period. However, it is incumbent on the surgery nurses to collect only what they believe they will need based on the day list each morning from Central Collection Area.
31. Wrapped instruments can be stored up to 1 year. Unwrapped instruments can be kept for 1 day maximum in the clinical area and 1 week maximum in a non-clinical area.
32. Pouched instruments should be kept above ground in a clean, dry cupboard and opened directly out onto the instrument tray, having checked that the pouch has not been tampered with first.
33. The date of sterilisation (DOS) and expiry date (EXPD), initials of CSO and machine numbers (M/N) noted on the pouch. The instruments that are shared amongst surgeries will be kept in Central Collection Area. It will be the CSR's responsibility to check these daily and ensure that those that should be used soonest are at the front of the storage area. Those instruments that have not been used within 1 year will be re-sterilised and returned to the storage area with a new DOS and EXPD.
34. All working areas used during treatment will be kept to a minimum, clearly identified and cleaned and disinfected after each patient using disinfectant spray or clean water, and detergent and disposal paper towel.
 - a. Local work surfaces
 - b. Dental chairs
 - c. Curing lamps
 - d. Inspection lights and handles
 - e. Hand controls including replacement of covers
 - f. Trolleys/delivery units
 - g. Spittoons
 - h. Aspirators
 - I X-ray units
 - j. Dead man switch for radiographs
 - k. Handles of mirror
 - l. Computer keyboard and mouse
 - m. Drawer handles
35. Areas and items of equipment that need to be cleaned every day (and more frequently if visibly dirty) are:-
 - a. taps
 - b. drainage points
 - c. splash backs
 - d. sinks
 - e. front of cabinets
36. Computers should be hovered, screens dusted and wiped with a damp cloth and bottom of dental chairs dusted and wiped with a damp cloth weekly.
37. Inside of drawers and cupboards should be spring cleaned quarterly.
38. Spittoons and aspirating units need to be washed through at the end of every day. Orotol Plus disinfectant solution should be used – 40 millilitres made up with cold tap water to two litres with no foam. This should be poured into the spittoon (one litre) and then the remaining litre should be aspirated into the suction water lines. Pulijet disinfectant solution to be used in Surgery 11,12 and 14.10 millilitres made up with warm water approximately 50°C water up to the third marker of Pulse Cleaner Bucket.

39. The amount of 1% concentration of Alpron solution should be added to every bottle of RO (reverse osmosis) water used whilst treating patients, this is a small amount and is not harmful to patients.
40. The solution is left in the bottle overnight according to manufacturer's instruction and in the DUWLs to ensure that a biofilm build up is discouraged.
41. Each morning, prior to use on patients, flush each line for 2 minutes to refresh the Alpron solution in the system. Always flush between patients for 20-30 seconds, this is to ensure no oral bacteria are transferred between patients. The above instructions are according to manufacturer's instructions – Quality Water Specialist.
42. Non-clinical cleaning is detailed in the job description for cleaners.
43. At the end of each day, the surgery should be clean, any dirty instruments should be soaked in Gigazyme Plus3 enzymatic solution in transport container, which needs to be taken into DR and left overnight. All external surfaces of the cabinetry should be properly cleaned with hot water and detergent or disinfectant spray. They should also be clear of clutter.
44. Weekly cleaning should include the dusting of inside of cupboards. Any other cleaning needs or damage to chairs must be notified to the head nurse immediately. It is the surgery nurse who is working in the surgery who must take responsibility to ensure that the remedial action is taken.
45. No clinical area should have anything on it except clinical necessities. There must be NO CLUTTER on the clinical surfaces, above them or on shelves within a space of 4 feet.
46. The disposal of needles and sharps is entirely the responsibility of the treating clinician (dentists/hygienists). Needles must not be re sheathed at all and must be disposed of at point of use by using Spencer Wells or Mosquito Forceps. The use of disposable scalpel will eliminate the need to remove blade from its holder. Sharps must never be carried by hand nor should they be handed to anyone, unsheathed. It is the decision and the responsibility of all treating clinicians to ensure that they comply with the European Directive and the Safe Practice is applied.
47. All spillages of blood and body fluid must be attended to immediately.
 - a. Put on protective clothing provided in the Body Fluid Disposal Kit.
 - b. Sprinkle powder liberally over spill area.
 - c. Remove gel using scoop and scraper. Disposable of gel and scoop/scraper into yellow bag.
 - d. Spray area with disinfectant. Wait for 2 minutes. Clean with bonded wipe and repeat.
 - e. Place soiled wipes and empty disinfectant bottle into yellow bag.
 - f. Remove protective clothing and place into yellow bag. Dispose the bag safely.
 - g. Disinfect your hands.
48. Vomiting should be dealt with urgently as it is likely to spread a virus. Follow the step-by-step procedure mentioned above.
49. Repaired or new instruments must be sterilised before use.

IN THE DIRTY ROOM

50. The CSO will check for debris and only if absolutely necessary due to the breakdown of the washer/disinfector should instruments be cleaned by manual cleaning.

NB: It is recommended that dirty instruments are submerged in a bowl/basin and scrubbed under water. Our practice has decided not to comply with this as we consider it a danger of needle stick injury as the nurse cannot see the instruments easily.

Protocol for the manual cleaning of dental instruments in the Dirty Room

1. Maintain a dirty-to-clean workflow procedure
2. Wash hands
3. Wear personal protective clothing (PPE)
4. Nurses must wear heavy duty gloves, replace if gloves are damaged and purchase new gloves monthly. The gloves should be dried after use.
5. Prepare sinks, equipment and setting-down areas
6. Dismantle and open the instruments, as applicable
7. Agitate and scrub the instruments under running water 45 degrees centigrade or lower using long handled brushes with soft plastic bristles keeping the instruments as low in the sink as possible to avoid aerosols.
8. Rinse in second sink or bowl.
9. Dry instrument if it is to be wrapped.
10. Visually inspect all items under an illuminated magnifier, ensuring they are clean, functional and in good condition
11. Lubricate any relevant items prior to sterilization with a non-oil based lubricant.
12. Dispose of cleaning materials in accordance with policy. (Brushes should be replaced regularly and autoclaved every day).

WASHER/DISINFECTORS

51. Everything that can be processed through the washer/disinfector, should be.
52. A machine identifier with the number of the surgery from where the instruments have come must be placed on top of the machine during processing.
53. Run the machine, ensuring that the readout confirms a successful cycle.
54. Open with caution when machine has finished.
55. Remove contents to an autoclave with the machine identifier.
56. Washer/disinfectors should be maintained and have planned cleaning programmes.
57. Must run at 90 °C for one minute or 80 °C for 10 minutes for it to be effective. (This is an A₀ of 600) (A₀ is the term for lethality effect against micro organisms during a thermal disinfection cycle)
58. Maintenance of washer/disinfectors
 - Validation is required on installation and annually
 - Daily: cleaning of filters and strainer and, visual cleanliness
 - Weekly: protein residue test and safety checks i.e door seal.
 - Annually: servicing by a competent person.
 - Annually: Complete validation tests by a competent person
59. A six monthly audit of decontamination and infection control will take place as part of our regular clinical governance checks.
60. See supplier for full maintenance and operator check programmes

61. AUTOCLAVES

62. Note the number of the autoclave on the machine identifier, then place it on top of the relevant autoclave.
63. Run the autoclave when full. Never place trays on top of each other.
64. Open the autoclave with caution. Check that the cycle has completed successfully. If not, run the instruments through another machine, making a note on the daily record that this has been done. Also change the information on the machine identifier.
65. Remove the instruments using the tray holder to the pouching area placing them on a clean shelf with the machine identifier.
66. Pouch the instruments as instructed.
67. Stamp the back of the pouch and complete the initials and machine numbers from the identifier.
68. Place the instruments on the pouch shelf.
69. Must have validation when installed and annually. They should be maintained and have planned cleaning programmes.
70. Autoclaves are situated in a designated area where cleanliness and tidiness are important.
71. Procedures for checking the levels of sterilisation are in place and must be followed by everyone using instruments. *See Protocol 20 Central Sterilisation*
72. There will be machine log sheets which must be completed by the person in charge of the central sterilisation room. This book will record validation, faults, maintenance and daily, weekly, monthly and annual checks. These will be kept as long as clinical records.
73. A Type B autoclave can sterilise everything – wrapped, hollow, porous and take tubes up to 1.5 metres. It is a vacuum pump and pouches can be used in it. The Type B sucks out air from the inside of the tubes and pouches so that steam gets into all the hollow areas.
74. A type N autoclave sterilises unpouched instruments and handpieces.
75. An autoclave must run at 115 -118 °C for 30 minutes, or 121 - 124 °C for 15 minutes, or 126-129 °C for 10 minutes or 134 - 137 °C for 3 minutes.
76. Once the cycle is established and calibrated, the cycle should NOT BE CHANGED. If there is a reason to change the cycle, then the head nurse will have to call in the engineer to recalibrate the machine. The pressure gauge should also show minimum 2.2 Bar (if used 134 °C) or 320 depending on which measurement system is being used by the machine.
77. Water used in sterilisation machines should be either sterile, freshly distilled or RO (Reverse Osmosis).
78. Water must be changed daily by draining down.

See supplier for full maintenance and operator check programmes

WASTE

- 79. Waste policy is the responsibility of the Practice Manager and delegated to the Head Nurse. See new waste protocol 23**
80. Clinical waste = Hazardous waste – waste that is contaminated with blood and saliva ie body fluids. Everything that is used in the surgery for treating or collected from patients is considered clinical/hazardous.
81. Our EWC Codes for the waste disposed of by NHS Dentist are as follows:- 18 01 09 Sharps, 18 01 03 Clinical Waste, 18 01 10 Dental amalgam waste. These codes will be on the waste documentation provided by our waste disposal company.
82. Needles, scalpel blades, burs, extracted teeth without amalgam, matrix bands, POMS, LA cartridges etc shall be disposed of IMMEDIATELY in the yellow sharps container with the yellow lid in each surgery. This container must never be more than two-thirds full and must be marked with the name of the practice and our postcode. The bin must be kept well above ground level on the wall fixture provided. Close the lid tightly and dispose of in designated area **under** the stairs at the rear of 355.
83. Extracted teeth with amalgam (hazardous waste), excess amalgam, mercury including spent and out of date capsules must be stored in a separate container. Contents of amalgam separators must be stored in amalgam sludge drum. This is because amalgam cannot be incinerated.
84. All clinical waste must be placed in the nurses bin in each surgery and at the end of the day securely fastened and stored in the orange sack which will be in the black dustbin outside the rear of 355 **UNDER THE STAIRS**. All orange sacks must securely closed and have our name and post code on them. The orange sack must never be more than two-thirds full and must be stored in the designated area (**NOT IN THE RAIN**).
85. The waste collector will provide an annual Duty of Care Controlled Waste Transfer Note – this is a certificate confirming our contract and is kept in the Head Nurse's office.
86. Collection of waste is organised by the head nurse through a reputable company. This company must provide a consignment note for hazardous waste every time it is collected. This consignment note must be kept for 3 years. The description of the waste must be accurate.
87. NHS Dentist is registered as a hazardous waste producer under 2005 Hazardous Waste Regulations.
88. Non-hazardous waste is collected twice weekly by the waste collector – First Mile. NHS Dentist will sign the annual contract/certificate confirming what type of waste we are producing and return to the local authority. The Head Nurse is responsible for keeping these records in the white file in the head nurse's office.
89. Every quarter the waste company collecting the hazardous/clinical waste must provide NHS Dentist with a consignee returns form which confirms exactly how much waste and what type of waste has been collected and how it has been disposed of during a given period. The Head Nurse is responsible for keeping these forms in the office with the weekly consignment notes.
90. Amalgam separators are fitted on to our suction machines. They are emptied by the head nurse every quarter. If a warning bleep is heard it should be reported to the head nurse as it indicates that the machine is full up. The amalgam is disposed of in the amalgam sludge drum.

NHS Dentist as generators of waste has a legal duty of care under Environment Protection Act. We also have a duty to the NHS England and the “Care Quality Commission” for disposing of our waste legally. Under the Health Act 2006 (revised January 2008) and within “Standards for Better Health” there are myriad regulations.

91. Domestic waste – waste that would normally be generated by a household. This can include clinical gloves that have not been contaminated by patients. It should include all packaging that is taken off clinical items and hand towels used to dry clean hands. New addition to our environmentally friendly waste disposal is the recycling we are doing, see protocol on waste 23.
92. Clinical waste – will be taken away in orange bags and should be filled with infectious waste such as cups, clinical gloves, masks, aprons, anything that has been contaminated by patients.
93. Pharmi-Sharp Bin will accept sharps that are infectious and include medicines such as LA cartridges.
94. Waste amalgam and amalgam filled extracted teeth will go into the white container with a red screw top lid and it must be labelled “Amalgam Guard”
95. Spent amalgam capsules and Dappens dishes/carrier tips will go into a white container with a red screw top lid labelled “Cap Guard”.
96. Teeth without amalgam will go into the sharps bin or directly into the orange bag depending on whether they are sharp.
97. Nurses and hygienists are responsible for writing “NHS Dentist, SW6 1NW” on every sharps and pharmi bin. And once it is filled up to the line, date and initial will be written by the nurse who close and lock the lid.

SHARPS AND SPLASHES See Protocol 9 Sharps and Splashes Injuries

98. In the event of a SHARPS injury,
99. The **wound** should be made to bleed – do not suck.
100. Washed thoroughly under running water with soap for several minutes. Do not scrub.
101. Cover with a waterproof dressing
102. Wash **eyes** thoroughly with running water or eye wash solution, removing contact lenses first.
103. Exposed **oral mucous membranes**, rinse vigorously with water and spit out.
104. The incident should be discussed with the principal or practice manager immediately
105. The practice manager will contact the patient whose instruments have caused the injury to ascertain if they are high risk using protocol 9 “Occupational Health Emergency Procedures”. This information will help occupational health decide on the next stage of the procedure
106. The practice manager will contact Imperial Health At Work or Occupational Health Department at Charing Cross Hospital by phone or the nearest A&E department (out of hours) for advice and action needed.
107. The incident must be recorded in the accident book in the office so an audit of incidents can be done every six months with clinical governance checks.
108. Any spillage involving blood, saliva or mercury must be reported to Dr Amir Vahdat (principal dentist).
109. The following information is for the benefit of staff and patients. Risk of catching Hepatitis B is one in three, Hepatitis C is one in thirty, HIV is 1 in 300 from a needle stick injury and HIV is 1 in 1000 from mucus.

The definition of whether an object (in our case an instrument) is hollow is:-

110. If the cavity (instrument/object is open at one end only) is greater than the width of the instrument’s orifice the instrument is hollow. So if the length of the instrument is longer than the width of the instrument then you must consider it to be hollow and use a sterilising method that is appropriate for hollow instruments.

111.If the length of the tube (open at both ends) is greater than twice the width, the object is hollow.

WATER POLICY

- 112.Water used for cleaning should have a hardness of less than 55 ppm. Hardness values must be checked regularly and noted in the machine log. Normal drinking water can be used.
- 113.Dental Unit Water Lines (DUWL) will be tested with Dip Slide every month to show compliance to the EU Directive 98/83 for potable water, which states the recommended level for potable water is 100cfu per ml (colony forming units). Dip Slide is actually an agar media developed for enumeration of heterotrophic water borne bacteria. This procedure will be done by and/or under supervision of Head Nurse.
- 114.**Biofilm Removal Procedures** : If needed, firstly, all instruments (i.e. 3-in-1 syringes, turbines, motors, scalers, and any filters within the water lines) will be removed to ensure no clogging of the fine lumen of handpieces, 3in1 syringes and filters during the Biofilm Removal Procedures. And by using diluted Sodium Hypochlorite + 50 °C warm water and Clean Water Bottle, operate all equipment to pump the solution into the water lines. Leave for 20-30 minutes, flush the remaining solution. As the bottle empties, flush air out for 30 seconds using a pulsed action with the foot control, this will ensure any loose biofilm is forced from the water lines.
- 115.Secondly, operate all instruments with BRS Forte-Remover dissolved in 2L of hot water (50-60 °C) + BRS Forte-Activator (20ml) until blue coloured solution coming from each outlet. Leave for 20 minutes, flush the remaining solution. As the bottle empties, flush air out for 30 seconds using a pulsed action with the foot control to make sure that any loose biofilm is forced from the water lines. These procedures will be carried out by Head Nurse.
- 116.According to manufacturer's instruction, Alpron 1% solution should be used at all times as maintenance solution on a continuous basis in the clean water bottle fitted to the chair. Alpron solution is physiologically and ecologically harmless and is safe to store for up to 4 weeks in the storage bottle.
- 117.The first time the chair is used after a treatment for bacteria (as above) the nurse should add 8ml of Alpron to 792 ml of clean water (preferably distilled) (1% solution) and fill the clean water bottle and then open up the lines until half of the bottle contents have gone through the unit. This will remove any residual chemicals and the dental chair is now ready for use. The bottle on the system is to be left overnight. It only needs to be removed to refill with the diluted Alpron or for Cleaning.
- 118.After one week of a treatment, the head nurse will retest and if bacteria is found in the DUWLs then he will repeat the procedure.
- 119.Bottled Water System will be used as a water supply on all dental units with Alpron 1% solution. A written scheme and legionella risk assessment for water services (refer to L8)(in the form of Dr Michael Martin's report) and plans of our water supply, storage and distribution are available.
- 120.NHS Dentist has a plan to deal with emergency incidents where the water supply stops and how we get water back to usable form.
- 121.Taps not used over long periods i.e. Christmas holiday should be flushed before usage.
- 122.DUWLs if not used for a long period should be flushed on a weekly basis.
- 123.DUWLs need to be flushed for 3 minutes, disinfected and then flushed again for 3 minutes. Filters in lines will have to be cleansed with a solution recommended by the manufacturer after the first flushing of the DUWL (if the filters are disposable, change them).
- 124.All equipment with anti-retraction valves should be checked that they are fitted and working correctly. (Dental spittoons, three in one syringes, ultrasonic scalers and wet-line suction apparatus.)
- 125.In the event of a power failure or mains water stoppage patients cannot be treated.

LEGIONNAIRES RISK ASSESSMENT AND WRITTEN SCHEME

The practice manager will review the risk assessment annually as part of management governance. Records of testing of the system will be kept for five years.

1. Check for dead legs in the water system
2. If dead legs in hot water system then no problem as over 47 degrees legionnaires dies. Our water has been set at 50 degrees.
3. Need good mixer taps with thermostats or notices on taps saying that it is hot water to warn patients and staff.
4. If dead legs in cold water system, unlikely to be able to blank off but can minimise the risk of legionella by the following:
 - a. Have type A gaps installed – we have them.
 - b. Stop breathing in from aerosol – our protocols require that nurses start aspirating BEFORE the use of drills, this removes 90% of all aerosols.
 - c. Use Alpron (or Sterilox) in the DUWL's all the time, we do this.
 - d. Once a clean DUWL has been achieved, use dipstick mechanism on each chair three-monthly. Done
5. To ensure clean water lines at commencement of process do the following:-
 - a. Use dipsticks on each chair weekly for 2 months. Then fortnightly for a further month. If clean dipsticks, then go to three-monthly.
6. Have a plan of the water system and plans for usage in case of no water supply – we have this.
7. Ensure that water lines that are not used regularly (we have none) are run before use for 2 minutes as biofilm can build up.
8. Immunosuppressed and elderly are more at risk but universal precautions will be applied. See 4b
9. We do not have excess storage capacity, water is not taken from the taps, water is used regularly through all outlets.
10. The above constitutes an adequate risk assessment for the control of legionnaires and there is no evidence to show that growing cultures from supply will do any more than you can do yourself as there will always be some legionnaires in the water supply.

Relevant legislation:

- Health and Social Care Act 2008
- Code of Practice Prevention and Control of Infection which will include HTM 01-05
- Health and Safety at Work Act 1974
- Management of Health and Safety At Work Act
- COSHH
- HTM 07-01 Safe management of healthcare waste 2006
- HTM 01-05 plus Appendix 1 – Waste Disposal
- Hazardous Waste Regulations 2005
- HTM 04-01 and Approved Code of Practice and Guidance on legionella (L8)

This document is updated together with our annual management governance protocol