BASINGSTOKE AND NORTH HAMPSHIRE NHS FOUNDATION TRUST

CLEANING, DISINFECTION AND STERILISATION POLICY

IC/32/10

Supersedes: IC/32/07 Cleaning, Disinfection and Sterilisation Policy

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	Job Title	TSSU Manager
Final approval committee	Name	Infection Control Committee
	Date of meeting	10 December 2010
Authoriser	Name	Dr Nicki Hutchinson
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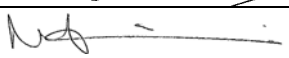
	Signature	
	Date of authorisation	15/12/2010
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Audience	(tick all that apply)	Trust staff √ NHS √ General public
Standards	Standards for Better Health	
	NHSLA	

Summary
This policy aims to ensure that staff are aware of when cleaning, disinfection and sterilisation should occur and what type of cleaning materials to use.

Implementation Plan

Summary of changes
Cleaning of Endoscopes
Cleaning of Nasopharyngeal scopes
Hand washing update
General cleaning table

Action needed and owner of action

- All staff need to be aware how to clean, decontaminate and sterilise items of equipment safely and correctly.
- All staff need to know what items of cleaning material is needed to clean specific equipment.
- Infection control will evaluate compliance with the policy and update changes as required.

Contents

Aim

This policy aims to guide hospital staff in the appropriate measures to reduce infection from inanimate objects using the processes of cleaning, disinfection and sterilization.

Roles and Responsibilities

The Director of Nursing on behalf of the Chief Executive will ensure that the Clinical Directors take clinical ownership of the policy.

The Clinical Directors on behalf of the executive director of nursing will ensure that all clinicians comply with this policy.

The Clinical Directors, Heads of Nursing and Modern Matrons on behalf of the Executive Director of Nursing and the Clinical Directors will ensure that all clinicians comply with this policy.

The infection prevention and control team will:

- Act as a resource for information and support.
- Monitor the implementation of this policy within clinical areas.
- Provide education in relation to this policy
- Regularly review and update the policy.

All Trust staff including all clinicians will:

- Comply with the Cleaning, disinfection and sterilisation policy.
- Inform the infection control team about any issues or concerns relating to cleaning, disinfection and sterilisation.
- All Trust staff will undertake annual mandatory infection control training.

Terms of Reference of the Decontamination and Estates Sub Committee

1.0 **Purpose**

The purpose of the Decontamination and Estates Sub Committee is to provide guidance to the Trust Infection Control Committee in matters relating to decontamination and to provide direction to the various Trust directorates on how to implement and enforce decontamination policy.

2.0 **References**

HTMs, Medical Devices Directive 93/42/EEC, ISO 13485, ISO 14971, ISO 17664, En285, EN13060, EN 554, H&S act 1974, Customer Protection act, H&S (consultation with employees) regulations 1996. BNHFT Risk Management Strategy.

3.0 **Remit**

- To monitor the Trust's compliance with the DoH controls assurance standard on
- decontamination.
- To Monitor compliance with national guidance and controls assurance standards, through regular audit and assurance reports.
- To audit local decontamination processes for medical devices and equipment.
- To ensure there is an annual planned preventative maintenance programme in place to manage all aspects of decontamination throughout the Trust.
- To ensure consultation with infection control team is a mandatory step in contract tendering procedures for building projects, IT infrastructure, and for cleaning, laundry and catering services.
- To ensure infection control requirements are designed in the planning stages of healthcare facilities including new builds or renovation projects.
- To ensure contamination of water supply in the hospital with bacteria such as Legionella is avoided by appropriate building design and maintenance, by

cleaning water storage tanks, maintaining consistently high temperature in hot water supply, keeping cold water systems cold and minimising water storage.

- To receive and respond to external reports and audits relating to decontamination issues.
- To co-opt members as required in the short term to achieve above.

Introduction

Micro-organisms will always be present in the hospital environment and all Trust staff have a responsibility to be aware of methods to prevent their transmission. The choice of decontamination method depends on a number of factors, which include the type of material to be treated, the organisms involved, the time available for decontamination, manufactures instructions and the risks to staff and patients. Decontamination of equipment and the environment is a key infection control measure and this policy will outline a risk assessment strategy the Trust staff can use.

Prior to purchasing equipment Trust staff must ensure that the item can be decontaminated effectively and that the company supplying the equipment offers clear instructions on suitable cleaning, disinfection and sterilization methods. If advice is needed from the Infection Prevention and Control Team please contact prior to purchasing equipment.

Cleaning, disinfecting or sterilising equipment and the environment can be understood more readily if medical devices, equipment and surgical materials are divided into three categories with decontamination methods clearly defined.

RISK CATEGORIES[1]

HIGH RISK	**DEFINITION**	Items in close contact with a break in skin or mucous membrane or introduced into a normally sterile body area.
	EXAMPLES	Surgical instruments Syringes and needles Intrauterine devices Dressings
	SUITABLE METHODS	**Sterilization required** **Use disposable, single use items where possible**

INTERMEDIATE RISK	**DEFINITION**	Items in contact with mucous membranes or other items contaminated with particularly virulent or readily transmissible organisms or items to be used on highly susceptible people.
	EXAMPLES	Respiratory equipment Gastroscopes
	SUITABLE METHODS	**Disinfection** required by heat where possible.
LOW RISK	**DEFINITION**	Items in contact with normal and intact skin.
	EXAMPLES	Washing bowls Floors
	SUITABLE METHOD	**Cleaning** and drying usually adequate.

DEFINITIONS[2]

STERILIZATION	A process that removes or destroys all micro-organisms including spores*.
DISINFECTION	A process used to reduce the number of micro-organisms but not usually of bacterial spores: the process does not necessarily kill or remove all micro-organisms. **NB.** Disinfection of the skin and living tissues is known as **antisepsis.**
CLEANING	A process, using a detergent, that physically removes contaminants, including dust, soil, large numbers of micro-organisms and the organic matters (eg faeces and blood) that protects them. Cleaning must proceed disinfection and sterilisation.

*****_Standard sterilization procedures may not eliminate 'prions' (eg. agents of variant and classical Creutzfeldt Jacob Disease). Whenever a particular hazard from such agents is identified, refer to SEAC (Spongiform Encaphalogy Advisory Committee). Single-use (disposable) items will generally be preferred._

Sterilization

Cleaning is essential preparation when decontaminating equipment and must precede sterilization activity presents the handler with a potentially hazardous situation and full standard precautions apply. Only staff who can demonstrate that they have been adequately trained are permitted to carry out this task. Information on Standard Precautions and Cleaning can be found further on in this policy.

Sterilization can be achieved by physical methods such as heat in an autoclave (moist heat) or hot-oven (dry heat), by irradiation, chemical methods (including ethylene oxide), fine membrane filters (for lipids and pharmaceuticals), and low temperature plasma diffusion. Certain solutions such as glutaraldehyde Peracetic Acid are capable of achieving sterilization, but only under controlled conditions and over prolonged exposure times. These methods are less reliable than physical methods of sterilization. Further advice on

sterilization can be obtained from the Sterile Services Department and Infection Control Officers.

Heat Sterilization

The sterilization service available through the Sterile Services Unit (TSSU) uses steam at 134^{o}C (moist heat) to 137^{o}c. for 3 to 3.5 minutes using a pre vacuumed autoclave, porous load machine.

Sterilizers are not in use locally, All Sterilization is to be carried out in the above unit except Endoscopy Day theatres where reprocessing of flexible endoscopes is undertaken. If you feel you must process locally You must seek advice from the infection Control team. **Do not reprocess items without authority.** Additional information can be obtained through the Trust Estates department, or from the Sterile Services Unit Manager.

NB. Before returning procedure trays to TSSU the contents list, which is included in each tray must be signed by the assisting nurse or user, confirming that he/she has removed all sharps and all instruments are correct. All items being received into the Sterile Services Unit for re processing will be considered to be high risk

Bench Top Sterilizers

It has been agreed that NO bench top sterilizer is to be used or purchased for use within the Basingstoke and North Hampshire Hospital NHS Foundation Trust.
All items which are routinely sterilized, by whatever method, and wherever the location, must be specifically documented by the manufacturer as being suitable for re-sterilization and the particular sterilization method chosen. Before any item is purchased it is the responsibility of the purchaser to ensure that a PPQ (Pre Purchase Questionnaire) Has been completed by the manufacturer and that the product can with stand the rigors of autoclaving in a porous load autoclave wherever appropriate. Health Act 2008

Further advice can be found in the **Device Bulletin DB 2000(04): Single-use Medical Devices: Implications and Consequences of Reuse,** published by the Medical Devices Agency.

Chemical Sterilization

Glutaraldehyde (Cidex 2% ASEP 2.2%) This chemical is no longer to be used within the Basingstoke and North Hampshire Hospitals NHS Foundation Trust. If it is in use in any area, its application must be reported and the Microbiologist informed.

Alkaline Glutaraldehyde, when used in a 2% solution, can be relied upon to sterilize in 10 hours, but for all practical purposes 3 hours should provide an adequate sporicidal effect. All materials must be **clean,** and only surfaces wetted by Glutaraldehyde will be satisfactorily treated. The rinse used to remove residual chemicals needs careful controls to avoid recontamination or depositing of particulates on the load. Final rinse water should be sterile water for irrigation which is Pyrogen free.

Atmospheric pollution due to glutaraldehyde is subject to strict regulatory control, it is potentially toxic, and appropriate precautions are required when it is used (Health & Safety Executive 2000).

Use of glutaraldehyde should only be contemplated following a documented risk assessment in accordance with current C.O.S.H.H. legislation (2002).

Occupational exposure standard.

Appropriate short-term Work Place Exposure Limit (15 minute reference period) is set at 0.05 ppm.

This equates with the odour threshold and is difficult to achieve unless the glutaraldehyde is used within an enclosed plus/or exhaust ventilated facility.

Peracetic Acid (Steris)

'Steris' contains 0.2% peracetic acid solution and has to be used in a dedicated processing machine i.e. a Steris System 1 Endoscope Processor, at an elevated temperature of 45^{o}C. This sterilant is supplied as a concentrate, which is diluted within the machine, and discarded to waste after use. It is important to establish compatibility with instruments and processing equipment before use.

Disinfection

Staff must remember that **cleaning is an essential pre-requisite** when decontaminating equipment and must precede disinfection. The routine use of disinfectants is wasteful, potentially harmful and unnecessary.

Disinfection can be achieved by physical methods such as boiling or pasteurisation. In practice, the use of chemical disinfectants is more common in hospitals. Whenever heat disinfection can be used staff should choose this option. **Chemical disinfection is less reliable than physical methods and should not generally be used when sterilization is required.**

COSHH Regulations and Disinfection

Staff must only use products when a COSHH assessment has been performed using safety data sheets obtainable from the manufacturer. Protective clothing must be worn when making up and using solutions according to risk to assessment. Ensure exposure limits are adhered to if applicable. Only use solutions or powders that are within their expiry date. Any sensitivity or reaction to a disinfectant must be reported to the Department of Occupational Health, and also documented by the head of department.

Important Do's and Don'ts of Disinfection [3]

DO	DON'T
Add the measured amount of disinfectant to the right amount of water, to make an effective solution for use.	Add detergent to a disinfectant; this may inactive both.
Use a clean, dry container for the solution.	Store instruments or cleaning tools in a disinfectant.
Wash away dirt, where possible, before using the disinfectant.	Top up yesterday's solution: make up a fresh one today.
Remember that if disinfectants are used carelessly they may promote microbial growth.	Use two disinfectants together, unless one of them is alcohol.
Check expiry dates.	Bring in your own disinfectant to the hospital.
Give adequate time for disinfectant to work.	Disinfect if cleaning is sufficient.

Recommended Disinfectants and Their Properties [4]

Chlorine-based Disinfectants.

Examples: Sodium Dichloroisocyanurate (NaDCC), Hypochlorite solutions.

1. Wide range of bactericidal, virucidal, sporicidal and fungicidal activity.

2. Disinfectant of choice for use against viruses, including HIV and HBV.

3. Rapid action.

4. Inactivated by organic matter, particularly at low concentrations.

5. Corrosive to some metals, and may bleach and rot fabrics.

6. Diluted solutions are unstable and must be freshly prepared daily.

7. Care should be taken not to allow contact with strong acids as chlorine gas will be released

8. Do not use in the presence of formaldehyde, as one of the by-products is carcinogenic.

9. Useful for water treatment and in food preparation areas.

NB. For surface decontamination and management of spillages involving agents of Transmissible Spongiform Encephalopathy sodium Hypochlorite at 20,000 parts per million (ppm) Free Available Chlorine (FavCl): contact time: one hour, has been found to be effective. Frequent re-wetting of surfaces will be necessary.

Peroxygen Compounds

Examples: Virkon, Hydrogen Peroxide, Peracetic Acid.

1. Wide range of bacterial, virucidal and fungicidal activity.

2. Activity is greatly reduced by organic matter.

3. Anti-mycobacterial activity is variable.

4. Corrosive to some metals.

5. Often formulated with detergent.

6. Virkon has low toxicity and irritancy.

7. Seek manufacturer's approval for equipment where corrosion may present problems e.g. endoscopes, centrifuges.

Iodine and Iodophors
Examples: 'Betadine', 'Videne'

1. Wide range of bactericidal, virucidal and fungicidal activity.

2. Some activity against bacterial spores.

3. Inactivated by organic matter (depending on preparation and concentration).

4. May corrode or stain metals.

A 1% solution of iodine in 70% alcohol is an effective skin antiseptic. Some iodophors may be used for disinfection of the environment, but they are expensive and cannot be recommended for general disinfection in hospital.

Clear Soluble Phenolics
Examples: Stericol, Hycolin, Clearsol

1. Good bacterial and fungicidal activity.

2. Have limited virucidal activity and poor activity against bacterial spores.

3. Relatively cheap, stable and not readily inactivated by organic matter.

4. May corrode or stain metal.

5. Should **not** be used in food preparation areas as they taint food.

6. Should **not** be used on equipment that is likely to be in contact with skin or mucous membranes.

Alcohols
Example: 70% industrial methylated spirit (IMS), 70% isopropyl alcohol solution, alcohol handrub, alcohol impregnated wipes.

1. Good bactericidal and fungicidal activity.

2. Active against mycobacteria but not against spores.

3. Activity against viruses is variable, and non-enveloped viruses tend to be more resistant.

4. Rapid action and easy to use in wipe form.

5. Volatile and especially useful as rapidly drying disinfectants for skin and surfaces.

6. Recommended concentrations of ethanol (70%) and isopropanol (60%) are optimal *in vitro* for killing organisms, and are more effective than absolute alcohol.

7. Can be used with other bactericides such as chlorhexidene, iodine and Triclosan.

8. Do not penetrate well into organic matter, especially protein-based, and **should be used only on physically clean surfaces.**

Chlorhexidine
Examples: Hibiscrub, Hibitane, Hibisol

1. More active against Gram-positive than Gram-negative organisms.

2. No activity against tubercle bacilli or bacterial spores.

3. Good fungicidal activity.

4. Limited activity against viruses.

5. Low toxicity and irritancy.

6. Inactivated by organic matter, soap and anionic detergents.

7. Most useful as a skin disinfectant.

8. Must **not** come in contact with brain, meninges or middle ear.

9. Available in easy use sachets and bottles.

Hexachlorophane

1. More active against Gram-positive than Gram-negative bacteria.

2. Good residual effect on skin.

3. 0.33% powder gives protection against colonisation with *Staphylococcus aureus* in neonates.

4. Cutaneously absorbed hexachlorophane may be toxic to babies after repeated application of 3% emulsions.

Triclosan (Irgasan DP300)
Examples: Manusept, Phisomed, Aquasept

1. Triclosan has similar properties to hexachlorophane and does not have toxicity in neonates.

2. Often used in the treatment of MRSA carriers, as they may be better tolerated than some other antiseptic-containing detergents.

Aldehydes
Examples: Formaldehyde, Glutaraldehyde

1. Wide range of bactericidal, virucidal and fungicidal activity.

2. Good but slow activity against bacterial spores.

3. Active against tubercule bacilli, but less so against *M. avium-intracellulare.*

4. Irritant to eyes, skin and respiratory mucosa. Potential sensitiser in some individuals.

5. Most preparations are non-corrosive to metals and other materials.

6. Little inactivation by organic matter, but penetrates slowly.

7. A useful disinfectant for heat-labile equipment, but is expensive and toxic.

Approved List of Disinfectants

Only chemicals on the approved list must be used in the Trust. Staff must never bring in agents from home or order agents not on the list unless written permission is given by the Infection Control Team.

Type of Disinfection	Categories	Approved List	Comment
Environment	Sodium dichloroisocyanurates	Actichlor plus	For use on Blood spillages and cleaning of hospital areas
	Alcohol	Alcowipes	
	Chlorhexidine & Cetrimide	Travasept	Pharmacy
	Phenolics	Hycolin	For use in Mortuary and laboratory.
Skin Hands Mucous membranes	Chlorhexidene	Hibiscub Chlorhexidine Gluconate 0.5% in IPA Hibitane obstetric cream Chlorhexidine 4%	Hibiscrub: Operating Theatres and for aseptic technique in clinical areas MRSA topical treatment
	Iodine	Betadine range including: Aqueous and Alcohol Solution Shampoo and skin cleanser Gargle/mouthwash Dry powder spray	
	Tristel wipe	3 stage Tristel wipe	ENT scopes / TOE scope
	0.5% Chlorhexidine in 70% IMS		
	70% Isopropyl alcohol (ISA)	Hydrex hand rub	
	Aldehydes	Sterets	
Equipment	Alcohol We do not recommend alcohol for cleaning	Glutaraldehyde	
	Peracetic acid	70% IPA Spray, Azo-wipes, Alcowipes	IPA spray: Pharmacy only We do not recommend alcohol for cleaning
		'Steris' System Nu Cidex	For use in Endoscopy suite

Cleaning

Detergent is **essential** for effective cleaning. It breaks up grease and dirt and improves the ability of water to remove soil. Organic material such as blood is coagulated by heat or chemicals and therefore, must be cleaned with detergent and water in addition to disinfection.

Wet surfaces and equipment are more likely to encourage the growth of micro-organisms and to spread potential pathogens. Cleaning equipment and used cleaning solutions should be removed from patient treatment or food preparation areas as soon as cleaning is completed. Surfaces should be left as dry as possible following cleaning.

Cleaning should be preformed as described in the Trust Cleaning Policy **"Trust Standardised procedures for Cleaning"**.

Mops and other equipment should be cleaned as per Trust cleaning policy "**Trust Standardised procedures for Cleaning**"

The use of HPV (Hydrogen peroxide vapour) with in an environment at the Trust must be authorised having met the required criteria detailed in the **'Trust Standardised procedures for Cleaning'**.

All cleaning equipment should be examined at regular intervals and cleaned if soiled. Worn or damaged equipment should be repaired or replaced.

Generally, cleaning is essential prior to disinfection and sterilization. Further advice can be sought from the Infection Prevention and Control Team.

Cleaning of Operating Theatres

See Theatre cleaning policy

Decontamination of equipment prior to inspection and repair

The Department of Health issued guidance on the need for decontamination of equipment prior to inspection, service or repair in Safety notice SN 9516 (1995) and HSG (93) 26. Please see appendix 1 for a copy of the Trusts decontamination Certificate.

Index Of Methods For Decontamination of Equipment and the Environment.

In order to standardise methods of decontamination in the Trust a list of equipment and decontamination methods is outlined. If an item is not on the list and staff require assistance after undertaking an initial assessment, please contact one of the following by contacting switchboard:

Infection Control Nurse:

Consultant Microbiologist:

Health and Safety Manager:

Sterile Services Manager

Equipment/Environment	Method of Decontamination
Air Puffers (Radiography)	Single Use – Disposable
Ampoules and Vials	Swab neck or closure with alcohol swab. Allow to evaporate before breaking seal.
Anaesthetic Equipment including Laryngoscope blades.	Use disposable where possible. Return non-disposable to Sterile Services for heat disinfection.
Auroscope ear pieces Re useable type only	Send to SSD for reprocessing.
Baths	Clean bath with hospec between all patients. Use Actichlor plus after use by patients in isolation.
Bedpans	Disposable.
Bedpan Holder	After each use clean with hot soapy water/detergent wipe. Rinse and dry thoroughly. Do not stack when wet. . If an infected patient use a Hydrochloride solution after.
Bed Frames	Hot soapy water on a daily basis. Underside of the bed should be cleaned on a weekly basis and after discharge.
Birthing Pool	See Appendix 2
Bowls	Theatre : Sterile Services Wards : See Page 13 of this document
Breast Pumps	Clean outer surface with hot soapy water. Immerse plastic utensils in NaDCC 140 ppm FAvCL for one hour. Store dry. (Milton) with applicator (breast pump) being reprocessed by TSSU.

INDEX OF METHODS FOR DECONTAMINATION OF EQUIPMENT AND THE ENVIRONMENT.

Equipment/Environment	Method of Decontamination
Catheters	Disposables – Single use
Commodes	Clean with an Actichlor plus solution between every patient. Each commode should be stripped down once a day and cleaned.
Crockery and Cutlery	If not washed in a dishwasher or central washing up area, then wash with hot soapy water & rinse with hot water. Allow to air dry using racking system or use disposable paper towels.
Curtains	Change if soiled with body fluids. Curtain adjacent to patients heavily colonised with MRSA or with exfoliating skin conditions should be changed on

	discharge. Change as part of ward cleaning schedule, every 3 months and after any infected cases. See **"Trust Standardised procedures for Cleaning"**.
Dishcloths	Disposable only or use disposable towels.
Domestic Equipment	Clean at end of shift with Actichlor Plus. Store dry and inverted. See **"Trust Standardised procedures for Cleaning"**.
Drainage Bottles and Tubing	Disposable.
Drains	Clean regularly. Do no use disinfectant unless instructed by Infection Control Team.
Dummies/Pacifiers	Store dry. Wash in hot soapy water and rinse or if visibly soiled, immerse in NaDCC 140 ppm FAvCL for one hour (Milton) at least daily
Endoscopes	Follow manufacturer's instructions. Use an endoscopy cleaner. Rinse with water immediately after use to remove organic matter and debris. Manually clean and test for leaks and blockages in the wash area of the Endoscopy suite. Process through the dedicated endoscope washer disinfector machine. Maintain parameter print out and follow tracking procedure. **Sterilization:** Use Steris System. Must adhere to MDA DB 9607: Decontamination of endoscopes. November 1996. Copies available from Infection Control Team. Rigid endoscopes to be processed in TSSU
Face Masks	Return to TSSU for heat disinfection. New mask per patient.

INDEX OF METHODS FOR DECONTAMINATION OF EQUIPMENT AND THE ENVIRONMENT.

Equipment/Environment	Method of Decontamination
Feeding Bottles and Teats	Use disposables, or clean with hot soapy water, rinse thoroughly and immerse completely in Na DCC 125 ppm FAvC1 Solution.
Floors	Clean as per specification with Actichlor plus
Furniture and Fittings	Damp dust and wash hot soapy water/Actichlor Plus according to specification. If patient is in isolation, clean as above, then disinfect with NaDCC 1,000 ppm FAvC1 solution. Contact time should be 1 minute for routine cleaning and 5 minutes for spillages of blood or other body fluids. Rinse with hot soapy water and dry thoroughly. See **"Trust Standardised procedures for Cleaning"**.
Humidifiers/Nebulisers	Use single use disposable type, renew after 48 hours. Dry thoroughly and store inverted in between drug rounds.
Hoists (metal frame)	Clean with hot soapy water/ decontamination wipes between patients. Disinfect with NaDCC 1,000 ppm FAvC1 solution if used on an infected patient or on a patient in protective isolation.
Incubators	All parts should be cleaned with neutral detergent solution, rinse and dry thoroughly. Incubators used for infected babies should be cleaned as above, then disinfected with NaDCC 1,000 FAvC1 solution. Ensure all disinfectant solution is rinsed off with hot soapy water.
Infusion Stands and Pumps	Stands and Infusion pumps must be wiped with an disinfectant wipe after each use.
Mattresses (plastic covered)	Wash with hot soapy/ decontamination wipes between patients. Rinse and dry thoroughly. Replace if heavily soiled or torn. For patients in isolation follow cleaning with disinfection i.e. NaDCC 1,000ppm FAvc1.
Medicine Trolley	Wash at least weekly with hot soapy water. Ensure spillages are cleaned promptly.

INDEX OF METHODS FOR DECONTAMINATION OF EQUIPMENT AND THE ENVIRONMENT

Equipment/Environment	Method of Decontamination
Mop Buckets	**See "Trust Standardised procedures for Cleaning"**.
Nail Brushes	Single use devices should be used and these disposed of after use.
Nasal / sinus / flexible endoscopes / laryngoscopes	The use of Trisept wipes has been agreed for this trust. However it is the responsibility of the OPD head of department to ensure that staff using this method of disinfection is properly and adequately trained to do so. A record will be maintained of staff who receive training and are considered to be competent in carrying out this task. A matrix will also be maintained so that competent staff can be readily identified who have signed to state that they understand and will follow the documented procedures for this activity
Pillows	Wash with hot soapy water/ decontamination wipes

	between patients. Dispose of pillows soiled with body fluids or from infected patients.
Razors	Plastic: Single use/disposable
Resuscitation Equipment	Use disposable. See Resuscitation Policy.
Hoist Slings (material)	Wash via hospital laundry services when soiled with body fluids or used on a patient in isolation use disposable where available,
Soap Dishes	NOT TO BE USED
Spirometers	Use disposable single use types.
Sputum Containers	Use disposable types only.
Stethoscopes	Wipe bell/ear piece with an alcohol wipe after each use.
Suction Bottles	Use disposable
Syringes	These should now be single use throughout the Trust
Thermometers	Use disposable or electronic. Glass thermometers are not to be used.
Tooth Mugs	Use disposable.
Tonometer prisms	Wash with NaDCC 500 ppm FAvC1 for 10 minutes and rinse with sterile water [(4)]. Or use Tonosafe disposable prisms.
Toys and Books	Select toys that can be washed in hot soapy water and dried thoroughly. Avoid in isolation rooms. Destroy if contaminated.
Trolley's	Wash trolleys with hot soapy water/detergent wipes prior to use. The whole trolley to be cleaned not just the top see **"Trust Standardised procedures for Cleaning"**.
Uniforms	Wear a clean uniform daily. If laundered at home, wash separately from other clothing at 65^{o}C or above. Theatre staff must change out of 'Theatre blues' if leaving the Operating Department and wear outside shoes. No mask or caps to be worn outside theatres. **DO NOT TRAVEL ON PUBLIC TRANSPORT IN UNIFORM OR WEAR IN PUBLIC PLACES.**

Skin/Mucous Membrane Disinfection

There are three principal reasons for removing or reducing the number of micro-organisms present on the skin or mucous membranes. These are to:

1. Remove/destroy potentially pathogenic micro-organisms present on hands of staff (**Hand hygiene).**

2. Treat a carrier or disperser of resistant, virulent or highly communicable strains of bacteria (**Skin/mucous membrane de-colonisation).**

3. Reduce number of micro-organisms prior to invasive procedures (**Skin disinfection).**

1. **Hand hygiene**

Hand washing and hand disinfection must be regarded as one of the main measures in the prevention of the transfer of infection. Hands cannot be sterilized, and agents used to disinfect equipment are too toxic for human skin. Therefore, specially formulated antiseptics and soap are needed for hand washing. Using this knowledge a rational policy for hand washing can be formulated [5] [6].

The following table is not exhaustive but indicates when hands should be washed and will allow staff to assess at ward and departmental level their hand washing needs. See Trusts Hand Hygiene Policy

TYPE	EXAMPLES	HAND WASH AGENTS
Routine	Hands visibly soiled After routine bed making After going to the toilet Before handling food Before preparing oral medication Before starting shift After bed bathing patient	Soap and water.
Antiseptic	After removing protective clothing. Prior to insertion of intravenous lines. Prior to manipulation of intravenous, central and arterial lines. Prior to insertion of urinary catheter. Before/after doing a wound dressing. After leaving isolation room. Before care on immunosuppressed. During an outbreak. Before and after patient contact After handling body fluids. After dealing with soiled linen.	Soap and water. Alcohol gel may be used up to five times if hands are visibly clean.
Surgical	Prior to surgical operations.	Chlorhexidene or povidone-iodine surgical hand wash solution.

Disinfection of Nasal Mucous Membranes

For eradication of methycillin resistant staph. aureous. (MRSA) carriage prior to surgery and eradication of resistant organisms, Naseptin or Bactroban nasal creams are available and should only be used after discussion with a member of the Infection Prevention and Control Team.
*****Refer to Trust MRSA policy.

Treatment and Prophylaxis of staphylococcal skin colonisation.

Eradication of MRSA for Adults: antiseptics to be used at the discretion of the Infection Control Team on an individual patient basis.

Skin Disinfection [(1).]

TYPE	ACTIVITY	AGENT NEEDED	COMMENT
Routine	Injection (not insulin)	No treatment	
Antiseptic	Insertion of intravenous line	70% ISA & chlorhexidine Sanicloth swab	Allow to dry before activity
	Insertion of central/arterial/long lines	Chlorhexidine gluconate 0.5% in ISA or Betadine surgical scrub	Allow to dry before activity
Surgical	Operation	Chlorhexidine gluconate 0.5% in ISA or Betadine surgical scrub	Allow to dry before activity

SEE "CONTROL OF METHICILLIN RESISTANT STAPLYLOCOCCULS AUREUS (MRDSA) CLINICAL CARE PROTOCOL"

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Appendix 1: Trust Decontamination Certificate

DECONTAMINATION CERTIFICATE FOR HEALTH CARE EQUIPMENT PRIOR TO INSPECTION, SERVICING OR REPAIR

To: .....

.....

.

Make and Description of Equipment/Item:.....

ID/Serial/Batch No:. .....

Other Distinguishing Marks: .....

Is this item contaminated?: **Yes** ☐ **No** ☐

If "Yes", what is it contaminated with? ……

…….....

Has this item been decontaminated?: **Yes** ☐ **No** ☐

If "Yes", what was it decontaminated with?……

…….....

Please Note: ALL EQUIPMENT FROM AN ISOLATION WARD/AREA OR KNOWN OR SUSPECTED INFECTED PATIENT MUST BE DECONTAMINATED WITH A HYPOCHLORITE SOLUTION (ACTICHLOR)

Is this item faulty? Yes ☐ **No** ☐

If "Yes", please give details of the fault .....….

.....

Name: ..... **Title**:
.....…….

Signed: ..... **Dept**:
.....……

Date: …….. **Telephone No:** ……..

PLEASE KEEP A COPY IN WARD/DEPARTMENT

Appendix 2: Procedure for decontamination of health care equipment prior to inspection, servicing or repair

BASINGSTOKE AND NORTH HAMPSHIRE NHS FOUNDATION TRUST

Name of Originating Department: **MEDICAL EQUIPMENT**	
Name of Policy: PROCEDURE FOR DECONTAMINATION OF HEALTH CARE EQUIPMENT PRIOR TO INSPECTION, SERVICING OR REPAIR	
Policy No: ICC 14	**Effective Date:** **October 2010**

PROCEDURE FOR DECONTAMINATION OF HEALTH CARE EQUIPMENT PRIOR TO INSPECTION, SERVICING OR REPAIR

DOCUMENT AUTHOR:	**DOCUMENT AUTHORITY:**
Written by: **Senior Medical Equipment Engineer:** NIGEL PARKER	**Chief Executive:** MARY EDWARDS
Signature:	**Signature:**

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APPENDICES

PROCEDURE FOR DECONTAMINATION OF HEALTH CARE EQUIPMENT PRIOR TO INSPECTION, SERVICING OR REPAIR

1. PURPOSE OF PROCEDURE

To ensure that BNHFT employees and contractors providing services to the Trust, are not put at risk when handling items which have been contaminated as a result of use in health care, a laboratory or other Trust facility.

2. GENERAL PRINCIPLES

2.1. Procedures for the protection of Trust employees shall be as stringent as those protecting contractors.

2.2. Whenever a piece of equipment is transferred to another person the person handing it over shall ensure that it is externally clean.

2.3. When a piece of equipment has become contaminated the user shall decontaminate it before transferring it to anyone else or using it on another patient. Where decontamination by the user is not practical the user shall ensure that anyone receiving the item is warned of the contamination and is not put at risk.

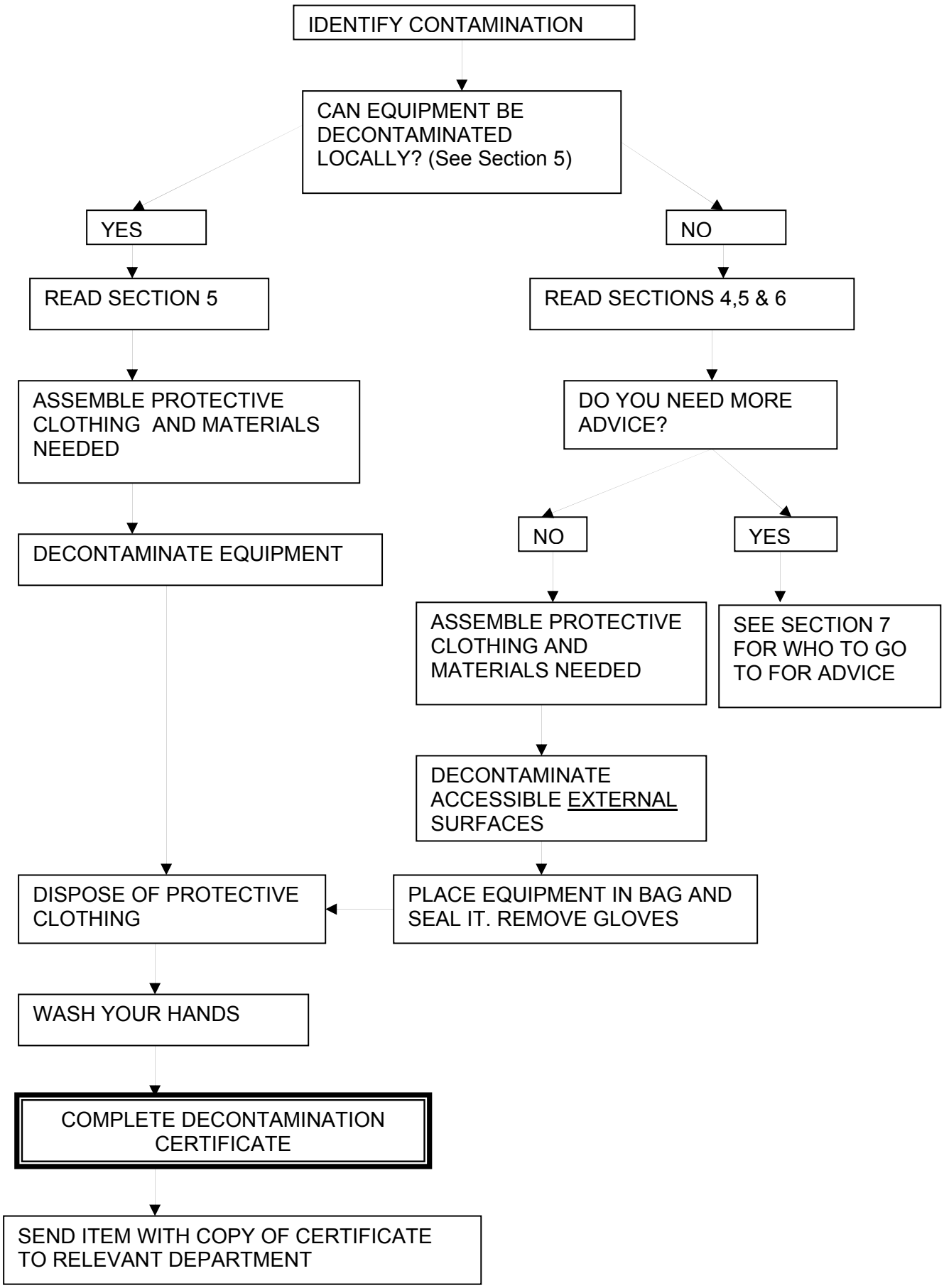
2.4. If any item is transferred to another ward/dept it should be cleaned and a decontamination certificate completed and sent with the equipment.

2.5. Equipment, whether contaminated or not, shall not be handed or sent directly to a contractor by a user. It should be sent to the appropriate hospital service department (either Estates, Medical Equipment Department, Pathology or TSSU) unless a specific service contract is in place.

2.6. Equipment shall not be transferred to a contractor in a contaminated state if it is possible to decontaminate it locally, and all equipment, whether contaminated or not, shall be accompanied by a Decontamination Certificate describing its state of cleanliness when transferred to a contractor.

2.7. When contaminated equipment needs to be transferred out it should be sent in an adequately sealed container that conforms to the Dangerous good act**.** The receiving company must be informed that equipment has not been decontaminated prior to transportation.

3. ACTIONS BY EQUIPMENT USERS



4. ACTIONS BY SERVICING DEPARTMENTS

4.1. Uncontaminated Equipment (i.e. where equipment has been cleaned on ward & a decontamination form completed)

4.1.1. Repair in house, no special precautions.

4.1.2. Transfer to a contractor, ensure that the equipment is externally clean. Forward Decontamination Certificate stating that the item is free of contamination.

4.2. Contaminated Equipment

4.2.1. Repair in house, obtain the information and materials relevant to the contamination specified in the Decontamination Certificate, before disturbing the bag/wrapping. (Methods of dealing with some contaminants are listed in para. 6. If faced with an unlisted one, or if uncertain how to proceed, obtain advice from the appropriate officer from the list in para. 7). Clean every part of the equipment before starting work on any part, observing any instructions on methods or materials which have been given by the equipment maker or supplier.

4.2.2. Transfer to a contractor. Ensure that the plastic bag/wrapper is undamaged and the warning tape securely in place, repack if decontamination has been attempted unsuccessfully. Make a copy of the Decontamination Certificate.

Make arrangements with the contractor who is to handle the contaminated item and send or hand over the original decontamination certificate and retain the copy.

5. DECONTAMINATION DEFINITIONS & METHODS

5.1. Definition of contaminated item: an item is contaminated if it has been or is thought to have been in contact with blood or body fluids or disease causing organisms, i.e.:

Hepatitis virus – A, B or C

Human Immunodeficiency Virus (HIV)

Legionella

Tuberculosis

Causative agents of Viral Haemorrhagic Fevers

MRSA

Clostridium Difficile

Norovirus

Pandemic Flu

Creutzfeldt Jackob Disease (Spongiform Encephalopathy)

5.2. THE INFECTION CONTROL TEAM MUST ALWAYS BE CONSULTED FOR ADVICE ON THE FOLLOWING:

Creutzfeldt Jackob Disease (Spongiform Encephalopathy)

Plague

Rabies

Marburg Virus

Ebola Virus

Lassa Fever

Yellow Fever

and other Viral Haemorrhagic Fevers

5.4 Decontamination Methods

METHOD	TYPE	SUITABLE FOR	EFFECTIVE AGAINST	NOTES
HIGH TEMPERATURE STEAM AUTOCLAVING 134° - 138° C	STERILISATION	Heat and moisture stable equipment	All living micro-organisms	See TSSU WORKING PROCEDURES
SPORICIDAL DISINFECTANTS Parecetic Acid	STERILISATION	Heat liable, but moisture stable equipment, e.g. Endoscopes	- HIV - Hepatitis - T.B. - Bacteria - Spores	- Read manufacturers instructions - For HIV/Hepatitis B/TB use freshly activated solution. - Gloves, apron + goggles needed - Use in well ventilated room - Only effective if equipment first cleaned with detergent and rinsed. - Dispose of protective clothing into yellow bag.
MINI AUTOCLAVES	STERILISATION	Heat and moisture stable instruments	- HIV - Hepatitis - T.B. - Bacteria	- Gloves and apron needed - Only effective if equipment cleaned first with detergent then rinsed. - Dispose of protective clothing into yellow bag.
LOW TEMPERATURE STEAM 73°C	DISINFECTION	Heat and moisture stable equipment	- HIV - Hepatitis - T.B. - Bacteria	- See TSSU WORKING PROCEDURES
HOT WATER AND STEAM 65°c - 100°c e.g. dishwasher, bed pan washer	DISINFECTION	Heat and moisture stable equipment	- HIV - Bacteria	- Items may be hot when removed from washer - More effective if gross soiling removed before washing.

5.4 Decontamination Methods continued .....

METHOD	TYPE	SUITABLE FOR	EFFECTIVE AGAINST	NOTES
GLUTARALDEHYDE DISINFECTANT 2% e.g. Cidex Gigasept	DISINFECTION	Heat liable but moisture stable items e.g. Endoscopes.	- HIV/Hepatitis = immerse for 30 minutes (60 minutes if heavily contaminated) - T.B. = 6 hours - Bacteria = 10 minutes	- Most effective if items first cleaned with detergent then rinsed- Gloves, apron + goggles needed - use in well ventilated room - For HIV/Hepatitis B/TB use freshly activated solution. - Dispose of protective clothing into yellow bag.
CHLORINE RELEASING AGENTS 0.1% e.g. Actichlor Actichlor Plus Milton	DISINFECTION	Non-metallic surfaces contaminated with blood or body fluids. (Not urine or vomit).	- HIV/ Hepatitis = immerse for 30 minutes (60 minutes if heavily contaminated)	- Most effective if items first cleaned with detergent then rinsed. – Gloves, apron and goggles needed.- Rinse off residues well. - Dispose of protective clothing into yellow bag.
SPIRIT 70% - liquid form - Wipes such as Mediwipes PDI Sanicloths (CHG) 2% Chlorohexadine, 70% alcohol	DISINFECTION	Dressing Trolleys Patient skin decontamination and hubs and ports	- Bacteria - Viruses	- Allow spirit to evaporate before using equipment - Gloves must be worn
DETERGENT non-ionic e.g. Hospec Pink powder	CLEANING	Any moisture stable items.	Physically removes most viable micro-organisms and dirt	- Required prior to any disinfection process. - Dilute approximately 0.1% in hot water.

5.5 The following facilities are not available in Basingstoke & North Hampshire Hospitals NHS Foundation Trust:-

Sterilisation by Ethylene Oxide

Sterilisation by low temperature Steam & Formaldehyde

Disinfection by Formaldehyde Cabinets

6. TYPES OF CONTAMINANT AND THEIR CONTAINMENT

6.1. Biological

Place in a clear plastic bag or wrap in clear plastic sheet and seal with "DANGER OF INFECTION" TAPE.

6.2. Chemical/drug

Place in a clear plastic bag or wrap in clear plastic sheet and seal with "CHEMICAL HAZARD" TAPE.

6.3. Radioactive material

No general procedure can be given. In all cases keep all persons away from the contaminated area and obtain guidance from X-ray department.

7. SOURCE OF ADVICE

7.1. Biological

Control of Infection Nurse, X 6774, Bleep 2364

Consultant Microbiologist, X 3312

or if neither of the above is available, Microbiology Bleep Holder via switchboard

7.2. Chemical/Drug

Chief Pharmacist, X 3339

or when not available Drug Information Office, Pharmacy, X 3341

7.3. Radioactive material/X-rays

Superintendent Radiographer, X 3484

Nuclear Medicine, X 3481

Further advice can be obtained from:-

Medicines & Healthcare Regulatory Agency (MHRA)

10-12 Market Towers

1 Nine Elms Lane

London

SW8 5NQ Telephone 020 7084 2000 (weekdays 0900-1700)

020 7210 3000 (other times)

8. BACKGROUND DOCUMENTS

HSG (93) 26

MDA SN 9516

Policy No IC/32/10 Cleaning Disinfection and Sterilisation policy

JOB NO	

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