Shropshire Community Health
NHS Trust

Document Details	
Title	Aseptic Technique Policy
Trust Ref No	766-85344
Local Ref (optional)	
Main points the document covers	This policy details the generic use of aseptic technique in the prevention and control of healthcare associated infections (HCAI)
Who is the document aimed at?	All staff who carry out direct patient care within Shropshire Community Health Trust
Author	Head of Infection Prevention and Control
Approval Process	
Who has been consulted in the development of this policy?	This policy has been developed by the IPC team in consultation with appropriate senior Operations and Quality managers, Locality Clinical Managers, Specialist Nurses, Medicine Management and Public Health England
Approved by (Committee/Director)	Infection Prevention and Control Governance Meeting – notified to Quality and Safety Committee
Approval Date	
Initial Equality Impact Screening	Yes
Full Equality Impact Assessment	No
Lead Director	Executive Director of Nursing and Operations, DIPC
Category	Clinical
Sub Category	Infection Prevention and Control
Review date	31 October 2026
Distribution	
Who the policy will be distributed to	IPC Operational Group Members, IPC Committee members
Method	Electronically to IPC Operational Group Members, IPC Committee members and available to all staff via the Trust website
Keywords	
Document Links	
Required by CQC	Yes

Amendments History		
No	**Date**	**Amendment**
1	August 2017	Update throughout policy
2	July 2020	Update throughout policy
3	November 2021	Added section (6.7) on use of ultrasound gel. Added appendix 1.
4	August 2023	Policy reviewed. No amendments required.

Contents

1 Introduction

An aseptic technique is defined as a means of preventing or minimising the risk of introducing harmful micro-organisms into sterile areas of the body when undertaking clinical procedures in order to prevent contamination of wounds and other susceptible body sites.

Poor asepsis can increase the risk of transmission of micro-organisms to susceptible patients from healthcare workers' hands or equipment which can result in infection.

2 Purpose

The policy is intended to provide guidance on the generic use of aseptic technique and related techniques in the prevention and control of healthcare associated infection (HCAI) and has been written to provide healthcare workers with evidence-based guidance on the application of an aseptic technique when undertaking clinical procedures.

3 Definitions

Term / Abbreviation	Explanation / Definition
ANTT	Aseptic Non-Touch Technique
Asepsis	The absence of bacteria, viruses, and other microorganisms
Aseptic	Free from micro-organisms
CCR	Clinical Case Review
Dehisced	The parting of the sutured lips of a surgical wound
IPA	Isopropyl Alcohol
IPC	Infection Prevention and Control
IV	Intravenous
Key-part	A key-part is the part of the equipment that must remain sterile, such as a syringe hub, and must only contact other key parts or key sites.
Key-site	A key-site is an area such as a wound or IV insertion site that must be protected from contamination with microorganisms.
MCAF	Micro Critical Aseptic Field e.g. caps, covers and hubs of IV devices
Mucous membranes	An epithelial tissue which secretes mucus, and lines many body cavities and tubular organs including the gut and respiratory passages
PIR	Post Infection Review
PPE	Personal Protective Equipment
RCA	Root Cause Analysis
SCHT	Shropshire Community Health NHS Trust
Standard-ANTT	Requires an aseptic field and non-sterile gloves.
Surgical-ANTT	Requires a critical aseptic field and sterile gloves.
VAD	Vascular Access Device

4 Duties

4.1 Responsibility for Infection Prevention and Control (IPC) outside the immediate scope of this policy

For duties and responsibilities for IPC practices outside the specific scope of this policy, please refer to the IPC Arrangements and Responsibilities Policy on the Staff Zone SCHT Staff Zone (shropcom.nhs.uk)

5 Aims of an Aseptic Technique

The aims of an aseptic technique are:

- To reduce the risk of introducing potentially pathogenic micro-organisms into susceptible sites such as wounds, blood or the bladder during medical and nursing procedures.
- To prevent the transfer of potentially pathogenic micro-organisms from one patient to another.
- To prevent the transfer of pathogens from patients to staff and staff to patients.

6 Aseptic Technique

An aseptic technique is a method used to maintain asepsis and should be used during any invasive procedure which by-passes the body's natural defences e.g. skin or mucous membranes. The key-site should not come into contact with any item that is not sterile. Any item in contact with a key-site must be discarded safely or be appropriately decontaminated following the procedure.

Asepsis must be maintained when handling equipment prior to carrying out invasive procedures e.g. maintaining sterility of sterile equipment for wound care dressings and urinary catheters, to ensure aseptic key-parts are only ever in contact with other aseptic key-parts and sites. The underlying principles are:

- To decontaminate hands effectively
- To use appropriate Standard Infection Control Precautions for the procedure
- To prepare the patient
- To create and maintain a sterile field and safe environment
- Never to contaminate key-parts
- To touch non-key-parts with confidence

6.1 Procedure Guidelines: Aseptic Technique

- Environmental cleaning should have ceased at least 30 minutes prior to the procedure in order to reduce and minimise the risk of airborne contamination.
- All movement should be kept to a minimum during the procedure e.g. closure of adjacent windows, discontinuation of fans and minimal movement of healthcare personnel.
- Expose area for the minimum time to avoid contamination and to maintain optimum wound temperature.
- The room and surfaces that may have become contaminated during the procedure should be cleaned between patients e.g. couches and dressing trolleys which should then be labelled with a green decontamination status band or label when cleaned and ready for use.
- Aseptic techniques must be used for procedures such as urethral and supra-pubic catheterisation, insertion of vascular access devices (VADs) and administration of IV medication.

6.2 Aseptic Non-Touch Technique

The main focus of an aseptic non touch technique (ANTT) is to minimise the risk of introduction of micro-organisms by use of a Surgical-ANTT or a Standard-ANTT.

The underlying principles of ANTT are:

- **A**lways decontaminate hands effectively
- **N**ever contaminate key-parts or patient's susceptible site
- **T**ouch non-key parts with confidence
- **T**ake appropriate infection prevention and control precautions

6.2.1 Surgical-ANTT

Surgical-ANTT is used for surgical procedures, large complex wound dressings, urethral indwelling catheter insertion and supra-pubic catheter insertion i.e. when procedures meet one or more of the following criteria:

- They are technically complex, involving extended procedure time (approx. >20 mins)
- Involve large open key-site(s)
- Involve large or numerous key-parts.

The aseptic field needs to be managed 'critically' i.e. only sterile and aseptic equipment can come into contact with the aseptic field. Single use, disposable plastic apron and sterile nitrile gloves should be worn. Medical devices and skin cleansing solutions must be sterile, be checked for damage to packaging and be within expiry date prior to use.

6.2.2 Standard-ANTT

Involves the following steps

Environmental Management:

- Where environmental risks are removed or avoided

Personal and Equipment Decontamination and Protection:

- Hand cleaning
- Non-sterile gloves
- Sterile gloves are worn if key parts must be touched
- Personal Protective Equipment (PPE)
- Scrubbing of IV hubs etc.

Aseptic Field Selection and Management:

Micro Critical Aseptic Fields (MCAFs)

- Use of a disinfected or disposable tray with key parts protected by MCAFs
- Essential but non-sterile equipment may be placed in the main aseptic field
- Non-touch technique is essential at all times

Standard-ANTT is the technique of choice when procedures meet all of the following criteria:

- They are technically simple
- Are short in duration (approximately < 20 minutes)
- Involve small key-sites
- Involve a minimal number of small key-parts.

Therefore, the main aseptic field does not need to be managed 'critically'. A Standard-ANTT will utilise a general aseptic field, non-sterile nitrile gloves, disposable plastic apron and use a non-touch technique to protect key-parts.

Standard-ANTT is to be used for dressing chronic wounds healing by secondary intention e.g. pressure ulcers, leg ulcers, dehisced wounds, which will already be heavily colonised with environmental micro-organisms. It will also be used for simple grazes, endo-tracheal suction, IV medicine administration, and venepuncture for cannulation. For example, when touching a needle and syringe you would handle the syringe but not the needle which is a key-part. If a key-part is to be handled then sterile nitrile gloves must be worn.

Chronic wounds may be irrigated or cleansed using potable/drinking tap water rather than with sterile fluids.

6.3 Hand Hygiene

Effective decontamination of the hands results in significant reduction in carriage of harmful micro-organisms resulting in a reduction in the incidence of preventable infections. For detailed guidance on hand hygiene, refer to Shropshire Community NHS Trust (SCHT) Standard Infection Control Precautions: Hand Hygiene and PPE Policy.

6.4 Personal Protective Equipment (PPE)

Single use nitrile gloves must be worn for invasive procedures, contact with sterile sites, non-intact skin or mucous membranes and all activities where exposure to blood or body fluids can occur. Gloves are single-use items and must be removed and disposed of once the procedure has been completed. Single use sterile nitrile gloves should be worn during aseptic procedures and for contact with sterile sites. Non sterile nitrile gloves should be worn for all other procedures where there is potential for exposure to the same risks.

Gloves are not a substitute for hand washing. Hands must always be decontaminated prior to donning gloves and following their removal.

A single-use, disposable plastic apron or a sterile surgical gown must be worn, as appropriate to the procedure and dependant on the area in which the aseptic technique is undertaken.

For more detailed guidance on the choice of or the use of PPE please refer to SCHT Standard Infection Control Precautions: Hand Hygiene and PPE Policy

6.5 Skin Preparation

Skin preparation, 'skin prep' or 'prepping', is the process by which the skin is cleansed to reduce the number of transient and resident skin bacteria before the procedure. During surgical skin incision and/or insertion of an invasive device, micro-organisms colonising the surface may contaminate the exposed tissues and subsequently cause an infection.

Transient bacteria do not normally colonise the skin and are easily removed. Most wound infections are associated with the patient's own skin flora. The purpose of skin preparation is to remove dirt and debris from the patient's skin, reduce the number of microbes and inhibit regrowth, therefore reducing the risk of Infection.

6.5.1 Chlorhexidine Gluconate 2% in 70% Isopropyl Alcohol

Skin cannot be 'sterilised' but certain chemical preparations reduce microbial levels. 80% of micro-organisms reside in the first five cell layers of the epidermis. 70% isopropyl alcohol (IPA) acts by denaturing proteins and is bactericidal but short acting.

Chlorhexidine 2% acts by disrupting the cell wall of the micro-organism, is bactericidal and has a long duration of action (up to 48 hours). Thus, a combination of IPA and Chlorhexidine is recommended for skin decontamination prior to insertion of invasive devices or surgical incision.

The skin must therefore be decontaminated with a single-use application of Chlorhexidine Gluconate 2% in 70% IPA solution or with Povidone 10% alcoholic solution for those with sensitivity to Chlorhexidine.

All solutions used to prepare skin must be sterile, within the expiry date, should not cause irritation to the skin or be used on broken skin.

For skin decontamination prior to urinary catheterisation, refer to the SCHT Indwelling Catheter Policy.

For skin decontamination prior to VAD insertion refer to the SCHT IV Therapy Policy.

6.5.2 Application

Skin antiseptics should be applied with sufficient friction to ensure deep penetration of the epidermal layers and cracks and fissures of the skin.

2% Chlorhexidine Gluconate in 70% IPA as a topical solution or a wipe should be administered as follows:

- Apply to the skin for 30 seconds using a side to side coverage using a back and forth motion which will penetrate 5 skin layers.
- Leave skin to dry for 30 seconds.
- Do not re-palpate area.

If the skin is broken, single-use sachets of aqueous Chlorhexidine solution 0.05% should be used. This is recommended for cleaning skin but should not be used prior to cannulation or prior to the insertion of any invasive device.

6.5.3 Prevail-Fx®

This is a one-step iodine-based product for when Chlorhexidine Gluconate 2% in 70% IPA solution is not appropriate for use e.g. sensitivity to chlorhexidine. Please see http://www.mhra.gov.uk/home/groups/dts-bs/documents/medicaldevicealert/con197920.pdf%20 for more detailed information.

For further, more comprehensive, information about disinfectants for skin preparation please see the SCHT Cleaning and Disinfection Policy.

6.6 Hair Removal

Hair should not be removed unless absolutely necessary. If hair removal is required then it should be performed immediately before the procedure using sterile single-use clippers. Shaving is strongly discouraged.

6.7 Ultrasound gel

Sterile ultrasound gel must be used for:

- Invasive procedures
- Near or on non-intact skin or invasive device insitu
- Near or on mucous membranes
- During labour when likelihood of a C section or invasive instrumentation

Please see Appendix 1 for the decision tree

6.8 Safe Use and Disposal of Sharps

Sharps used during the procedure must be disposed of by the user immediately after use, at the point of care into a sharps bin. For more detailed guidance on safe use and disposal of sharps refer to the SCHT Prevention and Management of Needlestick Injuries: including Inoculation Incidents and Exposure to Blood Borne Viruses Policy, and the SCHT Waste Management Policy.

Soft waste generated during the procedure e.g. contaminated wound dressings, should be disposed of as per the SCHT Waste Management Policy.

6.9 Decontamination of Equipment

Equipment can act as a vehicle to transfer micro-organisms between patients and staff which may result in infection. Sterile equipment should be used for performing an aseptic technique and may be deemed for single-use or be reusable. Reusable instruments must be decontaminated correctly between each patient use. Refer to the SCHT Decontamination of Reusable Surgical and Dental Instruments Policy incorporating Decontamination of Flexible Nasendoscopes, Trans-vaginal Probes, Sigmoidoscopy Light Sources and Cryo-cautery Equipment Policy.

Reusable plastic trays used for holding equipment during aseptic technique must be decontaminated using disinfectant e.g. Universal Wipes or Tristel Jet Spray before and after use.

6.10 Single Use Equipment

Single use equipment should be used whenever possible.

6.10.1 Symbols and their meanings	
 2018 -06 –30 Use by date, i.e. use by 30th June 2018	 2016 –06 Date of manufacture, i.e. manufactured during June 2016
 Do not re-use, Single use, Use only once	 Batch code

7 Consultation

This policy has been developed by the IPC team in consultation with Consultant Microbiologist and Infection Prevention and Control Doctor; Medicines Management, Tissue Viability Nurses, Wound Healing Service, Continence Specialist Nurses, Clinical Practice Teachers and Infection Prevention and Control Operational Group members.

A total of three weeks consultation period was allowed and comments incorporated as appropriate.

7.1 Approval Process

The IPC Committee will approve this policy and its approval will be notified to the Quality and Safety Committee.

8 Dissemination and Implementation

This policy will be disseminated by the following methods:

- Managers informed via Datix who then confirm they have disseminated to staff as appropriate
- Staff – via Comms and IPC newsletter

- Awareness raising by the IPC team
- Published to the Staff Zone of the Trust website

The web version of this policy is the only version that is maintained. Any printed copies should therefore be viewed as "uncontrolled" and as such, may not necessarily contain the latest updates and amendments. When superseded by another version, it will be archived for evidence in the electronic document library.

8.1 Advice

Individual Services' IPC Link Nurse/Worker act as a resource, role model and are a link between the IPC team and their own clinical area and should be contacted in the first instance if appropriate.

Further advice is readily available from the IPC team or the Consultant Microbiologist via the SaTH switchboard on 01743 261000.

8.2 Training

Managers and service leads must ensure that all staff are familiar with this policy through IPC induction and update undertaken in their area of practice.

In accordance with the Trust mandatory training matrix the IPC team will support/deliver training associated with this policy. Infection prevention and control training detailed in the mandatory training matrix includes elements and techniques for effective hand hygiene, safer sharps handling and disposal and standard precautions. Staff groups requiring this training will be identified within the mandatory training matrix. The systems for planning, advertising and ensuring staff attend are detailed in the Mandatory Training Policy. Staff who fail to attend training will be followed up according to the policy.

Further training needs may be identified through other management routes, including Root Cause Analysis (RCA) reviews, Clinical Case Reviews (CCRs) or Post Infection Reviews (PIRs) following an incident/infection control outbreak or audits findings. By agreement, additional targeted training sessions will be provided by the IPC team.

Competencies should be peer assessed via the SCHT Venepuncture Competencies and SCHT Check to Protect documents (see Associated Documents).

9 Monitoring Compliance

Compliance with this policy will be monitored as follows:

- Hand hygiene will be audited in accordance with the Hand Hygiene Policy and via peer Hand Washing Assessments
- Cleaning standards within Community Hospitals will be monitored in accordance with the National Standards of Healthcare Cleanliness B0271-national-standards-of-healthcare-cleanliness-2021.pdf (england.nhs.uk)
- Environmental and patient equipment cleaning will be monitored as part of local routine cleanliness audits
- Audited locally using the HCAI Prevention audits undertaken by the IPC team and by staff as Self- audits as part of the IPC audit programme
- Additional periodic auditing and self-audits by clinical teams
- The IPC Governance Meeting will monitor compliance of the cleanliness audit scores and the IPC team audit programme

Numbers of staff undertaking IPC training, which includes Standard Infection Control Precautions will be monitored by the Organisational Development and Workforce Department

As appropriate the IPC team will support Services' Leads to undertake IPC CCRs/RCAs and PIRs. Managers and Services' Leads will monitor subsequent service improvement plans and report to the IPC Governance Meeting.

Knowledge gained from CCR/RCA/PIR and IPC audits will be shared with relevant staff groups using a variety of methods such as reports, posters, group sessions and individual feedback.

The IPC team will monitor IPC related incidents reported on the Trust incident reporting system and, liaising with the Risk Manager, advise on appropriate remedial actions to be taken.

10 References

Aseptic Non Touch Technique (ANTT) Core Clinical Guidelines. ANTT Core Clinical Guidelines (2020). ANTT Clinical Guideline Collections for Hospitals and Community Care. http://antt.org/ANTT_Site/core_guidelines.html

Electronic Medicines Compendium (EMC). Chloraprep. CareFusion UK. (2020) https://www.medicines.org.uk/emc/product/6670/smpc

CareFusion U.K. (2016). ChloraPrep: Summary of Product Characteristics. CareFusion U.K. Hampshire Department of Health (2010 updated, 2015) The Health and Social Care Act 2008: Code of Practice for health and adult social care on the prevention and control of infections and related guidance. London. DH Publications.

Fraise A.P and Bradley C (eds) (2009) Ayliffe's, Control of Healthcare-Associated Infection. A Practical Handbook 5th Edition. Hodder Arnold, London.

Infection Prevention Society (IPS) and NHS Improvement (NHSI) (2017). High Impact Interventions. Care Processes to Prevent Infection. 4th. Edition of Saving Lives.

Loveday, H.P., Wilson, J.A., Pratt, R.J., Golsorkhi, M., Tingle, A., Bak, A., Browne, A., Prieto, J., Wilcox, M. (2014) epic3: National Evidence-Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospitals in England. Journal of Hospital Infection 86 (Supplement 1) (2014) S1–S70

MHRA Medical Devices Alert: MDA/2012/075 Issued: 25 October 2012. All medical devices and medicinal products containing chlorhexidine http://www.mhra.gov.uk/home/groups/dts-bs/documents/medicaldevicealert/con197920.pdf%20

National Institute for Clinical Excellence (2012, updated 2017), Infection control: Prevention of healthcare associated infection in primary and community care. London, National Clinical Guideline Centre

Royal Marsden Manual of Clinical and Cancer Nursing Procedures Online https://www.rmmonline.co.uk/manual/c04-sec-0099?resultNumber=0&totalResults=100&start=0&q=aseptic+techniques&resultsPageSize=10&rows=10

National Standards of Healthcare Cleanliness 2021 B0271-national-standards-of-healthcare-cleanliness-2021.pdf (england.nhs.uk)

11 Associated Documents

This policy should be read in conjunction with SCHT's:

- Cleaning and Disinfection Policy
- Decontamination of Reusable Surgical and Dental Instruments Policy incorporating Decontamination of Flexible Nasendoscopes, Trans-vaginal Probes, Sigmoidoscopy Light Sources and Cryo-cautery Equipment
- Indwelling Catheter Policy
- IV Therapy Policy

- Prevention and Management of Needlestick Injuries: including Inoculation Incidents and Exposure to Blood Borne Viruses Policy
- Standard Infection Control Precautions: Hand Hygiene and PPE Policy Waste Management Policy

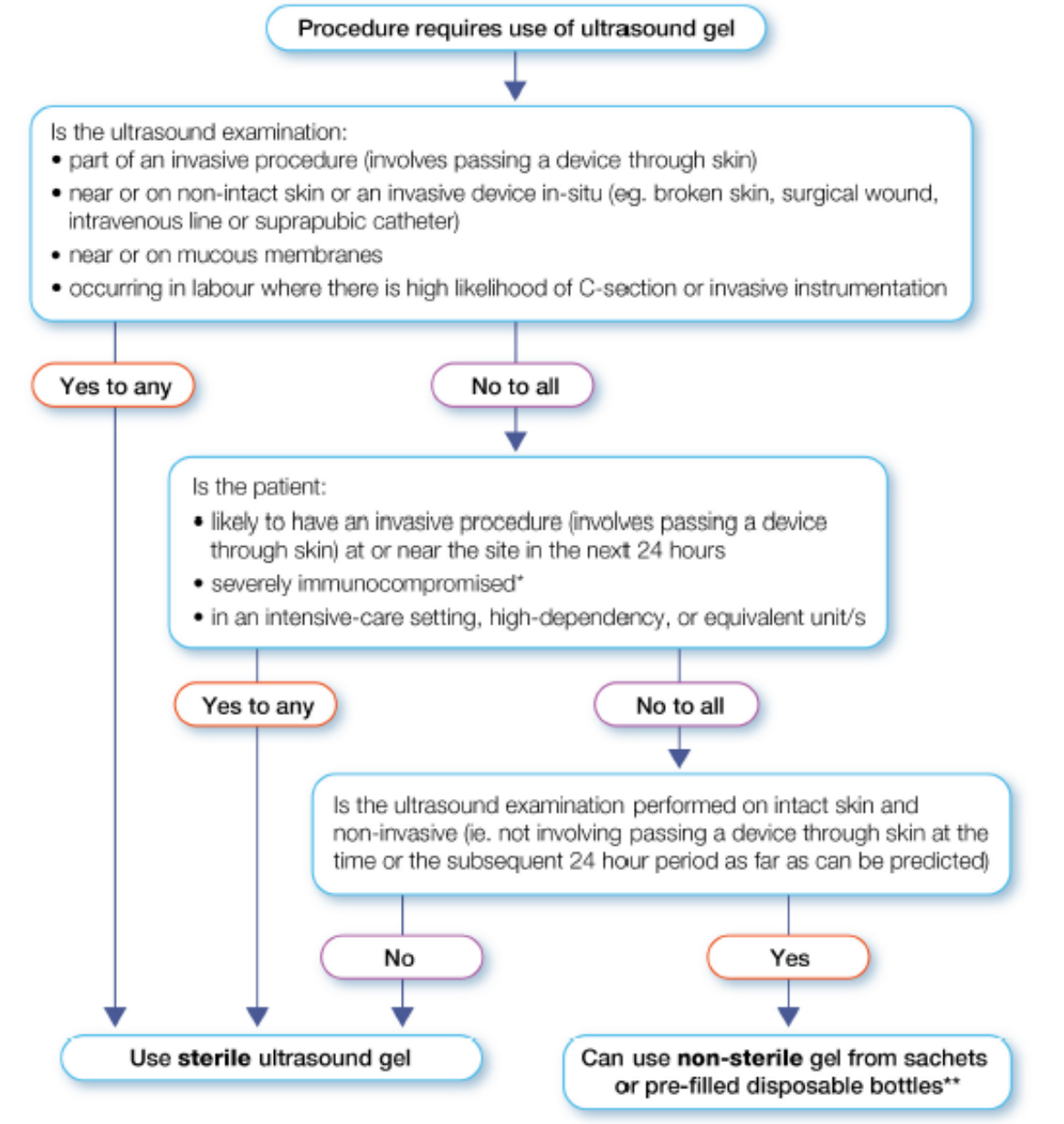
12 Appendix

Appendix 1 – Decision Making Tree

UK Health Security Agency

Good infection prevention practice: using ultrasound gel

Decision tree for gel type to use in various clinical settings/situations



* such as people with conditions which are explained in Appendix 2, this may be guided by a clinical risk assessment

** single use non-sterile ultrasound gel sachets/containers may be preferable in areas where gel is used infrequently

This decision tree is part of UKHSA guidance:
www.gov.uk/government/publications/ultrasound-gel-good-infection-prevention-practice