ASA GUIDELINE: THE SAFE USE AND STORAGE OF ULTRASOUND GEL



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For further information, please contact:

Australasian Sonographers Association Level 2, 93–95 Queen Street Melbourne VIC 3000 Australia

P: +61 3 9585 2996 E: ceo@sonographers.org W: www.sonographers.org Approved by Board – April 2013 Scheduled review – April 2016

Contents

ntroduction	1
Aim	2
Background	2
Definitions	2
Therapeutic Goods Administration (TGA) recommendations	2
ASA recommendations for the safe use and storage of ultrasound gel	3
1. Use of sterile gel	3
2. Use of non-sterile gel	3
3. Use of gel containers and bottles	3
4. Use of gel during patient examination	4
5. Warming of gel	4
6. Storage and discarding of gel	4
Related ASA Guidelines	5
Acknowledgements	5
References	5

Introduction

The Australian Sonographers Association (ASA) is dedicated to guiding the advancement of the sonography profession to ensure the community has access to quality sonographic services. A key strategic objective of the ASA is to promote and advocate for best practice in medical sonography through the development of evidencebased standards and guidelines. The ASA guideline on *The safe use and storage of ultrasound gel* provides sonographers with recommendations on how to minimise the risk of transmitting infection that may occur due to the use of contaminated ultrasound gel.

In the past, contaminated ultrasound gel has been associated with outbreaks of infection in various settings and with various organisms. Implementing a range of infection prevention and hygiene practices in the safe use and storage of ultrasound gel can minimise the risk of microbial growth of microorganisms in gel, and as such, the potential subsequent infection of patients. For more information on how and why the recommendations included in this guideline were developed, refer to the ASA Background Paper. The safe use and storage of ultrasound gel.

The ASA recommends that this guideline be used as a basic foundation for workplace protocols to be developed upon, as well as a guide for individual sonographers in the absence of workplace protocols. It is intended to provide useful tips and best practice recommendations, not rigid standards, on how to minimise the risk of transmitting infection in all sonography departments and sites in which ultrasound gel is used on patients. While this guideline is primarily intended to be used by sonographers, it may also be a useful resource for other medical professions which use ultrasound gel in their dealings with patients.

In the first instance, sonographers should follow their workplace protocols. The level of risk and practicality of implementation associated with each recommendation in this guideline should inform any decisions on how this guideline is adapted to suit the individual circumstances of each workplace. The guideline should be used in conjunction with workplace risk assessments, cost assessments, environmental considerations and other relevant industry standards.

The ASA Background Paper. The safe use and storage of ultrasound gel can be found on the ASA website at: http://www.a-s-a.com.au/cms/?c=136&t=asa-guidelines.

DISCLAIMER

This document aims to provide recommendations based on the best evidence available to the ASA at the time of publication to assist sonographers in their decision-making and development of workplace protocols. Recommendations made are not enforceable standards. The ASA gives no warranty that the information in this document and any online updates on the ASA website are correct or complete. This document is necessarily general so as to be applicable to the whole profession. It is not intended to be a substitute for a healthcare professional's judgement in each case. The ASA shall not be liable for any loss whatsoever whether due to negligence or otherwise arising from the use of or reliance on this document.

The recommendations made in this guideline are intended to be best practice recommendations, not rigid standards, to be appropriately adapted to suit the individual circumstances and level of risk in each workplace. The ASA advises in the first instance: always follow the manufacturer's instructions for use.

Aim

The aim of this guideline is to assist sonographers in minimising the potential risk of transmitting infection due to the use of contaminated ultrasound gel. This guideline provides best practice recommendations for the safe use and storage of ultrasound gel. The recommendations made are necessarily general to be applicable to the profession as a whole, and should be adapted by sonographers so as to be appropriately applicable to the individual circumstances of their workplace. This guideline should be used in conjunction with workplace risk assessments, cost assessments, environmental considerations and other relevant industry standards.

Background

For further information on how and why the recommendations in this guideline were developed, refer to the *ASA Background Paper*. *The safe use and storage of ultrasound gel* found on the ASA website at: http://www.a-s-a.com.au/cms/?c=136&t=asa-guidelines.

Definitions

For the purpose of this guideline, the following definitions apply:

- Dispensing container: used to store ultrasound gel not currently in use (bulk)
- Reusable bottle: used to store ultrasound gel for current use on patient; bottle is refillable once emptied
- Pre-filled disposable bottle: used to store ultrasound gel for current use on patient; bottle is not refillable and is discarded once emptied. It is purchased pre-filled
- Single-use bottle or sachet: used for sterile or non-sterile gel. Bottle or sachet is discarded after single examination is completed, not reusable.

Therapeutic Goods Administration (TGA) recommendations

The TGA has written the following recommendations for health professionals to follow in their use and storage of ultrasound gel:

- Ensure reusable dispenser bottles are completely emptied, thoroughly washed and dried daily/weekly according to your facility's infection control practices
- Clean all reusable equipment according to the manufacturer's instructions
- Do not reuse single-use equipment
- For procedures that require the use of sterile gel, ensure that only unopened containers/sachets labelled 'sterile' are used.

The ASA suggests these TGA recommendations be adopted as the basic minimum standard for sonography departments in minimising the possible risk of transmitting infection due to the use of contaminated ultrasound gel.

ASA recommendations for the safe use and storage of ultrasound gel

The ASA recommendations represent best practice standards, intended to be appropriately adapted to suit individual workplace circumstances.

1. Use of sterile gel

- 1.1 Sterile gel is to be used for all critical procedures, such as invasive examinations that pass a device through tissue, and for all procedures that may involve contact with non-intact skin or open wounds. A sterile probe cover should also be used.
- 1.2 It is highly recommended that sterile gel be used for all semi-critical procedures, such as examinations that may involve contact with mucous membranes (e.g. transrectal or transvaginal examinations).
- 1.3 Sterile gel should be used for examinations that involve critically ill hospitalised neonates, patients with known immunodeficiencies and patients on known immunosuppressive therapy, as they may be more susceptible to infection.
- 1.4 Sterile gel can only be single-use, as once a sterile gel package has been opened it is no longer sterile and therefore cannot be reused.

2. Use of non-sterile gel

- 2.1 The use of non-sterile gel should be limited to low-risk general examinations on intact skin.
- 2.2 If a non-sterile gel is being used on a patient who is on any transmission-based precautions, a single-use bottle or sachet should be used. If the patient is an inpatient, a reusable bottle can be left in the room if repeat procedures are necessary and discarded when isolation of the patient is discontinued. The bottle should not be left in the room for an extended period of time without the user being present.

3. Use of gel containers and bottles

- 3.1 For non-sterile gel, the use of pre-filled disposable bottles to store and dispense ultrasound gel is recommended, to be discarded once emptied.
- 3.2 Reusable dispensing containers and bottles may only be used for non-sterile gel.
- 3.3 When first using a new gel bottle or a newly refilled bottle, the bottle should be dated and it is recommended that unused gel be discarded after one month.
- 3.4 When filling a reusable bottle, ensure the expiry date on the bulk container the ultrasound gel was originally packaged in has not expired (refer also to 6.1).
- 3.5 When filling a reusable bottle, do not touch the opening of either dispensing container or bottle with your bare hands.
- 3.6 Reusable bottles should be filled using a dispensing device, such as a pump.
- 3.7 Bottles should not be 'topped up' (refilled when only partially empty).
- 3.8 Once emptied, reusable dispensing containers or bottles should be washed in warm soapy water or an appropriate disinfectant, rinsed thoroughly and dried prior to refilling.
- 3.9 Discard all dispensing containers or bottles that have cracks or other similar defects. Inspect regularly. Only completely intact dispensing containers and bottles may be reused.

4. Use of gel during patient examination

- 4.1 Ensure there is an adequate amount of gel in the bottle for the duration of the examination prior to commencing. Bottles should not be refilled part way through an examination.
- 4.2 Reusable bottles should be refilled as close as possible to the time of use.
- 4.3 Standard hand hygiene precautions should be adhered to when using gel products. Refer to the ASA Infection Prevention and Control Guidelines for Sonographers: An adapted summary of the Australian Guidelines for the Prevention and Control of Infection in Healthcare, p. 5.
- 4.4 Dispensing containers used to store gel in bulk should not be used to directly distribute gel on to transducers or patients.
- 4.5 Nozzles of bottles should not come in direct contact with a patient, staff or instrumentation.
- 4.6 If the nozzle of the gel bottle comes in direct contact with a patient's skin/tissue, it should be wiped with an appropriate disinfectant wipe.
- 4.7 After every examination, all gel must be removed from the probe and the probe cleaned with an appropriate and compatible disinfectant.
- 4.8 It is recommended that the outside of the gel bottle be wiped with an appropriate disinfectant between patients.
- 4.9 For sites that use gel infrequently, single-use bottles or sachets should be used.

5. Warming of gel

- 5.1 The use of dry heat should be the preferred method for warming gel.
- 5.2 If the device used to warm gel utilises water, bottles should be removed from the warmer as soon as possible and dried immediately.
- 5.3 Warming devices that require manual cleaning should be cleaned regularly as per the manufacturer's instructions, with warm soapy water or an appropriate disinfectant. It is recommended that stand-alone warming devices be cleaned weekly.
- 5.4 If the warming device becomes soiled, clean immediately.

6. Storage and discarding of gel

- 6.1 Gel products should be appropriately labelled with contents, date of opening, and date of expiry.
- 6.2 Gel products should be stored in areas that are dry and protected from potential sources of contamination, such as dust, moisture, insects, rodents, etc.
- 6.3 If evidence of contamination is present or package integrity has been breached, the gel product should be discarded immediately.
- 6.4 Gel products should be rotated when restocking takes place.
- 6.5 Gel holders should be regularly inspected and cleaned with warm soapy water or an appropriate disinfectant.
- 6.6 Strict attention should be paid to expiration dates and any gel that has passed this date should be immediately discarded.

Related ASA Guidelines

ASA Background Paper. The safe use and storage of ultrasound gel (2013).

ASA Guideline on the Disinfection of Intracavity Ultrasound Transducers (2012).

ASA Infection Prevention and Control Guidelines for Sonographers: An adapted summary of the Australian Guidelines for the Prevention and Control of Infection in Healthcare (2012).

These guidelines can be found on the ASA website at: http://www.a-s-a.com.au/cms/?c=136&t=asa-guidelines.

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References

For further information on the summary of evidence and references used in the development of this guideline, please refer to the *ASA Background Paper. The safe use and storage of ultrasound gel.* Available at: http://www.a-s-a.com.au/cms/?c=136&t=asa-guidelines.



Level 2, 93–95 Queen Street Melbourne Victoria 3000, Australia

T: +61 3 9585 2996 E: ceo@a-s-a.com.au w: www.sonographers.org