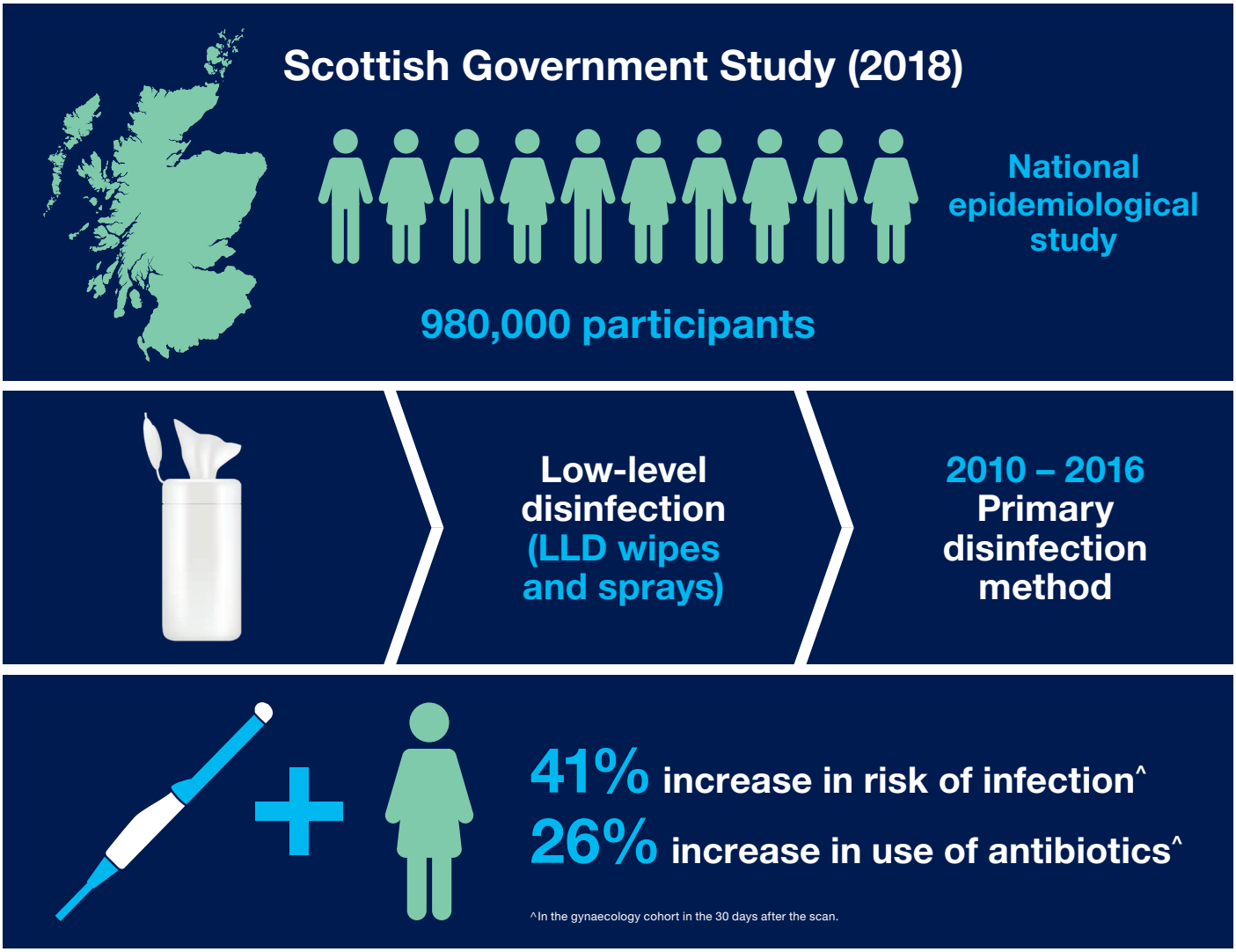
The body of evidence puts trophon® devices on top

trophon® | nanosonics
Infection Prevention. For Life.

Inadequate transvaginal ultrasound probe disinfection leads to increased infection risk

- Studies have found >90% of ultrasound probes are contaminated after patient use, and can harbour serious pathogens like MRSA[1–4]
- Other studies have found low-level disinfection (LLD) leaves probes contaminated with bacteria and viruses, including chlamydia and HPV[1–3,5]
- **A population level study by the Scottish government found gynaecological patients undergoing transvaginal scans were at a 41% increased risk of infection, where LLD was the standard of care[6]**



CONCLUSION: "Hence, failure to comply with existing guidance on [high-level disinfection] of semi-invasive ultrasound probes will continue to result in an unacceptable risk of harm to patients."[6]

HPV: Human papillomavirus. MRSA: Methicillin-resistant *Staphylococcus aureus*.

trophon technology outperforms other disinfection solutions

University Hospital Muenster, Germany. 2016.

Disinfection of transvaginal probes in a clinical setting: comparative performance of automated and manual reprocessing methods[2]

Comparison of disinfection methods of transvaginal ultrasound probes

Automated HLD* (n=120)
7 minute complete cycle
Probe head and handle

VS

LLD Wipes (n=120)
1 minute contact time
Probe head only (reflecting standard practice)

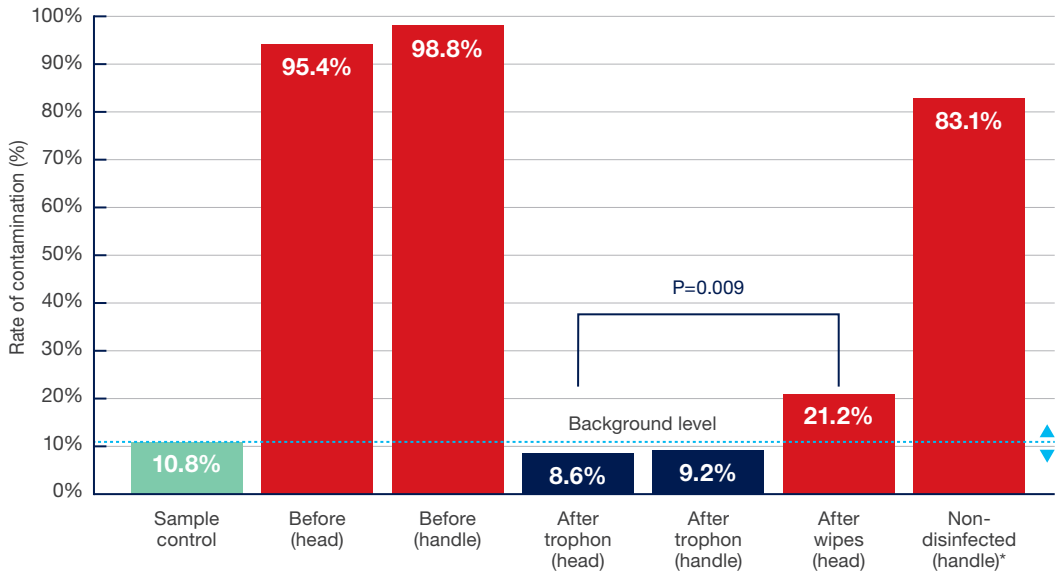
*High level disinfection

trophon device achieved disinfection below background levels on both heads and handles[2]

- Manual disinfection with LLD wipes failed to systematically eliminate bacteria to below background level[2]
- **Only trophon devices successfully eliminated bacteria; a group of organisms that should be inactivated by HLD and LLD.**

Risk of contamination was almost 3X higher when compared with wipes vs trophon (95% CI 1.3-6.3)[2]

Adapted from Buescher DL et al. 2016.
*Handles not disinfected according to standard facility practice.
CI: Confidence Interval.



Considering the data from both studies, only trophon devices

Automated UV-C light system demonstrates no significant difference in efficacy vs LLD wipes

University Hospital Muenster, Germany. 2019.

Disinfection of transvaginal ultrasound probes by UV-C: Clinical evaluation of automated and manual reprocessing methods[3*]

Comparison of disinfection methods of transvaginal ultrasound probes

UV-C System (n=160)
90 second cycle (according to instructions for use)

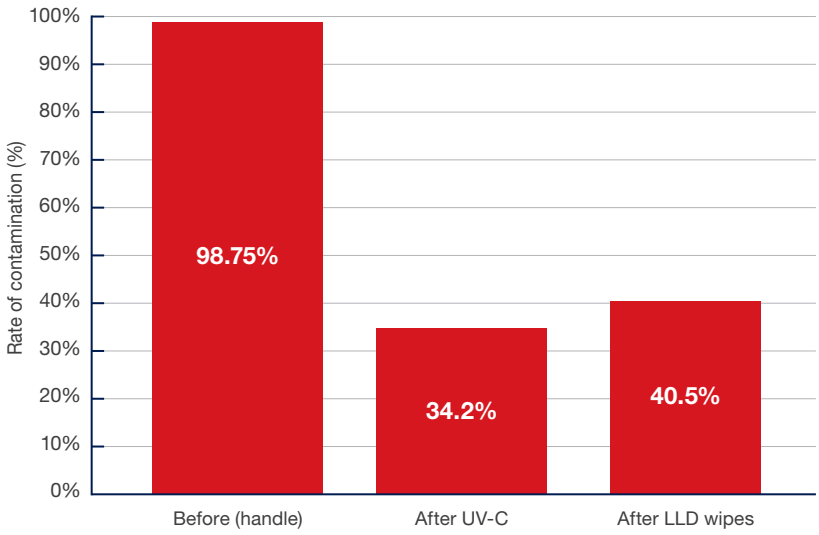
VS

LLD Wipes (n=160)
1 minute contact time (whole probe)

34.2% of probes were still contaminated following disinfection with UV-C and 40.5% with LLD wipes[3]

- Neither were able to systematically remove bacteria from probes and there was no significant difference in terms of effectiveness between UV-C and LLD wipes[3]
- **The UV-C device did not perform HLD effectively and there was no significant difference in efficacy vs LLD wipes.**

This was the first published clinical study to use the UV-C device (AntiGermix AS1) strictly according to its instructions for use and without other disinfectants[3]



Adapted from Schmitz J et al. (2019).
US: Ultrasound.
UV-C: Ultraviolet-C.

systematically demonstrated superior efficacy vs LLD wipes[2,3]

Superior microbial efficacy with trophon technology

trophon technology delivers a unique and fully automated device for high-level disinfection of both surface and endocavitary probes

- FDA-cleared and CE-marked as a high-level disinfectant device
- Demonstrated bactericidal, mycobacterial, fungicidal, virucidal and sporicidal disinfection efficacy in accordance with EN Standards, AOAC International Official methods and ASTM International Standards
- Nebulized H2O2 mist particles reach and disinfect all challenging probe surfaces, including uneven grooves and crevices that can harbor pathogens
- Demonstrated to eliminate an extended range of clinically-relevant pathogens, including those that cause STIs, such as chlamydia, gonorrhoea, herpes, HIV, hepatitis A, B and C as well as HPV, *Clostridium difficile* spores and drug-resistant bacteria (MRSA and VRE), in addition to mandatory testing.

trophon device - the global standard of care in ultrasound probe reprocessing

Enhanced clinical workflows

- Optimized and configurable settings to deliver HLD at any point-of-care
- Minimal reprocessing hands-on time required

Integrated digital traceability solutions

- Simplified workflows support audit-ready compliance
- Standardization to support facility-wide risk management

Ultrasound manufacturers' reprocessing solution of choice

- Industry-leading compatibility program delivers rigorous testing
- Over 1,300 probes from 28 original equipment manufacturers approved and endorsed for trophon devices

AOAC: Association of Official Analytical Chemists. ASTM: American Society for Testing and Materials. CDC: Centre for Disease Control. HIV: Human immunodeficiency virus. HPV: Human papillomavirus. HLD: high-level disinfection. IVF: in vitro fertilisation. MRSA: Methicillin-resistant *Staphylococcus aureus*. RFID: radio-frequency identification. STIs: sexually transmitted infections. VRE: vancomycin-resistant enterococci.

Nanosonics are the experts in ultrasound probe reprocessing

Over 34,000 trophon devices operating across thousands of hospitals in 30+ countries protect 27 million patients each year.[7]

Contact a Nanosonics representative to discuss how trophon devices may be applicable to the different scenarios and workflows at your facility

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References: 1. M'Zali F, et al. PLoS One. 2014;9(4):e93368. 2. Buescher DL, et al. Ultrasound Obstet Gynecol. 2016 47(5): 646-651. 3. Schmitz J, et al. Ultraschall in Med. 2020;41(6):681-687. 4. Oide S, et al. J Med Ultrason (2001) 2019;46(4):475-479. 5. Leroy S, J Hosp Infect. 2013;83(2):99-106. 6. Scott D, et al. Ultrasound 2018;26(3):168-177. 7. Nanosonics Annual Report. December 2024