



World Federation for
Hospital Sterilization Sciences

DGSV

Deutsche Gesellschaft für
Sterilgutversorgung e.V.

WORLD CONFERENCE
CENTER

CONFERENCE

Disinfection Systems of Semi-Critical Probes

Dr Sulisti Holmes

Who's interested in patient safety?



2017
18TH WORLD STERILIZATION CONGRESS

BONN | GERMANY | OCTOBER, 4-7, 2017

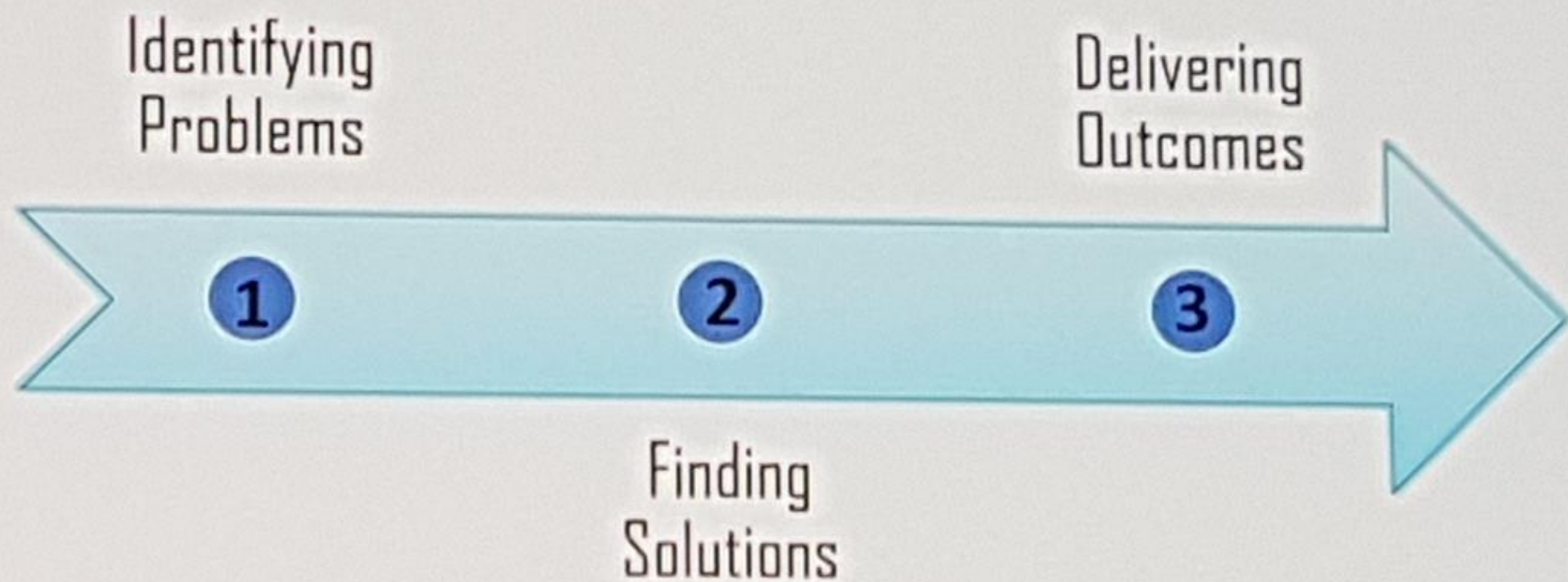
' 8.1.4. At the time of the surgical procedures in this incident, there were

NO NATIONAL GUIDELINES

on TOE (Transoesophageal echocardiographic) probe decontamination.'

Source: Independent External Review Panel Report (<http://www.wales.nhs.uk/sitesplus/863/news/22465>)

Agenda



IDENTIFYING PROBLEMS

News

Alert

Literature

Design

Manufacturer Instructions

Survey

Level of Contaminants

News

Mother dies as 150 heart patients told they are at risk from Hepatitis B in NHS hospital outbreak

National Alert

MHRA

Medical Device Alert

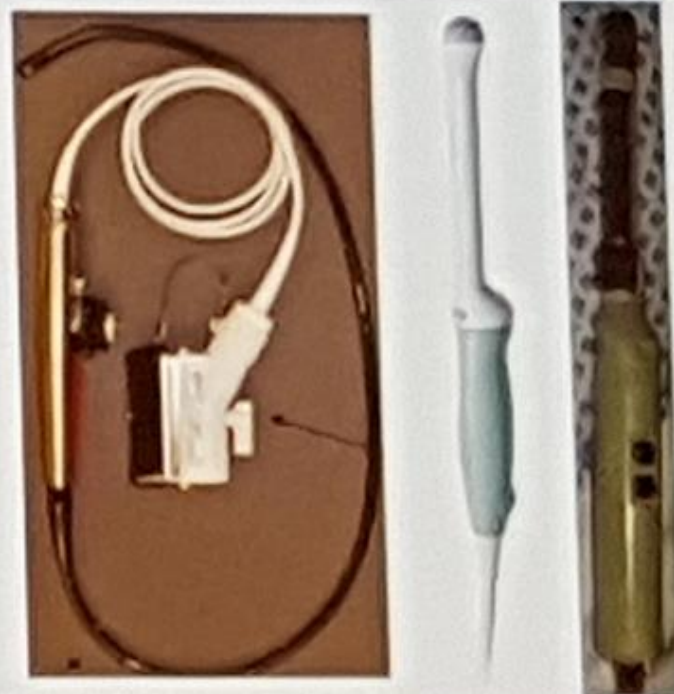
Ref: MDA/2012/037 Issued: 28 June 2012 at 14:00

Device

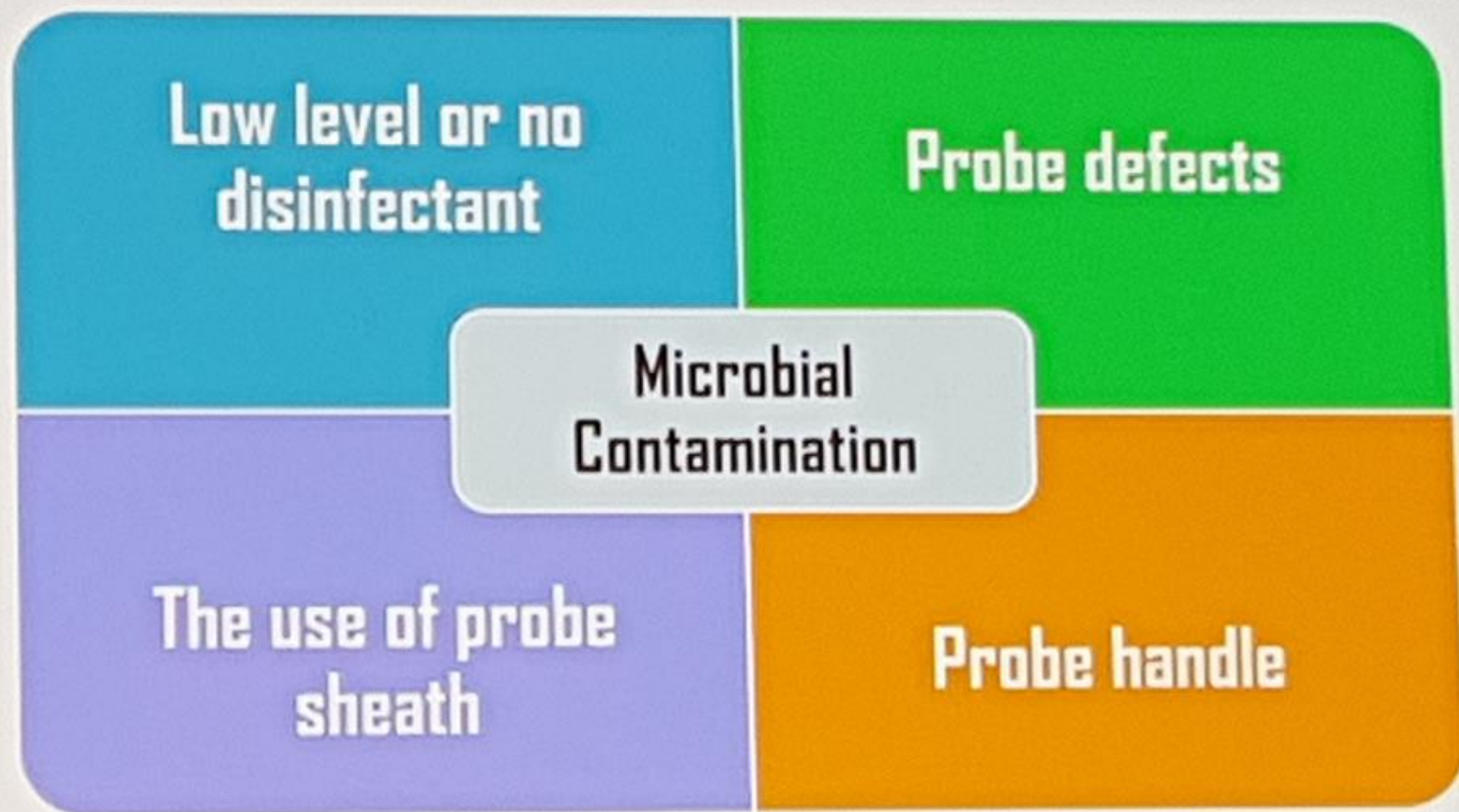
Reusable transoesophageal echocardiography, transvaginal and transrectal ultrasound probes (transducers).

All models.

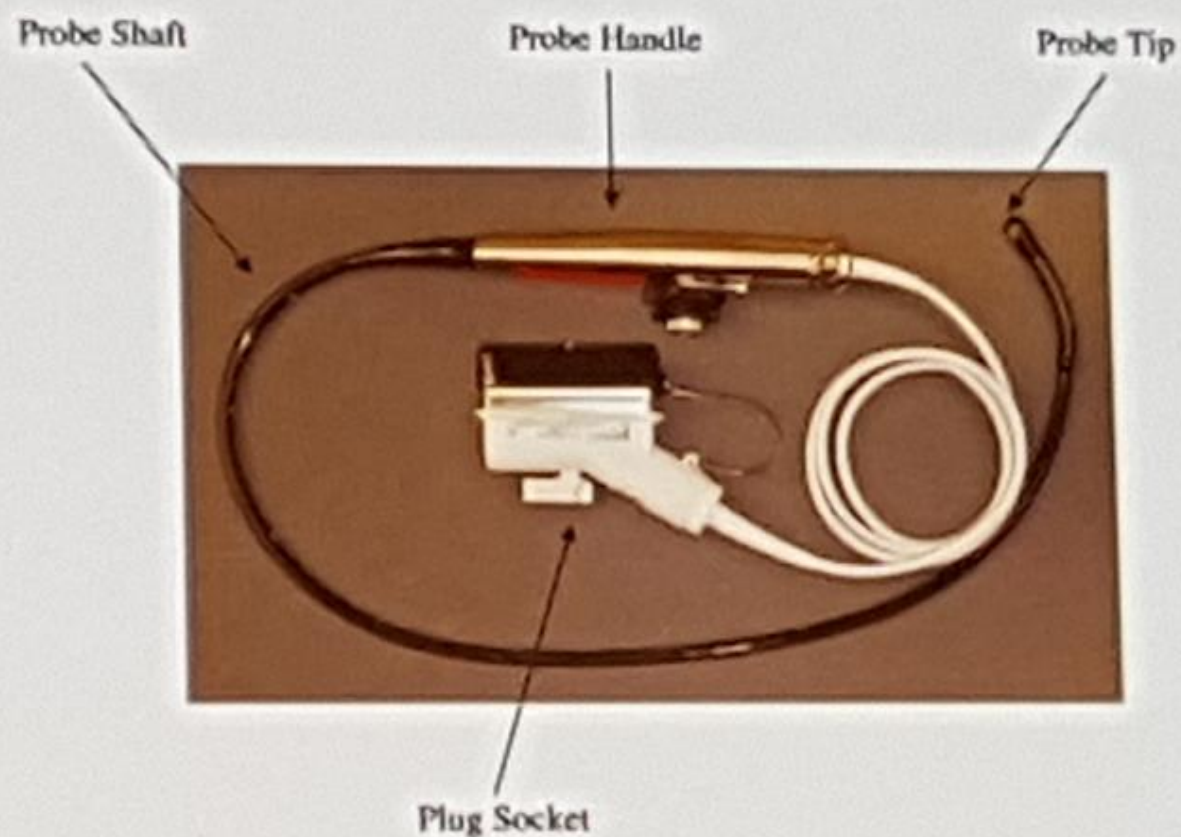
All manufacturers.



Literature



Design



TOE (Transoesophageal echocardiographic) probe

Design & Demands



Transvaginal ultrasound probes (TVUP)
Transrectal ultrasound probes (TRU)

Probe Manufacturer Decontamination Instructions

Variation

Inappropriate
detergents and
disinfectants

Material
compatibility

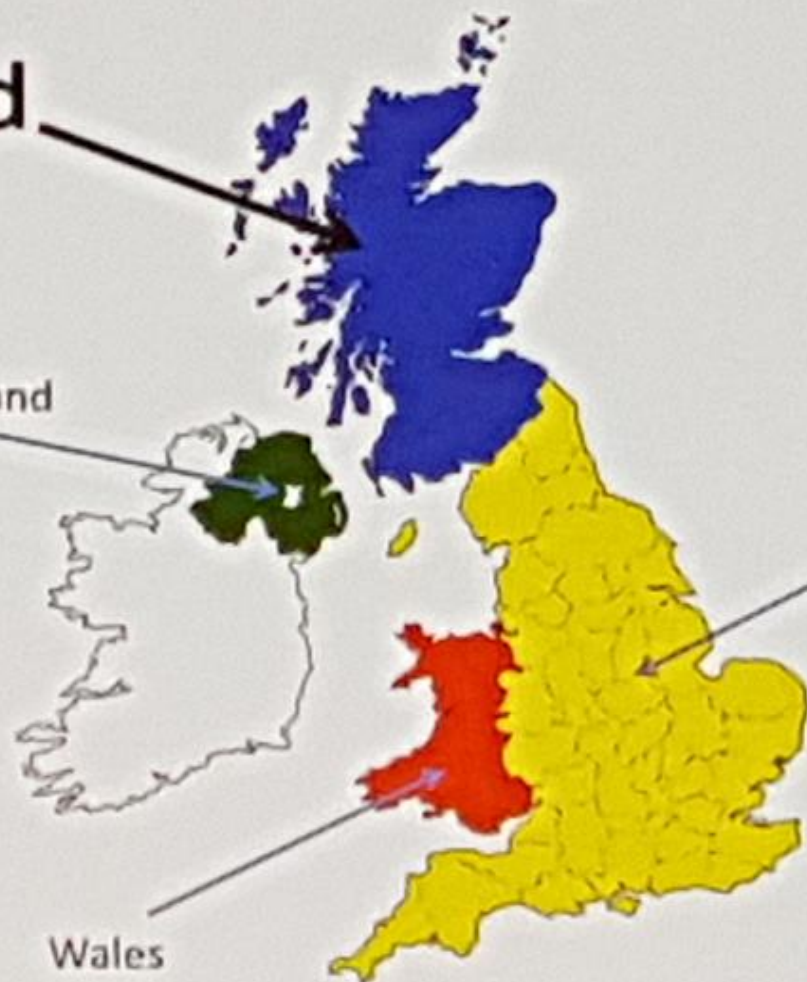
United Kingdom

Scotland

Northern Ireland

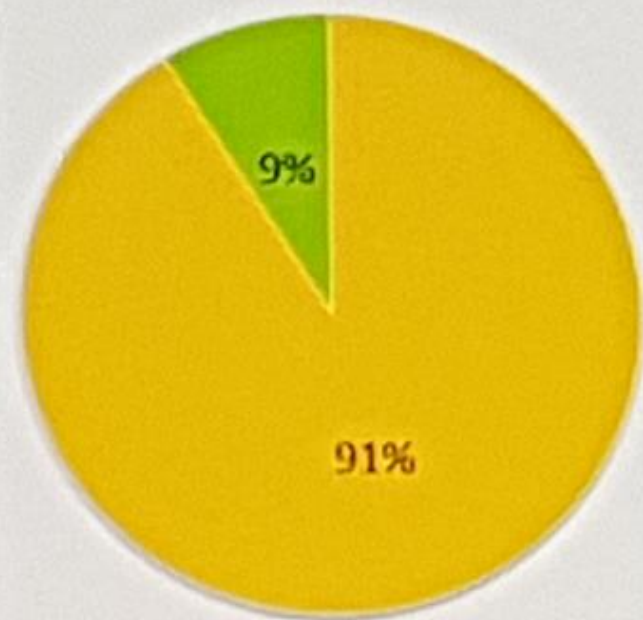
England

Wales



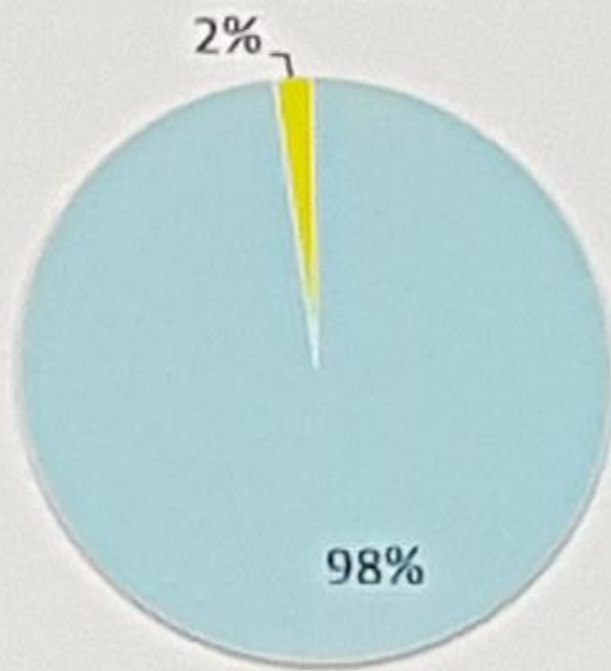
Survey Results

Location of decontamination process



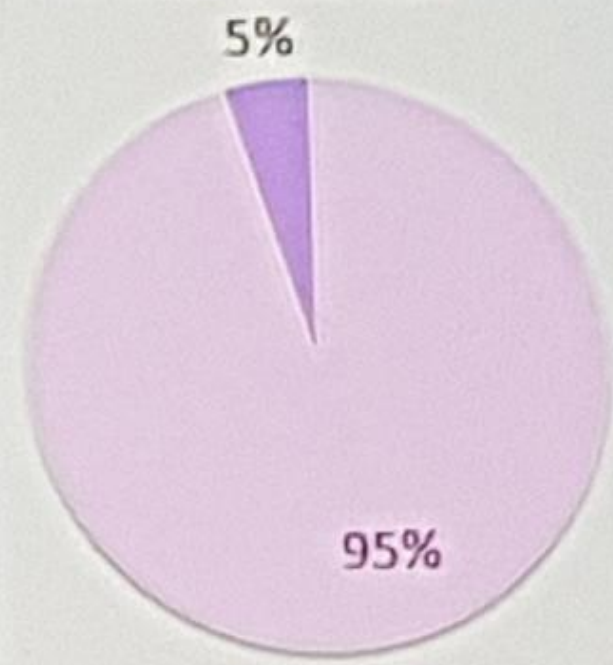
- Clinical area
- Dedicated room

Decontamination staff



- Clinical staff
- Dedicated staff

Awareness of the Alert



- Aware
- Not aware

Survey Results

- **60%** - **No** Standard Operating Procedures
- Most units **did not** follow manufacturer instructions
- **Variation** in decontamination practice
- **Inconsistent** use of sheath

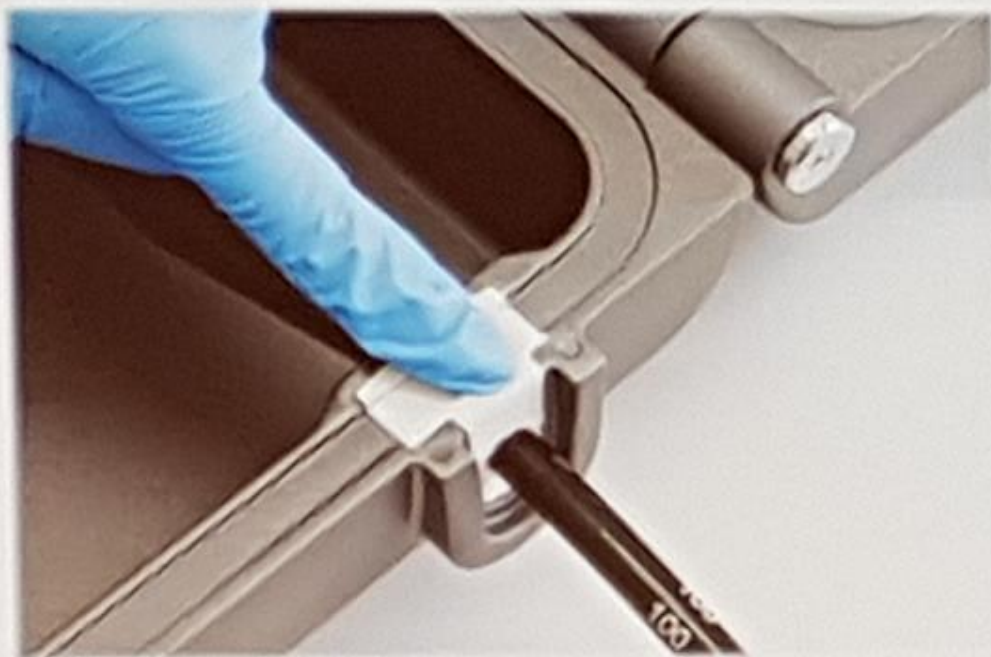
Protein Test of Probe Surface

- After patient use and removal of sheath
- 38 probes, 5 departments, 3 hospitals
- Use Clean Trace (3M™) as protein test kit

26%

Positive

TOE Probes



Compatible cover for non-immersible parts
Endoscope Washer Disinfector

Evaluation of Disinfection Systems for TRUS and TVUS



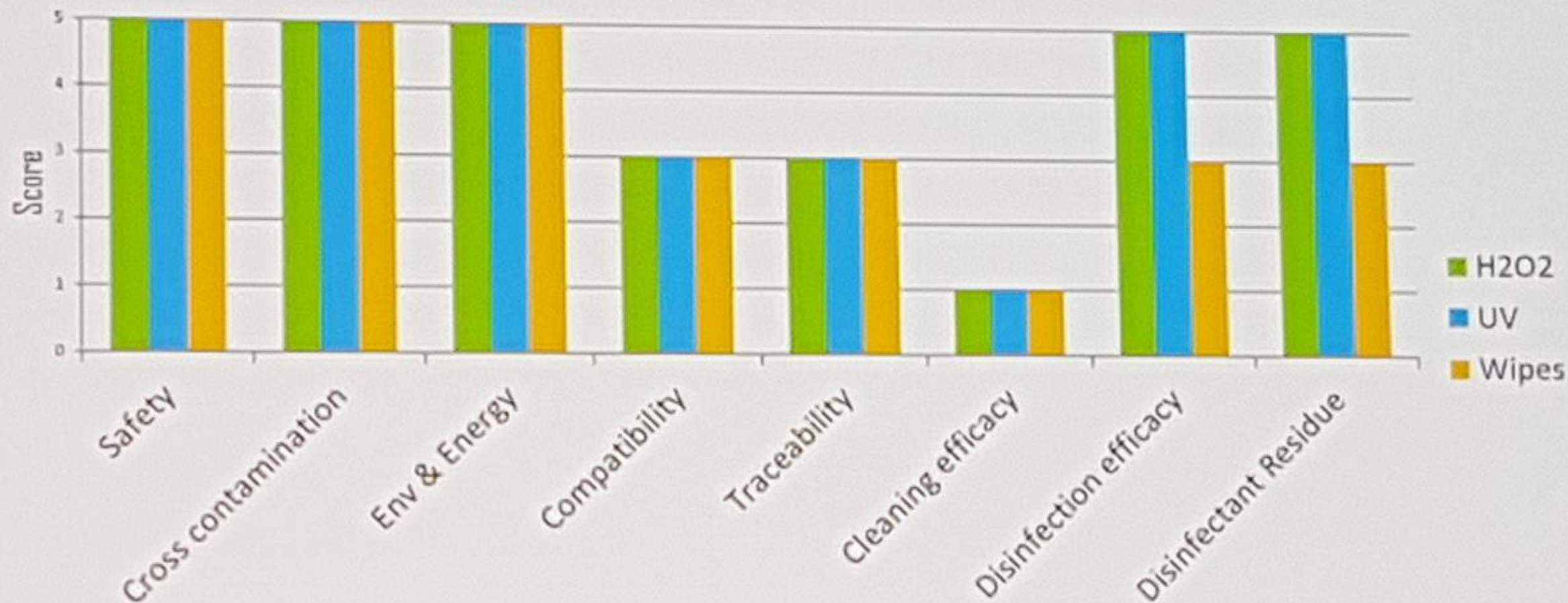
Project team

- Microbiologists
- Infection control team
- Occupational health
- Medical physicist
- Decontamination lead
- Sonographer
- Decontamination engineer

Evaluation Methodology



Assessment Results of Disinfection Systems



User Trial Feedback – Hydrogen Peroxide System

Training

Size

Safety

Ease of use

Reliability

Traceability manual



Adequacy of manual

Cycle time

Replacing the canister

Purging



User trial feedback – Ultraviolet system

Rapid cycle time
Easy to use



Bulky
Poor Power plug



Reliability and confidence
Training
Label supply



User Trial Feedback – Three Wipe System

Training
Speed of use
Small footprint
Manufacturer
instructions



Traceability – not linked
to the hospital IT
system



DELIVERING OUTCOMES

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Solutions

- Decontamination **after each use** despite the use of the sheath
- **TOE** probes – **compatible Endoscope Washer Disinfector**
in dedicated Endoscope Decontamination Units
- **TRUS and TVUS - 3 different disinfection systems** (preferably validated), locally by trained staff. Cleaning is still manual, not ideal but an improvement

NHSScotland Guidance Decontamination of Semi-critical Ultrasound Probes

<http://www.hps.scot.nhs.uk/haic/decontamination/resource/detail.aspx?id=1703>

