

eP273

## ePoster Viewing

### Assessing and decreasing environmental contamination

#### ENDOSCOPY RINSE WATER TESTING: 5 YEARS EXPERIENCE.

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## Objectives

Endoscopes are the most frequently reported medical device associated with cross-infection events. It is considered vital in several European Guidelines to ensure that all critical control points of endoscope reprocessing are subject to quality control. The penultimate stage in endoscope reprocessing is the final rinse with water following terminal disinfection. It is essential that the high level disinfected endoscope is not recontaminated by the reprocessing system. This requires a degree of microbiological and chemical control of the quality of the final rinse water. We report our successful experiences of 5 years of testing, reporting and managing the quality of final rinse water for thermolabile endoscopic devices.

## Methods

Three endoscope reprocessing units (ERUs), each comprising 5 Wassenburg WD440PT endoscope reprocessing units (ERU) supplied by two reverse osmosis (RO) water units (Elga Biopure) reprocessing in total approximately 1,100 endoscopes per week for a full range of clinical endoscopic services were subjected to weekly monitoring and control of final rinse water quality. ERU's are subject to nightly thermal self-disinfection and RO units subject to periodic sanitisation with peracetic acid according to manufacturers instructions. Final rinse water samples are processed periodically for total viable counts (TVC), *Pseudomonas* species, endotoxin, conductivity, environmental mycobacteria and *Legionella* species according to National and Regional guidelines (EN 15883 and Health Protection Scotland).

## Results

During the period 2008-2013 *Pseudomonas spp.*, environmental mycobacteria and *Legionella spp.* have not been isolated from endoscopy rinse water. Conductivity readings have been below 30  $\mu\text{S}\cdot\text{cm}^{-1}$ . Endotoxin levels have fluctuated over the recommended cut-off of 0.25EU/ml with no correlation to TVC results. Trend analysis was undertaken on TVC results to establish alert and action limits. Apart from one ERU supply water becoming contaminated with *Aspergillus spp.*, there have been no interruptions to operational capacity of the ERUs.

## Conclusions

Adoption of quality control principles coupled with appropriate thermal and chemical disinfection of AER systems can result in achieving the recommended microbiological quality of endoscope final rinse water. However, this requires a co-ordinated team approach between the microbiology department, infection control, endoscope unit managers and Estates departments to achieve this degree of success.

