Validating decontamination systems to help reduce hospital-acquired infection

Hospital acquired infections following surgery impact over 250,000 patients and cost the NHS in excess of £1 billion each year.

CASE STUDY

Innovation overview

Ineffective decontamination of surgical instruments is considered a major cause of hospital-acquired infection which affects up to 10% of patients, is responsible for 5,000 deaths and costs the NHS in excess of £1 billion each year. Despite this, there is little data on the efficacy of decontamination systems and a lack of standardised validation practices. The need for independent, standardised monitoring is therefore essential to improve patient outcomes and reduce costs.

This proposal will compare novel Aseptium decontamination technologies and washing systems in use throughout the NHS. Researchers within the University of the Highlands and Islands will perform independent cleaning efficiency analysis to detect surgical contamination products using advanced instrumentation including liquid chromatography-tandem mass spectrometry.

Objectives

- Comparison of Aseptium technologies (uSonic cleaning systems, VeriTest process challenge devices) and existing NHS systems.
- Identification of contaminants resistant to standard washing procedures.

Potential impacts and outcomes

This project will promote collaboration amongst Inverness Campus stakeholders, highlight regional healthcare innovation activity and support Aseptium marketing and business development activities. It may also help determine the efficacy of decontamination systems used by the NHS, potentially resulting in reduced hospital acquired infections.

City-Region Deal deliverables

Supported company for product innovation: Aseptium Ltd.

External partner:

Aseptium Ltd.

aseptium
Innovative Decontamination Solutions

University lead:

Prof Phil Whitfield,
Head of Lipidomics Research