NHS County Durham and Darlington NHS Foundation Trust

Casestudy

TO DO A GOOD JOB YOU NEED GOOD VISIBILITY

Automated Rigid Endoscope Testing

Background

County Durham and Darlington NHS Foundation Trust is a large integrated care provider in the North East of England, employing around 8,000 staff. The Trust serves a population of around 600,000 people. On average the Trust processes 500 scopes per month from a pool of over 270 devices. Rigid Endoscope stock, and its reliability, is vitally important to organisations performing minimally invasive surgery and represents a significant investment for the Trust. The trust needed to understand the condition of the stock and they hoped to be able to fulfil the following objectives;

- **Increase Patient Safety**, by ensuring only rigid endoscopes that were fit for use entered the Operating Theatre environment.
- **Aid budgetary planning**, to identify the scopes that need repairing or replacing and plan ahead with a timeline for scope maintenance, by means of a reliably repeatable testing system.
- **Have complete visibility**, compliancy, predictability and full traceability of the scopes in circulation, enabling better management, reduced operating costs, improved return on investment.

Current situation

The only testing method on rigid endoscopes during processing is a visual check. This is subjective, non-compliant to European MDR and relies only on what the CSSD Technician sees when looking into an endoscope and, how they translate this into a result that is either a 'pass' or 'fail'. Prior to the development and introduction of ScopeControl, there was no set standard to which the functionality of the light fibres could be assessed. If a scope reaches theatres and is not performing adequately, the surgical team usualy attempts to improve illumination by turning the light source up during surgery. This is a short-term fix, but the effect of doing this can damage the fibres irreversibly, meaning a costly new fibre bundle is needed during repair. It also decreases it's lifespan.

Case

An English distributor was invited to perform a trial of Dovideq's ScopeControl at County Durham and Darlington NHS Foundation Trust, to determine whether it could assist in resolving and/or improving key problems and issues associated with the use, processing and inventory.

Decontamination Services Manager, Jim Brown highlighted the key problem areas as;

- No traceability or testing logs for individual rigid scopes.
- No ability of identifying faulty rigid scopes.
- No accurate and single source of data available on the condition of rigid scopes in circulation, inventory types, serial numbers etc.
- Theatre time wasted when a scope is opened and found to be unfit for use, causing last minute procedure changes resulting in additional costs.
- Risk that an open procedure may present patient safety issues.

Installation

ScopeControl was installed in the Sterilization department, where it was temoprarily integrated into the standard operating procedure. Delivery, installation and training took place on the day of installation. ScopeControl was located within the clean room.

Procedure

On-site training was rolled out to technicians on their different shifts throughout the day. The operation of the ScopeControl unit is easy to understand and staff quickly became proficient in its use. The trial commenced at Darlington Memorial Hospital initially, and lasted for a period of 35 days. ScopeControl was then installed at the University of North Durham site for 15 Days. A test takes around 2 minutes and the integrated monitor showed a simple pass/fail upon which the SOP was followed.

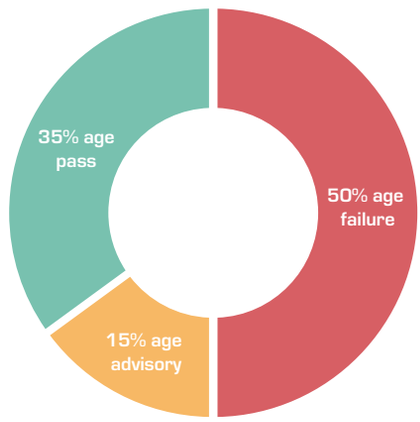
Results

Results

Site	% age failure	% age advisory	% age pass
Darlington	48	16	36
Durham	54	13	33
Both sites combined	50	15	35

Trial numbers

Site	Days trialled	Total tests	No. of indidividual tests	Avg. per day
Darlington	35	316	110	9
Durham	15	113	63	8



The actual live trial results show an average of 50% failure rate across both sites, the actual number of failed tests being 214. We assume that typically 25% of the faulty scopes would have been picked up by SSD staff, according to previous clinical research done in Lyon, and 25% of these failures would have been flagged by clinicians within the theatre environment, this equates to a possible risk of approximately 53 instances of faulty scopes reaching theatre and needing 'back up' or 're-placement' equipment to be made available over the combined trial period of 50 days.

The NHS Trust were able to take a 'snap-shot in time' of their current inventory, which provided valuable information that they used to make significant improvements to the overall quality and cost effectiveness of their rigid endoscope inventory.

The successful completion of the pilot enabled the Trust to fulfil its initial objectives and answer the key problems identified.
In addition, the trial gave a detailed understanding of the costs and potential savings they could make by using ScopeControl within their every-day-workflow.

Benefits

- **"3 days of wasted O.R. time" per year**
  The time taken to find replacement devices within the department (or elsewhere) was estimated to take at the very least 15 minutes per occasion, therefore at least 15 minutes per day could be saved. This equates to more than 12 hours of wasted theatre time over the trial period alone spent on finding replacement scopes, most likely whilst the patient is under anaesthesia.

- **£100,000 per year savings on Theatre time alone**
  Based on a "worst case scenario" based on average Operating Theatre running costs of £1,176 per hour (2016 researched data, details available by request), we can calculate potential cost savings for a typical Trust using ScopeControl to be in excess of £100,000 per annum.

- **Patient safety and vital procurement insights**
  Benefits include patient safety, provision of information to procurement, enabling them to make purchasing decisions based on real time performance data, improved traceability throughout the lifecycle of the device and improvement of overall quality.

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"This is the most significant step forward in the Sterile Services field of the processing of rigid endoscopes since the introduction of Minimal Invasive Surgery. We now have a compliant and tangible method of monitoring scopes through each process cycle, information and data which is retained for auditing, analysis and reporting.
ScopeControl provides a tool for management and maintenance of these high value assets, ensuring that they are maintained in service within an optimal condition and when they return from repair or maintenance that work was undertaken in line with the specification. Money is tight within the NHS, but equipment of this nature ensures our consistency of service, improves productivity and enhances patient safety.

We've bought a system after the pilot and have seen the same benefits long-term."

- Jim Brown, Decontamination Services Manager
County Durham and Darlington NHS Foundation Trust

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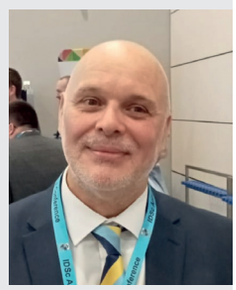

For more info visit: **www.dovideqmedical.com**