



A column by
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Quality & Safety

Safer surgery – track and trace

THIS month we focus on the national solution to safely tracking surgical instrument trays and endoscopes through the decontamination process, linking these devices to the patient on whom they have been used. There is well documented evidence highlighting the importance of effective decontamination processes to prevent the spread of infections. The Medical Devices Directive (93/42/EEC) specifies the minimum standards required in relation to the decontamination of reusable invasive medical devices. Healthcare associated infections are a concern for all hospitals and their patients as surgical site infections can have an impact on both patient safety and hospital costs.

What is surgical track and trace?

The HSE has implemented a national tracking system for re-usable invasive medical instrument sets (trays) and endoscopes in 29 hospitals to date. This solution is currently being rolled out to the remaining Irish hospitals with full implementation scheduled for quarter four, 2017. This is the only known national solution of its kind.

Using the GS1 Individual Asset Identifier, in a barcode format, it uniquely identifies each instrument set or endoscope and allows the set or endoscope to be linked to a patient in theatre. As the set or endoscope passes through the hospital's decontamination unit every step of the decontamination lifecycle is electronically recorded, time stamped and linked to the set or endoscope by scanning the GS1 barcode which is attached to the instrument set or endoscope. When sets or endoscopes move between hospitals, each receiving hospital scans the barcode and imports the details from the previous location. This maintains the identification integrity of the endoscope or individual instrument set and its contents as well as its documentation. Automation of the process ensures accuracy and safety, as well as saving time.

The introduction of a national system reduces the manual processes, increases



Source: Global Standards 1 Ireland (GS1)

Track and trace system for re-usable invasive medical instruments sets and endoscopes:

GSRN (global service relation number), which can identify either a recipient or a provider of the organisation's services. GTIN (global trade item number), which can identify types of products at any packaging level (eg. single use item/implant; drug). GIAI (global individual asset identifier) – one of the two GS1 keys for asset identification. Hospitals can apply a GIAI on any asset to uniquely identify and manage that asset. Hospitals can quickly identify the individual asset, and register relevant data such as its location as well as repair and maintenance activities.

efficiency and creates assurances that an effective decontamination process has occurred.

Benefits and outcomes

Research conducted by Trity College Dublin identified some compelling benefits of implementing a collaborative, interoperable solution such as surgical track and trace. Patient safety benefits include:

- Robust traceability of instrument sets and endoscopes, with audit trails for quality assurance electronically accessible
- Instrument sets and endoscopes can be located quickly in emergency situations
- Warnings are provided if a step is skipped in the decontamination process
- Links between patients, instrument sets/endoscopes and the decontamination process are established.

Efficiency benefits include:

- Ability to analyse staff productivity to improve processes
- Ease of reporting both during and post event
- Automated validation and streamlined processes
- Inventory visibility available in real time
- Automatic generation of set lists/

endoscope handling instructions when the GS1 code is scanned, reducing administrative work

- Improved communication between CDU/ERU and theatre staff, ensuring sets are ready where and when needed.

Get involved

Ask the staff in the operating department, endoscopy department or decontamination and sterilisation unit in your hospital for more information on track and trace. Further phases of the programme will involve single instrument marking, helping to ensure a level of traceability and reporting that would not have been previously possible with a manual or proprietary system of identification.

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About the HSE Quality Improvement Division (QID): the division led by Dr. Philip Crowley was established in January 2015. The mission of the QID team is to provide leadership by working with patients, families and all who work in the health system to innovate and improve quality and safety of care by championing, educating, partnering and demonstrating quality improvement. Our vision is *working in partnership to create safe quality care.*

