

# 31. INVENTORY MANAGEMENT OF O.R. MEDICAL DEVICES USING R.F.I.D. TECHNOLOGY

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## BACKGROUND:

The Gemelli University Hospital (GUS) in Rome, Italy needed to trace costly medical devices (MDs) for each operation, patient, surgeon and surgery unit. It lacked coordination between purchase and usage among different departments, surgical units and operative settings, as well as automated reporting of 'used' products interfaced to the hospital billing system.

## OBJECTIVES:

- Increase patient safety through direct allocation, especially for recalls on implantable devices
- Set up a single point of purchase and supply to manage the huge number of items
- Optimise efficiency and cost control by monitoring inventory, batch and expiry date of products

## METHODS:

The GUS introduced RFID tagging to improve traceability and coordination. It started by tagging all high-value MDs with an RFID tag on inbound material. Products to be used in procedures are inserted into kits and read by RFID readers. Everyday general MDs (tagged) are stored in smart cabinets close to the ORs.

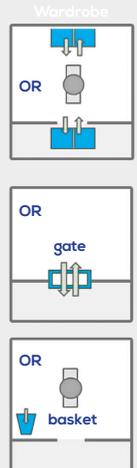
During operating procedures, boxes of both specific and general materials are thrown in electronic bins that read the tag and capture information, allocating it to the patient and sending the used quantity to the hospital ERP system.

In 2015, the project was implemented in 15 out of 53 operating rooms (ORs), in order to give the operators time to learn the technology and check the quality of the results. The project now covers 40 ORs and will soon be implemented in the remaining 13 ORs.

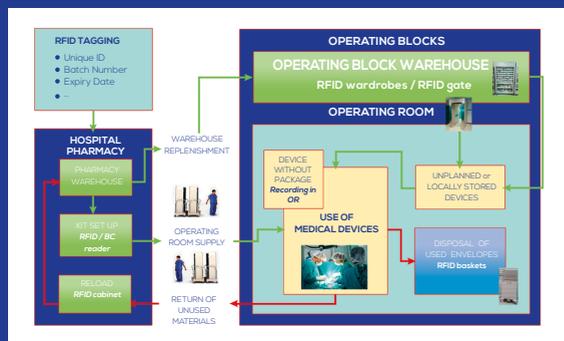


Scan the QR code to watch the video!

Video showing management of medical devices using RFID technology.  
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Integration of RFID technology on different levels.  
Source: Policlinico Universitario Agostino Gemelli



Overview of new inventory management system in operating rooms.  
Source: Policlinico Universitario Agostino Gemelli

## RESULTS:

### What has been achieved?

- ✓ 80% of MD's value is allocated to each single patient
- ✓ 100% reduction of expired products (of MDs in scope)
- ✓ 25-30% reduction of stock out and 15% inventory optimization
- ✓ Increase in quality of inventory monitoring and stock replenishment
- ✓ Increase in the quality of MDs' traceability for security alerts and safety recalls
- ✓ Simplified tasks for clinical staff to trace MDs used during the procedure
- ✓ Automated control processes with user-friendly technology

## TAKE-AWAYS:

### What worked well?

- ✓ Providing on-the-job training on all levels - not only on hard technical features but also on soft skills
- ✓ Adopting a gradual and very flexible approach to changing working methods and mindsets
- ✓ Securing top-down commitment
- ✓ Collecting bottom-up feedback and suggestions of innovative ideas from the shop floor
- ✓ Carrying out in-depth analysis and sharing data to improve visibility, support decisions and correct errors
- ✓ Setting up a multidisciplinary management team to monitor progress and results, as part of a continuous improvement process

