National Track & Trace System
A Collaborative Project – The Irish Experience

WFHSS  Prague  October 17th  2014

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Ireland

- Population over 4.58 million
- Health & Social Services
Outline

- Background – where we were
- Development – how we got there
- Implementation – what we achieved
- Outputs – where we are at
Where we were & what happened 2008 – 2014
National Standards for Safer & Better Healthcare

- Underpinning framework for continuous improvement in the quality and safety of healthcare services

- describe the principles of quality and safety for healthcare settings which can be understood and shared by the public, service users and service providers.

Reference: www.hiqa.ie/standards/health
Knowledgeable patients receiving safe & effective care from skilled professionals in appropriate environments with assessed outcomes

Vision

Strategic Objectives

1. Accountability
2. Communication and consultation
3. Capacity and capability
4. Standardised policies, procedures, protocols and guidelines, etc
5. Monitoring and review arrangements
6. Effective care (see clinical care programmes)
7. Risk and incident management
8. Service improvement
9. Key performance indicators (KPIs)

Quality Standards

Clinical Care Programmes

1. Primary Care
2. Care of the Elderly
3. Palliative Care
4. Radiology
5. Obstetrics and Gynecology
6. Stroke
7. Acute Coronary Syndrome
8. Heart Failure
9. Diabetes
10. COPD
11. Asthma
12. Mental Health
13. Epilepsy
14. Dermatology
15. Neurology
16. Rheumatology
17. Acute Medicine
18. Emergency Medicine
19. Critical Care
20. Surgery

Quality & Safety Programmes

1. Prevention and control of healthcare associated infections
2. Hygiene services
3. Decontamination of reusable invasive medical devices
4. Medical devices management
5. Healthcare records management
6. Integrated discharge planning
7. Medication safety
8. Blood and tissue safety
9. Radiation safety
10. Health & Safety
11. Post mortem services

Interventions

Person-centred care

Effective care

Safe care

Supported by...

Clear accountability arrangements
National Standards for Safer & Better Healthcare

Quality Themes

Capacity and Capability Dimensions
Decontamination Standards & Recommended Practices
HSE Decontamination of RIMD Standards

- Four Technical Standards
  - Suitability of Decontamination facilities
  - Decontamination Equipment
  - Decontamination Process
  - Procedures related to TSEs
All RIMD including Flexible Endoscope sets are traced through the decontamination process to the service user.

Recommended Practices

- Practical Best Practice Application

- Intended to define correct decontamination practice and to promote service user safety.

- Intended to serve as the basis for policy and procedure development in decontamination services in the HSE.
Objective

- provide guidelines for the effective tracking and traceability of RIMD through the decontamination life cycle ensuring that an effective audit trail can be created to service to user use.

Recommended Practices – 7 criterion

- Processing &
- Tracing
Recommended Practices Criteria

- Systems should be in place to record the decontamination process used on RIMD (tracking) and link them with service users on which they have been used (tracing).

- Enable retrospective tracing of RIMD and endoscope history including the service user on which the RIMD was used.

- As a minimum sets of RIMD should be individually identified with a Global Standard1 (GS1) Global Individual Asset Identifier (G1A1) code.
Scope / Procurement

- Business Case & Development of Specification
  - comprehensive traceability system – complete solution

- IT system minimum requirements:
  - Procure and Implement GS1 compliant T&T which will facilitate the replacement of the existing manual system.
  - the initial implementations will enable hospitals to track RIMD sets; supplementaries and endoscopes with associated accessories including loan sets through the decontamination process and trace to the patient / service user.
  - Exclusion:
    - Tracking and Tracing single instruments and single use devices is not within the scope of this project
Project Governance Structure

- Project Sponsors – Information Communication Technology & Acute Services Directorates
- Project Board
- National Project Team
- Local Project Teams – specific terms of reference

- The Project facilitates and supports compliance with the relevant standards and guidelines
- Primary responsibility for compliance
  - Line management structure for acute hospital services.

- Monitoring compliance with the standards
  - The HSE’s Quality and Patient Safety Directorate
Requirements / Funding

- HSE Corporate
  - Hardware & scanners (read 2D matrix)
  - Software GS1 compliant
  - Vendor Project implementation costs

- Each Hospital
  - Cost network infrastructure & power points
  - Their portion of ongoing maintenance & support contract from year 1
Proof of Concept – reflect complex nature of implementation

Full Trace and Trace Solution included
  ◦ Track and Trace System
  ◦ Independent Monitoring System
  ◦ Link to a Medical Standard 1 server
  ◦ Global Standard 1: Unique identifier on instrument sets / trays
  ◦ Link to hospitals Patient Administrative Systems

Rolled out to Seven HSE & HSE funded hospital Hospitals – Central Decontamination Units
Phase Two: 2013 /14

- 8 Central Decontamination Units &
- 27 Endoscopy Reprocessing Units

Phase Three – 2015

- Request for approval Depart. of Finance
  - 10 ERUs
  - plus a large number ERUs proposed

- Under Review Dept of Finance
Overview: Multiple Systems – Seamless Operation
Innovative Traceability in Healthcare

- Effective traceability of RIMD & flexible endoscopes during reprocessing cycle
- Reduced manual effort and increased efficiency due to automation
- Increased inventory management – better stock control & visibility
- Increased traceability from theatre & endoscopy unit through reprocessing
- Improved workflow through automation/scanning
- Process to manage & share loan sets much more efficient and effective
Implementation Costs

- HSE Costs: Year One €59k Year Two €12.5k

- Hospital Setup cost: average €43k
  - Local project manager
  - Enabling works
  - Hard ward – PCs
  - Calibration Costs – IMS
  - Miscellaneous

- Ongoing maintenance: €7.5k p.a.

- Return: 17% increase in workload with less staff
Scanning Station
Management of Lists

Before

After
Link: Patient – container– RIMD– process

- RIMD to container
- Container to process
- Container to Patient

RIMD/ Endoscope Labels
Manual Check
Process Log After

Electronic & Legible
Post–event – Can be retrieved at the touch of a button
Data logger linked to Tracking System
Steam Sterilizer Cycle Log

- Before
- After

Paper based records are liable to deterioration over time. Can be difficult to find

Electronic Post-event – Can be retrieved at the touch of a button
Electronic
• Post-event – Can be retrieved at the touch of a button
• Linked to instrument tracking system
Loan Sets – The Big Challenge!!

- Shared among hospitals (contents always changing)
- Large number of sets in a kit
AIM – HSE & IDI

- Providers to publish the Registry Catalogue items in a secure web based data pool
  - e.g. checklists of instruments, reprocessing instructions and decontamination certificates.
- Providers to adopt the GS1 coding system.
- Benefits
  - information accessed when the GS1 barcodes of the loan RIMD/Endoscope sets are scanned at the hospital
  - tracking system populated automatically.
  - reduce the burden of paperwork involved in loaning
  - increase the speed, efficiency and accuracy involved in the reprocessing of such RIMD/endoscope,
  - ultimately leading to increased efficiency and improved patient care.
**Loan Sets Lists**

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<th>Description</th>
<th>Code</th>
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**Electronic list**

- Screw Holding Forceps
- Bending Cutting Pliers
- Additional Instruments:
  - Sharp Hook
- Reduction Forceps with Points
- Holding Forceps with Swivel Hook
- Small Reduction Forceps
- Reduction Forceps
- Small Bone Lever
- Small Bone Lever
- Periosteal Elevator
- Double Guide in Tray
- Drill Locking Sleeve
- Compact Hand 1.5 Titanium Implants & Instruments
- Countersink
- Drill Bit 1.15mm
- Drill Bit 1.5mm
- Screwdriver Shaft and Holding Sleeve
- Double Drill Guide
- Compact Hand 2.0 LCP Titanium Implants & Instruments
- Top Tray:
  - Countersink
  - Drill Bit Short 1.5mm
  - Drill Bit Long 1.5mm
  - Drill Bit 2.0mm
  - Screwdriver Shaft Star Drive Short
- Bottom Tray:
  - Universal Drill Guide
  - Screwdriver Shaft Star Drive & Holding Sleeve
  - LCP Drill Sleeve
  - LCP Bending Pin

Place a tick in the box

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No certainty that list matched tray contents

Fully Legible, Up to date, – pulled from MS1 database just by scanning the tray
Loan Set Tracking in Theatres

### Document List Report

<table>
<thead>
<tr>
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**Number Of Items:** 3

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</table>

**Number Of Items:** 1

**Total Items:** 4
Scan Unique Code on Instrument Set: this pulls all the information for the loan set, from the cloud and into the tracking system.

CDU/ERU team can proceed with processing.

Before – CDU/ERU team have to: re-enter and check all the data relating to the loan set. *time consuming and error prone.*
Key Benefits

- Enables standard with foundations to be put in place using a common approach
- Robust traceability (links patient to the instrument set and the decontamination process)
- Easier and safer to share loan RIMD/Endoscopes
- Effective Patient recall management
- Instrument sets can be located quickly
- Warnings provided if a step is skipped
- Improved workflow, communication and reporting
- Inventory visibility available in real time
- Reduction in administrative paper work
- Reduction in non-conformance
IDI delivered education and training to inform, support and enable its members to implement the initiative.

The IDI collaborated with the HSE and actively influenced and lobbied Loan Set suppliers to embrace GS1 identification & bar-coding.
Role of Manufacturers / Users

- Real benefits are when manufacturers start to mark their own products

- De Puy Synthes are the first in Ireland to put GS1 codes on their loan set trays
  - Need more Manufacturers to follow this lead!
  - Others coming on board

- Hospitals users to lobby Manufacturers

- Include requirement in Procurement specifications / Service Level Agreements
Next Steps

- Phase 2 – continue implementation
- Phase 3 – Endoscope Tracking and greater links between machines and information system
  - Trial scheduled to commence Nov 2014
- Single Use Medical Device (prosthesis / implants) Tracking
- Independent Monitoring in more sites and
- Maximize efficiency in inventory control and management within hospitals and intra HSE hospitals
The Future for increased Patient Safety

- Future Proof Solution Paramount
- Loan set providers are being encouraged to join the programme
- GS1 Ireland is working with Private hospitals to join the programme
- Further phases will involve single instrument marking
- Solution supports shared services model and formation of Hospital Groups
Acknowlegdments / Stakeholders

- Pauline Biggane HSE ICT Directorate Kilkenny
- Joy Markey Former HSE National Decontamination Lead
- Slainte Healthcare
- Alana McMahon Trinity College Dublin
- Alan Gormley GSI Ireland
- Simon Jackson MSI
- FingerPrint
- De Puy Synthes and
- Irish Power and Process (IP&P).
Go raibh maith agat
Děkuji

Thank you for your attention