Disclaimer

• Getinge North America T-DOC Product Manager for Getinge’s T-DOC instrument & asset management system

• Manage the US and Canada T-DOC Implementation Team

• Presentation will be generic but will use Getinge’s system to show examples of functionality

Session Overview

Five Objectives within:

• Why Consider the Use of a Tracking System
• Tracking System Fundamentals
Why Consider the Use of a Tracking System

- Alerts for proper decontamination procedures
- Packing steps using multimedia (pictures, video, voice)
- Prevent skipped steps
- Record missing instruments
- Prevent staff from assembling sets untrained for
- Ability to record non-conformance, i.e. sharps
- Alerts if BI is needed and forgotten before starting sterilizer
- Alert if sterilizer ran different load than scanned or cycle incurred failure

Alerts if item is in recall status, in production, at patient

- Stop trays in their tracks
- Recalls on incorrect loads, BIs
- Visible and audible alerts
- Reports for identifying current tray locations
Why Track?  
Quality Assurance & Patient Safety

- Minimize mislabeling
- Minimize sterilization issues
- Maximize accuracy in data

Why Track?  
Quality Assurance & Patient Safety

- Track what is happening live in all areas
- Locate things quickly

Reporting capability:
- Production
- Staff productivity
- Non-conformance
- Sterilizer and washer data
- Ordered items
- Recalls
- Cost, sales prices, uses
- Invoice basis
- Turnaround time
- Stock inventory levels
- Missing instrumentation
- More...

Information for managing production, procurement, and productivity
Why Track?  
More Reasons

- Reduce operation delays and cancellations
- Reduce time searching for trays
- Improve Inter- and Intra-departmental communications
- Avoid unnecessary repairs
- Increase satisfaction and confirmation of a job well done

Questions so far?

Session Overview

- Why Consider the Use of a Tracking System
- Tracking System Fundamentals
Tracking System Fundamentals

- What can you track?
- How do you track?
- Where do you track?
- When do you track?
- Why track? (previous section)
- (Not covering Who do you track...)

What can you track and how?
Trays, Mobile Equipment, Consumables

1D or Linear barcode
(from Manufacturer or create your Own)

2D Data Matrix Codes

RFID (Radio Frequency ID)

What can you track and how?
Single Instruments, Endoscopes

2D Data Matrix Codes

Dot Peen

RFID
What can you track and how?

• What do you want to track?
• What kind of labeling or marking are you willing to perform or purchase?
• How much in the way of time and resources do you have?
• Trays/other or Single Instruments
• 1D, 2D, RFID
• Vendor marking?
• Limited or not

Where do you track and when?

Workflow

Decisions to make

• Corded Scanner
• Cordless Scanner
• PDA with WiFi
• Radio Receiver
Where do you track and when?

Workflow

Batch registration & washer process logging

Return of used items

Upon Return:

- Indicate hand washing or special handling equipment
- Alert staff to priority items based on inventory or needs lists
- Log errors like mishandled sharps, broken instruments, gross debris

Decontamination

Basics:

- Items registered and linked to their respective washing processes
- Any discrepancies between the program scanned and the program required can be displayed to the user
- Load balancing between washers
- Capture costs of washing
Where do you track and when?

Decontamination

- Cycle contents
- Cycle completion
- Ensure correct parameters
- Record cycle errors
- Record TOSI tests
- AAMI Documentation
- Note: Often the ability to connect to other equipment

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Where do you track and when?

Decontamination / Endo

- Record reprocessing information
- Cleaning instructions and ensure steps are followed

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Where do you track and when?

Workflow

- Checking, packing & quality control
- Batch registration & washer process logging
- Return of used items

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Basics:
- On-screen assembly
- Prevent incomplete trays leaving the department
- Easily identify missing instruments; labels with missing instrument information

Where do you track and when?
Prep and Pack

Print countsheets & Bar code Labels

Where do you track and when?
Prep and Pack

Pictures
Instructional Video

Verbal instructions
• Alerts and warnings for complex/special instrumentation
• Alerts and warnings for proper maintenance and assembly
• Alerts to accurately process end of life items

Manufacturer Information
• Instructions for Use
• Direct access to documents and online content
• Connect to sites like oneSOURCE

• Identify loan trays
• Record vendor pick up and drop off
• Record costs of vendor trays
• Record all other processing data
Where do you track and when?
Prep and Pack

• Identify repair vendors
• Track costs of repairs
• Track duration and estimated duration
• Communication around repairs

Where do you track and when?
Prep and Pack

• Send staff messages
  • Equipment faults
  • Loan tray arrivals
  • Load issues
  • New policies
  • General alerts
• Prioritize messages
  • Text, emails

Where do you track and when?
Prep and Pack

• Prioritize trays based on need or request
Questions so far?

Where do you track and when?

Workflow

- Batch registration & Sterilizer process logging
- Checking, packing & quality control
- Batch registration & washer process logging
- Return of used items

Basics:
- Items are registered and linked to their respective sterilization processes
- Any discrepancies between the program scanned and the program required are displayed to the user
- All process parameters are documented and stored
- Note: Often the ability to connect to, or interface with, various equipment
Where do you track and when?

**Sterilization**

- Cycle contents
- Cycle completion
- Ensure correct parameters
- Record cycle errors
- Alert when Sterrad/ETO item mistakenly goes into a steam cycle
- JCAHO Documentation

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**Additional:**

- Record sterilizer cycle
- Alert when a Biological Indicator is required
- Control & LOT numbers
- Identify incubator usage
- Prevent incorrect incubator usage
- Block use of trays if BI not approved
- Connect to actual incubator

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**Workflow**

Batch registration & Sterilizer process logging

Stock management

Checking, packing & quality control

Return of used items

Batch registration & washer process logging
Basics:
- After load approval - sterile goods placed in sterile stock/storage
- Trays and instruments may be scanned to actual stock aisle, cart or specific bin

Additional:
- Minimize manual counts
- Automatic re-order
- Track backorders
- Manage instruments, consumables, implants
- Auto-deplete based on usage

Where do you track and when?
- Create purchase orders (to materials management)
- Create customer orders (to hospital locations)
- Easy stock inventory
Where do you track and when?

**Storage**

- Identify current inventory level
- Identify current inventory cost

<table>
<thead>
<tr>
<th>Stock contents</th>
<th>HS Main stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Description</td>
</tr>
<tr>
<td>123456</td>
<td>Nails, screws</td>
</tr>
<tr>
<td>12345690</td>
<td>Fasteners</td>
</tr>
<tr>
<td>9876543210</td>
<td>Bolts</td>
</tr>
</tbody>
</table>

Where do you track and when?

**Workflow**

- Batch registration & Sterilizer process logging
- Checking, packing & quality control
- Stock management
- Preference Cards

Where do you track and when?

**Ordering**

- Prior to surgery - instruments, implants and disposables are ordered
- The availability and location of ordered items can be determined, and trays and case carts are prepared for surgery and delivered on time
• Preference lists may be merged based on various criteria

Procedure  Surgeon  Operating Room

Where do you track and when?

Workflow

Basics:
• Items are dispatched by a scan recording where it is going
• Alerts staff if the sterile goods are not in proper condition (e.g. were not properly sterilized)
• Can be local or external customers (e.g. clinics, surgery centers)
Where do you track and when?

**Dispatch**

Additional:
- Track mobile equipment
- Case cart handling
- Pick lists and delivery notes

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Where do you track and when?

**Workflow**

Batch registration & Sterilizer process logging
- Checking, packaging & quality control
- Stock management
- Preference Lists
- Batch registration & washer process logging
- Return of used items
- Patient Registration and Counting

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Where do you track and when?

**OR**

Basics:
- Used instruments, implants and disposables can be linked to a patient or a medical number
- The actual cost of patient treatment is documented and stored
- Alerts staff if the sterile goods are not in proper condition
- Alerts staff of recalls
Additional:
• On-screen counting in the OR – pre-, per- and post-procedure
• Connected with the count done at the packing stage
• Eliminate handwritten counting sheets
• Facilitate repairs in post counting

Where do you track and when?

Workflow

Checking, packing & quality control
Stock management
Preference Lists
Batch registration & washer process logging
Keeping track in the operation room
Post Surgery Procedures

Batch registration & sterilizer process logging
Return of used items

Where do you track and when?

Post-OR

• After surgery, all instruments are accounted for and returned to the SPD
Where do you track and when?

The Complete Workflow

Batch registration &
Sterilizer process logging
Checking, packing &
Quality control
Stock management
Preference Lists

Batch registration &
Washer process logging
Return of
Used Items
Keeping track in
the operation room
Post Surgery Procedures

You must have questions by now.

Beyond the Basics

• Interfacing with other hospital systems
• Single instrument tracking
• Tracking other hospital items
In a hospital setting, information system integration is the process of bringing together medical devices and information management applications into one cohesive solution, ensuring that everything functions together as a coordinated whole.

- William L. Holden, Philips Healthcare in Andover, MA (AAMI Horizons Fall, 2014)

- XML & HL7 interfaces
- Single and bi-directional interfaces
- Examples: GE Centricity, Cerner, TecSys, Oracle, SAP, McKesson, PeopleSoft, Picis, EPIC, SIS, Meditech

- Interfaces may include:
  - Operation/Picklist interface (inbound, outbound)
  - Purchase order interface
  - Patient interface
  - Inventory interface
  - Invoice interface
Past the education around what a tracking system is all about, what features it might include, and why you might want one...

Past all the enhancements to Central Service operations...

What happens when you decide to implement a system?

Back to Change Management
Next Steps

• Managing your data, count sheets, pick lists; including supplier information, pictures, sterilization programs, assembly instructions, etc. – Good data in...
• Managing a system across multiple sites
• Training for managers, CS staff, and possibly OR staff
• Working with IT/IS around requirements and setup needs
• And possibly working with integration team (for interfacing) and/or other vendors

Back to Change Management
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Parting Thoughts

Biggest Mistakes

Biggest mistakes made by organizations when investing in new technology:

1. Not including all relevant staff in decisions: 67%
2. Basing the decision solely on price: 35%
3. Not investigating the “cost of ownership” thoroughly enough: 32%
4. Not doing a proper technology assessment upfront: 31%
5. Making purchase decisions based on the preference of a single person: 26%

Ideas for how to avoid these mistakes:

• Involve SPD, OR, IT, MM manager and staff
• Think long term investment
• Plan for initial cost, recurring costs, people costs and time
• This is why you include IT to plan for technology requirements
• The system must meet the needs of many users, and in some cases many departments (back to #1)

Biggest mistakes list from Joseph Stiffler – AAMI Biomedical Instrumentation & Technology article, Sept/Oct 2014

Parting Thoughts

Biggest Mistakes
Thank You
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