



Benefits of Standards in the National Decontamination Tracking System in use at St James's Hospital

GS1 UK Healthcare Conference

Andrew Smith, HSSU Manager

9/10 April 2019

Agenda

- Introduction
- Overview of the National HSE programme
- Background to implementing GS1
- The process at SJH
- Benefits and learnings
- Next steps



In the news...

July
2013

Crumlin hospital apologises for contamination scare



Thursday 25 July 2013 22.21



“Hospital has apologised to 18 families who were wrongly identified as being at the centre of a contamination scare over a medical scope”

**Track
and
Trace?**



Our Lady's Children's Hospital, Crumlin has apologised to 18 families who were wrongly identified as being at the centre of a contamination scare over a medical scope.



In the news...

July
2013

THE IRISH TIMES

Helpline for patients with CJD concerns
attracts 1,300 calls

Fri, Jul 19, 2013, 15:39

Between 10 and 20 patients operated on with instruments used on patient with disease

“The HSE will contact up to 20 patients who were operated on using instruments which had been used on a patient who has been diagnosed with CJD disease”

**Track
and
Trace?**



The HSE will contact up to 20 patients were operated on using instruments which had been used on a patient who has been diagnosed at Beaumont Hospital with Creutzfeldt-Jakob (CJD) disease Photograph: Dara Mac Dónaill/The Irish Times





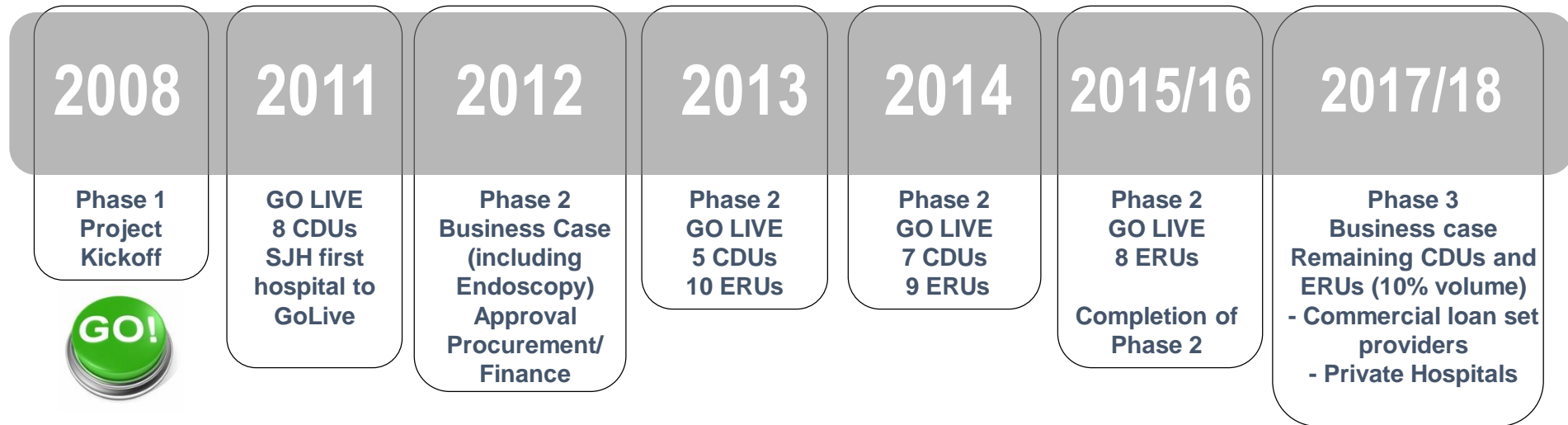
Overview of Instrument Set Traceability

“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)”

HSE Recommended Practices for Central Decontamination Units. Version 2.0, 2011

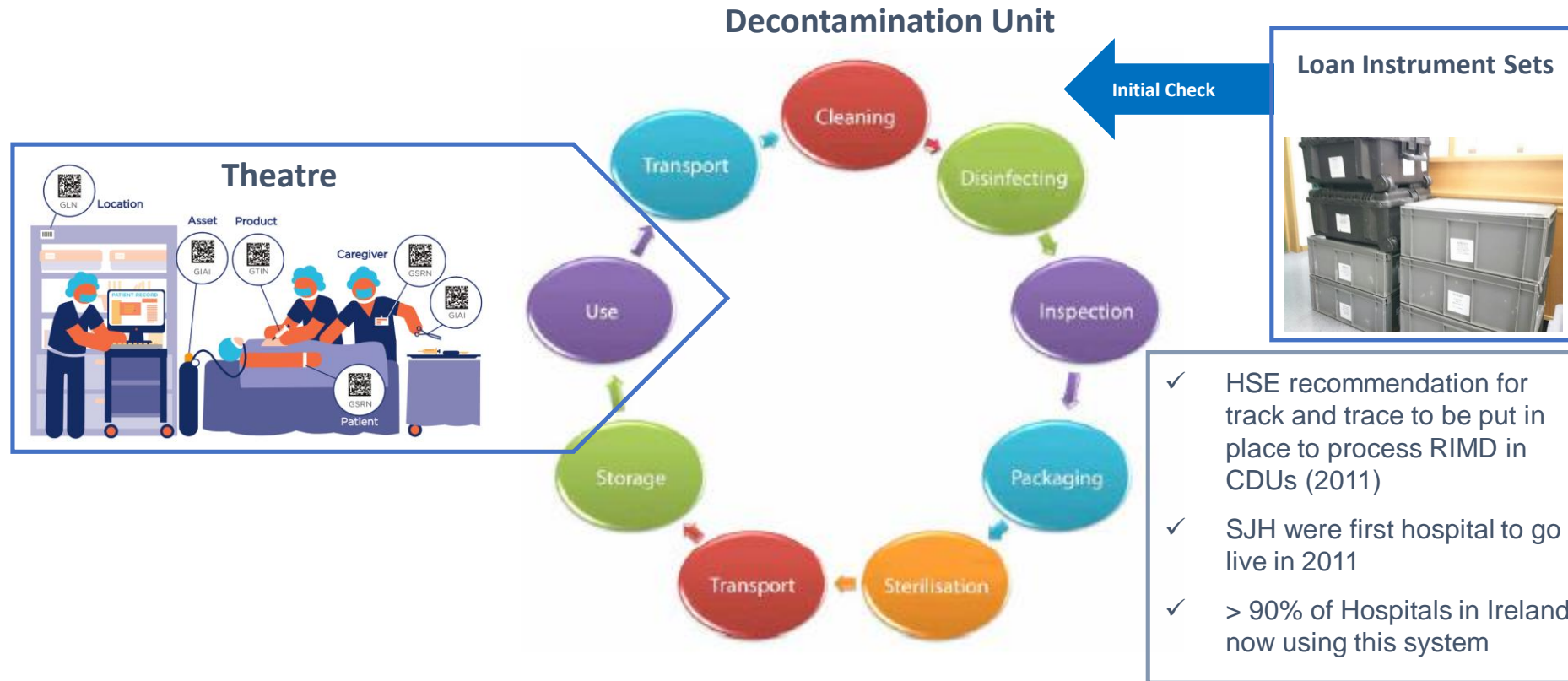
Project started in May 2008 – 1st “Go Live” site was St. James’s Hospital in July 2011

Decontamination Track and Trace - Timeframe



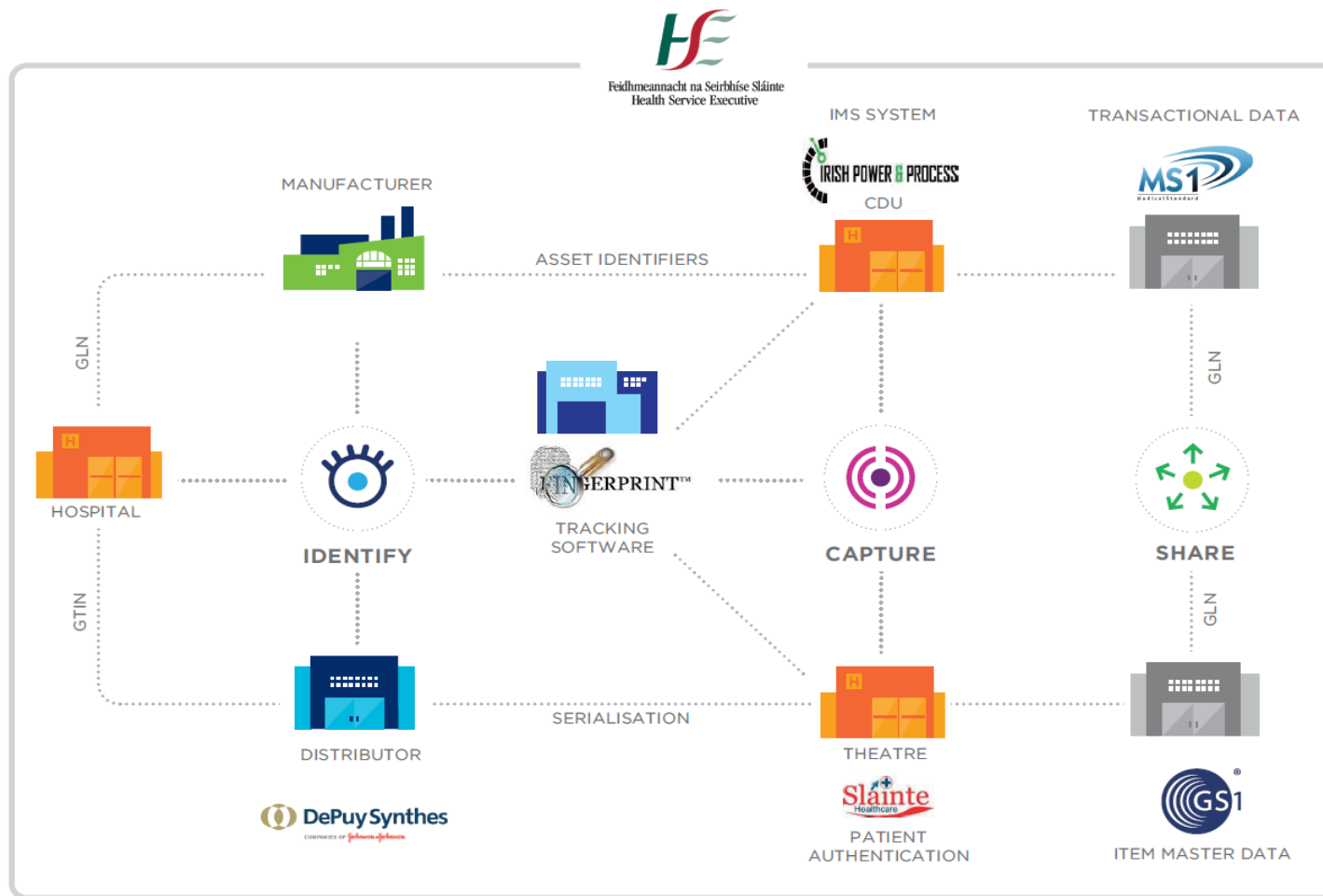
- **Only National Traceability Solution in the world (both trays and endoscopes)**
- 90% of volume will be utilising the solution by end 2015 (32 Hospitals)
- Patient Safety was the key reason for implementation :

Process overview – HSSU



Clinical imperative to have traceability for high risk procedures

Track and Trace Solution



Tracking Instruments

Before



- Manual Check

After

Washer Contents						
Barcode	User Code	Description	Quantity	Date In	Time In	Loaded By
▼ Washer : 1						
6000010	N/A	CONTAINERS		1 11/04/2012	14:00:57	AGNES
▼ Washer : 3						
100418500009	500	RHINO & SMR SET (PLASTICS)-02		1 11/04/2012	14:19:54	PAUL R
100377400043	99	CABG SET-05		1 11/04/2012	14:19:36	PAUL R
100293700031	3262	BARRE INSTRUMENTS SET		1 11/04/2012	14:17:01	PAUL R
100387500031	3322	BOOKWALTER RETRACTOR SET 2-02		1 11/04/2012	14:17:01	PAUL R
100302000011	3525	FINE STILLE OSTEOTOMES (TH 384)		1 11/04/2012	14:16:58	PAUL R
100368000029	3099	GINEAE ONCOLOGY SET-05		1 11/04/2012	14:16:52	PAUL R
100287700046	517	ABDOMINAL HYSTERECTOMY SET-01		1 11/04/2012	14:16:48	PAUL R
100322800049	3520	OPEN UROLOGY SET		1 11/04/2012	14:16:45	PAUL R

Information available:

- Electronically & Post-event
- Dataloggers linked to tracking system

Instrument set lists

Before: Paper based



After: Scan of barcode and set list automatically printed



ST JAMES'S HOSPITAL DUBLIN	
THEATRE 1	
CHAUX RETRACTOR CARDIAC-01	
Qty	Check
2	SIDE ARM
1	INTERLOCKING BRACKET WITH MAIN ARM ATTACHED 34-1150
1	INTERLOCKING BRACKET WITH HOLE FOR KEY
2	SCREW
1	TIGHTENING KEY
2	BLADE

Place A Tick In The Box As Required

9 Items In This Set.			
Clean Room (Check 1)	Date	Theatre Number	
Sign	/ /	Date Used	
Wash Room (Check 5)	Date	Hospital Reg. No.	
Sign	/ /		
Scrub Nurse Sign	Check 2	Check 3	Check 4
Circ. Nurse Sign	Check 2	Check 3	Check 4

After

- Electronic (list printed when barcode is scanned)
- No need to search in cabinet
- No confusion on document version

Process log

Before

DATE	NAME OF SET	THEATRE	LIST OF INSTRUMENTS	SIGNATURE
2/6/11	Paediatric Set no 123	T		Eileen Healy
	Basic Vag	T		John
	MICRO ORTHO	T		Eileen Healy
	Cardiac Set	T		John
	Micro Air Duct	T		Eileen Healy
	Paediatric Hipster	T		John
	Basic Vag	T		Eileen Healy
	Micro Air Duct	T		John
	Basic Hip	T		Eileen Healy
	Stomach Saw	T		John
	UNICAMER TUBAL NAL	T		Eileen Healy
	INTERCAM	T		John
	THYROIDSCOPE	T		Eileen Healy
	Basic Plastic	T		John
	GENERAL PLASTIC	T		Eileen Healy
	GENERAL PLASTIC	T		John
	MASON ABDOMINAL	T		Eileen Healy
	Basic Plastic	T		John
	HEALANAS CO2	T		Eileen Healy
	UENIS SET	T		John
	Amix Device / Radiocut	T		Eileen Healy
	Basic ORTHO	T		John
	ORTHO	T		Eileen Healy
	Basic Plastic	T		John
	THYROIDSCOPE	T		Eileen Healy
	THYROIDSCOPE	T		John
	MICRO NERVE	T		Eileen Healy
	MICRO AIR Duct	T		John
	COMPACT AIR Duct	T		Eileen Healy

- Paper based

After

From : 05/04/2012

To : 05/04/2012

ST JAMES'S HOSPITAL DUBLIN

01:Packing Detail

Unknown Type

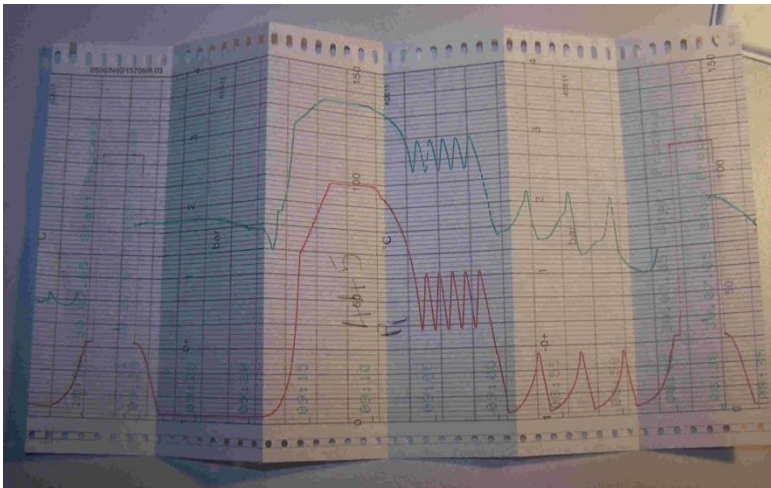
Barcode	UserCode	Operator	Date In	Time In	Description
100398700044	531	EILEEN H	05/04/2012	08:13:31	GYNAE LAPAROSCOPY SET-01
100458400011	2772	LINDA R	05/04/2012	08:54:05	30° LENS 4MM WOLF 433424 DSC
100457900012	2130	LINDA R	05/04/2012	09:01:13	10° LENS 4MM WOLF 427581 DSC
100458500018	2781	LINDA R	05/04/2012	09:05:31	30° LENS 4MM WOLF 433413 DSC
100460500024	4030	LINDA R	05/04/2012	09:08:52	HYSTEROSCOPE & SHEATH 5000193167 DSC
100303600088	2609	EILEEN H	05/04/2012	10:41:07	GENERAL LAPAROSCOPY SET NEW-01
100455100026	3768	LINDA R	05/04/2012	10:44:50	10° LENS 10MM WOLF 5000171714 DSC
100375400073	2938	PAUL R	05/04/2012	11:42:50	GENERAL LAPAROSCOPY SET NEW-06
100452500029	3195	ANTHONY C	05/04/2012	12:11:05	10° LENS 5.3MM WOLF 468796
100454900009	3177	LINDA R	05/04/2012	14:15:57	30° LENS 10MM WOLF 436023 DSC
100475700020	6024	LINDA R	05/04/2012	14:16:29	10° LENS 5MM STORZ 1127861 DSC
100375200071	2936	DOROTA S	05/04/2012	14:31:34	GENERAL LAPAROSCOPY SET NEW-04
100321000006	2393	JOSEPHINE D	05/04/2012	17:12:41	NEPHROSCOPE
100453000042	3194	DEIRDRE C	05/04/2012	17:29:14	30° LENS 10MM WOLF 457074
100452400009	3304	DEIRDRE C	05/04/2012	17:33:15	10° LENS 5MM STORZ 930600
100416900029	3889	JOSEPHINE D	05/04/2012	17:36:06	URETEROSCOPE STRAIGHT TH 10 & 11-04
100453200048	3677	DEIRDRE C	05/04/2012	17:38:59	30° LENS 10MM WOLF 5000145118
100328200015	879	JOSEPHINE D	05/04/2012	17:42:33	WOLF LITHOCLAST FULL SET
100465500034	6000	DEIRDRE C	05/04/2012	17:44:08	30° LENS 4MM ACMI 739453
100453100047	3676	DEIRDRE C	05/04/2012	17:48:29	30° LENS 10MM WOLF 5000145117

Number Of Items : 20

- Electronic
- Post-event can be retrieved at the touch of a button

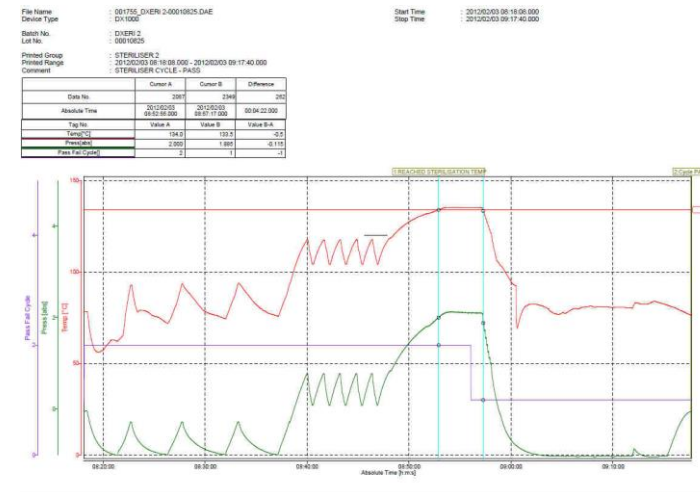
Steriliser Cycle

Before



- Paper based
- Reports are subject to deterioration over time

After



- Electronic
- Post-event can be retrieved at the touch of a button (anytime)

Tracking in Theatres - After

Document List Report

Document Number: T200242		Patient ID: 1087474	Theatre: THEATRE 2
Document Created By: %JESSIE S	Date & Time Created: 02/02/2012 14:14:23	Amendments	
Code: 1003567 Lot No: 00035 Quantity: 1 Operator: %JESSIE S	Type: TRACKER Item: BASIC CARDIAC SET-04 Supplier: STERILE SERVICES Remarks:		
Code: 1003774 Lot No: 00033 Quantity: 1 Operator: %JESSIE S	Type: TRACKER Item: CABG SET-05 Supplier: STERILE SERVICES Remarks:		
Code: 1004160 Lot No: 00027 Quantity: 1 Operator: %JESSIE S	Type: TRACKER Item: CARDIAC MAMMARY RETRACTOR-03 Supplier: STERILE SERVICES Remarks:		
Code: 1003741 Lot No: 00049 Quantity: 1 Operator: %JESSIE S	Type: TRACKER Item: STERNAL SAW BATTERY POWERED-01 Supplier: STERILE SERVICES Remarks:		
Number Of Items:			4

Document Number: T200243		Patient ID: 1087474	Theatre: THEATRE 2
Document Created By: %JENNIFER I	Date & Time Created: 02/02/2012 15:29:26	Amendments	
Code: 1002962 Lot No: 00001 Quantity: 1 Operator: %JENNIFER I	Type: TRACKER Item: CHAUX RETRACTOR CARDIAC-01 Supplier: STERILE SERVICES Remarks:		
Number Of Items:			1
Total Items:			5

Electronic

- Post-event – Can be retrieved at the touch of a button
- Linked to instrument tracking system



Loan Sets

Major challenge for traceability



The Big Challenge !!

- Shared among hospitals (contents always changing)
- Traceability is very challenging
- Can come from a commercial loan set provider or another hospital (often not barcoded)

Loan set – Example

Which loan set would you rather process?

Loan sets with NO barcodes



Loan sets WITH barcodes



Loan set – Example

Which loan set would you rather process?

SJH HSSU during 1 week in Feb 2015

Not GS1 Coded



- 30 loan sets
- 60 reprocesses
- Huge paper trail
- Manual tracking
- Very time consuming
- Manual rekeying and transcription of data

Hours

GS1 Coded



- 4 loan sets
- 8 reprocesses
- Huge paper saving
- Electronic tracking
- Very time efficient
- Unique identification of set (GS1 barcode)

Seconds

vs

Loan set Checklists

Before

H.S.S.U. INSTRUMENT CHECKLIST - OPERATING THEATRE							
SET NAME: Pinnacle Set (Tray 1)							Set No.
Check 1	# of Items	NAME OF ITEM	Check				
			2	3	4	5	
		Trial Cup Instruments					
	1	Pinnacle acetabular cup trial 48mm	221701048				Packing & Control
	1	Pinnacle acetabular cup trial 50mm	221701050				
	1	Pinnacle acetabular cup trial 52mm	221701052				Check 1
	1	Pinnacle acetabular cup trial 54mm	221701054				
	1	Pinnacle acetabular cup trial 56mm	221701056				Sign:
	1	Pinnacle acetabular cup trial 58mm	221701058				
	1	Pinnacle acetabular cup trial 60mm	221701060				Date:
	1	Pinnacle acetabular cup trial 62mm	221701062				
	1	Pinnacle acetabular cup trial 64mm	221701064				Decontamination
	1	Pinnacle acetabular cup trial 66mm	221701066				
							Check 5




- Paper based (hand written)
- No certainty that list matches tray contents

1	1	Insulated	221701000				Check 1
Version guide (2pin) 221701000							Check 2
Heads:							Check 3
1	1	28 Green +1.5					Circ. Nurse Sign:
1	1	28 Blue +1.5					
1	1	28 Blue +8.5					Check 1
1	1	28 Black +12					
1	1	32 Green +1					Check 2
1	1	32 Brown +5					
1	1	32 Blue +9					Check 3
1	1	32 Black +13					
1	1	36 Green +1.5					
1	1	36 Brown +5					
1	1	36 Blue +8.5					
1	1	36 Black +12					
36 Light Brown -2:							

Hours

After

		LOT 00001	ST JAMES'S HOSPITAL DUBLIN									
100470800001		Ucar Code SET00219	ANAESTHETICS AO COMPACT HAND SET, TH9									
Version No. 0016		Printed On: 11/01/2012 11:21:53										
Qty	Check	Description	Qty	Check	Qty	Check	Qty	Check	Qty	Check	Qty	Check
0		STANDARD INSTRUMENTS:			0							
1		HANDLE MEDIUM WITH QUICK COUPLING			1							
1		DEPT GAUGE			1							
1		DEPT GAUGE			1							
2		PLIERS FLAT NOSED			2							
1		SCREW HOLDING FORCEPS			1							
1		BENDING CUTTING PLIERS			1							
0		ADDITIONAL INSTRUMENTS:			0							
1		SHARP HOOK			1							
1		REDUCTION FORCEPS WITH POINTS			1							
1		HOLDING FORCEPS WITH SWIVEL FOOT			1							



- Electronic, fully legible
- Up to date
- List can be pulled from MS1 Cloud by scanning the tray/set barcode

1	1	DRILL BIT LONG 1.5MM	1						
1	1	DRILL BIT 2.0MM	1						
1	1	SCREWDRIVER SHAFT STARDRIVE SHORT	1						
0	0	BOTTOM TRAY:	0						
1	1	UNIVERSAL DRILL GUIDE	1						
1	1	SCREWDRIVER SHAFT STARDRIVE & HOLDING SLEEVE	1						
1	1	LCP DRILL SLEEVE	1						
1	1	LCP BENDING PIN	1						
Place A Tick In The Box As Required									
DO NOT USE IF PACKING DAMAGED									
STORE IN A CLEAN, DRY, DUST FREE ENVIRONMENT									
1 Pack Instrument Kit that the Supplier On Requested 8 2009 Project for the Standard 1st									
			USER CODE	PAGE					
			SE119215	1 of 2					
			LOT						
			00001						

Seconds


ST. JAMES'S HOSPITAL



Loan set – Best Practice Example (PEI)

PEI Loan sets with GS1
barcodes






DETAILED RETURNS REPORT

ST JAMES'S HOSPITAL DUBLIN

Date From: 22/03/2016

Date To: 22/03/2016



22-March-2016

Time	Barcode	User Code	Description	Qty	Operator
13:01:54	100563000001	ASREXP07IN	ASREXP07IN SET 7, TRAY 4 OF 4	1	CAROLINE F
13:01:54	100553300003	MORUNC02IN	MORUNC02IN MORELAND UNCEM SET 2, TRAY 1 INSTRUMENTS	1	CAROLINE F
13:01:54	100564200000	SROM01IN	SET 1, TRAY 5 OF 7, IMPACTOR/EXTRACTOR INSTS	1	CAROLINE F
13:01:54	100564900000	MOREXT01IN	MORELAND EXTRACTION SET 1, TRAY 1 INSTRUMENTS.	1	CAROLINE F
13:01:54	100564800000	SOLUTN01IN	SOLUTION THINSHAFT REAMERS, TRAY 6 OF 6	1	CAROLINE F
13:01:54	100564700000	SOLUTN01IN	SOLUTION INSTRUMENTS TRAY 5 OF 6	1	CAROLINE F
13:01:54	100564500000	SOLUTN01IN	SOLUTION TRIAL RIGHT. TRAY 3 OF 6	1	CAROLINE F
13:01:54	100562800001	ASREXP07IN	ASREXP07IN SET 7. TRAY 3 OF 4	1	CAROLINE F
13:01:54	100564300000	SOLUTN01IN	SOLUTION FEMORAL REAMERS TRAY 1 OF 6	1	CAROLINE F
13:01:54	100564600000	SOLUTN01IN	SOLUTION TRIAL STANDARD. TRAY 4 OF 6	1	CAROLINE F
13:01:54	100562700001	ASREXP07IN	ASREXP07IN SET 7, TRAY 1 OF 4	1	CAROLINE F
13:01:54	100562900001	ASREXP07IN	ASREXP07IN SET 7, TRAY 2 OF 4	1	CAROLINE F
13:01:54	100564400000	SOLUTN01IN	SOLUTION TRIAL LEFT. TRAY 2 OF 6	1	CAROLINE F
SubTotal				13	
Total				13	

Loan sets from PEI scanned into Wash Room

- No need to re-key information (huge time saving)
- Full audit trail

Tracking information shared with the cloud (MS1)

ADMINISTRATION MODULE v6.3.0.3 : ST JAMES'S HOSPITAL DUBLIN : [BlackBox Enabled] : [Remote Connection]

Home View Functions Images/Documents/Barcodes Printing/Reports MS1 Costings Administration

Single Record Upload Multiple Record Upload Download From Server Withdraw Tray MS1 Graph On Loan/Off Site Find GS1/Key Dot Code MS1 Filter

ANDREW S Auto Refresh Close

Type	Code	User Code	Description	Stamp	Current Position	Operator	Lot	Default Position	OffSite Position	GLAI / Keydot Code	Kg	Introduced	Rating	GTIN Co
A	TRAY SET	1004326	4046	0° & 30° LENS 4MM OLYMPUS ENT SET 1 DSC	23/02/2018 10:41:00	OFF SITE	PETER E	94	DAY SURGERY	DAY SURGERY	800453970219991001492	0	19/05/2011	
A	TRAY SET	1004328	4047	0° & 30° LENS 4MM OLYMPUS ENT SET 2 DSC	01/02/2018 08:22:05	OFF SITE	AGNES G	90	DAY SURGERY	DAY SURGERY	800453970219991001383		19/05/2011	
A	TRAY SET	1004563	4031	0° LENS 10MM OLYMPUS 587870 DSC	07/02/2018 08:17:41	OFF SITE	KARL M	49	DAY SURGERY	DAY SURGERY	800453970219991001249		21/06/2011	
A	TRAY SET	1004564	4032	0° LENS 10MM OLYMPUS 587927 DSC	13/02/2018 11:04:39	OFF SITE	ANTHONY C	46	DAY SURGERY	DAY SURGERY	800453970219991001288		21/06/2011	
A	TRAY SET	1006001	6560	0° LENS 10MM OLYMPUS 719377	22/02/2018 17:13:22	OFF SITE	JENNIFER I	8	THEATRE 1	THEATRE 1	800453970219991001684	0	07/09/2016	
A	TRAY SET	1005442	6445	0° LENS 10MM OLYMPUS ENDOEYE 622802	26/02/2018 15:09:07	IN DESPATCH AREA	ANZELIKA C	258	THEATRE 8	THEATRE 8	800453970219991001863		24/06/2015	
A	TRAY SET	1004666	2791	0° LENS 10MM WOLF 425750 DSC	06/02/2018 08:07:07	OFF SITE	MARTINA M	162	DAY SURGERY	DAY SURGERY	800453970219991001351		21/07/2011	
A	TRAY SET	1004676	2782	0° LENS 10MM WOLF 425751 DSC	09/02/2018 14:02:31	OFF SITE	CACHO, J. M	178	DAY SURGERY	THEATRE 10	800453970219991001299		27/07/2011	
A	TRAY SET	1005057	6167	0° LENS 10MM WOLF 445711	29/05/2017 17:47:06	OFF SITE	FARRELL C	8	THEATRE 1	THEATRE 1	800453970219991002171		30/08/2013	
A	TRAY SET	1005621	6518	0° LENS 10MM WOLF 5000139951	29/05/2017 12:57:31	IN REPAIR	ANDREW S	4	THEATRE 6		800453970219991001761	0	02/03/2016	
A	TRAY SET	1004518	3594	0° LENS 10MM WOLF 5000139955	15/06/2017 03:48:22	OFF SITE	FARRELL C	21	THEATRE 1	THEATRE 1	800453970219991001035		20/06/2011	
A	TRAY SET	1004528	3615	0° LENS 10MM WOLF 5000159142	21/02/2018 12:02:08	IN REPAIR	ANDREW S	54	THEATRE 6		800453970219991001175		20/06/2011	
A	TRAY SET	1005349	6384	0° LENS 10MM WOLF 5000301815 DSC	05/02/2018 08:40:13	OFF SITE	ANNA W	102	DAY SURGERY	DAY SURGERY	800453970219991001947		07/01/2015	
A	TRAY SET	1005400	6426	0° LENS 10MM WOLF 5000313946 DSC	20/02/2018 11:21:48	OFF SITE	STACEY M	67	DAY SURGERY	DAY SURGERY	800453970219991001912		12/05/2015	
A	TRAY SET	1005622	6519	0° LENS 10MM WOLF 5000345604	21/02/2018 13:51:05	IN REPAIR	ANDREW S	13	THEATRE 6		800453970219991001760	0	02/03/2016	
A	TRAY SET	1004857	6061	0° LENS 4MM STORZ 1081267 ENT	21/02/2018 08:11:20	OFF SITE	FIBIN M	100	THEATRE 8	THEATRE 8	800453970219991000836		20/04/2012	
A	TRAY SET	1004535	4034	0° LENS 4MM STORZ 1503281 ENT	01/02/2018 08:21:43	OFF SITE	COLETTE F	95	THEATRE 8	THEATRE 9	800453970219991001179		21/06/2011	
A	TRAY SET	1004580	2853	0° LENS 4MM STORZ 427577 DSC	20/09/2017 11:47:48	OFF SITE	MADELAINE W	85	DAY SURGERY	DAY SURGERY	800453970219991001316		21/06/2011	
										8004539702199910014				

Matching Records : 2,187


Record 1 of 2187

Start

16:36 26/02/2018

Barcode (keydot) being added to supplementary instruments

Morris Multi-Purpose Cross Clamp, 20cm (GU3630)



Item Type: SINGLE, Group ID: DEFAULT GROUP, Product: 00000, GIAI / Key Dot Code: 800453970219970000938

User Code: SIN00160, Transfer Point: THEATRE 1, MORRIS MULTI PURPOSE CROSS CL

Sterile Method: STEAM, Temp: 134, Category: 0, Weight(kg): 0, Quality Control No.: , Item Size:

Wash Method: IGNORE INSTRUCT, Tray SMV: 0.000, Tray Cost: £0.000, Stock SMV: 0.000, Stock Cost: €0.00, Skill: 0, Rating: Normal Use

☒ Track (Unique) ☐ Skip Washer ☐ Skip Autoclave ☐ Print CE Mark ☒ Auto Despatch ☐ Record Patient ☒ Set As Master Record

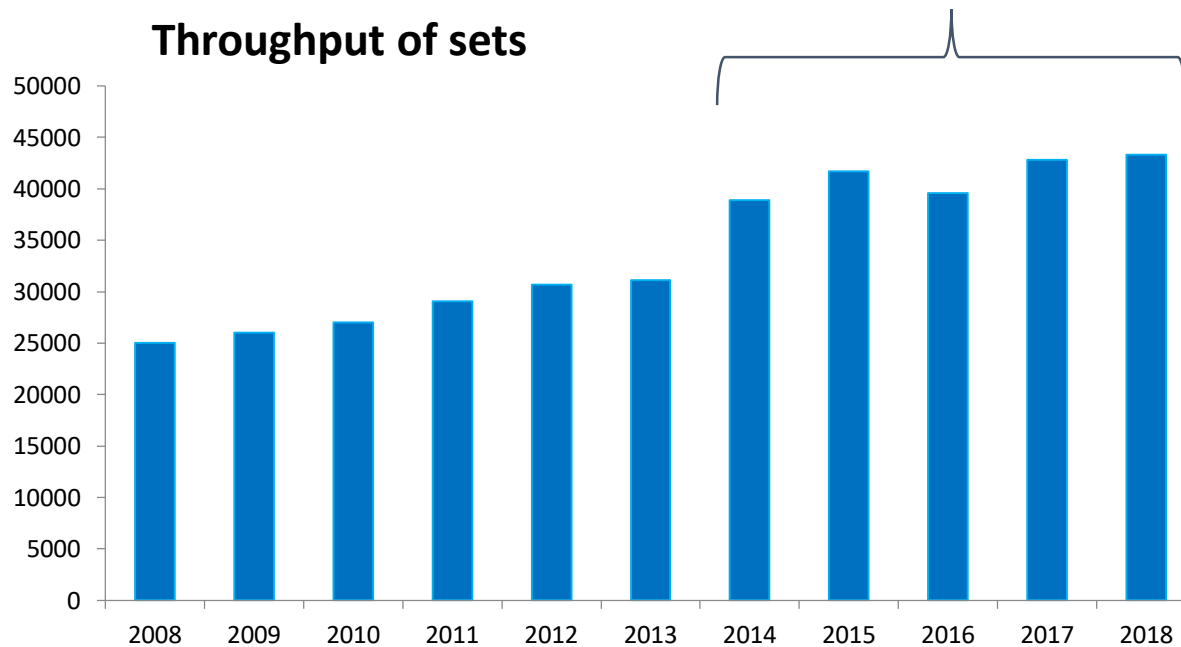
☐ Prevent Item From Entering An Autoclave ☐ PH Neutral Only

☐ Pre Wash ☐ Hand Wash ☐ Ultrasonic ☐ Dental Wash ☐ Phaco Wash

Properties Required Fields Save Record Cancel

Overview of the number of procedures year on year in SJH HSSU

* Between 2014 to 2018 increase in workload with less staff



Anecdotal evidence:
*Moved from 5,000
Transcriptions per day
in one hospital*

Key Benefits

National traceability solution for Instrument trays and endoscopes

- Automatic Tracking of Instrument Sets
- Much easier to share Loan Sets
- Tray Checklists printed when scanned
- All records stored digitally (huge paper saving)
- Link between tracking system and theatre to patient (EHR)
- Improved Workflow (time savings)
- Reporting and management of set inventory



Next Steps

- Adding Keydot barcode to all supplementary instruments
- Adding additional areas such as the Cath Lab & OPD which use sterile surgical sets
- Requesting all loan set providers to be compliant



Call to Action for Loan set providers!!

Not GS1 Coded

Medtronic



GS1 Coded



OLYMPUS

Contact



Andrew Smith

HSSU, St James's Hospital

James's Street, Dublin, Ireland

Tel + 353 1 416 2557

eMail ASmith@stjames.ie