

James Mayne (NHS)

Traceability and Driving Patient Safety



**University Hospitals of Derby and Burton
NHS Foundation Trust:**

SCAN  SAFETY

UHDB

- One of **Six** Scan4Safety demonstrator sites
- Derby Teaching Hospitals and Burton Hospitals

Numbers for context;

- 1850 patient beds over five sites, provides acute and rehab services
- Number of theatres 52 (35 Derby / 17 Burton)
- We carry out more than 300 elective procedures each working day
- Over 12,000 staff and around 1,000 volunteers
- Annual turnover of £750 million



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TAMWORTH



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The Scan4Safety Programme - Embedded Principles



Completed the first S4S programme objectives Sept 2017;

Starting to deliver the next wave of additional use cases...

Additional S4S Use Case; NJR Pilot

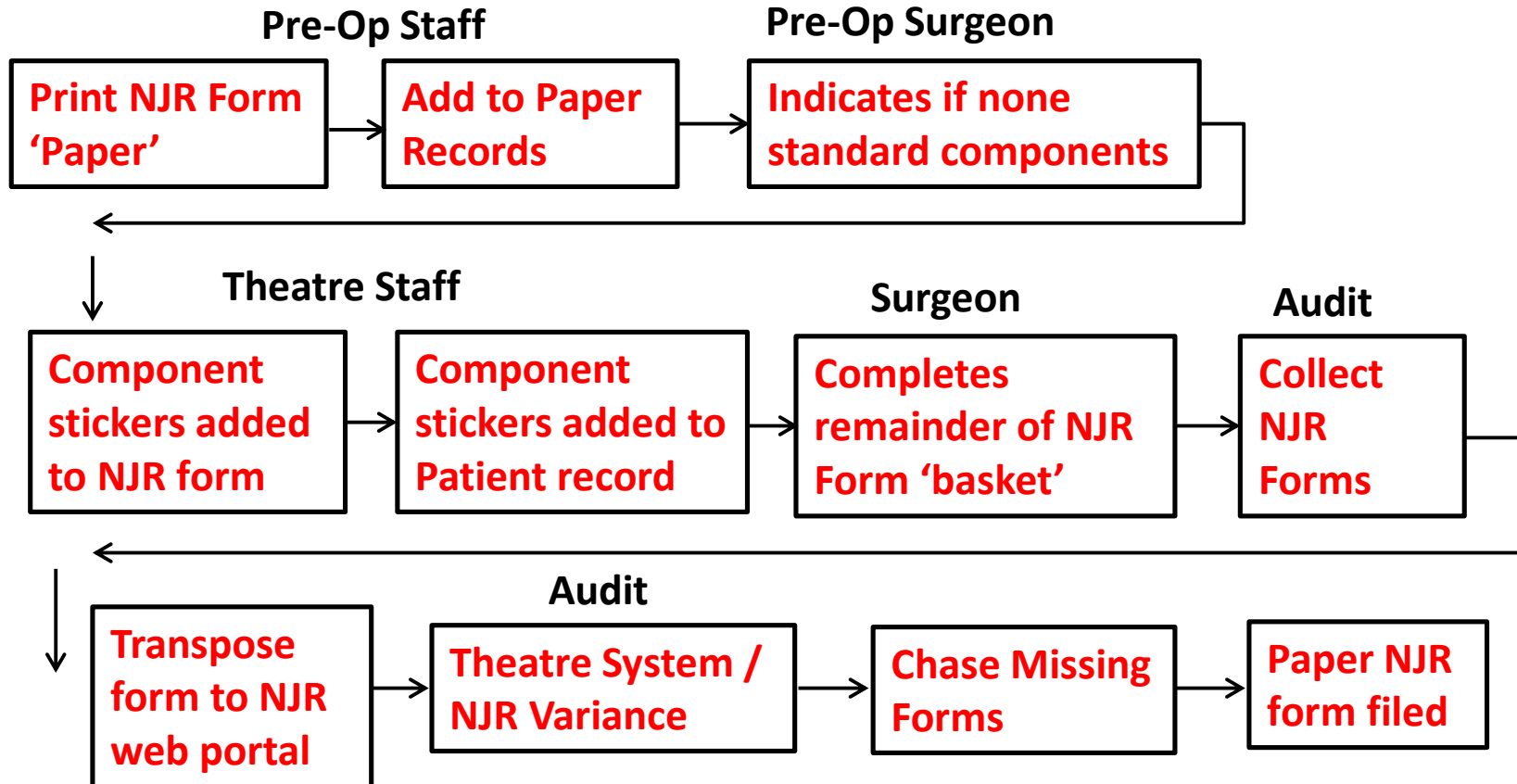
Phase 1: Aim – Identify patient safety opportunities and additional benefits via Point of Care Scanning

P1: National Joint Registry: Bulk data upload (Easy)

- Establish data requirements
- What happens today? Where is the data?
- Automate

How do we get the relevant data to the NJR?

Phase 1- Set the scene...



S4S: Rewind 2 years

- **Patient:** Scan Wristband (GS1 GSRN)
- **Timers:** Knife to skin, time in recovery
- **Location:** Records locations (GLN's)
- **Staff:** Who is present. (GSRN) **Reps** (GSRN)
- **Procedure:** Operations linked to OPCS codes
- **In Theatre:** Relevant Clinical Questions
- **Anaesthetic:** Type used
- **Devices:** Products, Trays & Implants used (GTIN's) Including Lot, Batch and expiry data
- **Inventory:** Enables automatic ordering / PLICS Feeds



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Once Synced – This data becomes available;

Affix Patient Label Here

Patient Ref: 123456789

Procedure Date: 20-07-2016

Hospital: Derby Hospital

Department: Cardiology

hTrak Report

Patient Ref: 123456789

Procedure Date: 20-07-2016

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Patient Class:	NHS	Facility:	LAB 2
Operation Type:	Elective	Facility Cost:	
		Hand Held User:	Staff A

Procedure Codes					
Procedure	Item Codes	Theatre Band	Band Amount	Hand Held User	Scan Date/Time
PCI 1 ARTERY	K491, Y534				20-07-2016 17:38:45
LHC	K634, Y534				20-07-2016 17:38:50
3+ DES	K752, Y534				20-07-2016 17:38:53

Procedure Timing				
Timing Point Name	Date & Time Stamp	Hand Held/HRS User		Procedure Duration
Start of Procedure	20-07-2016 14:29:00	Staff A		(HH:MM:SS)
End of Procedure	20-07-2016 17:38:00	Staff A		03:09:00

Attending Staff				
Staff ID	Staff Name	Staff Type	Staff Role	Duration
10706133	Staff B	Consultant	1st Operator	03:09:00
24803882	Staff C	Physiologist	Physiologist	03:09:00
25657217	Staff D	Radiographer	Radiographer	03:09:00
EXTRA	Company Rep	Extra Staff	Company Rep	03:09:00
EXTRA4	Visiting Consultant	Extra Staff	Company Rep	03:09:00

Anaesthetic			
Anaesthetic Key	Anaesthetic Description	Hand Held User	Scan Date/Time
LOCAL	Local Anaesthetic	Staff A	20-07-2016 17:14:32
SEDATION	Sedation	Staff A	20-07-2016 17:14:33

'Test Data'

Data records available through Scan4Safety...

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Products Used								
Item No.	Supplier Product Code	Description	Qty	Price	Consumption Type	Lot No.	Expiry Date	Ext. Price
1	1010482-H	014 HI-TORQUE PILOT 200, 3CM H 190	4	00.00	Normal	6020271		000.00
2	1011767	GOWN,SURGICAL, NON-REINFORCED XL	4	00.00	Normal			0.00
3	1099440	Angio Pack	2	00.00	Normal			00.00
4	401-811M	SI BRITE TIP 8F 11CM STR	1	00.00	Normal			00.00
5	502-521	DGW .035 FC J3MM 150CM TEF	1	00.00	Normal			0.00
6	504-607X	SI AVANTI+ 7F STD W/GW NO OBT	1	00.00	Normal			00.00
7	5572	GuideLiner Catheter 7F	1	000.00	Normal	590184		000.00
8	5621	Turnpike Gold Catheter 135cm	1	000.00	Normal	586692	17-08-2017	000.00
9	5640	Turnpike Spiral Catheter 135cm	1	000.00	Normal	587821	24-09-2017	000.00
10	610133	Angio Seal VIP 8F	2	100.00	Normal	5398681	31-01-2017	200.00
11	64038200	MANIFOLD, 2V, WB FG, STAR H, R OFF	1	0.00	Normal			0.00
12	A2000	Multi-Use Syringe Kit	1	0.00	Normal			0.00
13	AC3205P	SURVIVAL KIT AC3205P EVEREST 30 TJM	1	00.00	Normal	50981667	26-04-2018	00.00
14	AGH143090	CONFianza PRO Asahi CTO Straight wire 20cm tapered tip 180cm	2	000.00	Normal	160123A21A	31-12-2018	000.00
15	AGP140002	FIELDER XT 190 straight tip	1	00.00	Normal	151024A10A	30-09-2018	00.00
16	AGP140002	FIELDER XT 190 straight tip	1	00.00	Normal	160127A12A	31-12-2018	00.00
17	AGP140002	FIELDER XT 190 straight tip	1	00.00	Normal	160328A23A	31-03-2019	00.00
18	AHW10S302S	Wire, RG3, Diameter 0.010" 330cm (SAS) Straight tip	1	000.00	Normal	151222A11A	30-11-2018	000.00
19	AHW14R001S	SION 180CM STRAIGHT TIP	1	00.00	Normal	160107A14A	31-12-2018	00.00
20	AHW14R004S	SION BLUE 0.014" 180cm Guidewire Straight tip	1	00.00	Normal	160121A04A	31-12-2018	00.00
21	ATP54	Angio Touch Kit	1	00.00	Normal			00.00
22	BT2000	Automated Manifold Kit Latex-Free	1	44.00	Normal			44.00
23	CSW135-26N	CORSAIR MICROCATHETER 135 CM	1	000.00	Normal	160323K021	28-02-2018	000.00
24	CSW150-26N	CORSAIR MICROCATHETER 150 CM	1	000.00	Normal	160112K061	31-12-2017	000.00
25	FFF302	TruWave(TM) Single Pressure Monitoring Set: Single IV no tubing (Cath Lab) (T001758A)	1	0.00	Normal			0.00
26	FTE501	BIOGEL GLOVES LATEX SZ 7.5 POWDER FREE	3	0.00	Normal			0.00

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Item No.	Supplier Product Code	Description	Qty	Price	Consumption Type	Lot No.	Expiry Date	Ext. Price
27	H7493912415300	NC Quantum Apex MR 15mm x 3.00mm	1	10.00	Normal	19142512	30-04-2019	10.00
28	H7493919312250	F/G, EMERGE, MR, OUS 12mm x 2.50mm	1	10.00	Normal	19374659	28-02-2019	10.00
29	H7493919312300	F/G, EMERGE, MR, OUS 12mm x 3.00mm	1	10.00	Normal	19138808	31-12-2018	10.00
30	H7493919315250	F/G, EMERGE, MR, OUS 15mm x 2.50mm	1	10.00	Normal	19395906	28-02-2019	10.00
31	H7493919320250	F/G, EMERGE, MR, OUS 20mm x 2.50mm	1	10.00	Normal	19292522	31-01-2019	10.00
32	H7493919320300	F/G, EMERGE, MR, OUS 20mm x 3.00mm	1	10.00	Normal	19359882	28-02-2019	10.00
33	H7493926212350	SYNERGY OUS MR 3.50 X 12	1	000.00	Normal	18869747	18-07-2017	000.00
34	H7493926216300	SYNERGY OUS MR 3.00 X 16	1	000.00	Not Used - Wrong Size	18992378	15-08-2017	000.00
35	H7493926224300	SYNERGY OUS MR 3.00 X 24	1	000.00	Normal	18787023	02-07-2017	000.00
36	H7493926238250	SYNERGY OUS MR 2.50 X 38	1	000.00	Normal	18717797	30-05-2017	000.00
37	H7493926238270	SYNERGY OUS MR 2.75 X 38	1	000.00	Normal	18713694	30-05-2017	000.00
38	KESU0002	SUPERKETCH Y CONNECTOR PLUS	1	10.00	Normal	1601084577	31-12-2019	10.00
39	LA7EBU35	CATHETER LA7EBU35 LA 7F 100CM EB35	1	20.00	Normal			20.00
40	LA8AL75SH	CATHETER LA8AL75SH LA 8F 100CM AL75	1	20.00	Normal			20.00
41	QR-80-A/10	BLUE SENSOR RADIOTRANSLUCENT QR	6	0.00	Normal			0.00
Product Totals			57					6,505.77

Name: _____

Signature: _____

This data plus other data source = Xml file

Significant time saving and increase in accuracy

Phase 2 – Stopping Never Events

Phase 2: Aim – NJR validation checks to be available at point of care, alerting the theatre team and surgeon before the never event can happen...

Not after the event when it's already too late!

User friendly alerts and prompts, presenting the team with key information to flag up potential harm and adverse events...

How?

- NJR to share validation rules or offer a stand-alone interface to validation, if not yet live with Scan4Safety



Other data that is available;

1. Traceability of implants via lot and batch numbers, including tray and instrumentation
 - Product recalls - Patient identified quickly along with product quarantine potential
 - ALERTS – Don't use Product
 - MRI Safety Potential (Patient Pathway)
2. Provides surgeon with detailed theatre record
 - What to expect, products previously used, tools required?
 - Investigate SUI's
3. PLICS – Patient Level Costing
 - Accurate costing per patient
 - Private patients – The ability to invoice accurately and forecast income
 - Ability to analyse product variance, kitting and manage stock efficiently.
4. Scheduling accuracy, Surgeon reports and benchmarking capability
5. Using National Standards
 - Electronic – Not paper!
 - Review and enrich, not start from scratch (Interfaces and feeds)
 - Stop the duplication

Not just Product - Kit Potential;

Vital sign monitors (VSM)

- Machine taken to patient (Tracked)
- Identify the Care giver (Staff ID GSRN)
- Identify the Patient (Wristband GSRN)
- Vital signs taken as normal
- Interface to Electronic observation system

Benefits; Observation times

Pre & current
5:11 Vs 3:22
109 seconds*

Input Accuracy +



Average 6 observations per patient (24h period) Based on 850 inpatients

Total Benefit when live;

154 Hours which translates to 20.5 Nurses/HCA doing a

7.5 hour shifts

Questions

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Over to Mike Swanson