



University Hospitals of
Derby and Burton
NHS Foundation Trust

GS1 Global Healthcare Conference – Bangkok “Saving Money with GS1 Standards in a Hospital: Why and How?”

Kevin Downs, Executive Director of Finance & Performance



Facts About Our Trust



1750 beds
across 5 sites

>12,000 staff &
1,000
Volunteers

Largest number
of planned Ops
in UK (51,000)

25 babies born
here every day

860 patient s
seen in A&E
every day (6th)

52 theatres

220 emergency
admissions
every day

Urology
attendance(3rd)
1050 /week

Trauma & Ortho
largest activity
nationally

Cataract
Procedures >88
/week (3rd)

National leader
for Gall Bladder
Removal
(>20/wk)

Annual turnover
£750 million

Derby Hospitals and Burton Hospitals merged on 1st July 2018

Why Do It ?

- The NHS procures 1.7m different items
- 61 Trusts purchased 1750 different cannulae
- One Trust bought 177 different types of rubber gloves
- £2 – 4bn savings per year from GS1 standards to allow cost comparison between Trusts
- Access to “Management” Information

Control Master Data Catalogue Management



- Contract based item & price data
- Validated catalogue item data
- Consistent contract based item & price data
- Controlled ordering
- Standardisation of item choice

**459 HL Catalogues, resulting in
223,293 items in catalogues**

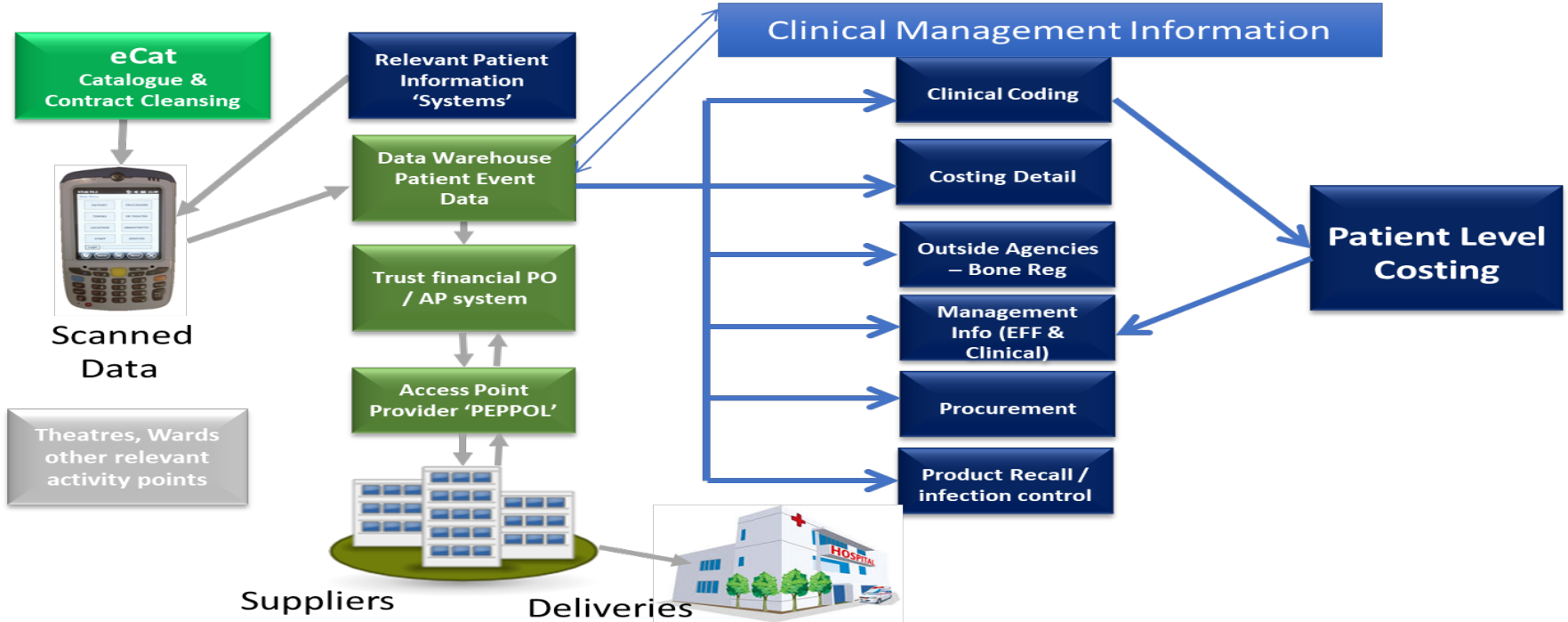
**Reduced Cost of Procurement
Eliminated PO Supplier queries**

Overview of Derby Theatres Project



- Patient Scanned and Checked
- Staff Scanned and Tracked
- Scans Surgical Trays (traceability & cost) CJD / AIDS...
- Scans Devices (lot & batch)
- Links to stock management
- Tracked Maintenance
- Prevented expiry wastage & Warning Flags
- Other data capture available

System Overview



Coding Problem – Extra data feed highlighting what has been done at Point Of Care

Activity in the 9 months to the end of December 2013 with a cost of £840k has a HRG Code "Data Invalid for Grouping"

FCE HRG	Description	Activity	Total Cost	Average Cost	Minimum	Maximum
JZ01Z	Data invalid for grouping	580	£839,755	£1,448	£31	£12,714

Impact on Hospital Standard Mortality Rate - HSMR

Coding Datafeed



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Untitled - Notepad
File Edit Format View Help
DOE Jane (Hospital No: 98989898/NHS Number: 123-456-7890)
Diagnosis Codes (Comorbidities via STEVE, updated on 02/04/2015 15:16 by Tester1 (Tester))
  H54 - Registered Blind
  I63, I64 - Stroke
  Z921 - Anticoagulant therapy
Procedure Codes (Procedures via HTRAK)
  Procedure Date: 23 Feb 2015
  G722 - Anastomosis of ileum to transverse colon
  T415 - Freeing of extensive adhesions of peritoneum
  Y502 - Laparotomy approach NEC
  Procedure Date: 17 Nov 2014
  G741 - Creation of continent ileostomy
  Y502 - Laparotomy approach NEC
  Y701 - Emergency operations NOC
  Procedure Date: 16 Nov 2014
  H071 - Right hemicolectomy and end to end anastomosis of ileum to colon
  L462 - Open embolisation of visceral branch of abdominal aorta NEC
  Y502 - Laparotomy approach NEC
  Y701 - Emergency operations NOC
```


Tray Traceability 'Infection Control'



Save Time – Tray Traceability 'Infection Control'

Pre Scanning Solution:



- Min. 50 hour review per patient
- Cannot be 100% confident that ALL patients who subsequently came into contact with the contaminated trays could be identified

☹️ 50 hours work per patient
☹️ Low confidence in results

NOW:



- 30 minutes to identify ALL affected trays and patients
- High level of confidence in the findings as all information electronically captures

✓ 30 mins work for all patients
✓ High confidence in results



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Quantifiable Results



Staff Savings - Pay

Staff Type	Cost Saving (mid point band used) FYE 2016/17	Comment
Nurse	£28,250	3 x B7 nurses now only approve orders rather than place them Time to Care Benefit - not cash releasing
Finance	£28,152	Staff member not replaced
General theatres	£21,052	Inventory manager not replaced
General Theatres (not cash releasing)	£20,000	Number of tasks no longer required carried out by a mixed range of staff and banding levels. E.g. Band 5 Order Max Fax Plates and screws (Paper form, ordering and Cabinet checking work) Band 2 Ordering other consumables as above process. Benefits of a controlled structured solution with designated storeman.
Total cash releasing	£97,454	

Working with Suppliers Example



Vital sign monitors (VSM)

- Machine taken to patient
- Identify the Care giver (Staff ID Barcode GSRN)
- Identify the Patient (Wristband GSRN)
- Vital signs taken as normal
- Interface to Electronic observation system
- Benefits 37%
Observation times
Pre & current
5:11 Vs 3:22
109 seconds*
- Average 6 observations per patient (24h period)
- Total Benefit
- 66 Hours per patient per year Based on 850 inpatients
- translates to 29 Nurses/HCA

Input Accuracy

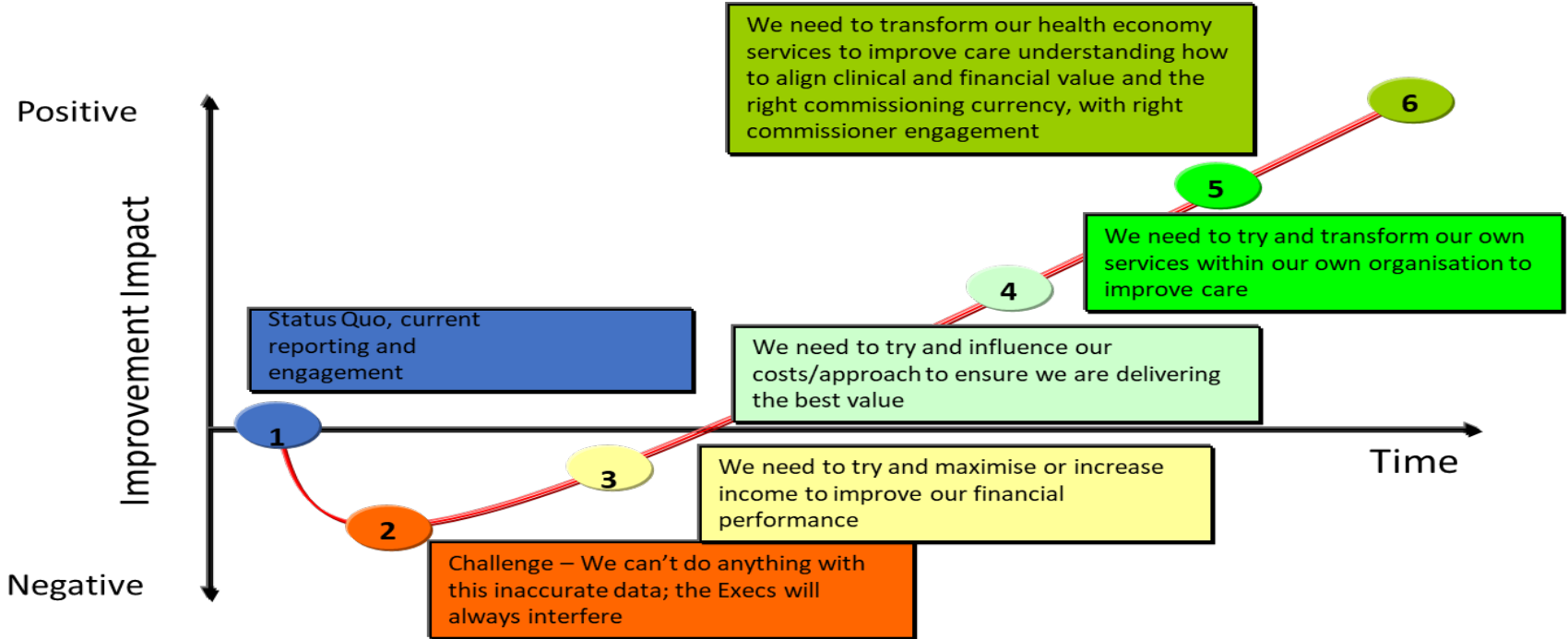
+



£579K



Improved Information - Service Line Management Capability and Improvement Trajectory



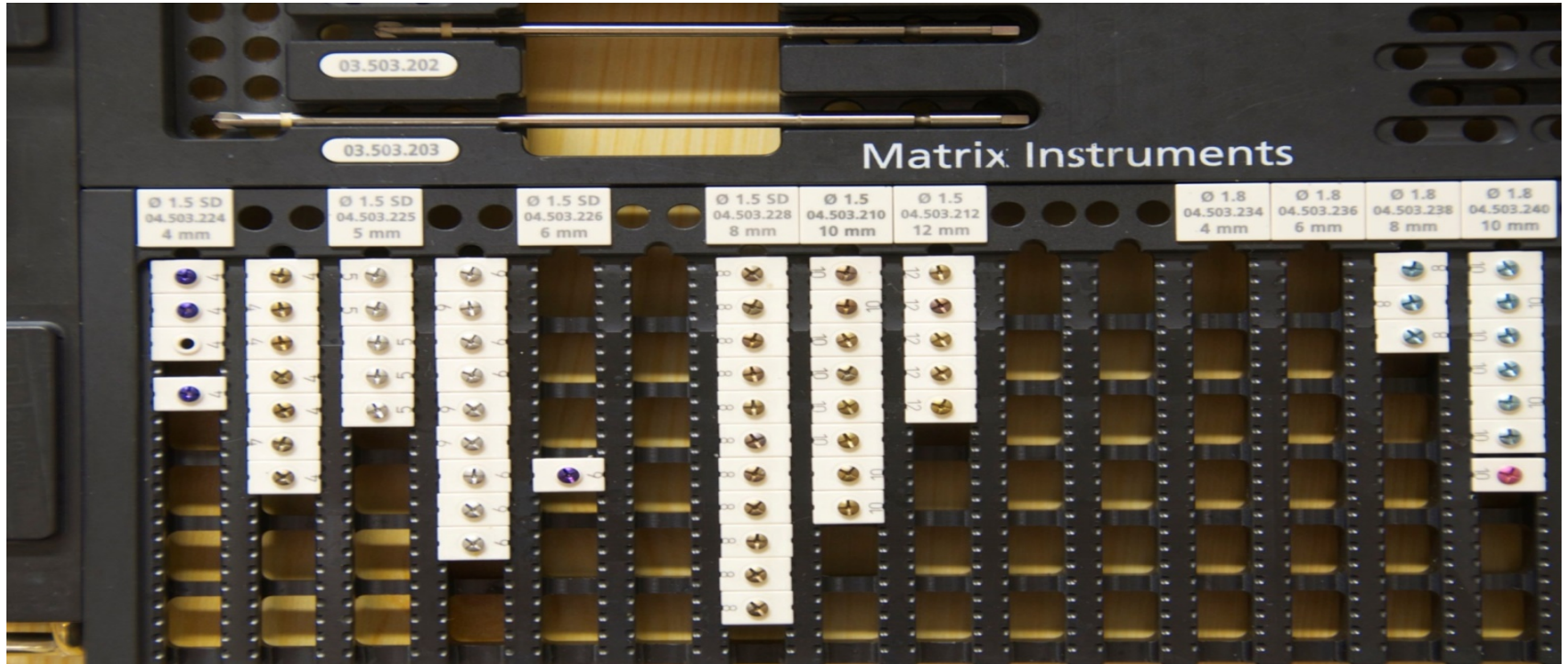
Unwarranted Clinical Variation

Laparoscopic Cholecystectomy Consumable Costs & Consultant Variation



Consultant Description	Avg Consumable Cost	Avg No of Products	Avg No of Staff	Avg Minutes	No of Procedures	Lower Quartile	Upper Quartile	Variance	Std Deviation	Avg LoS	Max LoS	Min Los
Cons A	£285	82	5	181	1	£285	£285	£0	-	3.00	3.00	3.00
Cons B	£239	74	7	127	3	£232	£250	£37	£19	1.00	1.00	1.00
Cons C	£231	70	6	123	6	£192	£255	£160	£59	1.83	5.00	1.00
Cons D	£227	70	6	98	9	£197	£248	£146	£45	1.56	6.00	1.00
Cons E	£223	70	5	100	11	£216	£235	£120	£31	1.27	4.00	1.00
Cons F	£218	69	6	93	6	£203	£238	£60	£24	1.00	1.00	1.00
Cons G	£209	62	6	79	8	£192	£231	£103	£38	1.63	4.00	1.00
Cons H	£188	64	7	90	9	£164	£224	£149	£53	1.25	2.00	1.00

Change in Clinical Practice



Sterile v Non-Sterile



Patient Traceability and other opportunities?

Individual Screw Pack



Multiple Screw Pack



Quantifiable Results



Through a combination of factors:

- The non-stock spend has reduced by at least 5-7% since go live
- Culture change in terms of waste, opening and using only what's needed
- Auto-replenishment of stock, clinician time diverted back to patient care (Stock Take efficiency) 2 days to 1/2 day
- Reductions in the stock holding – Visibility of consumption (Adjusted Min / Max)
- Reduced deliveries and charges by grouping orders
- Released stock storage space which can be relocated for other uses.

Key Data:

- Over 400 electronic catalogues feeding validated consumable pricing, enabling detailed analysis of non-pay spend.
- We are fully ready to benchmark our pricing.

Income Improvement

- Increased accuracy of OPCS codes due to data capture at point of care.
- Coding of all un coded patients - £850k.

Vital 'costing' data for clinicians to discuss



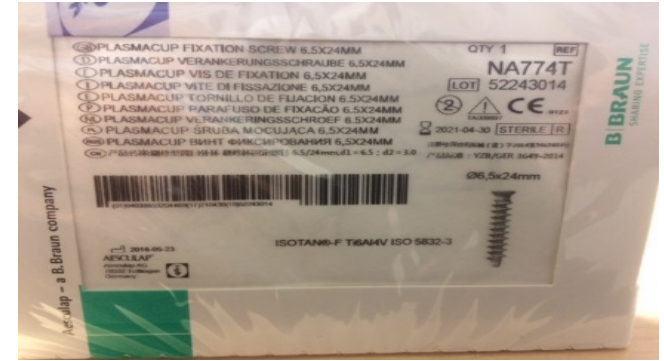
Cost of Consumables per Procedure	Avg. Cost p/procedure	Tariff Cost
DIAGNOSTIC ERCP, INTERMEDIATE THERAPEUTIC ERCP*	£568.61	£840
Diagnostic Colon with Biospy	£11.48	£488
Diagnostic ERCP	£328.22	£756
Diagnostic Colonoscopy	£13.84	£422
DIAGNOSTIC ERCP, MAJOR THERAPEUTIC ERCP*	£476.32	£1,002
Therapeutic Colonoscopy & Gastroscopy	£23.50	£537
Intermediate Therapeutic ERCP	£325.70	£840
Therapeutic Colonoscopy	£49.02	£537
Major Therapeutic ERCP	£410.70	£1,002

***IMPORTANT TO GET IT RIGHT IN CODING**

Electronic Procurement



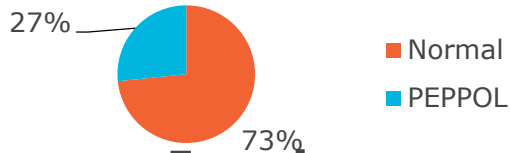
- First NHS PEPPOL Order and Invoice
- Supplier - B Braun – Product Fixation Screw August 16
- 32% at Phase 3
- Direct transmission into Supplier order system of reorder
- Direct replenishment
- Confirmation of delivery
- Electronic reconciliation to supplier invoice and payment



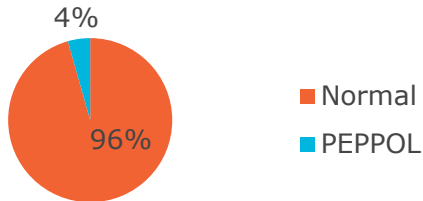
Where we are now?



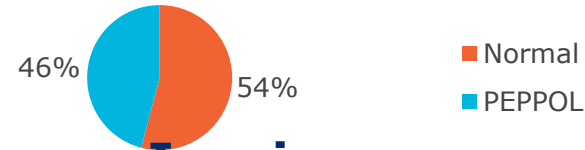
Orders transmitted via PEPPOL Feb...



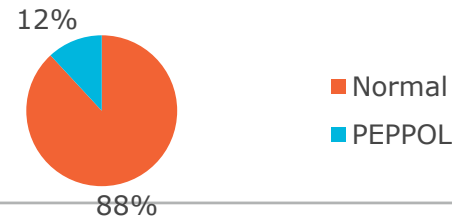
Invoice transmitted via PEPPOL Feb...



Order Lines Transmitted via PEPPOL June 2018



Invoices received via PEPPOL June...





Combined Areas	Go Live H Track	Year				Impact		Notes
		201415	201516	201617	6mths 201718	Actual 201718	Full Yr 201718	
Cardiology	Mar-15	1,613,562	1,509,061	1,783,025	665,349	369,698	739,395	
Activity		2,209	2,490	2,770	1,417			
Average Cost per Patient		730	606	644	470			
Day Case & General Theatres	Sep-14	3,599,042	4,039,230	4,156,683	2,018,770	314,250	628,500	
Activity		11,266	14,171	14,563	7,303			
Average Cost per Patient		319	285	285	276			
Eyes	Sep-15	972,976	968,496	1,121,827	528,084	112,925	225,849	
Activity		5,203	4,886	5,435	2,949			
Average Cost per Patient		187	198	206	179			
Gynaecology Theatres	Feb-16	581,045	804,940	1,023,037	454,209	0		Significant shift of activity to outpatient procedures, therefore increase in complexity in theatres not
Activity		5,701	5,288	4,548	2,371			
Average Cost per Patient		102	152	225	192			
Hands Day Case Unit	Oct-15	754,162	728,678	866,677	375,131	35,133	70,266	
Activity		4,925	4,998	5,420	2,814			
Average Cost per Patient		153	146	160	133			
Orthopaedic Theatres	Jul-16	8,566,173	8,925,574	9,185,353	4,230,205	546,036	1,092,072	
Activity		10,821	10,792	11,222	5,775			
Average Cost per Patient		792	827	819	733			
Paediatric Theatres	May-16	202,130	221,232	215,079	73,977	40,314	80,628	
Activity		3,043	3,070	3,163	1,586			
Average Cost per Patient		66	72	68	47			
Radiology	Jan-15	2,468,643	3,777,183	3,836,597	2,146,347	38,925	77,850	
Activity		2,580	2,750	3,073	1,591			
Average Cost per Patient		957	1,374	1,248	1,349			
Urology	Aug-15	190,930	176,692	211,640	123,905	6,354	12,707	
Activity		1,768	3,478	5,171	2,564			
Average Cost per Patient		108	51	41	48			

Savings 2017/18



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Total Savings		1,463,634	2,927,267
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H Track Costs		-110,712	-221,424
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Net Savings		1,352,922	2,705,843
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Business

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Any Questions?