

# Red Cell Utilisation Report -an update

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# Project History

- \* Project Group meeting January 2014 –
- \* From SWRTC
  - Janet Birchall (Chair)
  - Alister Jones
  - Steve Bassey
  - Alistair Penny
- From CliniSys
  - Craig Hayes ( Blood Transfusion Product Specialist)
  - Mike Brady (Business Analyst)

# The Concept-

## Based on the work of Frank et al

Using ClininSys PathManager (management reporting solution using BusinessObjectsXI) a report will be run

- Over a specified time
- Using Transfusion episodes
- The associated Pre-and Post Hbs
- By Specialty

# Initial Report- Problems

- \* November 2014-
- \* Hb in g/dl and not g/l – modify report = CRASH
- \* Absence of Patient Identification to facilitate validation.

Time to validate to enable Janet to present at ISBT  
and someone to present at the CliniSys UGM in June

## RBC Utilisation

Page 1/1

### Selection Criteria:

For Date Episode Date Range 01/01/2015 to 31/01/2015

Haemoglobin Test HGB Haemoglobin

For ALL Products

Patient matching on NHS Number

For ALL Status

Pre Transfusion Haemoglobin Result = Red

Post Transfusion Haemoglobin Result = Black

					Restrictive hb Trigger		Restrictive hb Target				
	1				77						
0 Unknown	3						86		96		
100 General Surgery	16								97.2		101.6
101 Urology	5								97.3	97.8	
104 Colorectal Surg	6								96.3	100	
110 Trauma & Ortho	33							91.2	91.3		
120 ENT	2					84		90			
160 Plastic Surgery	3					81	82.7				
180 Accident & Emer	44						88	89.1			
190 Anaesthetics	2	56.5							92		
300 General Medicin	31					82.5			90.9		
301 Gastroenterolog	7					80.1				97.8	
302 Endocrinology	2			66		77					
303 Clinical Haemat	71					80.5		85.1			

# 2nd Report- Problems

- \* Validation highlighted inaccuracies
- \* Narrowed down to 'Time and date of transfusion episode'.
- \* Ok if Hb –Transfused Hb
- \* Not Ok Hb Transfusion request 3units –Tx 2 units  
Check Hb Transfuse 3<sup>rd</sup> unit.

# Final Report

The screenshot displays a software interface for generating a final report. The interface is divided into several sections:

- PathManager Tree View:** Located on the left, it shows a hierarchical structure of data sources:
  - PathManager
    - Laboratory
      - Requests
      - QC
      - Donor Stock
      - Batch Stock
      - Mortuary
    - Logistics
    - Patient Index
    - Interface Stats
    - System Dates
    - \*Business Objects Reports
- Result Objects:** A pane on the right showing selected objects for the report:
  - Specialty Code
  - Specialty Desc
  - Best Gest Age
  - Number Of Screenings
  - Transfusion Episode (Count)
  - \*Pre Transfusion WinPath
  - \*Post Transfusion WinPath
  - Specialty Code & Desc
- Query Filters:** A pane at the bottom showing filters applied to the query:
  - Episode Date Range
  - \*Request Episode Identifier In list
  - \*Request Episode Identifier
  - \*Redcell Products
  - \*Status Used
  - Department Type Code Equal to T
  - Episode Date Range
  - Product Type Code Equal to REDCELL
  - Department Type Code Equal to T
- Display by objects:** A checkbox at the bottom left, currently checked.

				hb Trigger			hb Target						
	1				77								
0 Unknown	3					81.5							
100 General Surgery	11						90.7			102.5			
101 Urology	2		69						96.5				
104 Colorectal Surg	4						91	92.5					
110 Trauma & Orthop	22				79.3			92.6					
120 ENT	1					84							
160 Plastic Surgery	3				78.7			90.3					
180 Accident & Emer	32				75.7			93.1					
190 Anaesthetics	2	56.5						92					
300 General Medicine	29				78.1				95.4				
301 Gastroenterology	6				72.5					100			
302 Endocrinology	2				71.5	76							
303 Clinical Haemat	65					81.3	89.6						
320 Cardiology	1					81							
340 Thoracic Medicine	13				73.8			91.8					
370 Medical Oncology	6					84						110.3	
420 Paediatrics	1	61											
502 Gynaecology	9				78.9			92					
620 Old Ws GP Other	4				72.8				99.5				
7 Non Consultant	4					80.5			96.7				
800 Clinical Oncology	23						90.4					110.3	
810 Radiology	1						87		99				
		<60	60	65	70	75	80	85	90	95	100	105	110



Top 100 Specialists	Count	Score	Weighted Score	Percentage	Rank
300 General Medicine	29		78.1		
301 Gastroenterology	6		72.5		
302 Endocrinology	2		71.5	76	
303 Clinical Haematology	65			81.3	89.6
320 Cardiology	1			81	
340 Thoracic Medicine	13		73.8		91.8
370 Medical Oncology	6			84	

# Drilling Down

## RBC Utilisation

Page 1/1

### Selection Criteria:

For Date Episode Date Range 01/01/2015 to 31/01/2015

Haemoglobin Test HGB Haemoglobin

For Products RC Red Cells

Patient matching on Hospital Number

For Transfused Status I ISSUED;U PRESUMED USED;UC USED CONFIRMED

Pre Transfusion Haemoglobin Result = Red

Post Transfusion Haemoglobin Result = Black

					Restrictive			Restrictive				
					hb Trigger			hb Target				
EVEH DR H. EVE	2						82.5		91			
ROBEP DR P.J. ROBERTS	17						80.4 81.1					
RYME DR N.L. RYMES	12				71.5	77.5						
SMITS DR S.R. SMITH	19					79.3		87.5				
TURND DR D. TURNER	15							89.3 88.2				
		<60	60	65	70	75	80	85	90	95	100	1

# Validation

Clinical Haemat									
Specimen Number	Surname	Forename	Episode Date & Time	Pre -Hb	Date	Tx units	Post Hb	Date	
0015T000050			01/01/2015	72	01/01/2015	2	87	02/01/2015	
0015T000050			04/01/2015	86	03/01/2015	1	84	05/01/2015	
0015T000051			01/01/2015	101	01/01/2015	2	No Res	No Res	
0015T000052			01/01/2015	73	01/01/2015	2	68	02/01/2015	
0015T000066			04/01/2015	62	04/01/2015	3	113	07/01/2015	
0015T000081			02/01/2015	68	02/01/2015	1	85	03/01/2015	
0015T000089			02/01/2015	105	30/12/2014	2	No Res	No Res	
0015T000109			02/01/2015	89	02/01/2015	1	103	03/01/2015	
0015T000243			05/01/2015	78	05/01/2015	2	91	06/01/2015	

# CliniSys vs In House

Specialty	RBC Utilisation Report		In House	
	Pre-Hb	Post-Hb	Pre-Hb	Post Hb
A&E	75.7	93.1	75.8	93.0
Anaesthetics	56.5	92	56.5	89
Cardiology	81	116	81	116
Haematology	81.3	89.6	79.6	89.7
Oncology	90.4	110.3	89.3	110.4
Colorectal Surgery	91	92.5	83.75	99
Endocrinology	71.5	76	71.5	77.5
Gastroenterology	72.5	100	71.5	100
General Medicine	78.1	95.4	74.6	95.4
General Surgery	90.7	102.5	92.5	100.9
Gynaecology	78.9	92	77.8	86.9
Medical Oncology	84	110.3	84	107.6
Non Consultant	80.5	96.7	74.25	96.7
GP Other	72.8	99.5	72.75	99.5
Paediatrics	61	122	61	122
Plastic Surgery	78.7	90.3	81	90.3
Thoracic Surgery	73.8	91.8	69.5	89.2
Trauma	79.3	92.6	77.2	93.8
Unknown	86	98	86	98
Urology	69	96.5	68.5	96.5

# Conclusion

- \* There are some discrepancies!
- \* Ok if Pre Hb – Transfuse –Post Hb
- \* Multiple Hb's , multiple Xm Request and Transfusion episodes –it gets confused!
- \* It does have its use- particularly using the 'drill down function'



Thanks to Janet and Alister for being patient.

And Katy Cowan for help with the number crunching!