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**2016 Re-Audit of Patient Blood Management in
adults undergoing elective, scheduled surgery**

**2017 Re-Audit of Red Cell & Platelet Transfusion
in Adult Haematology patients**

South West RTC

2016 Re-Audit of Patient Blood Management in adults undergoing elective, scheduled surgery

South West RTC

Method

- For this repeat audit, sites were asked to
 - identify all patients who were admitted *and transfused* in Sept, Oct and Nov 2016 for one or more of 14 selected surgical procedures
 - audit all consecutive cases with the minimum target of 45 patients, and a maximum of 70
- A list of OPCS4 codes was provided to help with patient identification



Sample size: 339 patients from 15 sites

Blood and Transplant

Site	Cases
Dorset County Hospital NHS Foundation Trust	2
Gloucestershire Hospitals NHS Foundation Trust	11
Great Western Hospitals NHS Foundation Trust	38
North Bristol NHS Trust	31
Northern Devon Healthcare NHS Trust	9
Plymouth Hospitals NHS Trust	5
Poole Hospital NHS Foundation Trust	14
Royal Cornwall Hospitals NHS Trust	29
Royal Devon and Exeter NHS Foundation Trust	38
Royal United Hospitals Bath NHS Foundation Trust	25
Taunton and Somerset NHS Foundation Trust	23
The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	21
University Hospitals Bristol NHS Foundation Trust	40
Weston Area Health NHS Trust	37
Yeovil District Hospital NHS Foundation Trust	16

Type of surgical procedure audited (1)

Type of surgical procedure (n=3897)	National							
		Dorset	Gloucestershire	Great Western	North Bristol	Northern Devon	Plymouth	Poole
Primary unilateral total hip replacement	16% (610)	0	6	13	4	2	0	0
Primary bilateral total hip replacement	1% (30)	0	0	0	0	0	0	0
Primary unilateral total knee replacement	9% (341)	0	0	4	2	0	0	0
Primary bilateral total knee replacement	1% (27)	0	0	0	0	0	0	0
Unilateral revision hip replacement	7% (258)	0	0	1	1	0	1	4
Unilateral revision knee replacement	2% (67)	0	0	0	4	0	0	0
Colorectal resection for any indication (open or laparoscopic)	8% (300)	0	0	1	0	0	0	1
Open arterial surgery e.g. scheduled (non-ruptured) aortic aneurysm repair, infrainguinal femoropopliteal or distal bypass	4% (157)	1	0	0	5	0	0	0
Primary coronary artery bypass graft	3% (116)	0	0	0	0	0	0	0
Valve replacement +/- CABG	11% (423)	0	0	0	0	0	1	0
Simple or complex hysterectomy	9% (342)	1	1	0	2	0	1	4
Cystectomy	1% (37)	0	0	0	1	0	1	0
Nephrectomy	3% (130)	0	0	0	3	0	1	0
# neck of femur (arthroplasty)	27% (1044)	0	4	19	9	7	0	5

Type of surgical procedure audited (2)

Type of surgical procedure (n=3897)	National	Royal Cornwall	Royal Devon and Exeter	Royal United Hospitals	Taunton and Somerset	The Royal Bournemouth	University Hospitals Bristol	Weston	Yeovil
Primary unilateral total hip replacement	16% (610)	10	3	2	6	5	0	6	2
Primary bilateral total hip replacement	1% (30)	1	2	0	0	0	0	0	1
Primary unilateral total knee replacement	9% (341)	0	1	0	1	1	0	5	2
Primary bilateral total knee replacement	1% (27)	0	0	0	0	0	0	0	0
Unilateral revision hip replacement	7% (258)	2	6	4	5	1	0	3	0
Unilateral revision knee replacement	2% (67)	0	6	1	0	2	0	0	1
Colorectal resection for any indication (open or laparoscopic)	8% (300)	0	2	1	2	1	3	6	1
Open arterial surgery e.g. scheduled (non-ruptured) aortic aneurysm repair, infrainguinal femoropopliteal or distal bypass	4% (157)	7	1	0	1	7	0	0	0
Primary coronary artery bypass graft	3% (116)	0	0	0	0	0	0	0	0
Valve replacement +/- CABG	11% (423)	0	0	0	0	0	34	0	0
Simple or complex hysterectomy	9% (342)	3	3	2	2	0	1	0	1
Cystectomy	1% (37)	0	0	0	0	2	0	0	0
Nephrectomy	3% (130)	1	0	0	1	2	1	0	0
# neck of femur (arthroplasty)	27% (1044)	5	14	15	5	0	1	17	8

Key findings: Pre-op



Blood and Transplant

Standard	Subject and % met per site	
	PBM1: Pre-operative anaemia management	PBM 4: Pre-operative transfusion - single unit transfusion policy
Dorset	50	
Gloucestershire	100	
Great Western	53	
North Bristol	73	33
Northern Devon	100	
Plymouth	60	
Poole	11	
Royal Cornwall	75	50
Royal Devon and Exeter	38	
Royal United Hospitals	60	33
Taunton and Somerset	65	100
The Royal Bournemouth	48	
University Hospitals Bristol	36	
Weston	60	33
Yeovil	88	100

PBM Standard 2: Pre-operative transfusion indicated

Clinical staff should only prescribe a pre-operative transfusion in patients undergoing elective major blood loss surgery (i.e. excluding patients with fractured neck of femur) if the Hb is less than the defined Hb threshold for transfusion (70g/L in patients without acute coronary ischaemia or 80g/L in patients with acute coronary ischaemia)

Standard	Subject and % met per site
	PBM 2: Prescribing pre-operative transfusion
Dorset	
Gloucestershire	
Great Western	
North Bristol	5
Northern Devon	50
Plymouth	
Poole	11
Royal Cornwall	
Royal Devon and Exeter	4
Royal United Hospitals	
Taunton and Somerset	
The Royal Bournemouth	5
University Hospitals Bristol	
Weston	10
Yeovil	

Key findings: Intra-op



Blood and Transplant

Standard	Subject and % met per site	
	PBM 6a: Patients having intra-operative transfusion in whom at least one PBM measure has been attempted (where appropriate)	PBM 7a: Patients having intra-operative transfusion in whom all PBM measures have been attempted (where appropriate)
Dorset		
Gloucestershire	100	100
Great Western	50	50
North Bristol	75	38
Northern Devon		
Plymouth	100	100
Poole	100	
Royal Cornwall	100	
Royal Devon and Exeter	75	
Royal United Hospitals	100	67
Taunton and Somerset	100	40
The Royal Bournemouth	67	
University Hospitals Bristol	100	20
Weston	80	40
Yeovil	100	

Key findings: Post-op



Blood and Transplant

Standard	Subject and % met per site		
	PBM 9: Post-operative transfusion following the single unit policy	PBM 10a: Patients having post-operative transfusion in whom at least one PBM measure has been attempted (where appropriate)	PBM 11a: Patients having post-operative transfusion in whom all PBM measures have been attempted (where appropriate)
Dorset		50	
Gloucestershire	50	100	
Great Western	74	100	6
North Bristol	53	87	33
Northern Devon	40	100	
Plymouth	100	100	
Poole		100	
Royal Cornwall	100	100	
Royal Devon and Exeter	69	83	8
Royal United Hospitals	53	100	38
Taunton and Somerset	53	100	15
The Royal Bournemouth	67	91	
University Hospitals Bristol	63	91	14
Weston	40	76	12
Yeovil	9	86	

Recommendations



Blood and Transplant

- Only prescribe red cells for stable, asymptomatic, non-bleeding patients who have a pre-transfusion Hb of less than 70g/L, or less than 80g/L in those with cardiovascular disease
- Record the reason for transfusion in the patient's case notes
- In stable non-bleeding patients, staff should recheck Hb after each transfused unit

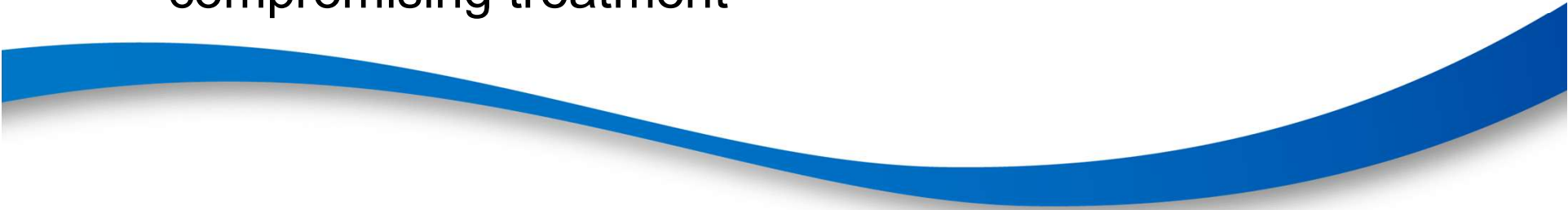


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2017 Re-Audit of Red Cell & Platelet Transfusion in Adult Haematology patients

South West RTC

Aims of the audit

- examine the use of red cells and platelets in a sample of patients who had a known haematological condition
 - collect information on the context in which care was delivered through the use of an organisational questionnaire
 - identify variation in practice and compare practice against guidelines
 - discuss reasons for variation and identify opportunities to reduce variation while not compromising treatment
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Method

- Audit any adult with a known haematological malignancy or myeloid failure syndrome
- Transfused with red cells or platelets in July 2017
- Patients could be audited for both red cell and platelet transfusions



Sample size: 479 patients from 16 sites

Blood and Transplant

Site	Cases
Dorset County Hospital NHS Foundation Trust	5
Gloucestershire Hospitals NHS Foundation Trust	27
The Great Western Hospital	34
North Bristol NHS Trust	23
Northern Devon Healthcare NHS Trust	29
Derriford Hospital	36
Poole Hospital NHS Foundation Trust	24
Royal Cornwall Hospital	39
Royal Devon and Exeter NHS Foundation Trust	38
Royal United Hospital	33
Musgrove Park Hospital	24
Salisbury NHS Foundation Trust	24
The Royal Bournemouth Hospital	42
Torbay and South Devon NHS Foundation Trust	29
University Hospitals Bristol NHS Foundation Trust	58
Yeovil District Hospital	14

Appropriate Red Cell Transfusion

Site	n RBC Tx	% Appropriate	n Appropriate	% Outside guidelines	n Outside guidelines	% Unable to assess	n Unable to assess
Dorset	5	40	2	0	0	60	3
Gloucestershire	27	78	21	19	5	4	1
Great Western	29	62	18	24	7	14	4
North Bristol	21	100	21	0	0	0	0
Northern Devon	29	72	21	3	1	24	7
Plymouth Hospitals	35	71	25	20	7	9	3
Poole	21	95	20	5	1	0	0
Royal Cornwall	38	74	28	5	2	21	8
Royal Devon and Exeter	37	89	33	3	1	8	3
Royal United Hospitals	30	90	27	10	3	0	0
Salisbury	24	83	20	0	0	17	4
Taunton and Somerset	23	87	20	13	3	0	0
The Royal Bournemouth	34	79	27	18	6	3	1
Torbay and South Devon	28	79	22	18	5	4	1
University Hospitals Bristol	46	80	37	13	6	7	3
Yeovil	14	64	9	0	0	36	5

Based on the algorithms and using NBTC indication codes



Appropriate Prophylactic Platelet Transfusion

Site	n Platelets Tx	% Appropriate	n Appropriate	% Outside guidelines	n Outside guidelines	% Unable to assess	n Unable to assess
Dorset	0						
Gloucestershire	4	75	3	25	1	0	0
Great Western	8	75	6	25	2	0	0
North Bristol	4	75	3	25	1	0	0
Northern Devon	2	50	1	50	1	0	0
Plymouth Hospitals	8	63	5	38	3	0	0
Poole	8	63	5	38	3	0	0
Royal Cornwall	11	73	8	27	3	0	0
Royal Devon and Exeter	9	67	6	33	3	0	0
Royal United Hospitals	9	78	7	22	2	0	0
Salisbury	6	100	6	0	0	0	0
Taunton and Somerset	3	100	3	0	0	0	0
The Royal Bournemouth	19	47	9	53	10	0	0
Torbay and South Devon	7	86	6	14	1	0	0
University Hospitals Bristol	33	79	26	21	7	0	0
Yeovil	0						

Based on the algorithms and using NBTC indication codes



Key recommendations for improving clinical practice

- Each patient undergoing transfusion should have a transfusion plan in the medical records that will, at minimum, include a transfusion threshold & target and document reasons that justify deviation from the existing standards. This is particularly important for patients on chronic transfusion programmes where a customized approach is recommended.
 - In the absence of active bleeding, use the minimum number of red cell units required to achieve target haemoglobin and consider a single unit transfusion.
 - One adult therapeutic dose of platelets is required for prophylaxis. Pre-procedure consider the size of the patient, previous platelet count increments and the target platelet count.
 - Risk assess the patient for transfusion-associated circulatory overload (TACO), which is the transfusion reaction most commonly associated with death.
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