

# 2016 Repeat Audit of Patient Blood Management in Adults undergoing elective, scheduled surgery



The Faculty of Intensive Care Medicine

**RCOA**  
Royal College of Anaesthetists

## PBM Audit Sep to Nov 2016

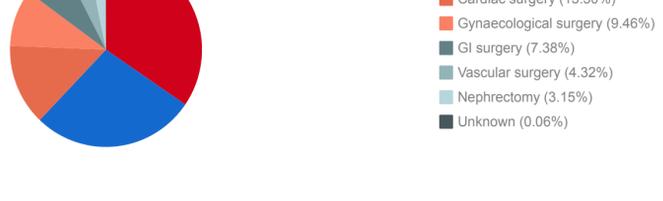
 **156** hospitals participated, **138** hospitals also participated in the 2015 audit

 **3266** patients  
median age 76 years

 **7000** red cell units

There has been an improvement in PBM practice since 2015, when the original audit was performed

### Type of surgery



## Pre-Operative Patient Blood Management

 **50%** of elective surgery patients received appropriate pre-operative anaemia management before surgery  
(1175/2361)  
Compared to **46%** in 2015  
(1004/2185)  
Data excludes patients with fractured neck of femur

 **6.3%** of all patients received a pre-operative transfusion  
(207/3262)  
**13%** received a transfusion when the Hb threshold was below the national guidelines, compared to 8.9% (18/203) in 2015

 **34%** of patients received a transfusion using a single unit approach  
(62/186)  
Compared to **27%** in 2015  
(57/213)

 **2%** of patients that had pre-operative anaemia management and received a transfusion were given the transfusion appropriately  
(2/90)

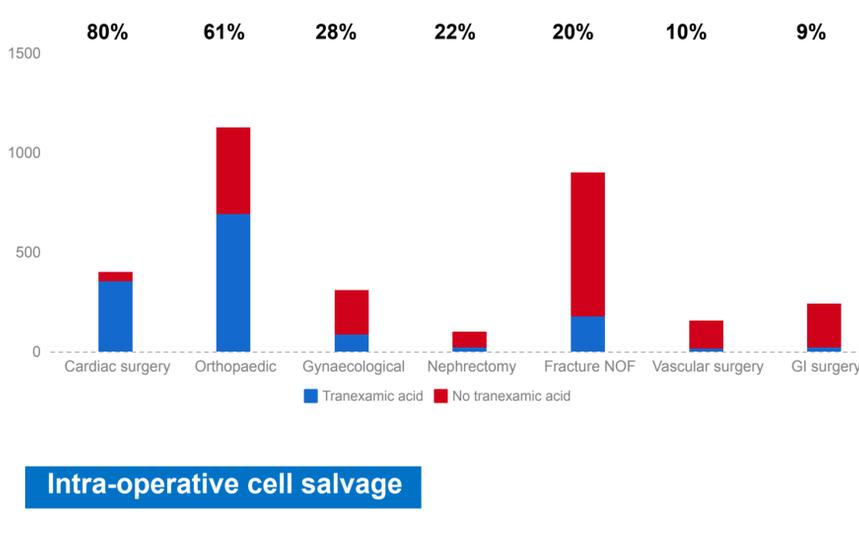
## Patient Blood Management in theatre and recovery

 **26%** of patients received an intraoperative transfusion  
(860/3266)  
**81%** of patients who had received an intraoperative transfusion had received at least one appropriate PBM measure  
(572/704)  
**20%** had received all appropriate PBM measures  
(141/705)

### Tranexamic Acid

 **42%** of all patients received tranexamic acid  
(1367/3255)  
Compared to **32%** in 2015  
(981/3025)

### Number of surgical cases and percentage that used tranexamic acid



## Intra-operative cell salvage

Intra-operative cell salvage was commenced in **17%** of all patients  
(539/3261)

**Reasons why cell salvage was not started**

- 36% not worthwhile
- 15% not available in the hospital
- 2% not available on day of surgery
- 37% the reason it was not used was unknown
- 9% it was contraindicated

## Post-Operative Patient Blood Management

 **74%** of patients received a post-operative transfusion  
(2396/3256)  
**84%** of patients who had received a post-operative transfusion had received at least one appropriate PBM measure  
(1494/1672)  
**10%** had received all appropriate PBM measures, compared to **7.5%** in 2015  
(113/1515)

 **34%** of patients received their first post-operative transfusion when actively bleeding or when the Hb was less than the national guidelines  
(797/2356)  
Compared to **23%** in 2015  
(503/2158)

 Clinical staff used a single unit transfusion approach in **49%** of patients who were not actively bleeding  
(903/1825)  
Compared to **37%** in 2015  
(703/1900)

## Key Recommendations

### Pre-operative anaemia management

**Clinical Staff**  
Use whatever time is available before operation for anaemia investigation and treatment initiation (if appropriate), even when surgery is urgent

Ensure surgeons know whether patient is anaemic or not when they undergo the informed consent process for surgery, they discuss the patient's individual clinical risks, and implement any Patient Blood Management required.

Ensure anaemia screening occurs as soon as possible after the decision to proceed (ideally same visit) to allow investigation and correction if appropriate.

Ensure preoperative results are reviewed in a timely fashion, and that patients with previously undetected and potentially serious anaemia are appropriately referred, including deferring non-urgent non-cancer surgery where appropriate.

**Hospital Transfusion Committee/Hospital Transfusion Team**  
Ensure healthcare pathways are structured to enable anaemia screening and investigation/ correction before surgery

Work with Commissioners to formalise integrated pathways and funding for the referral of the anaemia suggests to be anaemic during surgical workup, if the nature of the anaemia suggests unexpected significant underlying disease.

### Transfusion Practice

**Clinical Staff**  
Only prescribe a red cell transfusion in 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.

In stable non-bleeding patients, recheck Hb after each transfused unit.

Record the reason for transfusion in the patient's case notes and record a justification for transfusion if the transfusion was prescribed for a patient with a Hb higher than the recommended thresholds.

**Hospital Transfusion Committee/Hospital Transfusion Team**  
For hospitals with access to electronic order comms systems, the team should work with the IT department to design a decision support system that supports best practice.

Ensure education programmes for clinical staff include randomised trial findings which compare the patient outcomes of different red cell transfusion strategies

Support transfusion laboratory staff to query requests that are outside recommended guidelines prior to issuing blood.

### Patient Blood Management Measures

**Clinical Staff**  
The theatre staff, anaesthetists and surgeons SHOULD ensure that the PBM measures are implemented as appropriate.

Where available, peer data should be applied to compare individual surgical teams and encourage participation in PBM

**Hospital Transfusion Committee/Hospital Transfusion Team**  
Identify the need for intra-operative cell salvage and resource appropriately

Ensure local guidelines exist regarding the use of PBM measures

Ensure tranexamic acid use is the standard of care for surgical patients expected to have moderate or severe blood loss unless contraindicated.