2017 Repeat Audit of Red cell and Platelet Transfusion in Adult Haematology Patients
The audit was conducted on adults undergoing surgery and who received a transfusion during a 3 month period between September 2016 and November 2016. 153 patients, median age 73 years, were involved. 148 hospitals also participated in the 2016 audit.

4098 patients, median age 73 years, participated in the 2016 audit.

3830 red cell transfusions and 1553 platelet transfusions were administered.

72% of all patients were managed without curative intent (transfusion alone or low dose chemotherapy).

Haematological Diagnosis

- Acute leukaemia: 31%
- Aplastic anaemia: 7%
- Chronic leukaemia: 6%
- Myelodysplasia: 6%
- Myelodysplastic/myeloproliferative disorders: 7%
- Lymphoma: 4%
- Myeloma: 15%
- Other: 1%
- Myeloproliferative: 23%
**Organisational Audit**

- 11% (12/107) of hospitals did not have written transfusion guidelines.
- Approximately 29% used a higher haemoglobin for people without additional risk factors.
- Only 28% stated that platelet transfusions were not required in chronic bone marrow failure.

**Clinical Audit - Red cells**

- 58% (2187/3780) of red cell transfusions were for chronic anaemia.
- 76% of red cell transfusions were considered appropriate.
- 43% (527/1217) of inpatients and 24% (629/2602) of outpatients had single unit transfusions.
- Compared to 27% of inpatients and 13% of outpatients in 2016.

- 12% (80/684) of inpatients and 1.3% (25/1941) of outpatients had an Hb measured between red cell units.
  
  Results were similar in patients weighing less than 50kg. 5 outpatients weighing less than 50kg received 3 unit transfusions.

- 24% (195/815) of stable patients with reversible bone marrow failure were transfused with an haemoglobin less than or equal to 70 g/L.
  
  Compared to 17% in 2016.

- 44% (32/72) of patients with reversible bone marrow failure and cardiovascular disease were transfused with an haemoglobin less than or equal to 80 g/L.
  
  Compared to 30% in 2016.
Prophylaxis - 79%

- 51% (629/1223) of platelet transfusions were for patients with chronic bone marrow failure.
- 94% (1144/1218) of patients had a single unit transfusion.
- 75% (443/590) of prophylactic platelet transfusions were considered appropriate in reversible bone marrow failure.
- 65% (305/469) of patients with reversible bone marrow failure had a platelet transfusion when the platelet count was 10 or less.

Pre-procedure - 9%

- 7% (9/138) only had a bone marrow biopsy.
- 27% (37/138) of pre-procedure platelet transfusions were considered appropriate.

Therapeutic - 9%

- 88% (127/145) of therapeutic platelet transfusions were considered appropriate.
Key Recommendations

Improving Local Guidelines

1. Local hospital guidelines must be easily available and should reflect national guidelines for blood transfusion.
   Local hospital guidelines should state that prophylactic platelet transfusions are not required:
   A) Prior to bone marrow aspirates and trephine
   B) In stable patients with chronic bone marrow failure.

2. Local hospital guidelines should state how to manage transfusion in patients at high risk of Transfusion Associated Circulatory Overload (TACO).

Improving Local Audit

1. Information technology solutions are required to allow regular non labour intensive audit of transfusion practice.
2. Until IT solutions are available resource to allow staff to perform regular local audit of transfusion practice is required.

Improving Clinical Practice

1. Each patient should have a transfusion plan in the medical records that will include:
   - a transfusion threshold and target
   - document reasons that justify deviation from existing standards

2. In the absence of active bleeding, use the minimum number of red cell units required to achieve a target haemoglobin and consider a single unit transfusion.

3. 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.

4. Risk assess the patient for transfusion-associated circulatory overload (TACO). TACO is the transfusion reaction most commonly associated with death.