Errors in Transfusion of Transplant Recipients
Guidelines are Required

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Background:
Patients who receive allogeneic or autologous haemopoietic stem cell transplants (HSCT) or solid organ transplants have specific transfusion requirements such as the need for irradiation of cellular components, and for allografts (haemopoietic or solid organ), in the UK from March 2016, HEV-screened components. Where a HSCT allograft is from a donor of different ABO and/or D type the transfusion requirements are more complex and change with time over the transplant period requiring close collaboration between the transplant unit and transfusion laboratory.

Aim: To review and categorise transfusion errors in stem cell and solid organ transplant patients.

Method: SHOT reports over a five year period, 2012–2016, were searched for transfusion errors in transplant patients.

Results: A total of 298 cases were analysed from calendar years 2012-2016, Figure 1: 201 HSCT and 98 solid organ transplants (1 both). ABO and D errors accounted for 106/298 (35.6%), Figure 2. HSCT patients were affected in 201/298 (67.4%) and solid organ recipients in 98/298 (32.9%) (total transplants 299 as 1 patient had both HSCT and solid organ transplants). There were 26 ABO-incompatible red cell transfusions to HSCT allograft recipients, with 1 haemolytic transfusion reaction.

Summary and conclusions:
It is essential that clinical and transfusion laboratory teams are in close communication to ensure optimal component provision, in particular to prevent ABO-incompatible transfusions to HSCT patients. It is also vital that the LIMS is kept updated and used effectively. Further training and education of both clinical and laboratory staff may be required to ensure full understanding of the complexities of transfusion to transplant recipients. There is surprisingly little guidance available for transfusion of transplant recipients, particularly for ABO-incompatible solid organ transplants.

Recommendation:
Transplantation and transfusion experts should collaborate to develop national guidelines.