# Summary of Errors Related to Information Technology (IT) 10

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This chapter covers transfusion adverse events that relate to laboratory information management systems (LIMS) as well as other information technology (IT) systems and related equipment that are used in the delivery of hospital transfusion services.

The cases included are drawn from the other chapters of this report as shown in Table 10.1. The selected cases included events where IT systems may have caused or contributed to the errors reported, where IT systems have been used incorrectly and also includes cases where IT systems could have prevented errors but were not used. The corrective and preventative action suggested by hospitals in response to a few errors included IT solutions and therefore these have been included where they illustrate an important point.

In 2013 there were 187 (excluding Anti-D) reported incidents of errors related to IT systems (see Table 10.1) compared with 80 in 2012, 74 in 2011, 56 in 2010, 61 in 2009 and 44 in 2008. The breakdown of the 2012 figures is shown for comparison: there was a reduction in laboratory wrong component transfused (WCT) errors but a large increase in specific requirements not met (SRNM) errors, particularly relating to those where the primary error was outside the laboratory. Cases were included this year if it was considered that specific requirements might have been met if IT flags or alerts had been used in the laboratory. Similarly, right blood right patient (RBRP) cases increased because of the inclusion of any cases where incorrect data was recorded on one or more computer systems.

| Error | 2012 | 2013 |
|---|---|---|
| Wrong component transfused (WCT) | 21 | 8 |
| Specific requirements not met laboratory (SRNM) | 31 | 36 |
| Specific requirements not met clinical (SRNM) | | 81 |
| Right blood right patient (RBRP) | 8 | 51 |
| Avoidable, delayed or undertransfusion (ADU) | 3 | 2 |
| Handling and storage errors (HSE) | 15 | 9 |
| Haemolytic transfusion reaction (HTR) | 2 | 0 |
| **Total** | **80** | **187** |
| Anti-D immunoglobulin (Anti-D Ig) | 13 | 16 |
| **Total including Anti-D Ig** | **93** | **203** |

**Table 10.1: Source of cases included in the IT chapter**

In 2013, 80/187 (42.8%) of the component-related incidents originated in the transfusion laboratory and 107/187 (57.2%) originated in the clinical area. A total of 157 cases involved red cells, 23 platelets and 7 related to plasma components. An additional 16 cases were anti-D-related, 15 of which were laboratory errors. The total of 203 IT-related errors includes 95 laboratory and 108 clinical errors.

A small number of cases, 22/187 (11.8%), occurred in children (including 9 infants below the age of one year).

Where the timing of the error was known (125 cases) 96/125 (76.8%) occurred during core working hours and, of the 29/125 (23.2%) out of hours, 18/125 (14.4%) took place after midnight.

Where the urgency of the request was available (173 cases) 114/173 (65.9%) of the transfusions were considered routine, 42/173 (24.3%) urgent and 17/173 (9.8%) were emergencies. In 14 cases the urgency of the request was not stated.

## Deaths n=0

There were no transfusion-related deaths where IT systems contributed.

## Major morbidity n=1

Use of an age- and gender-specific flag was not used to prevent sensitisation to the K antigen.

## Minor morbidity

There were four cases where incorrect use of IT systems contributed to minor morbidity.

Three involved overriding warning flags resulting in the transfusion of ABO incompatible red cells, non-phenotyped units to a patient with red blood cell (RBC) antibodies and antigen-positive blood to a non-sensitised patient that resulted in alloimmunisation.

In the fourth case the timely setting of a warning flag would have prevented the transfusion of non-human leucocyte antigen (HLA)-selected platelets to a patient with HLA antibodies.

## No harm

All the other cases (182/187, 97.3%) did not result in any harm to the recipient of the components transfused.

IT events are added to the appropriate chapters, and further information is also available in the 2013 Annual SHOT Report Supplement located on the SHOT website, www.shotuk.org under SHOT Annual Reports and Summaries, Report, Summary and Supplement 2013.