

## The role of Sp-ICE in preventing Haemolytic Transfusion Reactions

**Essential information about Sp-ICE:****What is Sp-ICE?**

The Sp-ICE (Specialist Services Electronic Reporting using Clinisys ICE) application was launched by NHS Blood and Transplant on the 27<sup>th</sup> of November 2013 as a web-based reporting system with the additional benefit of being a repository of patient antibody data, which had been confirmed by the Red Cell Immunohaematology (RCI) Laboratory. RCI reports from 2011 were migrated to Sp-ICE but a later project uploaded reports from referrals from 31<sup>st</sup> October 2006 onwards. Other Blood Services may have similar national databases.

**SHOT recommendation regarding Sp-ICE and similar national databases**

In 2016 the efficacy of Sp-ICE and other similar national databases was discussed, with a key SHOT recommendation that hospitals should actively check these databases for those patients at high risk of experiencing transfusion reactions, such as those with sickle cell anaemia. This recommendation was repeated in 5 out of the last 6 reports. The 2022 Annual SHOT Report also highlighted how these databases can be utilised to obtain antibody history on patients who have been treated at different hospital sites. However, each year SHOT continues to receive reports of haemolytic transfusion reactions (HTR) in patients who have confirmed antibody history available on Sp-ICE.

**What information is available on Sp-ICE?**

Apart from Red cell Immunohaematology Reports, Sp-ICE also displays any specific transfusion requirements (e.g., irradiation, CMV, HbS negative) that RCI have received notification from the patient's hospital. Reports from the International Blood Grouping Laboratory (IBGRL) and NHSBT genotyping reports are also available. While Sp-ICE is a helpful tool, challenges faced by blood transfusion laboratories in optimally using the information available on the database are described below.

**Barriers reported and Information Governance:****Barriers to using Sp-ICE**

There is no direct link between Sp-ICE and hospital laboratory IT systems, which means staff must access a separate database to check whether a Sp-ICE record for the patient exists. It is therefore important that hospitals develop local guidelines explaining the situations in which staff must check such national databases, to ensure consistent practice.

**Information Governance**

Individual organisations are required to sign an information sharing agreement authorising NHS Blood and Transplant to share their patient reports with others. Without this agreement, other hospitals will be able to see that a record for an individual patient exists but will not be able to view the report contents, antibody record or specific transfusion requirement record.

# The role of Sp-ICE in preventing Haemolytic Transfusion Reactions

## Current users



258 locations referred samples to RCI

96.9% have Sp-ICE data sharing agreements. Of the 8 locations RCI do not currently have data sharing agreements with, 3 are private/non-NHS services, 1 from NHS Wales & 1 from NHS Scotland.

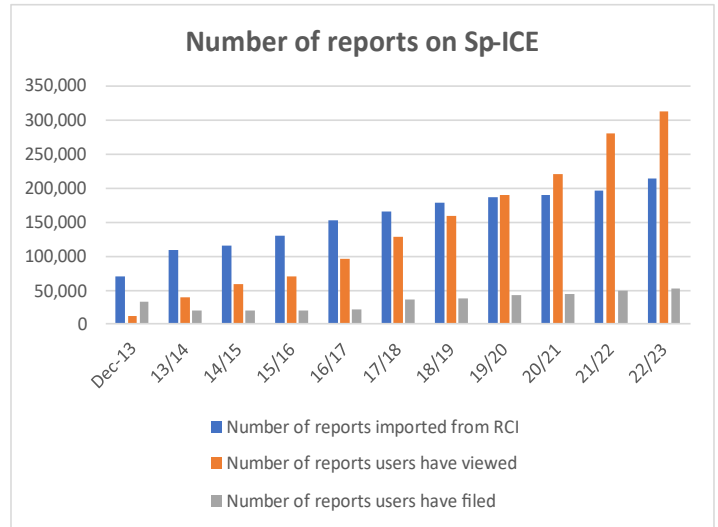
There are currently 2,243 active Sp-ICE accounts.

INFORMATION TECHNOLOGY MUST BE SET UP AND USED CORRECTLY TO BE SAFE

IT SUPPORTS SAFE TRANSFUSION - USE IT



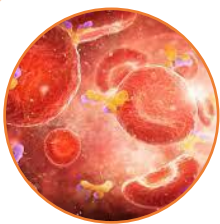
## Sp-ICE statistics (2012-2023)



## Illustrative cases highlighting the importance of accessing the information from national databases such as Sp-ICE to support safe transfusions



**Case 1: Failure to identify previous antibody history available in a patient treated across multiple hospitals.** A patient was admitted with a suspected transfusion reaction following a transfusion the previous week. The patient had received care at multiple different hospitals in the preceding 17 years and developed multiple red cell antibodies over the period. Each hospital had a record of the antibodies detected at that site and on each occasion, samples had been referred to NHSBT and the complete antibody history uploaded onto Sp-ICE. The hospital where the patient was last transfused, issued the red cells based on the antibody history they had on record from when they last sent a sample to NHSBT 17 years ago (The 2018 Annual SHOT Report).



**Case 2: Monitoring a patient with haemoglobinopathy at high risk of hyperhaemolysis.** A patient was being monitored as high risk of hyperhaemolysis when classical symptoms indicative of a delayed haemolytic transfusion reaction was reported. The patient had anti-S detected and S negative red cells issued. However, the patient also had a history on Sp-ICE from 2015 of an anti-Jk<sup>b</sup> which had not been identified by the hospital and Jk<sup>b</sup> negative units had not been selected (The 2022 Annual SHOT Report).

### Recommendations:

**Patient databases such as Sp-ICE can provide vital information about antibody history for red cell antibodies where the level has dropped below the detectable titre.**

**Hospitals should have local policies to help staff decide which patients to check on Sp-ICE.**

HAVING TRANSFUSION IT SYSTEMS IN PLACE DOES NOT NEGATE THE NEED FOR STAFF KNOWLEDGE & SKILLS

