

Personalised Obstetric Transfusion Strategy for Rare Red Blood Cell Antigens

@sarawRCI

 MattHazellRCI



Sara Wright¹; Matthew Hazell²; Fiona Regan¹

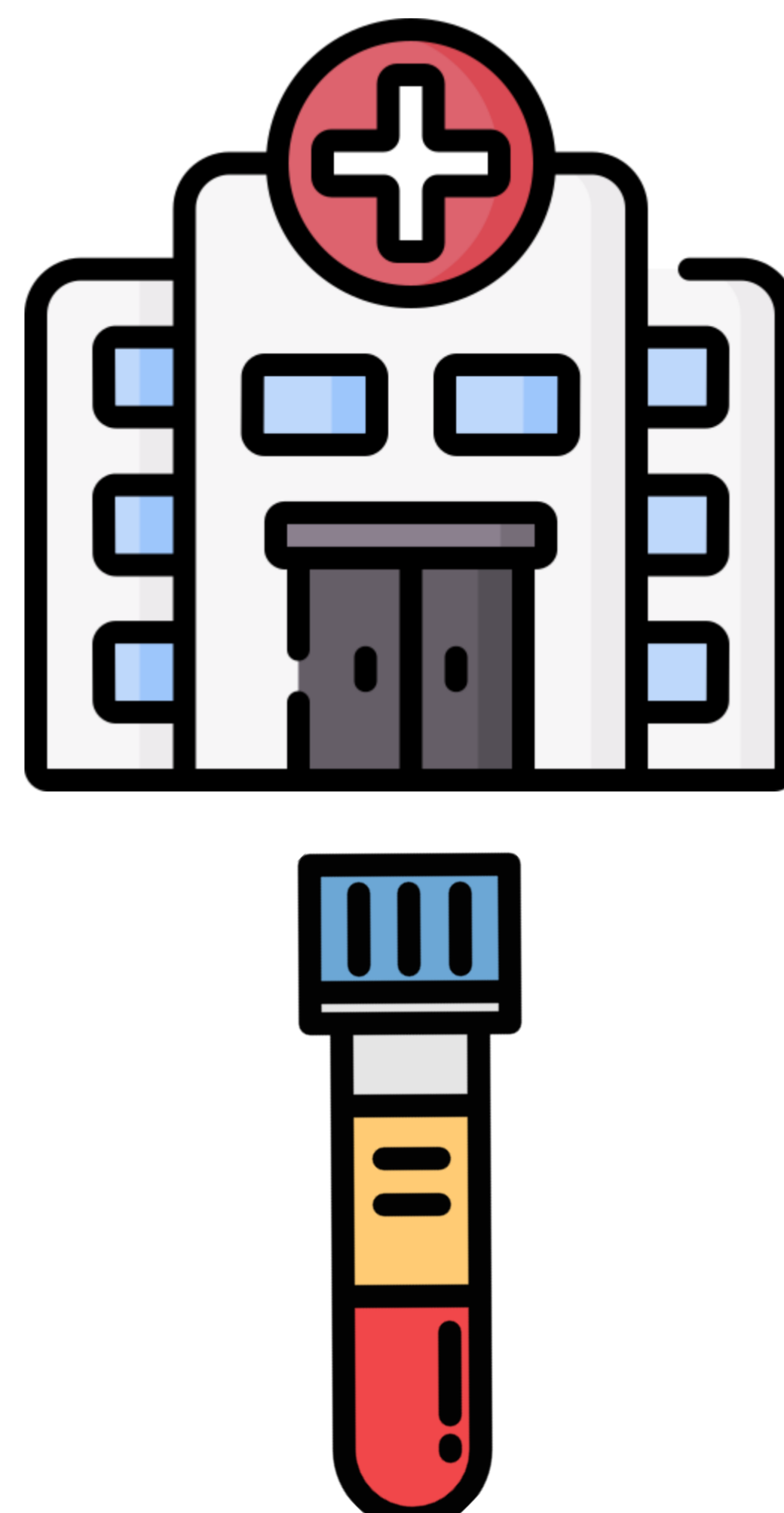
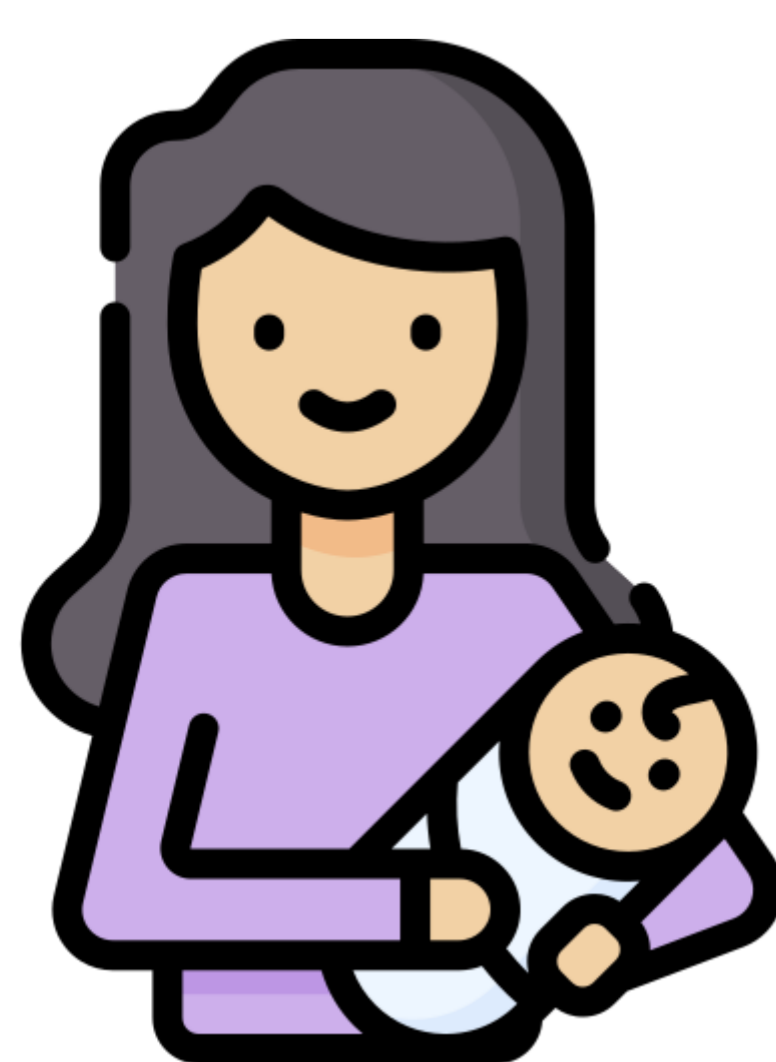
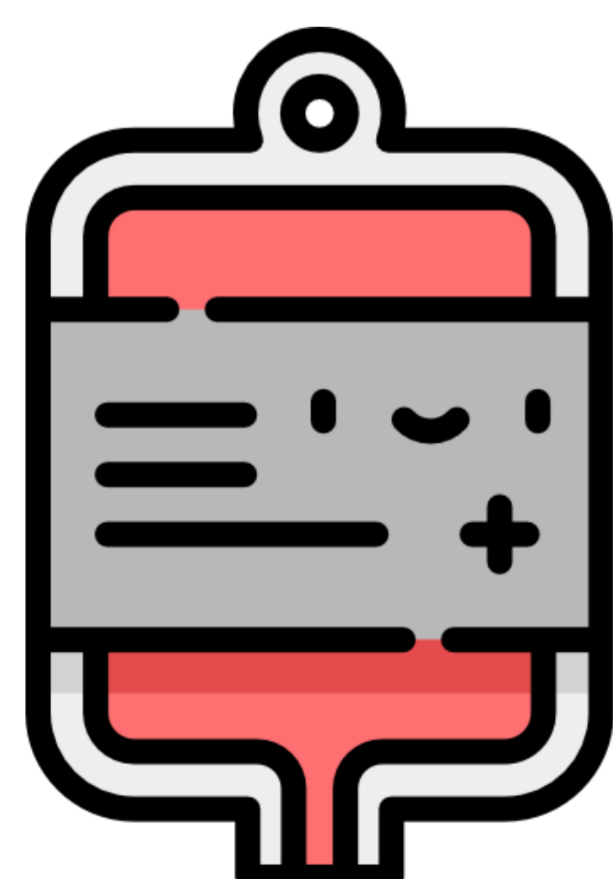
¹NHSBT Colindale, Charcot Road, London NW9 5BG, UK; ²NHSBT Filton, 500 North Bristol Park, Bristol, BS34 7QH, UK

Blood and Transplant

Bleeding risk and requirement to provide suitable red blood cells (RBC), increases towards delivery. Antenatal testing for RBC antibodies occurs at booking and 28 weeks. For RBC antibodies, greater monitoring and antigen negative blood may be required. RBC high frequency antigens (HFA) present in >99% of the population, responders are rare. Antibodies to HFAs cause patient RBC supply problems due to donor rarity. Antibody specificity and class must be considered, as not all have been implicated in transfusion reactions or Haemolytic Disease of the Fetus and Newborn (HDFN). A patient transfusion strategy (TS) needs to encompass patient blood management (PBM) and unavailability of compatible units for Mother and Baby – Including Hb optimisation, planned delivery, cell salvage, tranexamic acid and clear communication. Here we describe the TS used for the pregnancy/delivery of a lady with a HFA RBC antibody and bleeding history.



Red Cell Immunohaematology



8/40 weeks
Pan-reactive panel

Anti-U
Titre = 64

Personalised Blood Management Strategy
Optimisation of Hb
Assessment of bleeding risk and fetal anaemia
Mode of delivery
Cell salvage and anti-fibrinolytic

Communication between patient, Hospital Transfusion Laboratory, Red Cell Immunohaematology and Obstetric Team

Availability of blood
Fresh RBC units from a Panel of rare donors (35 day shelf life)
RBC units from the National Frozen Blood Bank (72 hours shelf life [closed system])

Maternal delivery plan
Major haemorrhage
ABO Rh and K matched
Steroids and IVIG cover
Top up transfusion
U negative blood

Baby delivery plan
U negative blood
Thawed units in SAGM
Risks
Hyperglycaemia
Risk renal function