Practical approaches to NOT giving the wrong blood in an emergency

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BBTS 2016

2014 SHOT Report

- 4 neonates transfused with wrong component
  - 3 newborn babies received urgent transfusions on NICU using adult emergency O D negative blood (CMV unscreened) due to collection errors and lack of awareness
  - 1 emergency transfusion in theatre and baby transfused with blood intended for the mother

Serious Hazards Of Transfusion SHOT

2015 SHOT Report

SHOT Recommendation

Adult O D negative units are unsuitable for neonatal emergency use. Dedicated neonatal O D negative units should be available for emergency use in neonates. Local measure should be in place to help guide staff to select correct red cell component for neonatal resuscitation in emergency situations

People will make mistakes!

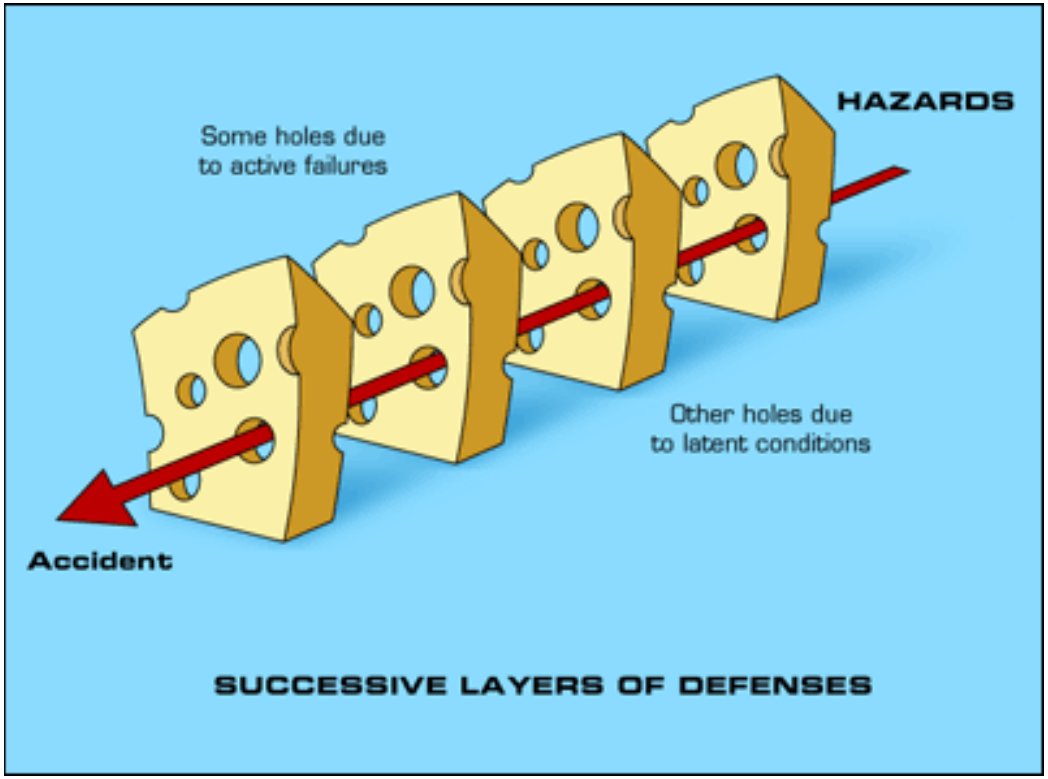
To err is Human

Many reasons why mistakes happen –

- Competing priorities
- System failures
- Human failures
- External pressures
- Management of emergencies
- New ways of doing things / environment
- Human factors

Warning Signs

Swiss Cheese



James Reason 1990

Barriers

- Swiss cheese shows we need barriers to prevent the continuum of the error
- BUT there is always a risk we add more barriers to prevent errors, make it a more complex system and people take short cuts and work-arounds
- Balance of complete safety versus pragmatic “real world”

Blood Tracking– a Physical Barrier

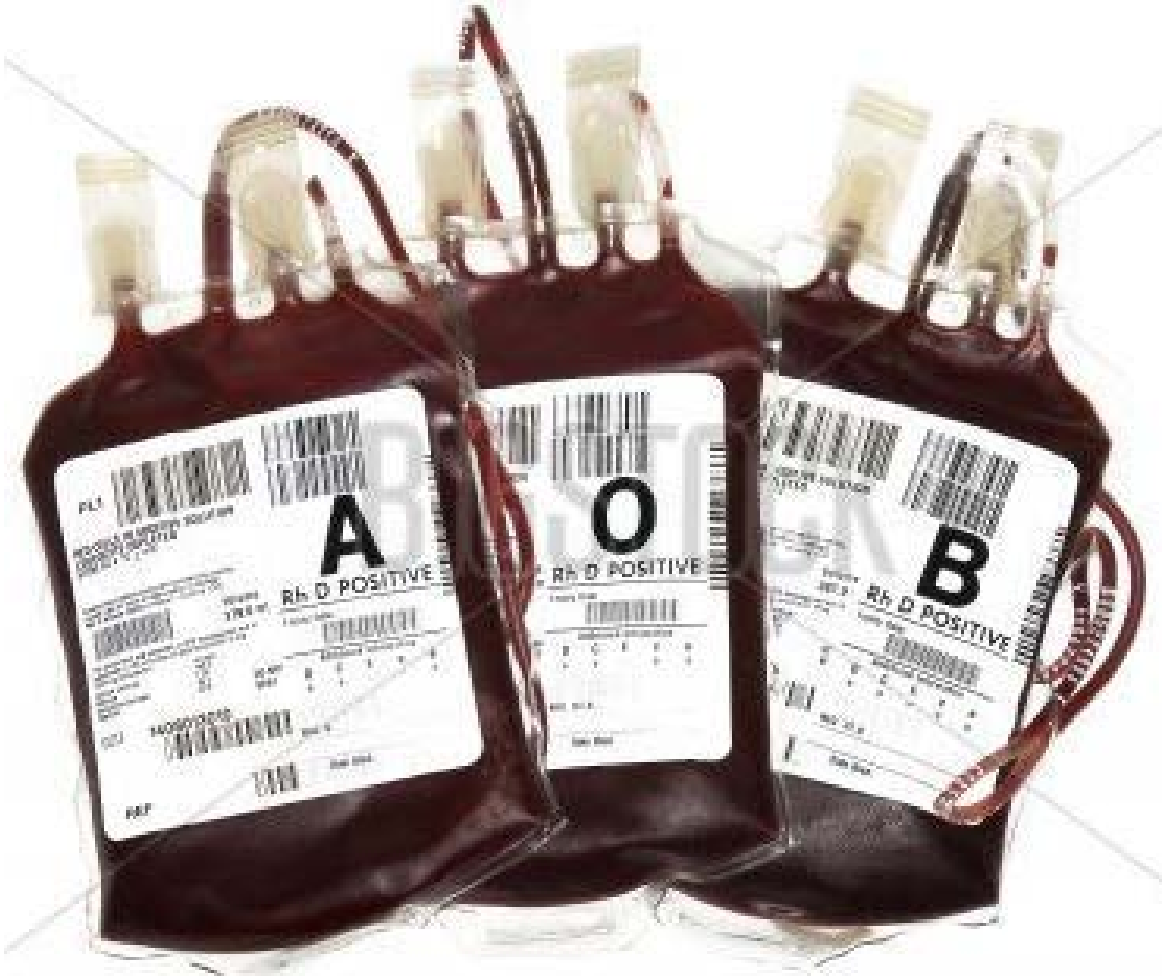
- Training needed before collecting blood
- Successful competency assessment before starting
- Locked fridge prevents “casual” collection
- Tracking system within kiosk (blood and staff)
- Restricted access

Visual Instructions

Beware Technology

- SHOT Reports 2014 & 2015 highlight a technology issue where staff were consistently missing vital steps in using the PDA in bedside tracking (staff using mode intended for emergency O-D negative units for named patients)
- Short-cuts when found will always be used
- If technology is perceived to slow down a process (despite it being a safety barrier) an over-ride might be found

Blood Bags all look the same!



Emergency Blood

- Stored in Labour & Delivery Ward Blood Fridges
- Usually Midwives trained to collect blood
- Not necessarily Paediatric Resuscitation Team or Anaesthetists
- Adult blood and neonatal large volume units can look very similar to clinical staff
- Difference in specification probably only understood by transfusion team

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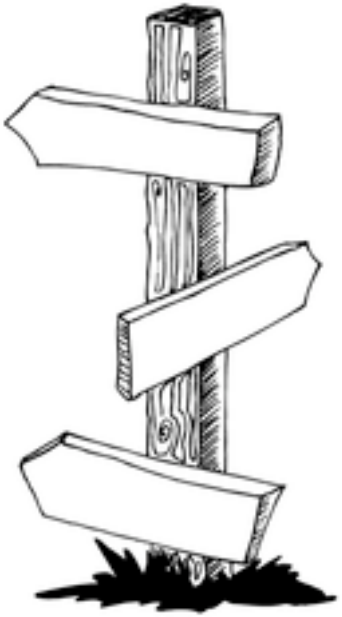
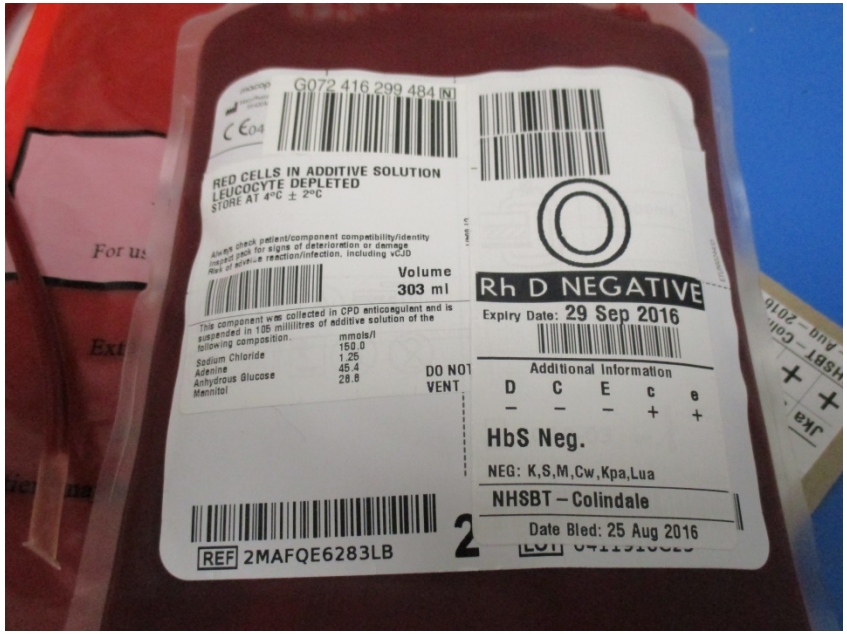


Emergency Blood drawers

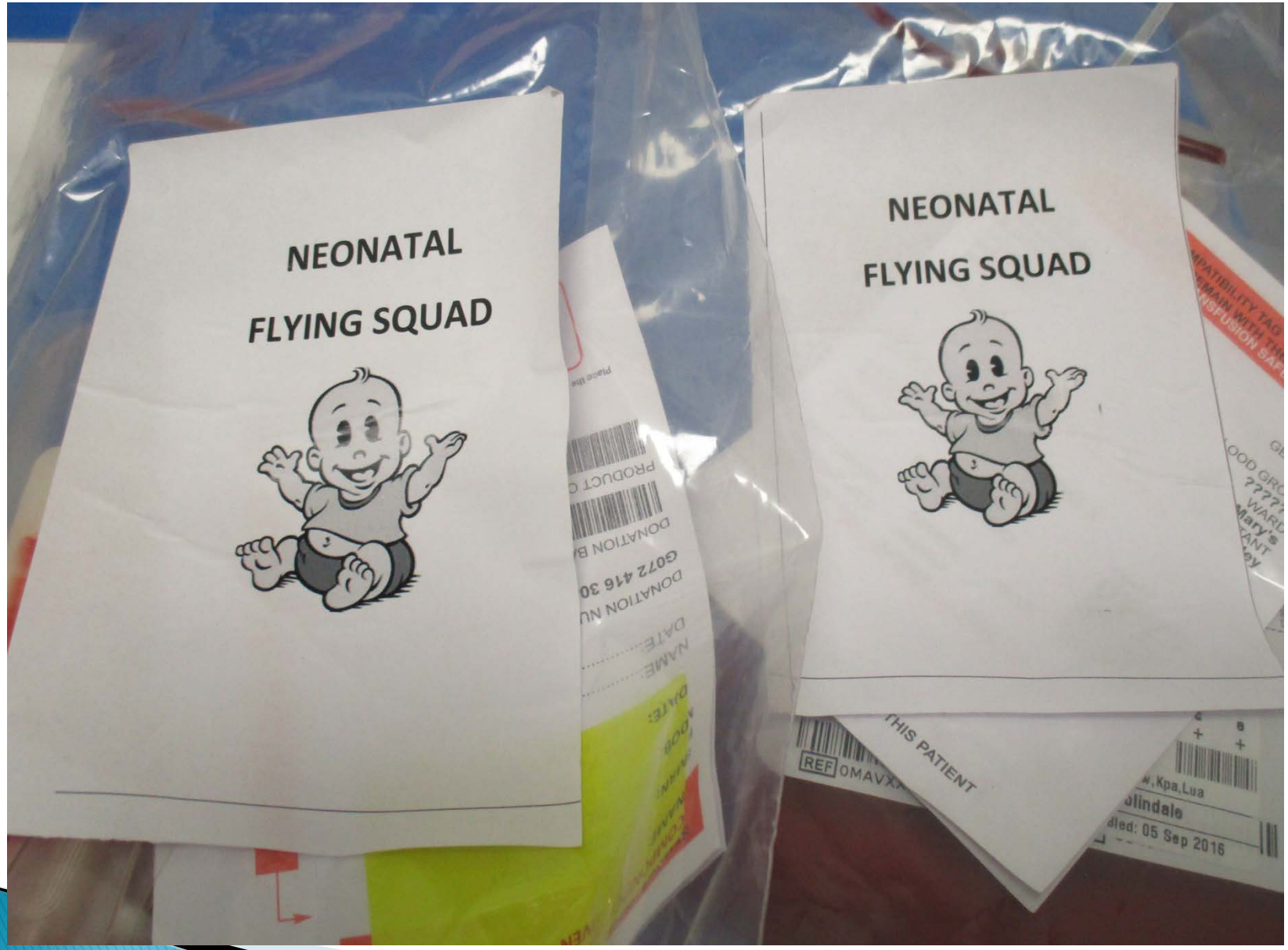
Boxes

Big Bag Little Bags



What we did

- We needed a low cost visual solution to the problem
- Minimal words- easy to identify which bag
- Even untrained people could see
- Started with the clear bag with baby picture on it using a split pack bag


NEONATAL
FLYING SQUAD
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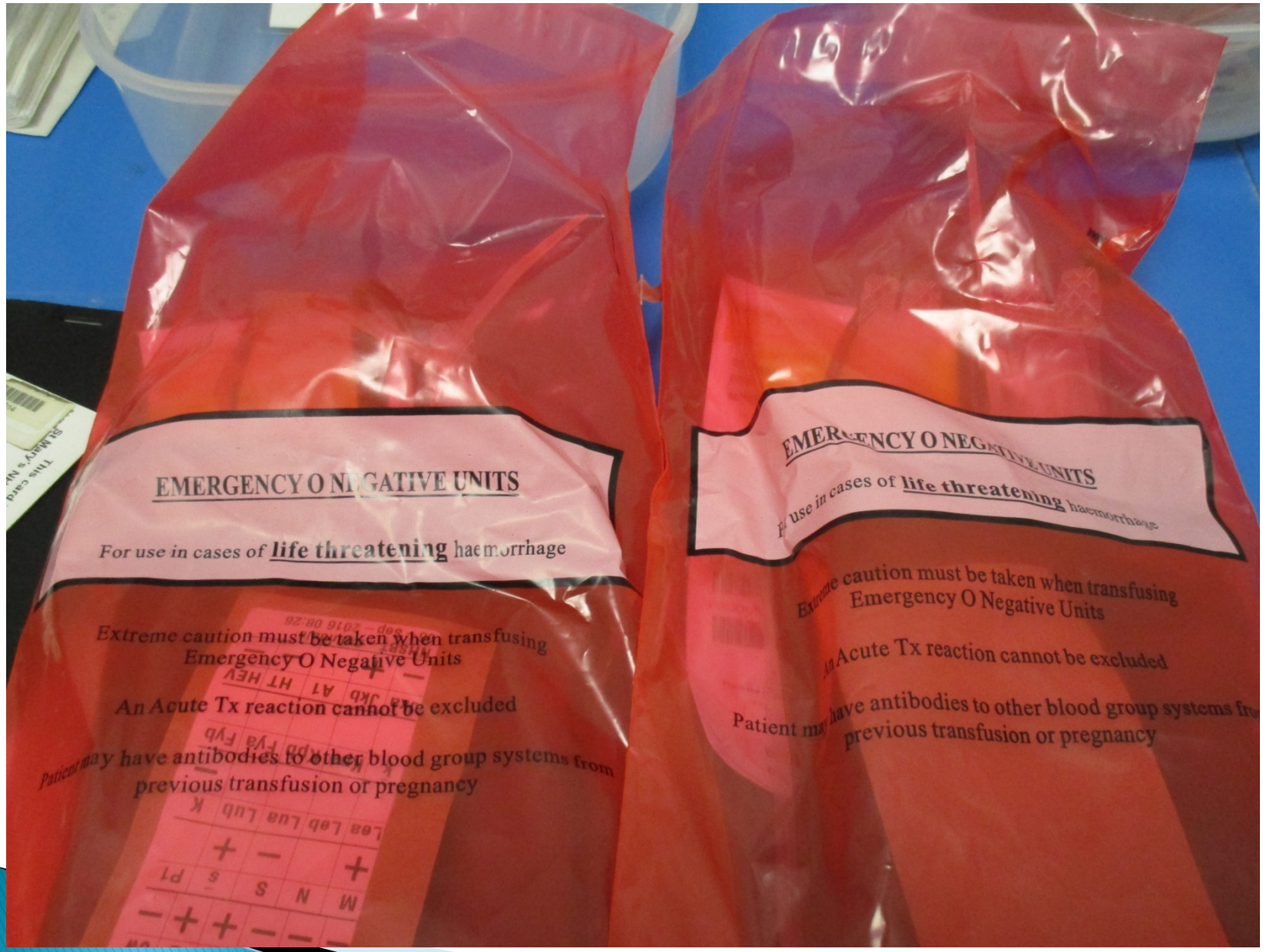
EMERGENCY O NEGATIVE UNITS
For use in cases of life threatening haemorrhage
Extreme caution must be taken when transfusing Emergency O Negative Units
An Acute Tx reaction cannot be excluded
Patient may have antibodies to other blood group systems from previous transfusion or pregnancy
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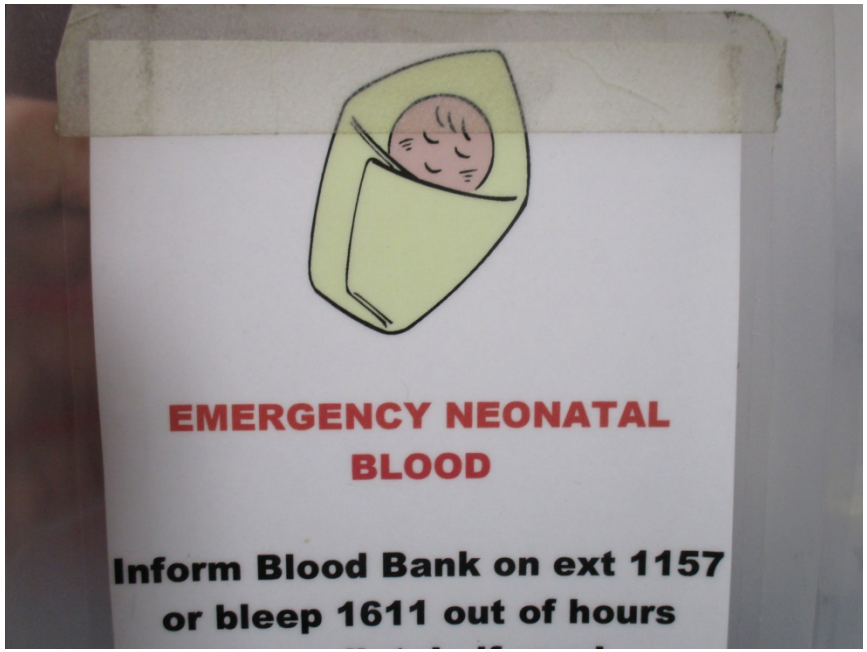
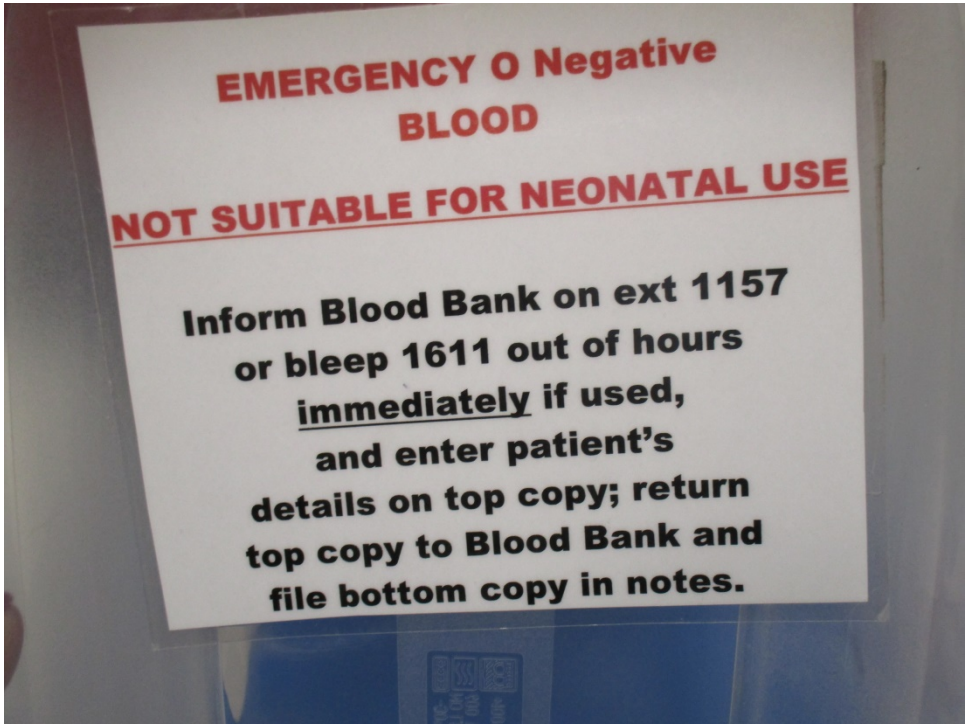
DONATION NUMBER: G072 416 317 510 G
PRODUCT GROUP: O Neg
PRODUCT: Blood
UNIT EXPIRES 07/10/16 23:59
UNIT REQUIRED 19/09/16
AVAILABLE UNTIL 20/09/16 09:00
SafeTx
HbS Neg.
NHSBT – Colindale
Date Bled: 02 Sep 2016
2
NEONATAL
FLYING SQUAD
UNIT SUITABLE FOR THIS PATIENT

Inside the boxes





Male Bags – next steps

EMERGENCY O POSITIVE UNITS
For ADULT MALES Only

Never Say Never

- Mistakes will happen
- Training of staff and effective communication still critical
- Important to set up a system that presents barriers to mistakes but *not* barriers to efficient working
- *Low cost visual solutions can be very effective*