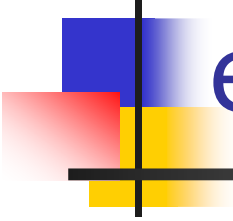
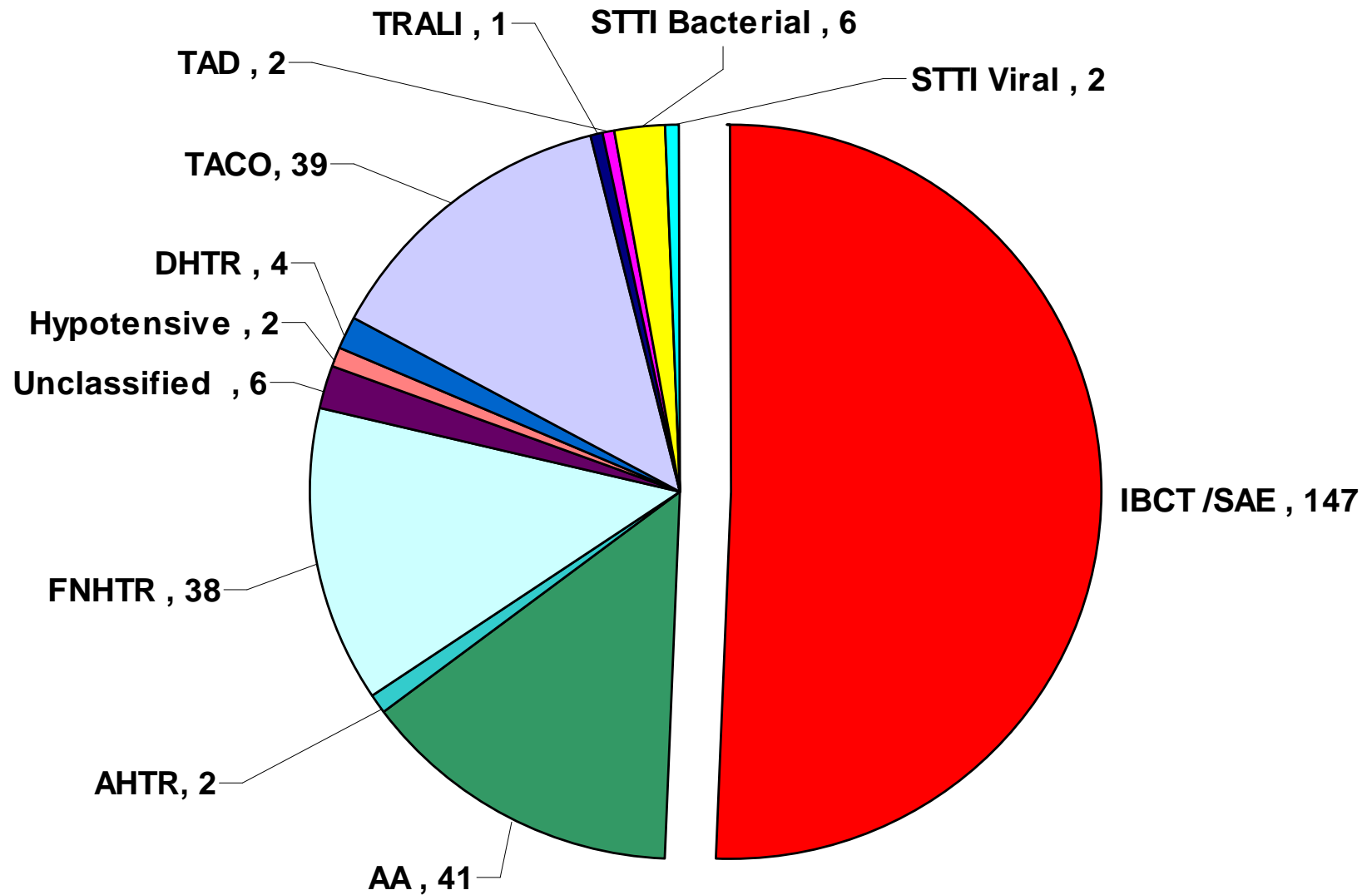


National Haemovigilance Office
Annual Report 2008:
focus on non mandatory clinical
events

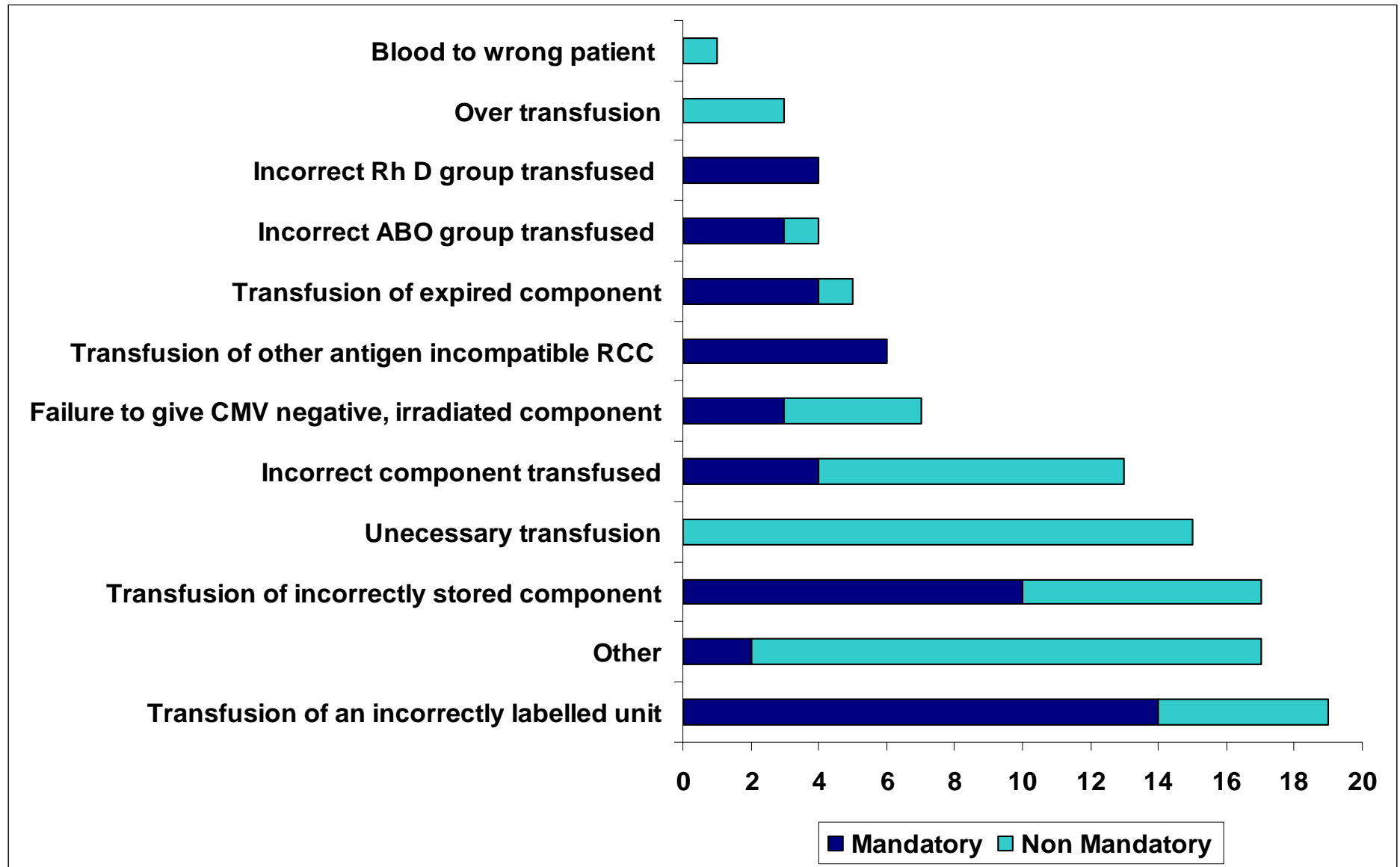


Marina Cronin
National Haemovigilance Office
5th October 2009

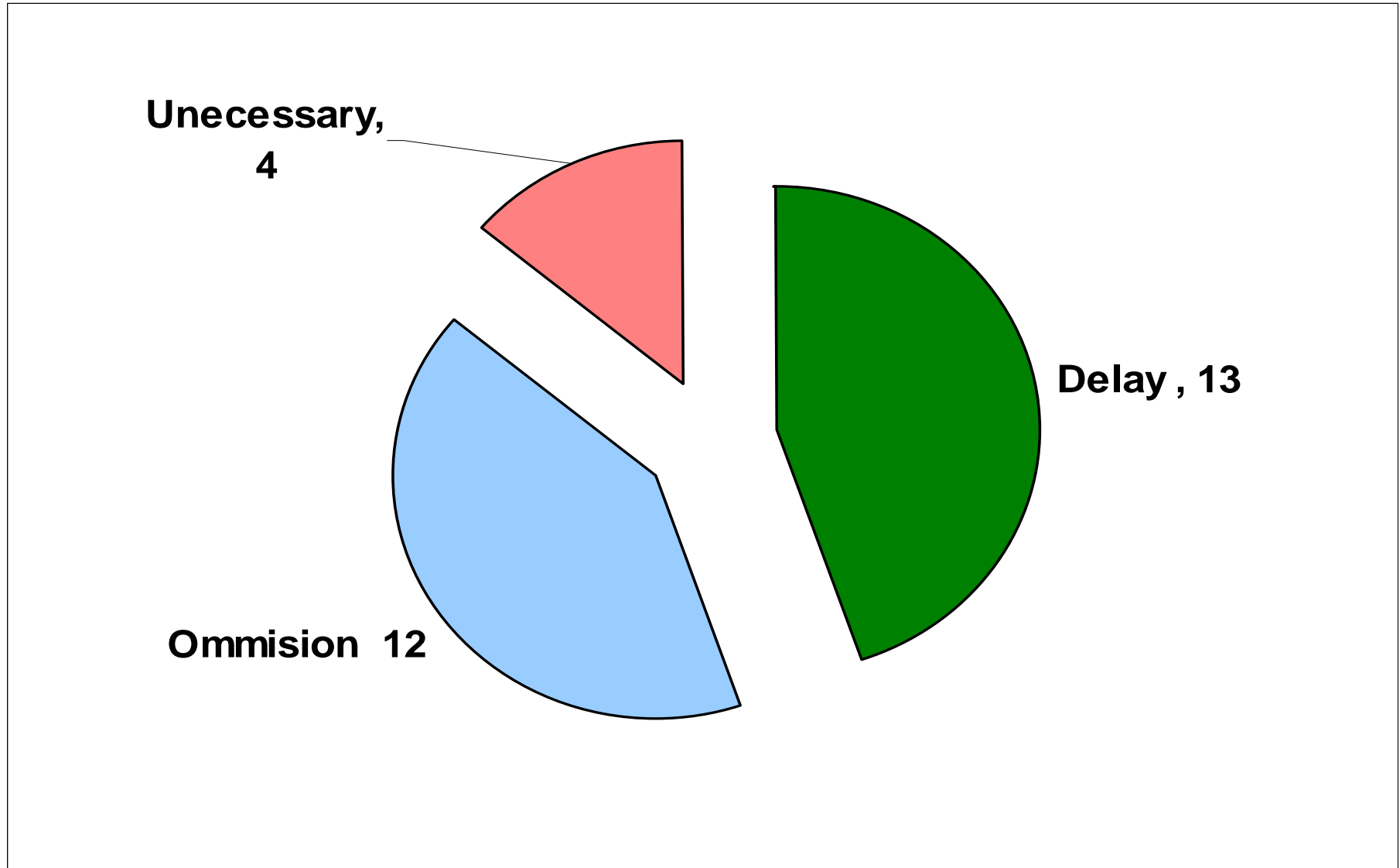
Reports analysed 2008 n=290



IBCT/SAE -blood components n=111



IBCT associated with Anti D Ig n=29

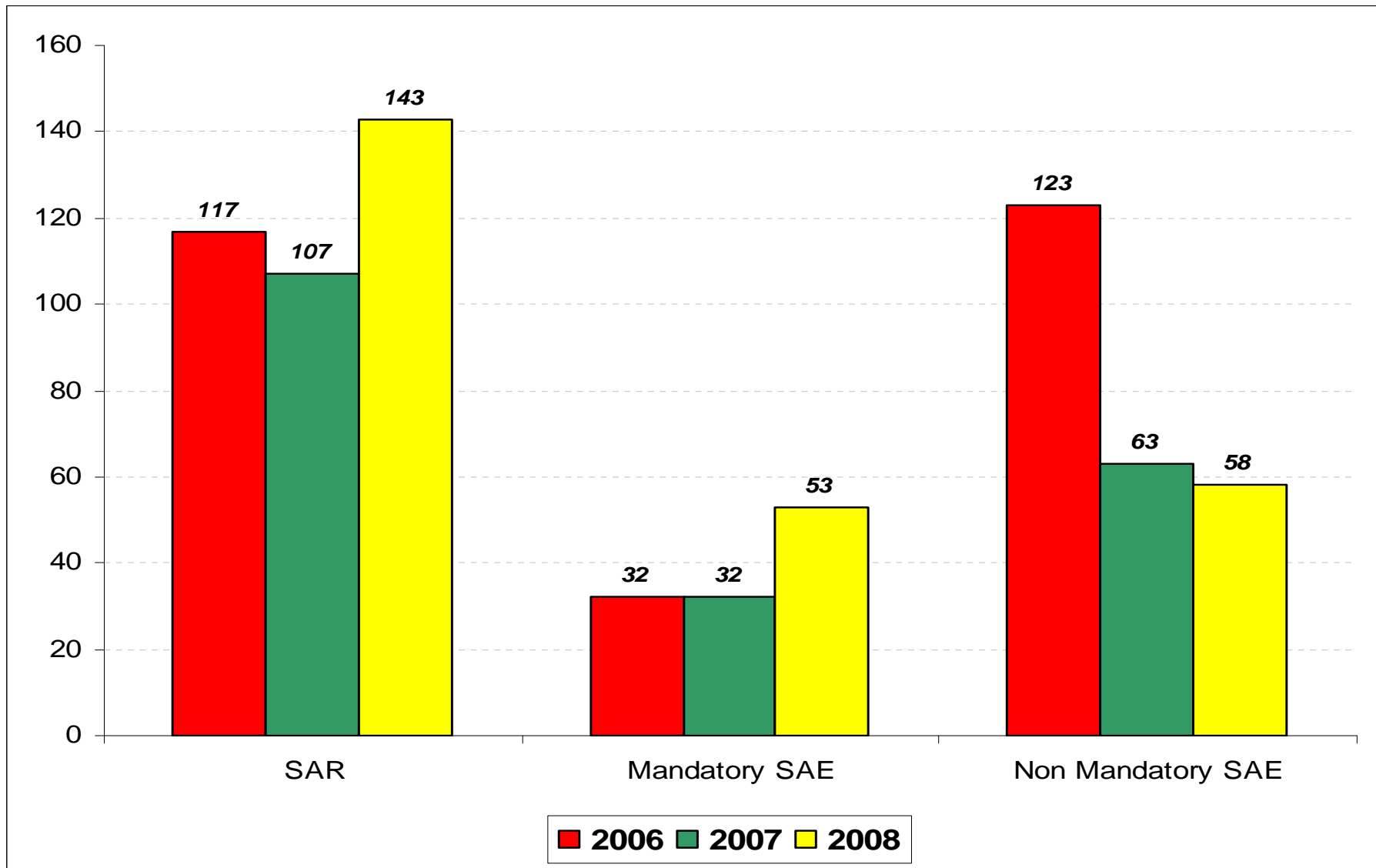




This presentation

- Reporting of **non-mandatory** IBCT
- Unnecessary transfusion n-15
- Incorrect component transfused n-13
- Paediatric transfusions n-24
- Risk assessment of steps in the work process
- Error cause
- Follow –up action

Haemovigilance Reporting 2006-08

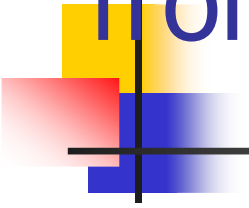




Unnecessary transfusion n=15

- Decision making which deviated from clinical guidelines n= 10
- Decision making based on incorrect or absent haematology results n= 4
- Delay which led to unnecessary transfusion n=1

Decision making which deviated from clinical guidelines n= 10



- Red Cells -7
- SD plasma- 2
- Platelets-1

- Transfusion for haematinic anaemia -6
 - 40% of all unnecessary transfusions
 - 5% of all IBCT/SAE



Transfusion for iron deficiency anaemia n=5

- Two patients had iron deficiency anaemia as result of menorrhagia
- *A 43 year old female patient developed an urticarial reaction post red cells.*
- *HVO discovered the patient had a Hb of 7g/dl, due to underlying menorrhagia.*
- *She was asymptomatic, and had not been commenced on iron.*
- *Error cause - lack of knowledge of the prescribing doctor.*

Transfusion for megaloblastic anaemia due to vitamin B12 deficiency



- *This 20 year old male patient was admitted via A&E from GP for investigation of anaemia with a differential diagnosis of B12 or folate deficiency.*
- *History of fatigue, no dyspnoea or any history of haemorrhage. Hb was 6.3g/dl.*
- *Two red cells were prescribed by a junior hospital doctor working in the A&E Department, outside routine working hours. One unit was transfused.*
- *When this patient was reviewed by the haematology team, the second unit of red cells was cancelled.*



Decision making based on incorrect or absent haematology results n= 4

- In two cases, patients received unnecessary red cell and SD plasma transfusions when doctors failed to verify blood results.
- In another case, a doctor ordered three units over three consecutive days based on Hb from the initial day.
- In final case, red cells were prescribed based on an incorrect Hb result from the haematology laboratory.



Key Recommendations

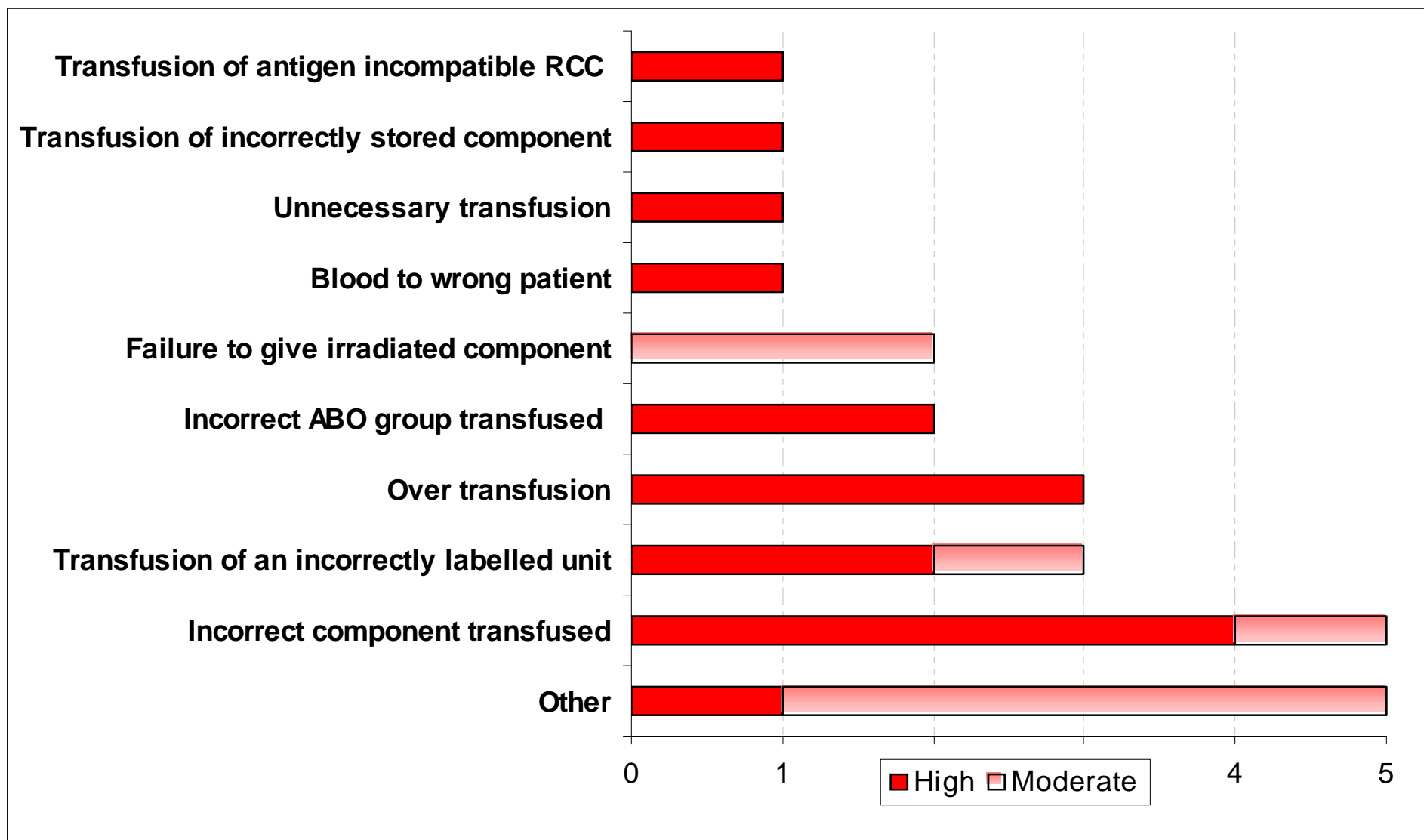
- Asymptomatic patients with iron deficiency anaemia - iron therapy.
 - Oral iron -three months.
 - Concerns about compliance- IV products.
- Patients with megaloblastic anaemia respond very rapidly to Vitamin B12 and Folate.
- Re-check Hb between units to minimise risk of unnecessary and over transfusion.

Incorrect component transfused n=13



- Red cells (5)
- SD plasma(5)- reversal of warfarin in non-bleeding patients
- Platelets (2)- platelets with special requirements not transfused
- FFP (1) - SD plasma

Paediatric SAE/IBCT n=24





Paediatric SAE/IBCT II

- 22% of all reports of IBCT/SAE related to paediatric patients.
 - 12% of all IBCT/SAE reports involved patients aged less than one year.

Risk assessment of SAE/IBCT	Adult	Paediatric
High potential to cause harm	39%	63%



What is in a number ?

- *Two neonate twins requiring transfusion were cared for in ICU.*
- *Nurse caring for Twin A collected the unit of red cells issued to twin B. This unit was transfused.*
- *Error was discovered by a medical scientist in the HBB when the nurse caring for Twin B came to collect a unit for her patient.*
- *Both patient identifiers were extremely similar.*
 - *Same gender,*
 - *Identical names -neither baby had a first name at the time*
 - *Same dates of birth,*
 - *MRN were only differentiated by **one digit.***



Specific paediatric practice issues highlighted

- Patient identification is central to safe transfusion practice.
- Certain issues inherent in paediatric practice, which make it more challenging e.g. the cases of the twin who received the wrong blood, or where patients names are changed.
 - Paediatric hospitals must be aware of these issues ensure that patients are correctly identified to ensure they are safe.
 - Staff caring for patients must be reminded that “short-cuts” can result in unsafe practice.



Over transfusion n-3

- *A critically ill three month old infant in ICU should have received 90 mls of red cells, but was instead transfused 200mls.*
- *Nurse incorrectly calculated the transfusion rate on the infusion pump, thereby delivering increased volume to the infant.*
- *Patient suffered no apparent sequelae*
- *In another case, an ambiguously worded prescription contributed to the error.*



Specific paediatric practice issues highlighted

- Over transfusion - no associated reports of TACO
 - neonatal and paediatric patients are at risk of such an event.
- Implications for clinical practice
 - Nursing staff - independent cross checks of rate and volume prior to transfusion.
 - Medical staff - prescribing rates and volumes of transfusion must be clear.



Incorrect component transfused – paediatric patients

- Red cells (4)- patients received whole red cells where paedipacks were already available
These errors tend to occur when blood is available in both the hospital blood bank and in a satellite fridge for patients, for use during surgery, which is not used and not returned to the hospital blood bank.



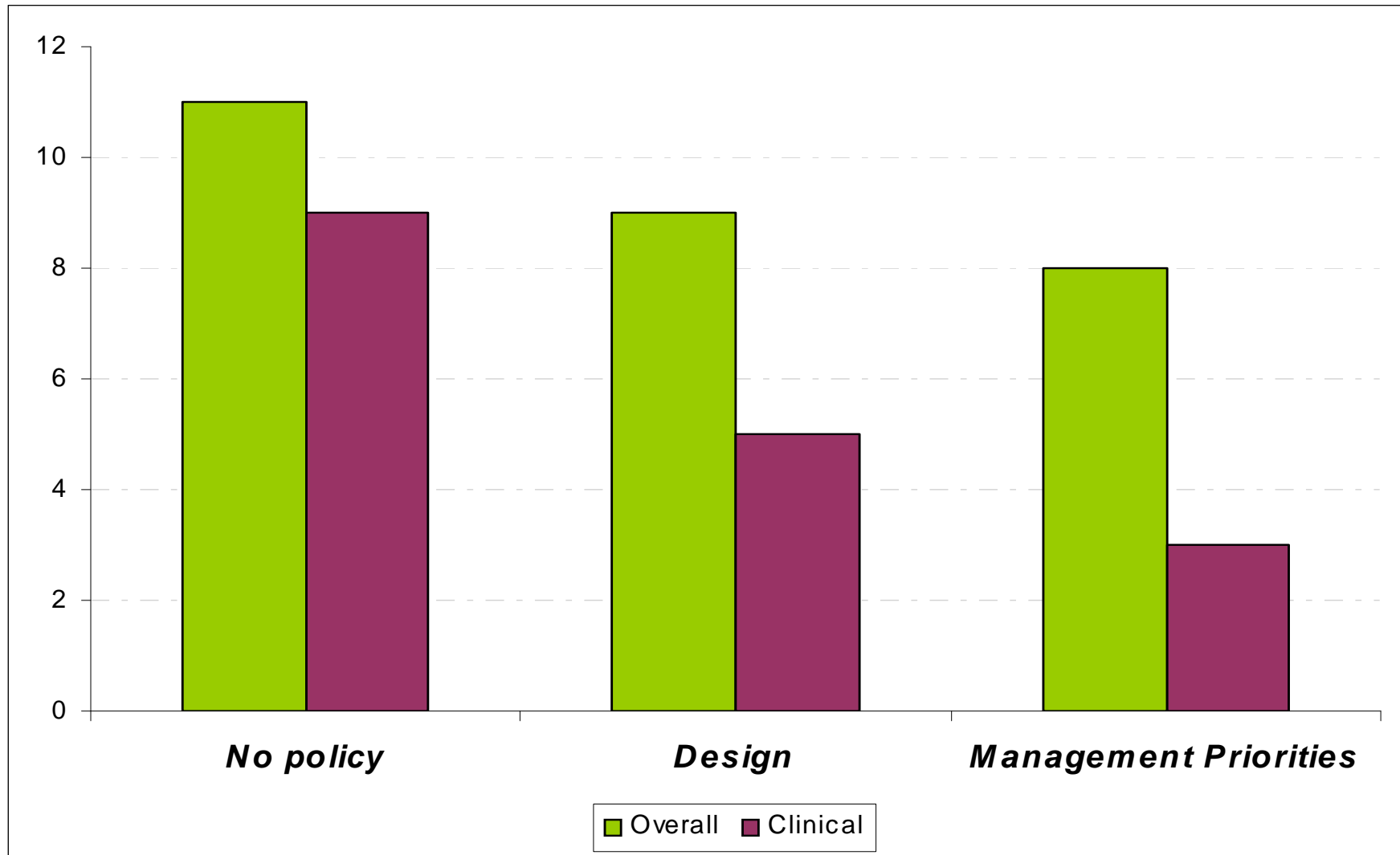
Specific paediatric practice issues highlighted

- The exposure of neonatal patients to further donors was not minimised.
- Hospitals should examine their work process to minimise these occurrences

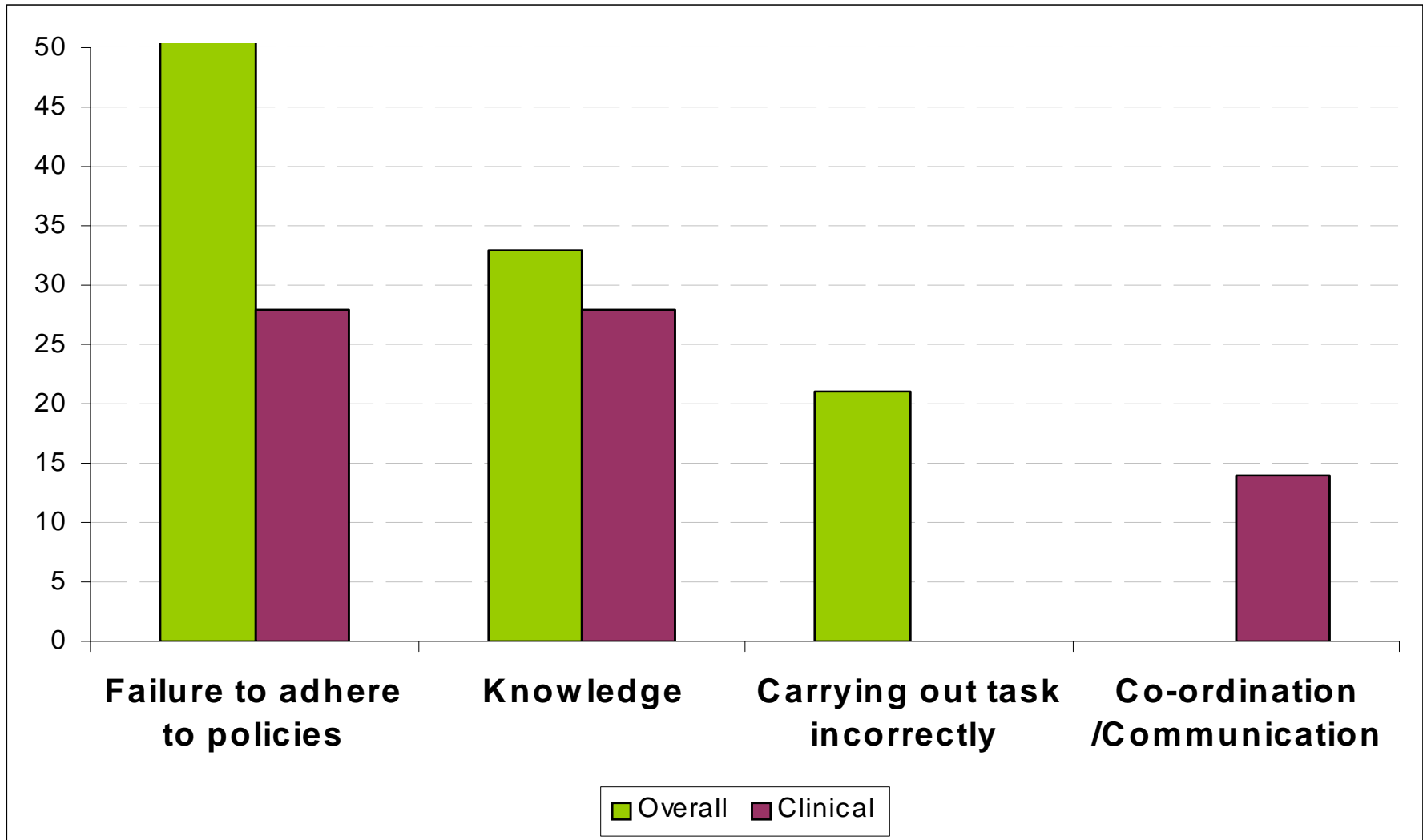
Risk Assessment by steps of the blood transfusion process

Step in work process	Total events at step in work process	% of events per step in the work process with high potential for harm
Prescription /Request	29	62%
Blood Transfusion Laboratory	40	52%
Storage	11	27%
Collection	6	33%
Administration	18	22%

System causes- overall / clinical



Human causes- overall /clinical



Reported follow-up action for SAE/IBCT

Process changes	17
Education and Training	15
Communication	8
Development and revision of policies	6
Audit	2
Multiple follow –up actions	6
Other	1



Recommendations

- Reporting clinical events make important contribution to safe practice
- Delay /Ommision of Anti D
 - Follow-up testing -6 months
 - Report sensitisations to NHO
- Paediatric patients are expected to be long term survivors of transfusion therapy. Practitioners working in paediatric centres continuously seek to minimise risk to these patients.



Recommendations II

- Targeting resources at high risk areas of work process
- Role of HVO in promotion of clinical transfusion practice
 - Policies
 - Competencies

