Highlights from the Annual SHOT Report 2013

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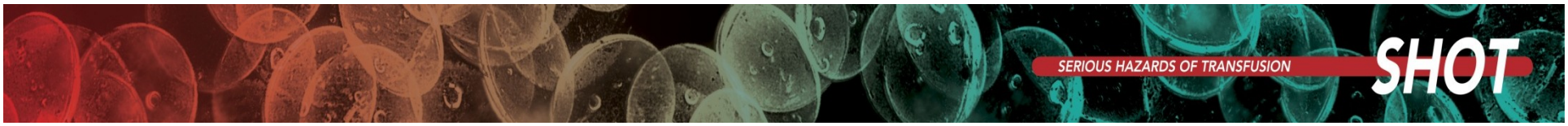
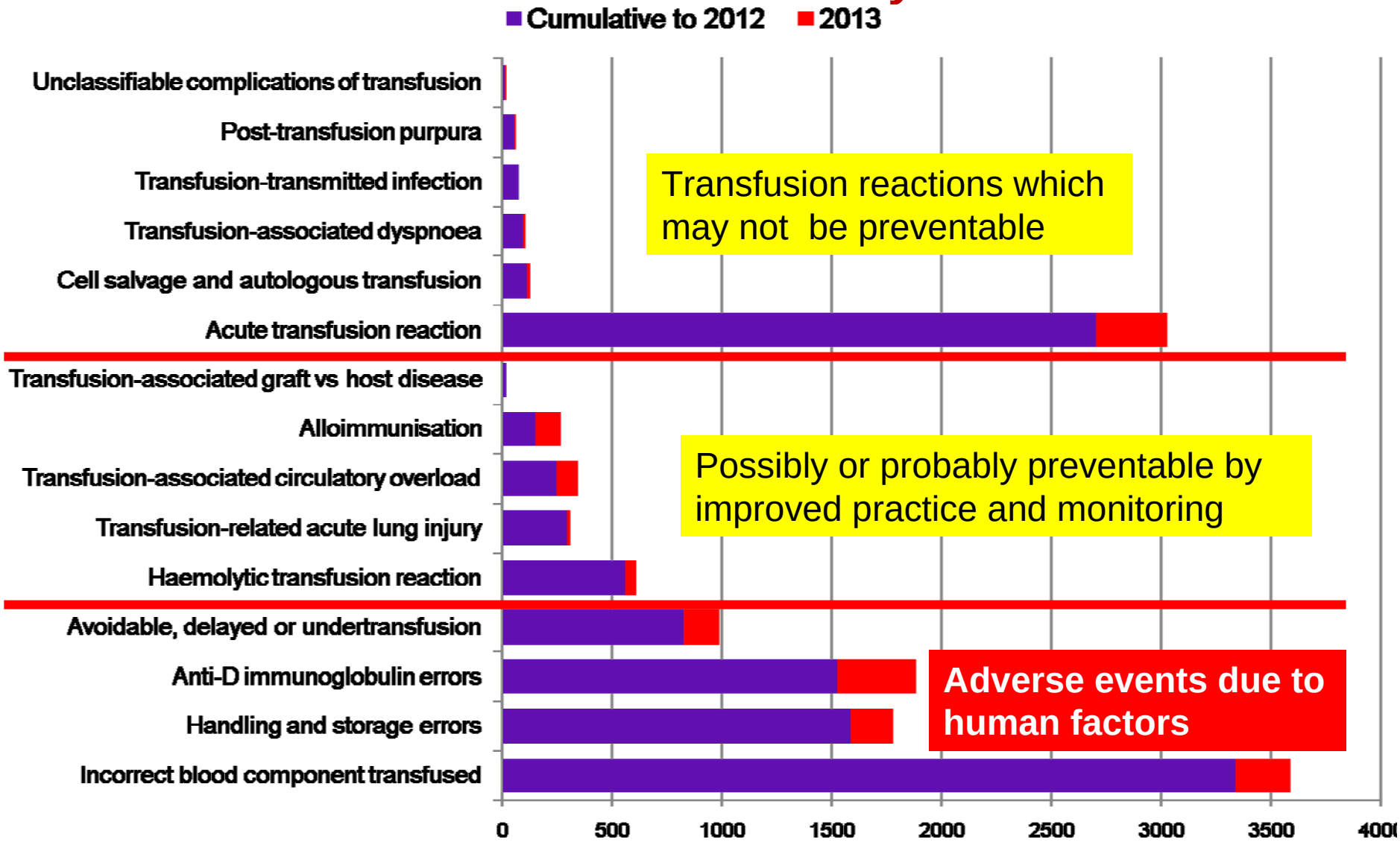
Serious Hazards of Transfusion

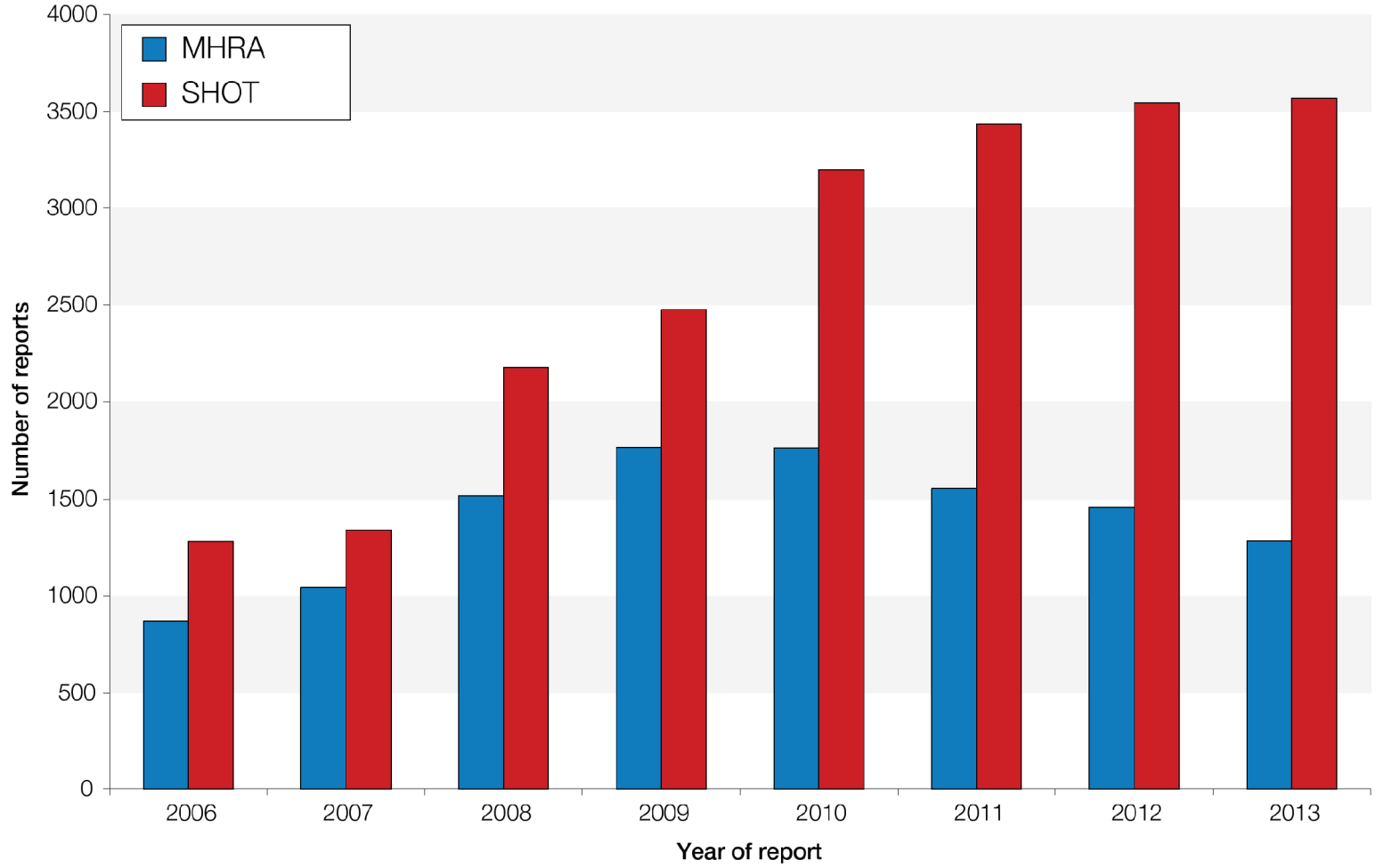


SHOT Cumulative data: 17 years n=13,141

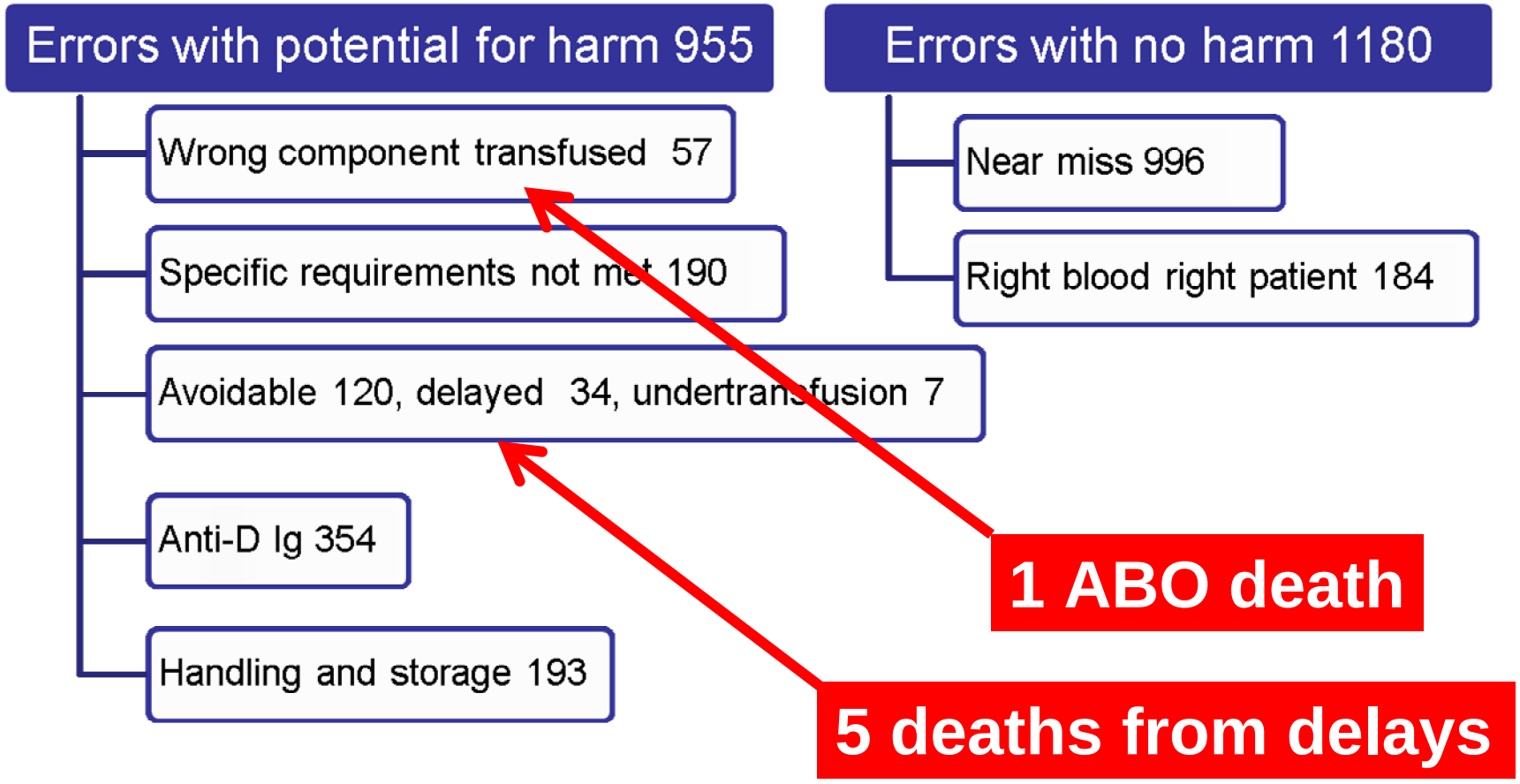


SERIOUS HAZARDS OF TRANSFUSION SHOT

Reporting levels for SHOT and MHRA



Human factors



Risks associated with transfusion

Error-related risks

SHOT reports	Risk per components issued
Total risk of death	1 in 125,000
Total risk of major morbidity	1 in 19,157
Risk of ABO incompatible red cells	1 in 263,157
Risk of wrong component	1 in 48,309
Risk of specific requirements not met	1 in 14,514

Transfusion-transmitted infections	Risk of infected donation entering blood supply
HBV	1 in 1.3 million
HCV	1 in 28.6 million
HIV	1 in 7.1 million

Deaths where transfusion was causal or contributory 2011-2013 (n=39)

ADU 1 Inappropriate and 5 delayed transfusion

IBCT 1 ABO incompatible transfusion

PTP 1 Post-transfusion purpura

ATR 2 Acute transfusion reactions

HTR 3 Haemolytic transfusion reactions

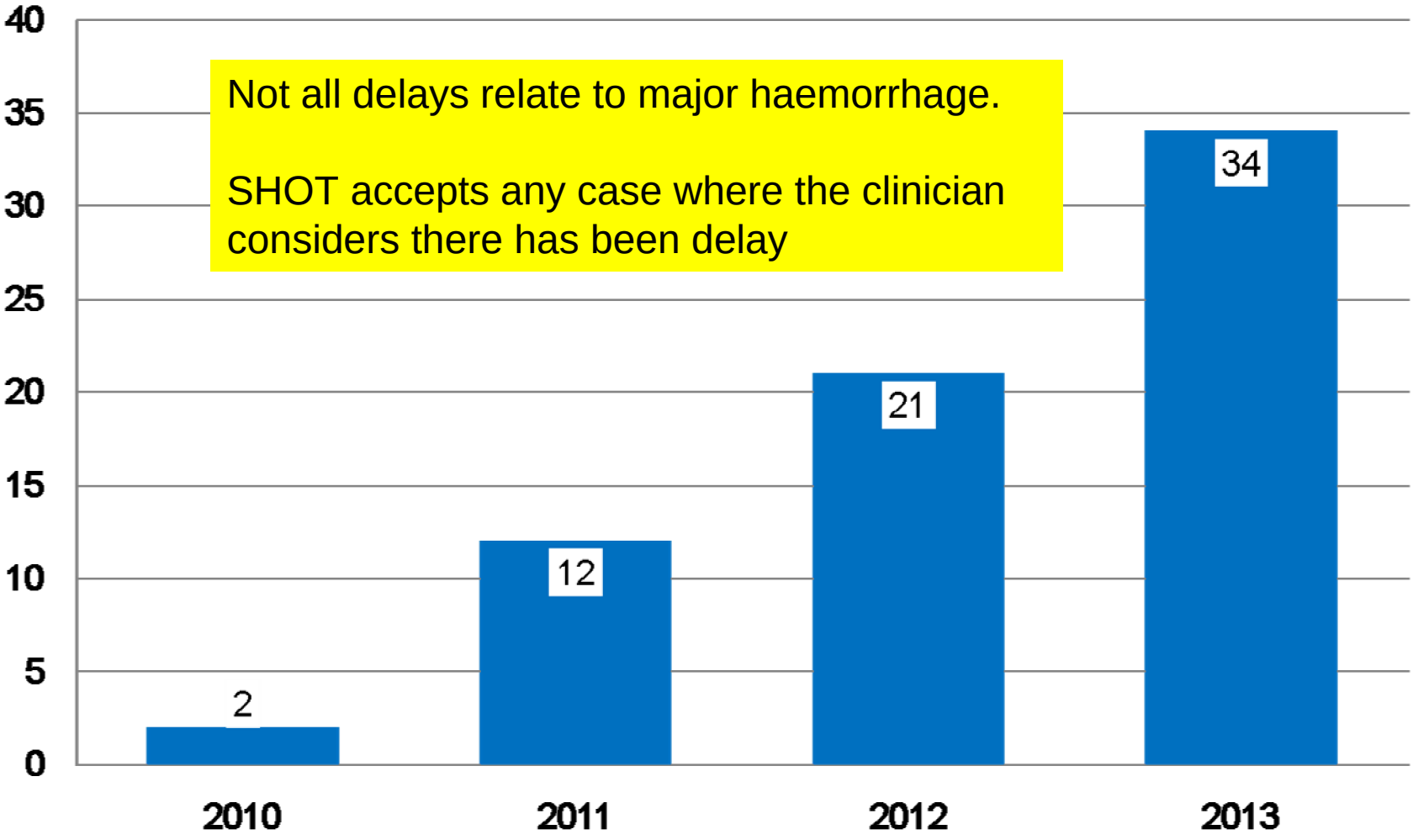
TRALI 2 Transfusion-related acute lung injury

TACO 20 Transfusion-associated circulatory overload

Unclassifiable 3: 2 infants with necrotising enterocolitis and 1 adult after IVIg

TA-GvHD 1 transfusion-associated graft versus host disease

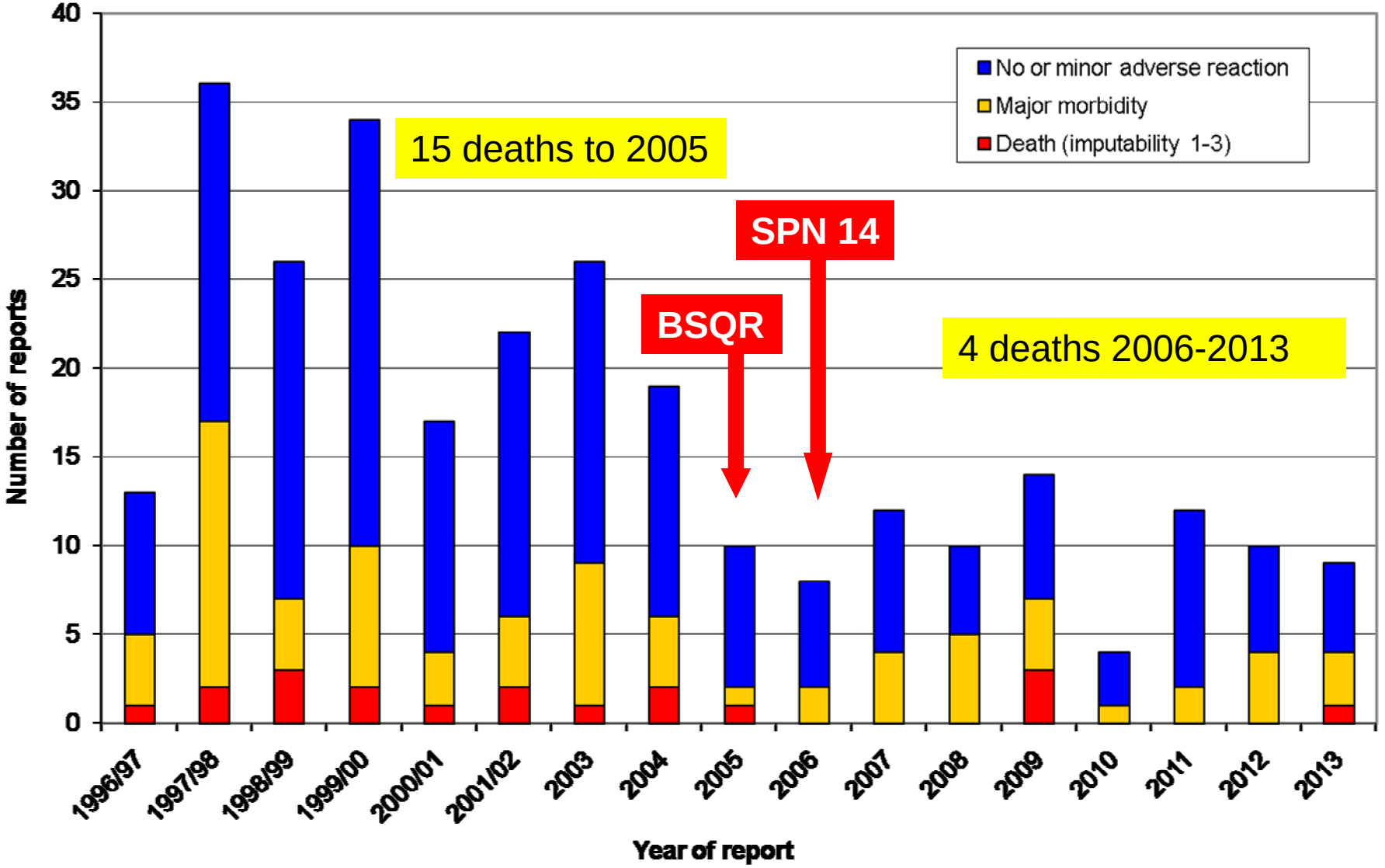
Delayed transfusions reported to SHOT
69 cases over 4 years



Delayed transfusions reported to SHOT

- Age range birth to 86 years
- Sick patients with high mortality 21/69 (30.4%)
- In 10/69 (14.5%) death was definitely or possibly related to the delay – 5 of these in 2013
- Causes of delay:
  - Failure to identify patients properly
  - Poor communication
  - Poor handover
  - Slow clinical response in critical situations

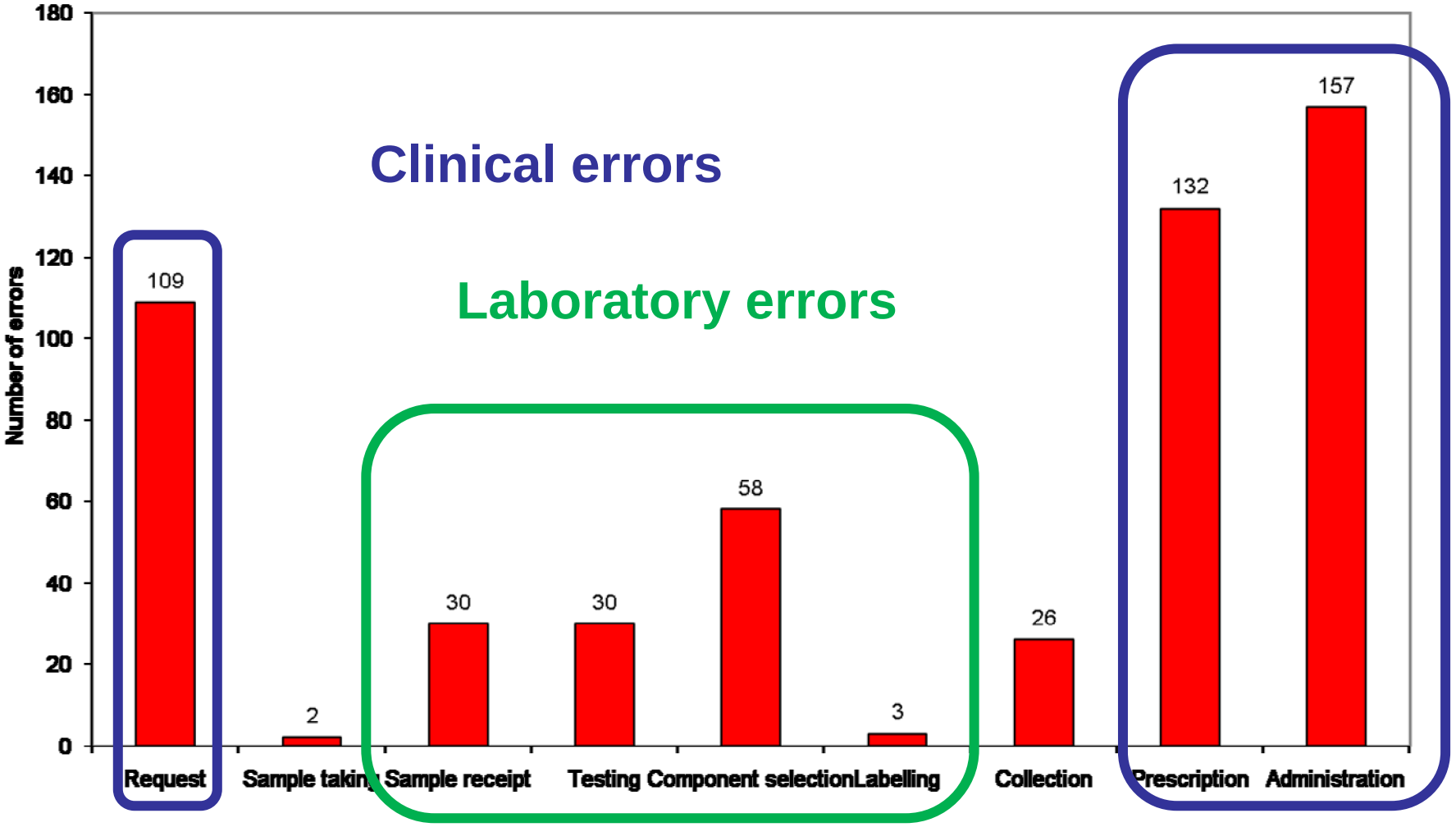
Outcome of ABO incompatible red cell transfusions
66% have no adverse effect



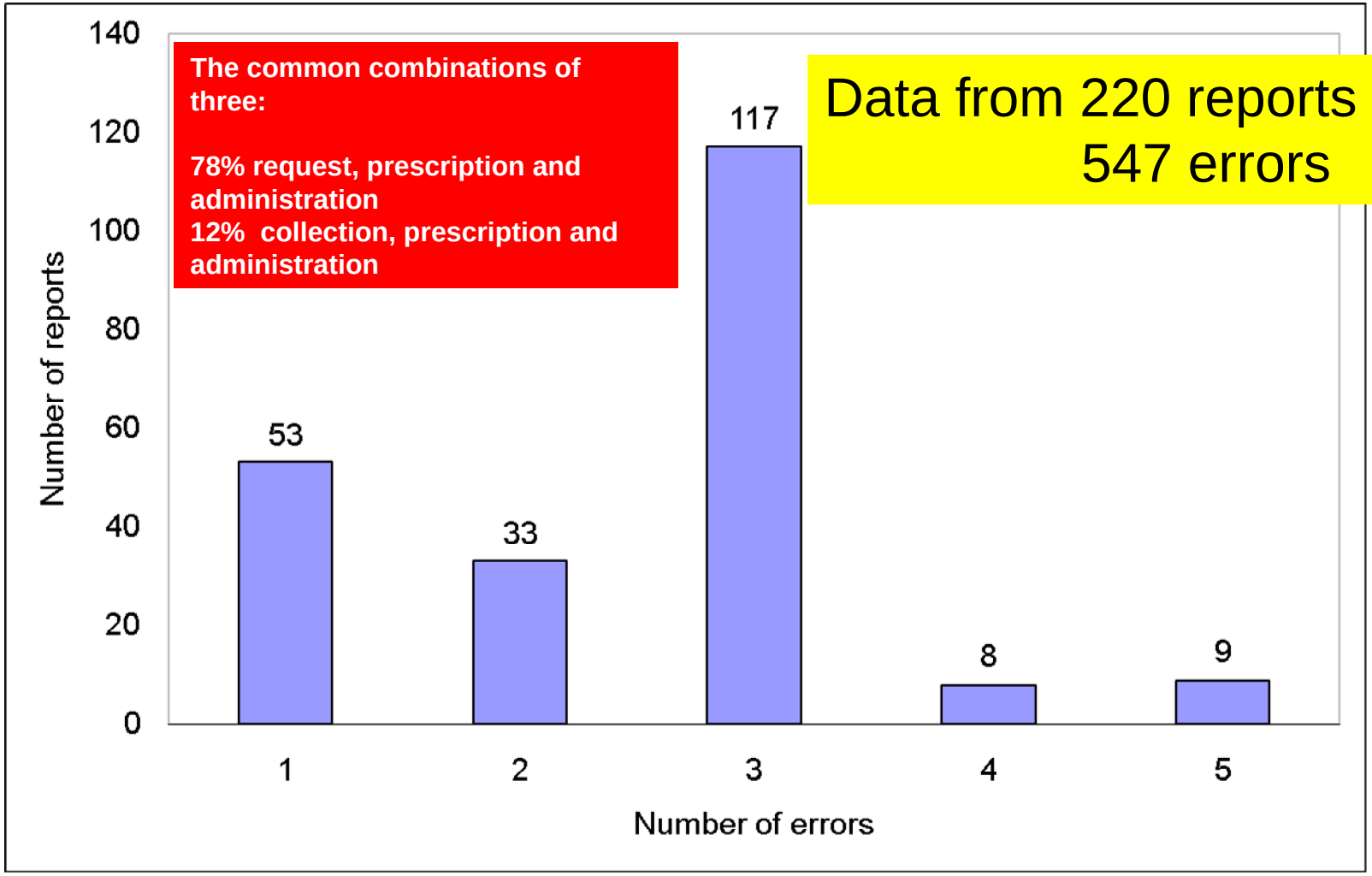
Recommendation

ALL ABO incompatible transfusions should be included by NHS England as Never Events, not just those associated with serious harm or death

Incorrect blood component transfused
Where are the mistakes made?



Incorrect blood component transfused



Recommendation

Use an aide-memoire at the bedside to check the key 5 points

1. Positive patient identification
2. Check identification of component against patient wristband
3. Check the prescription: has this component been prescribed?
4. Check the prescription: is this the correct component?
5. Check for specific requirements – does the patient need irradiated components or other specially selected units?

But this is not enough

- SHOT has been reporting errors as the main category causing harm to patients for 17 years
- Errors are the most common cause of MHRA serious adverse events – 97.8%
- The correct process is difficult to follow
- Can we redesign the process?

Recommendation

Process redesign

Process mapping and engagement of the human factors specialists

Working through:

National Blood Transfusion and Regional Transfusion Committees

NHS England Patient Safety Domain

National Comparative Audit Programme

TACO: 92 cases in 2013
48% death and major morbidity

Recommendation

Don’t give two without review

Transfusion reactions may occur hours or days later

- Transfusion-associated circulatory overload
  - An elderly lady felt unwell on her way home, came back to the emergency department, suffered respiratory arrest and was admitted to ICU
- Haemolytic transfusion reactions
  - A patient developed symptoms and signs of haemolysis 8 days after transfusion which was not recognised as such by the GP
- Some allergic reactions

Recommendation

Patients transfused as day cases or outpatients must be given printed advice and a 24-hour contact telephone number and warned to report any adverse symptoms or complications