How big is the iceberg below the surface? Near miss lessons from SHOT related to critical transfusion steps

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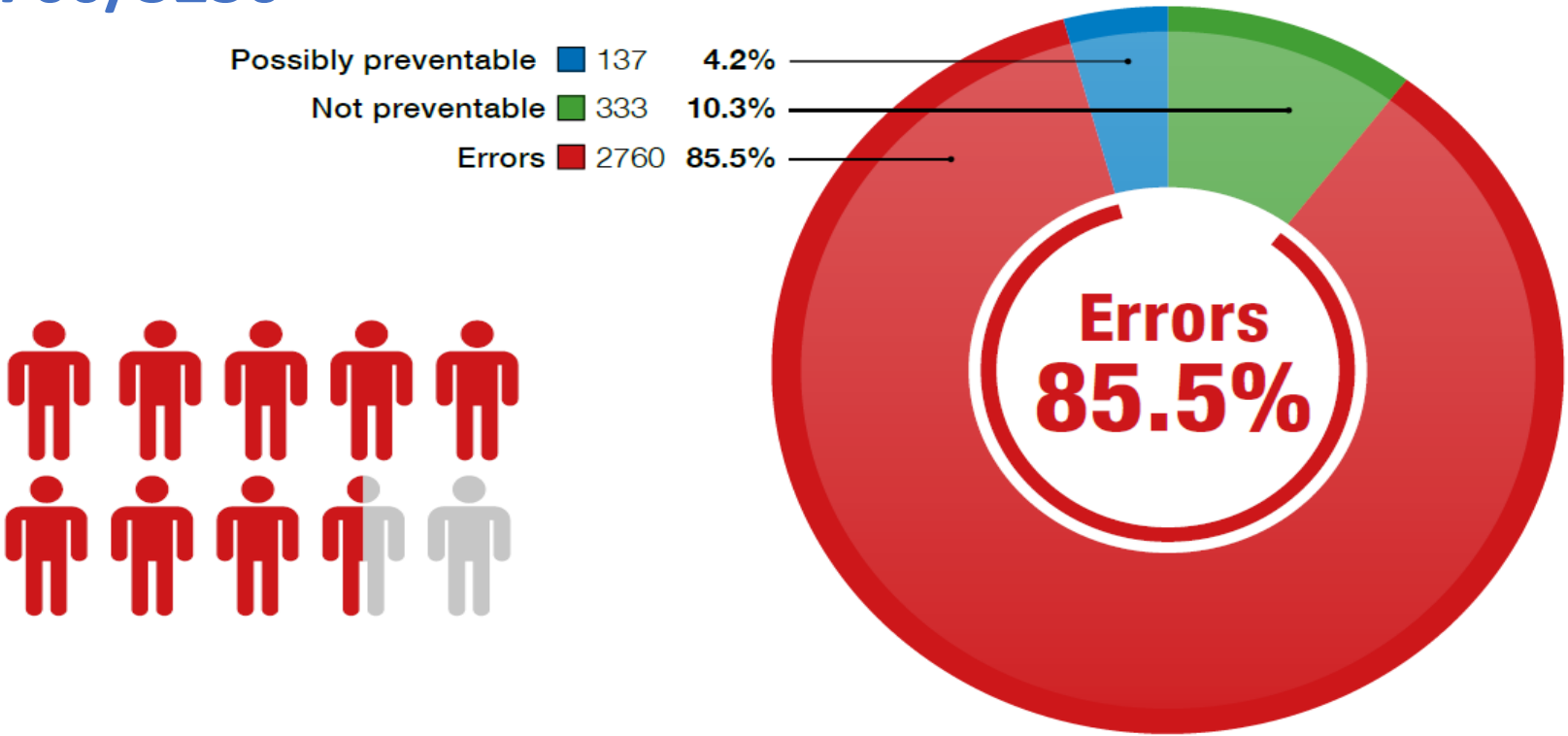
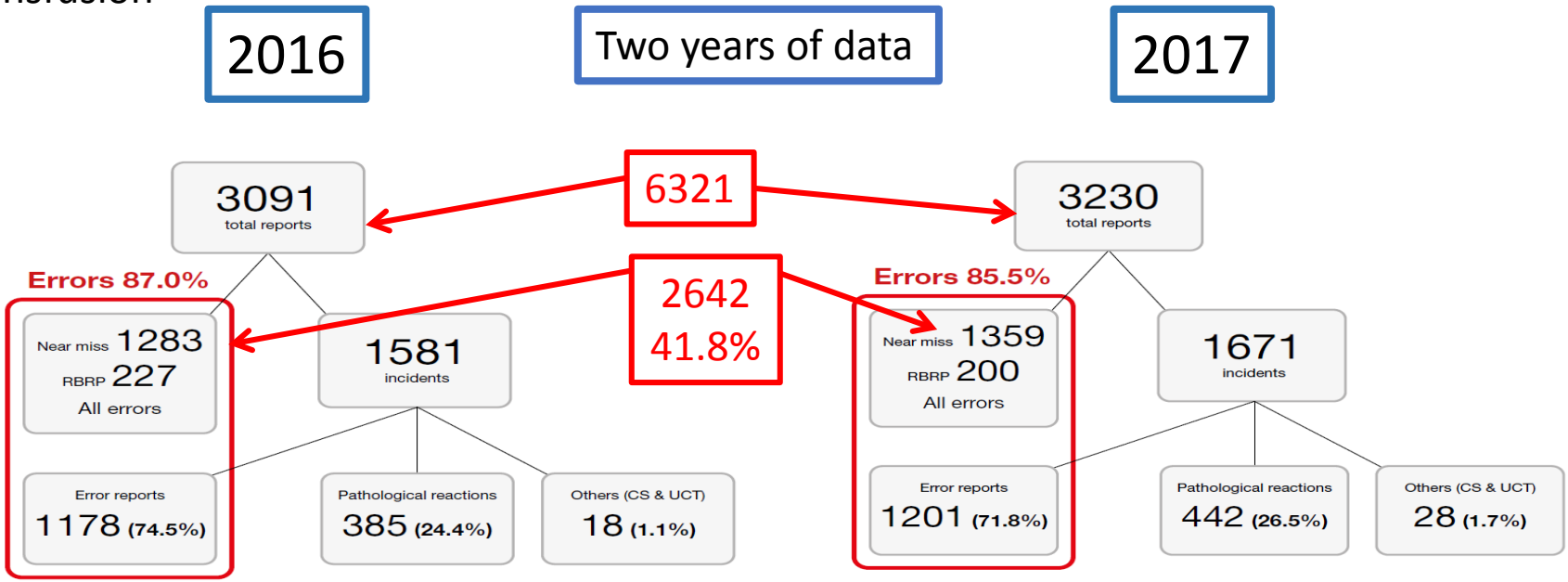
BBTS 2018

Errors account for the majority of SHOT reports in 2017: 2760/3230



Near miss (NM):

The serious hazards of transfusion haemovigilance scheme collects reports of incidents where patients might have been harmed but the error was identified prior to transfusion



Near miss: incorrect blood components transfused n=2022

	2016	2017
Wrong components transfused	881	899
Specific requirements not met	121	121

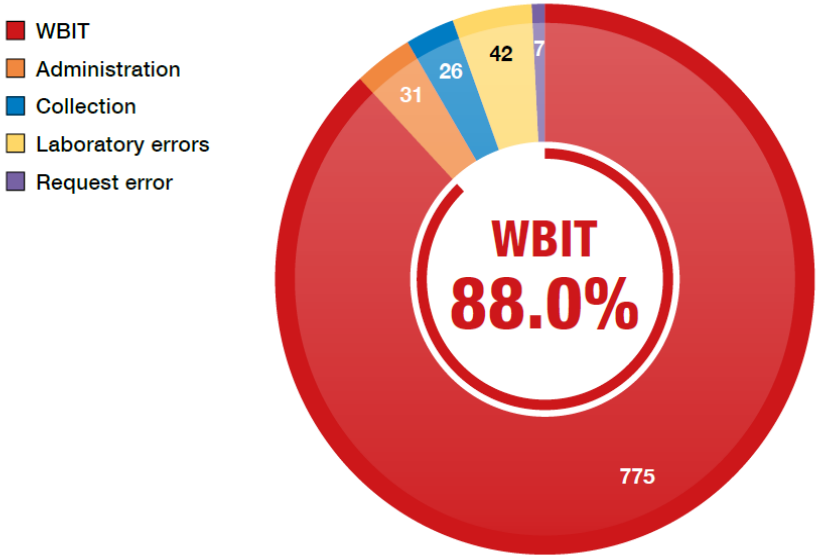
Near miss incidents that could have resulted in an incorrect blood component transfused = 2022/2642, **76.5%**

Actual incidents n=638

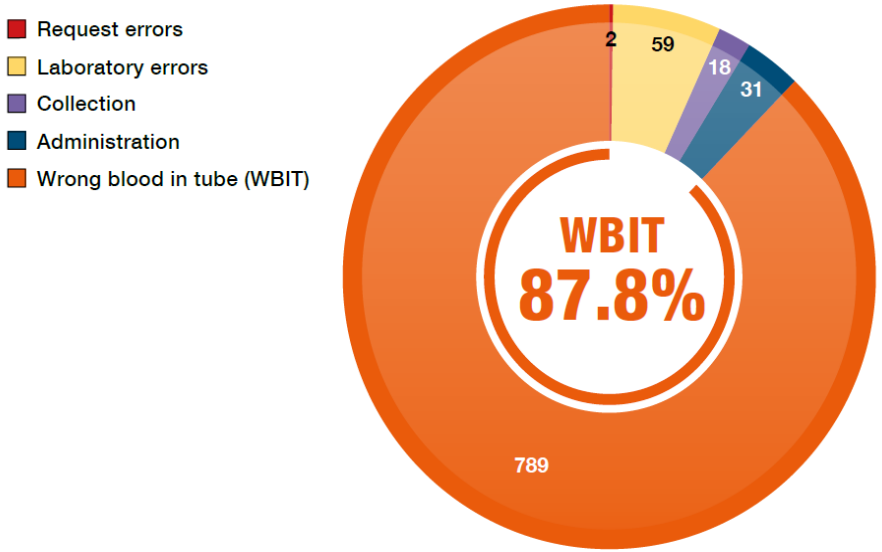
Wrong blood in tube errors 1565/2642 (59.2%) of all near misses

Most ‘near miss’ incorrect blood component transfused were wrong blood in tube errors

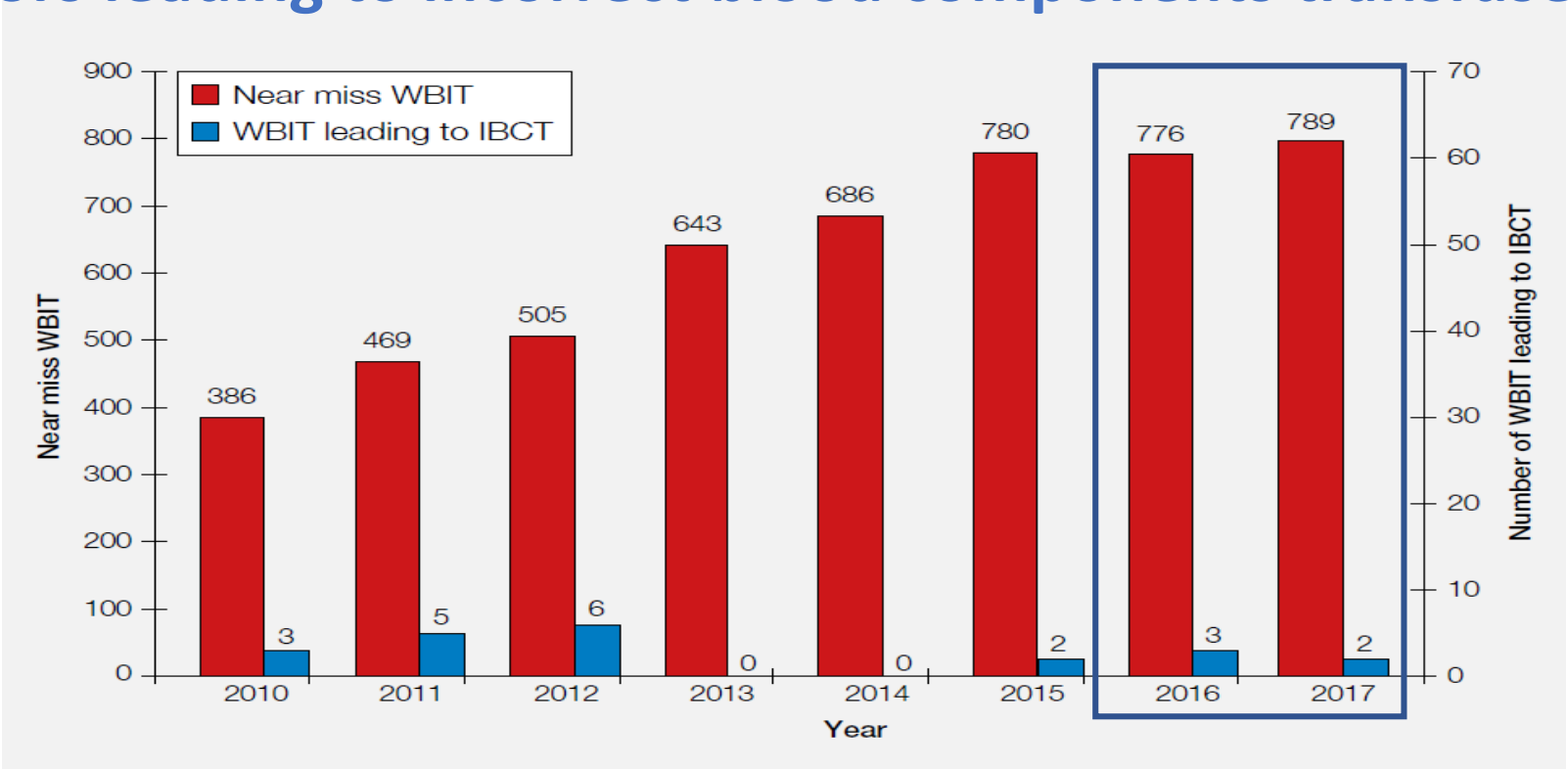
2016



2017



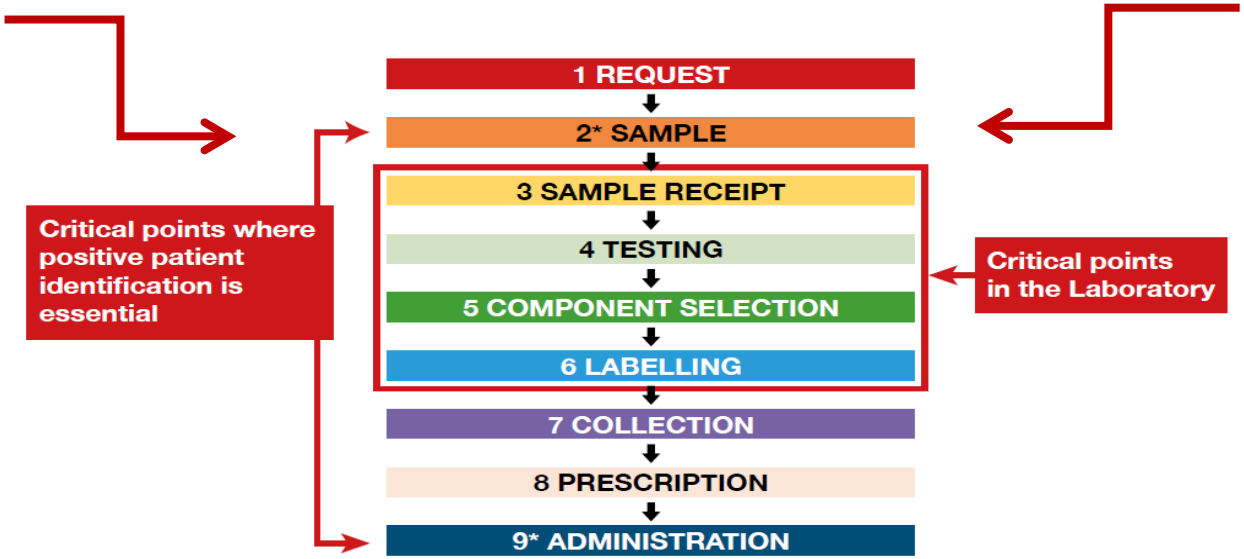
Comparison of near miss and actual wrong blood in tube errors leading to incorrect blood components transfused



The source of WBIT errors (1565) is poor practice

Failure to identify the patient correctly 735/1565, 47.0%

Failure to label the sample at the bedside 480/1565, 30.7%



NM incidents due to WBIT in 2016 n=629

Poor practice

- Patient not identified
- Sample not labelled at bedside
- Sample not labelled by person taking blood
- Prelabelled bottle

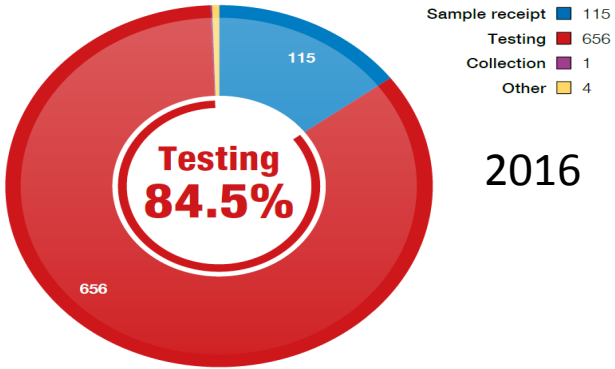
- Other

Almost all WBIT errors are due to poor practice leading to misidentification. No amount of experience or years of practice will remove the risk of misidentification if you are interrupted or distracted

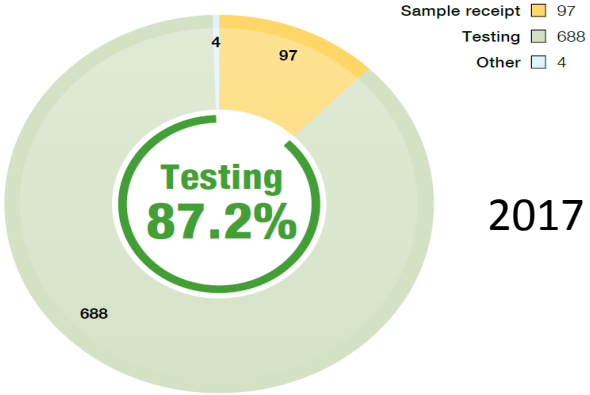
Point in the process where a wrong blood in tube incident was detected

Overall by laboratory testing 1290/1565, 85.9%
But also 212 at laboratory receipt

This is why the group-check sample is so important



2016



2017

Near miss - distraction

- Patient 1 had a pre-transfusion sample taken by a nurse in a side room of the ward
- The nurse was also coordinating the ward beds and labelled the sample away from the bedside, while dealing with a query from another member of staff about Patient 2
- The nurse labelled the sample and request form with Patient 2's details instead of Patient 1
- Patient 2 had a historical blood group result, so the ABO mismatch was detected by laboratory testing
- The nurse then realised her error and repeated the sampling of Patient 1
- There was a slight delay in ordering blood for Patient 1, but no major harm

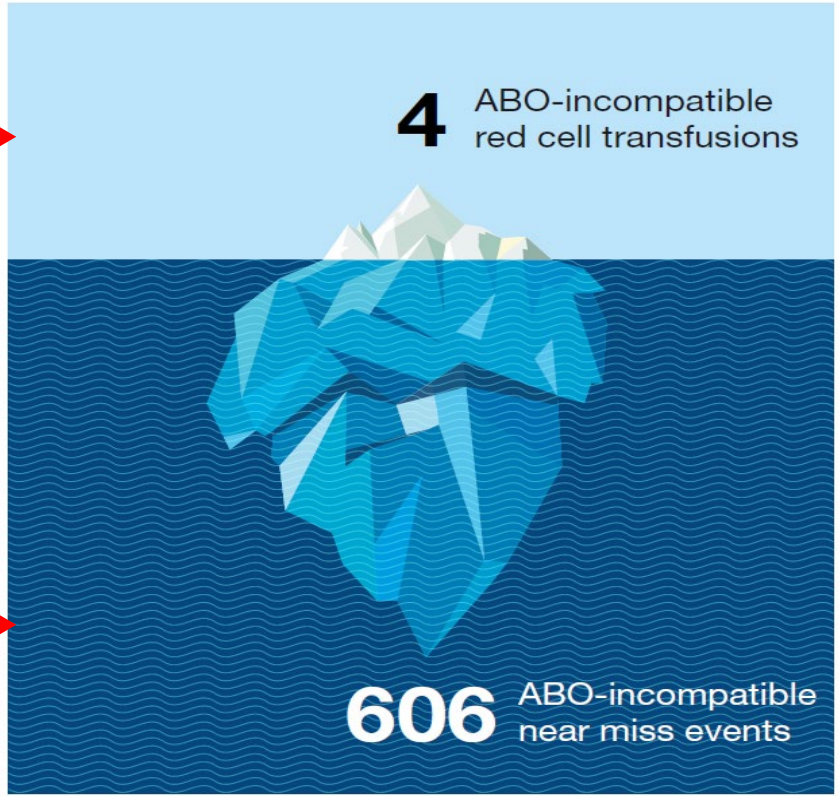
ABO-incompatible transfusions compared to near miss 2016 and 2017

2 were caused by WBIT

2 were administration errors

WBIT errors cannot be detected at the bedside

566/606 (93.4%) WBIT



Wrong blood in tube leads to ABO-incompatible transfusion and major morbidity

- A 61-year-old male (Patient 1) was admitted for coronary artery bypass graft
- He received four units of group A D-positive red cells, had an uneventful stay in hospital and was discharged home
- Fourteen days later he was admitted to critical care via the emergency department (ED) with renal impairment and a falling haemoglobin
- On this second admission Patient 1 was grouped as O D-positive
- The sample used for the crossmatch 14 days previous had been taken from the wrong patient (Patient 2) and labelled with Patient 1's details
- A second sample was not obtained to confirm the ABO group although it was the hospital policy

Wrong blood in tube leads to ABO-incompatible transfusion

- A sample was taken from a 66-year-old male with symptomatic iron deficiency anaemia and grouped as A D-positive
- One unit of A D-positive blood was issued, a group-check sample was not obtained despite the hospital having a 2-sample policy in place
- Three days later a further sample was sent to the laboratory which grouped as O D-positive; an additional check sample was sent on this occasion which confirmed the group as O D-positive
- The patient experienced mild loin pain and mild ‘haematuria’ lasting 24 hours but made a full recovery

How to prevent these errors?

- The group-check policy: a second (group-check) sample is required for first time patients not previously transfused, to confirm the group
- 1140/1565 (72.8%) reporters for WBIT NM indicated that their institution had this policy in place
- 394/1565 (25.2%) noted their incidents were detected as a result of this policy

Conclusions

- NM incidents demonstrate that the risk of ABO-incompatible transfusion is much greater than the number of events suggest
- Continued evidence of poor practice at sampling indicates that staff fail to understand the rationale for the group-check recommendation
- The bedside administration check will not detect an error due to wrong blood in tube at sampling
- See SHOT Bite No 10: Why 2 samples?

Acknowledgements

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