Wrong Blood In Tube
The Tip of the Iceberg

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SHOT Mission Statement (Serious Hazards of Transfusion)

To improve patient safety in blood transfusion practice

Near Miss reporting in UK

- **Near Miss** - any error which if undetected, could result in the determination of a wrong blood group or transfusion of an incorrect component, but was recognized before the transfusion took place
- Near Miss data fully analysed for 2010 and 2011

Wrong blood in tube

- Wrong name on tube (IHN) “a sample labelled with the identification details of a different patient”
- SHOT WBIT includes incidents where:
  - blood is taken from the wrong patient and is labelled with the intended patient’s details
  - blood is taken from the intended patient, but labelled with another patient’s details.

Near Miss – sample errors & WBIT

- Near miss reports are about 30% total reports
- Sample errors are about 50% of the near misses
- Wrong blood in tube (WBIT) are >90% of the sample errors

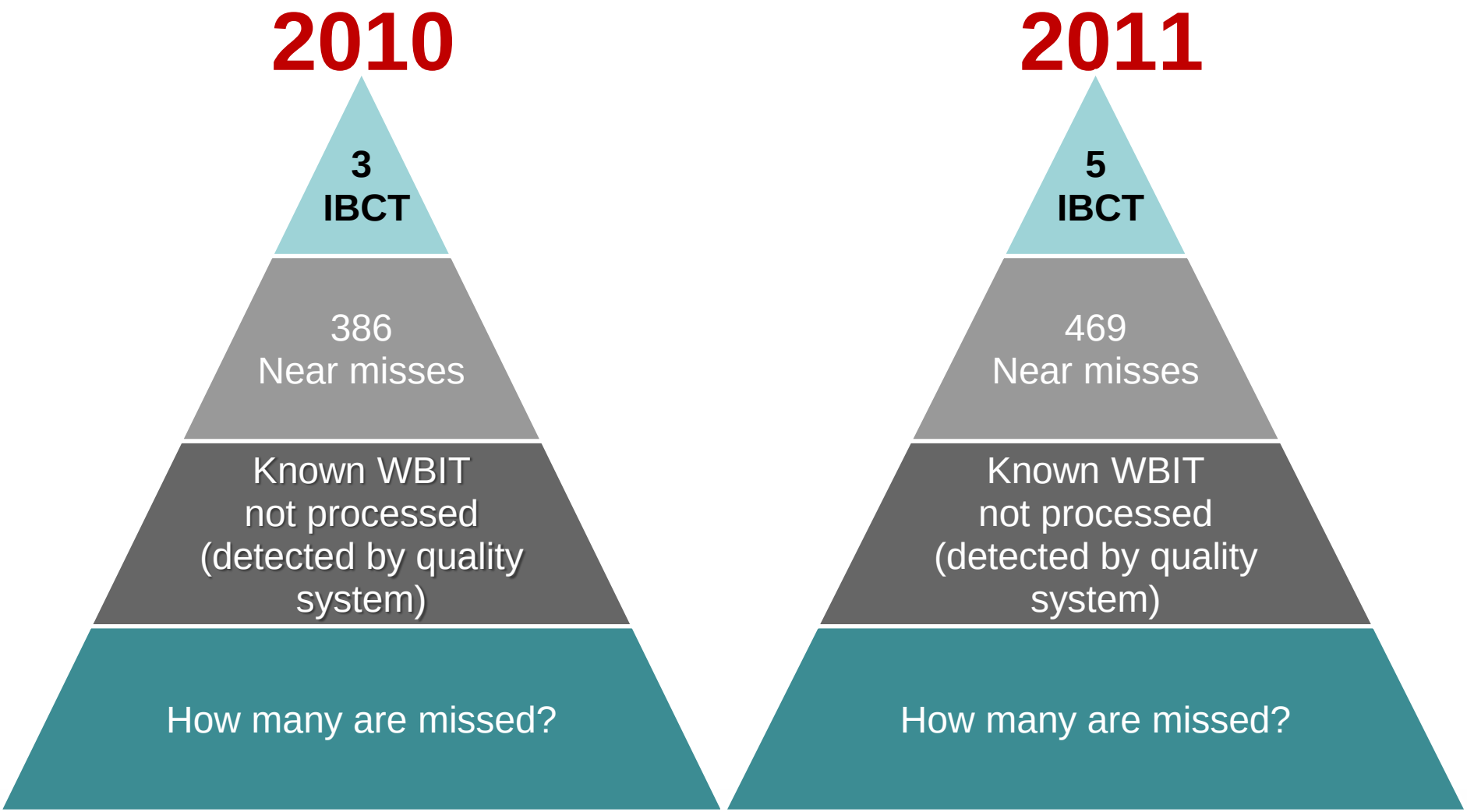
	2010	2011
Total SHOT reports analysed	2464	3038
Near misses	863	1080
Sample errors	409	508
Wrong blood in tube (WBIT)	386	469

How do wrong sample errors occur?

Practices leading to WBIT	Number of cases	Percentage of cases
Patient not identified correctly	174	37.1%
Sample not labelled at bedside	174	37.1%
Sample not labelled by person taking blood	23	4.9%
Pre-labelled sample tube used	10	2.1%
Other/Unknown	88	18.8%
Total	**469**	**100.0%**

Wrong Blood in Tube

Wrong Blood In Tube



Transposed patient ID during phlebotomy leads to ABO incompatible transfusion

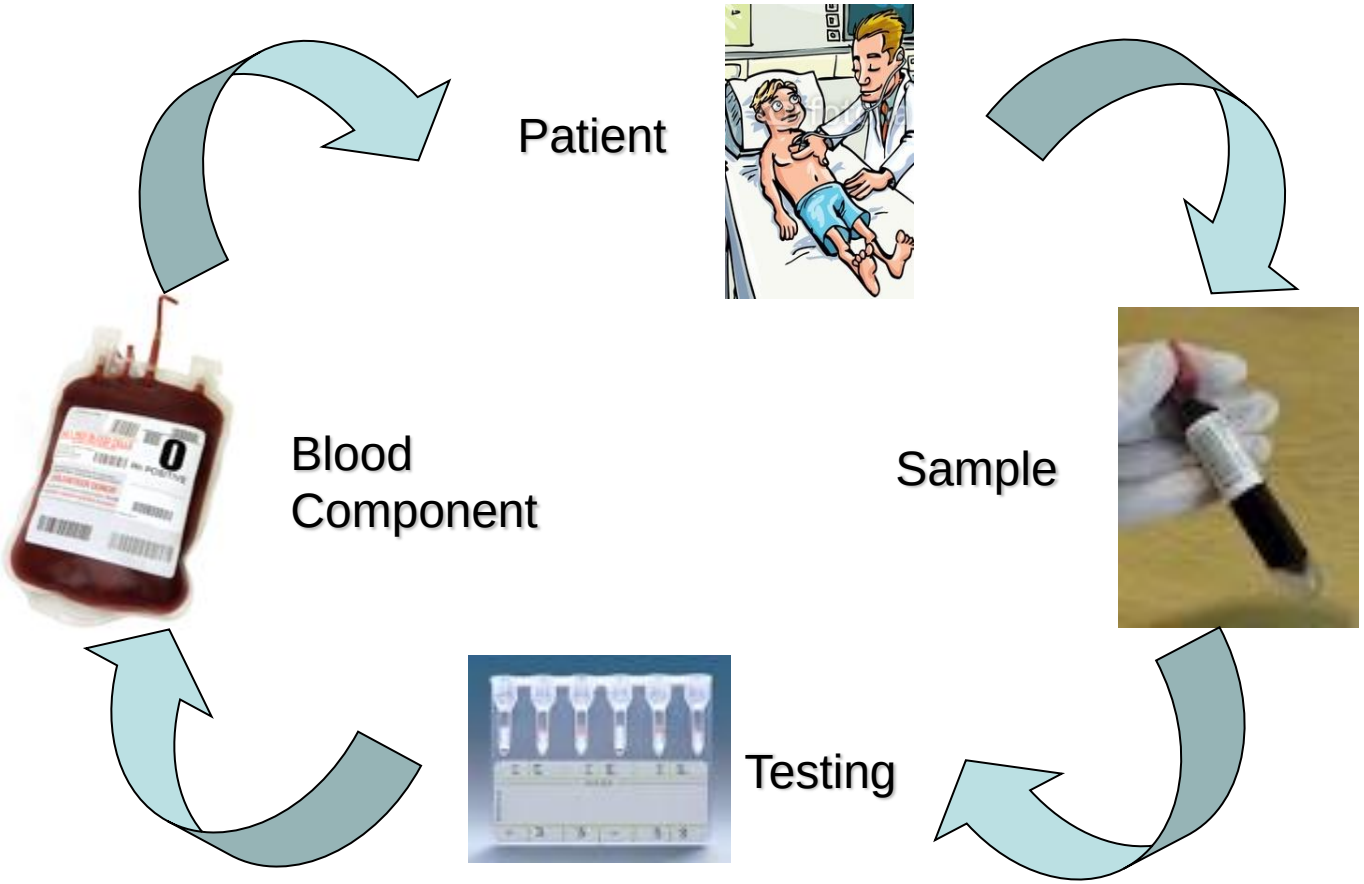
- Patient A, blood group O RhD negative, was transfused 2 units of A RhD positive blood during cardiac surgery
- On arrival in ICU he received two more group A units without apparent adverse events.
- Following transfusion, the patient showed evidence of haemolysis, with a fall in Hb requiring further transfusions, and rise in bilirubin to 241micromol/L within 6 days
- He had an extended stay in ITU.

One error results in one near miss and one potentially lethal event

- Patient A and patient B were sampled at the same time in a preoperative clinic. The nurse was distracted while bleeding patient A, did not complete the process at the bedside, and so patient details were transposed when labelling the samples.
- **Near Miss**: Patient B's mislabelled sample was detected in the laboratory, because a historical group was available.
- **Adverse event**: Patient A had no historical group and the error was not detected.

Transfusion Cycle

Correct patient identification is vital



Staff groups responsible for WBIT

Staff Group	2010 (% total 386 WBIT errors)	2011 (% total 469 WBIT errors)
Doctor	44.0%	37.5%
Nurse	19.4%	18.8%
Midwife	14.2%	16.7%
Healthcare Assistant	4.2%	5.3%
Phlebotomist	3.4%	6.8%
Medical student	0.5%	0.2%
Unknown/not stated	14.3%	14.7%

Patients identified by bed numbers only

- A clinician was asked to take a blood sample from the patient in Bed 2, but was given no documentation.
- She labelled the sample with the information contained in the notes for that bed number, instead of identifying the patient fully and checking the wristband.
- The request should have applied to the patient now in Bed 3, whose notes were still on Bed 2.
- Therefore, the sample was taken from the patient currently occupying Bed 2, but labelled with the details of the patient now in Bed 3.
- The error was noticed in the laboratory, because the sample was a different group from the patient's historical group.

Identification errors are common

- Estimated at 1% all specimens
  - Highest rate for surgical pathology
    - Unlabelled or mislabelled specimens or mismatch between specimen and request Valenstein et al. Clin Lab Med 2004; 24:979-996
- Estimate for US labs 1.31 per 1000 specimens
  - Reviewed 3.4 mill specimens at 147 institutions and identified 3043 mis- or unlabelled Paxton. CAP Today June 2008; 1-10

Do you know who I am?

- Errors, especially of patient identification, are made across all areas of medicine.
- Transfusion is particularly well regulated and acts as a ‘canary in the coal mine’.

Conclusion

- The circumstances that lead to detection of a WBIT are mostly fortuitous.
- There is no quality system that can guarantee detection if a sample is from the wrong patient.
- If patients are not properly identified there is a risk of transfusion of a component that has not been fully matched, which might be ABO incompatible and cause death.

SHOT Website Resources

www.shotuk.org

SHOT / RCA Toolkits

Reports and Summaries

Lessons for Laboratory Staff

Lessons for Clinical Staff

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SHOT Symposium 2012

The Lowry Centre, Salford Quays

Thursday 5th July £69

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Details on SHOT Website www.shotuk.org