15 Near Miss (NM) Reporting n=1408

This overview page covers all NM cases – including 899 wrong blood in tube, and 509 reports in other NM categories.

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Key findings:

- NM events continue to be the largest category reported to SHOT even though there was a slight decrease from 2023
- A substantial increase (>25%) of NM events in the incorrect blood component transfused (IBCT) and right blood right patient (RBRP) categories
- There were 203 potential ABO-incompatible (ABOi) red cell transfusions if the error had not been identified prior to transfusion

Gaps identified:

- Failure to follow a standard operating procedure (SOP) or policy were seen in many cases
- Lack of sustained changes in practice
- Patients not identified at phlebotomy and samples labelled away from the patient continue to be the most common reasons reported for WBIT
- Interruptions during sample taking and labelling resulted in errors
- Gaps in knowledge, ineffective training, mismatch between staff and workload, high-pressured work environments, and team function issues were the most common contributory factors

Good practice:

- More than half of NM events were detected during pre-administration checks
- Evidence of increased review of cases by hospital transfusion teams
- Most WBIT (84.2%) were identified during the laboratory testing or at authorisation of results, showing the importance of a sample check for confirmation of the blood group
- Most cases were, or were planned to be, reviewed at transfusion team meetings including, hospital transfusion team meeting or equivalent (95.4%)
- In 95 WBIT cases the error was identified in the clinical area, and laboratory staff were promptly informed

Next steps:

- Ensure that documentation and policies are clear and simple to follow to avoid confusion, misinterpretation and/or incorrect practice
- Where human factors and/or systemic errors are identified, an action plan with achievable measures and deadlines should be agreed
- Sample taking and labelling should be a single continuous process carried out beside the patient

For all abbreviations and references used, please see the **Glossary** and **Reference list** at the end of the full Annual SHOT Report. Please see the supplementary information on the SHOT website (https://www.shotuk.org/shot-reports/annual-shot-report-2024/).

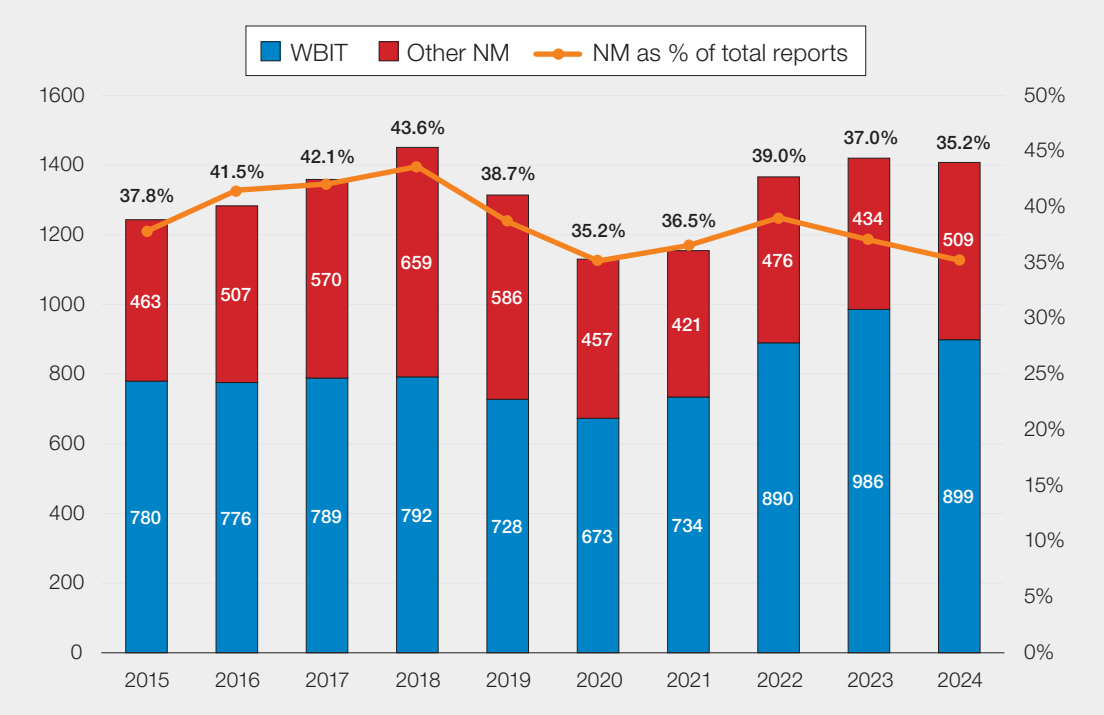
Definition:

A 'near miss' event refers to any error which if undetected, could result in the determination of a wrong blood group or transfusion of an incorrect component, but was recognised before the transfusion took place.

Introduction

As in previous years, NM events in 2024 accounted for the largest category of cases reported to SHOT, 1408/3998 (35.2%). Although there was a small decrease in the total number of NM events compared to 2023 (n=1420), this was still the second highest number of NM events reported since 2019 (Figure 15.1).

Figure 15.1: A decade of NM (other) and WBIT reports (2015-2024)



NM=near miss; WBIT=wrong blood in tube

The largest category of NM analysed by SHOT in 2024 was WBIT (n=899), which decreased from 986 in 2023 (Figure 15.1). WBIT can lead to ABOi transfusions which can be fatal (Chapter 15a, Near Miss – Wrong Blood in Tube (WBIT)). Contrarily, there were NM events in other categories with an increase of more than 25% compared to 2023; IBCT, 152 in 2023 to 196 in 2024 (increase of 28.9%); RBRP, 99 in 2023 to 125 in 2024 (increase of 26.3%).

Table 15.1: Comparison of the NM per SHOT category reported in 2023 and 2024

SHOT category	Number of cases in 2024	Discussed in chapter
Wrong blood in tube (WBIT)	899	Chapter 15a
IBCT-wrong component transfused (IBCT-WCT)	135	Chapter 9
Handling and storage errors (HSE)	132	Chapter 10
Right blood right patient (RBRP)	125	Chapter 16
IBCT-specific requirements not met (SRNM)	61	Chapter 9
Anti-D immunoglobulin (Ig) administration errors	40	Chapter 8
Avoidable transfusion	7	Chapter 12
Delayed transfusion	4	Chapter 11
Under or overtransfusion	4	Chapter 13
Incidents related to prothrombin complex concentrates (PCC)	1	Chapter 14
Total	**1408**	

NM events are discussed in each relevant chapter of the 2024 Annual SHOT Report (Table 15.1).

Most common NM events in laboratory and clinical settings

In 2024, 268 of the NM events were laboratory errors, while 241 were clinical.

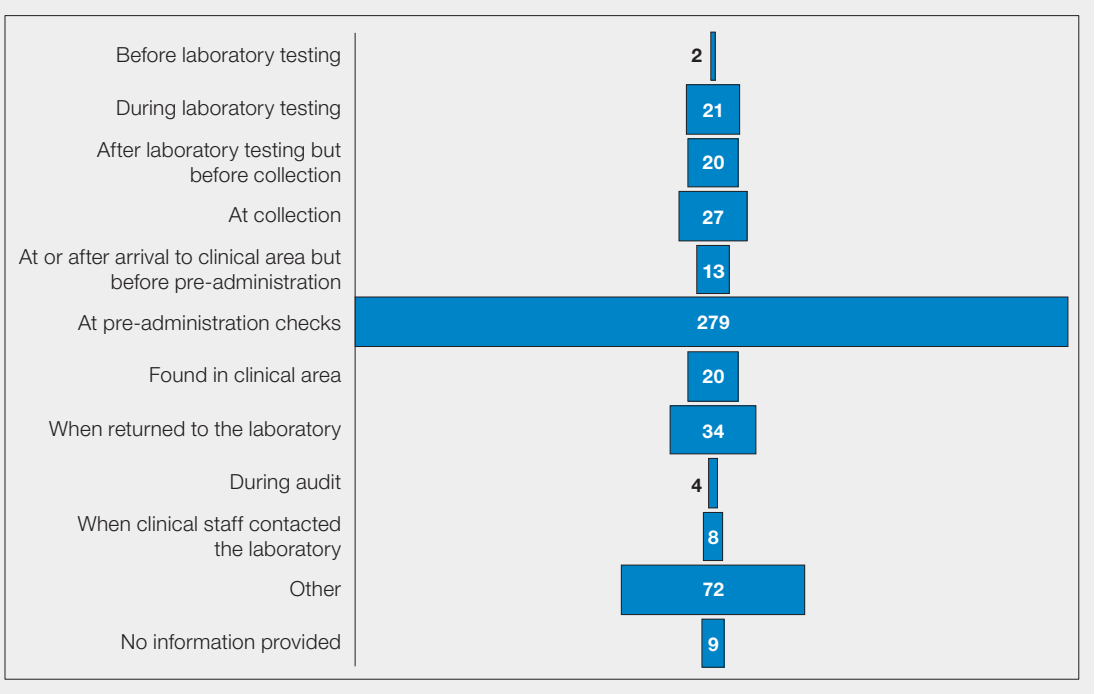
Laboratory errors were most commonly reported under RBRP, 106/268 (39.6%), IBCT-WCT, 59/268 (22.0%) and IBCT-SRNM, 44/268 (16.4%). The common errors in RBRP were labelling errors, 77/106 (72.6%) or patient identification errors, 28/106 (26.4%). In IBCT-WCT, most primary errors were either incorrect blood group provided, 25/59 (42.4%), or blood component issued for the wrong patient, 29/59 (49.2%). Not providing irradiated blood components when required was the most common error in IBCT-SRNM, 26/44 (59.1%).

Clinical errors were most commonly reported under HSE, 101/241 (41.9%) and IBCT-WCT, 76/241 (31.5%). HSE errors were mainly due to cold chain errors, 87/101 (86.1%). IBCT-WCT were mostly due to errors during blood component collection, request or about to be administered to the wrong patient, 75/76 (98.7%). Detection of these errors prevented 14 ABOi transfusions.

Point of error detection in NM events

More than half of the errors in NM events, excluding NM-WBIT, were detected during the pre-administration safety checks, 279/509 (54.8%). In 212/279 (76.0%), the error was identified by staff using a formal pre-administration checklist. There were 72 'other' responses (Figure 15.2) which included errors being detected when the laboratory staff or transfusion practitioner were either chasing traceability records, investigating an incident, or carrying out inventory and/or refrigerator checks.

Figure 15.2: Point in the process where the error was detected in NM events, excluding NM-WBIT reported in 2024 (n=509)



Local review of NM events in 2024

From 1408 NM events, 1225 were reviewed by local organisations and in 105, the review resulted in changes to transfusion procedures or policies. These changes included updating SOP or policies, improvement or changes in training, and exploring possible changes in information technology systems to improve safety. On a positive note, in the NM events that had not been reviewed, 166/1408 (11.8%), 117/166 (70.5%) stated that a review in a future (next) team meeting such as at the hospital transfusion

team, hospital transfusion committee or equivalent was scheduled. This represents 95.3% NM events either reviewed or to be reviewed.

A total of 388/509 (76.2%) reports used a human factors-based approach during investigation. Of these, 289 identified that failures in team function contributed to the event. In 107 NM, a mismatch between workload and staff available around the time of the event was reported as a contributory factor.

Conclusion

SHOT advocates and promotes learning from NM events. Investigating these helps identify potential hazards and risks before they lead to actual incidents or patient harm. NM investigations are an important tool to continuously improve systems and care provided, thus enhancing safety for all. If healthcare organisations do not have policies in place that encourage and understand the value of learning from NM events, the next patient will be at increased risk. Every report is a chance to make care safer.

Recommended resources

SHOT Bite No. 17: Learning from Near Misses (NM)
https://www.shotuk.org/resources/shot-bite-no-17/

Meet the experts – Near Miss Reporting & Wrong Blood in Tube (WBIT)
https://www.shotuk.org/resources/meet-the-experts-near-miss-reporting-wrong-blood-in-tube-wbit/

Near Miss Events and Incident Investigation Webinar 2021
https://www.shotuk.org/resources/near-miss-events-and-incident-investigation-webinar-2021/

SHOT
Serious Hazards of Transfusion