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CONFERENCE FEB 2022

SERIOUS Adverse Events 2019 to 2020

National Haemovigilance Office

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Components issued in 2019 and 2020

	RCC	Platelets	Other (Granulocytes)
Total Number of components issued 2019	122,582	21,237	163
Total Number of components issued 2020	113,766	21,049	92

Table 1: The number of components issued in 2019 and 2020

Reporting trends

Total number of reports received in the NHO 1999 -2020 (n= 7682)

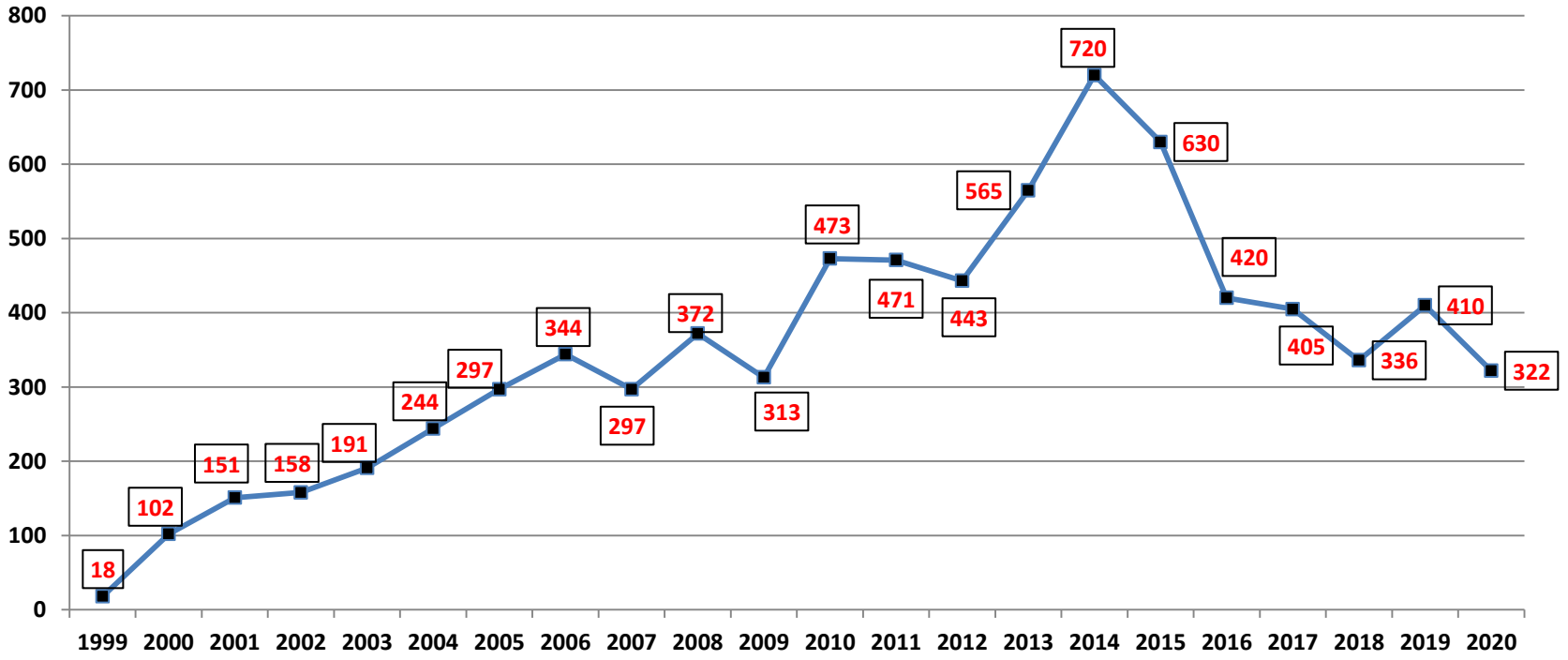


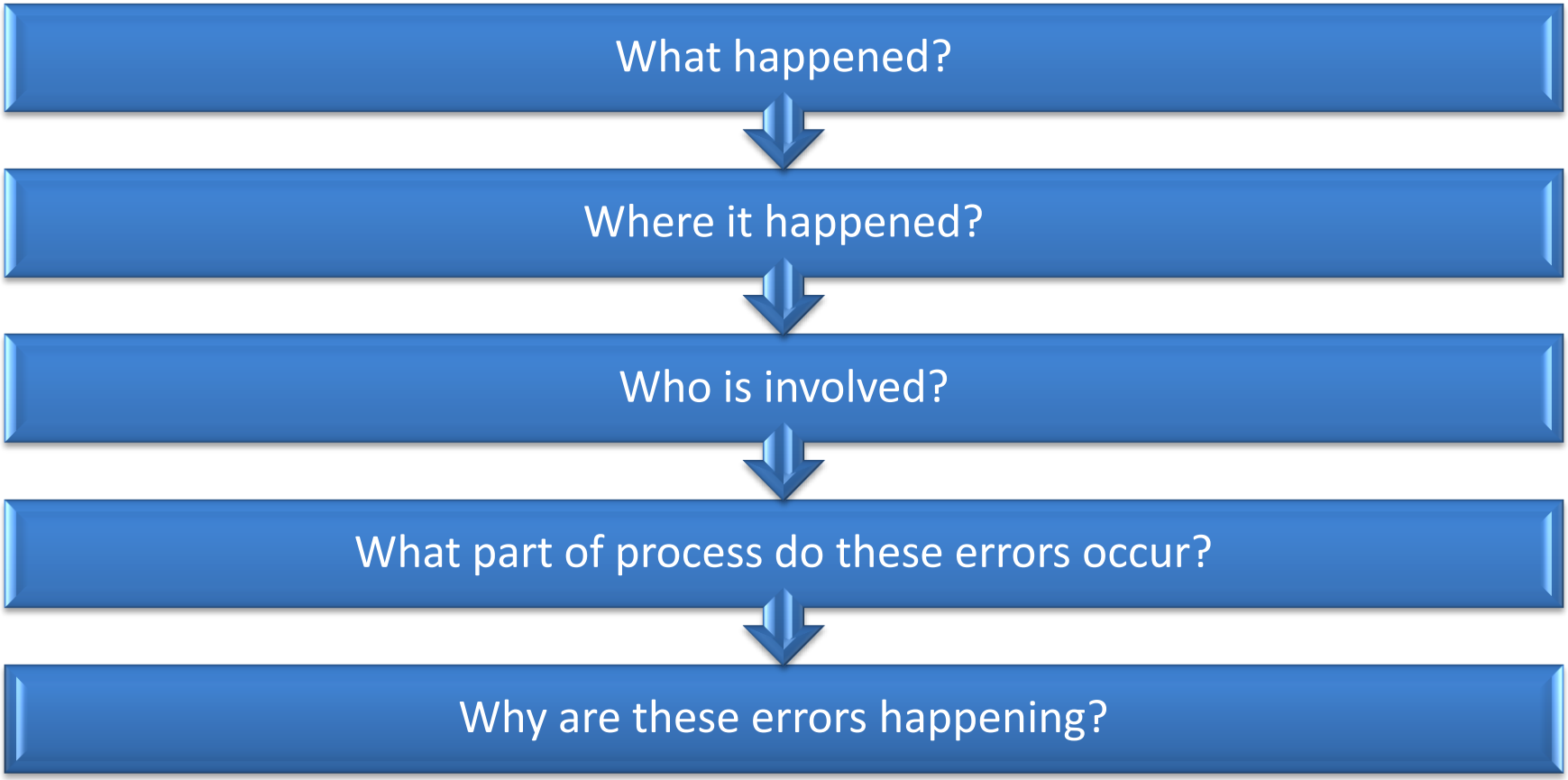
Figure 1: Number of reports received in the NHO from 1999 to 2020

Breakdown of reports accepted by the NHO between 2019 and 2020

Report classification	2019 (n=197)		2020 (n= 195)
SAE	87		67
WBIT	54		77
Near Miss	43		35
Did Not Progress	13		16

Table 2: Breakdown of adverse event reports accepted by the NHO between 2019 and 2022

Serious Adverse Events



What happened 2019?

Types of SAEs received in 2019 (n=87)

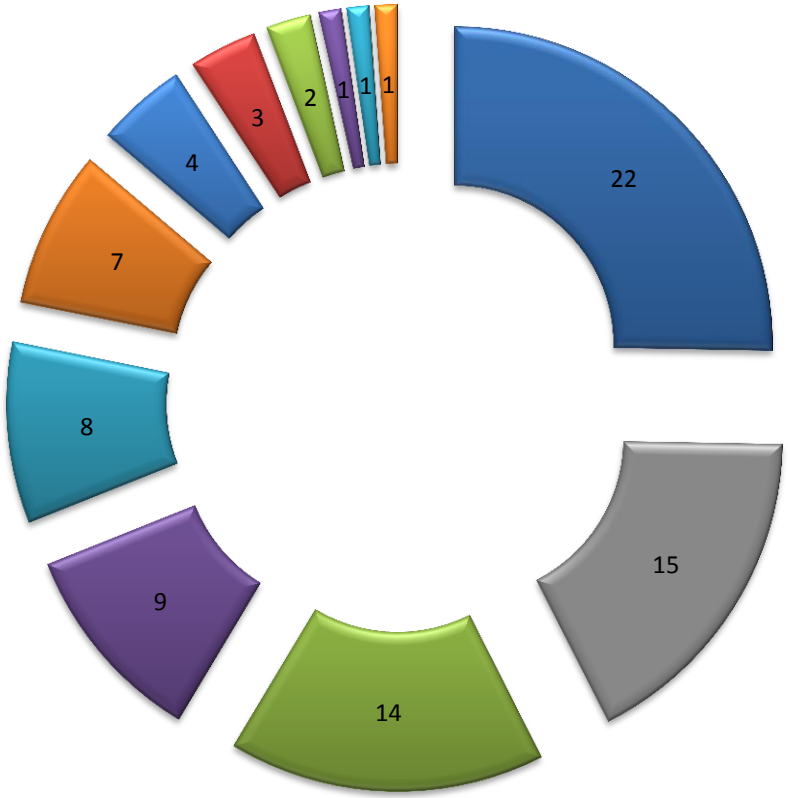
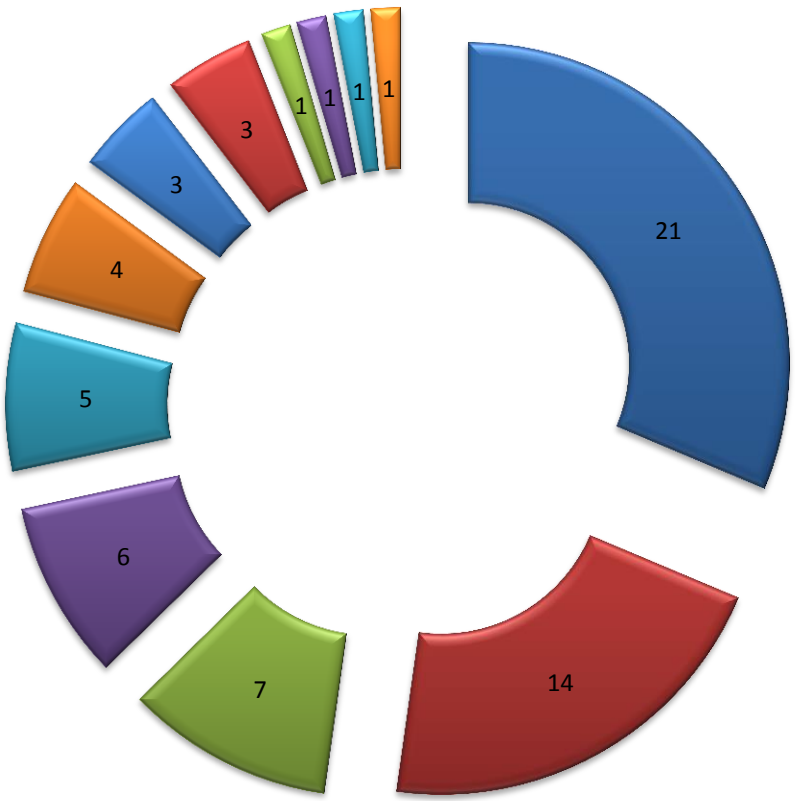


Figure 2: Types of SAEs received by NHO in 2019

- Other (n=22)
- Inappropriate transfusion (n=15)
- Tx of an incorrectly labelled unit (n=14)
- Failure to give an irradiated component (n=9)
- Incorrect component/product transfused (n=8)
- Tx of other ag incompatible RCC (n=7)
- Tx of incorrectly stored component (n=4)
- Incorrect ABO group transfused (n=3)
- Failure to give CMV neg and irradiated component (n=2)
- Incorrect RhD group transfused (n=1)

What happened 2020?

Types of SAEs received in 2020 (n=67)



- Inappropriate transfusion (n=21)
- Other (n=14)
- Incorrect component/product transfused (n=7)
- Tx of incorrectly stored component (n=6)
- Tx of other ag incompatible RCC (n=5)
- Failure to give an irradiated component (n=4)
- Tx of an incorrectly labelled unit (n=3)???
- Incorrect RhD group transfused (n=3)
- Blood or blood product given to wrong patient (n=1)
- Failure to give CMV neg and irradiated component (n=1)
- Tx of expired component (n=1)
- Failure to give CMV neg component (n=1)

Figure 3: The number and type of SAEs received at the NHO in 2020

Where are these errors occurring?

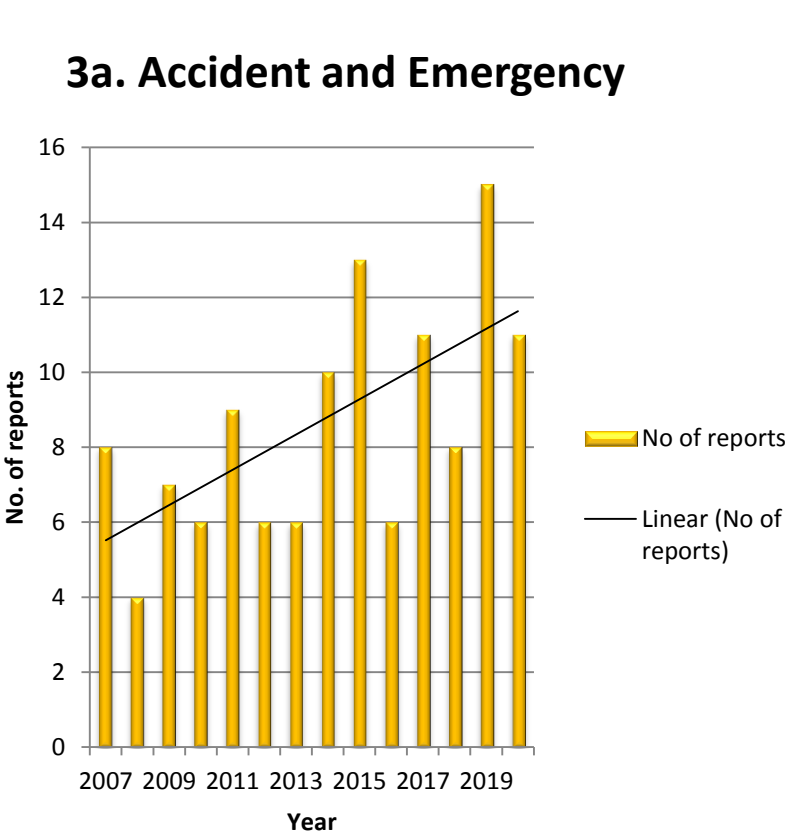


Figure 4: SAEs in A and E

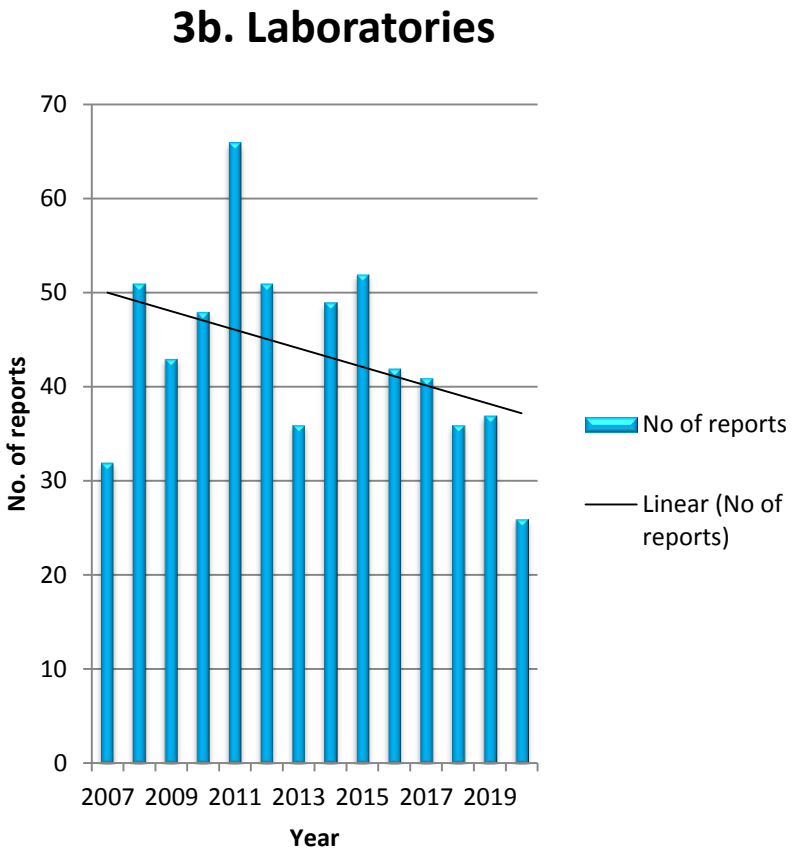


Figure 5: SAEs in Laboratories

Where are these errors occurring?

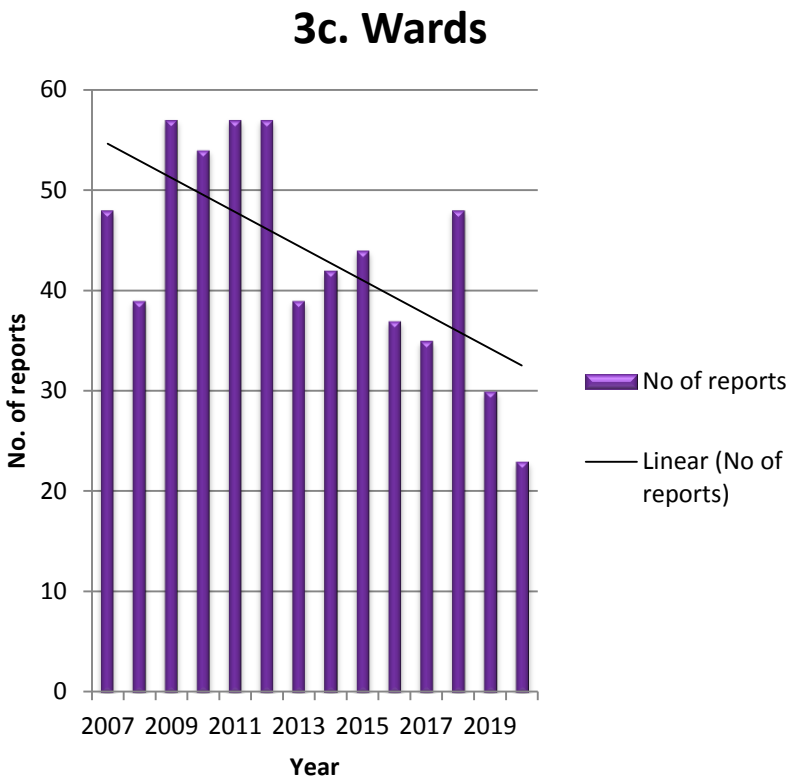


Figure 6: SAEs in wards

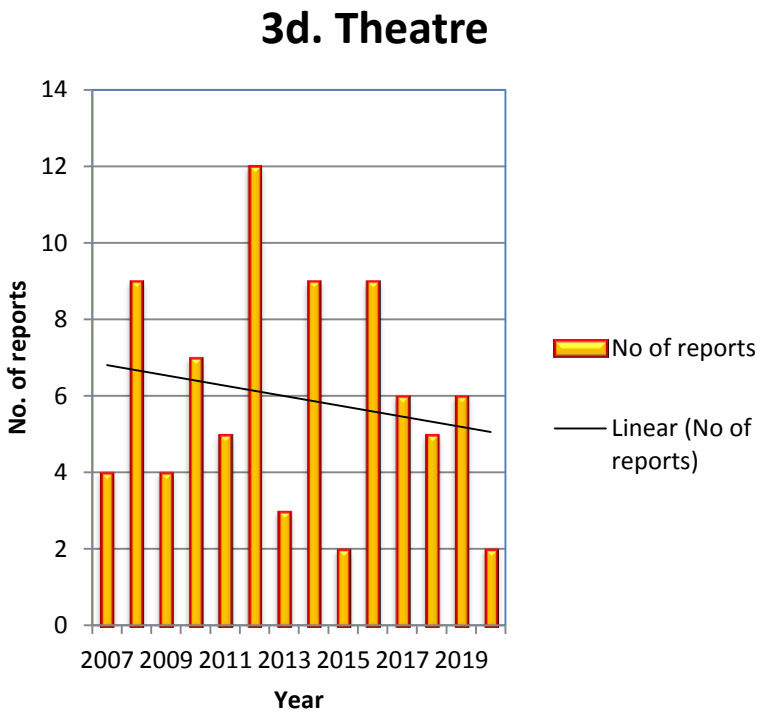


Figure 7: SAEs in theatres

Where are these errors occurring?

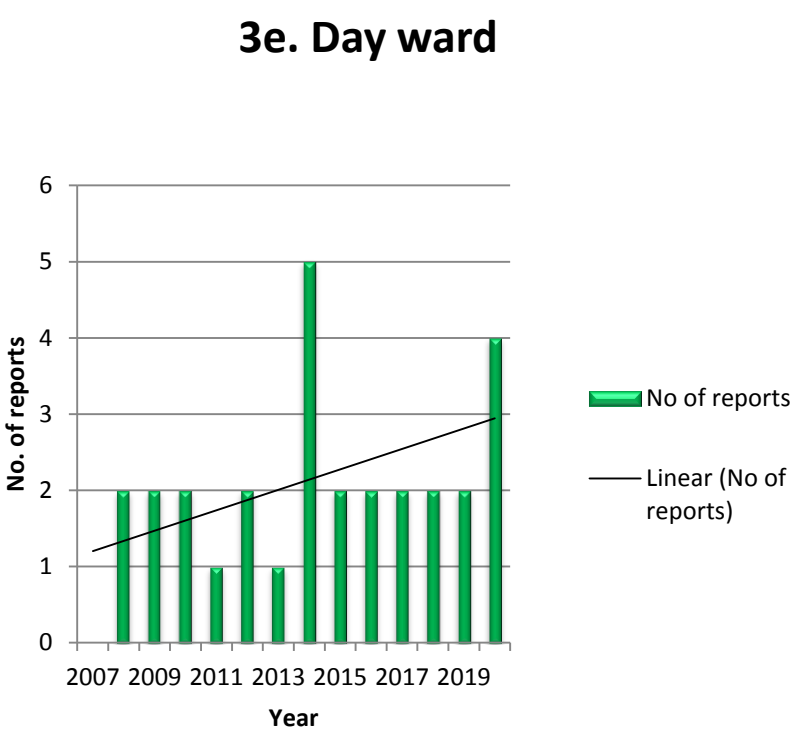


Figure 8: SAEs in day wards

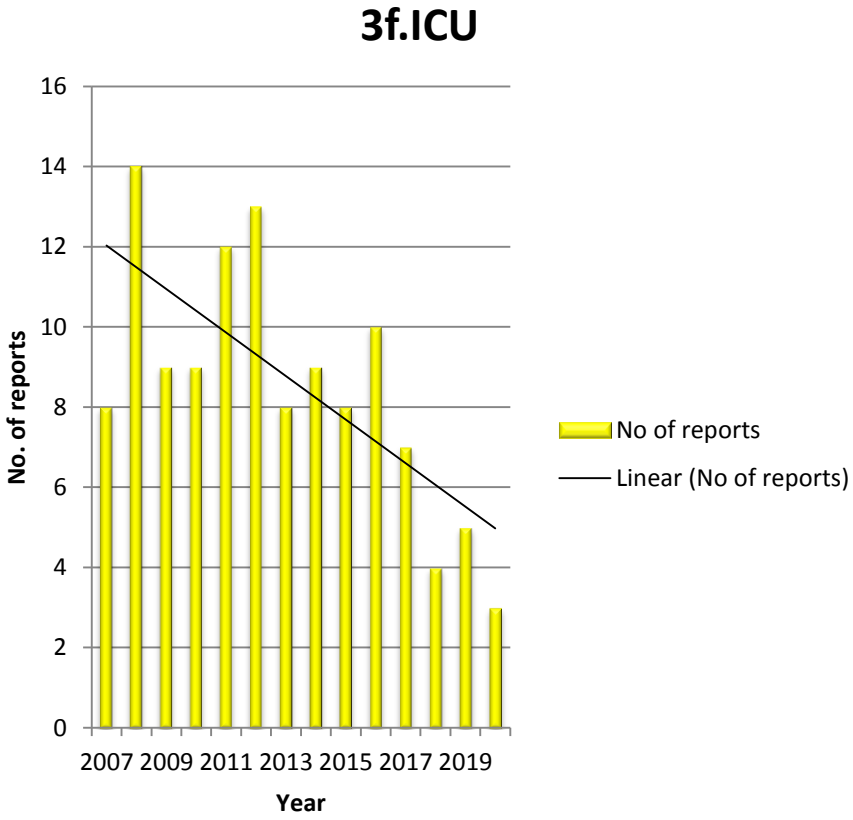
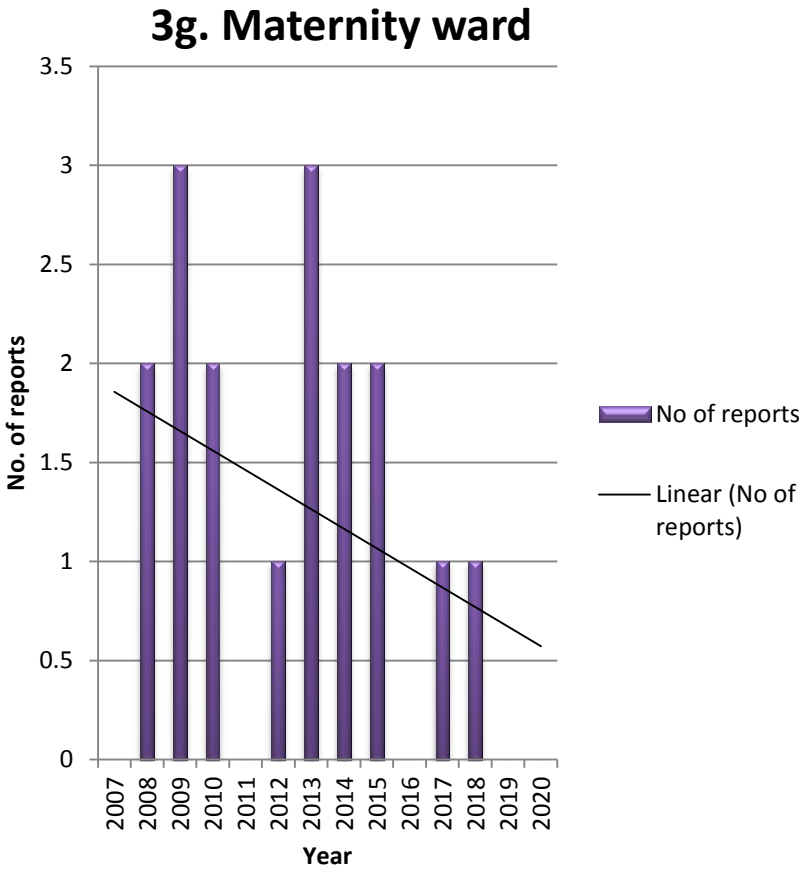


Figure 9: SAEs in ICU

Where are these errors occurring?



Who was involved in the error?

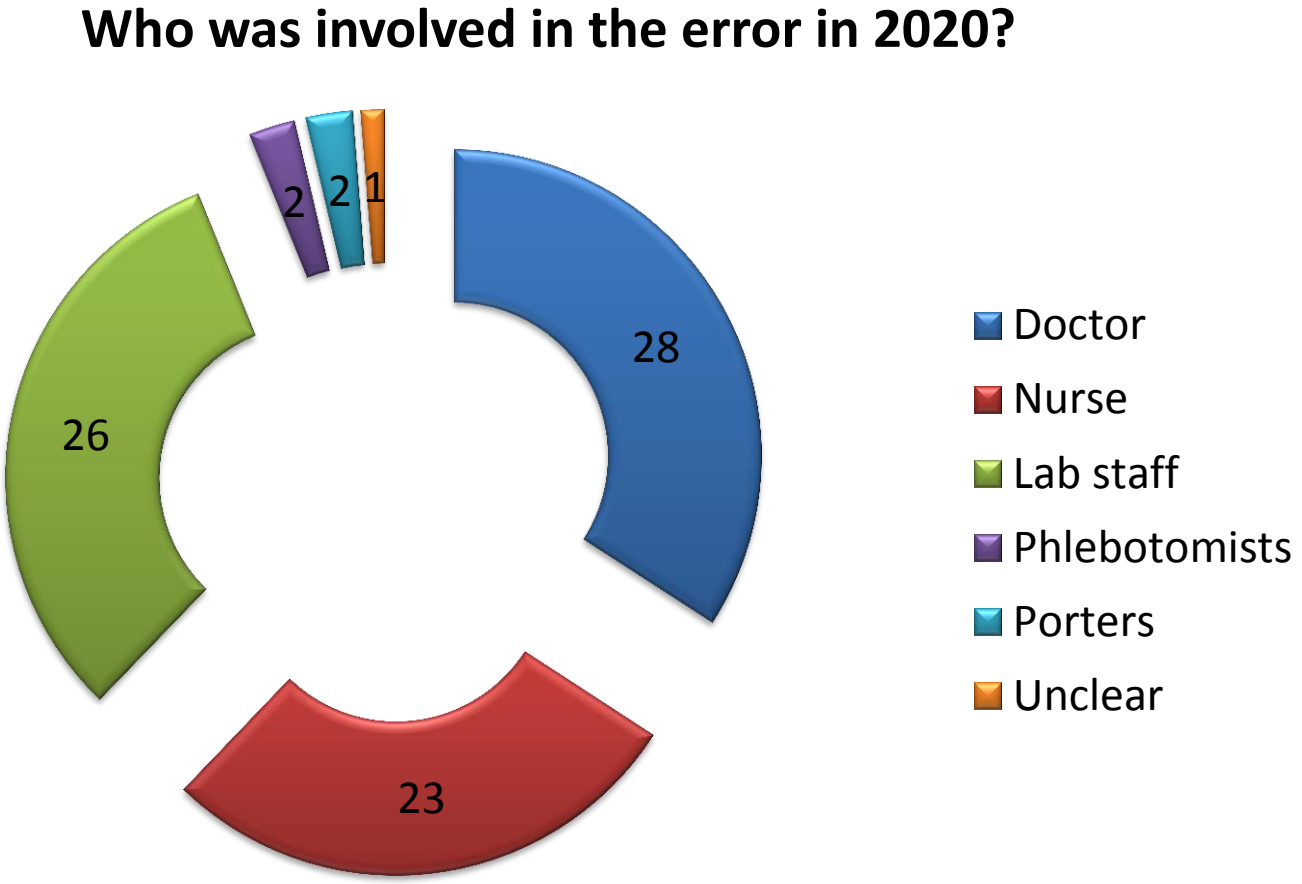


Figure 10: Staff members involved in errors in 2020.

Why did the error occur?

- Most reports have more than one factor cited as the cause of the SAE
- In 2019, 71% of reports had two or more factors cited as a cause of the SAE reported
- Human error is the most commonly cited factor in SAE reports

No. of times human error or system error was cited in reports in 2019 and 2020	
Human error: n= 85 (2019) n= 60 (2020)	System failure: n=13 (2019) n=15 (2020)

Why did the error occur?

Types of Human Error	No. of reports (n=87) 2019	No. of reports (n=67) 2020
Failure to adhere to policies and procedures	60	33
Knowledge	19	19
Co-ordination and communication	14	14
Carrying out task incorrectly	18	12
Other	7	9
Verification	25	7
Slip	9	3
Monitoring	4	1
Patient related	2	1

Table 3: Types of human error and number of reports

Incorrect ABO group transfused

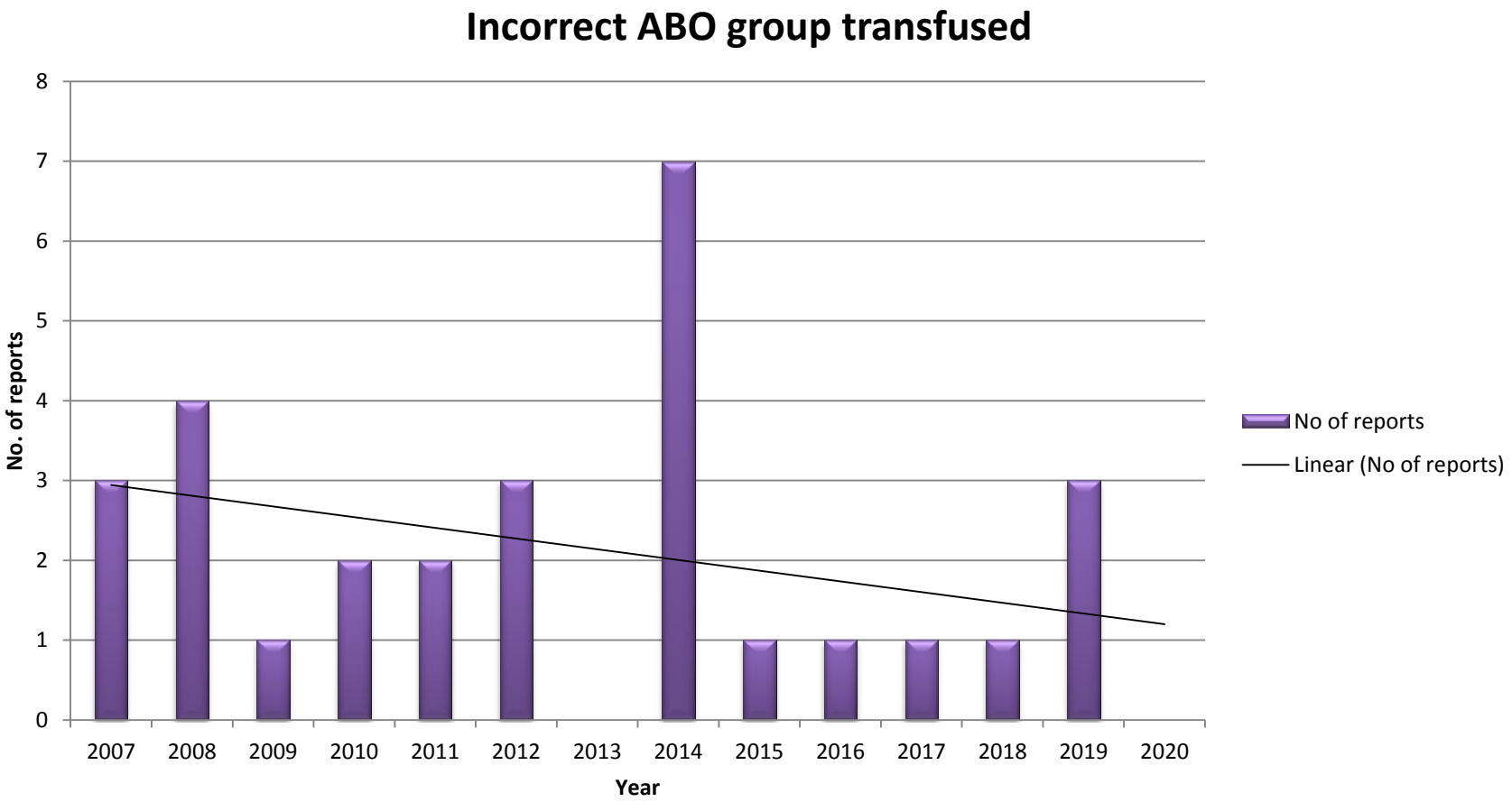


Figure 10: the number of incorrect ABO group transfusions (where no reaction occurred) between 2007-2020

Inappropriate Transfusion 2020

- **31.3%** of all SAEs accepted at the NHO in 2020.
- Increase from **n=15** in 2019 to **n=21** in 2020.
- Majority of inappropriate transfusions occurred at prescription stage, n=12 (57.1%),

Most frequent causative factors (2020)

- Knowledge (n=9)
  - Failure to follow policies and procedures (n=8)

Themes identified in Inappropriate Transfusion reports 2020

- **Incorrect Hb results – (n=9)**
- **Hb not checked between units – (n=5)**
- Staff unaware of single unit protocols – (n=2)
- Staff did not seek advice from haematology team – (n=2)
- Doctors prescribed incorrect treatment for condition patient was presenting with – (n=2)

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Case study

Background: Elderly patient (>70years) with anaemia prescribed RCCs unnecessarily.

What happened? : Consultant failed to verify patient's Hb result prior to transfusion of 3rd RCC.

Patient's Hb result was 11.1 post second transfusion of RCC.

Consultant said that they queried the Hb results but did not order a repeat FBC.

Clinical Outcome: Patient was ok

Corrective/Preventative actions: re-education of staff

re-check Hb every 24 hours or after 2 units of RCC in non-bleeding patient.

Staff to discuss rationale for treatment in patient reviews.

Transfusion of an incorrectly labelled component

- n = 14 (2019)
- n = 3 (2020)

What happened?

- Unit labelling errors – n=8
- Incorrect details recorded during initial admission – n=4
- Incorrect details on sample – n=1
- Other – n= 1

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Transfusion of an incorrectly labelled component

Case:

What happened? : Patient previously registered on LIS with mis-spelled surname from admission.

On new admission surname spelling corrected but not on LIS. G+S processed with correct name. LIS not updated. 4 units transfused. Name on ID band different from units

Corrective/Preventative actions: G + S procedure discussed with MS. Clinical staff spoken to about PPI.

Blood track was not available in theatre at time- WiFi issues

SAEs and Paediatric patients

Age range of patients	No. of reports 2019 (n=8)	No of reports 2020 (n=8)
Neonates <28 days	5	3
Infants (1mth-12 mths)	1	2
Infants (1yr-4yrs)	1	0
Child (5yrs-12yrs)	0	0
Adolescent (12yrs - 17 yrs)	1	3

Table 4: The age range of paediatric patients and the no. of reports submitted for each age range

SAEs and Paediatric patients

- **Incorrect component transfused (ICT)** most common report
  4 reports received 2019
  4 reports received 2020

- 57% of ICT reports received in 2020 - paediatric patients;

- Common themes include **units over 5 days being used** for neonates

- **Paedipack splits wasted** and patient exposed to second donor

SAE reports and Anti D

- (n =21) - 2019
- (n=13) – 2020

Type of error	No of reports 2019 (n=21)	No. of reports 2020 (n=13)
Delay in giving product >72 hours	11	6
Failure to administer products	5	4
Other	5	3

Table 5: Type of Anti D error and number of reports in 2019 and 2020

Anti D why the delay?

- **2019 n=11**

- 6 of these reports were due to **failures in coordination and communication**
- 3 – knowledge
- 2 - busy wards
- Good communication between hospital blood banks and wards is key.
- All staff need to be aware of when to administer Anti D

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Key Recommendations from 2019 and 2020

Remember to check!!!!!!

- ✓ Hb – correct result??, check between units
- ✓ Sample details – are they correct?
- ✓ If paediatric patient - Age of units, and save splits
- ✓ PSE event?? – Don't delay if Anti D required

Wrong Blood in Tube (WBIT)

Reports accepted 2019 – (n = 46)

Reports accepted 2020 - (n = 71)

	No. of reports 2019 (n = 46)	No. of reports 2020 (n =71)
Sample taken from intended patient but labelled with another patient's details	36	61
Sample taken from wrong patient but labelled with intended patient's details	10	10

Table 6: Classification and number of WBIT reports accepted by the NHO in 2019 and 2020

WBIT the potential never event

19% of WBITs in 2019 and 2020 could have led to an ABO-incompatibility if the error was not detected

What happened in 2019 and 2020?

Patient Identification errors reported to NHO	2019 (n = 47)	2020 (n=77)
Detail on sample not transcribed from ID band	4	4
Patient not correctly ID at phlebotomy	19	21
Patient not correctly ID at admission	4	4
Sample not labelled by person taking sample	4	15
Sample remotely labelled	9	21
Other	6	10
Unknown		2
Pre-labelling	1	

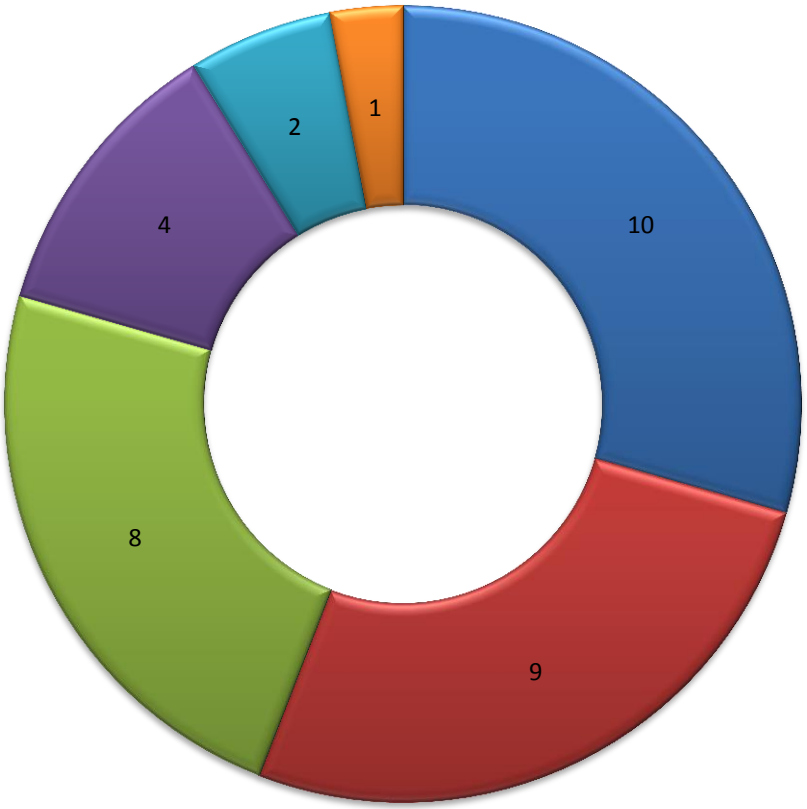
Table 6: the number and type of patient ID errors reported in 2019 and 2020

WBIT and electronic identification systems (EIS) 2020

- EIS in use in 24 out of 30 sites that reported WBIT events to the NHO in 2020.
- 92.2% of reported events were from sites which stated that an electronic system was in use at the time of the WBIT event.
- 26% of reported events an electronic ID system was not used during the sampling procedure.
- Of the remaining WBIT reported 34 used EBTS, 15 used MNCMS and it was unknown if an electronic sampling system was used in two incidences.

WBIT and EBTS

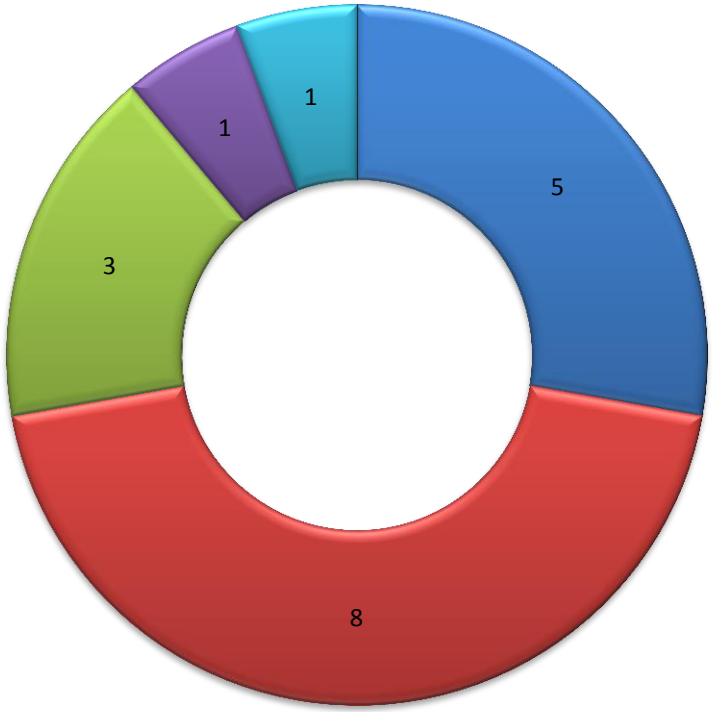
Errors involving EBTS in 2020 (n=34)



- Sample remotely labelled n= 10
- Patient not identified correctly at phlebotomy n= 9
- Person taken sample was not person labelling n= 8
- Other n= 4
- Details on sample not transcribed from ID band n= 2
- Patient not identified correctly on admission n= 1

WBIT and MNCMS

Errors involving MNCMS in 2020 (n = 18)



- Patient not identified correctly at phlebotomy n= 5
- Sample remotely labelled n=8
- Other n=3
- Person taking sample was not person labeling n=1
- Details on sample not transcribed from ID band n=1

WBIT themes when using EIS 2020

- Issues with MNCNS printers

- Staff scanning ID bands from charts not wristband

- Environmental factors – understaffing, 'busy'/'chaotic' environments

- 58% of WBIT events that occurred when using EBTS outside 9am – 5pm

What can we do?

- Address environmental factors?
- Stop scanning bands from charts??
- Address issues with printers?
- Get phlebotomists to take samples?

WBIT Survey 2021

- Have you experienced any problems with the electronic identification system that you use?

  Yes = 43%; No = 57%

- Is it standard procedure to affix extra ID band to a patient's chart in your hospital?

  Yes = 23%; No = 77%

- Do phlebotomists take blood transfusion samples in your hospital?

  Yes = 74%; No = 26%

WBIT Survey 2021

- Do phlebotomists take blood transfusion samples outside of hours?

  Yes = 13%; No = 87%

- Has the recent Covid 19 pandemic had an impact on the way that transfusion samples are taken?

  Yes = 30%, No = 70%

- Has the recent malware attack impacted sample taking?

  Yes = 44%, No = 56%

Key Recommendations from current WBIT data

Things to consider:

- Removing wristbands from charts
- Employing phlebotomists for out of hours sampling
- Address issues with printers

Near Miss Reports 2019 - 2020

2019 – (n = 43)	2020 – (n=35)

Where in the process did the error occur?

Deviation	No of reports in 2019 (n=43)	No. of reports in 2020 (n=35)
Compatibility testing	3	6
Component selection	5	3
Issue	5	12
Other	25	9
Storage	5	5

Table 7: Where in the process errors occurred 2019 and 2020

Why did the error occur?

Human error (2019) – n=78
(2020) - n=34

System error (2020) – n=6
(2019) – n=6

Types of human error	No. of reports 2019	No. of reports 2020
Verification	20	20
Insufficient attention to detail	21	20
Failure to adhere to policies and procedures	3	3
Coordination and communication	3	3
Knowledge	1	1
Slip	4	1

Near Miss Case

- **Background:** Group and screen (G+S) on antenatal patient.
- Antibody screen - weakly positive (0.5+) in cell 1 and 2. Medical Scientist (MS) ran an exclusion cell panel - negative.
- MS entered comment - patient had Anti-D not noting that patient was Rhesus positive.
- Previous tx hx checked on next sequential lab number who was Rhesus Neg, Screen neg and had previously received Rhesus Immunoglobulin.
- **Discovery:** This came to light when a (G+S) was received on patient. The antibody screen was now 3+ in cell 1 and 2+ in cell 2. Antibody panels run on the patient.
- **Investigation** showed patient had Anti C + Jkb. This was an incorrect recording of results.

Key Recommendations from Near Miss data 2019-2020

- Remember to check!!!

- Pay attention to detail

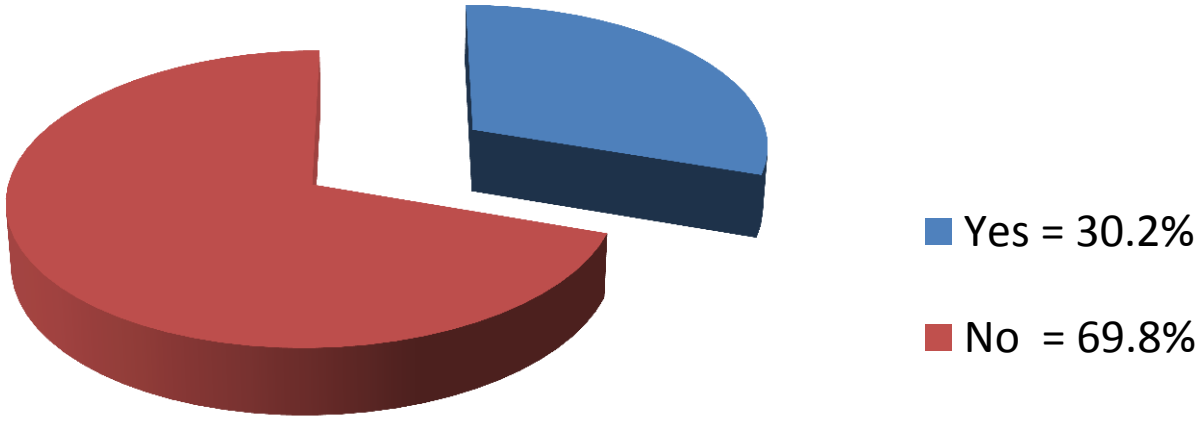
- Need to be extra careful when issuing blood

Covid 19 and errors in transfusion

- 0 SAE reports related to Covid 19.
- 0 Near Miss reports related to Covid 19.
- 7 WBIT reports related to Covid 19.
  - ❖4 related to **infection control measures**
  - ❖2 patient ID – **Patient unconscious**
  - ❖1- staff member anxious about Covid left ward post sampling

Covid 19 and errors in transfusion

- **Has the recent Covid 19 pandemic had an impact on the way that transfusion samples are taken? n = 43**



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WBIT Survey 2021 and Covid 19

'EBTS is not used where patients are thought to be suspected cases'

'Blood Track system was not being used for Covid patients or suspected Covid patients'

'In cases of suspected/confirmed COVID cases, we recommend that the samples be labeled manually.'

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Key Recommendations from 2019 and 2020

- We need to address the human factor principle
- We need more detail in our descriptions
- We need to learn from excellent practices
- We need to ensure our systems are robust and we are resilient

‘To make no mistakes is not in the power of man; but from their errors and mistakes the wise and good learn wisdom for the future.’

Plutarch

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