2 Participation in United Kingdom (UK) Haemovigilance

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Key SHOT messages

- Complete and accurate reporting to SHOT and the MHRA is essential to ensure good quality haemovigilance
- Approximately 7% of reports were submitted under an incorrect category and required re-submission under a different category, which indicates that further guidance and clarification are needed
- Reporters are encouraged to review their participation benchmarking data on an annual basis, to ensure all appropriate reporting is captured

Abbreviations used in this chapter

ADU	Avoidable, delayed and under/overtransfusion	**MHRA**	Medicines and Healthcare products Regulatory Agency
ANTID	Anti-D immunoglobulin errors	**NHS**	National Health Service
BSQR	Blood Safety and Quality Regulations	**NM**	Near miss
CCP	COVID-19 convalescent plasma	**RBRP**	Right blood right patient
FFP	Fresh frozen plasma	**SABRE**	Serious adverse blood reactions and events
IBCT-SRNM	Incorrect blood component transfused-specific requirements not met	**SD**	Solvent detergent-treated
MB	Methylene-blue treated	**UK**	United Kingdom

Introduction

In the calendar year 2020, a total of 4063 reports were received by SHOT. It is encouraging to see that haemovigilance reporting has continued throughout a very difficult year. Reporting numbers only dipped slightly, with 185 fewer reports received compared to 2019 (n=4248), 4.4% less.

Whilst there was a small drop in submitted cases during the most pressured months of the pandemic, there has not been a dramatic reduction in reporting during this time which is a testament to our dedicated reporters. December 2020 saw a large increase in submitted reports, and this is likely due to a backlog of reports being submitted before the end of the reporting year.

The date a report is submitted is not always within the same month that the event occurred, Figure 2.1 compares the number of reports submitted in each month, with the number of reports that actually occurred in that month. This shows that there were fewer incidents that took place during April 2020 which was at the height of the first wave of the pandemic. This is plotted against the number of components issued during each month, which also dipped dramatically during April 2020. The number of incidents by date of event appears to follow the pattern of issue data in general.

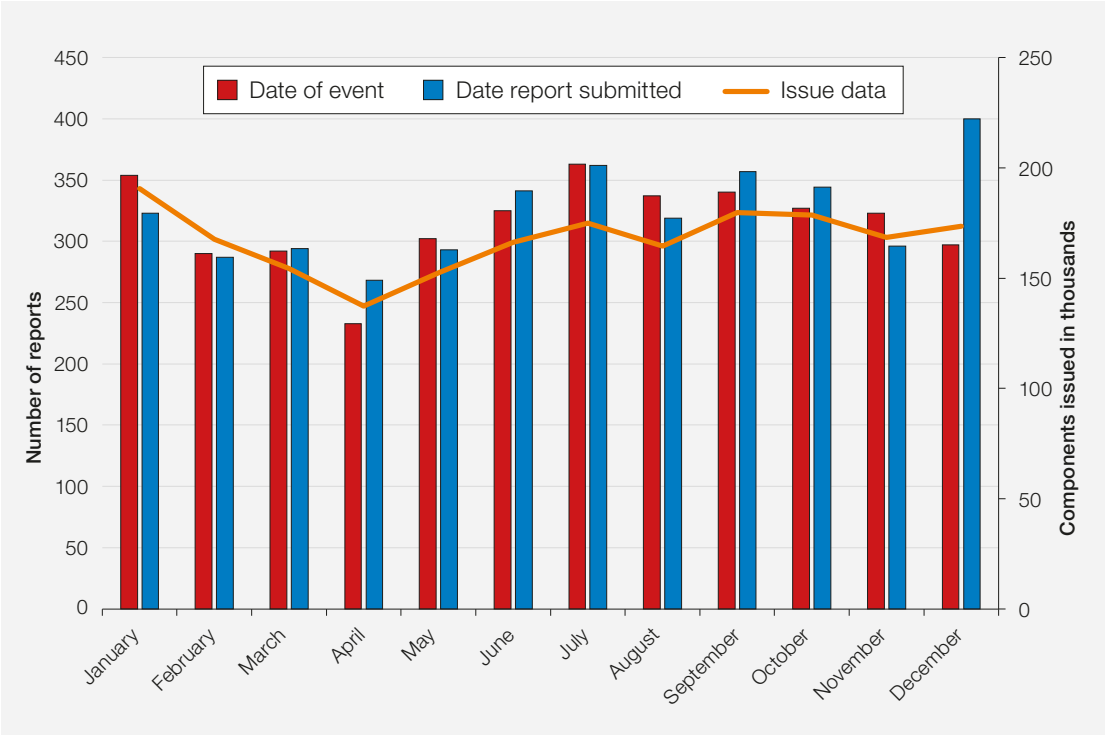


Figure 2.1: SHOT reporting by month during 2020

Not all reports submitted are SHOT-reportable or are included in the analysis for this Annual SHOT Report. Figure 2.2 details the fate of all submitted reports during 2020. Of the 735 withdrawn reports, 110 were submitted from the four Blood Services, which are MHRA-reportable only. Any patient impact that resulted from an error in the Blood Service would be reported to SHOT by the hospital concerned. The remaining withdrawn cases are those that were either reported in error or were determined to be not SHOT-reportable. Some of these would still have been included by the MHRA as they would be reportable under the BSQR. The 395 incomplete reports are those that were awaiting completion by the reporters at the time the 2020 data were downloaded. Reasons for non-completion could be that they are awaiting the outcome of investigations or were reported later in the year. Once complete, these reports will be reviewed for inclusion in the 2021 Annual SHOT Report. Reports relating to anti-D immunisation are counted separately, as they form part of a separate study, and are not within the usual SHOT reporting categories.

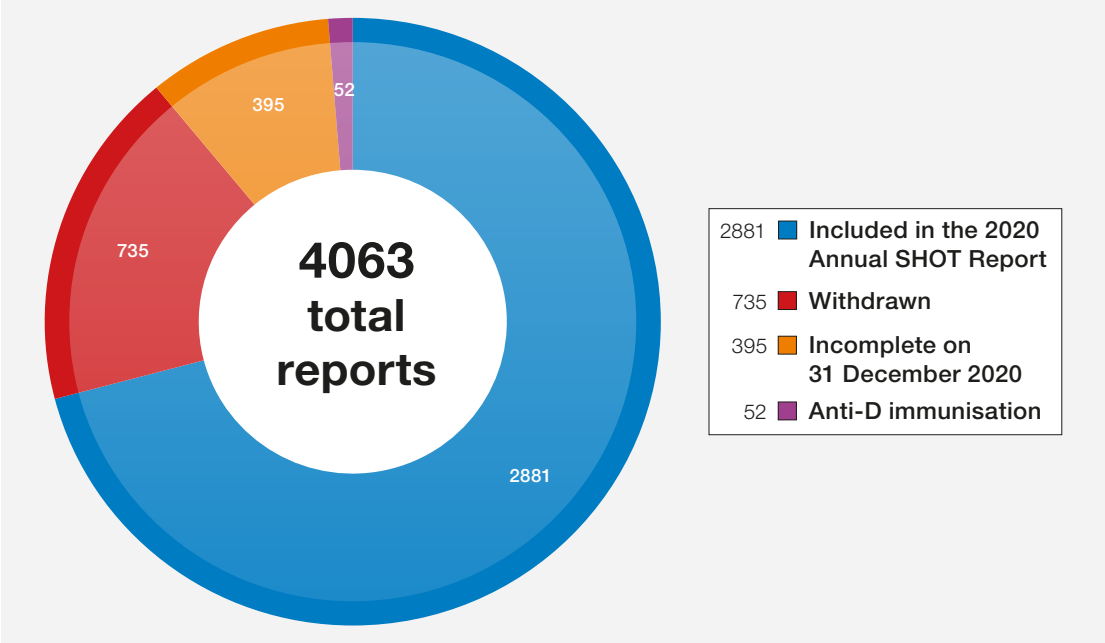


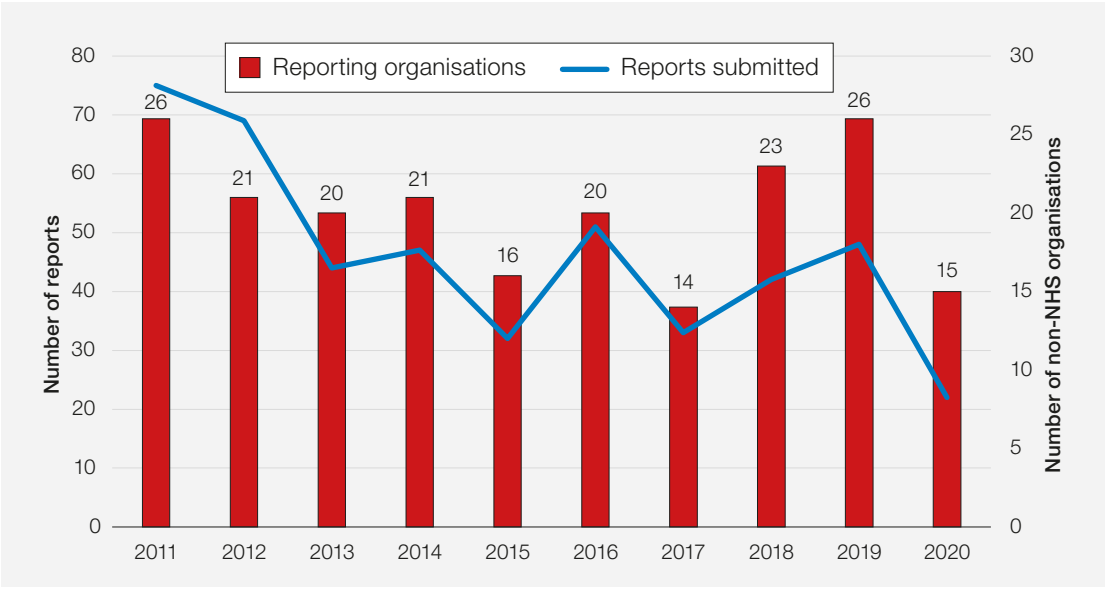
Figure 2.2: Status of reports submitted to SHOT in the calendar year 2020

Reporting organisations in 2020

All but two UK NHS Trusts/Health Boards submitted reports during 2020. Both these were specialist centres and possibly low users of blood components.

There were 15 non-NHS organisations that submitted reports in 2020, down from 26 that submitted reports during 2019. Analysis of the last 10 years of non-NHS reporting shows a downward trend since 2011 (75 reports), with 2020 seeing the lowest number of reports (22). This reduction could be due to the impact of the pandemic on private healthcare practices.

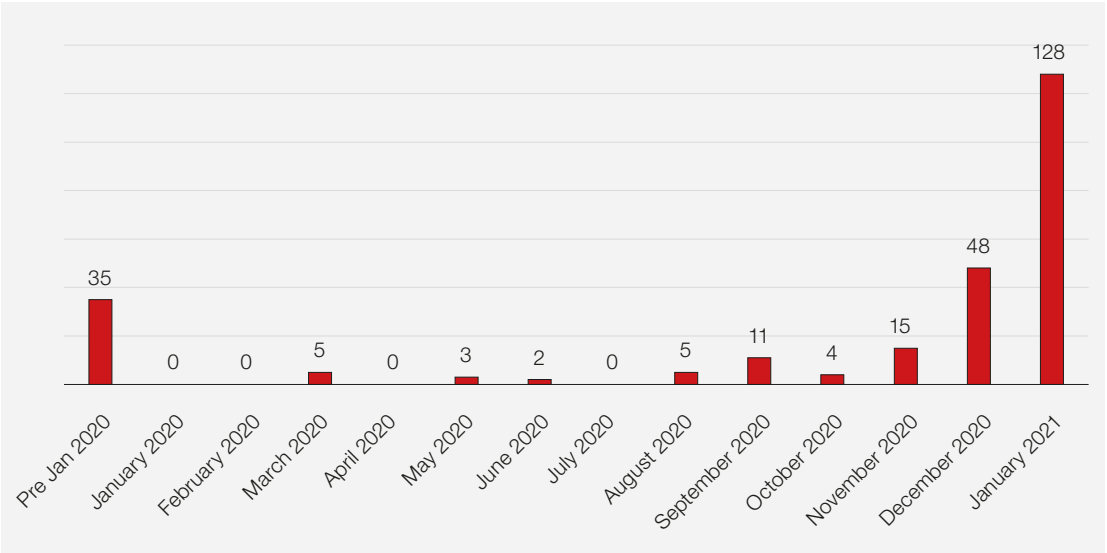
Figure 2.3: Ten years of reporting by non-NHS organisations 2011-2020



Analysis from SABRE

Figure 2.4 demonstrates excellent participation in the SHOT/SABRE haemovigilance schemes with most reporters reporting at least once within the previous few months. There are a small number of reporters who report less frequently. Most of those who have not reported at least once in the past 12 months are facilities without a transfusion laboratory or small NHS or private laboratories.

Figure 2.4: The last time a report was received on SABRE from an active SABRE account



SABRE participation data reflects accounts rather than Trusts/Health Boards whilst for SHOT, the individual accounts are amalgamated into the appropriate Trusts/Health Boards.

Blood component issue data 2020

Table 2.1 lists the total number of blood components issued from the UK Blood Services in 2020 and excludes CCP.

	Red cells	Platelets	FFP	SD-FFP	MB-FFP	Cryo	Totals
NHS Blood and Transplant	1,286,287	230,792	145,101	61,069	5,705	36,414	**1,765,368**
Northern Ireland Blood Transfusion Service	36,821	7,280	2,822	630	390	794	**48,737**
Scottish National Blood Transfusion Service	126,093	21,653	13,196	3,040	374	2,651	**167,007**
Welsh Blood Service	74,494	9,046	6,758	2,730	-	377	**93,405**
Totals	**1,523,695**	**268,771**	**167,877**	**67,469**	**6,469**	**40,236**	**2,074,517**

FFP=fresh frozen plasma; SD=solvent detergent-sterilised; MB=methylene blue-treated; Cryo=cryoprecipitate

SD-FFP data supplied by Octapharma

Paediatric/neonatal MB-FFP are expressed as single units; cryoprecipitate numbers are expressed as pools and single donations as issued; all other components are adult equivalent doses

Table 2.1: Total issues of blood components from the Blood Services of the UK in the calendar year 2020 (excluding CCP)

SHOT reporting by UK country

Figure 2.5 shows the total number of components issued and the number of reports analysed and included in the 2020 Annual SHOT Report per 10,000 components issued across all four UK countries.

The distribution of the number of submitted reports is proportionate to the number of components issued. This year the number of submitted reports that have been analysed and included in this SHOT Report are shown, this number excludes data relating to COVID-19 convalescent plasma (CCP).

The full table containing the breakdown of data from 2020 and previous years can be found in the supplementary information on the SHOT website (https://www.shotuk.org/shot-reports/report-summaryand-supplement-2020/).

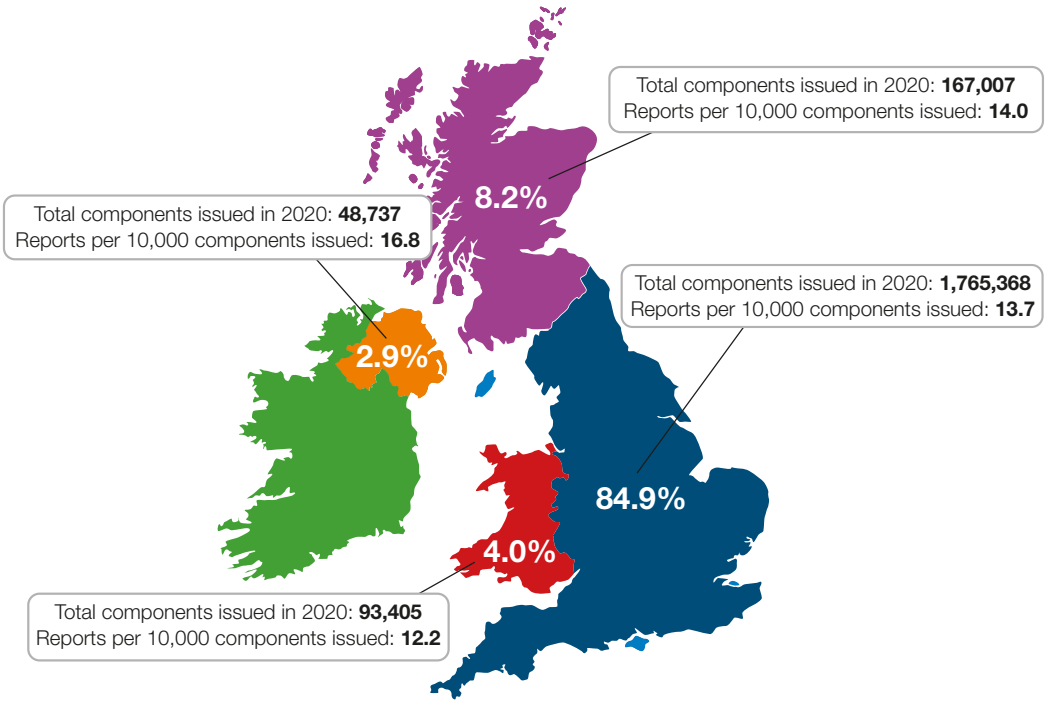


Figure 2.5: Percentage of SHOT reports analysed by UK country (excluding CCP)

Cases included in the 2020 Annual SHOT Report n=3214

The total number of reports analysed and included in the 2020 Annual SHOT Report is 3214. This is a

decrease of 183 from the 3397 reports analysed in the 2019 Annual SHOT Report (Narayan et al. 2020). This includes 29 cases relating to CCP.

In addition to these 3214 reports, there were 61 reports of immunisation against the D-antigen (9 of these were submitted in 2019 but finalised in 2020). These are counted separately as part of a specific stand-alone study.

The total number of 3214 is made up of the 2881 completed reports submitted in 2020 (Figure 2.2) plus 333 reports that were submitted in earlier years, but not finalised until 2020.

The number of reports with potential for patient harm (excluding 'near miss' and 'right blood right patient') is 1877, a slight increase from 2019 (n=1867).

Categorisation of incidents

Every year many cases are moved from the initial category to a more appropriate one by the SHOT Incident Specialists. In 2020, there were 269 transfers between categories in total, which is approximately 7% of all cases submitted to SHOT annually. This is shown in table 2.2 below.

Table 2.2: Number of reports transferred between SHOT reporting categories in 2020

		Transferred to category												
		ADU	ANTID	FAHR	HSE	HTR	NM	RBRP	IBCT-SRNM	TACO	TAD	UCT	IBCT-WCT	Total
Original Category	ADU		3	-	14	1	7	1	-	1	-	-	3	**30**
	ANTID	-		-	-	-	4	-	-	-	-	-	-	**4**
	FAHR	-	-		3	4	-	-	-	2	3	3	-	**15**
	HSE	6	1	-		-	4	8	8	-	-	-	-	**27**
	HTR	-	-	2	-		-	-	1	1	-	-	-	**4**
	NM	12	29	-	3	-		6	9	-	-	-	2	**61**
	PTP	-	-	1	-	-	-	-	-	-	-	-	-	**1**
	RBRP	8	1	-	16	-	10		21	-	-	-	5	**61**
	IBCT-SRNM	1	-	1	1	3	4	4		-	-	-	13	**27**
	TACO	1	-	2	-	-	1	-	-		12	1	-	**17**
	TRALI	-	-	2	-	-	-	-	-	2	5	-	-	**9**
	TTI	-	-	5	-	-	-	-	-	-	-	-	-	**5**
	UCT	-	-	-	-	-	-	-	-	1	-		-	**1**
	IBCT-WCT	1	-	-	1	-	-	1	3	-	-	1		**7**
	Total	**29**	**34**	**13**	**38**	**8**	**30**	**20**	**42**	**7**	**20**	**5**	**23**	**269**

ADU=avoidable, delayed or under/overtransfusion; ANTID=anti-D immunoglobulin; FAHR=febrile, allergic and hypotensive reactions; HSE=handling and storage errors; HTR=haemolytic transfusion reactions; NM=near miss ; RBRP=right blood right patient; IBCT-SRNM=incorrect blood component transfused-specific requirements not met; TACO=transfusion-associated circulatory overload; TAD=transfusion-associated dyspnoea; UCT=uncommon complications of transfusion; IBCT-WCT=IBCT-wrong component transfused

The numbers highlighted in pink are explained further in the paragraph below

The categories that saw the most transfers out to other categories were NM and RBRP (both 61/269, 22.7%), and ADU (30/269, 11.2%). The categories that received the most transfers were IBCT-SRNM (42/269, 15.6%), HSE (38/269, 14.1%) and ANTID (34/269, 12.6%).

The largest number of transfers between a single category was from NM to ANTID (29/269, 10.8%), and RBRP to IBCT-SRNM (21/269, 7.8%). There may be a need for more guidance for reporting in these categories.

Categorisation of incidents can be complex, and not every situation nicely fits a specific set of circumstances. For more help on categorising incidents, please see the latest SHOT reporting definitions document on the SHOT website (see the recommended resources at the end of this chapter), or alternatively contact the SHOT office for advice. We are always happy to help with the appropriate categorisation of an incident.

Analysis of errors by location

The number of incidents reported from the emergency department is the same as in 2019, however the proportion of total reports has increased slightly, so is still on an upward trend overall. The numbers of reports from theatres are higher for 2020, but overall percentage of total reports remains quite consistent with previous years. The number of reports from general wards, and adult critical care have also both increased during 2020, although for both these areas, the trend is downwards since this data has been analysed from 2010.

Unfortunately, there are no denominator data available with regard to the number of transfusions undertaken in each of these areas.

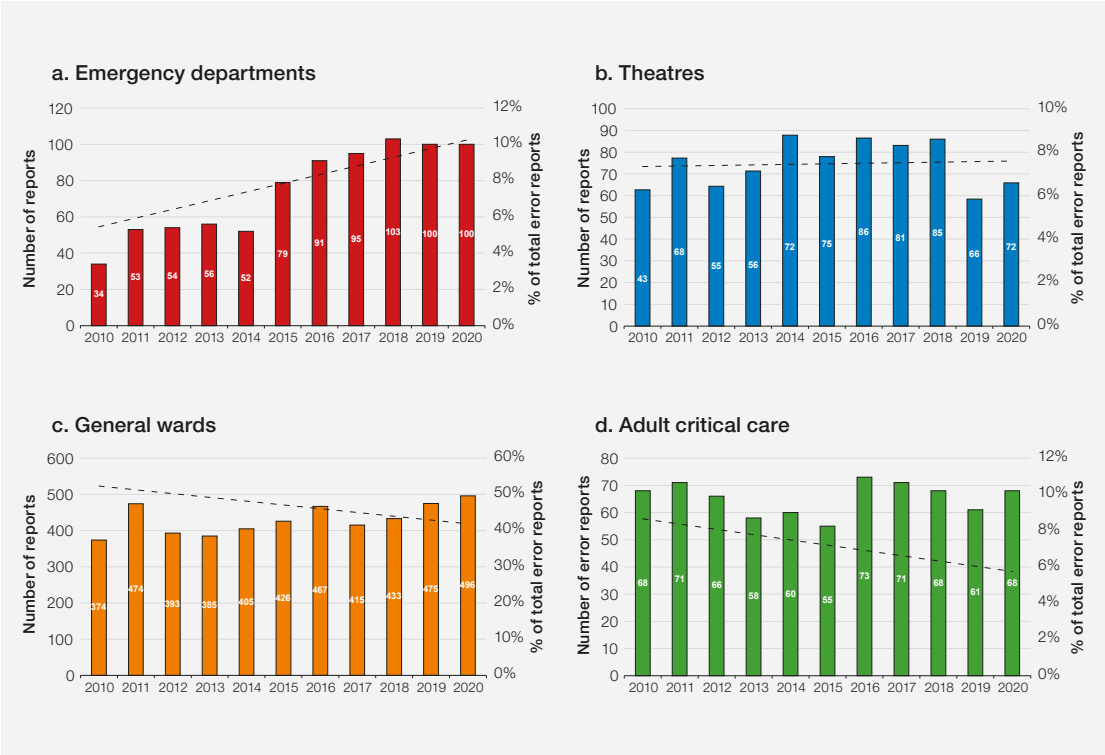


Figure 2.6: Trend of error reports from different departments

SHOT participation benchmarking data

SHOT participation data provides a useful benchmarking tool which is an integral part of continuous improvement in healthcare. Measuring, comparing to similar users, and identifying opportunities for tangible improvements will help improve patient safety. This supports local governance processes as well. Figure 2.7 illustrates how the SHOT participation data can be used to benchmark and drive local improvements in practices.

Data are collated and published annually in the autumn, and the 2020 participation data will be available on the SHOT website during October 2021.

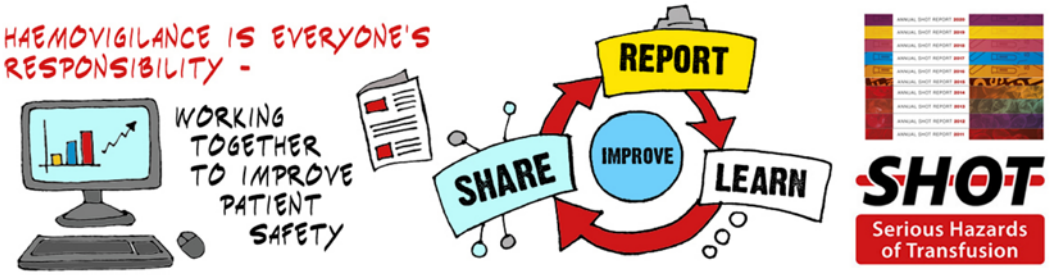
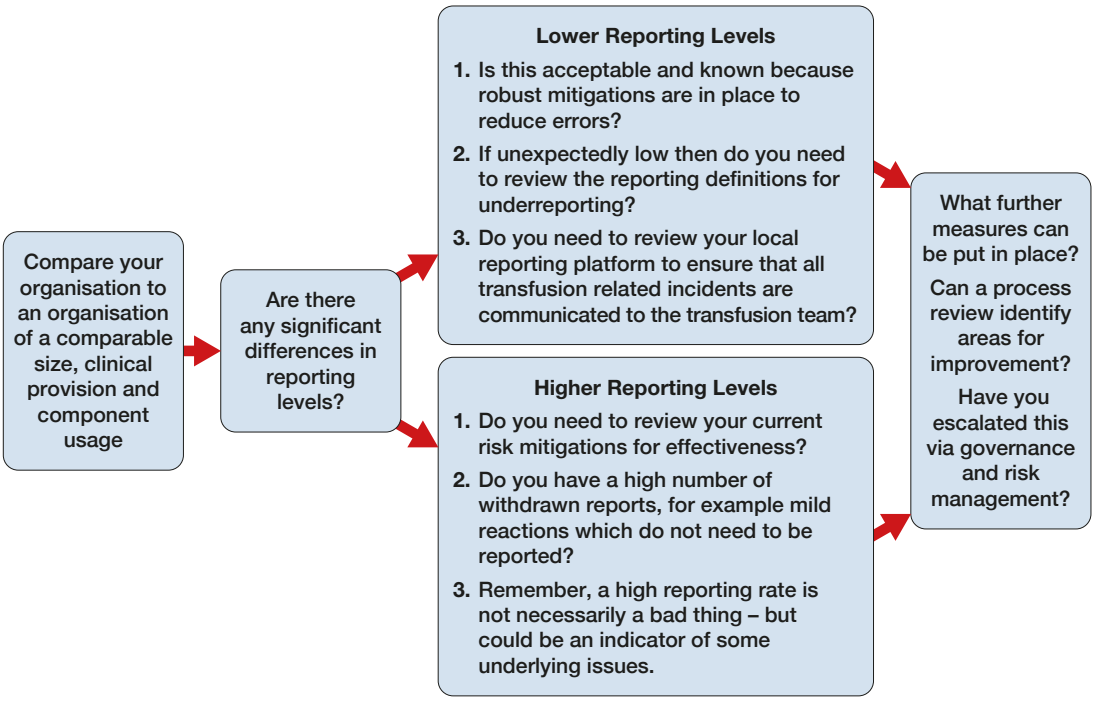


Figure 2.7: Using SHOT participation benchmarking data to drive improvements



All reporters and local governance teams should access and use this participation data to inform local improvements. These discussions should be included in local and regional transfusion meetings.

Conclusion

Participation in UK haemovigilance remains high and has continued throughout the year despite the challenging circumstances of the COVID-19 pandemic.

Reports were submitted from all but two NHS Trusts/Health Boards, however, reporting appears to be reducing over the years from non-NHS organisations.

Participation data, learning points and recommendations from the Annual SHOT Report should be used to improve transfusion safety in all healthcare organisations.

Recommended resources

Definitions of current SHOT reporting categories & what to report
https://www.shotuk.org/resources/current-resources/

SHOT Participation Benchmarking Data
https://www.shotuk.org/reporting/shot-participation-benchmarking/

References

Narayan S (Ed), Poles D, et al. on behalf of the Serious Hazards of Transfusion (SHOT) Steering Group. The 2019 Annual SHOT Report (2020). https://www.shotuk.org/shot-reports/ [accessed 31 March 2021].