



# 2022 HEMOVIGILANCE ANNUAL REPORT PREVIEW

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# Provisional Data\*

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\*as of March 27, 2023



# Provisional Data

- Of the 65 facilities reporting hemovigilance data in the National Healthcare Safety Network (NHSN) Biovigilance Module:
  - 9 facilities are missing at least one month of denominator data for 2022
    - Units and aliquots transfused, total discards
  - 11 facilities are missing at least one month of adverse reaction data for 2022
  - 39 facilities have yet to submit the 2022 Hospital Survey



# Data Preview\*

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\*All data current as of March 27, 2023



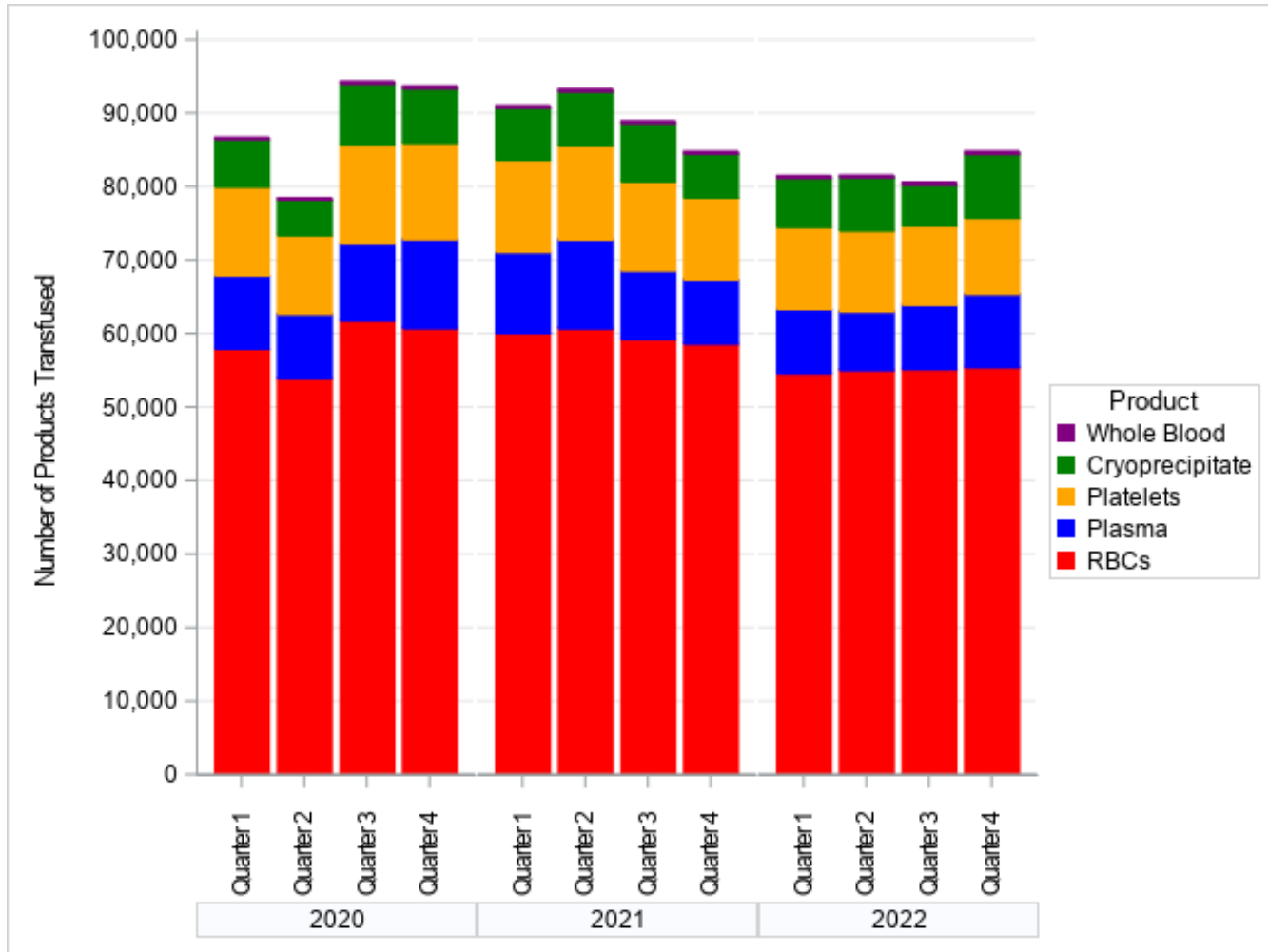
# 2022 Data Preview

- Data collected from 65 facilities
  - 14: BSG\* 1 (1-99 beds)
  - 36: BSG 2 (100-299 beds)
  - 15: BSG 3 ( $\geq 300$  Beds)
- 328,460 products transfused
  - Decrease from 358,043 in 2021
- 20,629 products discarded (6%)
  - Decrease from 21,435 in 2021 (5.6%)

\*Bed size group - categorization was assigned based on the corresponding year's annual facility survey

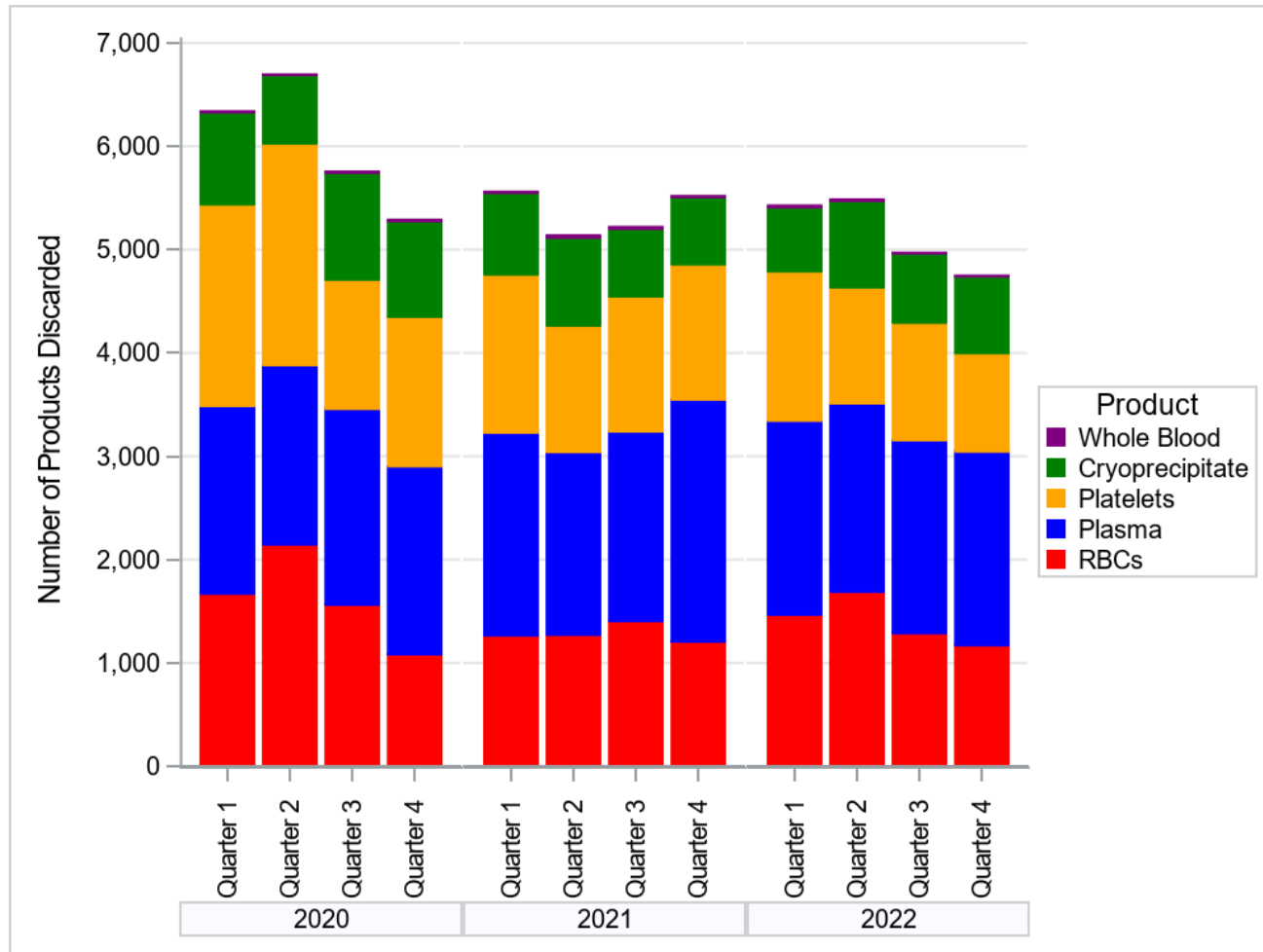


# Products Transfused from 2020-2022, by Quarter and Product Type





# Products Discarded from 2020-2022, by Quarter and Product Type





# Volume of Pathogen Reduced (PRT) Products Transfused from 2020-2022

Component Type	2020	2021	2022
<b>Total</b>	<b>3,558</b>	<b>11,313</b>	<b>20,897</b>
<b>Platelets</b>			
Psoralen Treated			
Apherisis Derived	3,409	11,084	19,803
Whole Blood Derived	149	66	677
Riboflavin Treated			
Apherisis Derived	0	9	25
<b>Plasma</b>			
Psoralen Treated			
Apherisis Derived	0	154	378
Whole Blood Derived	0	0	14





# Adverse Reaction (AR) Data

- 606 ARs reported
  - Severe allergic reactions increased
  - One severe infection was reported
  - *Staphylococcus epidermidis*
  - AR rate of 18.5 per 10,000 products transfused
    - Compared to 16.6 in 2021

Adverse Reaction Description	2020	2021	2022
AHTR	1	5	0
ALLERG	21	4	17
DHTR	9	12	5
DSTR	31	41	37
FNHTR	412	441	453
HTR	5	4	2
INF	2	0	1
TACO	37	55	68
TAD	28	29	22
TRALI	1	1	1
<b>Total</b>	<b>547</b>	<b>592</b>	<b>606</b>

- AR rate of **24.6** per 10,000 **PRT** platelets transfused
- AR rate of **32.3** per 10,000 **non-PRT** platelets transfused

Adverse Reaction Description	PRT Rxns
ALLERG	3
FNHTR	44
TACO	2
TAD	1
<b>Total</b>	<b>50</b>

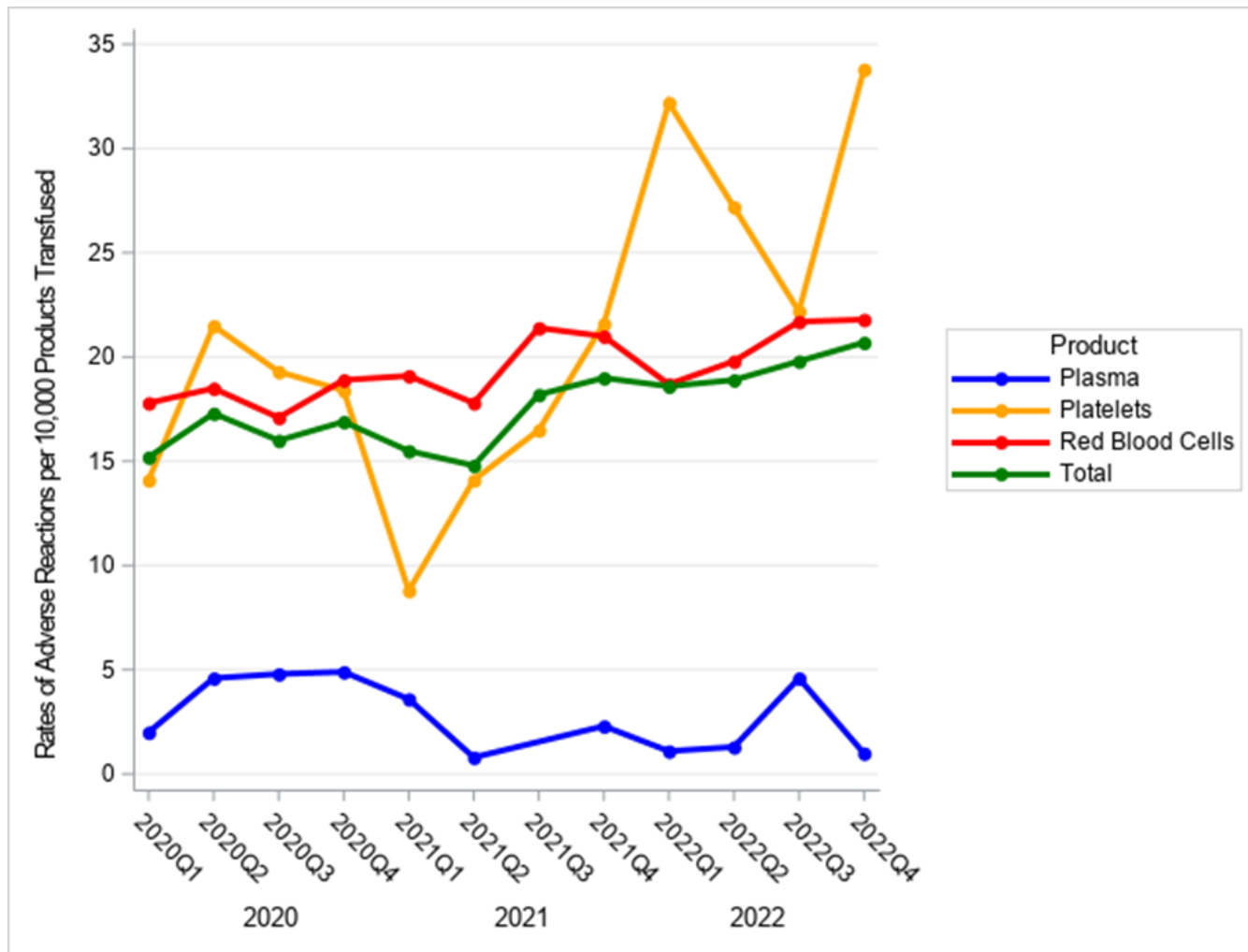


# Decrease in Severe Allergic (ALLERG) Reactions

- From 2020 to 2021 there was a statistically significant difference in the number of ALLERG reactions reported ( $p=0.003$ )
- Investigation
  - Overall #'s of ALLERGs reported (about 60 fewer in 2021)
  - ALLERGs marked as needs further review (NFR), Severe/Non-severe
  - Facilities that reported ALLERGs in 2020 vs 2021
  - Symptoms reported
  - Reasons for transfusion (ICD10 codes)
  - Components associated with reactions
  - Donor and recipient blood groups
  - No findings to explain decrease

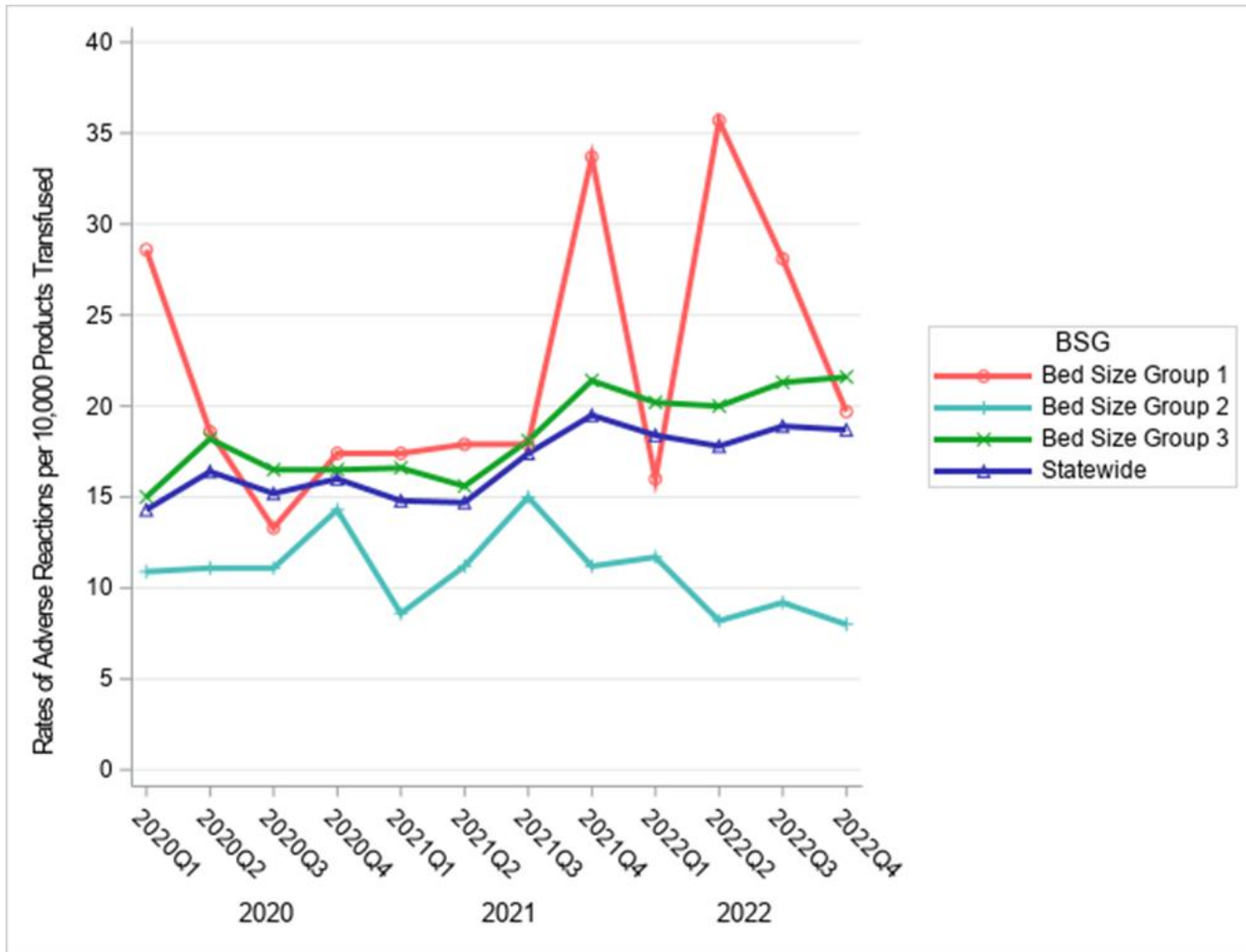


# Rates of Adverse Reactions by Quarter and Product Type, 2020-2022



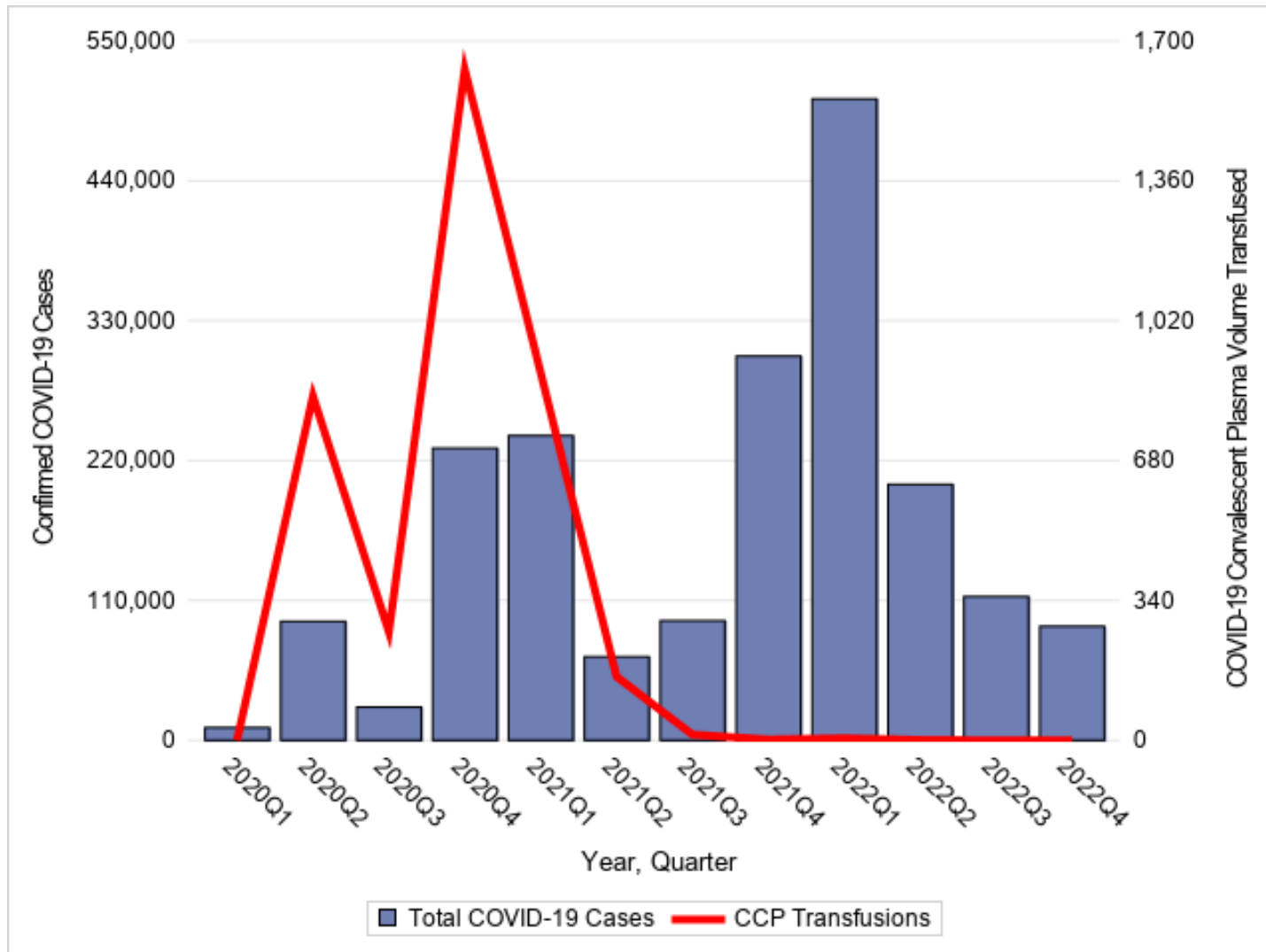


# Rates of Adverse Reactions by Quarter and Bed Size Group, 2020-2022





# COVID Convalescent Plasma Use vs. COVID-19 cases in MA by Quarter, 2020-2022





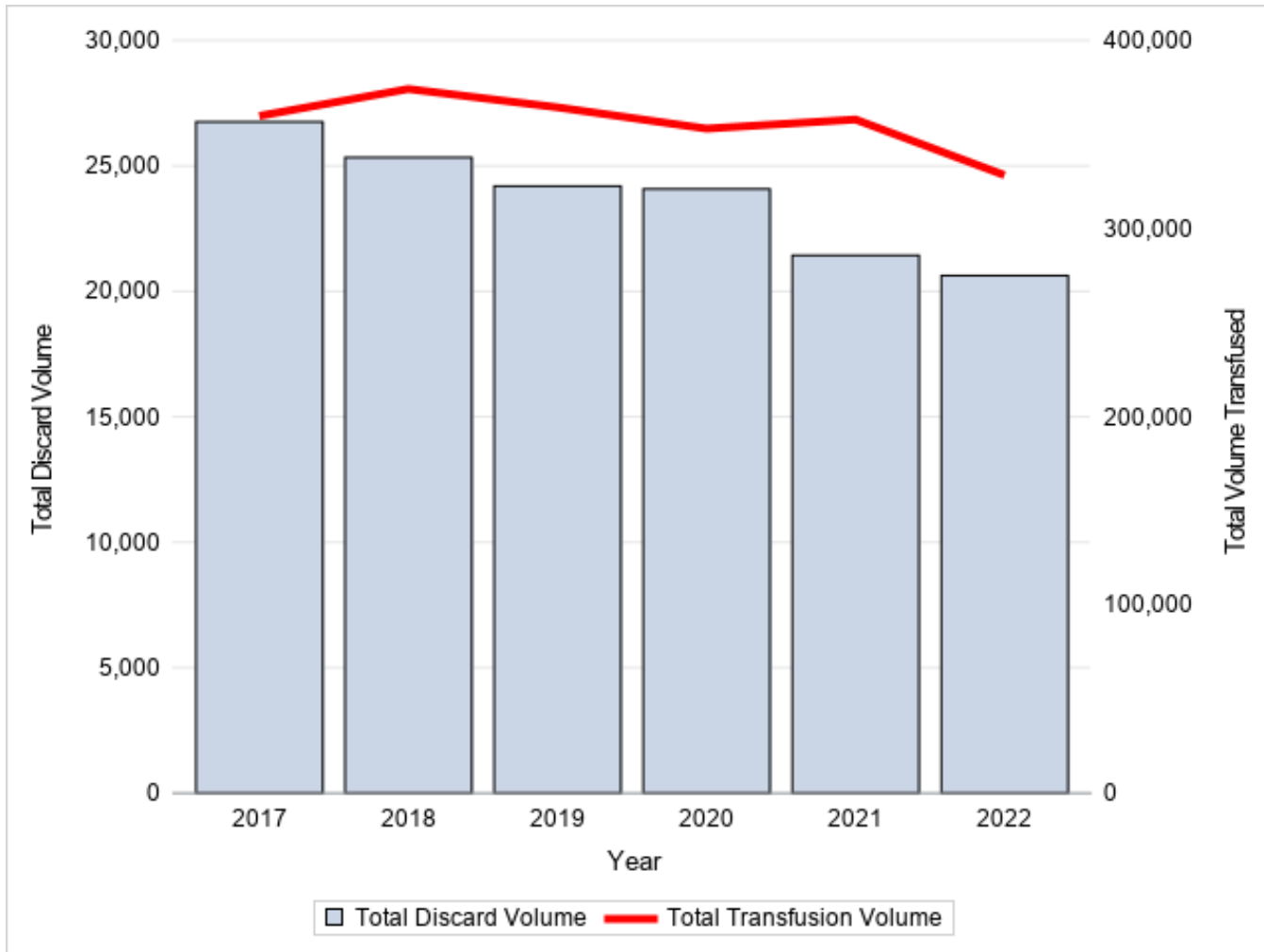
# Focused Analysis of Discards

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All data current as of March 27, 2023



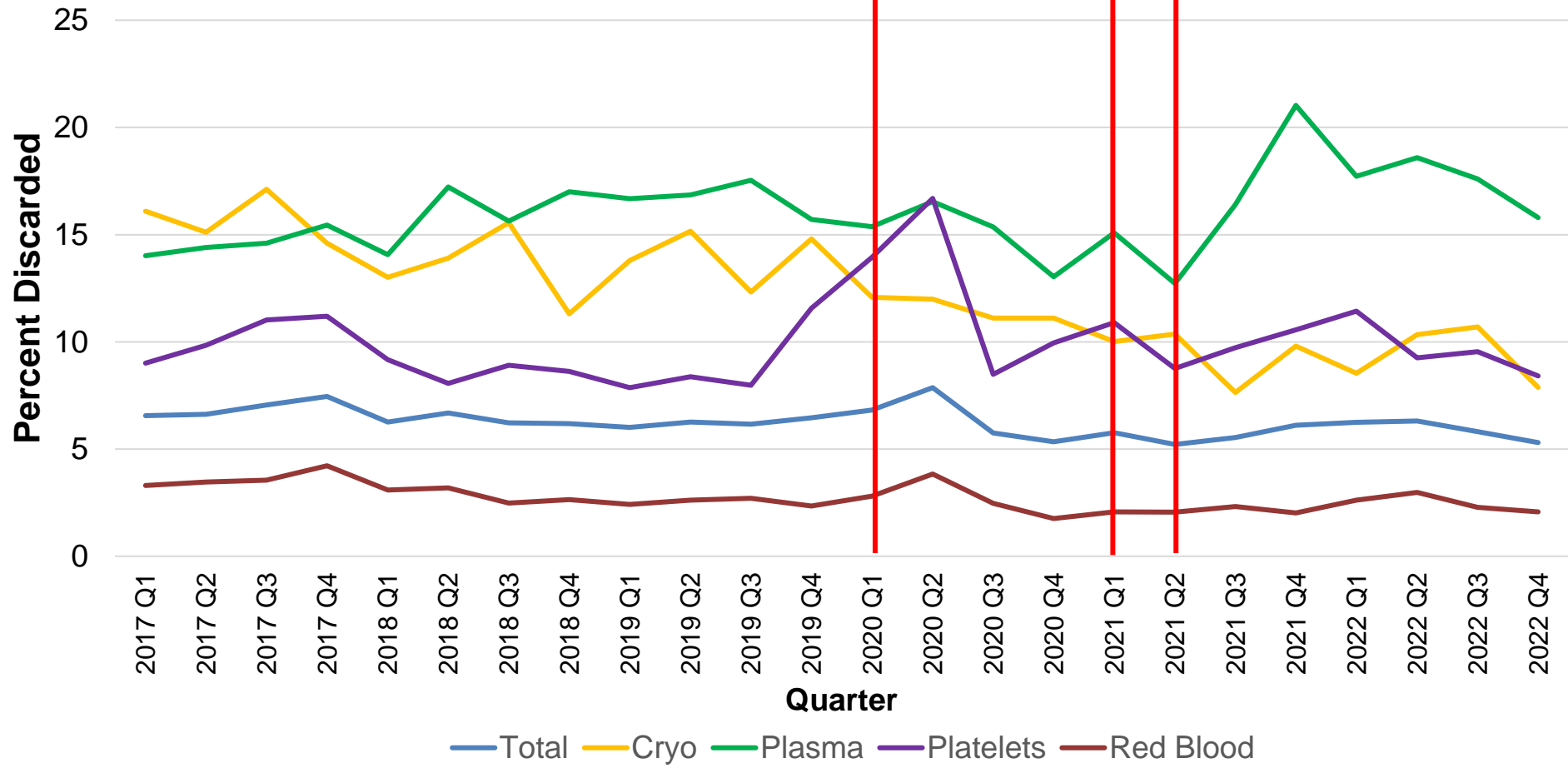
# Discard Volume vs. Transfusion Volume (2017-2022)





# Percent of Total Blood Products Discarded from 2017-2022

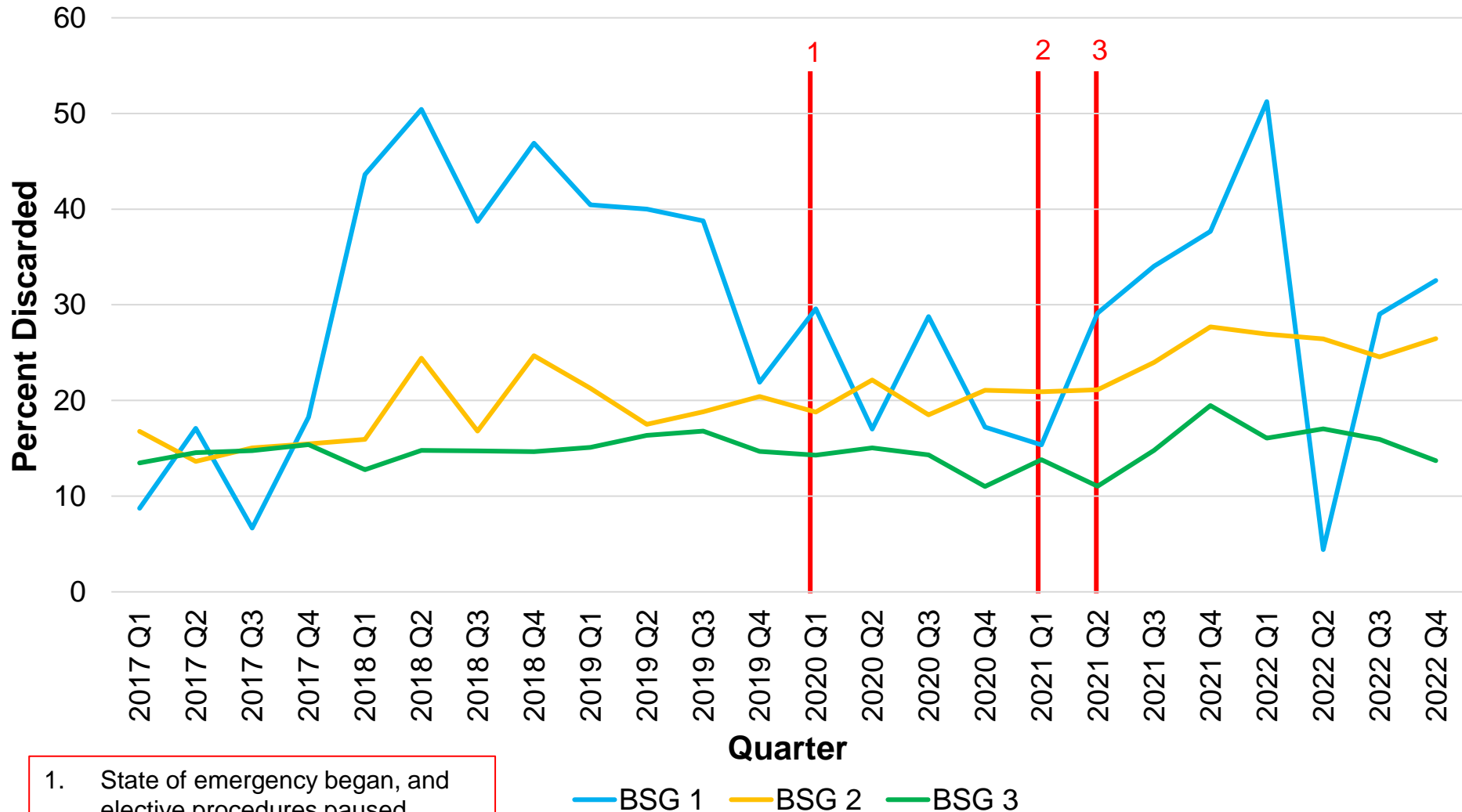
- 1. State of emergency began, and elective procedures paused
- 2. Elective procedure pause lifted
- 3. State of emergency lifted







# Percent of Plasma Discarded by Bed Size Group from 2017-2022

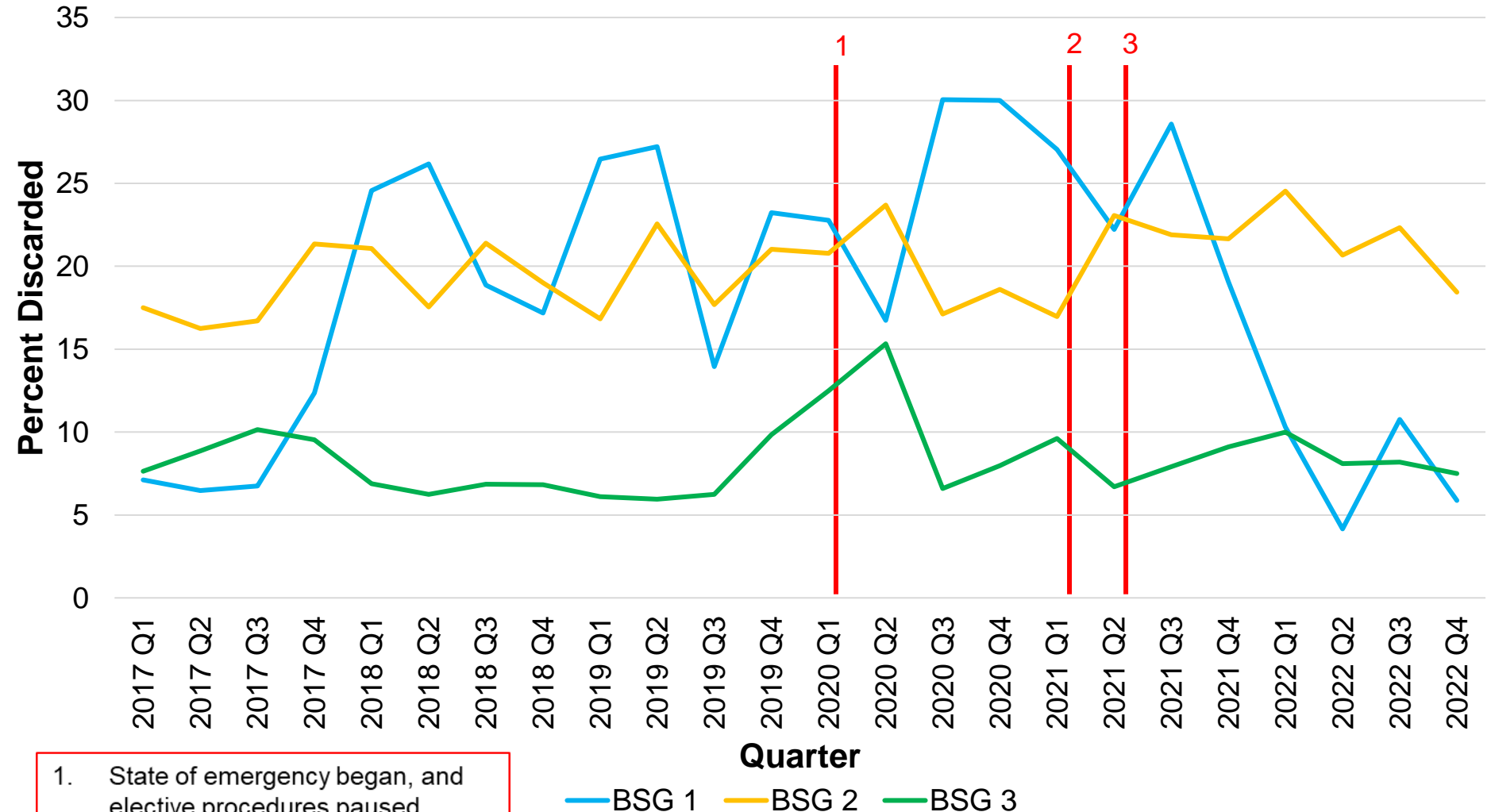


1. State of emergency began, and elective procedures paused
2. Elective procedure pause lifted
3. State of emergency lifted

— BSG 1 — BSG 2 — BSG 3



# Percent of Platelets Discarded by Bed Size Group from 2017-2022

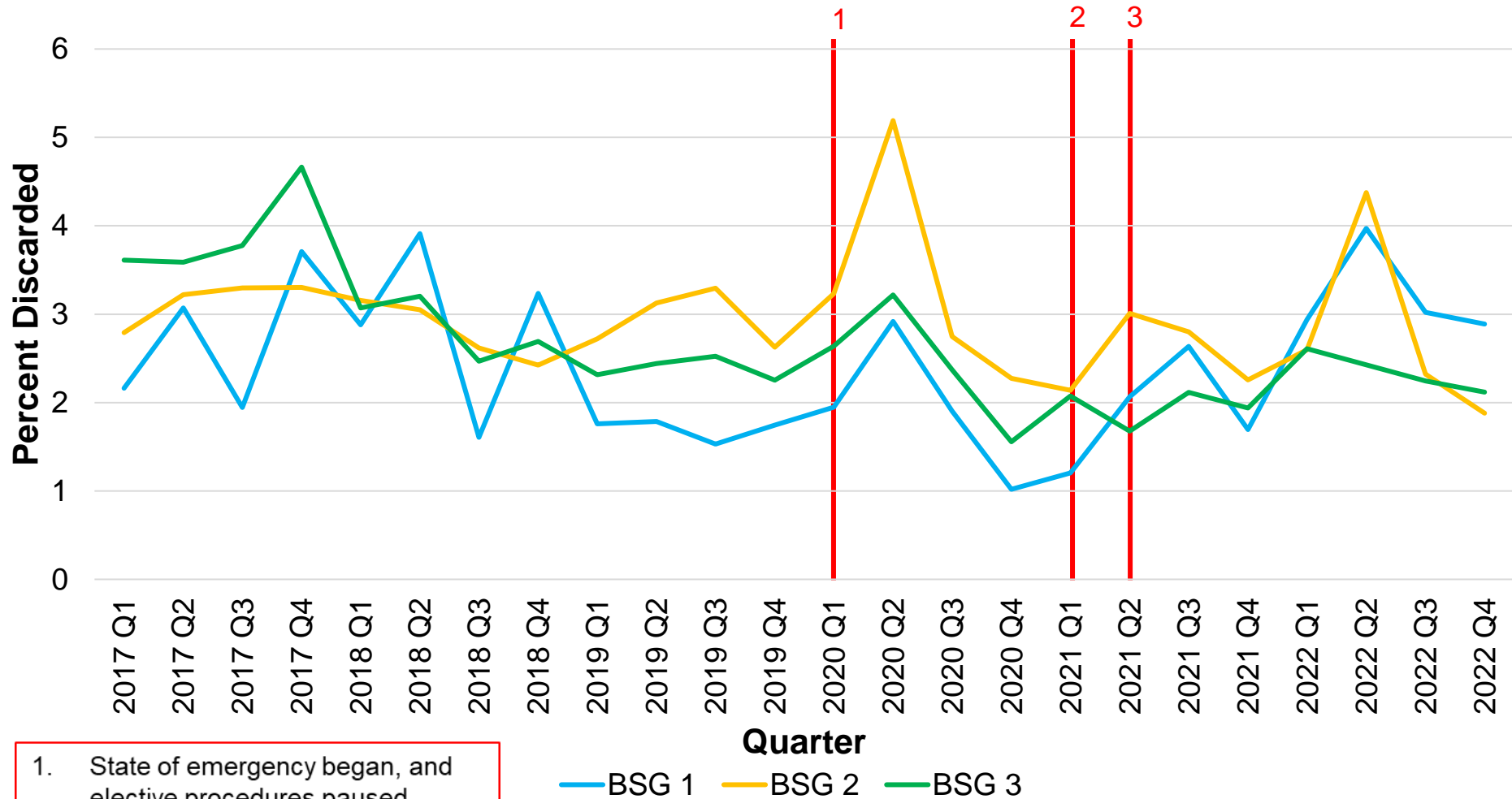


- 1. State of emergency began, and elective procedures paused
- 2. Elective procedure pause lifted
- 3. State of emergency lifted

BSG 1    BSG 2    BSG 3



# Percent of Red Blood Cells Discarded by Bed Size Group from 2017-2022



- 1. State of emergency began, and elective procedures paused
- 2. Elective procedure pause lifted
- 3. State of emergency lifted

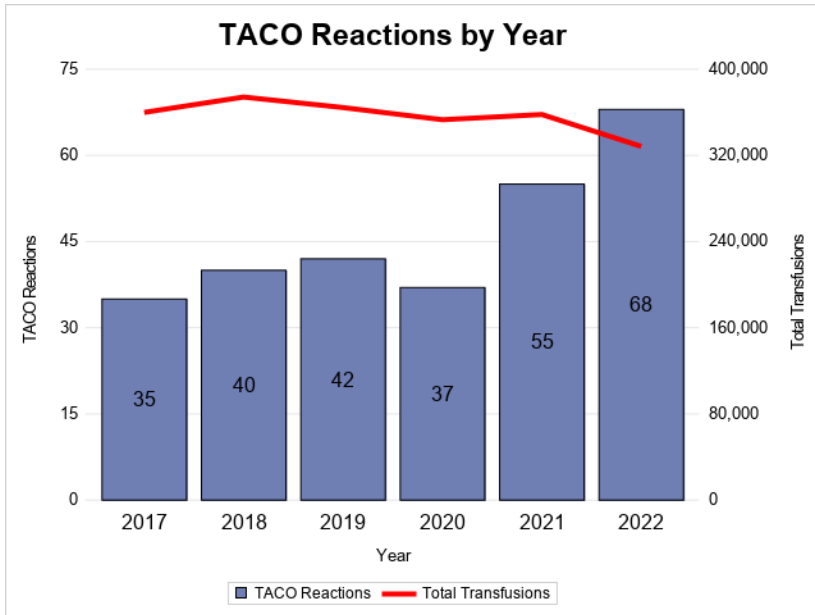


# TRANSFUSION-ASSOCIATED CIRCULATORY OVERLOAD (TACO) AND FEBRILE NON- HEMOLYTIC TRANSFUSION REACTION (FNHTR) UPDATES

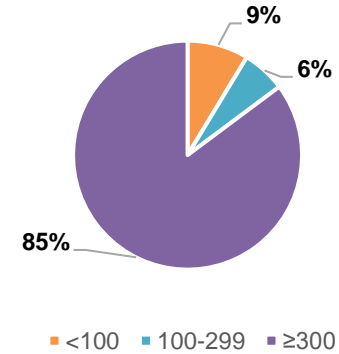
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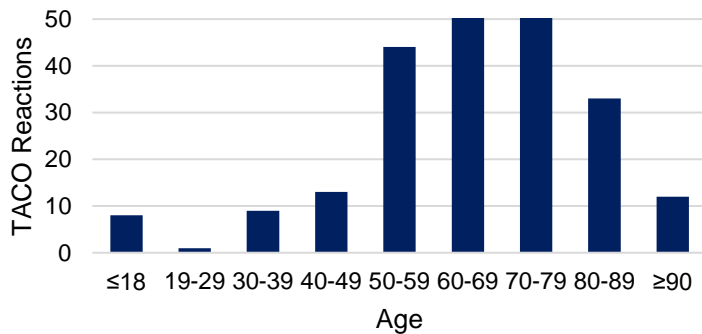
# TACO Reactions 2017-2022



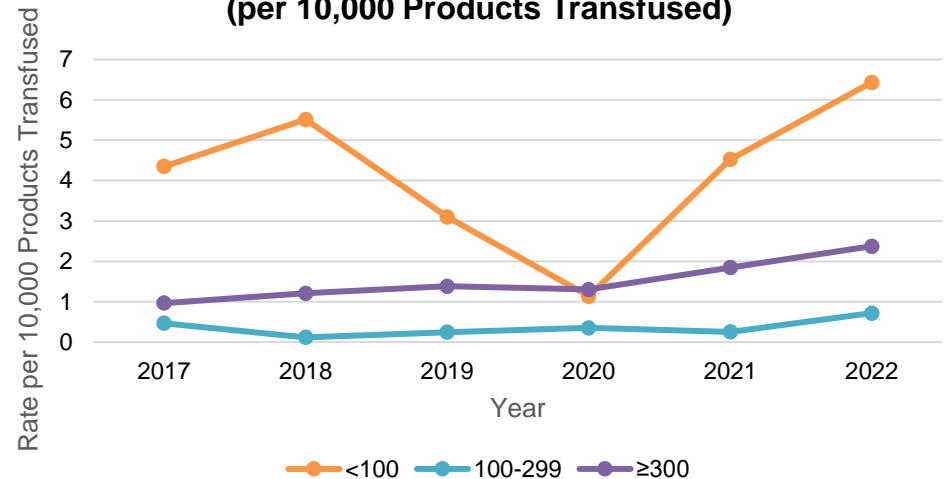
### TACO Reactions by Bed Size



### TACO Reactions by Age

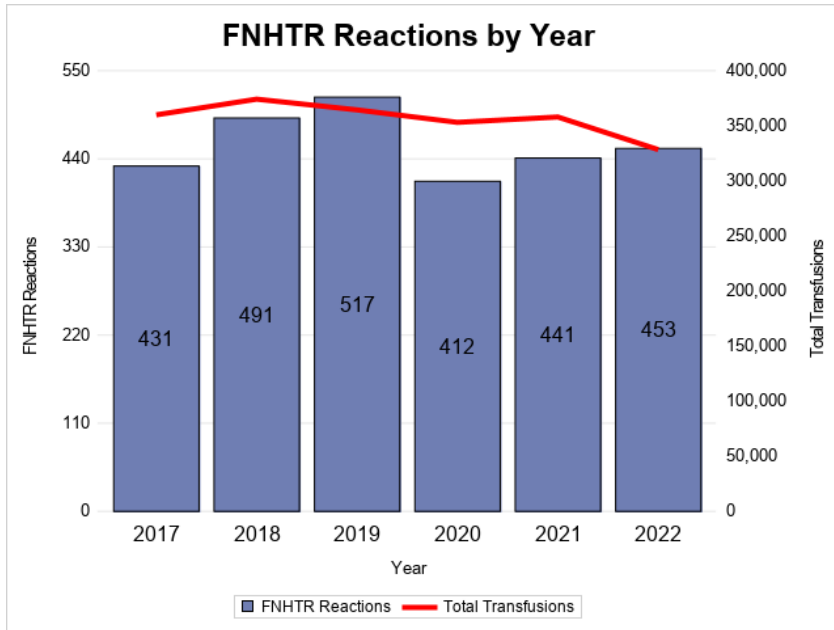


### TACO Adverse Reaction Rates by Bed Size (per 10,000 Products Transfused)

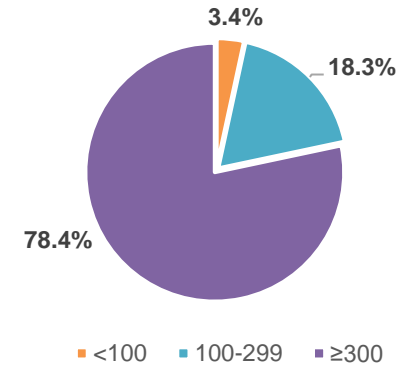




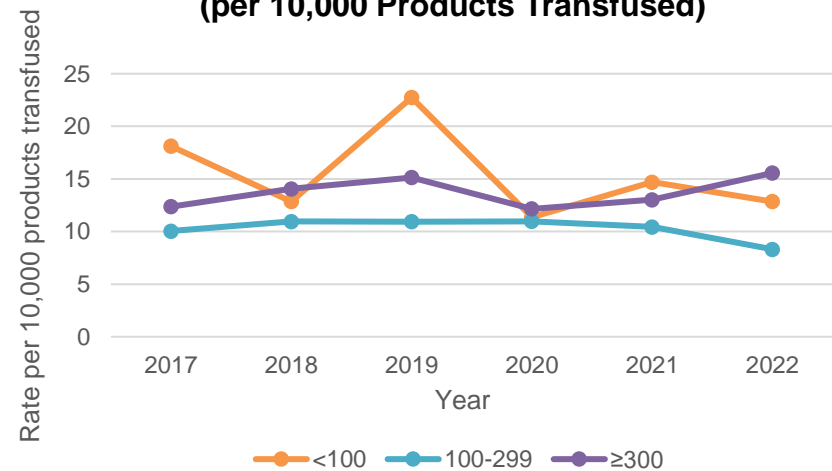
# FNHTR Reactions 2017-2022



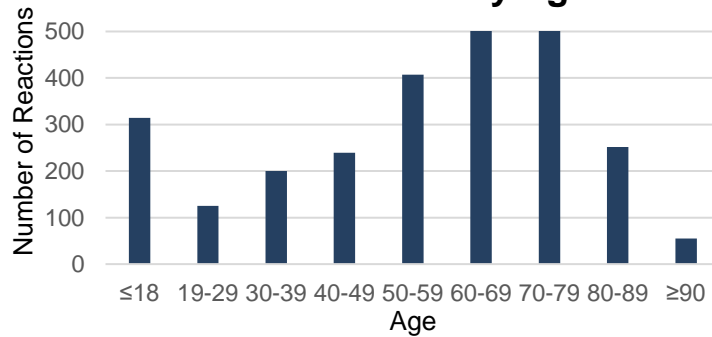
### FNHTR Reaction by Bed Size



### FNHTR Adverse Reaction Rates by Bed Size (per 10,000 Products Transfused)



### FNHTR Reactions by Age





# NEW NHSN INCIDENT CODES

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# NHSN Incident Reporting

- Accidents or errors that are associated with a reported adverse reaction
- May occur before (e.g., wrong product released) or after (e.g., failure to report adverse reaction to blood bank) an adverse reaction.
- After the incident record is entered, the adverse reaction record must be linked to the incident record in NHSN
- NOT required reporting in MA





# "No Blood" Incident Codes

- Recently added in NHSN
  - **NB 01** Inventory less than usual par level due to supplier unable to meet usual steady demand
  - **NB 02** Demand for blood product exceeding usual par inventory level
  - **NB 03** Incompatible/inappropriate units issued due to inventory constraints when demand for blood product exceeds usual par inventory levels
  - **NB 04** Suboptimal dose (less than optimal quantity) transfusion or no transfusion due to inventory constraints when demand for blood product exceeds usual par inventory levels
- Use of these codes could help us to more accurately assess the effects of blood shortages.



# Thank you!

## Questions?

- Contact Info:

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425-518-9038