



[2012-2017]

# AABB DONOR HEMOVIGILANCE



## KEY NOTES

Reaction rates and the reporting protocols vary among blood collection facilities, even collection sites within the same organization.

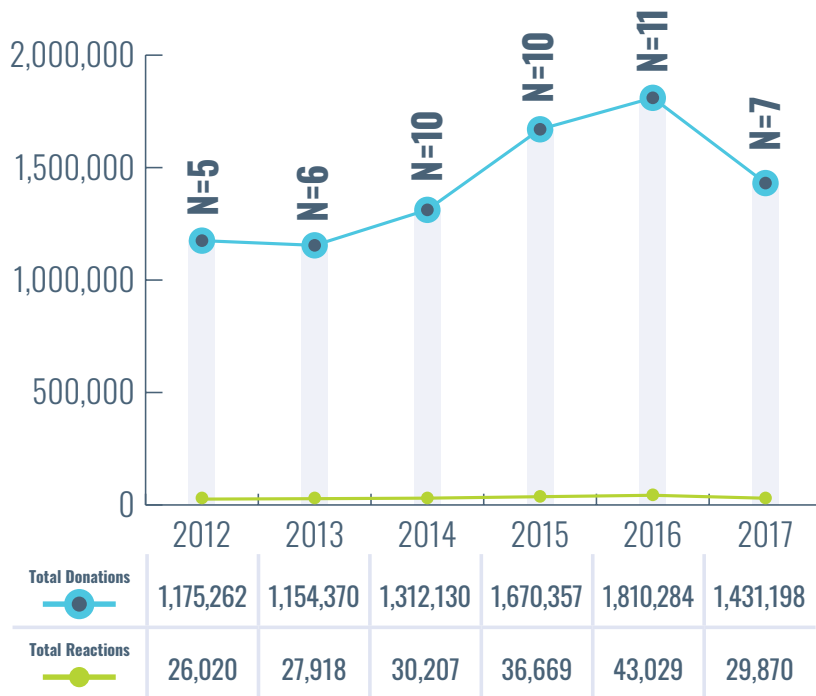
The overall donor reaction rates ranged from 20.8 to 24.3 per 1,000 donations.

The most common reaction was vasovagal reaction without loss of consciousness.

AABB Donor Hemovigilance data represented approximately one tenth of the US blood donations\*.

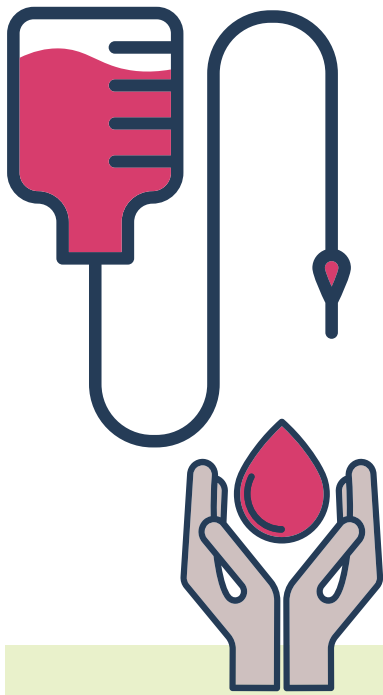
\*National Blood Collection and Utilization Survey

## Number of Donations and Reactions



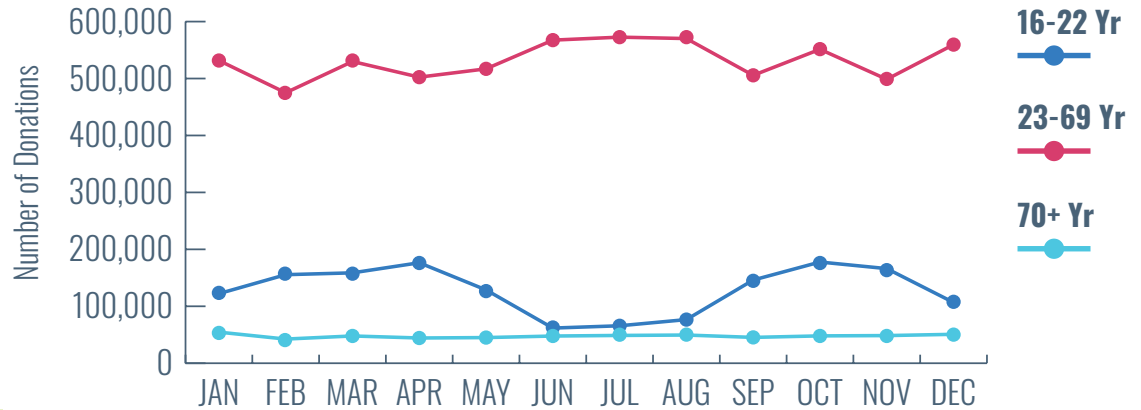
## Reaction Rates per 1,000 Donations

REACTION TYPE	2012	2013	2014	2015	2016	2017
Overall Reactions	22.2	24.3	22.8	21.9	22.2	20.8
<b>VASOVAGAL</b>	<b>15.9</b>	<b>17.4</b>	<b>16.3</b>	<b>14.8</b>	<b>14.4</b>	<b>13.2</b>
Loss of consciousness (LOC)	2.3	2.5	2.3	2.6	2.4	2.3
Pre faint, no LOC (uncomplicated or minor)	13.6	14.9	14.0	12.2	12.1	10.8
<b>LOCAL INJURY RELATED TO NEEDLE</b>	<b>3.0</b>	<b>3.3</b>	<b>3.1</b>	<b>3.5</b>	<b>4.5</b>	<b>3.7</b>
Nerve Irritation	0.2	0.2	0.2	0.2	0.2	0.2
Hematoma / Bruise	2.7	3.0	2.8	3.1	4.0	3.0
Arterial Puncture	0.03	0.03	0.03	0.04	0.05	0.05
Painful Arm	0.1	0.1	0.1	0.2	0.2	0.4
Delayed bleeding	—	—	—	—	0.002	0.01
Infection	—	—	—	0.01	0.003	0.01
Major Blood Vessel Injury	—	—	—	—	—	—
<b>INJURY</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.1</b>	<b>0.06</b>	<b>0.06</b>
Major Injury	0.01	0.01	0.01	0.1	0.03	0.02
Minor Injury	0.1	0.1	0.1	0.02	0.03	0.04
<b>APHERESIS-RELATED</b>	<b>2.8</b>	<b>3.1</b>	<b>2.9</b>	<b>3.3</b>	<b>3.0</b>	<b>3.8</b>
Citrate	0.2	0.2	0.2	0.2	0.2	0.3
Hemolysis	0.004	0.005	0.004	0.005	0.006	0.001
Air Embolus	0.001	0.001	0.001	—	0.001	—
Infiltration	2.6	2.8	2.7	3.1	2.7	3.6
<b>ALLERGIC</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.04</b>	<b>0.04</b>	<b>0.03</b>
Local	0.2	0.2	0.2	0.03	0.03	0.03
Systemic	0.04	0.04	0.04	0.01	0.004	0.004
Anaphylaxis	—	—	—	—	0.001	—
<b>MAJOR CARDIOVASCULAR EVENT</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	<b>0.001</b>	—	—
Angina pectoris within 24 hours	0.001	0.001	0.001	—	—	—
Cardiac arrest	—	—	—	—	—	—
Cerebrovascular accident	—	—	—	0.001	—	—
Myocardial infarction within 24 hours	—	—	—	—	—	—
Transient Ischemic Attack (TIA) within 24 hours	—	—	—	—	—	—
<b>OTHER</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.02</b>



# AGE COMPARISON

## Seasonal Donation Pattern



## KEY NOTES

Fewer donations by young donors (age 16-22) during the summer months, were compensated by donation from adult donors (age 23-69).

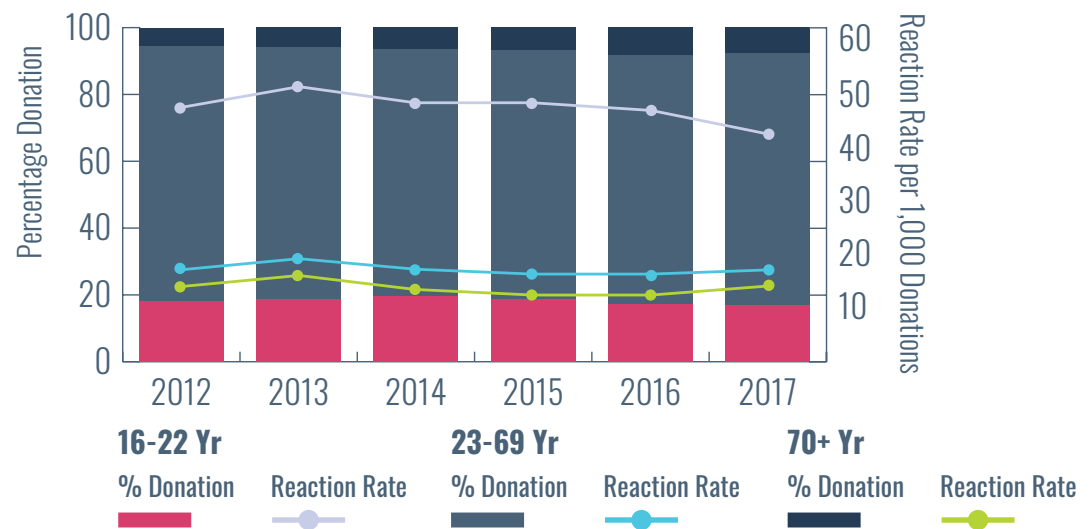
Younger donors were more likely to experience an adverse reaction to blood donation.

Younger donors (age 16-22) made 18% of the total donations, but accounted for higher reaction rates, ranging from 41.41 (2017) to 49.09 per 1,000 donations (2013).

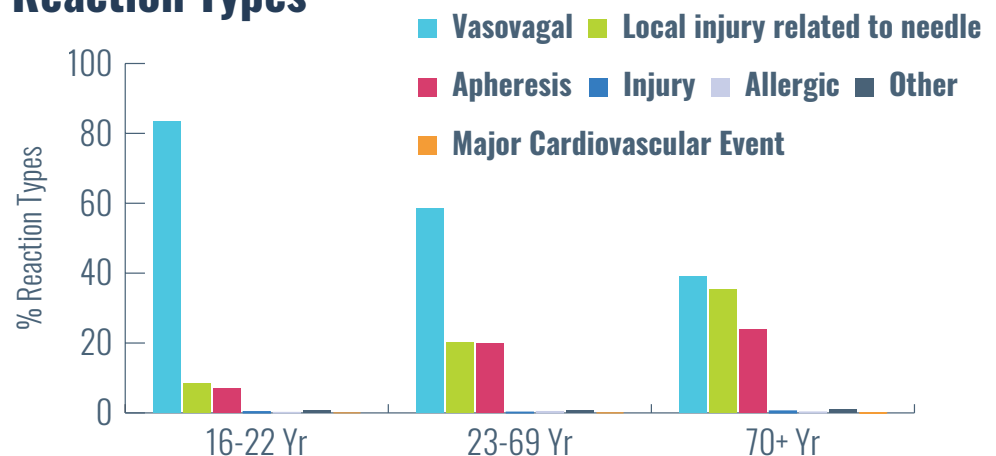
There was a downward trend of vasovagal reactions with increase in donor age.

The margin between vasovagal reactions and local injuries related to needle was narrowest among donors aged 70 years and older.

## Donation and Reaction Rates



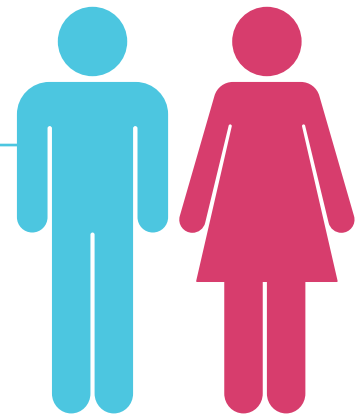
## Reaction Types\*



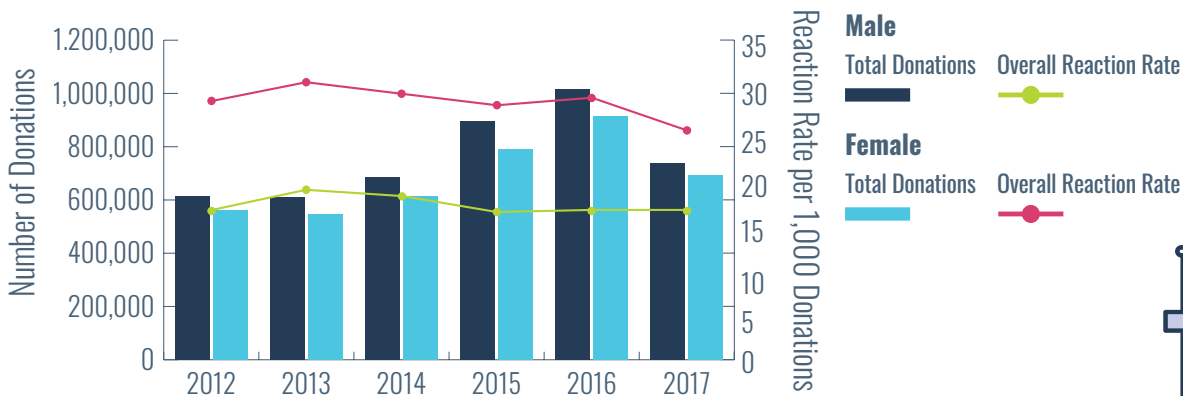
\* Among reported reactions

Source: AABB Hemovigilance System – DonorHART™ | ©AABB 2019

# GENDER COMPARISON



## Donation and Reaction Rates



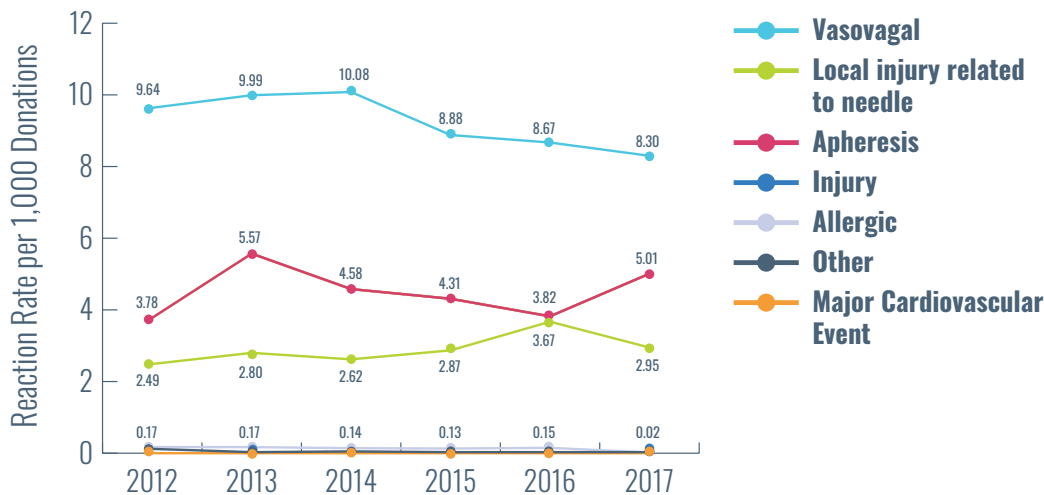
### KEY NOTES

Although the number of donations by male donors were higher compared with female donors, female donors experienced higher adverse reaction rates, ranging from 25.64 (2017) to 30.40 per 1,000 donations (2013).

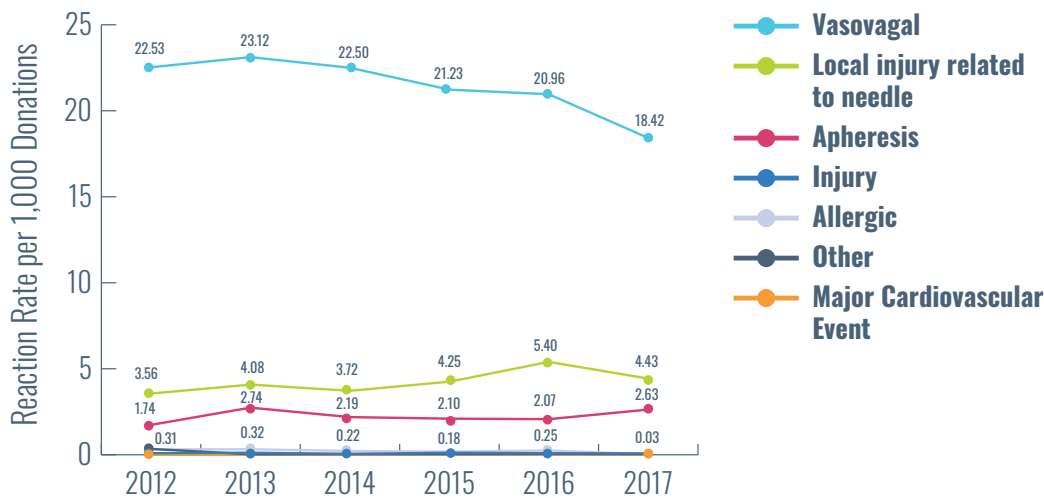
Male donors were twice as likely to experience apheresis reactions compared with female donors, making apheresis reactions the second-most common adverse reactions among this donor group.

Among female donors, local injuries related to needle were the second-most common adverse reactions.

## Male Donors



## Female Donors

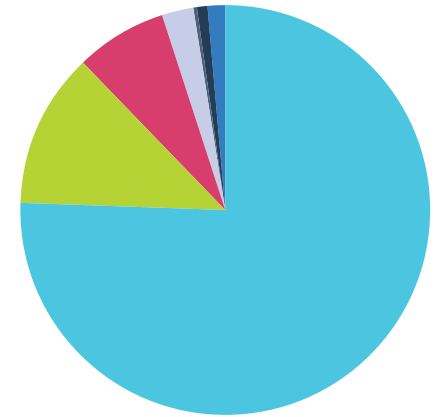
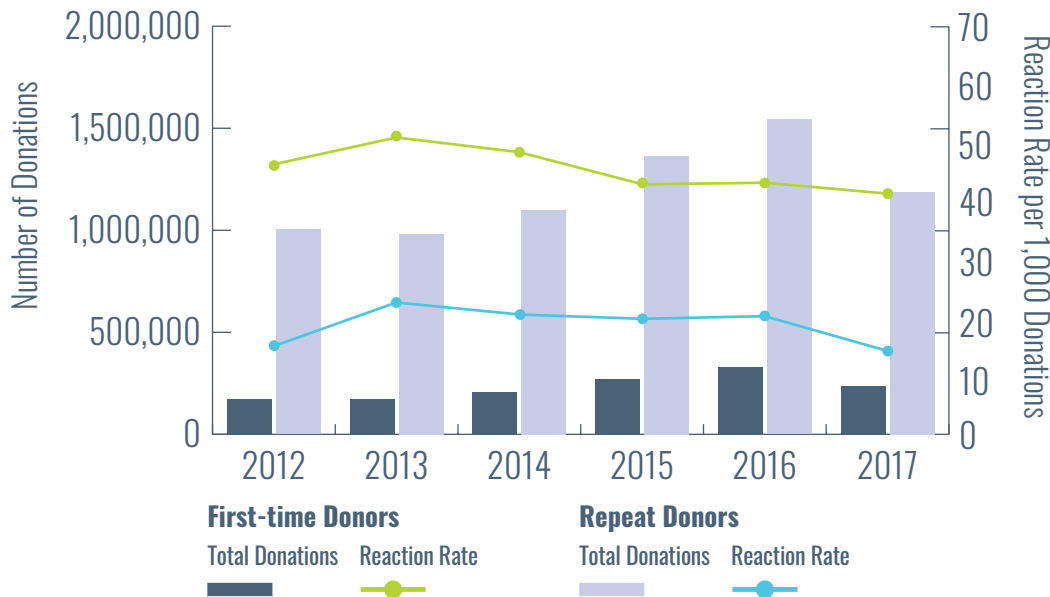


Source: AABB Hemovigilance System – DonorHART™ | ©AABB 2019

# OTHER FINDINGS

## Reported Reaction Location\*

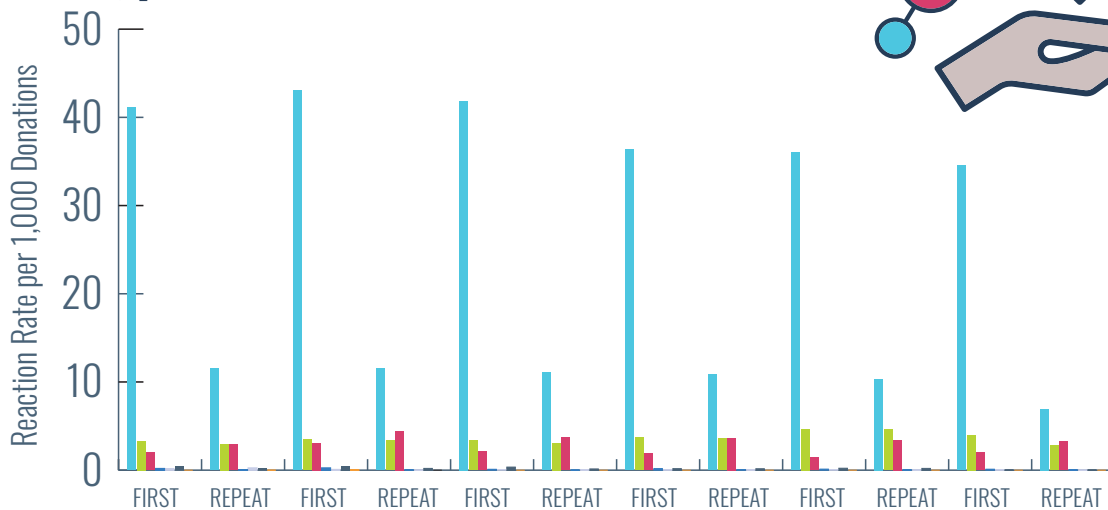
### Donor History Comparison Donation and Reaction Rates



- Bed 75.81%
- Canteen 12.23%
- Off site 7.08%
- Other location on site 2.56%
- Registration 0.10%
- Screening 1.04%
- Transit to canteen 1.18%

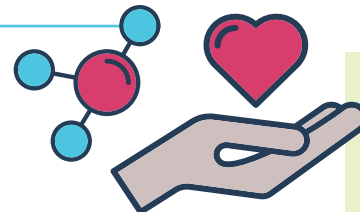
\* Excluding 68.5% of the total reports without this information.

### Reaction Types



REACTION	2012		2013		2014		2015		2016		2017	
	FIRST	REPEAT	FIRST	REPEAT	FIRST	REPEAT	FIRST	REPEAT	FIRST	REPEAT	FIRST	REPEAT
Vasovagal	41.14	11.50	43.08	11.50	41.86	11.04	36.32	10.86	36.00	10.34	34.52	6.93
Local injury related to needle	3.32	2.95	3.50	3.38	3.39	3.09	3.68	3.61	4.68	4.58	3.97	2.79
Apheresis	2.01	2.94	3.09	4.43	2.13	3.69	1.91	3.66	1.46	3.42	2.03	3.27
Injury	0.17	0.04	0.24	0.05	0.10	0.02	0.18	0.07	0.12	0.04	0.11	0.04
Allergic	0.15	0.24	0.06	0.02	0.07	0.04	0.05	0.04	0.06	0.03	0.05	0.02
Other	0.44	0.20	0.46	0.20	0.35	0.14	0.17	0.16	0.22	0.20	0.02	0.02
Major Cardiovascular Event	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

■ Vasovagal ■ Local injury related to needle ■ Apheresis ■ Injury ■ Allergic ■ Other ■ Major Cardiovascular Event



### KEY NOTES

Donor bed was the most common location where the reactions began.

First-time donors were more likely to experience an adverse reaction compared with repeat donors.

Apheresis reaction rates were higher among repeat donors compared with first-time donors.

Source: AABB Hemovigilance System – DonorHART™ | ©AABB 2019