



2017 National Blood Collection and Utilization Survey

The Office of the Assistant Secretary for Health and the Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS), are conducting the 2017 National Blood Collection and Utilization Survey (NBCUS). The NBCUS is a biennial, cross-sectional survey of all US blood collection centers and more than 3,000 hospitals that transfuse blood and blood components. This survey is used to characterize blood and blood component collection and transfusion practices. The information is used to understand blood demand and project future blood needs in the United States.

The 2017 NBCUS covers the period of collection and utilization from January 1 to December 31, 2017. Please assist us by completing the online survey by **June 11, 2018**. The link to complete the survey is included in an email sent to your facility and is unique to your facility. Please do not share the link with personnel outside your institution. Once you click the link (or copy and paste into a browser window) you will be directed to the 2017 NBCUS Portal Page. On the Portal Page, you will find instructions for completing the survey and a brief description of each section. If you are not the appropriate person to complete any portion of the survey or if you do not have all of the requested information, please forward the link to the person in your institution who can best provide the information.

Your responses will remain anonymous in the final dataset. While results of this survey will be released in aggregate form and data may be made available in the form of a de-identified dataset, no specific institutional identifiable information will be included.

Section A. General Information

Please provide the contact information for the primary person responsible for completing this section.

Prefix:

First Name:

Last Name:

Title/Position:

Phone Number:

Email:

A1. Check all applicable boxes that describe your routine operations. If you check Hospital Transfusion Service do not check any other box.

Community (Non-hospital) Blood Bank: A commercial or non-profit blood collection/processing establishment, not located in a hospital, that may perform product testing and routinely distributes blood and/or blood products to one or more hospitals. We consider an independent blood bank located inside a hospital, but separately operated and owned, to be a Hospital Blood Bank.

Hospital Blood Bank: A hospital (or establishment located within a hospital) that routinely collects or processes Whole Blood or blood components. A Hospital Blood Bank may collect components by apheresis or prepare them from Whole Blood. Processing includes freezing, deglycerolizing, washing, irradiating, rejuvenating, or leukocyte-reducing Red Blood Cells. We include hospitals that perform autologous or directed collections in this category. Hospital Blood Banks usually perform product testing (such as blood grouping and hepatitis testing), as well as compatibility testing. We consider hospitals that solely prepare Red Blood Cells or Recovered Plasma, pool Platelets or Cryoprecipitated AHF for ease of transfusion, or issue bedside leukocyte-reduction filters with blood components to be Hospital Transfusion Services. A hospital that collects Source Plasma under licensure should also check "Plasmapheresis Center."

Plasmapheresis Center: An establishment licensed by the FDA/CBER that collects Source Plasma or Therapeutic Exchange Plasma for commercial distribution. If you also collect Whole Blood for a licensed establishment, check "Collection Facility" and include the license number of the parent firm. Hospitals that perform plasmapheresis for research purposes only or to prepare transfusion products such as Plasma or Platelets, Pheresis, should NOT check this box.

Product Testing Laboratory: A separate establishment that performs routine blood and plasma donor testing. You must also indicate whether you are independent or associated with a Blood Bank.

Hospital Transfusion Service: A hospital that performs compatibility testing (cross matching) for blood or blood components but does NOT routinely collect allogeneic or autologous blood, or process Whole Blood into components (except Red Blood Cells and Recovered Plasma). We consider hospitals that freeze, deglycerolize, wash, irradiate, rejuvenate, or reduce the number of leukocytes from Red Blood Cells to be Hospital Blood Banks. You must also indicate your Medicare approval status.

Component Preparation Facility: An intermediate processing establishment that prepares components from blood collected by a mobile or fixed collection site but does not perform product testing.

Collection Facility: An establishment that performs blood collections or apheresis, but does not test. If you also redistribute the final product after the parent blood bank has processed and returned products to you, then also check Distribution Center.

Distribution Center: An establishment that stores blood or blood products FOR TRANSFUSION under specific controlled conditions prior to shipping it to the final user. If you are a transfusion service operating as a depot or distribution center for a blood bank, register as a Distribution Center and include the license number of the blood bank, if licensed.

Broker/Warehouse: A broker, distributor, or warehouse that stores and redistributes source material for further manufacture, such as Recovered Plasma, Source Plasma, and whole blood, red blood cells, or platelets for diagnostic product use.

Other (specify): This includes firms that manufacture fractionated blood derivatives, diagnostics, and other blood products, or independent establishments that irradiate blood products. Check the list of values for your type of establishment. If your establishment type is there, select it. If your establishment type is not on the list, select 'Other' and enter your establishment type in the adjoining box.

[If Other is checked, Free Text Box to Specify]

DRAFT

Section B. Blood Collection, Processing, and Testing

Please provide the contact information for the primary person responsible for completing this section.

Prefix:

First Name:

Last Name:

Title/Position:

Phone Number:

Email:

B1. Does your institution collect blood from donors? (Even if you collect autologous units only, check "Yes.")

- Yes
- No (if 'No', end of section)

B2. In 2017, how many collections were successfully completed by your institution in each of the following categories? (* indicates a required field. Do not count low-volume or incomplete procedures. For collections that result in multiple component types, list the components under the primary intended collection and report the numbers of each component collected. Enter "0" if you did not collect any unit.)

| | Number of Collection Procedures* | Number of Units Prepared |
|---|----------------------------------|--------------------------|
| B2a. Whole Blood collections (prior to processing) | | |
| Allogeneic (non-directed donations)* | | |
| Autologous* | | |
| Directed* | | |
| Total* | | |
| B2b. Whole Blood for distribution as Whole Blood | | |
| Allogeneic (non-directed donations) | | |
| Autologous | | |
| Directed | | |
| Total | | |
| B2c. Red Blood Cells | | |
| Apheresis | | |
| Allogeneic* | | |
| Group O+ | | |
| Group O- | | |
| Autologous* | | |
| Directed* | | |
| Concurrent red cells (with apheresis platelets and/or plasma) | | |
| Total Apheresis Red Blood Cells* | | |
| Whole-blood-derived | | |
| Allogeneic* | | |
| Group O+ | | |
| Group O- | | |
| Autologous* | | |
| Directed* | | |
| Total WBD Red Blood Cells* | | |
| B2d. Platelets | | |
| Apheresis | | |
| Allogeneic | | |
| Single collection | | |
| Double collection ¹ | | |
| Triple collection ¹ | | |

| | | |
|--|--|--|
| Directed | | |
| Total Apheresis Platelets* | | |
| Whole-blood-derived | | |
| Individual* ² | | |
| B2e. Plasma | | |
| Apheresis | | |
| FFP ³ | | |
| PF24 ⁴ | | |
| PF24RT24 ⁵ | | |
| Liquid | | |
| Jumbo FFP (>400 mL) ⁶ | | |
| Concurrent plasma (with apheresis platelets) | | |
| Total Apheresis Plasma* | | |
| Whole-blood-derived | | |
| FFP ³ | | |
| PF24 ⁴ | | |
| PF24RT24 ⁵ | | |
| Cryoprecipitate reduced | | |
| Liquid | | |
| Total WBD Plasma* | | |
| B2f. Cryoprecipitate | | |
| Individual* ⁷ | | |
| B2g. Total Granulocytes* | | |

¹ Count double collections as two units and triple collections as three units.

² Enter the number of individual platelet units prepared from whole blood collections.

³ Fresh frozen plasma (FFP): Plasma frozen at -18C or colder within 8 hours of collection.

⁴ Plasma, frozen within 24 hours of phlebotomy (PF24): plasma separated from the blood of an individual donor and placed at -18 C or colder within 24 hours of collection from the donor.

⁵ Plasma frozen within 24 hours of phlebotomy and held at room temperature up to 24 hours after phlebotomy (PF24RT24): Plasma held at room temperature for up to 24 hours after collection and then frozen at -18 C or colder.

⁶ Plasma, Jumbo: FFP having a volume greater than 400 mL.

⁷ Enter the number of individual cryoprecipitate units prepared from whole blood collections.

B3. Does your facility use hematopoietic growth factor mobilization for granulocyte collections?

- Yes
- No

B4. In 2017, how many people presented to donate including successful and unsuccessful donations, and those who deferred?

| | Donors Presenting |
|--------|-------------------|
| Male | |
| Female | |
| Total | |

B5. In 2017, how many donors were deferred for the following reasons:

| | Number of Male Donors Deferred | Number of Female Donors Deferred | Total Donors Deferred |
|--|---------------------------------------|---|-----------------------|
| Low hemoglobin/hematocrit | | | |
| Prescription drug use | | | |
| Pulse and/or blood pressure | | | |
| Other medical reasons | | | |
| High-risk behavior (MSM only) | | | |
| High-risk behavior (all other behaviors) | | | |
| Travel | | | |
| Tattoo/piercing | | | |
| Other non-medical reasons | | | |
| Total deferred for any reason | | | |

B6. In 2017, how many of the following types of donors did your institution successfully collect blood products from?

| | Number of Donors |
|--|------------------|
| First-time allogeneic donors | |
| Repeat allogeneic donors (Count multiple donations from a single repeat donor only once) | |
| Directed donors | |
| Autologous donors | |

B7. In 2017, how many allogeneic Whole Blood/RBC units/donations were successfully collected from the following donors?

| | Number of Donations |
|----------------------------------|---------------------|
| 15 year-old donors | |
| 16 year-old donors | |
| 17 year-old donors | |
| 18 year-old donors | |
| 19-24 year-old donors | |
| 25-64 year-old donors | |
| > 65 year-old donors | |
| All minority donors ¹ | |
| Repeat allogeneic donors | |
| First time allogeneic donors | |

¹ Minority donors include African-American, Asian, and/or Hispanic donors combined.

B8. How many severe donor-related adverse events were experienced by donors in 2017?

| | Number of Severe Donor-Related Adverse Events | |
|---------------|---|-----------------------|
| | Whole blood collections | Apheresis collections |
| All Donors | | |
| ≤18 years old | | |
| ≥19 years old | | |

B9. In 2017, how many units of each product were imported, distributed, and outdated by your institution? (* indicates required fields)

| | Total Units Imported | Total Units Distributed (including imported units) ¹ | Total Units Outdated |
|---|----------------------|---|----------------------|
| B9a. Whole Blood for distribution as Whole Blood | | | |
| Allogeneic (non-directed donations) | | | |
| Autologous | | | |
| Directed | | | |
| Total* | | | |
| B9b. Red Blood Cells | | | |
| Apheresis | | | |
| Allogeneic | | | |
| Group O+ | | | |
| Group O- | | | |
| Autologous | | | |
| Directed | | | |
| Concurrent red cells (with apheresis platelets and/or plasma) | | | |
| Total Apheresis Red Blood Cells* | | | |
| Whole-blood-derived | | | |
| Allogeneic | | | |
| Group O+ | | | |
| Group O- | | | |
| Autologous | | | |
| Directed | | | |
| Total WBD Red Blood Cells* | | | |
| B9c. Platelets | | | |
| Apheresis | | | |
| Allogeneic | | | |
| Single collection | | | |
| Double collection ² | | | |
| Triple collection ² | | | |
| Directed | | | |
| Total Apheresis Platelets* | | | |
| Whole-blood-derived | | | |
| Individual* | | | |
| Pooled ³ | | | |

| | | | |
|--|--|--|--|
| B9d. Plasma | | | |
| Apheresis | | | |
| FFP ⁴ | | | |
| PF24 ⁵ | | | |
| PF24RT24 ⁶ | | | |
| Liquid | | | |
| Jumbo FFP (>400 mL) ⁷ | | | |
| Concurrent plasma (with apheresis platelets) | | | |
| Total Apheresis Plasma* | | | |
| Whole-blood-derived | | | |
| FFP ⁴ | | | |
| PF24 ⁵ | | | |
| PF24RT24 ⁶ | | | |
| Cryoprecipitate reduced | | | |
| Liquid | | | |
| Total WBD Plasma* | | | |
| B9e. Cryoprecipitate | | | |
| Individual* | | | |
| Pooled ⁸ | | | |
| B9f. Total Granulocytes* | | | |

¹ Units returned and distributed more than once should be counted only once.

² Count double collections as two units and triple collections as three units.

³ Total number of platelet pools prepared from whole blood collections.

⁴ Fresh frozen plasma (FFP): Plasma frozen at -18C or colder within 8 hours of collection.

⁵ Plasma, frozen within 24 hours of phlebotomy (PF24): plasma separated from the blood of an individual donor and placed at -18 C or colder within 24 hours of collection from the donor.

⁶ Plasma frozen within 24 hours of phlebotomy and held at room temperature up to 24 hours after phlebotomy (PF24RT24): Plasma held at room temperature for up to 24 hours after collection and then frozen at -18 C or colder.

⁷ Plasma, Jumbo: FFP having a volume greater than 400 mL.

⁸ Total number of cryoprecipitate pools prepared from whole blood collections.

B10. In 2017, what was the average number of individual platelet units per whole-blood-derived platelet pool?
[Free text, numeric values only]

B11. In 2017, what was the average number of cryoprecipitate units per whole-blood-derived cryoprecipitate pool?
[Free text, numeric values only]

B12a. In 2017, did your institution prepare apheresis platelets using platelet additive solution?

- Yes
- No (if 'No', skip B12b)

B12b. How many apheresis platelet units were prepared using platelet additive solution?
[Free text, numeric values only]

B13. In 2017, how many units of Group AB Plasma were collected, distributed, and outdated by your institution?

| | Units Collected | Units Distributed | Units Outdated |
|-----------------|-----------------|-------------------|----------------|
| Group AB Plasma | | | |

B14. In 2017, for each of the following categories, how many units did your institution collect, prepare, or modify to achieve **pre-storage** leukoreduction?

| | Number of Units |
|------------------------------------|-----------------|
| Whole Blood units | |
| Whole-blood-derived RBC units | |
| Apheresis RBC units | |
| Whole-blood-derived platelet units | |
| Apheresis platelet units | |

B15. In 2017, for each product, what was the total number of allogeneic units (non-directed and directed combined) discarded for...

| | Number of units | | | |
|---|-----------------|----------------|------------------|---------------------|
| | Whole Blood | Apheresis RBCs | Apheresis Plasma | Apheresis Platelets |
| Abnormal disease marker results? | | | | |
| All other reasons (e.g., low volume, broken bag, etc.) , not including outdated components | | | | |

B16a. Does your institution type red blood cell antigens using a molecular assay (e.g., genotyping)?

- Yes
- No (if No, skip B16b)

B16b. How many red blood cell donors were typed using a molecular assay (e.g., genotyping)?
[Free text, numeric values only]

B17a. In 2017, did your institution use pathogen reduction technology (PRT) to treat platelets and/or plasma?

- Yes
- No (if No, skip B17b)

B17b. If yes, how many of the following units were treated with PRT in 2017?

| | Number of Units treated with PRT |
|--|----------------------------------|
| Apheresis Platelet Units | |
| Plasma Units (Whole Blood derived and apheresis) | |

B18a. Does your facility screen donations for babesia infection?

- Yes
- No (if No, skip B18b)

B18b. How many whole blood or apheresis RBC donations were screened for babesia in 2017?

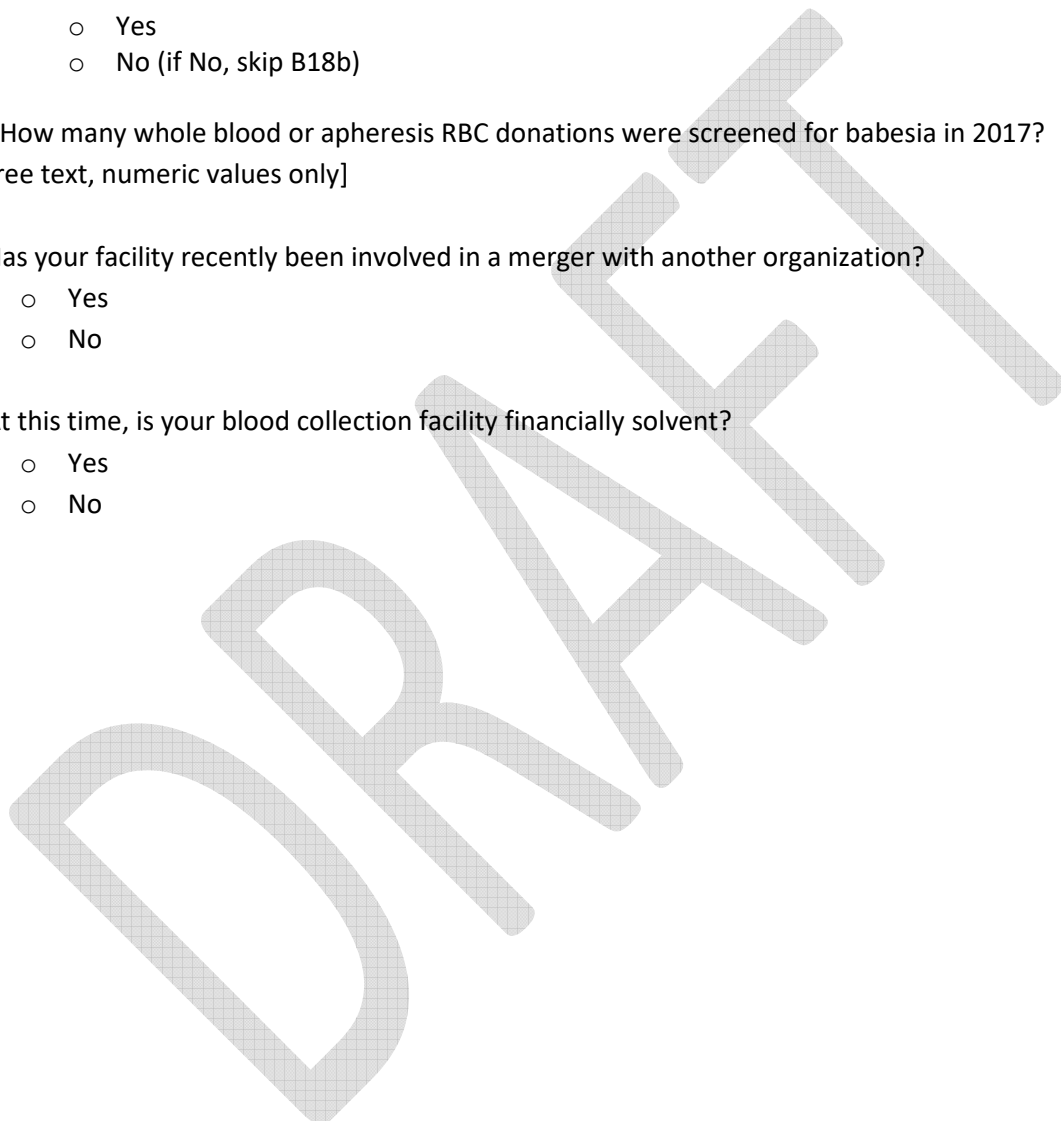
[Free text, numeric values only]

B19. Has your facility recently been involved in a merger with another organization?

- Yes
- No

B20. At this time, is your blood collection facility financially solvent?

- Yes
- No



Section C. Blood Transfusion

Please provide the contact information for the primary person responsible for completing this section.

Prefix:

First Name:

Last Name:

Title/Position:

Phone Number:

Email:

C1. Is your institution directly involved in the transfusion of blood to patients? (NOTE: If your institution is a centralized transfusion service, your participating facilities may have been sent a link to complete the survey. If so, Please answer "No" to this question and contact CDC at nbcus@cdc.gov.)

- Yes
- No (if 'No', end of section)

C2. In 2017, how many units of allogeneic whole blood and red blood cells did your institution transfuse? (* indicates required fields. Leave the field blank if you do not know the answer)

| | Total Number of Units Transfused | Total number of Recipients | Total outdated units |
|--|----------------------------------|----------------------------|----------------------|
| Allogeneic Whole Blood* | | | |
| Allogeneic Red Blood Cells (include all blood groups)* | | | |
| Allogeneic Group O Positive RBCs | | | |
| Allogeneic Group O Negative RBCs | | | |

C3. Indicate the disposition of directed and autologous units in 2017. (* indicates required fields)

| | Total Number of Units Transfused to Intended Recipient | Total Number of Recipients | Outdated Units |
|-------------------------------|--|----------------------------|----------------|
| Directed Whole Blood Units* | | | |
| Directed RBC Units* | | | |
| Autologous Whole Blood Units* | | | |
| Autologous RBC Units* | | | |

C4. In 2017, how many units of each of the following components did your institution transfuse and how many units were outdated while on your shelf including units transfused to pediatric patients? (* indicates required fields)

| (include all blood groups) | Total Number of Units Transfused | Total Number of Units Outdated |
|--|----------------------------------|--------------------------------|
| WBD Platelets (individual concentrates and pools expressed as individual concentrate equivalents)* | | |
| Apheresis Platelet units – Full dose* | | |
| Directed Platelets to intended recipients | | |
| Total Plasma* | | |
| Fresh Frozen Plasma (FFP) ¹ | | |
| FFP, pediatric size (≤100 mL) ¹ | | |
| Plasma, Frozen within 24 hours (PF24) ² | | |
| PF24RT24 ³ | | |
| Jumbo FFP (>400 mL) ⁴ | | |
| Liquid plasma (ie never frozen) | | |
| Directed plasma to intended recipients | | |
| Thawed plasma ⁵ (ie used within 1-5 days of thaw) | | |
| Plasma, cryoprecipitate reduced | | |
| Group AB plasma | | |
| Cryoprecipitate (include individual units and pools expressed as unit equivalents)* | | |
| Granulocytes* | | |

¹ Fresh frozen plasma (FFP): Plasma frozen at -18C or colder within 8 hours of collection.

² Plasma, frozen within 24 hours of phlebotomy (PF24): plasma separated from the blood of an individual donor and placed at -18 C or colder within 24 hours of collection from the donor.

³ Plasma frozen within 24 hours of phlebotomy and held at room temperature up to 24 hours after phlebotomy (PF24RT24): Plasma held at room temperature for up to 24 hours after collection and then frozen at -18 C or colder.

⁴ Plasma, Jumbo: FFP having a volume greater than 400 mL.

⁵ Thawed plasma: FFP, PF24, or PF24RT24 that has been thawed and held at 1 to 6 C for 1 to up to 5 days after thawing.

C5a. In 2017, did your facility transfuse blood to pediatric or neonatal patients? (Select all that apply)

- a. Yes.
- c. No. (If no, skip to C8)

C5b. Indicate the total number of units transfused to pediatric and neonatal patients in 2017.

| | Number of Units in Whole or in Part Transfused for Pediatric (>4 months old) Patients ¹ | Total Number of Pediatric (>4 months old) Recipients | Number of Units in Whole or in Part Transfused for Neonatal (<=4months old) Patients ¹ | Total Number of Neonatal (<=4months old) Recipients |
|---------------------|--|--|---|---|
| Whole Blood | | | | |
| RBCs | | | | |
| Plasma | | | | |
| Apheresis Platelets | | | | |
| WBD Platelets | | | | |
| Cryoprecipitate | | | | |

¹ This should be a subset of data reported in the previous two questions.

C6. For neonatal patients, which of the following do you use for aliquots? (check all that apply)

- a. Aliquots using syringes from full-size unit.
- b. Pedipacks

C7. For neonatal patients, does your facility attempt to use aliquots from the same full-size unit for every transfusion?

- a. Yes
- b. No

C8. Indicate how many irradiated, leuko-reduced, and leuko-filtered units for each of the following components your institution transfused in 2017. For pediatrics, use the number of adult equivalent units used in whole or part. For components that are irradiated and leuko-reduced, include these in the count for both columns.

| | Components Irradiated | | Components Leukoreduced | |
|--|-----------------------|----------|-------------------------|--|
| | By Cesium | By X-Ray | Before Storage | After Storage (including at the Bedside) |
| a. Whole Blood | | | | |
| b. RBCs | | | | |
| c. Apheresis platelets | | | | |
| d. WBD platelets | | | | |
| Total components (if the number for a-d is 'unknown', enter the total number of components for the modification) | | | | |

C9. Does your institution have a policy to transfuse only leuko-reduced (LR) components?

- Yes
- No

C10a. In 2017, how many total units of RBCs transfused were...

| | Number of Units | |
|-------------------|-----------------|------------|
| 1 – 35 day(s) old | | Don't Know |
| 36 – 42 days old | | Don't Know |

C10b. In 2017, how many total units of WBD platelets transfused were...

| | Number of Units | |
|------------------|-----------------|------------|
| 1 – 3 day(s) old | | Don't Know |
| 4 – 5 days old | | Don't Know |
| 6- 7 days old | | Don't Know |

C10c. In 2017, how many total units of Apheresis platelets transfused were...

| | Number of Units | |
|------------------|-----------------|------------|
| 1 – 3 day(s) old | | Don't Know |
| 4 – 5 days old | | Don't Know |
| 6-7 days old | | Don't Know |

C11. In your institution, on average, how many individual platelet units were included in a pooled WBD platelet dose in 2017?

- < 3
 3
 4
 5
 6
 7
 8
 9
 10
 > 10
 Not applicable

C12. Indicate the number of units that were transfused in inpatient or outpatient settings. (*This can be determined by location or by physician use.*)

| | Number of RBC Units | Number of Platelet Units | Total |
|--|---------------------|--------------------------|-------|
| All Surgery (including transplant) | | | |
| Inpatient Medicine (including hematology/oncology) | | | |
| Emergency Department | | | |
| Obstetrics/Gynecology | | | |
| Pediatrics | | | |
| Neonates | | | |
| Critical Care | | | |
| Outpatient and non-acute inpatient settings ¹ | | | |

¹E.g., outpatient dialysis, rehabilitation, long term care, etc.

C13. Does your institution routinely order plasma transfusions to non-pediatric patients based on:

- Weight based dosing (e.g., 20mL/kg)
- A standard number of units regardless of patient weight (e.g., 4 or 6 units)
- Dosage varies based on perceived level of coagulation factor deficiency or degree of bleeding
- Number of units ordered is not consistent with any of the above

C14a. Does your institution routinely order **prophylactic** platelet transfusions to non-pediatric patients based on:

- Weight based dosing (e.g., 20mL/kg)
- A standard number of units regardless of patient weight (e.g., 4 or 6 units)
- Dosage varies based on perceived level of thrombocytopenia or degree of bleeding
- Number of units ordered is not consistent with any of the above

C14b. Does your institution routinely order **therapeutic** platelet transfusions to non-pediatric patients based on:

- Weight based dosing (e.g., 20mL/kg)
- A standard number of units regardless of patient weight (e.g., 4 or 6 units)
- Dosage varies based on perceived level of thrombocytopenia or degree of bleeding
- Number of units ordered is not consistent with any of the above

C15. What was the average whole dollar amount your institution paid per unit in 2017 for the following components? (Include discounts in your calculations. If you do not use a particular component, select “Not Applicable”. CPT/HCPCS codes are in parenthesis.)

| | Average Amount Paid Per Unit (\$) |
|---|-----------------------------------|
| Plasma, single donor, frozen with 8 hours of phlebotomy (P9017) | Not applicable |
| Plasma, frozen between 8 and 24 hours of phlebotomy (P9059) | Not applicable |
| Red cells, leuko-reduced (P9016) | Not applicable |
| Red cells, non-leuko-reduced (P9021) | Not applicable |
| WBD platelets, each unit, not leuko-reduced, not irradiated (P9019) | Not applicable |
| Apheresis platelets, leuko-reduced (P9035) | Not applicable |
| Cryoprecipitate, each unit (P9012) | Not applicable |

C16. Were any surgeries delayed (greater than an hour) due to blood inventory shortages in 2017?

- Yes
- No
- Don't know

C17. Does your institution have an established program to treat patients who refuse any or all blood components for religious, cultural, or personal reasons?

- Yes
- No

C18a. Does your institution have a Transfusion Safety Officer (TSO)?

- Yes
- No

(if No, skip C18b and C18c)

C18b. If yes, how many full-time equivalent TSOs? (Consider two part-time employees as a single full-time equivalent)

[Free text, numeric values only] full-time equivalents

C18c. Is the TSO employed by your institution or by the blood center?

- Institution employee
- Blood center employee

C19. At your institution, how many units of Group O red cells are on your shelf on an average weekday?

[Free text, numeric values only] units

C20. At what number of Group O positive and Group O negative RBC units in uncrossmatched inventory do you consider your inventory to be "critically low"?

[Free text, numeric values only] units

C21. How many Whole Blood/RBC crossmatch procedures were...

| | Number of Procedures |
|--|----------------------|
| performed at your institution in 2017 by any method? | |
| electronic crossmatch procedures? | |
| manual serologic crossmatch procedures? | |
| automated serologic crossmatch procedures? | |

C22a. Does your institution type red blood cell antigens using a molecular assay (e.g., genotyping)?

- Yes
- No (if No, skip C22b)

C22b. How many red blood cell units from donors who were genotyped (e.g., using a molecular assay) were transfused by your institution in 2017?

[Free text, numeric values only] units

C23. How many samples (patient specimens submitted for testing) did your institution receive at the blood bank in 2017?

[Free text, numeric values only] samples

C24. Does your institution have an electronic system for tracking transfusion-related adverse events (e.g., unplanned, unexpected, and undesired occurrences)?

- Yes
- No

C25a. Did your institution collect data on sample collection errors (e.g., wrong blood in tube) in 2017?

- Yes
- No

(if No, skip C25b)

C25b. How many transfusion sample collection errors were reported in 2017?

[free text, numeric values only] errors

C26. How many transfusion-related adverse reactions were reported to the transfusion service in 2017?

(Count only the number of reactions that required any diagnostic or therapeutic intervention.)

[Free text, number values only] reactions

Complete the table below to indicate how many of each type of reaction occurred:

| | Number of reactions |
|--|---------------------|
| Life-threatening, required major medical intervention following transfusion (e.g., vasopressors, blood pressure support, intubation, or transfer to the ICU) | |
| Transfusion-related acute lung injury (TRALI) | |
| Transfusion-associated circulatory overload (TACO) | |
| Acute hemolytic transfusion reaction (ABO) | |
| Acute hemolytic transfusion reaction (other antibodies) | |
| Delayed hemolytic transfusion reaction | |
| Delayed serologic transfusion reaction | |
| Febrile, non-hemolytic transfusion reaction | |
| Hypotensive transfusion reaction | |
| Post-transfusion purpura | |
| Transfusion-associated dyspnea | |
| Transfusion-associated graft-vs-host disease | |
| Transfusion transmitted bacterial infection | |
| Transfusion transmitted parasitic infection | |
| Transfusion transmitted viral infection | |
| Mild to moderate allergic reaction | |
| Severe allergic reaction | |

C27a. Does your institution perform any kind of pre-transfusion bacterial testing on platelets?

- Yes
- No (if No, skip C27b and C27c)

C27b. Indicate what methods are used by your institution to test for bacterial contamination.

| | Culture-based testing | Rapid immunoassay (e.g., VERAX) | Other, specify | Not tested | Not applicable |
|-----------------------|--------------------------|---------------------------------|--------------------------|--------------------------|--------------------------|
| Apheresis platelets | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| WBD platelets, singly | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| WBD platelets, pooled | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

[Specify other methods, free text, alpha numeric values]

C27c. How many confirmed positives and false positives were detected by each method in 2017?

| | Number tested | Number of confirmed positives | Number of false positives | Number of indeterminate results | Not applicable |
|---------------------------------|---------------|-------------------------------|---------------------------|---------------------------------|--------------------------|
| Culture-based testing | | | | | <input type="checkbox"/> |
| Rapid immunoassay (e.g., VERAX) | | | | | <input type="checkbox"/> |
| Other methods | | | | | <input type="checkbox"/> |

C28a. In 2017, did your institution transfuse platelets and/or plasma treated with pathogen reduction technology (PRT)?

- Yes
- No (if 'No', skip 28b)

C28b. If yes, how many PRT-treated units were transfused in 2017?

| | Number of PRT-treated Units Transfused |
|--|--|
| Apheresis Platelet Units | |
| Plasma Units (Whole Blood derived and apheresis) | |

Survey Glossary

Autologous: Self-directed donations.

Collected: Successful whole blood or apheresis collections placed into production (not QNS, or other removals).

Deferrals: The number of donors deferred for specific reasons:

- a) Donors deferred for low hemoglobin do not meet the current FDA blood hemoglobin level requirements for blood donation.
- b) Deferrals for other medical reasons may include the use of medications on the medication deferral list, growth hormone from human pituitary glands, insulin from cows (bovine, or beef, insulin), Hepatitis B Immune Globulin (HBIG), unlicensed vaccines, or presenting with physical conditions or symptoms that do not qualify a person to be a blood donor.
- c) High-risk behavior deferrals include deferrals intended to reduce the risk of transmission of infectious diseases including HIV and hepatitis viruses. Examples of questions intended to identify these risks are sexual contact (e.g., men who have sex with men (MSM)) and non-medical injection drug use questions.
- d) Travel deferrals are deferrals for travel to a specific region of the world.

Directed: Allogeneic donations intended for a specific patient.

Distributed: Units that have fulfilled all processing requirements and have been made available for transfer to customers.

Donation: The collection of a unit of blood or blood component from a volunteer donor.

Dose/Dosage: A quantity administered at one time, such as a specified volume of platelet concentrates.

First-time allogeneic donor: A donor who is donating for the first time at your center.

Imported: Units not collected by your institution, but obtained by your institution from another institution for distribution to a transfusion facility.

Modify: Procedures applied by a blood center, hospital blood bank, or transfusion service that may affect the quality or quantity of the final product (e.g., irradiation, leukofiltration, or production of aliquots of lesser volume).

MSM: Men who have sex with men.

Outdated: Units that expire on your shelf.

Plasma:

- a) **Plasma, frozen within 24 hours of phlebotomy (PF24):** plasma separated from the blood of an individual donor and placed at -18 C or colder within 24 hours of collection from the donor.
- b) **Fresh frozen plasma (FFP):** Plasma frozen at -18 degrees C within 8 hours of collection.
- c) **Plasma, Jumbo:** FFP having a volume greater than 400 mL.
- d) **Plasma frozen within 24 hours of phlebotomy and held at room temperature up to 24 hours after phlebotomy (PF24RT24):** Plasma held at room temperature for up to 24 hours after collection and then frozen at -18 C or colder.
- e) **Thawed plasma:** FFP, PF24, or PF24RT24 that has been thawed and held at 1 to 6 C from 1 to up to 5 days after thawing.

Recipient: A unique individual patient receiving a transfusion one or more times in a calendar year.

Repeat allogeneic donor: A donor who has previously donated a blood component.

Severe Donor-Related Adverse Events: Adverse events occurring in donors attributed to the donation process that include, for example, major allergic reaction, arterial puncture, loss of consciousness of a minute or more, loss of consciousness with injury, nerve irritation, etc.

Transfusion Related Adverse Reactions: An undesirable response or effect in a patient temporally associated with the administration of blood or blood components. For a list of adverse reaction types and case definitions, visit <http://www.cdc.gov/nhsn/PDFs/Biovigilance/BV-HV-protocol-current.pdf>.

Transfusion Service: A facility that performs, or is responsible for the performance of, the storage, selection, and issuance of blood and blood components to intended recipients.