

Form Approved

OMB No. 0990-0313

Exp. Date: xx/xx/xxxx

**2021 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 2021 National Blood Collection and Utilization Survey (NBCUS). The NBCUS is a biennial, cross-sectional survey of all US blood collection centers and more than 2,800 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 2021 NBCUS covers the period of collection and utilization from January 1, 2020 to December 31, 2021. Questions were added specifically to gain information on the impact of COVID-19 on the blood supply and utilization in 2020. Please assist us by completing the online survey by **June 11, 2022**. 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 2021 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.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0990-0313. The time required to complete this information collection is estimated to average 4 hours/ 0 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to U.S. Department of Health & Human Services, OS/OCIO/PRA, 200 Independence Ave., S.W., Suite 336-E, Washington D.C. 20201, Attention: PRA Reports Clearance Officer.

Please provide the contact information for the primary person responsible for completing this section. Once you have submitted the survey, a PDF including your responses will be sent to the email address entered below. (\*indicates a required field)

|  |  |  |  |
| --- | --- | --- | --- |
| Prefix | |  | | --- | |  | |  | |
| First Name1 | |  | | --- | |  | |  | |
| Last Name1 | |  | | --- | |  | |  | |
| Title/Position1\* | |  | | --- | |  | |  | |
| Work Phone number | |  | | --- | |  | |  | |
| Work Email1\* | |  | | --- | |  | |  | |

1Denotes fields that were pre-populated in the online survey based on previous correspondence.

Section B. Blood Collection, Processing, Testing, and Inventory Management

B1a. Does your institution collect blood from donors? (Even if you collect autologous units only, select “Yes.”)

* Yes
* No (if ‘No’, skip to section C)

B1b. If your facility is reporting data based on multiple facilities, please list the name of each facility below:

|  |
| --- |
|  |
| Facility Names |

B2a. During 2021, how many **whole blood collection procedures** were successfully completed by your institution in each of the following categories? Do not count low-volume or incomplete procedures. (\*indicates a required field)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic whole blood\* | |  | | --- | |  | | Number of collection procedures | |
| Autologous whole blood\* | |  | | --- | |  | | Number of collection procedures | |
| Directed whole blood\* | |  | | --- | |  | | Number of collection procedures | |
| Total whole blood\* | |  | | --- | |  | | Number of collection procedures | |

B2b. During 2021, how many **apheresis collections procedures1** (not components collected) were successfully completed by your institution in each of the following categories? Do not count low volume or incomplete procedures. (\*indicates a required field)

|  |  |  |  |
| --- | --- | --- | --- |
| Apheresis red blood cells only\* | |  | | --- | |  | | Number of collection procedures | |
| Apheresis platelets only\* | |  | | --- | |  | | Number of collection procedures | |
| Apheresis plasma only\* | |  | | --- | |  | | Number of collection procedures | |
| Apheresis red blood cells AND platelets\* | |  | | --- | |  | | Number of collection procedures | |
| Apheresis red blood cells AND plasma\* | |  | | --- | |  | | Number of collection procedures | |
| Apheresis platelets AND plasma\* | |  | | --- | |  | | Number of collection procedures | |
| Apheresis red blood cells AND platelets AND plasma\* | |  | | --- | |  | | Number of collection procedures | |
| Total apheresis collection procedures (including all types of apheresis collections)\* | |  | | --- | |  | | Number of collection procedures | |

1For example, an apheresis collection that resulted in platelet and plasma units should be counted as a single platelet collection OR a single plasma collection, not counted under both.

B2c. During 2021, from the **whole blood** collection procedures recorded in **B2a**, how many units of **whole blood for distribution as whole blood** were prepared by your institution in each of the following categories?

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic whole blood | |  | | --- | |  | | Number of units prepared | |
| Autologous whole blood | |  | | --- | |  | | Number of units prepared | |
| Directed whole blood | |  | | --- | |  | | Number of units prepared | |
| Total whole blood | |  | | --- | |  | | Number of units prepared | |

B2d. During 2021, from the **whole blood** collection procedures recorded in **B2a**, how many **red blood cell units** were prepared (i.e., separated from a unit of whole blood) by your institution in each of the following categories (\* indicates a required field)?

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic whole blood-derived red blood cell units\* | |  | | --- | |  | | Number of units prepared | |
| Autologous whole blood-derived red blood cell units\* | |  | | --- | |  | | Number of units prepared | |
| Directed whole blood-derived red blood cell units\* | |  | | --- | |  | | Number of units prepared | |
| Total whole blood-derived red blood cell units\* | |  | | --- | |  | | Number of units prepared | |

B2e. During 2021, from the **apheresis** collection procedures recorded in **B2b**, how many **red blood cell units** were collected by your institution in each of the following categories? (\*indicates a required field)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic apheresis red blood cell units\* | |  | | --- | |  | | Number of units collected | |
| Autologous apheresis red blood cell units\* | |  | | --- | |  | | Number of units collected | |
| Directed apheresis red blood cell units\* | |  | | --- | |  | | Number of units collected | |
| Total apheresis red blood cell units\* | |  | | --- | |  | | Number of units collected | |

B2f. During 2021, from the **whole blood** collection procedures recorded in **B2a**, how many **individual platelet units** were prepared (i.e., separated from a unit of whole blood) by your institution?

|  |  |  |  |
| --- | --- | --- | --- |
| Individual whole blood-derived platelet units1 | |  | | --- | |  | | Number of units prepared | |

1For example, if your institution pooled 5 individual platelet units per pool and manufactured 1000 pools of platelets, 5000 individual whole blood-derived platelet units should be recorded.

B2g. During 2021, from the **apheresis** collection procedures recorded in **B2b**, how many **platelet units** werecollected by your institution in each of the following categories? (\* indicates a required field)?

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic apheresis platelet units | |  | | --- | |  | | Number of units collected | |
| Single | |  | | --- | |  | | Number of units collected | |
| Double1 | |  | | --- | |  | | Number of units collected | |
| Triple1 | |  | | --- | |  | | Number of units collected | |
| Directed apheresis platelet units | |  | | --- | |  | | Number of units collected | |
| Total apheresis platelet units\* | |  | | --- | |  | | Number of units collected | |

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

B2h. During 2021, what was the average number of individual platelet units included per pre-storage pool of whole blood-derived platelets?

|  |
| --- |
|  |
| Free text, numeric values only |

B2i. During 2021, from the **apheresis** collection procedures recorded in **B2b**, how many **plasma units** were collected by your institution?

|  |  |  |  |
| --- | --- | --- | --- |
| Total apheresis plasma units | |  | | --- | |  | | Number of units collected | |

B2j.During 2021, from the **whole blood** collection procedures recorded in **B2a**, how many **plasma units** were successfully prepared (i.e., separated from a unit of whole blood) by your institution?

|  |  |  |  |
| --- | --- | --- | --- |
| Total whole blood-derived plasma units | |  | | --- | |  | | Number of units prepared | |

B2k. During 2021, how many units of **group AB plasma** were collected by your institution? (Count apheresis plus whole blood-derived units)

|  |  |  |  |
| --- | --- | --- | --- |
| Group AB plasma | |  | | --- | |  | | Number of units collected | |

B2l. During 2021, how many units of **COVID-19 convalescent plasma** were collected by your institution? (Count apheresis plus whole blood-derived units)

|  |  |  |  |
| --- | --- | --- | --- |
| COVID-19 convalescent plasma1 | |  | | --- | |  | | Number of units collected | |

1 Convalescent plasma collected from individuals who have recovered from COVID-19.

B2m. During 2021, from the **whole blood** collection procedures recorded in **B2a**, how many individual **cryoprecipitated AHF units1** were successfully prepared by your institution? (\* indicates a required field)

|  |  |  |  |
| --- | --- | --- | --- |
| Individual cryoprecipitated AHF units\* | |  | | --- | |  | | Number of units prepared | |

1For example, if your institution pooled 5 individual cryoprecipitated AHF units per pool and collected 1000 units, 5000 individual cryoprecipitated AHF units should be recorded. If your institution pooled 10 individual cryoprecipitated AHF units per pool and collected 1000 pools, 10,000 individual cryoprecipitated AHF units should be recorded.

B2n. During 2021, what was the average number of cryoprecipitated AHF units per whole blood-derived cryoprecipitated AHF pool?

|  |
| --- |
|  |
| Free text, numeric values only |

B2o. During 2021, how many **granulocytes** were **collected** by your institution?

|  |  |  |  |
| --- | --- | --- | --- |
| Granulocyte units | |  | | --- | |  | | Number of units collected | |

B3. During 2021, for each product, what was the total number of **allogeneic units** (non-directed and directed combined) **discarded** for: (\*indicates a required field)

Reactive infectious disease testing results

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood donation1\* | |  | | --- | |  | | Number of units discarded | |
| Apheresis red blood cells\* | |  | | --- | |  | | Number of units discarded | |
| Apheresis plasma\* | |  | | --- | |  | | Number of units discarded | |
| Apheresis platelets\* | |  | | --- | |  | | Number of units discarded | |

All other reasons (e.g., low volume, broken bag, etc.) **not** including outdated components

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood donation1\* | |  | | --- | |  | | Number of units discarded | |
| Apheresis red blood cells\* | |  | | --- | |  | | Number of units discarded | |
| Apheresis plasma\* | |  | | --- | |  | | Number of units discarded | |
| Apheresis platelets\* | |  | | --- | |  | | Number of units discarded | |

1If any or all components of a whole blood-derived collection are discarded, please record it as one unit. For example, if either an entire whole blood collection or both the plasma and the red blood cells prepared from a single whole blood collection are discarded, it is counted as one unit discarded. If the plasma from a whole blood donation was discarded (i.e., the red blood cells from same donation is successfully distributed), it is also counted as one unit discarded.

B4a. During 2021, how many people **presented to donate** including successful and unsuccessful donations, and those who deferred (\* indicates required field)?

|  |  |  |  |
| --- | --- | --- | --- |
| Male | |  | | --- | |  | | Number presenting to donate | |
| Female | |  | | --- | |  | | Number presenting to donate | |
| Prefer other self-description1 | |  | | --- | |  | | Number presenting to donate | |
| Total\* | |  | | --- | |  | | Number presenting to donate | |

1“Prefer other self-description” includes anyone who does not identify as male or female and should be included as part of the total donors presenting to donate.

B4b. Please list categories which may be classified under “prefer other self-description”:

|  |
| --- |
|  |
| Sex or Gender Identities |

B5. During 2021, how many **donors** were **deferred** for the following reasons1:

Low hemoglobin or low hematocrit

|  |  |  |  |
| --- | --- | --- | --- |
| Male | |  | | --- | |  | | Number of donors deferred | |
| Female | |  | | --- | |  | | Number of donors deferred | |
| Prefer other self-description2 | |  | | --- | |  | | Number of donors deferred | |
| Total | |  | | --- | |  | | Number of donors deferred | |

Medication use

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

Pulse

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

Blood pressure

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

High-risk behavior (restricted to MSM)

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

High-risk behaviors (all other behaviors)

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

Travel and/or residence

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

Tattoo/piercing/scarring

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

Other non-medical reasons

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

Total presenting donors deferred for any reason

|  |  |  |  |
| --- | --- | --- | --- |
| Male | |  | | --- | |  | | Number of donors deferred | |
| Female | |  | | --- | |  | | Number of donors deferred | |
| Prefer other self-description2 | |  | | --- | |  | | Number of donors deferred | |

|  |  |  |  |
| --- | --- | --- | --- |
| Total | |  | | --- | |  | | Number of donors deferred | |

1If donor was deferred for multiple reasons, count all.

2“Prefer other self-description” includes anyone who does not identify as male or female and should be included as part of the total donors presenting to donate.

B6. During 2021, how many of the following types of **donors** did your institution successfully collect blood products from and how many **donations** did they make?

|  |  |  |  |
| --- | --- | --- | --- |
| First-time allogeneic donors | |  | | --- | |  | | Number of donors | |
| Donations from first time allogeneic donors | |  | | --- | |  | | Number of donations | |
| Repeat allogeneic donors (count a single repeat donor only once) | |  | | --- | |  | | Number of donors | |
| Donations from repeat allogeneic donors | |  | | --- | |  | | Number of donations | |
| Directed donors | |  | | --- | |  | | Number of donors | |
| Autologous donors | |  | | --- | |  | | Number of donors | |

B7. During 2021, how many **allogeneic** **whole blood and apheresis red blood cell donations** combined were successfully collected from the following donor age groups?1

|  |  |  |  |
| --- | --- | --- | --- |
| Donors aged 15 years | |  | | --- | |  | | Number of donations | |
| Donors aged 16 years | |  | | --- | |  | | Number of donations | |
| Donors aged 17 years | |  | | --- | |  | | Number of donations | |
| Donors aged 18 years | |  | | --- | |  | | Number of donations | |
| Donors aged 19-24 years | |  | | --- | |  | | Number of donations | |
| Donors aged 25-44 years | |  | | --- | |  | | Number of donations | |
| Donors aged 45-64 years | |  | | --- | |  | | Number of donations | |
| Donors aged 65-74 years | |  | | --- | |  | | Number of donations | |
| Donors aged ≥75 years | |  | | --- | |  | | Number of donations | |
|  |  |

1Combine whole blood donations and apheresis red blood cell donations.

B8. During 2021, how many **donations of allogeneic whole blood and red blood cell units** were successfully collected from donors who identify as1:

|  |  |  |  |
| --- | --- | --- | --- |
| Hispanic or Latino | |  | | --- | |  | | Number of donations | |
| Black or African American | |  | | --- | |  | | Number of donations | |
| Asian | |  | | --- | |  | | Number of donations | |
| Native Hawaiian or Pacific Islander | |  | | --- | |  | | Number of donations | |
| American Indian or Alaska Native | |  | | --- | |  | | Number of donations | |

1 More than one category can be selected for a single donor.

B9. How many **severe donor-related adverse events**1 were experienced by donors during 2021?

Whole blood collections

|  |  |  |  |
| --- | --- | --- | --- |
| All donors | |  | | --- | |  | | Number of severe reactions | |
| Aged ≤18 years | |  | | --- | |  | | Number of severe reactions | |
| Aged ≥19 years old | |  | | --- | |  | | Number of severe reactions | |

Apheresis collections

|  |  |  |  |
| --- | --- | --- | --- |
| All donors | |  | | --- | |  | | Number of severe reactions | |
| Aged ≤18 years | |  | | --- | |  | | Number of severe reactions | |
| Aged ≥19 years | |  | | --- | |  | | Number of severe reactions | |

1 AABB Donor Hemovigilance Working Group grade 2 or higher (e.g., adverse event with duration > 2 weeks; resulted in limitation in activities of daily living; or required transport to emergency department, sutures, or antibiotics). See https://www.aabb.org/docs/default-source/default-document-library/resources/severity-grading-tool-for-donor-adverse-events.pdf?sfvrsn=ff563263\_4. B10a. During 2021, how many units of **whole blood intended for transfusion as whole blood** were imported, distributed, and outdated by your institution? (\*indicates required fields)

Imported whole blood intended for transfusion as whole blood

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units imported | |
| Autologous | |  | | --- | |  | | Number of units imported | |
| Directed | |  | | --- | |  | | Number of units imported | |
| Total\* | |  | | --- | |  | | Number of units imported | |

Distributed whole blood intended for transfusion as whole blood1 (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units distributed | |
| Autologous | |  | | --- | |  | | Number of units distributed | |
| Directed | |  | | --- | |  | | Number of units distributed | |
| Total\* | |  | | --- | |  | | Number of units distributed | |

Outdated whole blood intended for transfusion as whole blood (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units outdated | |
| Autologous | |  | | --- | |  | | Number of units outdated | |
| Directed | |  | | --- | |  | | Number of units outdated | |
| Total\* | |  | | --- | |  | | Number of units outdated | |

1Units distributed more than once (e.g., because they have been returned) should be counted only once.

B10b. During 2021, how many units of **whole blood-derived red blood cells** were imported, distributed, and outdated by your institution? (\*indicates a required field)

Imported whole blood-derived red blood cells

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units imported | |
| Allogeneic group O+ | |  | | --- | |  | | Number of units imported | |
| Allogeneic group O- | |  | | --- | |  | | Number of units imported | |
| Autologous | |  | | --- | |  | | Number of units imported | |
| Directed | |  | | --- | |  | | Number of units imported | |
| Total\* | |  | | --- | |  | | Number of units imported | |

Distributed whole blood-derived red blood cells1 (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units distributed | |
| Allogeneic group O+ | |  | | --- | |  | | Number of units distributed | |
| Allogeneic group O- | |  | | --- | |  | | Number of units distributed | |
| Autologous | |  | | --- | |  | | Number of units distributed | |
| Directed | |  | | --- | |  | | Number of units distributed | |
| Total\* | |  | | --- | |  | | Number of units distributed | |

Outdated whole blood-derived red blood cells (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units outdated | |
| Allogeneic group O+ | |  | | --- | |  | | Number of units outdated | |
| Allogeneic group O- | |  | | --- | |  | | Number of units outdated | |
| Autologous | |  | | --- | |  | | Number of units outdated | |
| Directed | |  | | --- | |  | | Number of units outdated | |
| Total\* | |  | | --- | |  | | Number of units outdated | |

1Units distributed more than once (e.g., because they have been returned) should be counted only once.

B10c. During 2021, how many units of **apheresis red blood cells** were imported, distributed, and outdated by your institution? (\* indicates required fields)

Imported apheresis red blood cells

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units imported | |
| Allogeneic group O+ | |  | | --- | |  | | Number of units imported | |
| Allogeneic group O- | |  | | --- | |  | | Number of units imported | |
| Autologous | |  | | --- | |  | | Number of units imported | |
| Directed | |  | | --- | |  | | Number of units imported | |
| Total\* | |  | | --- | |  | | Number of units imported | |

Distributed apheresis red blood cells1 (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units distributed | |
| Allogeneic group O+ | |  | | --- | |  | | Number of units distributed | |
| Allogeneic group O- | |  | | --- | |  | | Number of units distributed | |
| Autologous | |  | | --- | |  | | Number of units distributed | |
| Directed | |  | | --- | |  | | Number of units distributed | |
| Total\* | |  | | --- | |  | | Number of units distributed | |

Outdated apheresis red blood cells (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units outdated | |
| Allogeneic group O+ | |  | | --- | |  | | Number of units outdated | |
| Allogeneic group O- | |  | | --- | |  | | Number of units outdated | |
| Autologous | |  | | --- | |  | | Number of units outdated | |
| Directed | |  | | --- | |  | | Number of units outdated | |
| Total\* | |  | | --- | |  | | Number of units outdated | |

1Units distributed more than once (e.g., because they have been returned) should be counted only once.

B10d. During 2021, how many units of **apheresis platelets** were imported, distributed, and outdated by your institution? (\*indicates a required field)

Imported apheresis platelets

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units imported | |
| Directed | |  | | --- | |  | | Number of units imported | |
| Total\* | |  | | --- | |  | | Number of units imported | |

Distributed apheresis platelets (including imported units)1 (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units distributed | |
| Single collection | |  | | --- | |  | | Number of units distributed | |
| Double collection 1 | |  | | --- | |  | | Number of units distributed | |
| Triple collection 1 | |  | | --- | |  | | Number of units distributed | |
| Directed | |  | | --- | |  | | Number of units distributed | |
| Total\* | |  | | --- | |  | | Number of units distributed | |

Outdated apheresis platelets (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Allogeneic | |  | | --- | |  | | Number of units outdated | |
| Directed | |  | | --- | |  | | Number of units outdated | |
| Total\* | |  | | --- | |  | | Number of units outdated | |

1Units distributed more than once (e.g., because they have been returned) should be counted only once.

B10e. During 2021, how many units of **whole blood-derived** **platelets** were imported, distributed, and outdated by your institution? (\*indicates a required field)

Imported whole blood-derived platelets

|  |  |  |  |
| --- | --- | --- | --- |
| Individual\* | |  | | --- | |  | | Number of units imported | |
| Platelet pools1 | |  | | --- | |  | | Number of pools imported | |

Distributed whole blood-derived platelets2 (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Individual\* | |  | | --- | |  | | Number of units distributed | |
| Platelet pools1 | |  | | --- | |  | | Number of pools distributed | |

Outdated whole blood-derived platelets (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Individual\* | |  | | --- | |  | | Number of units outdated | |
| Platelet pools1 | |  | | --- | |  | | Number of pools outdated | |

1Number of platelet pools prepared from whole blood collections. Do not include the same platelet units in both the individual unit and platelet pool counts. For this question, individual units of whole blood-derived platelets and platelet pools are mutually exclusive.

2Units distributed more than once (e.g., because they have been returned) should be counted only once.

B10f. During 2021, how many units of **apheresis plasma** were imported, distributed, and outdated by your institution? (\*indicates a required field)

Imported apheresis plasma

|  |  |  |  |
| --- | --- | --- | --- |
| Total\* | |  | | --- | |  | | Number of units imported | |

Distributed apheresis plasma1 (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| FFP2 | |  | | --- | |  | | Number of units distributed | |
| PF243 | |  | | --- | |  | | Number of units distributed | |
| PF24RT244 | |  | | --- | |  | | Number of units distributed | |
| Liquid | |  | | --- | |  | | Number of units distributed | |
| Jumbo FFP (>400 mL)5 | |  | | --- | |  | | Number of units distributed | |
| COVID-19 convalescent plasma6  Total\* | |  | | --- | |  | | Number of units distributed | |  | | Number of units distributed | |

Outdated apheresis plasma (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Total\* | |  | | --- | |  | | Number of units outdated | |

1Units distributed more than once (e.g., because they have been returned) should be counted only once.

2Fresh frozen plasma (FFP): plasma frozen at -18C or colder within 8 hours of collection.

3Plasma frozen within 24 hours of phlebotomy (PF24): plasma separated from the blood of an individual donor and placed at -18C or colder within 24 hours of collection from the donor.

4Plasma 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 -18C or colder.

5Plasma, Jumbo: FFP having a volume greater than 400 mL.

6Convalescent plasma collected from individuals who have recovered from COVID-19, including units collected under the EUA, units collected and distributed for clinical trials and units disseminated under emergency Investigational New Drug (eIND) application.

B10g. During 2021, how many units of **whole blood-derived plasma** were imported, distributed, and outdated by your institution? (\*indicates a required field)

Imported whole blood-derived plasma

|  |  |  |  |
| --- | --- | --- | --- |
| Total\* | |  | | --- | |  | | Number of units imported | |

Distributed whole blood-derived plasma1 (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| FFP2 | |  | | --- | |  | | Number of units distributed | |
| PF243 | |  | | --- | |  | | Number of units distributed | |
| Cryoprecipitate reduced | |  | | --- | |  | | Number of units distributed | |
| Liquid | |  | | --- | |  | | Number of units distributed | |
| PF24RT24  COVID-19 convalescent plasma  Total\* | |  | | --- | |  | | Number of units distributed |  |  | | --- | |  | | Number of units distributed |  |  | | --- | |  | | Number of units distributed | |

Outdated whole blood-derived plasma (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Total\* | |  | | --- | |  | | Number of units outdated | |

1Units distributed more than once (e.g., because they have been returned) should be counted only once.

2Fresh frozen plasma (FFP): plasma frozen at -18C or colder within 8 hours of collection.

3Plasma frozen within 24 hours of phlebotomy (PF24): plasma separated from the blood of an individual donor and placed at -18C or colder within 24 hours of collection from the donor.

B10h. During 2021, how many units of group AB plasma were distributed and outdated by your institution? (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Units distributed1 | |  | | --- | |  | | Number of units | |
| Units outdated | |  | | --- | |  | | Number of units | |

1Units distributed more than once (e.g., because they have been returned) should be counted only once.

B10i. During 2021, how many units of **cryoprecipitated AHF** were imported, distributed, and outdated by your institution? (\*indicates a required field)

Imported cryoprecipitated AHF1

|  |  |  |  |
| --- | --- | --- | --- |
| Individual units\* | |  | | --- | |  | | Number of units imported | |
| Cryoprecipitated AHF pools1 | |  | | --- | |  | | Number of pools imported | |

Distributed cryoprecipitated AHF 2 (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Individual units\* | |  | | --- | |  | | Number of units distributed | |
| Cryoprecipitated AHF pools1 | |  | | --- | |  | | Number of pools distributed | |

Outdated cryoprecipitated AHF (collected and imported)

|  |  |  |  |
| --- | --- | --- | --- |
| Individual units\* | |  | | --- | |  | | Number of units outdated | |
| Cryoprecipitated AHF pools1 | |  | | --- | |  | | Number of pools outdated | |

1Number of cryoprecipitated AHF pools prepared from whole blood collections. Do not include the same cryoprecipitated AHF units in both the individual unit and cryoprecipitated AHF pool counts. For this question, individual units of cryoprecipitated AHF and cryoprecipitated AHF pools are mutually exclusive.

2 Units distributed more than once (e.g., because they have been returned) should be counted only once.

B10j. During 2021, how many units of **granulocytes** were imported, distributed, and outdated by your institution? (\*indicates a required field)

|  |  |  |  |
| --- | --- | --- | --- |
| Imported granulocyte units\* | |  | | --- | |  | | Number of units imported | |
| Distributed granulocyte units1\* (collected and imported) | |  | | --- | |  | | Number of units distributed | |
| Outdated granulocyte units\* (collected and imported) | |  | | --- | |  | | Number of units outdated | |

1 Units distributed more than once (e.g., because they have been returned) should be counted only once.

B11a. During 2021, did your institution prepare apheresis platelets using platelet additive solution?

* Yes
* No (if ‘No’, skip to B12)

B11b. During 2021, how many apheresis platelet units were prepared using platelet additive solution?

|  |
| --- |
|  |
| Free text, numeric values only |

B12. During 2021, for each of the following categories, how many units did your institution collect, prepare, or modify to achieve **pre-storage** **leukoreduction**?

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood units | |  | | --- | |  | | Number of units leukoreduced | |
| Whole blood-derived RBC units | |  | | --- | |  | | Number of units leukoreduced | |
| Apheresis RBC units | |  | | --- | |  | | Number of units leukoreduced | |
| Whole blood-derived platelet units | |  | | --- | |  | | Number of units leukoreduced | |

B13. Does your facility use hematopoietic growth factor mobilization for granulocyte collections?

* + Yes
  + No
  + Not applicable because granulocytes are not collected

B14a. Does your institution type red blood cell antigens using a molecular assay (e.g., genotyping)?

* + Yes
  + No (if No, skip to B15)

B14b. How many red blood cell donors were typed using a molecular assay (e.g., genotyping)?

|  |
| --- |
|  |
| Number of donors |

B15a. During 2021, which of the following bacterial risk control strategies for platelets did your institution use? (select all that apply; if none are selected, skip to B16)

* Primary culture performed no sooner than 24 hours
* Large volume, delayed sampling no sooner than 36 hours
* Large volume, delayed sampling no sooner than 48 hours
* Pathogen reduction technology

B15b. During 2021, how many apheresis platelet units were distributed that were subjected to the following bacterial risk control strategies for platelets?

|  |  |  |  |
| --- | --- | --- | --- |
| Primary culture performed no sooner than 24 hours | |  | | --- | |  | | Number of units distributed | |
| Large volume, delayed sampling no sooner than 36 hours | |  | | --- | |  | | Number of units distributed | |
| Large volume, delayed sampling no sooner than 48 hours | |  | | --- | |  | | Number of units distributed | |
| Pathogen reduction technology | |  | | --- | |  | | Number of units distributed | |

B16. During 2021, how many blood drives were cancelled?

|  |
| --- |
|  |
| Number of blood drives |

B17. During 2021, did your facility experience a shortage of any blood products?

* + Yes
  + No

Note: The following questions were added specifically to gain information on the impact of COVID-19 on the blood supply in **2020**.

Supplemental Section B: Impact of COVID-19 Pandemic on Blood Collection and Distribution in 2020

SB1. During each month in 2020, how many **whole blood collection procedures** were successfully completed by your institution? Do not count low-volume or incomplete procedures.

|  |  |  |  |
| --- | --- | --- | --- |
| January | |  | | --- | |  | | Number of collection procedures | |
| February | |  | | --- | |  | | Number of collection procedures | |
| March | |  | | --- | |  | | Number of collection procedures | |
| April | |  | | --- | |  | | Number of collection procedures | |
| May | |  | | --- | |  | | Number of collection procedures | |
| June | |  | | --- | |  | | Number of collection procedures | |
| July | |  | | --- | |  | | Number of collection procedures | |
| August | |  | | --- | |  | | Number of collection procedures | |
| September | |  | | --- | |  | | Number of collection procedures | |
| October | |  | | --- | |  | | Number of collection procedures | |
| November | |  | | --- | |  | | Number of collection procedures | |
| December | |  | | --- | |  | | Number of collection procedures | |

SB2. During each month in 2020, how many units of **apheresis platelets** were distributed by your institution?

|  |  |  |  |
| --- | --- | --- | --- |
| January | |  | | --- | |  | | Number of units distributed | |
| February | |  | | --- | |  | | Number of units distributed | |
| March | |  | | --- | |  | | Number of units distributed | |
| April | |  | | --- | |  | | Number of units distributed | |
| May | |  | | --- | |  | | Number of units distributed | |
| June | |  | | --- | |  | | Number of units distributed | |
| July | |  | | --- | |  | | Number of units distributed | |
| August | |  | | --- | |  | | Number of units distributed | |
| September | |  | | --- | |  | | Number of units distributed | |
| October | |  | | --- | |  | | Number of units distributed | |
| November | |  | | --- | |  | | Number of units distributed | |
| December | |  | | --- | |  | | Number of units distributed | |

SB3. During 2020, did your institution collect convalescent plasma from donors?

* Yes
* No (if ‘No’, end of section supplemental section B)

SB4. During all months of 2020, how many **COVID-19 convalescent plasma collection units** were collected by your institution? Do not count low-volume or incomplete procedures. (\*indicates a required field)

|  |  |  |  |
| --- | --- | --- | --- |
| COVID-19 convalescent plasma1 | |  | | --- | |  | | Number of units | |

1 Convalescent plasma collected from individuals who have recovered from COVID-19

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 | |  | | --- | |  | |  | |
| Work Phone number | |  | | --- | |  | |  | |
| Work 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](mailto:nbcus@cdc.gov).)

* + Yes
  + No (if ‘No’, end of section)

C2a. During 2021, did your facility transfuse **whole blood**? (i.e., whole blood that has not been separated into red blood cells, plasma, and/or platelets)?\* (indicates a required question)

* Yes
* No (if ‘No’, skip to C3a)

C2b. During 2021, for **allogeneic whole blood** (i.e. that has not been separated into red blood cell, plasma, and/or platelets), how many units did your institution transfuse, how many recipients were transfused, and how many units were outdated? (\* indicates required fields)

Allogeneic whole blood

|  |  |  |  |
| --- | --- | --- | --- |
| Total units transfused\* | |  | | --- | |  | | Number of units transfused | |
| Total number of recipients | |  | | --- | |  | | Number of recipients | |
| Total outdated units\* | |  | | --- | |  | | Number of units outdated | |

C3a. During 2021, for **allogeneic** **red blood cells**, how many units did your institution transfuse, how many recipients were transfused, and how many units were outdated? (\* indicates required fields)

Allogeneic red blood cells (include all blood groups)

|  |  |  |  |
| --- | --- | --- | --- |
| Total units transfused\* | |  | | --- | |  | | Number of units transfused | |
| Total number of recipients | |  | | --- | |  | | Number of recipients | |
| Total outdated units\* | |  | | --- | |  | | Number of units outdated | |

C3b. During 2021, for **group O+ and O- allogenic red blood cells**, how many units did your institution transfuse and how many units were outdated?

Allogeneic Group O+ red blood cells

|  |  |  |  |
| --- | --- | --- | --- |
| Total units transfused | |  | | --- | |  | | Number of units transfused | |
| Total outdated units | |  | | --- | |  | | Number of units outdated | |

Allogeneic Group O- red blood cells

|  |  |  |  |
| --- | --- | --- | --- |
| Total units transfused | |  | | --- | |  | | Number of units transfused | |
| Total outdated units | |  | | --- | |  | | Number of units outdated | |

C4. During 2021, for **directed and autologous allogenic whole blood and red blood cells**, how many units did your institution transfuse, how many recipients were transfused, and how many units were outdated? (\* indicates a required field)

Directed whole blood units1

|  |  |  |  |
| --- | --- | --- | --- |
| Number of units transfused to intended recipient\* | |  | | --- | |  | | Number of units transfused | |
| Number of recipients | |  | | --- | |  | | Number of recipients | |
| Outdated units\* | |  | | --- | |  | | Number of units outdated | |

Directed red blood cell units1

|  |  |  |  |
| --- | --- | --- | --- |
| Number of units transfused to intended recipient\* | |  | | --- | |  | | Number of units transfused | |
| Number of recipients | |  | | --- | |  | | Number of recipients | |
| Outdated units\* | |  | | --- | |  | | Number of units outdated | |

Autologous whole blood units

|  |  |  |  |
| --- | --- | --- | --- |
| Number of units transfused to intended recipient\* | |  | | --- | |  | | Number of units transfused | |
| Number of recipients | |  | | --- | |  | | Number of recipients | |
| Outdated units\* | |  | | --- | |  | | Number of units outdated | |

Autologous red blood cell units

|  |  |  |  |
| --- | --- | --- | --- |
| Number of units transfused to intended recipient\* | |  | | --- | |  | | Number of units transfused | |
| Number of recipients | |  | | --- | |  | | Number of recipients | |
| Outdated units\* | |  | | --- | |  | | Number of units outdated | |

1Directed units are those which have been donated by a family member or friend of the patient as a result of a patient request to be transfused with blood from a specific donor.

C5a. During 2021, how many units of each of the following components did your institution **transfuse** andhow many units were **outdated** while on your shelf including units transfused to pediatric patients? (\* indicates required fields)

Transfusions

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood-derived platelets (pre-storage pooled and individual platelet concentrates expressed as pooled equivalents)1\* | |  | | --- | |  | | Number of units transfused | |
| Apheresis platelet units 2\* | |  | | --- | |  | | Number of units transfused | |
| Directed platelets to intended recipients3 | |  | | --- | |  | | Number of units transfused | |

Outdates

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood-derived platelets (pre-storage pooled and individual platelet concentrates expressed as pooled equivalents)4\* | |  | | --- | |  | | Number of units outdated | |
| Apheresis platelet units (full unit)5\* | |  | | --- | |  | | Number of units outdated | |
| Directed platelets to intended recipients3 | |  | | --- | |  | | Number of units outdated | |

1Number of whole blood-derived platelet pools transfused. If any individual units of whole blood-derived platelets were transfused, convert these to a pooled equivalent. For example, if 200 platelet pools and 100 individual whole blood-derived platelet units were transfused and 5 individual platelet units are included per pool, then 220 units (200 + [100/5]) should be recorded.

2The number of apheresis platelet units transfused. In contrast to units of whole blood-derived platelets, no conversion calculation is needed.

3Directed units are those which have been donated by a family member or friend of the patient as a result of a patient request to be transfused with blood from a specific donor.

4Number of whole blood-derived platelet pools outdated. If any individual units of whole blood-derived platelets were outdated, convert these to a pooled equivalent. For example, if 200 platelet pools and 100 individual whole blood-derived platelet units were outdated and 5 individual platelet units are included per pool, then 220 units (200 + [100/5]) should be recorded. 5The number of apheresis platelet units outdated. In contrast to units of whole blood-derived platelets, no conversion calculation is needed.

C5b. During 2021, how many units of plasma did your institution **transfuse** and how many units were **outdated** while on your shelf including units transfused to pediatric patients? (\* indicates required fields)

Transfusions

|  |  |  |  |
| --- | --- | --- | --- |
| Total Plasma\* | |  | | --- | |  | | Number of units transfused | |

Outdates

|  |  |  |  |
| --- | --- | --- | --- |
| Total Plasma\* | |  | | --- | |  | | Number of units outdated | |

C5c. Among plasma units included in the response to question C5b, during 2021, 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?

Transfusions

|  |  |  |  |
| --- | --- | --- | --- |
| Thawed plasma1 (i.e., used within 1-5 days of thaw) | |  | | --- | |  | | Number of units transfused | |
| Liquid plasma (i.e., never frozen) | |  | | --- | |  | | Number of units transfused | |
| Group AB plasma | |  | | --- | |  | | Number of units transfused | |
| COVID-19 convalescent plasma | |  | | --- | |  | | Number of units transfused | |

Outdates

|  |  |  |  |
| --- | --- | --- | --- |
| Thawed plasma1 (i.e., used within 1-5 days of thaw) | |  | | --- | |  | | Number of units outdated | |
| Liquid plasma (i.e., never frozen) | |  | | --- | |  | | Number of units outdated | |
| Group AB plasma | |  | | --- | |  | | Number of units outdated | |
| COVID-19 convalescent plasma | |  | | --- | |  | | Number of units outdated | |

1 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.

C5d. During 2021, 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)

Transfusions

|  |  |  |  |
| --- | --- | --- | --- |
| Cryoprecipitated AHF individual units transfused\*1 | |  | | --- | |  | | Number of units transfused | |
| Cryoprecipitated AHF transfused pool size\* | |  | | --- | |  | | Size of pool | |
| Granulocytes units transfused\* | |  | | --- | |  | | Number of units transfused | |

Outdates

|  |  |  |  |
| --- | --- | --- | --- |
| Cryoprecipitated AHF individual units outdated\*1 | |  | | --- | |  | | Number of units outdated | |
| Granulocytes units outdated\* | |  | | --- | |  | | Number of units outdated | |

1Number of individual cryoprecipitated AHF units transfused. Please convert pools of cryoprecipitated AHF to individual units. For example, if 200 pools of cryoprecipitated AHF were transfused and 5 individual units were included per pool, please record 1000 units (200 pools \* 5 units/pool).

C6a. During 2021, did your facility transfuse blood to **pediatric** or **neonatal** patients? (Select all that apply)

* Yes, pediatric (>4 months old)
* Yes, neonatal (<=4 months old)
* No (skip to C9a)

C6b. Indicate the total number of units **transfused** to **pediatric** and **neonatal patients** during 2021.

**Pediatric Transfusions**

Number of units in whole or in part transfused for pediatric (>4 months old) patients1

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood | |  | | --- | |  | | Number of units transfused | |
| Red blood cells | |  | | --- | |  | | Number of units transfused | |
| Plasma | |  | | --- | |  | | Number of units transfused | |
| Apheresis platelets | |  | | --- | |  | | Number of units transfused | |
| Whole blood-derived platelets | |  | | --- | |  | | Number of units transfused | |
| Cryoprecipitated AHF | |  | | --- | |  | | Number of units transfused | |

Total number of pediatric (>4 months old) recipients that received the following blood components

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood | |  | | --- | |  | | Number of recipients | |
| Red blood cells | |  | | --- | |  | | Number of recipients | |
| Plasma | |  | | --- | |  | | Number of recipients | |
| Apheresis platelets | |  | | --- | |  | | Number of recipients | |
| Whole blood-derived platelets | |  | | --- | |  | | Number of recipients | |
| Cryoprecipitated AHF | |  | | --- | |  | | Number of recipients | |

**Neonatal Transfusions**

Number of units in whole or in part transfused for neonatal (≤4months old) patients1

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood | |  | | --- | |  | | Number of units transfused | |
| Red blood cells | |  | | --- | |  | | Number of units transfused | |
| Plasma | |  | | --- | |  | | Number of units transfused | |
| Apheresis platelets | |  | | --- | |  | | Number of units transfused | |
| Whole blood-derived platelets | |  | | --- | |  | | Number of units transfused | |
| Cryoprecipitated AHF | |  | | --- | |  | | Number of units transfused | |

Total number of neonatal (≤4months old) recipients that received the following blood components

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood | |  | | --- | |  | | Number of recipients | |
| Red blood cells | |  | | --- | |  | | Number of recipients | |
| Plasma | |  | | --- | |  | | Number of recipients | |
| Apheresis platelets | |  | | --- | |  | | Number of recipients | |
| Whole blood-derived platelets | |  | | --- | |  | | Number of recipients | |
| Cryoprecipitated AHF | |  | | --- | |  | | Number of recipients | |

1This should be a subset of data reported in the previous two questions. Pediatric aliquots should be recorded in standard unit equivalents. For example, if the standard red blood cell unit volume is 500mL and the volume of pediatric aliquots are 50mL (10 pediatric aliquots per standard unit), then record 150 pediatric aliquot transfusions as 15 units.

C6c. For **neonatal** patients, which of the following do you use for aliquots? (check all that apply)

* Aliquots using syringes from full-size unit
* Pedipacks

C6d. For **neonatal** patients, does your facility attempt to use aliquots from the same full-size unit for every transfusion?

* Yes
* No

C7a. Which of the following methods does your facility use to irradiate components? (check all that apply)

* Cesium
* X-Ray
* Unknown, irradiation performed by another facility

C7b. Indicate how many **irradiated** (by any method) units for each of the following components your institution transfused in 2021. For pediatrics, use the number of adult equivalent units used in whole or part.1 For components that are irradiated and leukoreduced, include these in the count for both entries.

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood units | |  | | --- | |  | | Number of units irradiated | |
| Red blood cell units | |  | | --- | |  | | Number of units irradiated | |
| Apheresis platelet units | |  | | --- | |  | | Number of units irradiated | |
| Whole blood-derived platelet units | |  | | --- | |  | | Number of units irradiated | |
|  |  |

1Pediatric aliquots should be recorded in standard unit equivalents. For example, if the standard red blood cell unit volume is 500mL and the volume of pediatric aliquots are 50mL (10 pediatric aliquots per standard unit), then record 150 pediatric aliquot transfusions as 15 units. If only part of a standard unit is used and the rest is discarded, please record it as 1 standard unit.

C7c. Indicate how many **leukoreduced** units for each of the following components your institution transfused during 2021. For pediatrics, use the number of adult equivalent units used in whole or part.1 For components that are irradiated and leukoreduced, include these in the count for both entries.

Before Storage

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood units | |  | | --- | |  | | Number of units leukoreduced | |
| Red blood cell units | |  | | --- | |  | | Number of units leukoreduced | |
| Whole blood-derived platelet units | |  | | --- | |  | | Number of units leukoreduced | |

After Storage (including at the bedside)

|  |  |  |  |
| --- | --- | --- | --- |
| Whole blood units | |  | | --- | |  | | Number of units leukoreduced | |
| Red blood cell units | |  | | --- | |  | | Number of units leukoreduced | |
| Whole blood-derived platelet units | |  | | --- | |  | | Number of units leukoreduced | |

1Pediatric aliquots should be recorded in standard unit equivalents. For example, if the standard red blood cell unit volume is 500mL and the volume of pediatric aliquots are 50mL (10 pediatric aliquots per standard unit), then record 150 pediatric aliquot transfusions as 15 units. If only part of a standard unit is used and the rest is discarded, please record it as 1 standard unit.

C8a. During 2021, among **transfused red blood cells**, how many units were…

|  |  |  |  |
| --- | --- | --- | --- |
| 1-35 day(s) old | |  | | --- | |  | | Number of RBC units transfused | |
| 36-42 days old | |  | | --- | |  | | Number of RBC units transfused | |

C8b. During 2021, among **transfused whole blood-derived platelets**, how many units were…

|  |  |  |  |
| --- | --- | --- | --- |
| 1-3 day(s) old | |  | | --- | |  | | Number of WBD PLT units transfused | |
| 4-5 days old | |  | | --- | |  | | Number of WBD PLT units transfused | |

C8c. During 2021, among **transfused apheresis platelets**, how many units were…

|  |  |  |  |
| --- | --- | --- | --- |
| 1-3 day(s) old | |  | | --- | |  | | Number of apheresis PLT units transfused | |
| 4-5 days old | |  | | --- | |  | | Number of apheresis PLT units transfused | |
| 6-7 days old | |  | | --- | |  | | Number of apheresis PLT units transfused | |

C9. If your facility pools whole blood-derived platelets, during 2021 at your institution, on average,how many individual platelet units were included in a post-storage **pooled whole blood-derived platelet dose**?

|  |
| --- |
|  |
| Number of individual units in a pool |

○ Not applicable

C10a. Indicate the number of **red blood cell** units that were transfused in the following inpatient and outpatient settings during 2021. (*This can be determined by location or by physician use.*)

|  |  |  |  |
| --- | --- | --- | --- |
| All surgery (including transplant) | |  | | --- | |  | | Number of RBC units transfused | |
| Inpatient medicine (including hematology/oncology) | |  | | --- | |  | | Number of RBC units transfused | |
| Emergency Department | |  | | --- | |  | | Number of RBC units transfused | |
| Obstetrics/Gynecology | |  | | --- | |  | | Number of RBC units transfused | |
| Pediatrics, including critical care | |  | | --- | |  | | Number of RBC units transfused | |
| Neonates, including critical care | |  | | --- | |  | | Number of RBC units transfused | |
| Adult critical care | |  | | --- | |  | | Number of RBC units transfused | |
| Outpatient and non-acute inpatient settings1 | |  | | --- | |  | | Number of RBC units transfused | |

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

C10b. Indicate the number of **platelet** units that were transfused in the following inpatient and outpatient settings during 2021. (This can be determined by location or by physician use.) If whole blood-derived platelets were transfused, please convert them to pooled equivalent units.1

|  |  |  |  |
| --- | --- | --- | --- |
| All surgery (including transplant) | |  | | --- | |  | | Number of PLT units transfused | |
| Inpatient medicine (including hematology/oncology) | |  | | --- | |  | | Number of PLT units transfused | |
| Emergency Department | |  | | --- | |  | | Number of PLT units transfused | |
| Obstetrics/Gynecology | |  | | --- | |  | | Number of PLT units transfused | |
| Pediatrics, including critical care | |  | | --- | |  | | Number of PLT units transfused | |
| Neonates, including critical care | |  | | --- | |  | | Number of PLT units transfused | |
| Adult critical care | |  | | --- | |  | | Number of PLT units transfused | |
| Outpatient and non-acute inpatient settings2 | |  | | --- | |  | | Number of PLT units transfused | |

1 If any individual units of whole blood-derived platelets were transfused, convert these to a pooled equivalent. For example, if 200 platelet pools and 100 individual whole blood-derived platelet units were transfused and 5 individual platelet units are included per pool, then 220 units (200 + [100/5]) should be recorded.

2E.g., outpatient dialysis, rehabilitation, hospice, long term care, etc.

C11. During 2021, did 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 level of coagulation factor deficiency, INR, or degree of bleeding
* Number of units ordered is not consistent with any of the above

C12a. During 2021, did your institution routinely order **prophylactic** **platelet** transfusions to non-pediatric patients based on:

* A standard number of units regardless of patient weight (e.g., 4 or 6 units)
* Dosage varies based on level of thrombocytopenia or degree of bleeding
* Number of units ordered is not consistent with either of the above

C12b. During 2021, did your institution routinely order **therapeutic** **platelet** transfusions to non-pediatric patients based on:

* A standard number of units regardless of patient weight (e.g., 4 or 6 units)
* Dosage varies based on level of thrombocytopenia or degree of bleeding
* Number of units ordered is not consistent with either of the above

C13. During 2021, what was the average **whole dollar amount** your institution **paid per unit** 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.)

|  |
| --- |
| $ |
| Dollar amount paid per unit |

Red cells, leukoreduced (P9016)

* Not applicable

|  |
| --- |
| $ |
| Dollar amount paid per unit |

Apheresis platelets, leukoreduced (P9035)

* Not applicable

|  |
| --- |
| $ |
| Dollar amount paid per unit |

Pathogen-reduced apheresis platelets (9073)

* Not applicable

|  |
| --- |
| $ |
| Dollar amount paid per unit |

Plasma, single donor, frozen within 8 hours of phlebotomy (P9017)

* Not applicable

|  |
| --- |
| $ |
| Dollar amount paid per unit |

Plasma, frozen between 8 and 24 hours of phlebotomy (P9059)

* Not applicable

|  |
| --- |
| $ |
| Dollar amount paid per unit |

Cryoprecipitated AHF (P9012)

* Not applicable

C14. During 2021, did your institution have a policy to transfuse only leukoreduced components?

* Yes
* No

C15. During 2021, did your institution have a policy to only transfuse irradiated components?

* Yes
* No

C16. During 2021, did your institution have an established program to manage patients who refuse any or all blood components for religious, cultural, or personal reasons?

* Yes
* No

C17a. During 2021, did your institution have a transfusion safety officer (TSO)?

* Yes
* No  
  (if no, skip to C18)

C17b. If yes, how many full-time equivalent TSOs? (Consider two part-time employees as a single full-time equivalent)

|  |
| --- |
|  |
| Number of TSOs |

C17c. Is the TSO employed by your institution or by the blood center?

* Institution employee
* Blood center employee

C18. During 2021 at your institution, how many **whole blood/red blood cell crossmatch procedures** were…

|  |  |  |  |
| --- | --- | --- | --- |
| Performed by any method | |  | | --- | |  | | Number of crossmatch procedures | |
| Electronic crossmatch | |  | | --- | |  | | Number of crossmatch procedures | |
| Manual serologic crossmatch | |  | | --- | |  | | Number of crossmatch procedures | |
| Automatic serologic crossmatch | |  | | --- | |  | | Number of crossmatch procedures | |

C19a. Has your institution implemented typing of red blood cell antigens using a molecular assay (e.g., genotyping)?

* Yes
* No (if No, skip to C20)

C19b. How many **red blood cell units** from donors who were **genotyped** (e.g., using a molecular assay) were transfused by your institution in 2021?

|  |
| --- |
|  |
| Number of units |

C20. How many samples (patient specimens submitted for testing) did your institution receive at the blood bank during 2021?

|  |
| --- |
|  |
| Number of samples |

C21. Does your institution have an electronic system for tracking transfusion-related adverse events?

* Yes
* No

C22a. Did your institution collect data on sample collection errors (e.g., wrong blood in tube) during 2021?

* Yes
* No (if no, skip to C23)

C22b. How many transfusion sample collection errors were reported during 2021?

|  |
| --- |
|  |
| Number of errors |

C23. How many transfusion-related adverse reactions were reported to the transfusion service in 2021? (*Count only the number of reactions that required any diagnostic or therapeutic intervention.*)

|  |  |  |  |
| --- | --- | --- | --- |
| Total reactions | |  | | --- | |  | | Number of reactions | |

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

|  |  |  |  |
| --- | --- | --- | --- |
| Life-threatening (required major medical intervention1 following transfusion) | |  | | --- | |  | | Number of reactions | |
| Transfusion-related acute lung injury (TRALI) | |  | | --- | |  | | Number of reactions | |
| Transfusion-associated circulatory overload (TACO) | |  | | --- | |  | | Number of reactions | |
| Acute hemolytic transfusion reaction (ABO) | |  | | --- | |  | | Number of reactions | |
| Acute hemolytic transfusion reaction (other antibodies) | |  | | --- | |  | | Number of reactions | |
| Delayed hemolytic transfusion reaction | |  | | --- | |  | | Number of reactions | |
| Delayed serologic transfusion reaction | |  | | --- | |  | | Number of reactions | |
| Febrile, non-hemolytic transfusion reaction | |  | | --- | |  | | Number of reactions | |
| Hypotensive transfusion reaction | |  | | --- | |  | | Number of reactions | |
| Post-transfusion purpura | |  | | --- | |  | | Number of reactions | |
| Transfusion-associated dyspnea | |  | | --- | |  | | Number of reactions | |
| Transfusion-associated graft-vs-host disease | |  | | --- | |  | | Number of reactions | |
| Transfusion transmitted bacterial infection | |  | | --- | |  | | Number of reactions | |
| Transfusion transmitted parasitic infection | |  | | --- | |  | | Number of reactions | |
| Transfusion transmitted viral infection | |  | | --- | |  | | Number of reactions | |
| Mild to moderate allergic reaction | |  | | --- | |  | | Number of reactions | |
| Severe allergic reaction | |  | | --- | |  | | Number of reactions | |

1 Examples include vasopressors, blood pressure support, intubation, or transfer to the ICU

C24. During 2021, which of the following bacterial risk control strategies were used for platelets by the blood collection facility for platelets transfused at your facility?

* Primary culture performed no sooner than 24 hours
* Large volume, delayed sampling no sooner than 36 hours without secondary
* Large volume, delayed sampling no sooner than 48 hours
* Pathogen reduction technology
* Unknown

C25a. Does your institution perform any kind of pre-transfusion bacterial testing on platelets? This does not include testing performed by the blood collection facility.

* Yes
* No (if no, skip to C26)

C25b. Indicate what methods are used by your institution to test for bacterial contamination.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Secondary culture performed no sooner than Day 3 | Secondary culture performed no sooner than Day 4 | Rapid test1 | Not tested | Not applicable |
| Apheresis platelets | □ | □ | □ | □ | □ |
| WBD platelets, single | □ | □ | □ | □ | □ |
| WBD platelets, pooled | □ | □ | □ | □ | □ |

1Footnote: FDA cleared rapid tests include PGD Verax and Immunetics BacTx.

C25c. How many confirmed positives and false positives were detected by the following methods during 2021?

**Secondary culture performed no sooner than Day 3**

|  |  |  |  |
| --- | --- | --- | --- |
| Number tested | |  | | --- | |  | | Number tested | |
| Number of confirmed positives | |  | | --- | |  | | Number of confirmed positive | |
| Number of false positives | |  | | --- | |  | | Number of false positives | |
| Number of indeterminate results | |  | | --- | |  | | Number of intermediate results | |
| Not applicable | □ |

**Secondary culture performed no sooner than Day 4**

|  |  |  |  |
| --- | --- | --- | --- |
| Number tested | |  | | --- | |  | | Number tested | |
| Number of confirmed positives | |  | | --- | |  | | Number of confirmed positive | |
| Number of false positives | |  | | --- | |  | | Number of false positives | |
| Number of indeterminate results | |  | | --- | |  | | Number of intermediate results | |
| Not applicable | □ |

**Rapid test**

|  |  |  |  |
| --- | --- | --- | --- |
| Number tested | |  | | --- | |  | | Number tested | |
| Number of confirmed positives | |  | | --- | |  | | Number of confirmed positive | |
| Number of false positives | |  | | --- | |  | | Number of false positives | |
| Number of indeterminate results | |  | | --- | |  | | Number of intermediate results | |
| Not applicable | □ |

C26a. During 2021, did your institution transfuse platelets treated with pathogen reduction technology (PRT)?

* Yes
* No (if no, skip to end of section C)

C26b. During 2021, how many PRT-treated apheresis platelet units were transfused?

|  |  |  |  |
| --- | --- | --- | --- |
|  | |  | | --- | |  | | Number of units | |
|  |  |

Note: The following questions were added specifically to gain information on the impact of COVID-19 on blood utilization in **2020**.

Supplemental Section C: Impact of COVID-19 Pandemic on Blood Transfusion in 2020

SC1. During each month in 2020, how many units of **allogeneic red blood cells** did your institution transfuse?

|  |  |  |  |
| --- | --- | --- | --- |
| January | |  | | --- | |  | | Number of units transfused | |
| February | |  | | --- | |  | | Number of units transfused | |
| March | |  | | --- | |  | | Number of units transfused | |
| April | |  | | --- | |  | | Number of units transfused | |
| May | |  | | --- | |  | | Number of units transfused | |
| June | |  | | --- | |  | | Number of units transfused | |
| July | |  | | --- | |  | | Number of units transfused | |
| August | |  | | --- | |  | | Number of units transfused | |
| September | |  | | --- | |  | | Number of units transfused | |
| October | |  | | --- | |  | | Number of units transfused | |
| November | |  | | --- | |  | | Number of units transfused | |
| December | |  | | --- | |  | | Number of units transfused | |

SC2. During each month in 2020, how many units of **apheresis platelets**did your institution transfuse?

|  |  |  |  |
| --- | --- | --- | --- |
| January | |  | | --- | |  | | Number of units transfused | |
| February | |  | | --- | |  | | Number of units transfused | |
| March | |  | | --- | |  | | Number of units transfused | |
| April | |  | | --- | |  | | Number of units transfused | |
| May | |  | | --- | |  | | Number of units transfused | |
| June | |  | | --- | |  | | Number of units transfused | |
| July | |  | | --- | |  | | Number of units transfused | |
| August | |  | | --- | |  | | Number of units transfused | |
| September | |  | | --- | |  | | Number of units transfused | |
| October | |  | | --- | |  | | Number of units transfused | |
| November | |  | | --- | |  | | Number of units transfused | |
| December | |  | | --- | |  | | Number of units transfused | |

1Exclude whole blood derived platelets from the number of units transfused.

**Survey Glossary**

**Apheresis collection procedure:** One apheresis collection procedure is one apheresis donation from which multiple units of a single blood products or multiple products can be produced.

**Autologous:** Self-directed donations.

**Deferrals:** The number of donors deferred for specific reasons:

1. Donors deferred for low hemoglobin do not meet the current FDA blood hemoglobin level requirements for blood donation.
2. 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.
3. 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.
4. Travel deferrals are deferrals for travel to a specific region of the world.

**Directed:** Directed units are those which have been donated by a family member or friend of the patient as a result of a patient request to be transfused with blood from a specific donor.

**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.

**High-risk behaviors:** Behaviors associated with an increased risk of bloodborne viral infection (e.g. nonmedical intravenous drug use, incarceration, high-risk sexual contact

**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, leuko-filtration, or production of aliquots of lesser volume).

**MSM**: Men who have sex with men.

**Outdated:** Units that expire on your shelf.

**Plasma:**

1. **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.
2. **Fresh frozen plasma (FFP):** Plasma frozen at -18 degrees C within 8 hours of collection.
3. **Plasma, Jumbo:** FFP having a volume greater than 400 mL.
4. **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.
5. **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.1

**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.

**Whole blood collection procedure**: One whole blood collection procedure is one donation of whole blood from which red blood cells, plasma, platelets, and cryoprecipitate can be prepared.

1AABB Donor Hemovigilance Working Group grade 2 or higher (e.g., adverse event with duration > 2 weeks; resulted in limitation in activities of daily living; or required transport to emergency department, sutures, or antibiotics). See https://www.aabb.org/docs/default-source/default-document-library/resources/severity-grading-tool-for-donor-adverse-events.pdf?sfvrsn=ff563263\_4.