ABOUT VIRGINIA BLOOD SERVICES

Our Mission

To provide best in class blood products and clinical services to meet the needs of the healthcare community, patients and our donors through advanced transfusion medicine practices.

Our Vision

To be the premier provider of blood transfusion practices by delivering innovative industry leading services, operating efficiencies, donor satisfaction and improved patient care resulting in the achievement of our Mission.
## Phone Directory

### Virginia Blood Services Executive Administration

<table>
<thead>
<tr>
<th>Role</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Director</td>
<td>(865)202-6435</td>
</tr>
<tr>
<td>Medical Director</td>
<td>(804) 387-8495</td>
</tr>
<tr>
<td>Director of Technical Operations</td>
<td>(804) 213-4143</td>
</tr>
<tr>
<td>QA Director</td>
<td>(804)213-4145</td>
</tr>
<tr>
<td>Regional Director</td>
<td>(540)352-7923</td>
</tr>
</tbody>
</table>

### Hospital Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood Line</td>
<td>(804) 213-4113</td>
</tr>
<tr>
<td>TOLL FREE Blood Line</td>
<td>(800) 989-2566</td>
</tr>
<tr>
<td>EMERGENCY CELL LINE (if phone system is down)</td>
<td>(804) 349-4021</td>
</tr>
<tr>
<td>FAX</td>
<td>(804) 353-4877</td>
</tr>
<tr>
<td>TOLL FREE</td>
<td>(800) 989-4438</td>
</tr>
</tbody>
</table>

### Distribution Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distribution and Shipping of Products</td>
<td>(804)-213-4107</td>
</tr>
<tr>
<td>Roanoke Depot</td>
<td>(540) 777-5390</td>
</tr>
<tr>
<td>Roanoke Depot On –Call</td>
<td>(540)315-5335</td>
</tr>
</tbody>
</table>

### Laboratory Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference Laboratory</td>
<td>(804) 213-4129</td>
</tr>
<tr>
<td>Component Laboratory (manufacturing)</td>
<td>(804) 213-4023</td>
</tr>
</tbody>
</table>

### Clinical and Donor Services

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Service Help Line</td>
<td>(800) 989-2201</td>
</tr>
<tr>
<td>Patient Services (Autologous and Directed Donations)</td>
<td>(804) 213-4150</td>
</tr>
<tr>
<td>Donor Collections</td>
<td>(804) 213-4215</td>
</tr>
<tr>
<td>Donor Recruitment (Richmond)</td>
<td>(804) 342-4035</td>
</tr>
<tr>
<td>Donor Recruitment (Western)</td>
<td>(540) 352-9145</td>
</tr>
<tr>
<td>Donor Relations</td>
<td>(804) 213-4186</td>
</tr>
</tbody>
</table>

### Accounting Department

<table>
<thead>
<tr>
<th>Service</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Services</td>
<td>(412) 209-7316</td>
</tr>
<tr>
<td>Financial Services - Fax</td>
<td>(412) 209-7095</td>
</tr>
</tbody>
</table>

### Mailing Address:

Virginia Blood Services  
2825 Emerywood Parkway  
Richmond, VA 23294
ABOUT VIRGINIA BLOOD SERVICES

Our History

By 1973, the Richmond Academy of Medicine had become alarmed about the safety and availability of blood for Richmond hospital patients. For years Richmond hospitals had obtained their blood from a number of sources of varying safety and reliability. Some of these sources provided blood donated by volunteers; others were commercial operations that paid people for their blood.

Blood from volunteers was considered safer but was frequently scarce; blood from commercial sources was more available but had become well documented as being likely to transmit hepatitis.

With the goal of improving the safety and reliability of the blood supply, the Academy appointed John L. Thornton, M.D., a clinical pathologist at Johnston-Willis Hospital, to chair a committee to explore establishing the community's first blood center. The committee enlisted the support of hospital pathologists and the three area chapters of the American Red Cross.

As a result of the Academy committee's work, Richmond Metropolitan Blood Service (RMBS) was incorporated on January 11, 1974, as a non-profit corporation established to collect, process, test, and distribute blood for Richmond hospital patients. Its goal was to furnish blood to Richmond hospitals from volunteers only by 1975, and that goal was reached.

Today, RMBS is called Virginia Blood Services (VBS) and serves hospitals throughout the state of Virginia, including Richmond, Charlottesville, Fishersville, Harrisonburg, Roanoke, Salem, and Winchester. VBS also serves hospitals in West Virginia and Washington, DC.

In December 2012, Virginia Blood Services joined the Institute for Transfusion Medicine℠ (ITxM℠). ITxM is one of the nation’s foremost organizations specializing in transfusion medicine and related services. Headquartered in Pittsburgh with offices in Chicago and, ITxM provides patients and medical facilities with comprehensive transfusion support, including medical staff consultation and treatment plans, along with testing and delivery of blood products. ITxM business units work together to develop, deliver and influence the highest quality patient care in transfusion medicine and related services. For more information, visit www.itxm.org.
ABOUT VIRGINIA BLOOD SERVICES

Professional Affiliations

U.S. Food and Drug Administration (FDA): VBS operates under very strict regulations. Blood and blood products are prepared following "Current Good Manufacturing Practices for Blood and Blood Components," published by the FDA, Department of Health and Human Services. The blood center holds a license issued by the FDA and is inspected for compliance with regulations annually.

AABB (formerly known as American Association of Blood Banks): VBS voluntarily supports AABB through both institutional and individual memberships. AABB is a professional, not-for-profit, scientific and administrative association for institutions and individuals engaged in blood banking and transfusion medicine. Established in 1947, it is the largest international organization exclusively devoted to these disciplines. There are more than 2,200 institutional and 8,500 individual members. AABB has many purposes—it supports high standards of medical, technical and administrative performance, scientific investigation, clinical application and education. AABB is dedicated to encouraging the voluntary donation of blood and other tissues and organs through education, public information and research. One of its most critical purposes is creating acceptable standards of administrative and technical performance in immunohematology. VBS adheres to these standards and is inspected bi-annually by AABB to ensure this.

America’s Blood Centers (ABC): VBS is also a member of ABC, a national association of independent, nonprofit and community blood centers dedicated to serving the public interest by promoting excellence in blood services. ABC member centers are located throughout the U.S. and Canada providing approximately 50% of the U.S. blood supply. ABC serves as a forum for blood center administrators, medical directors, senior management and operations staff to exchange information, discuss pertinent issues, and work together to improve the quality and efficiency of service to hospitals, patients and blood donors. Additionally, VBS imports blood products from ABC centers when local collections are not sufficient to meet patient transfusion needs.

HemeXcel Purchasing Alliance LLC: VBS is also a member of HemeXcel Purchasing Alliance through its affiliation with ITxM. HemeXcel Purchasing Alliance comprises five leading blood centers – each with a national presence and recognized expertise, including: Blood Systems (Scottsdale, AZ); Institute for Transfusion Medicine (Pittsburgh, PA); New York Blood Center; (New York, NY); OneBlood (St. Petersburg, FL); and Puget Sound Blood Center (Seattle, WA). Together, these centers collect process and distribute 4.8 million blood components every year, serving 1,428 hospitals in 29 states.
ABOUT VIRGINIA BLOOD SERVICES

Our Donor Centers
To schedule a blood drive or for hours visit www.vablood.org

RICHMOND AREA:

Headquarters, Near West End
2825 Emerywood Parkway
Richmond, VA 23294
(804) 359-5100
FAX (804) 359-5379
Autologous, patient-selected donation and therapeutic hours are by appointment.

Chesterfield County
9200 Arboretum Parkway, Suite 100
Richmond, VA 23236
(804) 342-5100
FAX (804) 323-6307

Shoppes at Innsbrook, Far West End
4040 Cox Road
(Facing Dominion Boulevard)
Glen Allen, VA 23060
(804) 342-4040
FAX (804) 270-2871

Chester
12212 Bermuda Crossing Lane
Chester, VA 23831
(804) 342-4040
FAX (804) 748-7990
Autologous, patient-selected donation and therapeutic hours are by appointment.

CHARLOTTESVILLE AREA:

Albemarle Donor Center
606 Albemarle Square Road
Charlottesville, VA 22901
(434) 973-0716
FAX (434) 979-4860
Autologous, patient-selected donation and therapeutic hours are by appointment.

STAUNTON, WAYNESBORO AREA:

Waynesboro Donor Center
125 Lucy Lane
Waynesboro, VA 22980
(540) 946-1300
FAX (540) 946-1683
Autologous, patient-selected donation and therapeutic hours are by appointment.

HARRISONBURG AREA:

Harrisonburg Donor Center at Town Center Shopping Mall
182 Neff Avenue, Suite 11 & 12
Harrisonburg, VA 22801
(540) 437-9890 or (540) 437-9891
FAX (540) 437-9893
Autologous, patient-selected donation and therapeutic hours are by appointment.

ROANOKE AREA:

Salem
131 Electric Road
Salem, VA 24153
(540) 444-0179
FAX (540) 444-0181
Autologous, patient-selected donation and therapeutic hours are by appointment.

WINCHESTER AREA:

Winchester
333 W. Cork St., Suite 220
Winchester, VA 22601
(540) 450-2170
FAX (540) 450-2125
Autologous, patient-selected donation and therapeutic hours are by appointment.

You may give blood with Virginia Blood Services at any of the above locations or by calling us at (800) 989-GIFT (4438).
Our Commitment to Customer Service

An essential element of the VBS Quality Program is the reporting of any information acquired through the investigation of customer complaints to the quality assurance system. If there is no investigation, then factors contributing to the problems cannot be addressed and corrected.

The Hospital Services Department is staffed 24 hours per day, 7 days per week. Problems and complaints can be reported there at (804) 213-4113 or (800) 989-2566.

Incidents will be investigated and reviewed by management who will then respond to the customer.

We ask that our hospital customers call Hospital Services to initiate a "Customer Service Inquiry" form (Attachment F) when a customer service issue arises. This system provides documentation enabling VBS to track, trend and resolve quality issues, thereby providing better customer service for everyone.
EMERGENCY TELEPHONE PROTOCOL

Our Hospital Services Department is staffed 24 hours a day, 7 days a week.

Someone is waiting to take your call at (804) 213-4113 or toll free at (800) 989-2566.

- In the event of an electrical power outage, no interruption of telephone service should occur.

- In the event of an INTERNAL telephone system failure:
  
  o The emergency cellular phone will be available to receive calls at (804) 349-4021.

  o The fax line will remain functional. We are reachable via fax at (804) 353-4877 or (800) 242-1782.

- In the event of an EXTERNAL telephone service interruption, the emergency cellular phone will available to receive call at (804) 349-4021.
Ordering Products

The VBS Hospital Services department receives and processes orders, handles customer inquiries and answers general questions for VBS. They are available by phone 24 hours a day to serve our customers at (804) 213-4113 or (800) 989-2566. All orders for products should be phoned or faxed to VBS as far in advance of expected arrival time as possible (Hospital Services requests that orders are placed at least 2-hours prior to scheduled departure time). VBS in partnership with outsourced transportation services provides scheduled routine deliveries 7 days a week at designated times and provides on-demand services for requests outside of scheduled routine orders (STAT product orders).

Scheduled Morning and Evening Orders

Although stock product orders can be placed as far in advance as desired, VBS requests our customers call/fax their orders at a minimum of 2 hours ahead of expected arrival time for Richmond and Charlottesville area hospitals and within 5 hours ahead of expected arrival time for Roanoke and Winchester area hospitals.

STAT Orders

Customers should call STAT orders to Hospital Services. An expected delivery time is based on location. Generally, delivery can be expected to arrive at your facility within 1 hour in the Richmond metropolitan area and within 2-hours for Charlottesville customers. Customers in Roanoke and Winchester locations should allow up to 4 hours for STAT deliveries. Hampton customers should allow up to 3 hours for STAT deliveries. Any special request products will be delivered at the earliest possible time after they become available.

ASAP Orders

Customers should call ASAP orders to Hospital Services. Any stock product will be delivered to your facility within 2 hours in the Richmond metropolitan area and within 5-hours for non-local customers. Any special request products will be delivered at the earliest possible time after they become available.

Replacement Orders

Deliveries resulting from product unavailability (backordered products) are delivered to customers at no charge. Replacement orders do not require customer to call/fax as follow-up or to re-order. As a courtesy, once the products become available, VBS will contact the customer prior to order departure to assess if the customer still has a need for the product and/or if any additional products are needed. From time to time with customer approval, backordered products may be sent with a future routine/pre-scheduled or STAT delivery.
DISTRIBUTION SERVICES

Blood Components Available

Stock Products Routinely Available

- Red Blood Cells Leukocytes Reduced
- Platelets Leukocytes Reduced (Whole Blood-Derived)
- Apheresis Platelets Leukocytes Reduced
- Fresh Frozen Plasma/24 hr FP
- Plasma Frozen Within 24 Hours After Phlebotomy
- Plasma Cryoprecipitate Reduced
- Cryoprecipitate AHF
- Pre Pooled Cryoprecipitate AHF

Products Available Upon Request

- Red Blood Cells
- Platelets (Whole Blood-Derived)
- Washed Red Blood Cells
- Washed Apheresis Platelets
- Plasma Reduced Platelets (Whole Blood-Derived)
- Plasma Reduced Apheresis Platelets
- Rejuvenated Red Cells
- Pediatric Units (Divided and Aliquotted Red Blood Cells)
- HLA Matched Apheresis Platelets
- Buffy Coat for Research
- Apheresis Granulocytes
- Pooled/Concentrated Platelets Leukocytes Reduced (Whole Blood-Derived), Concentrated/Aliquotted Single Donor Platelets
- Pooled Cryoprecipitate AHF
- Frozen Red Blood Cells
- Deglycerolized Red Blood Cells
Other Products and Services

CMV Negative Products
Cytomegalovirus is a human viral pathogen belonging to the family of herpes viruses. CMV infection is usually asymptomatic and can persist in the host as a chronic or latent infection. Use of CMV seronegative blood donors has been reported to be effective in reducing the occurrence of CMV infection in immunocompromised recipients who are CMV seronegative. Low birth weight neonates are also at high risk and should have CMV negative units.

Sickle Cell Negative Red Cells
The sickle cell test detects the presence of Hemoglobin S in donor blood. All units intended for pediatric transfusion and units for sickle cell patients should be screened for Hemoglobin S.

Antigen-Negative Units
VBS offers the service of screening for antigen-negative units if no units of the appropriate types are available at the transfusing facility.

Problem Antibody Identification
VBS offers antibody identification services including testing with numerous panels and elution and absorption techniques. A "Request for Red Cell Reference Lab Studies" form (Attachment M) should be completed and submitted with specimens for reference work up. More complex identification problems may be sent out for further studies.

Irradiation
Irradiation is used to inactivate immunocompetent cells (lymphocytes) in blood and blood components. Transfusion of the lymphocytes into immunosuppressed patients and first degree family members can result in serious and often fatal graft versus host disease (GVHD). VBS irradiates all patient selected (directed) donations and HLA matched products.
Automated Blood Collection (Apheresis)

Using automated blood collection equipment, VBS can perform the apheresis procedure to remove blood from the donor by circulating it through a sterile cell separation process to extract the desired component (red cells, white cells, platelets or plasma), and then returning the remainder of the blood to the donor. The products are tested the same as a unit of whole blood. The yield of each product is indicated on the final product container.

Apheresis Platelets: The most frequently requested apheresis product is platelets. Platelets can be ordered as “apheresis platelets”, “HLA matched apheresis platelets” or “cross-matched compatible apheresis platelets”. One unit of apheresis platelets is the equivalent of approximately 4-6 units of whole blood derived platelets.

Granulocytes: White cell apheresis is referred to as Leukapheresis for the collection of granulocytes. The collection process takes approximately two and one-half hours and must be drawn from an ABO compatible donor. This procedure is requested for neutropenic, septic patients who have not responded to 48 hours of antibacterial or antifungal therapy.

Since granulocyte products outdate in 24 hours, they are released prior to the completion of all infectious disease marker tests. This requires that an “Approval of Emergency Release of Blood/Blood Products” form (Attachment G) be signed by the blood bank pathologist and attending physician, the VBS Regulatory Resource Group and the VBS Medical Director. The form will be faxed to the transfusing facility by VBS in these instances.

Ordering: Apheresis products can be requested through the Hospital Services department 24 hours a day at (804) 213-4113 or (800) 989-2566. Patient specific information will be requested.
Autologous Donations

VBS has provided autologous donation services since 1979. A prescription (Attachment H) is required to perform this service and patients must pay a service fee at the time of each donation. The VBS prescription indicates the type and quantity of components needed. In addition, it asks for the planned date of transfusion and the transfusion facility. VBS supplies these prescriptions to physicians’ offices upon request.

General Requirements for Donation:
1. Hematocrit of at least 33% or Hemoglobin of 11.
2. Patient should be free of infection.
3. Certain unstable cardiac conditions or seizure conditions may be contraindications for autologous donations due to the increased risk to the patient during the procedure.
4. Patient must have a completed prescription at the time of donation.
5. An appointment will be scheduled prior to the procedure. Payment must be paid in full by appointment day and time.
6. Parent or guardian’s signature is required at the time of donation if the patient is under 17 years of age.
7. Collection of donors outside of these criteria requires medical director evaluation.
8. If a patient is known to have a reactive result for HIV or hepatitis, contact VBS in advance, as these cases will be evaluated individually.

Fee:
A service fee per autologous unit is charged to each patient at the time of donation.

Labeling:
Each unit of autologous blood will be labeled “Autologous Donor” and will be tagged with a green autologous tag that lists pertinent patient information. The FDA requires that autologous units be stored separately from volunteer donations. Generally, blood will be made available to the transfusion facility within three business days of collection. Autologous donations are accepted at the following VBS locations. Hours vary, so patients should call the most convenient location to schedule an appointment.

RICHMOND: 2825 Emerywood Parkway (804) 213-4150
CHESTER: 12212 Bermuda Crossing Lane (804) 213-4150
ALBEMARLE AREA: 606 Albemarle Square Road (434) 973-0716
WAYNESBORO: 125 Lucy Lane (540) 946-1300
HARRISONBURG: 182 Neff Avenue Suites 11 and 12 (540) 437-9890
WINCHESTER: 333 West Cork St., Suite 220 (540) 450-2170
ROANOKE | SALEM: 131 Electric Road (540) 444-0181
Directed (Patient-Selected) Donations

VBS provides directed (patient selected) donations (DIR) for those patients who wish to meet their transfusion needs with blood from family members and friends. We will also receive these donations from, and send them to, other blood centers. The donor must pay a service fee at the time of donation. Medicare does not cover the cost of this category of donation.

A prescription is required to perform this service (Attachment H). VBS has a specific prescription for the order. This prescription indicates the patient’s blood type, what components are needed, special component preparation and the quantity of these components. In addition, it asks for the planned date of transfusion and the transfusion site. Completed prescription will be faxed to VBS. VBS supplies these prescriptions to physicians’ offices upon request.

It is the responsibility of the patient or their representative to recruit the required number of donors and provide VBS with a list of their acceptable donors. Patient-selected donors must meet the same requirements for eligibility as community donors. In addition, we request that these donors schedule an appointment for their donation. Donations should be made no sooner than 30 days prior to the scheduled transfusion date, so that the blood will not expire before that date. Donations should not be made any later than three business days prior to the transfusion date to allow processing and shipping of the blood to the transfusion facility.

It is sometimes necessary to perform preliminary testing on a donor before they donate, to determine the donor’s blood type, if that is unknown, or to test for cytomegalovirus, if this is part of the physician’s order. These tests are performed on samples drawn from the donor, and the results are available within five business days. A fee per test is collected at the time that the samples are drawn.

Patient-selected donations are accepted at the following VBS locations. Hours vary, so patients should call the most convenient location to schedule an appointment.

**RICHMOND:**
2825 Emerywood Parkway  (804) 213-4150

**CHESTER:**
12212 Bermuda Crossing Lane  (804) 213-4150

**ALBEMARLE AREA:**
606 Albemarle Square Road  (434) 973-0716

**WAYNESBORO:**
125 Lucy Lane  (540) 946-1300

**HARRISONBURG:**
182 Neff Avenue Suites 11 and 12  (540) 437-9890

**WINCHESTER:**
333 West Cork St., Suite 220  (540) 450-2170

**ROANOKE | SALEM:**
131 Electric Road  (540) 444-0181
Therapeutic Phlebotomy

Patients requiring periodic removal of blood for therapeutic reasons can be divided into two major groups: those with increased red cell (RBC) mass such as Polycythemia Vera and those with iron overload and normal RBC mass such as Hemochromatosis. The acceptance of a patient for therapeutic phlebotomy is the decision of the Medical Director for VBS. This decision is based on review of medical history and supporting laboratory data furnished by the ordering physician.

Procedure:

1. A VBS prescription form (Attachment I) for therapeutic phlebotomy from a physician, NP, or PA must include the following written legibly:
   a. The patient’s full name, date of birth, and medical record number.
   b. The patient’s clinical diagnosis.
   c. Any known medical condition that may place the patient at risk (e.g. cardiovascular disease) for complications during (from) a therapeutic phlebotomy procedure.
   d. Volume of blood to be removed will be 500 ml.
   e. Frequency of phlebotomy (no abbreviations).
   f. Hemoglobin threshold.
   g. Date and printed full name plus signature of requesting physician, NP, or PA.

2. Prescriptions must be updated annually by the ordering physician.
3. All patients presenting for a phlebotomy must have an appointment.

Fee:

VBS has an FDA variance that allows some hemochromatosis donors to give to the community blood supply so none of them are charged a fee. Therapeutic phlebotomies are performed at the following VBS locations. Hours vary, so patients should call the most convenient location to schedule an appointment.

RICHMOND: 2825 Emerywood Parkway (804) 213-4150
CHESTER: 12212 Bermuda Crossing Lane (804) 213-4150
ALBEMARLE AREA: 606 Albemarle Square Road (434) 973-0716
WAYNESBORO: 125 Lucy Lane (540) 946-1300
HARRISONBURG: 182 Neff Avenue Suites 11 and 12 (540) 437-9890
WINCHESTER: 333 West Cork St., Suite 220 (540) 450-2170
ROANOKE | SALEM: 131 Electric Road (540) 444-0181
Blood/Blood Component Inventory and Resource Availability

VBS reviews the established target and critical inventory limits by product and for specific products by blood type on a periodic basis. These numbers do not include hospital inventories or units not yet processed or labeled.

**Please note:** At any given time we will have a few hundred donor units of RBCs and a lesser number of other components “In-Process,” i.e., partially tested--not yet labeled.

**Definition of inventory levels**

**Target Level:** The amount of red cells or blood components needed to stock all contract customers for two days of normal usage.

**Critical Level:** The amount of red cells or blood components needed to stock all contract customers for one day of normal usage. VBS may elect to limit release of product with the approval of our Medical Director in consultation with the hospital’s Medical Director. All factors affecting inventory will be monitored closely.

When VBS reaches critical levels, we look at the following:

- a) The number of units in process and awaiting testing
- b) The collection forecast
- c) Current usage patterns and orders from contract customers
- d) Environmental factors potentially impacting collections, product availability and distribution

From this information, we determine the length of time before the levels return to normal. If this time is determined to be too long, we do the following:

- a) Try to import blood from other centers.
- b) Notify contract customers of the critical level of one or more blood types.
- c) Go on appeal and set up special drives targeting the types needed.

Once a critical level is reached on a particular blood type, the Hospital Services technician will assess the expected inventory changes for the next 24 hours and will alert management. The Medical Directors or pathologist on call may use discretion in the release of critical products and will be contacted as necessary.


**BACKUP PROVISION FOR THE IMPORTATION OF BLOOD/BLOOD COMPONENTS ARE AS FOLLOWS:**

**The Institute for Transfusion Medicine (ITxM)**
Manages 4 blood center operations with a centralized inventory management with market share leader in each market served; Virginia, Chicago, Western PA, and Geisinger, PA, collecting nearly 500,000 donated units annually through fixed collection sites and mobile blood drives.

**America’s Blood Centers (ABC)**
VBS is a member of ABC. ABC member centers draw over 50% of the nation’s blood supply. We communicate with other ABC member centers about resource sharing needs.

**National Blood Exchange (NBE)**
This is a resource sharing effort established by and operated through association with AABB. If necessary, we communicate with the National Blood Exchange as to resource sharing needs.

**AABB (formerly known as American Association of Blood Banks)**
VBS voluntarily supports AABB through both institutional and individual memberships. Established in 1953 as a resource-sharing program, NBE — a program of AABB — continues to provide an important and valuable service to the blood banking and transfusion medicine community. NBE relies on a nationwide network of blood facilities with a surplus of blood and blood components. This nationwide network has enabled NBE to become the primary resource-sharing program in the US. Each year, NBE coordinates the distribution of more than 185,000 units of blood and blood components.

In addition, we may contact the few independent community/hospital-based blood programs that are not members of the above organizations.
Product Discrepancy

When a receiving facility reports a product to VBS as a discrepancy or potentially unsuitable product (clotted, broken units, positive DAT, ABO discrepancy etc.) a Product Discrepancy Form (Attachment D) needs to be completed and sent to: Virginia Blood Services / 2825 Emerywood Parkway / Richmond, VA 23294 / attention: Hospital Services. This allows us to conduct a thorough evaluation and to document findings. Forms can be obtained from VBS or via website.

Perform the following when completing a Product Discrepancy Form:

**Electronic Procedure:**
1. Quarantine product until just prior to leaving the facility for return to VBS.
2. When returning the product to VBS, release from quarantine as needed and electronically transfer back to VBS.

**Physical Documentation Procedure:**
1. Complete all applicable blanks on the form. If several units are being returned for the same reason, one Product Discrepancy Form may be used.
2. Use a separate report for each different type of discrepancy (i.e., one form for a broken product and a separate form for a clotted product).
3. Sign the form.
4. If an error is made when recording information, cross out the error with one line, initial and date the error, and record the correct information.
5. Use only blue or black pen with indelible ink.
6. Call VBS when the form is completed at (804) 213-4113 Or (800) 989-2566.
7. Retain the yellow copy, the top copy should be sent along with product to VBS.
The Red Cell Reference Laboratory is an integral part of the Institute for Transfusion Medicine and Virginia Blood Services. The lab performs both routine and complex serological problem resolutions and provides a wide variety of blood products on a 24 hour a day, 7 days a week basis. The Red Cell Reference Laboratory staff is also available at all times to provide both technical and medical consultations.

The Red Cell Reference Laboratory is an accredited Immunohematology Reference Lab (IRL) by the AABB. As an AANN accredited IRL, the lab has at its disposal multiple resources to aid in both serological problem resolution and provision of blood products. This includes an extensive inventory of rare cells and sera for use in complex serological problem resolutions. The lab has available not only the blood center’s inventory, but also its own inventory of frozen rare units for use in unusual compatibility cases. The Red Cell Reference Lab is also a member of the American Rare Donor Program (ARDP). In the event that the necessary product is not available at VBS, the lab can obtain the products from another ITxM blood Center or through a national network of blood centers.

All testing is completed in accordance with AABB and Food and Drug Administration (FDA) standards. Because of these standards, the Red Cell Reference Lab is not able to provide cross matched blood products unless an ABO/Rh determination as well as a complete antibody identification has been completed on the sample submitted. All staff are instructed to complete only necessary testing to resolve the serological problem, but required tests will vary with each sample submitted based on the nature of the serological problem.

ACCREDITATIONS

- AABB Immunohematology Reference Lab
- American Rare Donor Program
- FDA
- CLIA
SAFETY IN OUR BLOOD SUPPLY

Our Highest Priority

We use many precautions to assure that your blood supply is safe.

1. Blood Donor Eligibility Standards: These standards are based on scientific research that has determined what categories of people are most likely to be suitable blood donors. The standards range from the most basic requirements that make a person eligible to donate blood (age at least 16, weigh at least 110 pounds, in general good health) to the more specific conditions and behaviors (exposure to HIV, malaria, hepatitis, syphilis or West Nile Virus, a history of blood disease, illegal drug use or use of certain prescribed drugs that signal a health problem) that would make them unsuitable as blood donors.

2. Individual Screening: Each blood donor at each donation is screened to determine if a) it is safe for them to donate blood and b) their blood is likely to be safe for a patient. To protect the donor's health their pulse, temperature, and blood pressure are measured and a small sample of their blood is tested to determine its iron level. This stage of screening often provides a great benefit for the donor, who may not have been previously aware of a health problem these measures reveal. This is also the stage where the donor's suitability as a provider of blood for patients is determined through a series of questions about their health and habits. Between 13 and 15 percent of the people who come to VBS are disqualified as donors at this stage.

3. Opportunities for Donors to Provide Post Donation Information: At the time of donation, donors are provided with a telephone number through which they may report subsequent illness, information they might have neglected to provide at the time of donation, or information that is different from that provided at the time of donation.

4. Laboratory Testing: Every blood donation, regardless of how many times the donor has given previously, is tested for HIV-1/2 and HIV-1 Group O, HTLV-I/II, Hepatitis B, Hepatitis C, syphilis, and West Nile Virus. VBS also performs initial lifetime Chagas disease testing on each donor. Donations from which platelets are made are also tested for bacteria. This testing provides protection for the patient who needs blood. It has also provided blood donors with information about their health that they did not have. About 1 percent of the people who passed through layers 2 and 3 are either disqualified as donors at this stage or the particular donation that was tested is not used for a patient.

5. Donor Record Checks: Since the FDA regulates blood as if it were a drug, it considers blood center computers to be medical devices. The computer is indeed a very important part of blood safety. Each time a person donates blood, that individual's records of previous donations are checked to be sure the individual continues to be an eligible donor. Sometimes people forget they have been asked not to give blood. This step assures that the blood center "remembers."
SAFETY IN OUR BLOOD SUPPLY

The Current Risks of Acquiring Infectious Diseases through Transfusion

HIV – 1:1,467,000

Hepatitis B – 1:1,149,000-1,467,000

Hepatitis C – 1:1,149,000

HTLV I and II – 1 in 650,000

*Other emerging infectious diseases and risk for transfusion safety like Chagas, Babesia, Dengue, and XMRV are being discussed at various scientific workshops.
Quality Control

Blood and Blood Product Storage Units

Quarterly high and low alarm checks are performed to ensure that blood and blood product storage units will alert employees to unacceptable temperature conditions. Alarms sound before unacceptable temperatures are reached so that action can be taken in a timely manner. This testing also involves re-verification of all temperature measuring devices related to each unit against a reference temperature reading. All reference instruments are NIST certified.

Product Inspection

During the collection, manufacturing and shipping process, each unit is inspected visually for clots, hemolysis, icteric plasma and evidence of possible bacterial contamination.

Shipping

Semi-Annually, the blood box packing process is checked by recording the temperature of packed products at the time of shipment and at the time of receipt by the customer. This QC procedure is performed during extreme weather conditions. Testing is performed on one shipment of red blood cells, platelets, and frozen plasma product. This verifies that packing techniques and transport container integrity are consistent in maintaining products at acceptable storage temperatures during shipment.
SAFETY IN OUR BLOOD SUPPLY

Routine Testing Performed on the Blood We Collect

Except for bacterial contamination detection, the following routine donor testing is performed for VBS by Creative Testing Solutions located in Dallas, Texas.

1. **Blood Type:** Forward and reverse ABO typing and Rh testing with weak D confirmation to determine the blood type of each unit.

2. **Antibody Screen:** Detects unexpected antibodies that may be harmful to the recipient if he or she possesses the corresponding red cell antigen.

3. **Hepatitis B core antibody (anti-HBc):** Detects the presence of the antibody to the Hepatitis B virus core antigen by chemiluminescent immunoassay.

4. **Hepatitis B surface antigen (HBsAg):** Detects the Hepatitis B virus surface antigen by chemiluminescent immunoassay.

5. **Hepatitis C antibody (anti-HCV):** Detects the presence of the antibody to the Hepatitis C virus by an enzyme-linked immunosorbent assay.

6. **Human Immunodeficiency Viruses antibody (anti-HIV-1/HIV-2 and antibody to HIV-1 Group O viruses):** Detects the presence of the antibodies to the Human Immunodeficiency viruses types 1, 2 and group O (the viruses that cause AIDS) by an enzyme-linked immunosorbent assay.

7. **Human T-Lymphotropic Viruses antibody (anti-HTLV-I/HTLV-II):** Detects the presence of antibodies to the Human T-Lymphotropic viruses’ types I and II by an enzyme-linked immunosorbent assay.

8. **Syphilis (TPHA):** Detects the presence of antibodies to Treponema pallidum using a particle agglutination assay.

9. **Nucleic Acid Amplification Test (NAT) for HIV-1, HCV and HBV:** Detects the presence of viral RNA for Human Immunodeficiency Virus type 1, Hepatitis C and/or Hepatitis B by a qualitative nucleic acid assay.

10. **NAT for West Nile Virus:** Detects the presence of viral RNA for West Nile Virus by a qualitative nucleic acid assay.

11. **Chagas Selective Testing:** Detects the presence of antibody to Trypanosoma cruzi by an enzyme-linked immunosorbent assay.

12. **Bacterial Contamination Detection (BacT/ALERT):** Detects the presence of bacteria in apheresis platelets and in whole blood-derived platelets. This testing is performed by VBS.
Storage

To ensure proper storage of blood and blood products, VBS has an Alarm Monitor System. This system furnishes the following information:

a) A permanent recording of each storage unit’s number, temperature, time and date.

b) An alarm upon a deviation outside acceptable operating temperatures and a permanent recording of the storage unit number, temperature, time and date of alarm conditions.

c) A permanent recording of the storage unit’s temperature.

Back up monitoring systems are in place in the event of malfunctions. All blood product storage equipment is on an emergency power source in the event of a power outage.
Recalls and Market Withdrawals

A recall is indicated upon discovery of any discrepancy that could affect the safety, purity and/or potency of any product shipped from VBS. The depth of a recall may be determined based on the product’s potential hazard to the recipient.

A market withdrawal is indicated when information on a donor with active products warrants further evaluation even though the products were not mislabeled or misbranded at the time of distribution. Examples may be subsequent donation history information or subsequent repeat reactive screening results.

VBS sends a notification letter and a "Product Follow Up Report" (Attachment E) to the consignee Medical Director when the products involved in a recall or market withdrawals are involved in an FDA reportable incident. The "Product Follow up Report" should be completed and returned to the Quality Assurance Specialist at VBS.

In the event of a recall on a blood product from a blood center other than VBS, additional procedures may be required. These will be communicated with the transfusing facility on a case by case basis.
Recipient Adverse Reactions

A transfusion service should report to VBS recipient adverse reactions that may require blood center investigation if the hospital post-transfusion workup indicates possible bacterial contamination, transfusion-associated infectious disease, or TRALI reaction. These steps assure that other products from the same donor(s) can be quickly withdrawn.

The VBS Medical Director will evaluate each reported case and determine if it may be transfusion related and outline preliminary actions to be taken. For more information, contact the Donor Advocate at VBS at (804) 213-4166 or (800) 989-3666.

For suspected bacterial contamination, transfusion associated infectious disease, or TRALI perform the following:

1. **Immediate Notification:** The hospital transfusion service must IMMEDIATELY phone VBS at (804) 213-4113 or (800) 989-2566 to report suspected cases of transfusion-associated bacterial contamination, West Nile Virus infection and TRALI reaction. Complete the Immediate Blood Product Withdrawal Notice (Attachment F) and fax to VBS at (804) 353-4877 or (800) 242-1782.

2. **Follow-up Notification:** Within 72 hours, fax the “Transfusion Reaction Report” (Attachment K), or hospital reaction workup to the Donor Advocate at (804) 358-2786.

For possible cases of transfusion-associated infectious disease (such as HIV/HCV/HBV) perform the following:

As soon as possible following suspicion of disease transmission, fax the “Report of Suspected Transfusion Associated Disease (Attachment K) to the Donor Advocate at (804) 358-2786 or mail the report to: Virginia Blood Services / 2825 Emerywood Parkway / Richmond VA 23294 / Attention: Donor Advocate.

Lookback Investigations:

VBS performs lookback investigations on any donor with a confirmed positive test for HIV-1/2, HCV, or T. cruzi. VBS sends (by mail or fax) a letter of notification and a "Product Follow up Form" (Attachment E) to the Medical Director whose institution has received products from the donor involved in the lookback. VBS also performs Creutzfeldt - Jakob disease (CJD) lookbacks if a donor is identified with CJD or verified to be at increased risk of CJD. Product Follow Up Forms should be completed and returned to the Donor Advocate at the fax number, or mailed to the address listed above.
**Donor Notification of Abnormal Test Results**

VBS policy dictates that we notify all donors of abnormal test results requiring their deferral as donors or indicating a significant medical issue. We believe that it is our responsibility to share information about their health with donors. Furthermore, donors who understand their abnormal test results are less likely to attempt to donate; this, in turn, creates a safer blood supply.

VBS’ notification personnel and procedures are dedicated to providing donors with health information and related services. The donor advocate initiates donor notification and is available for donor calls. Most donor questions and problems are resolved on these calls.

**When a donor is contacted or calls us:**

- We stress that their test results are held in the strictest confidence.
- We recommend that donors who have positive test results follow up with their personal physicians.
- Donor eligibility or deferral is clarified.

  Except for some autologous donations, whenever there is a positive test result, the unit is destroyed.

For more information, please contact the Donor Advocate at (804) 213-4166 or (800) 989-3666.
Product Returns

All products being returned to VBS should be recorded on a "Products to Be Returned" form (Attachment L) or a "Product Discrepancy Form" (Attachment D).

- A "Products to Be Returned" form is used for returning outdated products or stock rotation products. This form is also used if VBS has asked that the product be returned for a recall or market withdrawal.

- The "Product Discrepancy Form" is used when a customer wants to return a product and report a product performance issue or discrepancy. Examples include: broken or clotted products, ABO discrepancies, positive DAT discrepancies, bloody, hemolyzed or icteric products and underweight and overweight products. After the products have been evaluated by VBS, a copy of the completed "Product Discrepancy Form" will be returned to the customer for your records.

All products and forms should be returned to the Hospital Services Department. It is important that the products being returned to VBS meet the requirements listed on the bottom of each form. The completed form should be signed and the date and time of returning the products should be indicated.
Invoicing

BILLING PERIODS

The billing period is the 1st of the month through the 15th of the month and then the 16th of the month through the last day of the month. Bills are generated on the 1st working day after the 15th of the month, and also the 2nd working day of the month.

HOSPITAL INVOICES (BILLS):

Billing is generated electronically and generally sent via secure encrypted email. Each bill you receive will include the blood or product identification, date of transfusion or distribution, and price. Units that have been credited are noted with a (-) after the unit price. Each bill has a summary page, detail pages, and a statistics. Please pay the net amount due within 30 days. Additional information about billing is found in the hospital contracts. Transportation fees are added directly to the 2nd half of monthly invoices.

BILLING INQUIRIES OR PROBLEMS:

Hospital Invoices: Finance Department (412) 209-7316
Reference Bills: Finance Department (412)209-7316
Shipping Documents: Hospital Services (804) 213-4113

Toll Free: (800) 989-4438 plus last four digits of phone number
Education Opportunities at VBS

AABB Teleconferences:

VBS sponsors teleconferences offered by AABB. VBS is pleased to be able to offer these conferences at no charge to our contract customers but registration is required. Information is emailed to all hospital blood banks. These conferences are held in our 2825 Emerywood Parkway facility or via a ‘GoToMeeting’ internet session. For more information, contact the Clinical Instructor at (804) 213-4152 or (800) 989-4438 and extension 4152.
Attachments:

A. Copy of FDA License
B. Copy of AABB Certification
C. Copy of CLIA Certificate
D. Product Discrepancy Report Form
E. Product Follow Up Form (QA 105)
F. Customer Service Inquiry Form
G. Approval of Emergency Release of Blood/Blood Products Form (HS 19)
H. Autologous/PSD Form (PS003)
I. Therapeutic Prescription Form (PS007)
J. Immediate Blood Product Withdrawal Notice (QA 515)
K. Transfusion Reaction Report Form (D_REL 102)
L. Products to be Returned Form (HS 11)
M. Request for Red Cell Reference Lab Studies Form
N. HLA/Platelet Testing Request Form

Note: Copy of Licenses and forms available online.