## *How do large hospitals transport blood products to patient care areas for transfusion?*

**A colleague in the Midwest** reports that in their facility, it has historically been the responsibility of the **Laboratory** (specifically the Blood Bank) to provide transport for blood products to the patient care area where the transfusion will take place. This has always been an inefficient service because the demand for the service occurs when the transporter is on a run requiring the requesting area to wait (it is one of Murphy's laws that the transporter will not be available when the service is required). Additionally, there is a significant turnover of personnel filling these jobs, which forces them to use laboratory technicians and sometimes technologists. Technologists and technicians are not always available to do this work, especially when they are working on a trauma or other situation requiring their technical skills. The Midwesterner wants to know:

- how other large hospitals (theirs is 1400 beds) transport blood products to patient care areas
- if human transporters assigned to the laboratory are used, do you provide the service to every patient care area, and do you provide the service around the clock (24/7)?

---

The following reponses have been received.

**ADDENDA** Sept. 26, 2003

1. A colleague reports that one **hospital in the SE United States** is served by the compatibility lab of their community blood center, located about 500 feet from the hospital. **Blood components are sent to most locations via hospital vacuum tube**. The blood center has a vacuum tube station at the blood center. The transport system has been validated. It is rare for there to be a problem, especially since the vacuum tube transport is preceded by a specific request procedure that the component be sent. This activates a level of awareness such that, if the component should not arrive in a reasonable time, an inquiry is initiated. The reporting colleague comments that in his experience, the above described system is very reliable.

2. **A transfusion medicine physician at a 1800-bed tertiary care multispecialty teaching hospital in India** reports that their blood bank transports blood to the operating rooms for scheduled procedures, and these blood products are placed into **monitored coolers** until needed. If a blood product is not needed, in the evening any unused blood is returned to the bank by the operating room staff. For other blood requests elsewhere in their hospital or for emergency operations, the needed blood products are picked up by a doctor/nurse/ward support staff upon presenting an appropriate authorization form. For treatment units located approximately 3 to 18 miles away, blood product transport is organized by the respective peripheral units themselves.

3. **A transfusion medicine colleague in Michigan** reports that her 888 bed facility includes five separate hospitals linked together, and that walking travel time from the Blood Bank to the furthest operating room is 10 minutes. In order to transport blood products to the place of transfusion, they use a **combination of pneumatic tube system and patient care personnel coming to the blood bank**. When the pneumatic tube system is down or the amount to be delivered is large or in a cooler, they use members of the phlebotomy team and central specimen distribution personnel to deliver the blood. The use of pneumatic tubes is a mixed bag. During the height of the day, the wait time for a tube to take off can be 10 minutes. During their recent great power outage, they had no pneumatic tube system nor elevators available. They had phlebotomy personnel climbing as many as 7 flights of stairs to deliver blood. Patient care unit personnel also came to the Blood Bank to obtain products as well. They **do not have the staffing to run a full time blood delivery service** from their Blood Bank as they are kept busy with patient care, transplants and emergencies.

**ADDENDA** Oct. 2, 2003

4. **A colleague at a small hospital in Missouri** reports that they use a **pneumatic tube system** to transport blood to most locations in their institution. She reports that essentially all of their blood is transported this way, except thatintended for patients in the operating room, where a refrigerator

maintains RBCs for major surgeries. **For operating room cases**, blood products are hand delivered to the OR in the morning (3 or more units are set up). When the surgeries are done, any unused products are retrieved. When the nurses take a product from the storage refrigerator, they log the unit in a notebook. They have a Short Stay Unit (for transfusions) that uses a pneumatic tube station that is located in their Surgical ICU, which is just down the hall. The rest of their patient care areas have tube stations. **For transfusions outside the operating room**, here is their procedure:

1. A nurse sends a routing slip via the tube system to the laboratory requesting that a blood product be dispensed.
2. The laboratory calls the patient care area and asks if they are ready to receive the blood product.
3. The blood product is signed out in the computer and sent with the routing slip to the patient care area via the tube system.
4. The nurse receives the blood product from the tube station, checks that the patient information on the unit, attached tag and routing slip all match, fills out the bottom part of the routing slip and returns the slip via the tube system to the lab so that the laboratory knows the product was received. If the routing slip does not come back to the laboratory in 10-15 minutes, the lab calls up to the floor TO make sure the product is not still sitting in the tube station.
5. If it is decided that the blood product transfusion cannot start right away, the blood product must be hand delivered to the laboratory within 30 minutes.

The Missouri colleague states that their **tube system is rarely down, but when it is**, the nurses come down to the laboratory and pick up the blood products. They transfuse 1500 - 1700 RBCs and 500-600 FFP per year, but in the 8 years that the Missouri colleague has been at this institution, they have had a **problem with this system only once** when a blood product was sent on a weekend to a wrong station and there was no one on duty to try to track it down.

Please submit comments to the e-Network Forum.

Ira A. Shulman, MD
CBBS e-Network Forum Editor & Moderator



**Printable PDF of this page**

**Posted**: September 23, 2003

**Addenda**: Sept. 26 & Oct. 2, 2003