

Centralization of blood and tissue services - A new trend

In the evolving healthcare arena, change is inevitable and as the tissue industry becomes more regulated, a new trend affecting hospital-based blood banks is emerging. Many hospitals are choosing to centralize their tissue management and blood transfusion services in their already



established blood banks, giving blood banks' staff new responsibilities and roles. This change may be a response to the recent scrutiny of allograft tissue by the FDA and the continuously updated standards from the Joint Commission. The Human

Cells, Tissues, and Cellular and Tissue Based-Products Committee and the AABB Task Force agree that centralization of hospital tissue banks within a single department, such as the blood bank, leads to improved tissue ordering, utilization, handling and tracking. It also ensures optimal supplier qualification, product identification and storage, record-keeping, traceability, inventory control, and recall management.²

According to an AABB article written by staff writer Tanya Brown, one of the hospitals to implement this change was Children's Healthcare of Atlanta-Egleston Campus. When the Joint Commission released new tissue standards for its accredited facilities, they decided to redesign their new facility to include a room within the blood bank to house tissue. This change allowed the blood bank technologists to manage all of the human tissue needs within the hospital. "We set out to be compliant with The Joint Commission's standards for tissue and thought that it would be best handled by the blood bank," said Cassandra Josephson, MD, Assistant Director of the blood and tissue bank at Children's Healthcare of Atlanta. "The blood bank already had a system for tracking and could handle recalls, vendor qualifications and manage the issuance of tissue. It would have

cost more to bring the surgical area up to compliance than it would the blood bank."¹

Susan Sharpe from Northside Hospital in Atlanta can relate. Northside started tracking tissue in 2003 and moved their physical inventory of tissue into one centralized location in 2005—the blood bank. They did some renovations in preparation for this change and actually ended up using less room to accommodate the extra inventory of tissue than originally planned. As the Transfusion Service and Tissue Bank Supervisor, Susan is certainly familiar with the benefits of undergoing such a change and the hurdles that need to be overcome. "We experienced two very different cultures (the laboratory and the OR) that needed to be brought together to make the transition of tissue to the Transfusion Service successful. Our Transfusion Service staff and the OR staff worked diligently to bridge the gap between the two areas to improve our tissue management system overall."

The blood bank appears to be a superior choice for hospitals to centralize tissue management as their staff and directors are already keen to maintaining federal regulatory compliance and to the standards

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Tissue Connection Trivia

Correctly answer this quarter's question and you'll be entered to win a \$25 gift certificate to Best Buy. To enter, e-mail your answer to: contactinfo@lifelinkfound.org. Please provide your full name, hospital and phone number.

According to the AATB Current Good Tissue Practice guidance document, what records must distribution intermediaries maintain?

- records of receipt, inspection, and acceptance or rejection of tissue,
- storage temperature records, if applicable,
- disposition records documenting the identification number, tissue type and quantity, date of shipment and identity of consignee (if shipped) or date of destruction (if applicable),
- All of the above.

Only correct answers will be entered into the drawing. One winner per quarter. The winner will be notified and posted in the next Tissue Connection.

Skin for the Well Dressed Patient

By Ernest K. Manders, MD

Much has been made of how we dress and the image we put out for the world to see. The fashion industry is built on that importance: clothing. The real miracle of fashion, however, lies just beneath the cloth in what we all wear to meet the world: our skin. Whether it is the largest organ in the body, as some say, or not, it is certainly one of the most important. Without it mankind would have no more chance of life than a jellyfish washed up on a beach. Our plasma is our internal sea, rich in sodium and chloride like the salt sea of our oceans; without our skin, we would dry up and blow away.

Skin is a source of beauty, it protects against dehydration, regulates our temperature and defends against bacterial invasion. It is amazingly durable and capable of self-repair. Skin automatically grows to accommodate the enlargement of our physical bodies. It is sensitive and provides feedback that helps us move safely through our world. Skin is adorned with special areas of color and appendages such as hair and nails. Our skin is part of our identity and it is no small wonder that a large part of the beauty industry focuses on the enhancement of skin.

What happens when we lose skin or damage it in a major way? Unfortunately major loss of the integument is common due to burns, trauma, infections, and cancer. The loss of skin can hamper our well-being, particularly if the loss is visible.

Thanks to a largely American innovation, human skin recovered from deceased donors can be a life saving resource for burn patients and is indispensable to the practice of modern medicine.

Skin is also used as a treatment for non-lethal wounds including venous stasis ulcers and diabetic foot ulcers. In addition the dermis, or deeper layer of skin, composed almost exclusively of collagen, is now recovered and processed to make an acellular collagen sheet for reconstructive surgery.

Patients have benefitted through repair of defects in the abdominal wall, closure of palatal fistulas after cleft palate and as a substitute for dura in neurosurgical procedures.

Driven by the needs of patients, the tissue bank community recovers and processes skin from the upper extremities, the back of the legs and the upper back of the torso which allows for thicker decellularized grafts utilized in reconstructive surgery. Today, split-thickness grafts are consumed in large volume by the military where explosive devices cause both burns and wounds with major tissue loss. Skin is a front line defense for surgeons and wound-care personnel who understand the characteristics and ease of use for wound treatment.

A world leader in burn surgery, Col. Basil Pruitt, U.S. Army Institute of Surgical Research Burn Center, Brooke Army Medical Center in Fort Sam Houston, TX listed the desirable characteristics of biological skin substitutes, based in large part on the burn unit's experience with living allograft skin and the lack of available skin. They include tissue compatibility, rapid and lasting adherence, vapor barrier, resistance to shear stress, indefinite shelf life, low cost, and minimal storage needs.

Frozen skin has many of the same attributes and has been the gold standard against which other wound and burn treatment modalities must be compared, but its use has suffered because of the required low temperature freezers or liquid nitrogen storage tubs which can be quite expensive to maintain the frozen skin.

The implementation of new technology has enhanced the needs of patients and surgeons. Promethean LifeSciences, Inc., of Pittsburgh, PA introduced a new preservation method of skin through gamma irradiation. Staff in the Plastic Surgery Laboratory at Pennsylvania State University learned that high dose irradiation preserves and sterilizes the skin against many viruses, allowing it to be stored at room temperature. The cellular architecture of the skin was unchanged, yet because it is no longer viable the skin prevents rejection; something that did occur with living skin. GammaGraft is the first irradiated skin allograft stored at room temperature. The T cells do not invade and destroy GammaGraft, therefore it can benefit patients many weeks longer than living skin would on an immunocompetent individual.

The irradiated skin is stored at room temperature and can be carried in packs. It is now in the field in Afghanistan and in Iraq. The irradiated skin is stocked on the US hospital ships USS Mercy and USS Comfort and in American embassies in more volatile countries. The storage at ambient temperature has allowed wound care personnel to have skin immediately available to them as a temporary skin substitute.

There is now an extensive use of GammaGraft in treating wounds, especially problem wounds of the lower extremities. Of particular importance to the patient is the fact that the skin is impermeable; amazingly no cover dressing is needed. The skin may be surgically affixed and the patients may even walk on it. They can bathe in it and wear clothes over it without any cover dressings. Because the graft persists for weeks, wound care is greatly simplified and the cost of wound care reduced. Wounds heal under the GammaGraft. Now any health care facility or office can have its own skin bank on a shelf, ready to go with the skin ready for application just by opening the peel pack.

As Americans age and more wound care is needed, the care can be better than ever before and the costs can be lowered, thanks to advances in skin banking. Behind these successes are all those working to make this life and limb-saving resource available. Indeed, skin represents the gift of life for many fellow human beings. All of us working in this endeavor can be justly proud.



Allograft skin may be surgically affixed. A skin barrier is formed and no cover dressing is needed.

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Special Announcements:

Tissue Connection Trivia Winner:

The Tissue Connection Trivia winner from the last newsletter, Deborah M. Gant, received a \$25 gift card from Best Buy. Deborah is employed at Sacred Heart Health Systems in Pensacola, FL. She initially spent 10 ½ years working in various positions before leaving the Health Systems to complete her Masters degree in Nursing Administration at the University of South Alabama in Mobile. Since her return nine years ago Deborah is responsible for education, staff development and quality improvement for PeriOperative Services. Congratulations!

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Tissue Connection readers measure up to LifeLink's high standards!

Call LifeLink Tissue Bank to order your free measuring tape tool and badge holder at 800-683-2400 ext. 4144 or send an email to contactinfo@lifelinkfound.org. This measuring tape is a compact size with a belt clip so you can take it anywhere. The badge holder stays in place with gently locking teeth and is a favorite at many hospitals!



ACCREDITED CONTINUING EDUCATION PROGRAMS



Symposiums:

On June 28th, we held our annual symposium in Tampa, FL with nearly 130 nurses and hospital personnel in attendance - our largest group thus far. All of the speakers received rave reviews about their presentations, which covered the following topics: steps in the tissue donation process, the making of an allograft, clinical applications for mesenchymal stem cells, qualifying tissue distributors and myths and facts

about organ and tissue donation. The same program was held in Orlando, FL on August 9th. Our next symposium is scheduled in San Juan, Puerto Rico on November 1st.



8170 Woodland Center Blvd., Tampa Florida 33614



800 683 2400
Fax: 813 886 1851
www.lifelinktb.org

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