Since the tragic loss of our transplant team in a plane crash in June 2007, we at the University of Michigan Transplant Center have become interested in improving organ procurement travel safety and efficiency. We have undertaken numerous studies in an effort to better understand organ procurement travel practices in the United States. This work has revealed some interesting findings and has fueled national efforts to improve organ procurement practices.

Organ procurement travel occurs under poor weather conditions, to remote locations, and with a sense of urgency. Our work has suggested there is concern within the transplant community that current organ procurement travel practices are high risk and inefficient. Surgeons reported feeling “very safe” only 16% of the time while traveling for organ procurement. Further, in the last two decades, there have been 9 deaths among American transplant professions as a result of plane and helicopter accidents. In addition, 15% of transplant surgeons in the U.S. who responded to our survey reported personal involvement in a self described “accident” while traveling on an organ procurement trip.

These concerning findings must be considered with care. Firstly, over the past 20 years countless lives have been saved by transplantation, and travel is necessary for transplants to occur. Secondly, upon discussion with national transportation safety experts, organ procurement travel, though significantly higher risk than other modes of travel, is quite safe.

The work done by our group has yielded numerous
Sculpture Memorializes U-M Transplant Team Heroes on Anniversary of Crash

Sculpture by Ann Arbor native and University alum Douglas Hollis erected outside University Hospital to remember team on transplant mission

ANN ARBOR, Mich - Families, friends, and colleagues of the University of Michigan Health System transplant team that died two years ago while engaged in a life-saving mission will now have a permanent memorial in remembrance of their loved ones.

Ann Arbor native and University of Michigan alumnus Douglas Hollis was commissioned to create a sculpture memorializing the team that died when their plane crashed into Lake Michigan June 4, 2007 after procuring organs for transplantation.

The sculpture and garden are intended to be a place of remembrance and rededication to the ongoing work of organ transplantation and health care.

The “Rotations” sculpture was erected May 14 and 15 outside the hospital’s main entrance. The stainless steel screen contains rotating components that spin with the wind and should come to life when Survival Flight missions stir the air as they descend upon the University Hospital helipad. The sculpture is built on a low concrete wall and surrounded by a garden.

Hollis, creator of scores of high profile permanent projects, among them “A Sound Garden” at the National Oceanic and Atmospheric Administration in Seattle, Washington, and “Mountain Mirage” at the Denver International Airport, has named the sculpture “Rotations” to honor and celebrate the work of the transplant team.

A task force made up of members of the Transplant Department, the Survival Flight team, and other University of Michigan staff selected the artist and approved the sculpture proposal. The task force researched the names and work of artists commissioned to do similar memorial projects, requested qualifications from six artists and asked for proposals from two finalists. Hollis, who now resides in California, was selected.

“It is a great honor,” says Hollis, who received an M.F.A. at U-M in 1970. His work spans many states, including California, Arizona and New York. This is his first work of art in Michigan.

Hollis designed the sculpture and the St. Louis-based metal fabrication company Troco built the sculpture and shipped it to Ann Arbor, where it was erected and welded together.

The University of Michigan mourns the loss of David Ashburn, M.D., a fellow (physician-in-training) in cardiothoracic surgery; Richard Chenault II, a transplant donation specialist with the U-M Transplant Program; Dennis Hoyes, a Marlin air pilot; Ricky (Rick) LaPensee, a transplant donation specialist with the U-M Transplant Program; Bill Serra, a Marlin air pilot, and Martinus (Martin) Spoor, M.D., a cardiac surgeon who had been on the U-M faculty since 2003.
publications and presentations. In addition, through the generosity of the University of Michigan Health System, the Transplant Center received a generous grant to host the Michigan Donor Travel Forum. This conference on March 30, 2009, invited 25 experts in transplantation and transportation to develop approaches to improve the efficiency and safety of organ procurement travel. Numerous opportunities for improvement were noted, and the proceedings will undoubtedly fuel significant policy initiatives.

Potential improvements in practice include a reduction in the travel by transplant teams by increasing the local procurement of organs. For example, instead of the University of Michigan team traveling to Indianapolis to retrieve a liver, Indiana University would procure the liver for us and ship it to Ann Arbor. As a result, a pilot and the organ would have to travel, but no transplantation professionals. In addition, efforts were made to establish safety best practices for organ procurement travel. Within this context, general guidelines were established to assure that only high quality aero-medical operators are used for procurement travel.

The tragic events of June 2007 had a profound impact on the Transplant Center. We can be proud that we are now leading efforts to help prevent such a tragedy from happening again.

— Michael Englesbe, MD
Helping Patients Who Are Incompatible Through Desensitization

The renowned University of Michigan Kidney Transplant Program is performing kidney transplants in patients who normally would be ineligible. This is accomplished through the kidney desensitization program.

Approximately 30% of patients who are awaiting a kidney transplant are considered “sensitized.” Likewise, 30% of kidney transplant candidates cannot receive a kidney transplant due to blood incompatibility with the donor.

Sensitization and blood incompatibility are defined by the presence of antibodies against human cells or blood types – antibodies are proteins that are produced by white blood cells to help the body fight infection. These proteins are also produced any time that the immune system encounters a “foreign” protein inside the body.

A person develops antibodies against human cells from previous transplants, blood transfusions, or pregnancy. Antibodies against blood types are developed after birth – a normal response in humans. Subjects with blood type O have antibodies against blood types A and B, and can only receive blood or transplants from donors with blood type O. Individuals with blood type A have antibodies against blood type B and cannot receive transplants or transplants from type B donors. Similarly, subjects with blood type B cannot receive blood or transplants from type A donors.

If a kidney transplant is performed in a patient with antibodies against human cells or blood types, antibodies will bind to the transplant causing severe rejection and destruction of the kidney.

A process called desensitization removes unwanted antibodies from the bloodstream to prepare for a successful kidney transplant. Desensitization can be performed in patients with a potential living donor against whom they have antibodies, patients waiting for a deceased donor transplant, and patients who have a living donor who is “blood type incompatible”.

Desensitization includes plasmapheresis treatments and immunosuppressant medications. Plasmapheresis is similar to dialysis. While dialysis removes toxic chemicals from blood, plasmapheresis removes harmful antibodies. Plasmapheresis lasts about 2 hours, is done 3 times a week, and is followed by an IV medication called Immune Globulin (IVIg) that prevents harmful antibodies from coming back. For sensitized patients who are waiting for a deceased donor transplant, desensitization consists of 6 monthly IVIg infusions followed by two additional doses 9 months and 1 year after the treatment is started.

Although insurance approval is required prior to initiating desensitization treatments, the University of Michigan is in the process of obtaining approval of our desensitization program by the Centers for Medicare and Medicaid Services (CMS). Financial coverage by CMS will ensure access to desensitization to all patients with end stage kidney disease including those without private insurance and those without a living donor.

Finally, the success of desensitization depends on the amount of antibodies. Patients with very high levels of antibodies are likely to fail this treatment and, as a better option, the University of Michigan Transplant Program offers the opportunity of joining our Kidney Paired Donation Program (KPD). The University of Michigan KPD program was developed over the last two years; this program offers the matching of incompatible living donor/recipient pairs to others with a complementary incompatibility until an immunologically compatible or better-suited donor is identified. This represents the best option for successful transplantation in patients with very high levels of antibodies.

Milagros (Millie) D. Samaniego, M.D.
Medical Director
Adult Kidney and Pancreas Transplant Programs
U-M Computer Software Matches Kidneys to Hard-to-match Recipients

*Paired Kidney Donation program provides additional opportunity for some people needing a kidney transplant*

**ANN ARBOR, Mich.** – The University of Michigan has developed an organ matching software program that offers new hope to patients needing a kidney transplant.

Often a patient who needs a kidney has a family member or friend willing to donate one of his or her kidneys, but it cannot be done due to tissue or blood type incompatibilities. The University of Michigan Transplant Center seeks to match these two people – an incompatible recipient/donor pair – with other pairs in the same situation, utilizing this U-M computer program.

The specialized computer program makes it possible for the donor from the first pair to donate to the recipient from the second pair, and the donor from the second pair donates to the recipient from the first pair.

“There are about a half dozen kidney paired donation matching programs throughout the country,” says Alan Leichtman, M.D., medical director of Kidney Paired Donation Transplant Program at the University of Michigan. “U-M is distinguished in two ways: one way is that we are the largest single center pool and the second is our matching program is very efficient. It’s designed to find kidneys for these people who are the most difficult to find kidney transplants for. Consequently, we are effective in transplanting those people who are the hardest to transplant.”

**A special bond is formed**

Although strangers before they met in July, two married couples already shared a profound bond because they had surgically swapped kidneys after being matched by U-M’s software. Both of the women had needed a new kidney. Their husbands were willing to donate one of theirs, but neither man could give a kidney to his own wife due to tissue incompatibilities.

After the software match was identified, the U-M transplant team determined that Dave Hedberg of Alto, Mich. could give a kidney to Lyn McKiernan-Karsten of Allegan, Mich., and Brian Karsten could give one to Dave’s wife, Marilyn Hedberg.

“Dave is so generous to give a part of himself to someone he doesn’t know. It’s amazing that there are people out there who are so generous,” McKiernan-Karsten says of her donor, Dave Hedberg. “I was extremely ill before the surgery. Afterwards, it’s like a whole new life. I have some more energy and I’m able to do things I couldn’t do before. It’s incredible.”

Since July 2008, the U-M Paired Kidney Donation program has given an additional opportunity for transplantation to people who need a kidney transplant and who have a willing but incompatible donor.
Paired Kidney Donation program continued from page 5

The program also can match altruistic donors – people willing to donate without a recipient in mind – to potential recipients that would create a chain of transplants sometimes involving numerous recipients and donors.

The need for kidney transplantation has grown significantly over the past decade with over 76,500 patients currently waiting a kidney transplant. In 2007, only 10,587 kidney transplants were performed in the United States, and 4,443 people died waiting for a transplant. In Michigan the wait for a kidney from a deceased donor is currently about five years.

“There’s not that many of these programs out there,” says Marilyn Hedberg. “They are such a life saver for people because you know a lot of people who don’t make it on the waiting list. So this is a real blessing.”

More information about the Paired Kidney Donation Program can be found on its Web site, http://www.michigantransplant.org/kidney/paired.htm. To enroll in the program or for more information, call 734-763-4228. To participate, a blood test may be needed to provide matching information with other pairs.

– Source: PRMC www.med.umich.edu/prmc

Whole Foods Market 5% Day

On April 2, 2009 the Whole Foods Market on Washtenaw in Ann Arbor hosted a “5% Day” to benefit our Transplant Center. We were fortunate to be the recipients of this generous program, as only 4 charities are chosen each year at each Whole Foods Market location. Gift of Life Michigan assisted with recruiting and scheduling the dozen volunteers that worked at information tables in the store throughout the day. Shoppers were given the opportunity to join the Michigan Donor Registry and 68 people joined the registry during the course of the day. Five percent (5%) of all of the day’s sales were donated to the Transplant Center, which resulted in a check for $4,287.90. All of us at the Transplant Center are grateful for this very generous donation as well as for the opportunity to share our life-saving mission with the general public in a very meaningful way.

– Bob Garypie
Transforming Lives Through Leadership: Organ Donation Executive Summit

A national program Transforming Lives Through Leadership: Organ Donation Executive Summit was held in Chicago, Illinois in May 2009. The event was to examine, from a leadership perspective, how organ donation fits within the continuum of today’s hospital environment with a focus to effectively integrate organ donation as part of the continuum of care in the nation’s largest hospitals. The University of Michigan and Gift of Life Michigan have been recognized for their effective collaborative approach in bringing leadership across organizations resulting in improvements in donation and transplantation.

A senior leader at UMHHC was invited to share their experience in leading change and collaboration across organizations to develop an effective donation environment. T. Anthony Denton (a.k.a. Tony), Senior Associate Director and Chief Operating Officer of UMHHC, made a presentation at the Summit meeting sharing our view that organ donation is part of the multidisciplinary care that we deliver to our patients. The Venn diagram shown below illustrates the system we use at UMHHC. Our internal UM Donation Initiatives Program (UMDIP) directs our organ, tissue and eye donation activity and efforts. They work collaboratively with our organ procurement organization which is the Gift of Life Michigan. Although they are independent, each group is connected through the donor and donor families…the important intersection. Our donation success results from the positive interactions of each area working together.

Tony shared the specifics of the success of our program, noting UMHHC has received the U.S. Department of Health and Human Services – Organ Donation Medal of Honor for the four years it has been awarded. The presentation reviewed how the program is integrated into the UMHHC continuous quality improvement processes, has daily compliance audits, shares monthly results to institutional leaders, and includes awareness and training activities. The initiation and success of the donation following cardiac death program was shared.

Organ donation requires a multi-disciplinary approach to solving the donation shortage. Tony’s focused on the need for collaboration and teamwork; encouraging others to partner with their local organizations to promote best practices in organ donation and transplantation, care, education and research. The presentation concluded with media campaign created through collaboration to promote organ donation in Michigan.

Tony’s message was clear: leadership, collaboration, and teamwork can be effective in promoting organ donation and transplantation.
Trevor Scott – Student, Athlete, and Lung Transplant Recipient!

In May 2009, the University of Michigan Transplant Center, as well as friends and family of Trevor (Teddy) Scott, celebrated his college graduation and perseverance throughout the journey of this accomplishment. Teddy graduated from the University of Michigan with a Bachelor of Arts in Sport Management. Teddy’s challenges throughout his academic years at the University of Michigan were not those of a typical student. Most of his classmates and professors were unaware of the health challenges he was facing simultaneously with student demands.

Teddy was born with the genetic disorder cystic fibrosis. Cystic fibrosis causes a number of health challenges for the affected person. One of the most debilitating health issues with cystic fibrosis is the body produces thick, sticky mucus. The mucous blocks airways in the lungs, makes it increasingly difficult to breathe, leading to coughing fits and recurrent lung infections. During Teddy’s first years in college, he was experiencing all of these respiratory problems. Teddy had severe end stage lung disease from Cystic Fibrosis. Teddy had to wear 6 liters per minute of oxygen, the maximum amount of oxygen on a portable system. Breathing became more and more difficult. He struggled just walking from one class to another and would have to stop to recover his breathing after five minutes of walking. Fortunately, Teddy’s brother was able to assist driving him between campus classes. Teddy spent hours each day doing breathing treatments and airway clearance maneuvers in order to breathe. His disease forced him to be organized, balancing his health needs and student life in order to stay alive. Teddy often took many medications, including infusing intravenous antibiotics between classes in order to treat his recurrent lung infections. Wearing oxygen and coughing frequently in class made it very difficult to keep other students from noticing he had a major health issue. Teddy did his best as much as possible to blend in as a regular student. Having energy to study and do homework while struggling to breathe and battling lung infections demonstrates the determination of this man.

Teddy’s University of Michigan Health System pulmonologist, Tammy Ojo, MD informed him during his sophomore year at Michigan that she recommended lung transplant of both lungs for Teddy as his disease was very advanced and becoming life threatening. Dr. Ojo specializes in lung transplant for patients with Cystic Fibrosis. Teddy would need to receive both lungs from an organ donor. Cystic Fibrosis patients need both lungs transplanted as the diseased lungs are full of infections. Both diseased lungs need to be removed and replaced with healthy lungs. Cystic Fibrosis does not recur in the transplanted lungs. Lung transplant recipients must take special medications lifelong to prevent the body from rejecting the transplanted lungs as well as face many other challenges as a transplant recipient.

Teddy was placed on the lung transplant wait list. The wait time for organ transplant is variable as it depends on organ donation from a suitable donor with healthy lungs. Teddy was aware that often lungs from an organ donor are not usable as the lungs are so easily damaged by injury or infection. He also was aware that not everyone on the lung transplant wait list receives lungs as there are more patients waiting for transplant than organ donors. Annually, across the country, patients with Cystic Fibrosis...
waiting for transplant become too sick for transplant or die on the lung transplant wait list because suitable lungs are not available in time. Increasing organ donation awareness and the critical need for organs can save many lives. On March 10, 2006 the family of an anonymous donor agreed to donate their loved ones organs and Teddy received two lungs via transplantation which began early in the morning on March 11th. Teddy’s life was forever changed by the generous gift of his donor.

Teddy has always shown great interest in sports. He rarely missed a Michigan hockey or football game throughout his student years at Michigan. Prior to transplant, his lung disease had made it impossible for him to participate in sports but he remained a huge Michigan sports fan. After his lung transplant, Teddy once again was able to breathe and found he could tolerate sports. He loves hockey and began ice skating again. As his endurance increased, he was able to play on adult recreation league hockey teams. Teddy began playing softball, sand volleyball, flag football, and broomball through U-M intramurals. He was able to travel to watch Michigan play in The Rose Bowl and follow the Michigan hockey team to numerous tournaments. Walking across the U-M campus between classes became effortless. His junior and senior years at Michigan were full of sports activities and very different from his first years thanks to transplantation.

The University of Michigan Transplant Center has a summer camp for children between the ages of 7-16 years who have received an organ transplant. Camp Michitanki is a special experience for transplanted children to come together and share their experience of surviving end stage organ failure, transplantation, and coping with the medical routines of an organ transplant recipient. Teddy volunteered to be a camp counselor for the campers. August 2009 will be Teddy’s third year as a Camp Michitanki counselor. Teddy is able to understand first hand what the campers face medically and socially. The campers look up to him in an amazing way. Teddy can relate to the campers and motivate them through example. Teddy does not let his medical condition keep him from pursuing an education or participating in the activities he loves. He is a role model and inspiration to the campers.

Life after organ transplantation does carry a number of challenges. Teddy not only was attending classes but also working part time. Organ transplant recipients must follow up frequently with their transplant center and have frequent testing. The appointments usually are inconvenient for any schedule and time consuming. Recipients must take numerous medications to stay healthy and keep from rejecting the transplanted organ. The medications have side effects that make student life more challenging. Organizing the medications, remembering to take the medications, and frequent visits to the pharmacy are necessary. Staying healthy and avoiding getting sick must also be a priority for success after transplant. Teddy did have to miss class and work after transplant for necessary hospitalizations and appointments. During his final semester at Michigan, Dr. Ojo informed Teddy he had to be admitted to the hospital and miss a week of school for rejection treatment that could not be postponed. Despite the health obstacles and interruptions, Teddy exceptionally faced these and maintained his determination to balance his health with his pursuits. Teddy has been an inspirational patient for our Transplant Center and we congratulate him on his graduation and wish him continued success with all his endeavors.

– Cathy Bartos, RN, BS, EMT-P
Transplant Docs Wait Tables at Zingerman’s Roadhouse

All winter long we dream about summer outdoor meals with friends. On June 16th our dreams came true at the 2009 second annual Transplant Center dinner at Zingerman’s Roadhouse, Ann Arbor, Michigan.

What could be better than a great meal with friends, live jazz and cool drinks on a warm summer evening? The thing that made it really special was the wait staff. For one night only, diners were treated to transplant doctors waiting tables!

The 2008 event put transplant surgeons to the test, so 2009 was the year for the transplant medical doctors to demonstrate their service skills. Drs. Aaronson, Chan, Conjeevaram, Dyke, Fontana, Leichtman, Marrero and Samaniego, did a fabulous job serving appetizers, soup, drinks, entrees, and desserts.

The event was well attended and netted nearly $10,000 for the Transplant Center. The live auction was a great success; featuring art work by Neil Davison, a handmade quilt, tickets to our Vita Redita and more. All of the ‘doctor-waiters’ autographed an event t-shirt which was auctioned off! By nightfall, many guests were still swaying to the music and relaxing in the warm breeze.

Everyone is looking forward to the 2010 event, when the transplant surgeons will return to further enhance their skills at serving a great meal. The success of these events is due largely to the generosity and hard work of the owners, management, and staff of Zingerman’s Roadhouse. Chef/owner Alex Young donated two dinners cooked-in-your-home for the live auction, which sold for over $2,000 each.

We send many thanks to our fabulous waiters who made this event so much fun and such a tremendous success!

– Bob Garypie
The Transplant Center’s Mission
The Transplant Center’s clinical mission is to provide our patients with the best possible medical care in a setting that emphasizes excellence, compassion, accessibility, responsiveness and prompt delivery of care.

University of Michigan Transplant Center Contact Information

Liver Transplant Programs

Adult
Liver Transplant Clinic - Gastroenterology Division
1500 E. Medical Center Drive
3868 Taubman Center, SPC 5391
Ann Arbor, Michigan 48109-5391
Phone: 734-936-7491 (Local)
Phone: 800-395-6431 (Toll Free)
TTY: 800-649-3777
Fax: 734-936-2464

Pediatric
Liver Transplant Program - Pediatric
Medical Professional Building
1500 E. Medical Center Drive
Room D5216, SPC 5718
Ann Arbor, Michigan 48109-5718
Phone: 734-615-2462 (Local)
Phone: 877-543-7789 (Toll Free)
Fax: 734-615-2223

Heart Transplant Programs

Adult and Pediatric
Cardiovascular Center
200 North Ingalls Building, 8B02
Ann Arbor, Michigan 48109-5477
Phone: 888-287-1082

Kidney and/or Pancreas Transplant Programs

Adult
Kidney and Pancreas Transplant Program
1500 E. Medical Center Drive
3868 Taubman Center, SPC 5391
Ann Arbor, Michigan 48109-5391
Phone: 734-936-7491 (Local)
Phone: 800-333-9013 (Toll Free)
Fax: 734-647-3417

Pediatric
Kidney Transplant Program - Pediatric
C. S. Mott Children’s Hospital
1500 E. Medical Center Drive
Room F6865, SPC 5297
Ann Arbor, MI 48109-5297
Phone: 734-615-2040 (Local)
Phone: 877-543-7789 (Toll Free)
Fax: 734-615-2042

Lung Transplant Program

Adult
Lung Transplant Program
1500 E. Medical Center Drive
3862 Taubman Center, SPC 5391
Ann Arbor, Michigan 48109-5391
Phone: 734-936-7491 (Local)
Phone: 800-333-9013 (Toll Free)
Fax: 734-936-6671

United Network for Organ Sharing (UNOS)

The United Network for Organ Sharing provides a toll-free patient services line to help transplant candidates, recipients, and family members understand organ allocation practices and transplantation data. You may also call this number to discuss a problem you may be experiencing with your transplant center or the transplantation system in general. The toll-free patient services line number is 1-888-894-6361.

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