



A YEAR IN REVIEW **2017**

Carolina Donor Services
maximizes the passing of the
heroic gift of life from one
human being to another through
organ and tissue donation.



A MESSAGE FROM OUR CEO

As the year closed, we found ourselves planning for the future but also reflecting on the events and accomplishments of 2017. We remember our donors and their families with gratitude, inspiration, and in awe of their ability to provide lifesaving gifts while they themselves navigated tragic and often unexpected loss.

Through the generosity of our heroic donors and the dedication of our hospital partners, Carolina Donor Services provided more organs to transplant recipients throughout 2017 than any other year in our history. In 2017, 662 organs were transplanted to hopeful recipients from 211 organ donors. This was a 4% increase from our previous high which occurred in 2010 and an 10% increase in the number of organs transplanted from our donors in 2016.

Donor families express tremendous comfort in knowing they are helping to fulfill their loved one's desire to be a donor. In October, we gathered at the State Capitol in Raleigh to celebrate over 5 million North Carolinians have generously registered as organ donors. We joined Donate Life North Carolina, the North Carolina Division of Motor Vehicles, LifeShare of the Carolinas, and Miracles in Sight to commend this momentous accomplishment and applaud the success of the North Carolina Division of Motor Vehicles examiners.

Partnerships like the one at the North Carolina Division of Motor Vehicles are the essence to our success and mission. Looking into 2018, excellent partnerships remain a key priority while we focus on process improvement and strategies to increase the number of organs and tissue available for transplantation and research. While reflecting on our past and imagining our future are easily overshadowed by the urgency that comes with each new day or donor situation, in 2017 we took time to envision our future in a new way and asked each member of our staff and management to contribute to the development of our strategic path forward. We developed specific strategies and goals centered on increasing organ and tissue donation and supporting staff to excel at honoring the heroic gift of life.

As we experience a bright start to 2018, we once again express our most sincere appreciation to all of our valued partners, the heroic donors, and their generous families.

Sincerely,

A handwritten signature in cursive script that reads "Danielle Niedfeldt". The ink is dark and the signature is fluid, with a large 'D' and 'N'.

Danielle Niedfeldt, RN, JD
President & CEO
Carolina Donor Services



5 MILLION REGISTERED DONORS



As of August 2017, over 5 million of the approximately 9.1 million licensed drivers and ID card holders in North Carolina have said “Yes” to registering as an organ donor at the DMV! This means that over 54% of North Carolinians have registered. North Carolina has the 6th largest organ donor registry in the country.

On October 2nd, CDS joined a celebration hosted by Donate Life North Carolina at the State Capitol in Raleigh. We gathered with our DMV partners, Friends for Life Ambassadors, and our friends at LifeShare of the Carolinas and Miracles in Sight to commend this momentous accomplishment in which all North Carolinians can take pride.



HONORING DONOR LEGACIES

In April, New Hanover Regional Medical Center in Wilmington held their first donor memorial. Carolina Donor Services, hospital administration and staff welcomed over 15 families to the event. During the ceremony as the names of the donors were read, each family was presented with a white rose and an engraved leaf with their loved ones' name on it. They were then able to walk to the donor memorial tree, located outside of the ICU waiting area, and see another exact metal leaf that is now permanently placed on the donor tree. For these families and hospital staff, this serves as their connection to purpose.



"The leaves of this tree illustrate the new life brought to so many and is a reminder of how beautiful and precious our loved ones were to each of us. Seeing Lindsay's leaf on the tree is right where it needs to be, bringing new life, beauty and memories to all that view it."

- The Benton/Ekstrom Family

2017 Workplace Partnership for Life



Carolina Donor Services once again teamed up with its hospital partners for the national Workplace Partnership for Life (WPFL) campaign sponsored by the U.S. Department of Health and Human Services to promote organ, eye and tissue donation within hospitals and communities. In CDS' service area, 76% of hospitals and transplant centers registered in the WPFL program received recognition for engaging in activities designed to promote donation awareness and register new donors. Nationally, this initiative has added over 419,000 donor registrations to state registries since 2011.

*"Workplace Partnership for Life has allowed **New Hanover Regional Medical Center** and Carolina Donor Services to work collaboratively to discover new and innovative ways to reach out to our community in an effort to provide educational opportunities to raise awareness about organ and tissue donation," - Neta Greenlief, Manager, STICU MICU at New Hanover Regional Medical Center*

o for Life Hospital Campaign

In Carolina Donor Services' Service area, the following 44 hospitals and transplant centers received recognition:

Platinum

Alamance Regional Medical Center
Cape Fear Valley Health System
Carolina East Medical Center
Columbus Regional Healthcare System
Duke Regional Hospital
Duke University Medical Center
Frye Regional Medical Center
Moses H. Cone Memorial Hospital
New Hanover Regional Medical Center
Novant Health Forsyth Medical Center
Novant Health Thomasville Medical Center
Randolph Hospital
UNC Hospital
Vidant Beaufort Hospital
Vidant Bertie Hospital
Vidant Chowan Hospital
Vidant Medical Center
Wake Forest Baptist Medical Center
WakeMed

Gold

Pender Memorial Hospital
Vidant Edgecombe Hospital
Wayne Memorial Hospital

Silver

Ashe Memorial Hospital
Carteret Healthcare
Central Carolina Hospital
Charles A. Cannon, Jr. Memorial Hospital
FirstHealth Moore Regional Hospital
FirstHealth Moore Regional Hospital - Hoke Campus
FirstHealth Moore Regional Hospital - Richmond
Halifax Regional Medical Center
Harnett Health - Betsy Johnson Hospital
Hugh Chatham Memorial Hospital
Nash Health Care System
Onslow Memorial Hospital
Rex Healthcare
Sentara Albemarle Medical Center
Southeastern Regional Medical Center
UNC Hospital Hillsborough Campus
Vidant Duplin Hospital
Vidant Roanoke-Chowan Hospital
Watauga Medical Center

Bronze

Duke Raleigh Hospital
High Point Regional Hospital



"The Workplace Partnership for Life Campaign at Cone Health has not only increased our organ donation awareness in multiple hospitals, but also allowed us to grow stronger as one health system. Three of our six Cone Health facilities are actively engaged in working together along with CDS to achieve our goal of increasing the number of registered donors in NC."

-Tammy Blackburn, RN, Trauma/Neuro ICU at Moses H. Cone Memorial Hospital

A STORY OF HOPE

LAURA BEIRNE



I found out I needed a transplant when I was 15-years-old. Until then, I was an average teenager whose life pretty much revolved around school and playing tennis. From a very young age I was groomed to play Division 1 College tennis. All those dreams came to an end when I was diagnosed with a rare liver disease called Primary Sclerosing Cholangitis or PSC.

The biggest and toughest change was having to leave my job as a tennis pro which I loved. I could no longer bear the physical exertion, the heat and the stress it put on my body. It was rough and my morale took a major blow. My family was affected as well. I always felt they were angry, frustrated, discouraged and sad watching me battle every day.

Waiting for a transplant was the hardest thing I have ever endured in my life up until now. It was a whirlwind of emotions and tested me to my limits both mentally and physically.

Finally I got the call that they had a liver for me. It was almost surreal. I received my liver transplant at 22-years-old after waiting on the transplant list for a year.

Today my life no longer revolves solely around my health. Nearly six years post-transplant, it no longer defines me. I am closer now to living a "normal" life than I have been in a very long time. I have a wonderful job at Carolina Donor Services that allows me to be involved with donation at a different level. I am able to pay it forward for my donor through my work and, to me, that is the best gift of all. Because someone made the courageous and selfless decision to become a donor, I truly got a second chance.

DONOR FAMILIES SUPPORTING DONOR FAMILIES



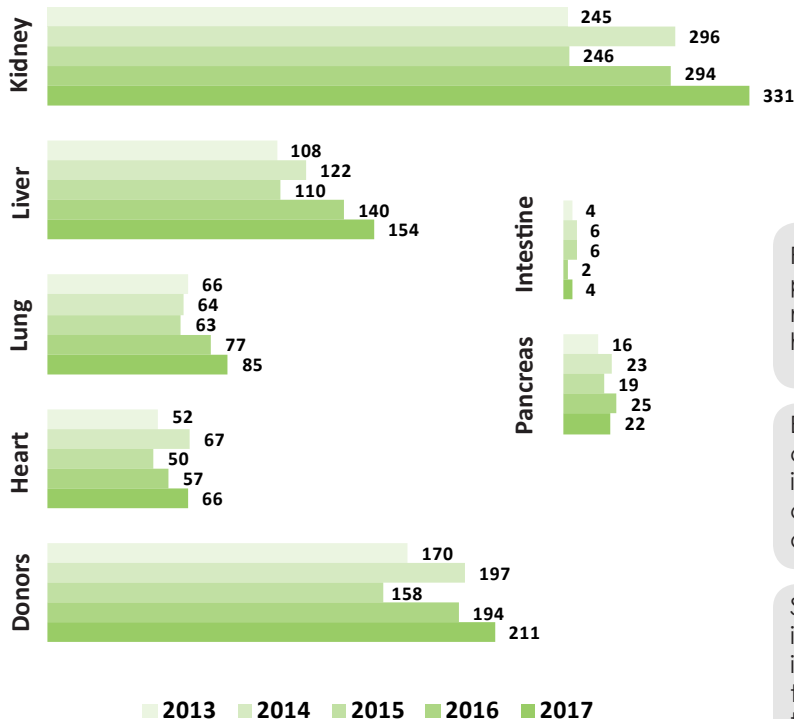
In September 2017, the Lindsay M. Benton Foundation (LMBF) held its first annual volleyball tournament with prizes, vendors, and family fun to benefit Carolina Donor Services and other charities and organizations including New Hanover Special Olympics and Pretty in Pink. LMBF was able to raise \$8,900 in ONE DAY and over \$19,000 the first year as a foundation. The LMBF graciously donated \$4,000 to CDS to help provide hand molds to donor families.



*"The Lindsay M. Benton Foundation (LMBF) was created to carry on a legacy of a young woman that lived life to the fullest, dreamed of saving lives, and through her own passing, fulfilled that dream. **Lindsay was an organ donor.** Our first fundraiser on September 30, 2017 was a true testament to the amazing young lady we were proud to honor, as well as the wonderful community in which we live."*

ORGAN DONATION, 2017

Donation Statistics 2013-2017



CDS expanded the number of organs transplanted by 10% from the previous year, hitting an all-time high of 662 organs transplanted. The organ division team's focus on improving internal processes and initiatives fostered increased engagement with our hospital partners and contributed to a successful year.

2017 HIGHLIGHTS

Family Services was nationally recognized for a process improvement project that helped the department achieve annual authorization goals and set a departmental record for the highest authorization rate in any given one month period.

Efficiently initiating pulsatile perfusion optimizes organ outcomes by decreasing the instances of delayed graft function in recipients. The Preservation team had a record high percentage of kidneys that met specific criteria being placed on a pulsatile perfusion pump within the allotted time frame.

Studies have shown that meeting donor management goals improves organ outcomes. With consistent focus on improving instances in which the goals are met, 2017 efforts resulted in the Organ Services department's highest number of organs transplanted.

TISSUE DONATION, 2017

Carolina Donor Services' tissue division broke records in 2017 for the most skin recovered for transplant by recovering over 1,550 square feet. By doing so, a historic number of recipients are being helped by CDS with skin grafts that aid wound healing and through breast reconstruction for those that undergo a mastectomy.

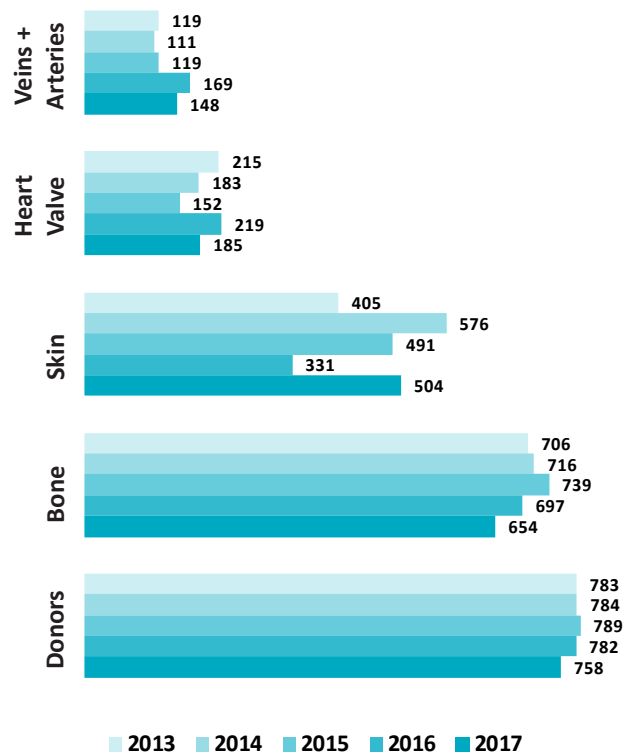
2017 HIGHLIGHTS

A year of changes and process improvements led to maximizing donation in tissue. There was an increase in single tissue donors in 2017 and the number of tissues recovered per donor (2.13) set a record high for the last three years.

CDS partnered with cardiovascular partners, CryoLife, for a wet lab focused on saphenous and femoral vein recovery. This lab helped CDS end the year with an overall saphenous vein error rate of six percent.

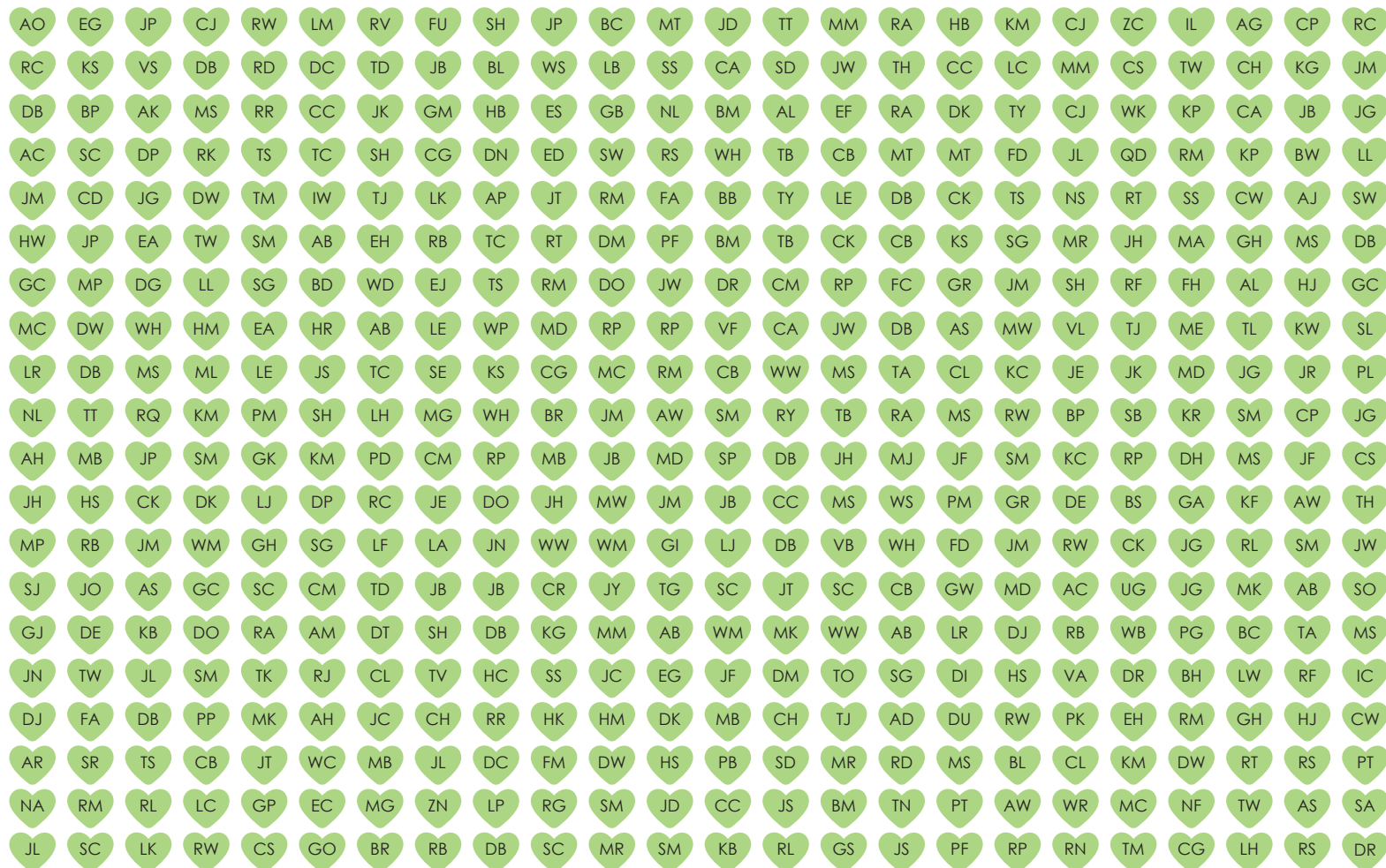
Three abstracts were selected for the 2017 annual AATB meeting for poster display. The "Reducing Authorized Not Recovered Cases by Utilizing a Suitability Review Coordinator" abstract was selected for a podium presentation.

Donation Statistics 2013-2017



REMEMBERING THOSE WHO GAVE THE GIFT OF LIFE





A STORY OF HOPE

NINA JOHNSON



Nina was a happy, 10-year-old girl who loved the simple things in life: drawing, playing with her siblings and friends. She loved picking daisies for her mom while out on her bicycle rides, one of the last things she would get to do before she passed away very suddenly. Nina contracted bacterial meningitis and went from a healthy girl on Thursday morning to being taken to the pediatric intensive care unit by Life Flight the next morning. It was too late to save our princess, the damage to her brain was too severe.

When the doctor mentioned the possibility of donating her organs, we knew right away this is what Nina would have wanted. Even though our time with her had ended, if others could get to live, to have more time with their loved ones, it would be an honor to be a part of that through organ donation.

Her liver, lungs and both kidneys were donated and in doing so four lives were saved. Getting to meet both liver and lung recipients and their families has been a blessing to us. They're part of our family now. We have shared many happy times together and we have seen the impact organ donation made in their lives. We hope one day to meet both kidney recipients, too.

"Organ donation is the best gift you can ever give... the gift of life, of hope for others. The ripples of that selfless gift are beyond what any of us can imagine."

- The Johnson Family

MORE THAN SAVING LIVES: HOW NC EMS IS SUPPORTING TISSUE & CORNEA DONATION

Emergency services across the state are working to bring hope to families suffering the loss of a loved one by preserving opportunities for tissue and cornea donation. While previously the majority of deaths occurred in hospitals, more deaths are now being pronounced outside of the hospital setting than within the hospital. This change is problematic for tissue donation because only hospitals have an established process for referring deceased patients to Carolina Donor Services for potential donation opportunities... until now.

Carolina Donor Services is partnering with EMS agencies across the state to establish a referral program for tissue and cornea donation. Working together, the goals are to help to carry out the donation decisions of registered donors, to give hope to families who find solace in knowing their loved one can help others and to support the needs of the community for tissue and cornea grafts that enhance or even save the lives of recipients.

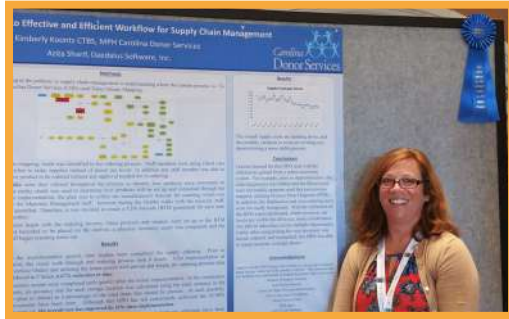
Over a **dozen** counties participated in non-hospital referrals last year.

EMS referrals potentially helped over **1,300** people receive critically needed tissues.

Tissue grafts can be used for **reconstructive surgeries, healing wounds, replacing heart valves, vascular bypass grafts** and more.



ACHIEVING GREAT THINGS: CDS NATIONAL RECOGNITION



KIM KOONTZ

Kim Koontz, Carolina Donor Services' Chief Operating Officer, was the 2017 First Place Abstract Winner at the APOPO Annual Meeting for her abstract, "An OPOs Journey to Effective and Efficient Workflow for Supply Chain Management".



**JOEL BAUCOM &
DERECK MUSHAYAMUNDA**

CDS' Manager of Family Services, Joel Baucom, and Family Services Education Coordinator, Dereck Mushayamunda, were the recipients of the 2017 APOPO Quality Improvement Award for their work on "Sustaining Effective Authorization Rates through Targeted Education". This project measured the effects of incorporating a Family Services Education Coordinator position into the Family Services department with hopes that authorization rates would improve and be sustained.



**ANGEL PENDLETON
& FARID SIDDIQUI**

Carolina Donor Services' Tissue Donation Coordinators, Angel Pendleton and Farid Siddiqui, received American Association of Tissue Banks' Outstanding Scientific Abstract Award for their tissue-focused abstract, "Reducing Authorization Not Recovered Cases by Utilizing a Suitability Review Coordinator". The abstract was presented and displayed at the 2017 AATB National Conference.

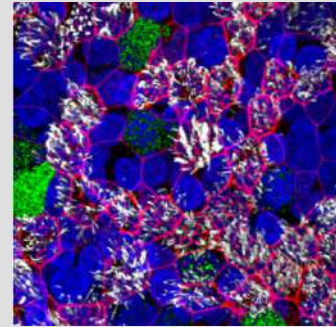
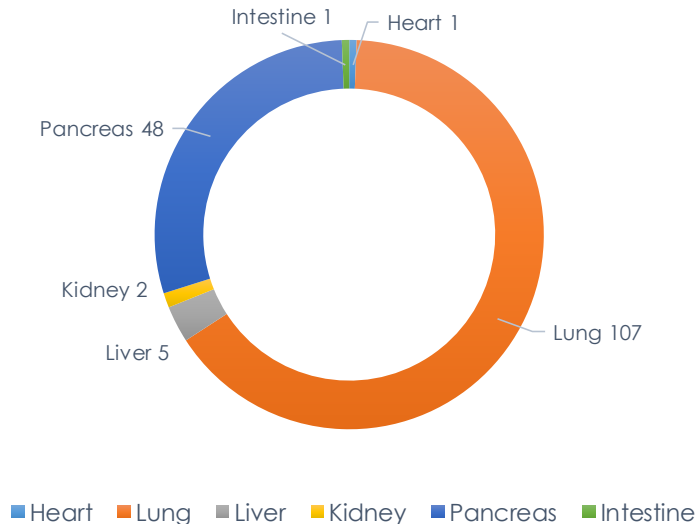
MAXIMIZING THE GIFT THROUGH MEDICAL RESEARCH

Through the generosity of our donors and donor families, Carolina Donor Services was able to provide **164** organs for medical research in 2017.

"Even donated organs and tissues not suitable for transplantation can help future generations of patients through their use in research programs. For example, recent research has led to a revolution in solid organ transplantation through the development of organ perfusion machines. Work like this helps provide more organs for more people now and into the future."

– **Dr. Matthew Hartwig, Associate Professor of Surgery, Duke University**

2017 CDS Research Organ Placement



"A bird's eye view looking down on a human bronchial epithelial cell culture produced from donated research lungs. Lung diseases are the third leading cause of morbidity and mortality worldwide. These cell cultures are vital for research to better understand, prevent, and treat lung disease. Research lungs provided by CDS are critical to support this important resource."

– **Dr. Scott Randell, Associate Professor of Cell Biology and Physiology, UNC-Chapel Hill**

FROM THE DEPARTMENTS

Tissue Services

Early in 2017, the Tissue Services Division rolled out a new initiative of reviewing medical records earlier in the process. Throughout the year, we continued working on integrating LEAN into our processes to drive efficiency. We are working on a LEAN tool called a Value Stream Map which identifies other potential inefficiencies in our current processes. Not only are we mapping our processes, but also increasing our collaboration with Miracles in Sight to engage them in the process. This engagement also includes regular training and combined meetings with staff from all levels of the two organizations.

By integrating more standardized processes, we hope to continue to find innovative ways of maximizing the gift of tissue donation.

Organ Services

The Organ Services Division has been working together to implement strategies to improve our work schedules and hardwire best practices. New call schedules are being tested for the Organ Services and Preservation departments, with goals to improve work life balance and assure optimal service to donor families, hospitals, and transplant centers. We are implementing other improvements to our clinical activity response by incorporating a Referral Coordinator role for evaluation of donation potential and to determine the most appropriate time for on-site response, using remote medical record review. Work instructions are being developed to assure standardization and hard wiring of best practices for critical issues like labeling and packaging of organs and specimens, and electronic solutions are being implemented to improve communication and efficiency.

Communications

In 2017, the Communications Department resolved to do everything possible to increase organ and tissue donation to benefit thousands of patients waiting for transplants in North Carolina. Media was key in raising awareness in communities throughout the state. We distributed 22 press releases and garnered 26 news stories. Public Service Announcements ran on various local radio stations. Our department attended more than 450 events in the CDS service area, including presentations at churches, health fairs, colleges, universities, and to civic groups. Members of the department visited 69 DMV Offices in our service area to thank the examiners and to answer questions about organ, eye and tissue donation. Our Friends for Life Ambassador Program continued to grow in 2017 with 31 new ambassadors trained to assist at local donor drives and health fairs.

Finance / Human Resources

Both Finance and Human Resources have focused on projects to enhance the employee experience at CDS. The department has been transitioning the organization to new payroll and HR software. Ultimately, this change will provide an improved user experience for employees and job seekers. Additionally, CDS transitioned to a new retirement vendor during the year which will provide more tools to assist our employees in planning for retirement. CDS was also excited to roll out "Simple Change," a program utilizing technology to assist employees in living a healthy lifestyle.

Quality Systems

2017 was a year of change for the CDS Quality Systems Department. During the past year the Medical Records staff joined QS. The Medical Record Review role was also moved from Hospital Development into Quality Systems and with that, two new positions were created: Medical Record Review(MRR) Lead Coordinator and MRR Coordinator.

We had a busy audit year in 2017. In November we had a very successful UNOS audit with a score of 99%! We also hosted 4 Tissue Processor audits during the year: LeMaitre, CryoLife, RTI, and Allosource. We continue to perform very well in our audits thanks to the excellent work our staff does day in and day out!

IS

The IS department has focused on long-term strategic goals in 2017. Specifically, the IS team has begun working with other CDS departments to better empower staff to do their best work while increasing efficiencies and improving technical reliability. The groundwork has been set: a "Network and Systems Review" has been completed and a "Telephone Assessment" is underway. These appraisals will provide CDS with the information necessary to help the IS team foster long-term, active partnerships between IS staff and end users.

LEADERSHIP CHANGES



Patrick Johnson

CDS welcomed Patrick Johnson to its Executive Leadership Team as Director of Tissue Services in May. Prior to joining CDS, Johnson served as Donor Services Manager and Tissue Donor Coordinator at Donor Alliance in Denver, Colorado. Johnson received his Bachelor of Science in Business Administration and Management from Colorado Christian University. He is a Certified Tissue Bank Specialist and a member of the American Association of Tissue Banks and The American Society for Quality.



Melinda Locklear

CDS promoted Melinda Locklear to the position of Chief Quality and Information Officer in August. Locklear joined CDS in 2003 as Vice-President of Quality, with expanding responsibilities through the years. During her tenure, she built CDS' Quality Management System, fully supporting compliance across the regulatory, accreditation, and partners spectrums. Locklear received a Bachelor of Chemistry from Salem College and a Master of Science in Synthetic Organic Chemistry from Wake Forest University.



Greg McKinney

CDS promoted Greg McKinney to the position of Director of Quality Systems in August. McKinney previously served as CDS' Compliance Manager since he joined the organization in 2007. He has been a member of the Association of Organ Procurement's Quality Improvement Council since 2009. McKinney received a Bachelor of Science degree in Textile Chemistry from North Carolina State University and earned his Master of Science in Technology Systems/Quality Systems degree from East Carolina University.

PARTNERING WITH FUNERAL HOMES: 2017 HIGHLIGHTS

- Exhibited at NFDA convention in Boston in cooperation with Donate Life America
- 322 funeral home visits
- 65 funeral service trainee letters sent introducing Carolina Donor Services
- 49 funeral directors received CEU's from Carolina Donor Services
- 3 flag presentations by funeral homes in honor of donors
- Hosted two NCFDA Board of Directors meetings at CDS
- Exhibited at NCFDA & FD & MA state convention
- Liaison Traveled 31,583 miles representing CDS in donor service area

COLLABORATING WITH MEDICAL EXAMINERS

Carolina Donor Services continued to work collaboratively with local and state medical examiners by involving CDS leadership to communicate with the many medical examiners spread across our DSA. This joint effort resulted in increased internal discussion of best practices in areas ranging from communication with medical examiners to identifying the samples needed at the time of recovery.

Because of this collaboration, there was an increase from 2016 to 2017 of 102 organs and 73 additional tissues recovered in cases that involved the medical examiner.

Looking to the future, CDS is working to form an ME council that could help bring awareness of organ and tissue donation to all the state and local medical examiners in our DSA and improve best practices between CDS and the medical examiners.

EVENTS TO EDUCATE: CDS COMMUNITY OUTREACH

LINKING HANDS

Vidant Medical Center continuously partners with CDS to raise awareness of the critical need for registered organ donors. One example is the annual Linking Hands for Life event, which provides the opportunity to promote donation and transplantation in a celebratory way. This event, featuring donor families, recipients, individuals waiting for transplant, hospital staff and community members, has continued to grow in popularity with a record number of attendees in 2017. The highlight of the celebration occurs when everyone gathers to link hands, symbolizing those who have given the gift of life and our shared commitment to maximize the gift for those still waiting.



UNC PHARMACY SCHOOL DONOR DRIVE

Last April, Carolina Donor Services partnered for the 10th year with the Rho Chi honor society of the UNC Pharmacy School. At the UNC campus event, games were played, pizza and donuts eaten, questions about donation answered, and 249 students registered as organ, eye and tissue donors on the North Carolina Registry. It was a fun and successful day to mark a decade of collaboration between CDS and the UNC School of Pharmacy.



LOCAL HOSPITALS FLY DONATE LIFE FLAG



During the entire month of April, which is Donate Life month, Alamance Regional Medical Center, Frye Regional Medical Center and Randolph Health proudly displayed their Donate Life Flags to honor donor families, recipients and patients who need transplants. Each hospital sponsored a special ceremony in which recipients shared their stories of hope and observed a moment of silence to honor donors. Seeing the flag on display reminded the staff of their important role in making donation happen. Patients and visitors to the hospitals had a chance to learn that nearly 3,000 people in North Carolina are waiting for transplants.

