



Dialysis Clinic, Inc.  
A Non-Profit Corporation

**ANNUAL  
REPORT  
FOR 2018**

## DCI Values

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### **Non-profit: The patient is our reason for existence.**

- We invest in research and education.
- We invest in under-served areas.
- We are fiscally responsible to ensure the long-term success of our mission.

### **Quality: We understand what quality and safety mean to our patients and use this to guide our clinical practices.**

- We strive for excellence daily.
- We collaborate across disciplines.
- We take pride in the work we do.

### **Integrity: We are ethical and honest.**

- We do the right thing.
- We treat everyone fairly and with respect.
- We do not pursue profit by cutting corners.

### **Services: We serve our patients, employees, physicians, and the community.**

- We recognize and value patients, employees, and physicians as our partners.
- We treat others with courtesy, professionalism, and kindness.
- We are recognized and rewarded through superior patient outcomes, greater employee retention, and increased referrals.

### **Leadership: Leadership is a mindset, not a title.**

- We go above and beyond expectations.
- We recognize a need and take action.
- We improve our weaknesses and build upon our success.



## **Mission: We are a Non-Profit Service Organization. The Care of the Patient is Our Reason for Existence.**

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Dialysis Clinic, Inc., is the largest non-profit dialysis provider in the United States.

Today, we are more than our name suggests. Over the last 48 years, DCI has played a significant role in shaping the landscape of the kidney care community. We invite you to see how in this book.



**06**

A Timeline: 48  
Years of Service



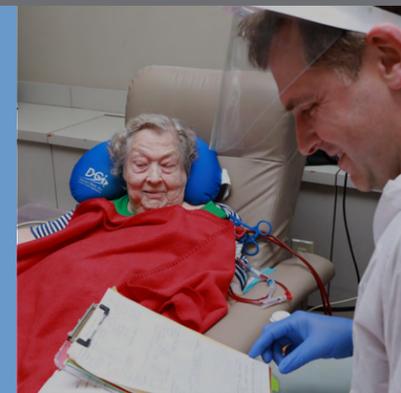
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## The DCI Story

In the late 1960's Dr. H. Keith Johnson was completing his nephrology training at the VA Medical Center and Vanderbilt Medical Center. At the time, Vanderbilt only had a three-station unit responsible for dialyzing acute patients, backing up the kidney transplant program, delivering home training, and caring for a few chronic patients. Faced with the dilemma of having too few resources for so many needs, and faced with the hospitals requirement that a physician be in attendance whenever a patient received a dialysis treatment, nephrology fellows would dialyze chronic patients until the early hours of the morning, making for very long days. Inspired by Northwest Kidney Center's success with a free standing dialysis center the idea of trying the same approach was born - but the big challenge was to find funding for this effort.

During a family vacation in 1970, Dr. Johnson explained his idea to his father, Dr. Harry Johnson who was a practicing physician in New York. He considered his son's idea and offered to provide the seed money to assist from his foundation. With that, the idea became a reality.

Upon incorporation, in March of 1971, the decision was made for the organization to be non-profit and that any excess revenues generated would be used for research and education in the field of kidney disease or in other ways that would benefit people with kidney disease. Finally, **Dialysis Clinic, Inc.** (DCI), was established, a 1,000 square foot refurbished home in Nashville was secured to be the new clinic location, and in May of 1971 patients began dialyzing and the mission, "The care of the patient is our reason for existence," was not only adopted, it was lived.

In 1971, with DCI's first clinic already operating, there was no Medicare funding and most patients still did not have insurance to cover the cost of treatment. That didn't stop the DCI staff from providing treatment to patients. To the surprise of citizens all over Nashville, road blocks were established. The staff of the dialysis unit (including the doctors) and volunteers from the Kidney Foundation asked Kentucky Fried Chicken for KFC buckets to collect donations. The staff placed pictures of patients on the red and white buckets and on Saturday and Sunday afternoons, made their way to the busiest intersections in Nashville to collect donations for anything people could give. On a good weekend, they could raise \$10,000 to go toward the cost of treatments, but it wouldn't last long and they would be out collecting donations once again. To everyone's relief, in 1973, the Medicare ESRD Program began, and thousands of people with End-Stage Renal Disease (ESRD) across the U.S. were able to receive treatment that was and still is paid for by that program.

Over the years, the cost of care keeps rising while the Medicare payments for dialysis have actually decreased. Somehow DCI manages to find ways to provide more than expected. For instance, DCI Donor Services was created to provide for organ and tissue recovery and transplantation. Camp Okawehna was established for the pediatric renal patient. DCI has given over \$316,000,000 to research initiatives. Today, DCI is the only national dialysis provider to have remained under its own control since its founding. It has successfully remained non-profit and has had the lowest standard mortality rates and standard hospitalization rates among national dialysis providers since 2003. DCI is the fourth largest dialysis provider in the US, operating more than 240 dialysis clinics, and nearly 150 hospital services programs. DCI employs over 5,000 people and serves over 18,000 patients across 28 states.

*Thank you* for reviewing the 2018 Dialysis Clinic, Inc. (DCI) Annual Report. This year's report is our second annual report.

In 1970, Medicare did not cover dialysis care, and as a result most people with kidney failure in Middle Tennessee died. Dr. Keith Johnson was working in the acute unit at Vanderbilt during October - December, 1970 and would stay up late each night to provide life-saving dialysis to a few patients as they waited for a kidney transplant. During winter holiday in December, 1970, Dr Keith Johnson talked with his father, Dr. Harry Johnson about the need for dialysis access in Nashville and his father agreed to provide \$100,000 from his foundation in New York City to open an outpatient dialysis clinic in Nashville, thus DCI was born.



Left to Right: Dr. Doug Johnson and Dr. H. Keith Johnson

Much has changed since DCI was founded and we provided our first treatments on May 24, 1971. Medicare does now cover dialysis, and more than 500,000 people receive dialysis care. In addition, more than 200,000 people are living with a kidney transplant. [USRDS 2018 ADR] At DCI, we provide dialysis care to more than 15,000 patients in more than 240 clinics in 28 states. We also operate three organ procurement organizations and due to the hard work of the staff of DCI Donor Services, 637 people received a kidney transplant in 2018. In addition, we care for more than 3,000 patients with chronic kidney disease, not on dialysis in eight locations in seven states. Our primary goal for these patients is to keep them off dialysis.

For fourteen years in a row, the USRDS found that DCI had the lowest mortality ratio and the lowest hospitalization ratio of the national providers. The USRDS stopped comparing outcomes of the national providers in 2017. We wish they would start again - we think it is a good thing for providers of dialysis care to push each other to improve care and have mortality and hospitalization outcomes compared by an independent organization.

Over the last year, we have seen a new interest in better overall care for people with kidney disease, in particular - 1. Improving care for people with chronic kidney disease; 2. Increasing access to transplantation; and 3. Increasing home dialysis. We have enjoyed working with CMS and CMMI on building a new value-based model of care and are encouraged by the new focus on better overall care.

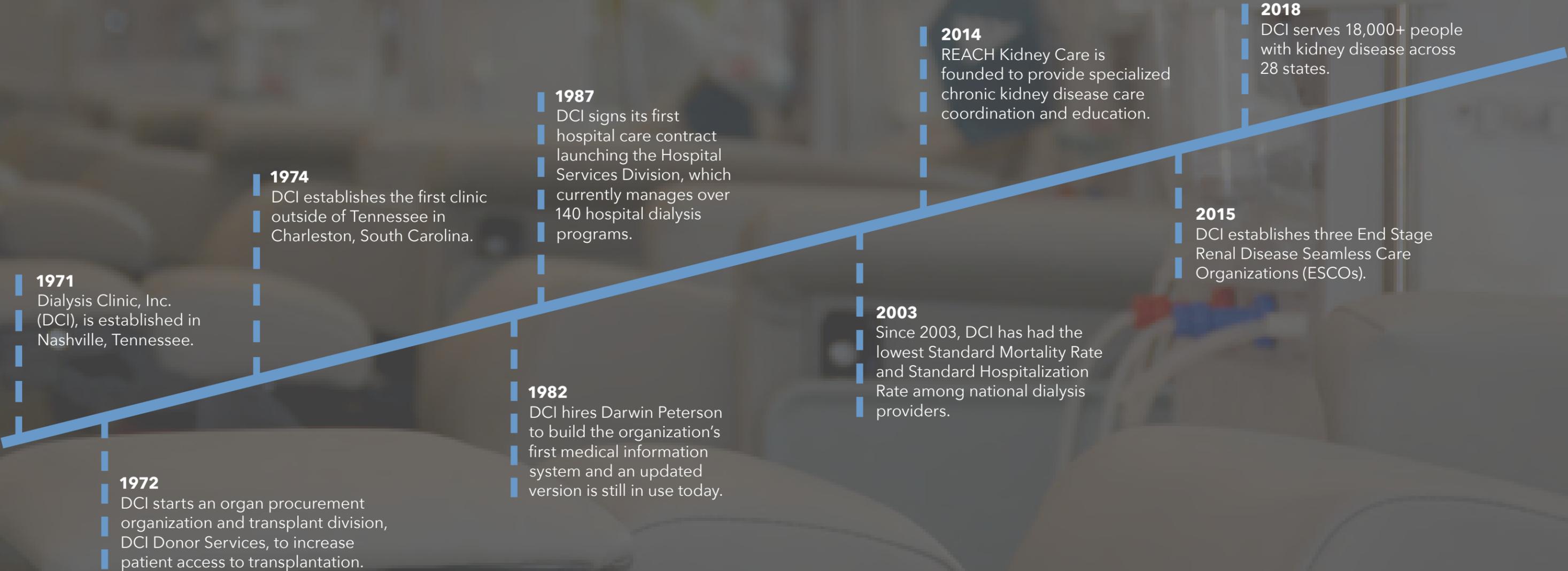
At the same time, it is critical to realize that the vast majority of people with ESRD receive care in an outpatient dialysis clinic and the vast majority of people starting dialysis care receive their first treatment using a hemodialysis catheter. We need to make sure that those who need dialysis are prepared for the transition to dialysis and we need to make sure that people receiving care in our clinics are receiving the best care possible.

We strive to be the kidney health organization that people trust. From medical partners to people with kidney disease, we want each person we work for to know that they are our highest priority. Our mission for the past 48 years has been, "We are a non-profit service organization. The care of the patient is our reason for existence." It has guided our decisions in the past and it will guide us going forward.

H. Keith Johnson, MD  
Chairman, Founder of DCI

Doug Johnson, MD  
Vice-Chairman

# What Does 48 Years of Service Look Like?





## Leadership



**H. KEITH JOHNSON, MD**  
*Chairman, Founder of DCI*



**DOUG JOHNSON, MD**  
*Vice-Chairman*



**BILL WOOD**  
*President*



**ED ATTRILL**  
*Executive Vice-President,  
Corporate Secretary*



**Donovan Schultz**  
*Chief Financial Officer*



**STUART REDPATH**  
*Chief Operating Officer*



**KEN JOHNSON**  
*Director*



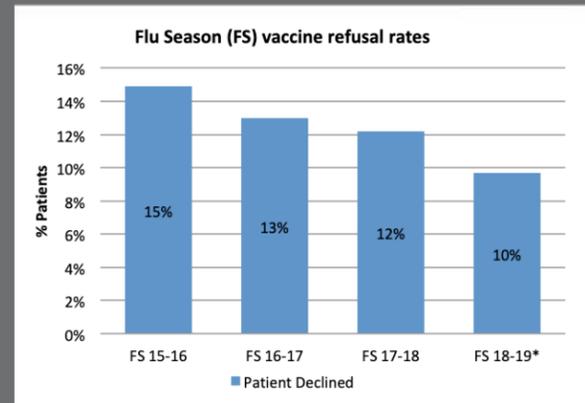
**JAMES PERRY**  
*Director*

# Operations

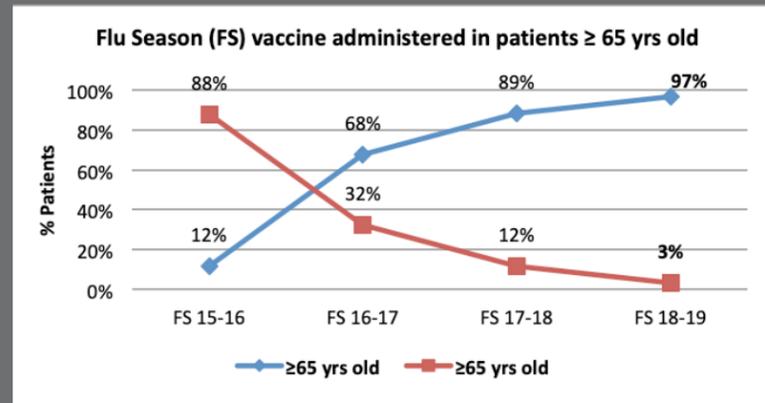


# DCI Dialysis Outcomes

In our effort to enhance population health and preventive care in complex patients with chronic kidney disease and other comorbidities, DCI focuses on initiatives such as immunization. Specifically, studies in patients with chronic diseases and the elderly, including patients with chronic kidney diseases have reported that influenza and pneumonia vaccination has been associated with fewer hospital admissions, less severe pneumonia illnesses, and lower mortality rates.



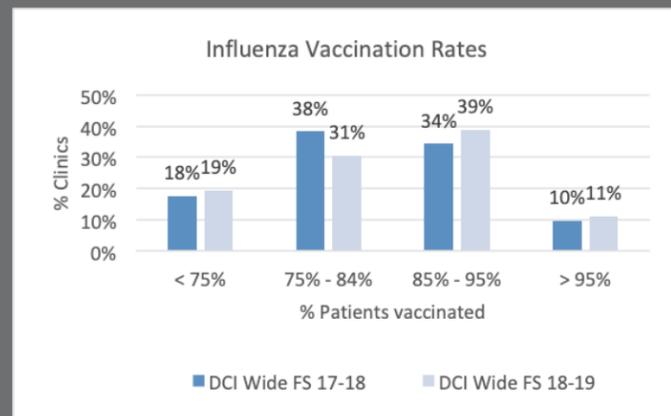
Graph 1.1



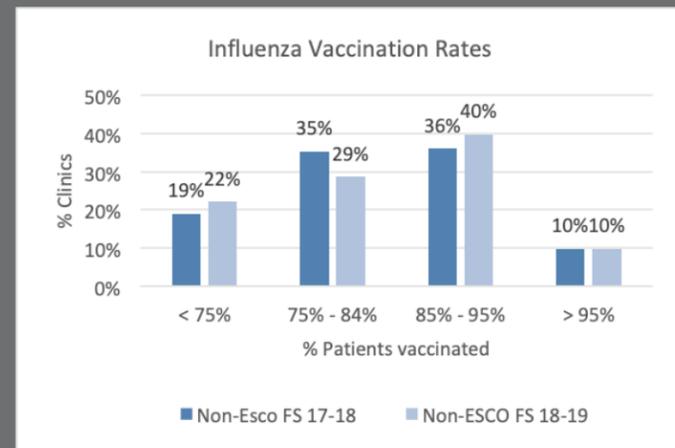
Graph 1.2

Regarding influenza vaccinations, DCI vaccinates 90% of patients against influenza compared to 71% reported by USRDS (2018 ADR). Since 2015, patient and clinic education efforts resulted in 33% lower flu vaccine refusal, 85% more patients ≥ 65 years old receive high-dose flu vaccine. (Depicted in graphs 1.1 and 1.2 above.)

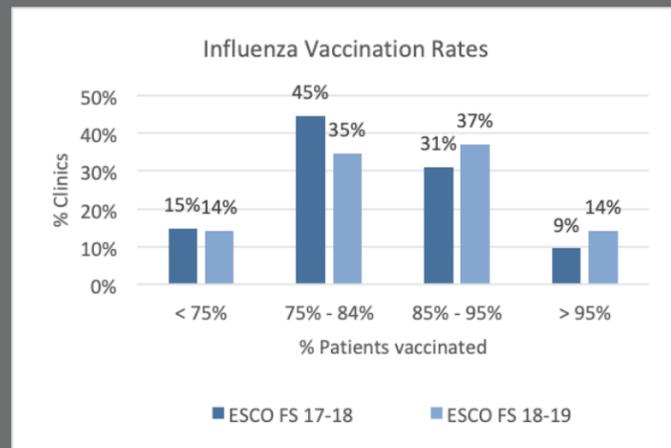
Compared to the 2017-2018 flu season, more patients were vaccinated against influenza during the 2018-2019 flu season and this trend was observed in both ESCO and Non-ESCO clinics. (Depicted to the right and below in graphs 2.1, 2.2, and 2.3.)



Graph 2.1



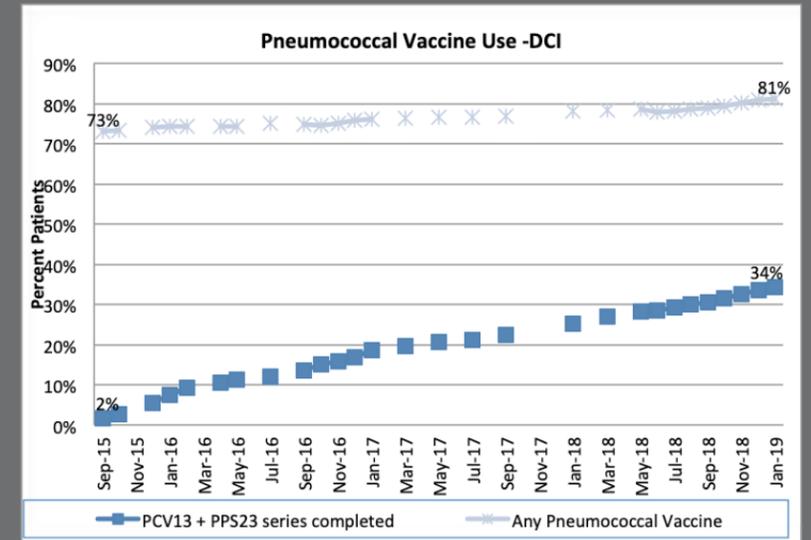
Graph 2.2



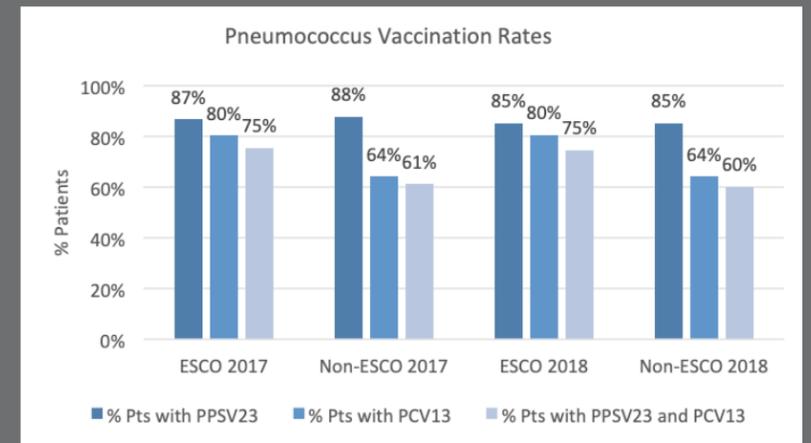
Graph 2.3

Pneumococcal vaccination rates in dialysis patients range from 21% to 41.8% (AJKD 2012). Currently 81% of patients at DCI clinics have received at least one pneumococcal vaccine. In September 2015 the DCI Pneumococcal Vaccination Protocol was revised to recommend both PPS23 and PCV-13 vaccines in all patients. Since then, 32% more patients now have pneumococcal vaccine series completed (PCV13 + PPS23 vaccinations) compared to 2% patients in 2015. (Depicted in graph 3.1 to the right.)

Analysis of facility-level pneumococcal vaccination rates yielded similar results. At the end of calendar years 2017 and 2018 and for those patients treated in the clinic for at least 90 days, ESCO clinics had higher vaccination rates compared to Non-ESCO clinics across all vaccination categories. However, both ESCO and Non-ESCO patients were equally successful in vaccinating more patients against Pneumococcus compared to published reports. (Depicted in graph 4.1 to the right.)



Graph 3.1



Graph 4.1





# Hospital Services

## In 2018 DCI Hospital Services:

Opened 10 programs. Currently, serving nearly 150 hospitals.

Provides services to:

- Health Systems
- University Teaching Centers
- Rehabilitation Centers
- Long Term Care Facilities
- Rural Hospitals

Regulatory and Hospital Accreditation Standards:

- DCI Hospital Services is committed to meeting CMS and accreditation standards.
- DCI Collects and tracks treatment related data through our web-based Medical Information System (MIS) that is specific to the renal patient population and the services we provide.
- The DCI Hospital Service renal-specific MIS allows us to generate reports for hospital partners that address a variety of performance measures.

The purpose of DCI Hospital Services is to maximize patient well-being and satisfaction, be a physician partner in the inpatient care of their patients regardless of choice of outpatient provider and to be a hospital partner in achieving clinical excellence and operational efficiency in the care continuum. This goal is in concert with the values-based philosophy of DCI. We achieve these goals by providing high quality services in a safe and collaborative environment. We continually focus on improving the safety and quality of our services by analyzing meaningful measures that address clinical and financial performance in the hospital setting. The multi-disciplinary Hospital Services team meets monthly to identify opportunities for improvement, set priorities, and ensure that resources are in place to achieve desired results.

As a hospital partner, we provide seamless patient care without differentiation between DCI and hospital staff. Hospital initiatives and goals for patient care become our initiatives and goals. This unified approach improves satisfaction of hospital leaders and is responsible for our year over year growth rate of 12%. As more hospitals and health systems become aware of the quality and consistency of DCI Hospital Services, development in this setting will continue to grow. In addition, our patient centric approach improves the patient's perception of the safety and quality of care that they receive and promotes positive feedback on the Hospital Consumer Assessment of Health care Providers and Systems (HCAHPS) survey.

What does DCI's commitment to quality mean for our Hospital partners?

1. Confidence in best practices gleaned from DCI inpatient and outpatient programs and relationships with other top-caliber organizations
2. Confidence that DCI Hospital Services meets or exceeds standards of CMS and accreditation platforms (The Joint Commission, NIAHO, etc.)

DCI collaborates with Hospital partners in a consistent and accurate Quality Management program aligned with Hospital priorities for patient safety, infection control, and other performance metrics. Our service exceeds the regulations for contracted services, and beyond the requirement, we use this data to improve the care of your patients.



## Transforming Care



### REACH Kidney Care

Reach Kidney Care is a division of Dialysis Clinic, Inc. (DCI) focused on transforming care for people with kidney disease. Our goals are to:

1. Improve care for people with stage 4 and 5 chronic kidney disease (CKD) and patients with stage 3 CKD with severe proteinuria (albumin creatinine ratio (ACR) > 300 mg/g). We currently care for more than 3,000 people in eight locations in seven states.
  - Focus on the person with CKD as someone with current significant clinical needs and not just someone who may need dialysis
  - Ensure that our care is based on the life goals of the person with kidney disease and that this person has chosen a healthcare agent
  - For those who need renal replacement therapy (RRT), delay the start of RRT until clinically necessary.
  - For those who need RRT, increase the likelihood that they will receive a transplant
  - For those who need RRT, increase the likelihood that they will dialyze at home
  - For those who choose in center dialysis, increase the likelihood that they have a smooth transition to dialysis, avoiding the first hospitalization before dialysis, and increase the likelihood that they start dialysis with a permanent access
2. Improve care for people requiring RRT:
  - Ensuring that the treatment provided matches the person's goals for life
  - Increasing the number of people receiving a transplant
  - Increasing the time that a person is able to keep his/her transplant
  - Increasing home dialysis
  - Improving care for people receiving in center dialysis
    - i. Decreasing the likelihood that they will be in the hospital
    - ii. Increasing the likelihood that they have a permanent access
3. For those whom the burden of treatment outweighs its benefit, ensuring that we are meeting the person's goals of treatment outweighs its benefit, ensuring that we are meeting the person's goals of treatment.
  - Ensuring that the person has selected a healthcare agent
  - Ensuring that the person and his/her healthcare agent have a good understanding of the person's prognosis
  - Remove barriers that could keep the person from choosing palliative or hospice care

## Home Therapies



In 2018, DCI opened eight new home dialysis programs throughout the 28 states in which we practice. This is in addition to the 128 clinics already offering either peritoneal dialysis or home hemodialysis. Several new home dialysis programs are already in the planning stages for 2019, in areas where there has previously been limited access to home dialysis modalities. We also continue to expand our partnerships with long term care facilities (LTCF). This will enable patients previously on home therapies prior to residing in a LTCF to continue their chosen modality, and will also enable LTCFs to accept more ESRD patients.

Our focus for 2019 remains on education, teaching and research. We have trained hundreds of nurses in week long classes covering both modalities of home therapy, logistics, leadership and management of home dialysis clinics. We are exploring multiple options to continue to educate our physicians, and continue our traditional home therapies symposium held each spring at our medical directors' meeting. We have had the good fortune of partnering with multiple organizations to enroll in trials of new and novel home dialysis machines, striving to expand the therapeutic options we can offer our patients. In addition to training our home program nurses, we are committed to increasing awareness of home therapy options in our hospital service nurses, our in center staff, and our in center hemodialysis patient population. To accomplish this, we are expanding our digital foot print and continuing to educate patients through our newsletter, website and in center educational activities.

Another focus for our division in 2019 will be to upgrade the capabilities of our electronic medical information system. We are anticipating that this upgrade will provide more efficient recording of patient data that can be utilized to continually improve the standard of care we provide to our patients. Additionally, we would like to create a reliable platform for remote telehealth visits and monitoring that will increase the speed with which we can respond to our patients' needs.

## The Facts

**REACH patients:**  
**20% started at home**  
 10% is the national average

**52% started using permanent access**  
 20% is the national average

**55% avoid hospitalization** before the start of dialysis  
 33% is the national average

**6.6% got a pre-emptive transplant**  
 2.6% is the national average

*(data from 3,017 patients in 8 locations)*

# Transforming Care Continued

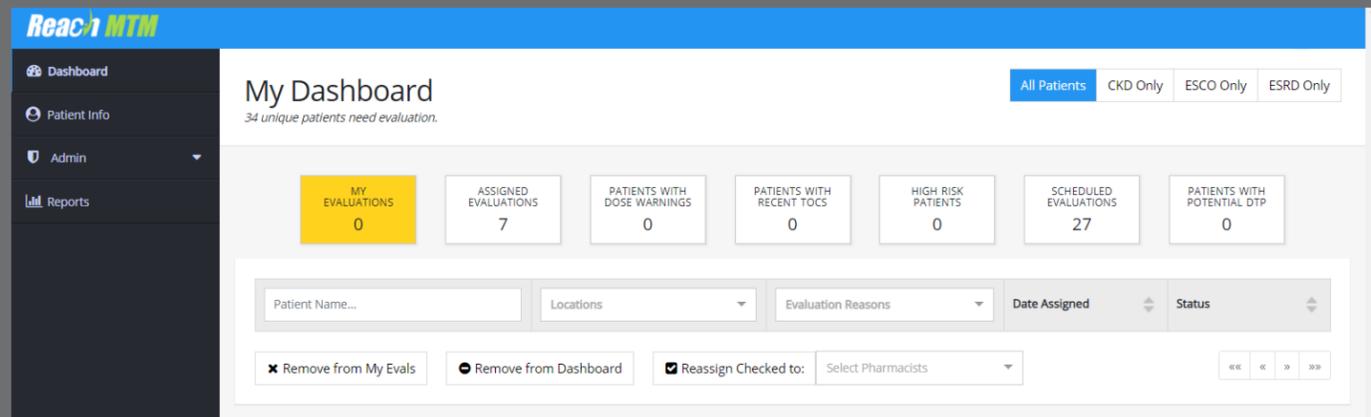


## REACH Medication Therapy Management (MTM)

Reach MTM utilizes nephrology pharmacists with several years training and experience addressing the unique medication needs of patients across all stages of chronic kidney disease (CKD). They improve patient care through population health techniques and individualized direct patient care activities via state-of-the-art software applications and multidisciplinary healthcare team engagement.

### CKD-specific MTM software:

In 2018, Reach MTM launched the industry's first MTM software application specifically designed for use in care of patients with CKD. The software interfaces with external electronic medical record systems to incorporate patient specific demographic, laboratory, vitals, transition of care events and medication history. The software also utilizes CKD-specific and custom clinical rules that highlight potential medication safety or efficacy issues. Through use of the new tool, Reach MTM pharmacists can quickly identify patient specific and evidence based medication-related problems and communicate specific recommendations to nephrologists. Various clinical and operational reports and patient scheduling features were also built into software.



### Reach MTM program initiatives:

Reach MTM program continues to collaborate with clinic nurses and nephrologists to reduce dialysis patient's medication misadventures. Reducing hospital readmissions, a main driver of healthcare costs, remains main focus as the program demonstrated a 55% reduction in 30-day hospital readmission rate. Evaluation of 1,452 discharges occurring May 2016 - April 2017 results demonstrated that MTM, partial MTM (initiated medical reconciliation but missed completing the entire process) and no-MTM 30-day hospitalization rates were 10.5%, 19.3% and 29.0%, respectively.

Reach MTM service expansion to other patient safety areas became possible with launch of new MTM software application. Reach MTM pharmacists now provide reviews to all patients having system identified major drug-drug and -allergy alerts or prescribed CKD-specific High Risk Medications or High Doses. Patient outcomes associated with these initiatives are forthcoming.



## Annie Jeter: REACH Kidney Care Takes the Fear Out of Kidney Disease



Since July 26, 2016, Annie Jeter has been a patient at REACH Kidney Care in Spartanburg, South Carolina.

In the beginning, Annie would describe her journey with kidney disease as scary. "When I first learned about kidney disease, I was scared because I thought I'd have to start dialysis immediately," stated Annie. "But, with the help of Dr. McGee and the REACH team I am learning ways to improve my kidney function and hopefully I can stay off of dialysis."

Annie has received free education classes at REACH that include nutrition, strategies for prolonging kidney function, and treatment options. If dialysis becomes a part of Annie's future, she knows she'd be prepared to start peritoneal dialysis, a home therapy.

Delaying dialysis has been possible because Annie follows the advice of her doctor and her REACH team. "I've learned how to eat healthier and stay on a kidney friendly diet."

Annie is no longer afraid of kidney disease. She has security in her faith and her medical team. "The REACH team is very nice. They know how to comfort and encourage me," stated Annie. "I feel like family when I walk through the door."

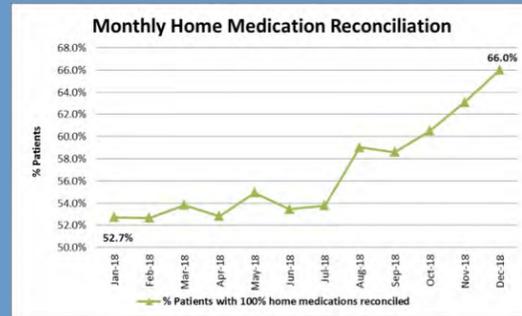
## Medication Reconciliation

Foundational of all medication safety programs is maintaining accurate medication lists via medication reconciliation. Contemporary patient medication use information is vital in many patient care decisions and avoidance of drug-drug and -disease interactions. During 2018, various education and training initiatives and changes in clinic QAPI resulted in 13.3% more patients having 100% of their home medications reconciled every month.

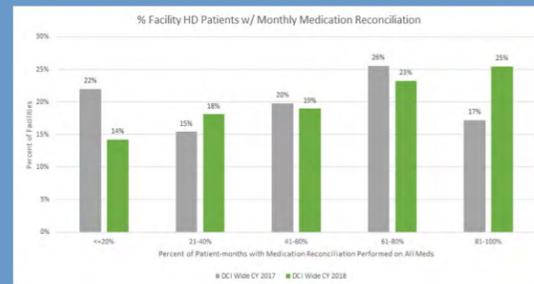
The ESCO population comprises approximately 33% of the DCI-Wide data and was a major contributor to the overall DCI-wide trends. However, while it is expected that the ESCO facilities will take the lead, introduction of these metrics during the annual meeting (Fall, 2017) seems to also have led to encouraging changes in the non-ESCO DCI facilities in 2018. The ESCOs have the advantage of having clinical coordinators and the MTM program in addition to a head start in 2016, hence the greater improvement. However, the overall picture is a bright spot for DCI.

The graphs show DCI-wide (graph 6.1), then separately, the Non-ESCO (graph 6.2) and ESCO (graph 6.3) facilities. Note the shift to the right between 2017 to 2018.

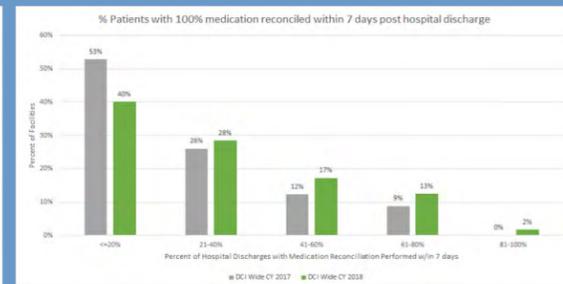
The post-hospitalization Medical Reconciliation was not as dramatic but is also heading in the right direction, as shown in graphs 7.1, 7.2, and 7.3 to the right.



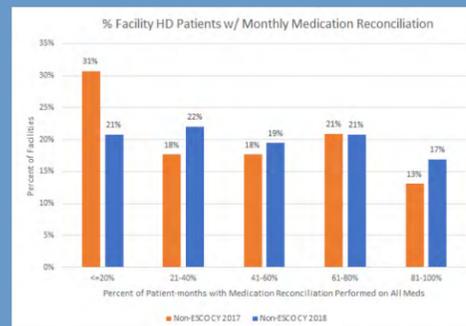
Graph 5.1



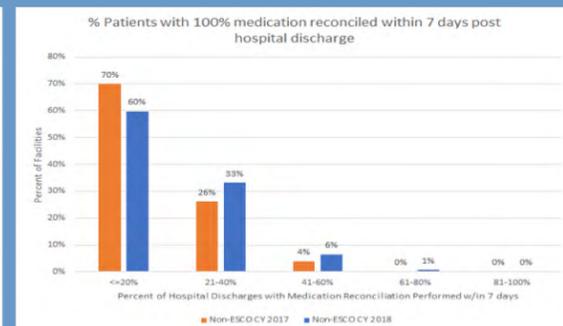
Graph 6.1



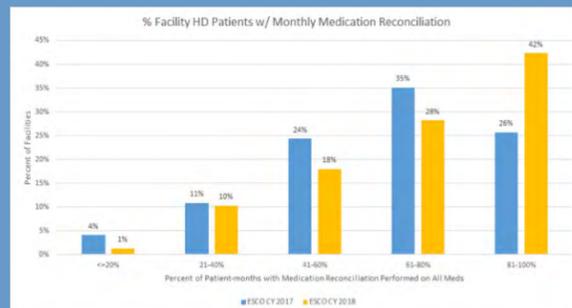
Graph 7.1



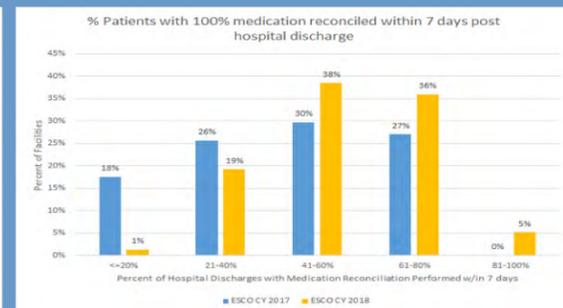
Graph 6.2



Graph 7.2



Graph 6.3



Graph 7.3

## Transforming Care Continued



## End Stage Renal Disease Seamless Care Organizations (ESCOs)

In an effort to demonstrate that the delivery of kidney care can be improved from the patient perspective and to reduce the overall cost of care for ESRD beneficiaries, DCI has joined forces with a select group of community health partners to establish six End Stage Renal Disease Seamless Care Organizations (ESCOs) across the nation. DCI currently has over 3,000 eligible patients under our care enrolled in an ESCO.



## DCI Donor Services

DCI Donor Services (DCIDS) family of companies includes DCI Donor Services Tissue Bank, Sierra Donor Services Eye Bank, and organ procurement organizations (OPOs) in Tennessee, California/Nevada and New Mexico. DCIDS is an exceptional team of professionals dedicated to saving and improving lives by connecting organ and tissue donations to the patients who need them.

DCI Donor Services, Inc.  
an extraordinary commitment to science, health and hope



LIFE IS  
*a beautiful ride.*

April is National  
Donate Life Month.

BeTheGiftToday.com



In 2018, DCI Donor Services launched an innovative new social media campaign called #BeTheGift. The idea is simple: it encourages people everywhere to #BeTheGift to others by registering online as organ and tissue donors. Since its kickoff in August, the campaign garnered over 65 million media impressions and has received national support from media and celebrities alike. In only six months, over 1000 people in 46 states clicked through to state or national registries from the campaign's website, BeTheGiftToday.com.

This year, both DCI Donor Services Tissue Bank and Sierra Donor Services Eye Bank introduced new or expanded existing product lines. The Eye Bank introduced Vidaris™ autologous serum eye drops for patients suffering from severe cases of chronic dry eye disease. The Tissue Bank experienced significant growth in birth tissue products and musculoskeletal products.

DCIDS strives to end the transplant waiting list by encouraging donor registration; and works to extend the reach of each generous donor's gift to those who are always profoundly grateful for them.

In 2018, Donor Services had:  
Organ Donors: 415  
Tissue Donors: 3,126  
All organs Transplanted: 1,297  
Kidneys Transplanted: 637  
Tissue Grafts Distributed: 235,708



## DCI Logistics

DCI Logistics specializes in transportation within the organ and tissue transplantation community. Logistics offers both ground and air support for a variety of different medical transportation needs. For more than 25 years, DCI Logistics has been providing excellence in transportation for lab samples, transplant teams, and tissue donors. Understanding the urgency of donation, DCI Logistics works closely with Organ Procurement Organizations (OPOs) and Transplant Centers to assure all transport needs are met.

DCI Logistics Services Include:

- Coordination of ground and air transportation of organs, tissue, and transplant professionals
- 24/7 professional dispatching and air transportation
- HIPAA compliant staff
- Owned and managed by licensed medical professionals
- Aircraft fleet includes (2) Cessna Citation II, (2) Cessna 310, and (1) Piper Cheyenne III
- Vehicles and drivers located across Tennessee, dedicated to transportation of tissue donations
- Continuous monitoring of all transportation and real-time communication with Donor Services



# DCI Laboratory

## Lab - Nashville

DCI Laboratory, founded in 1988 as a division of Dialysis Clinic, Inc., is a full-service laboratory specifically designed to meet the unique needs of dialysis patients. The laboratory division was founded in response to our nephrologists' requests for personnel and testing services in tune with the dialysis community.

Our comprehensive ESRD and environmental testing menu includes:

- Chemistry
- Hematology (Including Chr)
- Immunochemistry
- Protine (INR)
- Aluminum
- Intact PTH
- Vitamin D
- Hepatitis Serology
- Therapeutic Drug Monitoring
- Water & Dialysate Testing (Including AAMI, Endotoxin, Colony Counts, Trace Metals and testing to ultrapure standards)

We are committed to continuously evaluating and improving our performance while operating in accordance with the laws and regulations that govern our industry.

DCI Laboratory strives to always deliver comprehensive testing, analysis and reporting with the reliability and personal services required to ensure the best outcomes for our patients. Our clinical support team includes licensed personnel who understand the dialysis workflow and are well qualified to meet the educational and consultation needs of a dialysis clinic staff.



## DCI HLA Transplant Immunology Laboratories

DCI has two Transplant Immunology Laboratories in Tennessee. The flagship laboratory in Nashville, Tennessee, and a satellite laboratory in Knoxville, Tennessee, provide continuous support (24/7/365) to Tennessee Donor Services Organ Procurement Organization (TDS) and multiple vibrant transplant programs around the state. The labs provide services such as HLA typing, HLA antibody testing, HLA crossmatching and post-transplant monitoring. These tests help determine compatibility between recipients and donors so patients receive the best matched kidney, lung, heart, pancreas and stem cell transplants. The HLA labs facilitate organ donation from both living and deceased donors.

The success of the laboratory is a direct result of the work completed by the medical technologists. The technologists have specialized training in histocompatibility and immunogenetics. The technologists perform highly complex and challenging testing around the clock, to provide the most timely and accurate results for patients awaiting lifesaving transplants.

Through cooperative efforts between TDS transplant coordinators, transplant centers, DCI programs such as REACH Kidney Care and the DCI Transplant Immunology laboratories, the numbers of successful transplants in Tennessee are increasing every year.

## DCI Pharmacy Services



DCI Pharmacy Services provides ESRD bundle-related prescriptions to patients and is a full-service pharmacy for employees. During the past year, over 62,500 prescriptions were dispensed. In addition to dispensing pharmacy services, population health initiatives regarding Influenza and Pneumococcus vaccination and medication reconciliation have been a focus.

### Calcimimetic Use in DCI

The clinical value of current therapies for bone-mineral disorders (BMD) has not been fully proven, such that biochemical parameter improvement (i.e. PTH) is the surrogate being used. Therefore, relative value of high cost BMD treatments vis-à-vis programs to meet other needs of DCI patients needs to be considered.

Despite use of calcimimetics, data from DCI showed only minor changes in the distribution of PTH levels and no signals indicating improved clinical outcomes, perhaps due in part to only half the patients prescribed the agents actually filling prescriptions adequately to be adherent. Review of literature showed supervised thrice weekly oral cinacalcet therapy attained similar laboratory results to daily therapy. A protocol was developed in early 2017 that optimized judicious use of vitamin D therapy as first line agent, with options for adjunct use of TIW calcimimetic and piloted by year-end.

While the official pilot was ongoing, DCI physicians decided to implement local therapeutic trials of thrice weekly calcimimetics and laboratory trends independently. Results were analyzed during spring and also fall of 2018 and the general distribution of PTH and other laboratory parameters initially fluctuated but over time was the same if not better, than daily calcimimetic use. Furthermore, supervised thrice weekly calcimimetics given during in-center hemodialysis was well tolerated and ensured compliance.

In the DCI ESCO at Palmetto for 2018, the cost of calcimimetic therapy was \$1,182 per pt-year for the oral and \$28.23 per pt-year for intravenous formulations, compared to \$2,455.39 and 333.34 per pt-year, respectively, for the overall ESCO populations and \$2189.24 and \$664.43 respectively for the reference population (non-ESCO CMS controls). In this ESCO alone, DCI reduced cost to Medicare from calcimimetic therapy by \$1,643.13 per pt-year. Using the reference population costs, we calculated the cost to Medicare based on the overall DCI calcimimetic (oral + IV) use for Medicare beneficiaries for 2018 at \$1,177 per patient-year whereas the total cost for reference population was at \$2,854 per patient-year. This represents responsible stewardship through an estimated cost-savings to Medicare from DCI patients at \$1,677 per pt-year or a total of \$16.8 million for the entire DCI Medicare population in 2018.

## Donor Story

Jim was diagnosed with juvenile diabetes at the age of four and began to lose his kidney function in the 80's. "Some times I would feel really bad," said Jim about a lifetime of struggling with diabetes and eventually kidney failure.

"The Peritoneal Dialysis cyclor was draining, even though it was wonderful life saving and life sustaining," his wife Zueseline noted.

Jim was already registered on the transplant list, but after years and years of waiting, he felt he was out of options, and began to consider the option of a living kidney donor. He turned to his devoted wife and asked if she would get tested to see if she might be a match. To his relief, she already had.

After extensive testing, they learned that Zueseline was a suitable match. In an act of love and courage, Zueseline donated her kidney to her husband, Jim, on October 16th, 2018.

"Personally, since I know my recipient, I couldn't imagine life without him," said Zueseline about her decision to donate.

When asked about her experience and any fears she may have had as a donor, Zueseline responded, "I think the most uncomfortable part was the IV, but everything else wasn't bad. The transplant teams were wonderful. They give you a donor advocate which means they are there for you for any questions you might have. They pretty much protect you."

After recovering from the transplant surgery, Jim feels better than he has in years. "The thing I'm most thankful for is the freedom and not being bound to a dialysis machine every night. I'm also thankful that I'm feeling much better than I did. I'm able to go forward and live a much healthier and longer life."

"I would so do this again. I wish I had another kidney to donate to someone else. I would do it again," said Zueseline.



## DCI Supply Division

The Supply Division was initiated in 1985. The primary focus was to support DCI home hemodialysis patients and coordinate the delivery of their machines and supplies.

Opportunities to assist the dialysis facilities developed over time and now include:

- National Contract Negotiations and Contracting  
- Medical Supplies/Equipment/HD/PD/Pharmaceuticals
- Manage and Maintain Master Inventory System
- Home Patient Support (supplies and equipment)
- Support Pharmacy Division (ship/receive/physical operations)
- Support Lab Division (supplies/inventory/shipment of collection tubes)
- Support TDS Tissue (supplies and special inventory)
- Support Nutritional Supplement Program for DCI Facilities
- Facilitate delivery of supplies to Camp Okawehna
- Support DCI IT - Machine Interface Project (ELO Units)
- PCB board repair for clinics
- Centrifuge repair and backup
- NxStage® Redeployment Services
- Build custom clinic wall (connection boxes) for hemo machines in clinics
- Supply Pex materials for clinic water systems and all SS connectors
- Supply wall chase materials for new and existing facilities

## Research

In 2007, DCI's Office of Clinical Research was established. This division provides expert knowledge in Federal Regulations, HIPAA, Medicare Clinical Trial Policy, Good Clinical Practice, and Federal Wide Assurances.

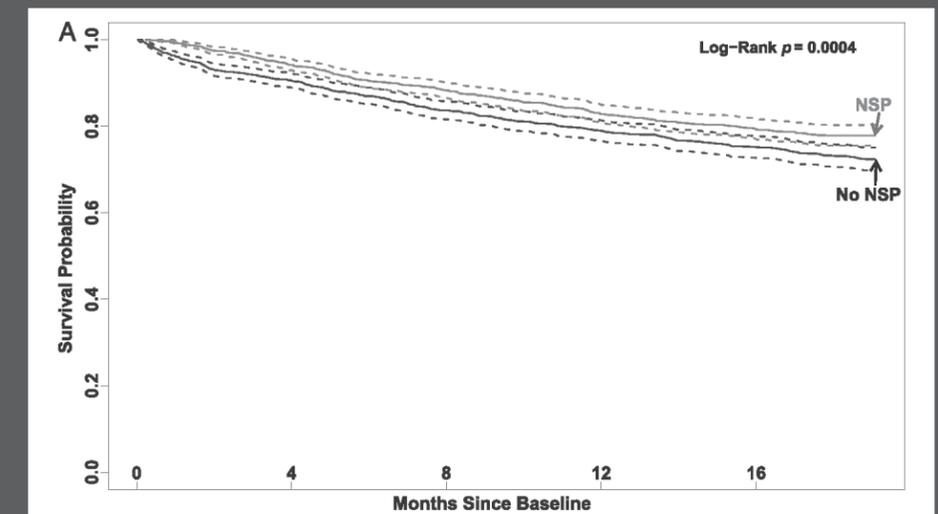
The Office of Clinical Research has access to approximately 2,800 potential study patients. DCI has an extensive MIS. All DCI clinics use the system. Information is entered on the patient at initiation to a DCI clinic and updated as events occur (medication changes, hospitalizations). When performing clinical research within the role of a site management organization, DCI leverages organizational strength, technology and integrity with over 44 years of research experience to ensure a professional, ethical, and high quality work product.

**DCI is currently conducting the largest dialysis study in history**, "Health Effects of oral Protein Supplements in HD (The HELPS-HD Trial); An Open-Label Cluster Randomized Pragmatic Trial Evaluating the Effectiveness of Oral Intradialytic Nutritional Supplements on Mortality in Hemodialysis Patients." The study will explore the effectiveness of two approaches to the use of oral nutritional supplements on mortality. The three-year study has 105 DCI clinics participating with **over 8,100 patients enrolled to date**. The study has been initiated, conducted, managed, and funded by DCI. The study is anticipated to be completed by the first quarter of 2020.

DCI has contributed over \$316,000,000 to research, education, and development since inception. In 2018, DCI allocated over \$1.5 million dollars to kidney disease research studies, and granted more than \$3.5 million toward kidney disease education. In addition, DCI created and maintains a fund specifically to provide grants and research support for young investigators in the field of kidney disease. The DCI Paul Teschan Research Fund (PTRF) utilizes a peer review process to fund scientific applications. \$600,000 was provided by the PTRF in 2018 to support 10 research studies. More than \$9,100,000 dollars have provided support to 191 total PTRF projects.



The graph to the right (graph 8.1) shows a Kaplan-Meier curve showing better survival probabilities comparing DCI patients assigned to receive oral nutritional supplements by protocol (NSP) to patients not on the nutritional supplement protocol. Weiner DE et al. Oral intradialytic nutritional supplement use and mortality in hemodialysis patients. American Journal of Kidney Diseases; February, 2014.



Graph 8.1

## Participating in dialysis research: “The life I save could be my own”

At 51 years old Eldon Jones has acquired the bittersweet worldly wisdom that comes from living through difficult days. Experience has taught the 6' 3" Boy Scout leader how to use humor to make the best of any situation.

Yet, there was nothing funny about his diabetes diagnosis at 35 years old or learning about his high blood pressure in his mid-40s. Laughter didn't come easily to the former controls electrician who put long hours in on the job and couldn't tolerate his prescribed medication.

“Everybody makes excuses, but I know I didn't manage my diet or medication,” Eldon explained with a grin in his voice. “I worked a crazy schedule and I ate fast food. I was aware of what could happen, but I was stubborn. If you're going to be dumb, be tough.”



The active outdoorsman said dialysis was an eye opener for him. Going from camping and fishing to a schedule dictated by thrice weekly dialysis treatments was a significant lifestyle change. “Early on I struggled and contemplated if I really wanted to live this way. I took a look around and decided that I have a lot to live for.”

Eldon's social worker, Debbie, showed him how to approach situations in a different way when he started dialysis, “She helped me adjust to my new normal.” Eldon also credits the rest of his care team for providing support. “I've only been to DCI for dialysis but I can say the staff here really care about patients. I know they have my best interest at heart.”

Eldon now monitors his blood sugar and food intake. He also took time to find a doctor that understood his needs. “I changed doctors until I found one that was willing to listen. A lot of doctors weren't asking how the prescribed medications made me feel. They didn't care if it fit into how I wanted to live. I finally found a doctor that would prescribe a non-refrigerated insulin that allowed me to continue my outdoor adventures.”

Difficult days have taught the California-native-turned-Tennessee-resident how to live with his new normal. Even though dialysis is physically exhausting, Eldon perseveres. He finds opportunities to make others laugh. “Telling a corny joke to a kid, seeing him laugh, that's fun. I'm living for all my kids. I will find joy in everything I can.”



The father of two young adults now in their twenties still takes pleasure in coaching, leading Boy Scouts, Cub Scouts and Venture programs. He believes an upbeat attitude can make a difference in the lives of boys and girls struggling to find a role model outside their home.

Eldon also knows he can make a difference by participating in research. “I've done several studies with DCI. People ask me why. I tell them I can't see why I wouldn't. The information could benefit future dialysis patients as a whole. And, by participating in research, there's a chance that the life I save could be my own.”

## Community Impact

### Education

DCI recognizes the rewards of higher education and has supported that endeavor since 1995 through the DCI Scholarship Program. To date, DCI has awarded over \$704,000 in university scholarships. Since 1998, DCI has also sponsored a summer internship for premedical students in the clinical area of organ transplantation. Our internship program has given more than 200 students the opportunity to expand their knowledge of the medical field and confirm their decision to go into medicine. In addition, in 2002, DCI launched a partnership with Glenclyff High School to provide the opportunity for students to work in a DCI facility as patient care technician interns. In 2018, Glenclyff's Academy of Health and Hospitality partnered with DCI and participated in a pilot reading program to help high school students make “connections between the classroom and careers in healthcare.”

### PA Kidney Kamp

From July 29, 2018 through August 3, 2018, 19 kids with kidney disease converged on Ligonier Methodist Camp Ground in Ligonier, Pennsylvania.

The campers have plenty of activities to conquer. Their first event began on Sunday with a simple meet and greet that included swimming. Monday found the campers engaging in trust games, a ropes course, horseback riding, a hayride and roasting s'mores. Tuesday had them flying through the air like super heroes on the zip line then enjoying an evening talent show. The Western PA National Kidney Foundation sponsored a carnival to round out the evening. The campers enjoyed a night made possible by the Western PA National Kidney Foundation and volunteers from DCI Hempfield and DCI Mt. Pleasant. Wednesday was all about Idlewild Park with exciting rides and challenges for campers and counselors. Thursday, the last day of camp, sped by at the lake with jet skiing, tubing, and laser tag before heading back to camp and preparing for the evening dance with Juke Box Johnny. At the end of the week, campers left with a renewed sense of confidence and a lifetime of memories.





### Camp Okawehna

DCI's Camp Okawehna has served kids with kidney disease from all over the country since 1974. Campers from cities around the US arrived to Lyles, Tennessee on June 9 to attend the week long summer camp. Camp "O", as it is affectionately called, is the only kidney camp located in the state of Tennessee. With over 500 acres of green space, it is one of the largest kidney camps in the country. The support of the Cedar Crest staff over the last 40 years has allowed DCI to provide this immersive camping experience to kids with kidney disease.

Children who have had a kidney transplant as well as children on hemodialysis and peritoneal dialysis are welcomed at camp, where on-site dialysis is provided. Every camper who requires dialysis is required to bring a knowledgeable home unit staff person who understands the intricacies of the child's dialysis treatment. Children between 6 to 18 years of age are eligible to attend, regardless of where their treatment is received. The nominal cost to attend camp is \$65 per camper. However, no child is denied the camp experience due to an inability to pay.

If you ask a camper what their favorite part of camp is, you may hear a mixed response of the various activities, events, and even the food provided at camp. But what they love most is the interaction with other campers just like them, living with kidney disease. Meeting others on the same journey helps to remind them they are not alone and DCI is proud to be able to provide this experience for the campers.

## In loving memory of our friend Bill Peckham

Bill was an incredible man. He is one of the smartest men I knew. He also shared my love for travel. And he happened to be on dialysis.

I first met Bill after I had re-joined DCI after completing residency. I visited Northwest Kidney Centers to learn from Joyce and her team. When I got there, Joyce said to me, "Doug, there is someone I need you to meet." She introduced me to Bill and Bill, Joyce and I had the best conversation about so many different topics. The number one thing that I remember about this meeting is that he told me that DCI needed "to fight above its weight class" in pushing for changes to improve care.



During that trip, I also found out from Bill's friend Jim Smith that they were planning on taking a rafting trip down the Rogue River and that he had two extra spots for the trip. I walked out of the room and immediately called my wife - "Kath - please, please, please - can we go on this trip?" I wish I could have seen her face on the other end of the line. She agreed, and we both took the trip down the Rogue.

The trip was incredible. Also on the trip for DCI were Lauren Hollingsworth, Kyle Nuckolls, Cheryl Conquest and two summer interns, including Vlad Ladik's daughter Sasha. Fantastic rapids, beautiful wilderness, and we got to sleep on beds. We also talked a great deal with Bill, Kay Deck, Gary Peterson, Dan Larabee and his wife Connie about how care needed to change. As we neared the end of the trip, we started paddling backwards - we did not want the incredible experience to end and we wanted to stay on the river. We also didn't want to leave Bill. Bill told us that he was going to visit a redwood forest later that day, so we followed him. On the way we had a few stops, put our feet in the Pacific Ocean, and wandered with Bill in the Redwood Forest. By the time we got to Portland Airport, I think it was 3 AM and our flight was scheduled to leave in a few hours.

The Rogue Trip was a proof of concept trip to the Grand Canyon. If we can do three days on the Rogue, why can't we do eight days down the Colorado River?

The trip through the Grand Canyon was incredible. The water was SO cold. The temperature was SO hot. Beautiful scenery that someone can only see from the river, hail storms, intense rain storms, always changing, never knowing what was coming next.

On the last day, we floated down the river and all shared our thoughts about the trip. When it got to Bill, he took some whiskey. Then some more whiskey. And he started talking about the lonely journey of a person on home dialysis. He also thanked us for sharing his dream with him.

Bill continued to fight for better care and continued to live "the breadth of life." I visited him in the hospital. I thought I would get to see him for an hour. We spent the whole day together. On that day, once again, I felt that I was sitting at the feet of a legend. He saw things with such clarity and purpose.

Bill's big push this year was finding ways to improve care for people receiving in center dialysis. After Lauren and I returned from the Rogue trip, we met in her office and agreed with each other that we would work together to improve care for people with kidney disease. This was the beginning of REACH.

I feel like Bill is still with me. He is in my heart. And I think I will be pushing harder for us to improve care. When I do, you will know that Bill is at my side.

- Doug Johnson, M.D.

**December:** DCI Yorktown Home Training facility opened to provide access to home dialysis in the Westchester County, NY area.



**November:** DCI advocated for kidney patients and opposed the Dialysis PATIENTS Demonstration Act (DPDA).

**October:** DCI achieved a milestone of 5K followers on Facebook. More followers means more people reached through this platform.



**September:** DCI celebrated Nephrology Nurses Week with the release of a video that reached over 20,900 people.



**August:** REACH Kidney Care of Albany, NY hosted an open house to provide free kidney disease education to the community.



**July:** DCI Jacksonville, FL hosted a transplant lobby day to educate patients about the process of getting a transplant.



**February:** REACH Kidney Care of Spartanburg, SC hosted a "PD Day" to educate CKD patients about Peritoneal Dialysis.



**January:** DCI Pointe North clinic opened in Albany, GA.



**March:** DCI and DCI Donor Services hosted a walking challenge for employees and raised \$25,000 for the American Association of Kidney Patients.



**April:** In honor of #DonateLifeMonth, DCI released a video sharing Brian Frampton's transplant story.



**May:** DCI announced new Home Therapies Medical Director, Page Salenger, MD.



**June:** Nearly 100 children with kidney disease from cities around the U.S. attended Camp Okawehna.

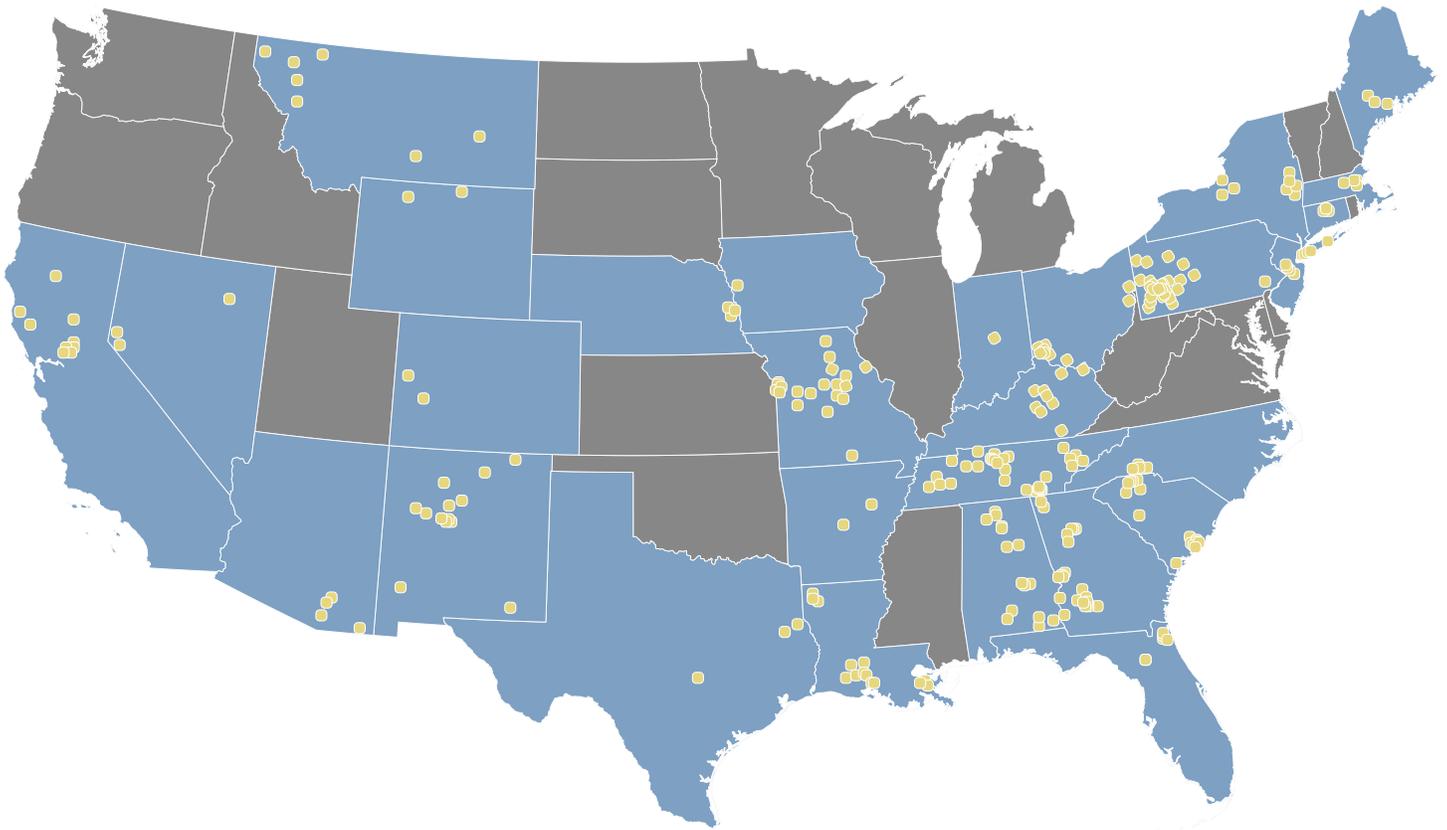


# 2018 IN REVIEW



# Dialysis Clinic, Inc.

A Non-Profit Corporation



-  States where DCI is located
-  Approximate locations for DCI clinics

[www.dciinc.org](http://www.dciinc.org)

