

# FOCUS

FEBRUARY 2017 VOLUME 28, NO. 2

*Focusing on the people and initiatives that distinguish Christiana Care Health System*

## INSIDE

### 5 TRANSPLANT TURNS 10

Kidney Transplant Program celebrates a decade of service.

### 14 BEACON AWARD

Cardiovascular Critical Care Complex earns second Gold Beacon Award.

### 18 CHILD LITERACY

Christiana Care and community partners help to nourish healthy minds through reading.



Get the latest at  
CHRISTIANA CARE  
**news.org**



## Delaware Medical-Legal Partnership helps vulnerable patients overcome obstacles to health

David Jester and grandson Joshua enjoy a day at Brandywine Creek State Park near Wilmington. Jester was able to avoid significant financial hardship thanks to the Delaware Medical-Legal Partnership.

CONTINUED INSIDE

## DELAWARE MEDICAL-LEGAL PARTNERSHIP | CONTINUED

After suffering a stroke and a heart attack, David Jester of Wilmington faced another crisis at the worst possible time. A gap in his insurance coverage threatened to burden him with significant financial hardship as he worked to bounce back from cardiac catheterization and triple-bypass surgery. But thanks to an innovative new program at Christiana Care, he got fast help when he needed it to solve his insurance challenge so that he could focus on his health.

Jester, a 54-year-old disabled mechanic, was on the mend after successfully going through cardiac rehabilitation. Unfortunately, he was about to lose his Medicaid coverage, as he began to receive Social Security Disability Insurance (SSDI) but was subject to a waiting period for Medicare. The SSDI made him over-income for his Medicaid, and he was sent a termination notice.

His Christiana Care social worker realized what was happening and put him into contact with the innovative Delaware Medical-Legal Partnership, a new program at Christiana Care that helps patients to address legal problems that might be barriers to good health. The Delaware Medical-Legal Partnership lawyer discovered that the Medicaid termination was incorrect and successfully advocated, on Jester's behalf, for the coverage to be reopened in a special Medicaid eligibility category for people like Jester, who are waiting for their Medicare eligibility.

"I have serious health issues and it could be a disaster for me to lose coverage," said Jester. "I couldn't believe how fast the lawyer with the Delaware Medical-Legal Partnership took care of things and made sure there was no break in coverage."

The Delaware Medical-Legal Partnership, which began in early 2016, represents a movement beyond the traditional bounds of medicine to impact the social determinants of health. The partnership is a collaboration between Christiana Care Health System and the Community Legal Aid Society Inc. of Delaware (CLASI). CLASI is a private, non-profit law firm that provides free civil legal services to Delawareans who have disabilities or low incomes, or who are age 60 and over.

"The concept of the Delaware Medical-Legal Partnership is to solve—or assist with solving—medical problems with a legal intervention for some of our neediest patients," said Julie Silverstein, M.D., FACP, associate service line leader of the Primary Care and Community Medicine service line.

A common need in the first few months of the program has been safe housing. From February to October 2016, 20 patients were determined to have serious housing and utility needs. Thirteen patients were identified with issues related to income support. Nine patients had needs connected to personal and family stability. Four patients wanted help with personal rights or immigration status, and one patient sought help with a bankruptcy.

Overall, 289 patients were screened for eligibility.

The program does not address cases involving criminal matters, wills, traffic offenses or medical malpractice.

"It's frustrating as a physician to see medical problems that you have no answers for unless you address the social determinants of health," said Dr. Silverstein. "We have wonderful social workers, but often they can only go so far in their assistance by connecting patients to community resources. What you sometimes need are legal services that allow you to get at the root of a social problem impacting a patient's health."

An example is the case of a patient who was homeless, despite having been approved to move into a low-income housing complex. She was having difficulties getting her electric utilities turned on because of an outstanding balance with the utility. Through the Delaware Medical-Legal Partnership, a lawyer was able to negotiate a smaller initial payment and set up a monthly reimbursement plan for her, enabling the patient to move into her new apartment.

Delaware Medical-Legal Partnership services are available to patients throughout Christiana Care's primary care network. The program is based at the Rocco A. Abessinio Family Wilmington Health Center, with offices adjacent to Patient Support Services, where health guides assist with screenings for eligibility and issues that can impact health.

Patients eligible for Delaware Medical-Legal Partnership services are those who:

- Receive primary care from a Christiana Care Medical Group practice.
- Have had at least one hospitalization or two emergency department visits in the past six months, though patients 18 and younger do not have to meet this utilization criteria.



“The concept of the Delaware Medical-Legal Partnership is to solve—or assist with solving—medical problems with a legal intervention for some of our neediest patients.”

JULIE SILVERSTEIN, M.D., FACP

CONTINUED

- Have household or personal income at or below 200 percent of the federal poverty level.

More than 90 percent of an individual's health relies on social factors that occur outside of hospital walls, and civil law is often an effective tool in achieving positive outcomes for patients, said Daniel Atkins, Esq., executive director of the Community Legal Aid Society. For example, a child with asthma might visit the emergency department repeatedly because of mold or pest infestations that should be removed from the child's home. For poor, at-risk patients, this is a problem that is more readily addressed by a medical-legal partnership than by a physician alone, according to the National Center for Medical Legal Partnership, which reports almost 300 such partnerships in more than 40 states.

A growing body of research suggests that embedding a lawyer in a medical practice can improve patient health, reduce stress, reduce hospital readmissions and lower overall care costs, he said.

Christiana Care's Value Institute is gathering data on the effectiveness of the new partnership in Delaware.

"We hope that research will show the value of the partnership to patient health and illustrate cost savings for Christiana Care," said Marissa L. Band, Esq., supervising attorney for the Delaware Medical-Legal Partnership.

This research is supported by a \$150,000 grant from the Harrington Value Institute Community Partnership Fund to launch the Delaware Medical-Legal Partnership. The Harrington Fund was established to foster innovative partnerships between Christiana Care and the community, supporting population health research and program development to address community needs and reduce health care disparities for underserved and disadvantaged populations.



Robert Locke, D.O., MPH, director of Neonatal Research; David Paul, M.D., chair of the Department of Pediatrics and clinical leader of the Women and Children's Service Line; and Julie Silverstein, M.D., FACP, associate service line leader, Primary Care and Community Medicine Service Line, were honored with the Community Legal Aid Society's annual Founders Award.

In appreciation for their work in creating the Delaware Medical-Legal Partnership, CLASI honored Dr. Silverstein and two other Christiana Care physicians — David Paul, M.D., chair of the Department of Pediatrics and clinical leader of the Women and Children's Service Line, and Robert Locke, D.O., MPH, director of neonatal research — with a special Founders Award on Oct. 20 at The Queen Theater in Wilmington.

"With Julie, Rob, and David, we are so fortunate to have such smart, hard-working and caring medical champions on our side," Atkins said.

In recent years, Dr. Paul and Dr. Locke have served as board members and advocates of the Delaware Healthy Mother and Infant Consortium, which has worked to reduce Delaware's high infant mortality rate. In 2013, at the urging of Dr. Paul and Dr. Locke, the consortium began an experimental medical-legal partnership to assist high-risk pregnant women in New Castle County, a program that was later expanded across the state. This partnership was designed to address the

social determinants of maternal stress, and it continues as a collaboration between CLASI and the Delaware Division of Public Health, which has funded the effort.

"This has been an important program because there is a strong relationship between toxic stress and health, and the program has shown benefits for newborns in our state," said Dr. Locke.

Impressed with this initial partnership, Dr. Paul and Dr. Locke advocated for a similar partnership at Christiana Care, where Dr. Silverstein was also hoping to start such a program. Dr. Paul said the new partnership was supported in its launch by Christiana Care champions that included Brenda Pierce, Esq., RN, corporate counsel of Legal and Risk Management, and Linda Brittingham, LCSW, BCD, director of Social Work.

"It's because of the transformative thinking of Christiana Care that we've been able to have a lawyer be an advocate for a primary care practice and achieve even better health outcomes for our patients," said Dr. Paul. ●

## Values plus behavior equals exceptional experience

By Joyce Sammons, corporate communications coordinator, External Affairs



**A**t Christiana Care we are working to define the values and behaviors that enable us to create an exceptional experience.

To that end, we're on a mission to hear the voice of every individual working in the health system. After all, we are the extraordinary people who make Christiana Care an extraordinary place to work.

Values Ambassadors are representatives from departments throughout Christiana Care. We have an important job to do, serving as trusted liaisons between our co-workers and the senior leadership of Christiana Care.

It has been my privilege to work at Christiana Care for 15 years. I'm glad to be part of the Values Ambassadors team because I believe it will enhance our organizational vitality and make a great health system even better.

As Values Ambassadors, it's our responsibility to convey messaging and enthusiasm for the Core Values initiative to our colleagues in our various groups. Then we gather our colleagues' feedback and share those insights with the Values Ambassadors team and leaders.

Serving as respectful, caring partners is The Christiana Care Way. It's a two-way street, where we listen to each other as colleagues who are partners in success.

Values Ambassadors come from many different disciplines. I get to meet nurses, IT people, colleagues I might not otherwise engage with. We may do different jobs, but we share the same goal. We take care of people. We do our best for our neighbors. It is part of the very fiber of our being, and we want to show that to everyone — to patients, to co-workers, to the public.

There's no hierarchy in this work. We talk freely about what we are doing, what we are not doing, what we could be doing. We have regular check-ins where we share information and feedback.

We are ambassadors at all times. When the opportunity arises, we talk about our values with colleagues. That might be in a one-on-one conversation, in a huddle or in a meeting.

One of the first exercises that I helped to lead as a Values Ambassador in my department was for each of us to choose five values from a long list of words. These are the values that each individual believes reflects who we are, what we stand for — and what values best reflect our commitment to providing our patients and guests with an exceptional experience, day in and day out.

When I think about these values, three deeply resonate with me as an individual: integrity, empathy and trust. Integrity means we adhere to a high moral code. Empathy is essential in understanding the thoughts and feelings of our patients, their loved ones and our colleagues. They trust us to provide them with respectful, expert care.

Our co-workers truly are our teammates. We are in this together. We think about these things collaboratively in creating innovative, effective, affordable systems of care that our neighbors value.

Our behaviors reflect our values. It's important to show respect for the knowledge and special skills of others. The tone of your voice is friendly. Your body language is positive, head held high, showing that you are open to others.

As positive role models, Values Ambassadors strive to reflect the core values of Christiana Care and express the overall vision to colleagues.

Christiana Care is doing something very important in defining our values and behaviors so that our performance consistently results in the exceptional experience every one of our patients and guests deserves.

It's a great honor to be a partner in that. It's The Christiana Care Way. ●



Christiana Care Kidney Transplant Program Coordinator Aline Stant, MSN, FNP-BC, CDE, AE-C, checks the blood pressure of new organ recipient Marietta Smith at the Wilmington Hospital Post-Transplant Clinic.

## Christiana Care Kidney Transplant Program celebrates 10 years of serving Delaware

For Marie Twyman, having a kidney transplant program close to home was about more than convenience. It meant independence. Twyman could drive 10 minutes to Christiana Care Health System's Newark campus, but she'd need a ride to get to a hospital in Philadelphia.

Care close to home also meant a personal relationship with her doctors and staff. The New Castle woman can always count on Medical Director Stephanie Gilibert, M.D., for straight talk about her health.

"She will say, 'Miss Marie, do you want to keep your kidney?'" Twyman said. "She's still my buddy."

Ten years ago on Jan. 15, Twyman became the first adult kidney transplantee in

Delaware. Since then, more than 250 people have received a new kidney at the Christiana Care Kidney Transplant Program.

Kidney transplants are life-saving and transformational. Before Twyman's transplant, even seeing food on a TV commercial caused her to experience waves of nausea. And because of incontinence, every trip out the door was fraught with worry.

After her transplant, her appetite came back — and she lost weight. "When I walk, I walk with a strut," she said.

Though transplants capture the imagination in a way that case management does not, the true measure of this program is about more than

transplants. For each patient who receives a new kidney at Christiana Care in a typical year, Christiana Care actively manages about 35 more patients. This care includes screenings for new patients, health management for those on the waiting list and monitoring after a transplant.

"We consider this a lifelong commitment to them," Dr. Gilibert said.

Christiana Care's kidney transplant program arose from a simple idea: Delaware's kidney transplant patients (there are about 55 in a typical year) can and should be screened, transplanted and cared for in their state. After all, a transplant is not a one-time procedure. Patients must be frequently tested while they are listed and after a transplant.

CONTINUED



Marie Twyman was the recipient in the first kidney transplant ever performed in Delaware, Jan. 15, 2007.

Traveling long distances can be especially taxing for those suffering from chronic kidney disease. And when a kidney becomes available, time is short, so a long drive can sometimes be disqualifying.

Also, some insurance programs don't cover out-of-state transplants, or they cover them to a lesser degree.

S. John Swanson III, M.D., FACS, chief of transplantation surgery, was ending a two-decade career with the Department of Defense when the opportunity arose to lead Christiana Care's kidney transplant program. He became employee No. 1 in July 2006.

His experience was augmented by other veterans, and soon enough their challenge wasn't performing transplants — it was convincing the public that they were ready. After all, signing up at a transplant program is an act of faith by a patient, who must believe the program can secure a kidney and be ready to transplant it at a moment's notice.

While assembling the medical expertise to earn that trust was key — the program's success rates are as good as any institution in the region — competency is only one element of trust. Building relationships by getting to know patients on a personal level is the culture of the transplant program.

"They see us as their family," said Dr. Gilbert. Some patients stop by just to chat over coffee and a bagel.

Building a relationship with patients serves a medical purpose, too. Trust is elemental throughout health care, but that dynamic is even more pressing in transplant medicine.

Patients on a transplant list can be understandably worried that disclosing their health conditions could lead to their removal from the list. But they quickly learn there is little to gain by hiding an incipient illness. "It's easier for me to take care of you if you don't get really sick," Dr. Gilbert said.



**Christiana Care's  
Kidney Transplant  
Program has:**

- Performed over 250 kidney transplants.
- More than 1,100 patients.
- Screened more than 4,500 people.

For the 300 or so patients on the waiting list, health management is crucial. These patients may develop multiple medical conditions that could, especially if untreated, jeopardize their chances of qualifying for a donated kidney.

Gerard J. Fulda, M.D., FACS, FCCM, FCCP, chair of the Department of Surgery, said a patient whose health is not well managed — if they are hospitalized for another reason, for example — may not be medically ready to accept a kidney. Part of being an effective steward of these organs is ensuring that your patients are healthy enough to make use of them.

Meanwhile, the medical scrutiny on transplantees and donors has led to ancillary benefits such as referrals for weight loss and bariatric surgery and the early detection of many cancers, said Aline Stant, MSN, transplant coordinator and quality assurance and performance improvement manager. "People have no idea how much work it takes to transplant someone," she said.

All told, the transplant program now cares for more than 1,100 patients. Since the program's inception, it has screened more than 4,500 people. Thanks to the transplant program's growth, nearly nine in 10 Delawareans who have health insurance can be covered for transplantation at Christiana Care.

As he reflects on the first 10 years of the transplant program, Dr. Swanson said that its future will include an even greater emphasis on prevention.

"We all love to do a transplant, but we prefer not to have to do them," he said. "In other words, public outreach can help put Delawareans in control of their kidney health, preventing the need for a transplant."

Population health, an approach that considers the health of the public at large, will be even more of a focus in coming years, as it is with Christiana Care generally.

The transplant program is involved in a study about the connection between hypertension, or high blood pressure, and kidney health among African-Americans, who are at a higher risk for hypertension.

"Our focus will be on patient-based research," Dr. Swanson said.

CONTINUED



S. John Swanson, III, M.D., FACS, chief of Transplantation Surgery, Emily Pruitt, MSN, RN, living donor coordinator, kidney donor Susan Karlson of Fair Hill, Maryland, and transplant recipient Rosalie Corbett of Newark, celebrate the nation's largest paired kidney donation program at Christiana Care in 2015.

Twyman came to the hospital for what she thought was a brief blood test. But as she walked into the parking lot afterward to head home, she turned to see a cloud of white coats rushing after her.

Twyman was to have the operation that day. A kidney was available for her.

The procedure was successful, and on Jan. 15, 2007, she became the first adult to receive a kidney transplant in Delaware. Eight days later, the program's surgeons performed the state's first live-donor transplant of an adult.

Twyman measured her recovery in months, but she has sweet memories of the nurses and doctors who cared for her.

"They make you feel wanted," she said.

Now, a decade later, she is healthy enough to maintain her independence and still lives along the quiet New Castle street where she has spent the last 40 years.

As the transplant program comes closer to its goal of providing a kidney transplant for every Delaware adult who needs one, Dr. Gilibert believes that the personal touch that began with patient number one, Marie Twyman, will continue with each new patient.

"I can't not see or remember my patients," she said. "They are our neighbors."

It's Delaware, after all. Dr. Gilibert and her colleagues routinely run into their patients at the grocery store, or the mall or the movie theater. Caring for their neighbors is The Christiana Care Way.

"Are we expected to take ownership for the health of our patients?" Dr. Gilibert said. "Heck yeah." ●



Christiana Care Kidney Transplant team members Ryan Haydu, MBA, administrative director, Velma Scantlebury, M.D., FACS, associate chief of Transplant Surgery, and Stephanie Gilibert, M.D., medical director of the Kidney Transplant Program.

It will also continue to raise the profile of living donation, which effectively saves two people: The person who receives the donation and the stranger on the waiting list who receives the next kidney in their place.

Living donations are "not only a huge humanitarian gesture but significantly help reduce the number of folks waiting," Dr. Fulda said.

For a few years after Twyman first saw a Christiana Care nephrologist, in 2001, medication and lifestyle changes kept her kidney problem in check. But as her health worsened, the prospect of dialysis, the filtering of blood by machine to compensate for an ailing kidney, loomed.

Twyman, now 73, had watched her mother and sister-in-law endure the thrice-weekly procedure, so she knew the toll it could take.

Though dialysis is necessary for patients with chronic kidney failure — and Christiana Care's nephrology care is ranked among the top 50 in this specialty nationwide by U.S. News & World Report — it exacts a heavy toll. In its most common form, called hemodialysis, patients must sit in a clinic for three- to four-hour sessions. Many patients are so drained that it takes more than a day to feel decent again — just in time for another session.

Even for all that, it is far from a cure-all; only about 35 percent of hemodialysis patients remain alive after five years. It also costs an average of about \$90,000 a year.

"I would say, 'Oh Lord, I'm coming to D-Day,'" Twyman said.

She was sitting on the couch when the call came. After hanging up, she held hands with her sister and prayed. Later that day,



Eric Kmiec, Ph.D., discusses gene editing techniques with researchers of the Gene Editing Institute at the Helen F. Graham Cancer Center & Research Institute.

## Gene Editing Institute develops new system for precise ‘surgery’ on the human genome

**M**olecular biologists at Christiana Care Health System’s Gene Editing Institute have developed a new system that allows them to not only repair damaged DNA within human cells, but also to determine when the DNA repair machinery has introduced unwanted genetic changes alongside — or instead of — the desired repair.

In the Jan. 3 issue of the scientific journal PLOS ONE, a team of researchers led by Eric Kmiec, Ph.D., director of the Gene Editing Institute at the Helen F. Graham Cancer Center & Research Institute at Christiana Care, published its findings using a modified version of the cutting-edge CRISPR/Cas9 gene editing technique.

The modified CRISPR/Cas9 technique, called excision and corrective therapy, or EXACT, uses a short single-stranded piece

of DNA called an oligonucleotide to serve as both a bandage and a template during the repair of a genetic mutation.

“The advancement here is a new concept of using donor DNA as an oligonucleotide to act as a Band-Aid across a gap created by the CRISPR [ribonucleoprotein complex], and then allowing replication to fill in the gap, and then the oligonucleotide dissociates and on you go,” said Dr. Kmiec.

The published paper, titled “Insertional mutagenesis by CRISPR/Cas9 Ribonuclear gene editing in cells targeted for point mutation repair directed by short single-stranded DNA oligonucleotides,” describes how the EXACT CRISPR/Cas9 technique can be used to repair what are called point mutations — single changes in the DNA code that can render genes non-functional and produce hereditary diseases in humans, such as sickle cell anemia or Gaucher’s disease.

The present study follows an earlier report published in the Sept. 9, 2016, issue of the journal Scientific Reports, in which Dr. Kmiec and his colleagues established that their EXACT CRISPR/Cas9 gene editing technique functions using the “Band-Aid template” repair mechanism that they had predicted.

In the PLOS ONE paper, Dr. Kmiec and his colleagues report using a single-stranded DNA template with a pre-assembled CRISPR/Cas9 ribonucleoprotein complex to fix a point mutation in human cells that have been engineered to express a fluorescent protein only if a single change in the DNA that encodes the fluorescent protein can be repaired.

The researchers report that their EXACT gene editing approach does in fact result in a significant amount of point mutation repair, thereby producing cells that make

functional fluorescent protein. More importantly, Dr. Kmiec and his colleagues also characterize undesirable mutations that sometimes occur alongside or instead of the desirable point mutation repair when using the EXACT CRISPR/Cas9 gene editing system. Dr. Kmiec and his co-authors refer to these undesirable side mutations, in which DNA is inappropriately inserted or deleted, as “collateral damage” or “on-site mutagenesis.”

“If you lose DNA, even one or two bases, even if you fix the point-mutation the gene is disabled, because the gene can no longer code for the proper protein,” said Dr. Kmiec. “So even though you have successfully corrected the gene, the problem is that you’ve also introduced some sort of secondary mutation at the site, and that causes the gene to be completely non-functional.”

As reported by Dr. Kmiec and colleagues, on-site mutagenesis can occur even when repair of the point mutation has not taken place, meaning that CRISPR/Cas9 ribonucleoprotein complexes can produce additional genetic lesions called indels (short for insertions and deletions) at a target site without carrying out the function they were placed there to perform.

In their PLOS ONE paper, the researchers map out exactly where and how indels occur during on-site mutagenesis in greater detail than has been reported previously, examining exactly what happens to both copies of the DNA strand after the CRISPR/Cas9 ribonucleoprotein complex has done its work.

Overcoming the problem of on-site mutagenesis and the genetic scar tissue it leaves behind will be necessary if CRISPR/Cas9-mediated gene therapy is to become useful in the clinical setting. As Dr. Kmiec and his colleagues suggest, solving this problem will not be easy, as the DNA-repair machinery that cells use to perform point mutation repairs is inherently error-prone.

Based on the greater mechanistic understanding provided by his recent studies, Dr. Kmiec says he remains optimistic that on-site mutagenesis is a problem that can be overcome.

“We are more optimistic now, seeing this data, that we will be able to fix point mutations efficiently, using this mechanism as opposed to other things that are now being reported in the literature,” Dr. Kmiec said. “It’s an advance that I think will give people hope that these kinds of point mutations can be fixed if we use the proper tools to fix them.”

In order to take his CRISPR/Cas9 system into the clinical setting, Dr. Kmiec says it will be necessary to further stabilize the repair complex at the site of the mutation, which should cut down on the occurrence of on-site mutagenesis.

Dr. Kmiec likens the repair process to the way in which a bandage can facilitate wound healing, noting that wounds “heal a lot faster if the bandage stays in place a lot longer. So the more times you wrap it with tape, or in this case, the more stable the binding, the more efficient the point mutation repair is going to be.”

To be effective in the clinical setting, Dr. Kmiec and his colleagues also must figure out how to get the CRISPR/Cas9 machinery into the progenitor cells that give rise to mature, therapeutically relevant cells in the body. Dr. Kmiec says this is an active area of research for his laboratory.

Despite all of these challenges, Dr. Kmiec hopes that CRISPR/Cas9 gene therapy with EXACT could be in human clinical trials at Christiana Care within 18 to 24 months. He feels confident that clinical trials will be forthcoming in large part because of the ease with which he can collaborate with his clinically oriented colleagues within Christiana Care Health System.

“Christiana Care is such a great, fully-integrated hospital complex,” he said. “I can walk down the hall and talk to the head of hematology here.”

Christiana Care’s Gene Editing Institute also recently entered into a partnership with The Wistar Institute in Philadelphia, with a goal of further accelerating research into repairing damage to the human genome.

#### DID YOU KNOW?

**Christiana Care’s Gene Editing Institute at the Graham Cancer Center is a worldwide leader in personalized genetic medicine, unlocking the genetic mechanisms that drive cancer and that can lead to new therapies and pharmaceuticals to revolutionize cancer treatment.**

Dr. Kmiec’s colleagues who contributed to the PLOS ONE paper as authors included Pawel Bialk at the Gene Editing Institute, Natalia Rivera-Torres and Kelly Banas at the University of Delaware Department of Medical Laboratory Science, and Kevin Bloh at the Nemours Center for Childhood Cancer Research.

The Gene Editing Institute at the Graham Cancer Center is a worldwide leader in personalized genetic medicine. Founded and led by Dr. Kmiec, the Gene Editing Institute is unlocking the genetic mechanisms that drive cancer and that can lead to new therapies and pharmaceuticals to revolutionize cancer treatment. The Gene Editing Institute also provides instruction in the design and implementation of these precise new genetic tools. ●

## Stroke survivor: 'Under no circumstances do you give up'



“When people ask me how I made my recovery I tell them I had the best care around — and I was willing to do my part to get well.”

BILL McNEAL

It was a trip Bill McNeal made often, driving home from work on I-95 on a Friday afternoon.

“All of a sudden, boom, my left hand fell off the steering wheel,” he said. “I thought I was just exhausted.”

He drove home using his right hand to steer. But when he didn’t feel better, his wife took him to Christiana Care’s Middletown Emergency Department. Suspecting a stroke, the staff immediately sent him via ambulance to Christiana Hospital, a comprehensive stroke center that provides the most advanced level of expertise in stroke care.

In addition to his symptoms, McNeal, 63, had a number of risk factors for stroke, including hypertension, Type 2 diabetes and sleep apnea. His mother died from a stroke.

Tests confirmed that he had suffered a pontine perforator stroke, in which an obstruction occurs in a blood vessel that goes to the brain stem.

“It’s caused by chronic small blood vessel disease related to his hypertension and diabetes,” said Waimei Amy Tai, M.D., a vascular neurologist with Christiana Care Neurology Specialists.

McNeal’s condition was stabilized with medications. But the stroke had taken a toll on his body and cognitive ability.

“I could get up, but I needed a walker to get around,” he said. “I could not speak as clearly as I did before the stroke.”

Work on his recovery began right away. He was evaluated and treated by rehabilitation teams skilled in physical, occupational, speech and cognitive therapies who addressed his specific, individual needs to achieve the best quality of life possible.

McNeal was hospitalized the day before Thanksgiving 2015. He went home from the hospital on Thanksgiving Day with an enhanced sense of gratitude.

After the holiday he continued with physical therapy and occupational therapy, relearning such tasks as tying his shoes and picking up coins. “I needed to get moving,” he said.

Speech therapy was his most difficult challenge.

“It required me to think, and that wore me out,” he said. “But the more reading and speaking I did, the better I got.”

Because he could not drive, Christiana Care staff connected him with a bus service from the Middletown Odessa and Townsend Senior Center.

“They picked me up at the house and dropped me up at the front door of the PT center,” he said. “There were no barriers, nothing to keep me from getting the help I needed.”

By mid-March, McNeal had exchanged his walker for a cane and was back at his job as a logistics analyst on a reduced schedule. In September, he and his wife Joyce flew to Los Angeles for his nephew’s wedding.

“I was determined to walk to the terminal at the airport instead of going in a wheelchair — and I was able to do just that,” he said. “Under no circumstances do you give up.”

Today, McNeal is back behind the wheel, driving to his job, where he now works a full schedule. He goes to the gym on a regular basis. He also has resumed target shooting, a favorite pastime before the stroke.

“I can hit what I aim at,” he said.

He feels fortunate each day that he has regained his strength and mobility, an outcome he attributes to his partnership with the expert providers at Christiana Care.

“When people ask me how I made my recovery I tell them I had the best care around — and I was willing to do my part to get well,” he said. ●

## Newly named eBrightHealth ACO announces expansion



# eBrightHealth ACO



**C**hristiana Care Quality Partners Accountable Care Organization, LLC (ACO), is adding two leading health systems to the network on Jan. 1, 2017: Beebe Healthcare in Lewes, Delaware, and Atlantic General Hospital and Health System in Berlin, Maryland. Also joining are eight additional community practices and La Red Health Center, a federally qualified health center (FQHC). On that date the ACO will begin doing business as eBrightHealth ACO.

The ACO is participating in the Medicare Shared Savings Program (MSSP) launched by the Centers for Medicare and Medicaid Services (CMS) to advance the Affordable Care Act. The MSSP facilitates coordination and cooperation among providers both to improve the quality of care for Medicare beneficiaries and to reduce unnecessary costs.

In addition to the two new health systems, the ACO consists of Bayhealth, Christiana Care Health System, Nanticoke Health Services, Westside Family Healthcare (FQHC) and several community physician practices.

Since it began operations on Jan. 1, 2016, the ACO has been serving more than 26,000 Medicare beneficiaries and has involved more than 200 providers. With the addition of the two health systems and physician practice partners, the five-health-system-strong ACO will care for more than 45,000 Medicare beneficiaries in our service area and involve close to 300 providers.

Using the name eBrightHealth ACO aligns it with the newly formed statewide eBrightHealth network, which consists of many of the same partners. The eBrightHealth ACO will continue to provide the same care transformation strategies to its Medicare beneficiaries that the eBrightHealth network will provide to its diverse patient populations.

“This innovative partnership will enable us to better serve the Medicare beneficiaries in our area,” said Jeffrey M. Fried, FACHE, president and CEO of Beebe Healthcare. “We are convinced that proactive coordination of care, careful attention to

care transitions between providers and greater use of information technology improves the patient experience and delivers better patient outcomes.”

“Our partnership with this ACO will benefit our physician colleagues and provide value to the Medicare population we serve,” said Michael Franklin, FACHE, president and CEO of Atlantic General Hospital. “We will continue to focus on care coordination for our members, especially those who have more significant needs due to chronic conditions.” Atlantic General serves Medicare beneficiaries in Worcester, Wicomico and Somerset counties in Maryland and in Sussex County in Delaware.

A unique aspect of this ACO is Christiana Care Care Link Inc. (Care Link), an information technology-enabled care coordination service developed by Christiana Care that works directly with physicians to support their patients. Care Link harnesses an information technology platform that integrates available data regarding a person’s health data to enable highly trained caregivers, such as nurses, social workers and pharmacists, to proactively address clinical, behavioral, social and other needs that may affect someone’s ability to achieve optimal health and wellness. ●

### DID YOU KNOW?

**The newly expanded ACO will care for more than 45,000 Medicare beneficiaries, and close to 300 providers will participate.**



## Pain medicine specialist helps patients and care providers in complex cases

**I**t's difficult for patients to rest and get well when they are suffering from severe pain. Christiana Care's new Pain Consult Service provides care for hospital patients with complex cases that don't respond to traditional pain management.

In May, the program addressing acute and chronic pain rolled out on medical and surgical floors at Christiana Hospital, and the program became available hospital-wide in August as part of the Neurosciences service line. Previously, it was part of a joint program with Pain and Palliative Care, which focuses on patients with terminal illnesses in Medicine.

Pain was first recognized as the "fifth vital sign" in the 1990s, noted Irina Phillips, M.D., the program's medical director, and much attention was focused on the importance of treating patients' pain. But medications used to treat pain sometimes contributed to new problems.

"In the past 15 years, there's been a rapid rise in the number of prescribed opioids for pain," Dr. Phillips said. "Unfortunately, we also have seen a rise in the abuse and misuse of opioids. We want to maximize the use of non-opioid medications so we can treat our patients' pain in the safest and most effective way."

Opioids are drugs such as morphine, codeine and oxycodone that act on the nervous system to relieve pain.

"We at Christiana Care are fortunate that senior leadership recognizes and supports the need to take a novel approach to pain management," said Kert F. Anzilotti, M.D., MBA, chair of the Department of Radiology and physician leader of the Neurosciences service line.

"Dr. Phillips and her team are developing a novel, population health level strategy for pain that will transform the care we provide our neighbors and allow us to more effectively address this ubiquitous issue in our community."

CONTINUED



**“We want to maximize the use of non-opioid medications so we can treat our patients’ pain in the safest and most effective way.”**

IRINA PHILLIPS, M.D.



Dr. Phillips consults with the care team to make recommendations on strategies for managing pain. Any medications are ordered by the patient’s attending physician.

Often, patients are forthcoming in sharing concerns about pain medications they were taking before they were hospitalized. Dr. Phillips also gains insights through searching the state’s controlled substance monitoring database, which includes records for prescriptions dating back to 2012.

“We have seen patients who have been on opioid medications for 30 years, and their pain is either the same or worse,” she said. “For heroin users, it can be especially difficult to treat their pain because their tolerance to opioids is so high. In both groups, we often have to use many strategies to treat their pain in the safest way possible.”

Alternative treatments include Tylenol and drugs used to treat neuropathic pain, such as gabapentin and pregabalin. Topical patches, muscle relaxers and nerve blocks with steroids also can provide relief. Patients can be referred for physical therapy, acupuncture, yoga and mindfulness training.

Antidepressants and coping mechanisms also can help patients to achieve optimal health.

“It is emotionally draining and isolating to be in constant pain,” Dr. Phillips said. “Often patients are depressed, and their depression contributes to their physical pain. Treating a patient’s mood disorder is critical to helping manage their chronic pain.”

Patients who were addicted to pain medications before they were hospitalized can be referred to Project Engage, a program in which patients with substance abuse problems are counseled and connected with resources while they are still in the hospital.

Currently the Pain Consult Service operates Monday through Friday at Christiana Hospital. Ultimately, the program will be expanded to serve outpatients with acute and chronic pain.

“The most important goal in pain management is restoring function,” she said. “Many patients will never be pain-free. We have to think about how they can best manage it. Can they go to the grocery store? Can they play with their grandchildren? We want to help them to be the best they can be.” ●

**“We at Christiana Care are fortunate that senior leadership recognizes and supports the need to take a novel approach to pain management.”**

KERT F. ANZILOTTI, M.D., MBA

## Cardiovascular Critical Care earns second Gold Beacon Award

**C**hristiana Care's Cardiovascular Critical Care Complex (CVCCC) has again earned a gold-level Beacon Award from the American Association of Critical Care Nurses.

This is the second consecutive gold-level Beacon Award for the unit, signaling sustained, staff-driven excellence in improving patient clinical outcomes that exceed national benchmarks and achieving the highest levels of satisfaction among patients and their families, as well as the nurses who serve on the unit.

The CVCCC first earned the three-year gold honor — the highest recognition of the critical care nursing profession — in 2013. They will carry the title from this most recent award through 2019.

Nurse Manager Carolina Flores-Gopez, MSN, MHA, CCRN, NE-BC, attributes the CVCCC's two-time accomplishment to the hard work and commitment of each of the unit's 70 extraordinary professional staff nurses and their interdisciplinary partners. She cites accountability and transparency as key drivers of the team's success.

"We have really leveraged accountability. Everybody is a stakeholder in our unit's success in providing safe, evidence-based care and partnering with our patients and families to provide the best possible patient experience," Flores-Gopez said. "We worked really hard to promote meaningful transparency and a continual dialogue about all aspects of our patients' care — from daily huddles to ongoing collaboration with the multidisciplinary teams. Each member of our team gives 100 percent. If we have the information and tools we need, we all believe there are no excuses."

CONTINUED

“ We have really leveraged accountability. Everybody is a stakeholder in our unit's success in providing safe, evidence-based care and partnering with our patients and families to provide the best possible patient experience.”

CAROLINA FLORES-GOPEZ, MSN, MHA, CCRN, NE-BC





“The Beacon Gold award signals the delivery of exceptional critical care and provides an assurance to families that no greater professional nursing care is available in their loved ones’ most critical hours.”

RIC CUMING, Ed.D., RN, NEA-BC, FAAN

Key indicators for any critical care unit include optimal pain management, as well as reducing or eliminating patient falls, ventilator-associated pneumonia, central-line associated bloodstream infections (CLABSI) and catheter-associated urinary tract infections (CAUTI). Flores-Gopez said the CVCCC team closely focuses on sustaining a restraint-free environment and extubating patients from ventilators as soon as medically appropriate. In March, the unit earned a Christiana Care Zero Harm Award for achieving 12 consecutive months without a Methicillin-resistant staphylococcus aureus (MRSA) infection, and they have marked significant sustained periods without CLABSI or CAUTI occurrences.

The unit has an innovative physical environment designed to promote healing and improved patient outcomes and satisfaction — features such as open visitation, daily quiet time, elimination of unnecessary alarms, private rooms with natural light, and the support of both a Healing Touch certified practitioner and the volunteer-based Mended Hearts support group. The unit has demonstrated its dedication to enhancing the patient experience and optimizing patient and family satisfaction through increasingly high performance on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS).

Christiana Care Chief Nurse Executive Ric Cuming, Ed.D., RN, NEA-BC, FAAN, applauded the CVCCC team for sustaining its success in delivering care experiences that are patient-centered, data-driven and evidence-based.

“The Beacon Gold award signals the delivery of exceptional critical care and provides an assurance to families that no greater professional nursing care is available in their loved ones’ most critical hours,” Cuming said. “Beacon is also a visible signal to our extraordinary nurses of the unit’s commitment to supporting staff-driven improvements and providing a healthy work environment.”

He said that there is a direct correlation between the quality of a nurse’s work environment and the ability to deliver excellent nursing care for optimal patient outcomes.

The 26-bed CVCCC provides evidence-based intensive and progressive care for critically ill cardiac medical and surgical patients, including those treated for myocardial infarction, acute decompensated heart failure, cardiopulmonary arrest, post-cardiovascular intervention and post-cardiothoracic surgery.

The unit provides specialized care for patients requiring cardiac-assist devices — such as bridge-to-transplant and destination left-ventricular-assist devices (LVAD), extra corporeal membrane oxygenation and intra-aortic balloon pumps — and serves those requiring slow, low-efficiency daily dialysis (SLEDD) transfusions and fluid resuscitation, pericardial drains and targeted temperature management.

Nearly 90 percent of the registered nurses in this synergistic critical and progressive care environment hold a BSN or higher, 27 percent of the staff is actively seeking advanced degrees and 57 percent are specialty certified. Nearly half of the staff has worked on the unit for at least five years. The unit maintains a Tier 1 (highest) rating in employee engagement in the Press Ganey Employee Engagement Survey.

The CVCCC joins Christiana Hospital’s Medical Intensive Care Unit, which has earned three top Beacon awards, and the Wilmington Hospital Intensive Care Unit, which earned silver recognition in 2015, in achieving the Beacon symbol of excellence. ●

Nearly 90 percent of nurses in CVCCC hold a BSN degree or higher, above the national average.



Dominique Comer, Pharm.D., MS, Colleen D. Ellis, MSN, FNP-C, CEN, Ryan Arnold, M.D., MS, Kristen Miller, DrPH, MSPH, and Muge Capan, Ph.D., are members of a Value Institute team researching best practices for early detection and treatment of sepsis in patients after their admission to medical and surgical nursing units.

## Christiana Care wins National Library of Medicine grant to develop sepsis alert system

**S**epsis, a life-threatening organ dysfunction, causes nearly half of all U.S. hospital deaths, accruing \$20 billion in treatment costs each year.

Now, a team from the Value Institute at Christiana Care Health System is determined to change that landscape. It is pioneering an innovative approach to detect and treat sepsis, which nationally infects about 1 million people annually, killing a quarter of them.

Their research project, “Signaling Sepsis: Developing a Framework to Optimize Alert Design,” recently won a highly competitive, four-year grant from the U.S. National Library of Medicine funded through the U.S. National Institutes of Health. The study is a collaboration with the University of Pennsylvania, the University of Michigan and the Medical University of South Carolina.

“Our research has the potential to evolve the electronic medical record system and significantly impact the design of clinical care and practice,” the team wrote in its application for the R01 Research Project Grant, the original and historically oldest grant mechanism of the U.S. National Institutes of Health.

“This research will advance what is known in the field and has the capacity to improve medical case decision-making, delivery and health of patients and of the public.”

It is the first such grant at this level to originate with Christiana Care as the leading research entity, said the project’s lead investigator, Kristen Miller, DrPH, MSPH and the Value Institute’s associate director of Human Factors.

The project is unique on several fronts. First, it focuses on providers in medical and surgical units, not those in an emergency setting where workers are more used to looking for deadly vital signs.

“National data show a higher mortality rate for inpatients that develop severe sepsis or septic shock on a medical or surgical unit compared to those that present to the emergency department and are admitted directly to the Intensive Care Unit,” said Eric V. Jackson Jr., M.D., MBA, director of the Value Institute’s Center for Health Care Delivery Science and associate director of the Value Institute.

CONTINUED

“Clinicians and nurses on the general medical-surgical units are not as oriented or experienced in recognizing and diagnosing septic patients,” he said. “Selecting these units provides enormous potential to save and improve lives, understanding that these patients would benefit the most from a predictive tool to drive action for decompensating patients,” Dr. Jackson said.

Sepsis occurs when a body is experiencing a severe response to bacterial, fungal, viral or yeast infection. The release of chemicals into the bloodstream to fight the infection causes widespread inflammation that eventually can slow blood flow and damage organs. In the later stages, sepsis can progress to life-threatening organ failure and shock.

The tricky part is that sepsis often hides behind other diagnoses, escaping detection. It can attack any organ in people of any age, and it does: roughly one in every 23 patients admitted to the hospital will develop a sepsis infection.

“It’s not as clear-cut as, say, a heart attack,” said Vinay Maheshwari, M.D., MHCDS, FCCP, vice chair of Medicine and associate physician operations leader for the Acute Medicine service line. “Sepsis has such a broad presentation. It can creep up on providers, who don’t necessarily connect the dots.”

Early and accurate identification of sepsis is critical to survival. For every hour that treatment is delayed, the chance of dying from sepsis increases 7.5 percent.

The signs can be subtle, which is where the computer-assisted guidance comes in. Instead of having to hunt among patients’ medical records to piece together the big picture, the alert system will assess danger by recording such data as abnormalities in vital signs, respiratory rate, kidney and other organ function and mental status.

“It’s important to have a tool specific to this disease so treatment is appropriate and accurate, and providers are using it consistently,” said Ryan Arnold, M.D., MA, research director in the Department of Emergency Medicine, clinical investigator at the Value Institute and co-primary investigator on the project.

In another unique twist, the research won’t be studying patients per se, but their providers. That is, the team will test various ways to display information that will most effectively alert the providers to possible danger and guide them through evidence-based best practices to turn the infection around before it becomes deadly.

The key to success is in having a strong understanding of human behavior, which is Miller’s specialty, as she has studied public health, cognitive psychology and industrial engineering.

“One of my research interests is the design, implementation and evaluation of clinical bioinformatics electronic decision support — how you display information in a meaningful way,” she said. “Research addressing the changing nature of clinical decision support systems is different from what you usually see.”

Part of the 4-year, \$1.4 million grant is \$40,000 for a mobile usability lab. Researchers will use the lab to collaborate with providers in rural, urban, academic and community settings.

“Our objective is to determine the best way to provide a sepsis alert to improve decision-making in the dynamic, fragmented health care work environment,” Miller said. “We hypothesize that the design of the alert plays a significant role in provider recognition and response. Ultimately, it will improve the response of providers and result in better, quicker and most appropriate treatments.”

Dr. Maheshwari is intrigued with the approach.

“In today’s digital world, we get inundated with alerts and flags, and after a time they just become noise,” he said. “The exciting thing about this is we have folks like Kristen who can tell you what makes a person act one way or another — do they respond to green or red?”

“This research will advance what is known in the field and has the capacity to improve medical case decision-making, delivery and health of patients and of the public.”

“This project is about taking the information that we have in our computer system and presenting it to providers in a way that they are made aware that sepsis is present. Then, they are guided to make the right treatment choices.”

The project is part of a growing national

campaign to bring awareness to this deadly disease. Sepsis received national attention after physicians in the emergency department of a New York hospital in 2012 discharged a 12-year-old boy who had cut his arm diving for a basketball at school. Three days later, Rory Staunton died of sepsis in the ICU.

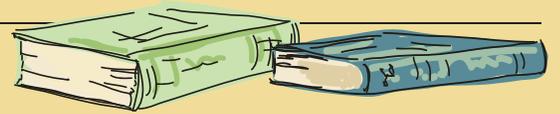
“One of the things that’s so tragic is sepsis can occur at any age,” Dr. Arnold said. “While it is more prevalent in the elderly, whose immune systems are declining, or the very young, whose immune systems are developing, we still have 20-, 30-, 40-year-olds dying solely from that infection.”

Dr. Arnold said the awareness campaign launched by Rory’s family shined an appropriate light on the condition.

“It was a landmark change in defining the at-risk population. The message was: Sepsis can develop from any infection, in any population, and needs vigilant screening,” he said.

“This is a disease I’ve focused on for the past 12 years, but we always called it the ‘orphan disease’ because it wasn’t focused on,” he said. “It’s exciting to have the opportunity to set the standard and be an industry leader in this disease process. Christiana Care is on the map now, leading the way.” ●

## Christiana Care and WPD partner in Prekindergarten Reading Encouragement Program



Community Educator Carlette Dickerson partnered with Wilmington Police to deliver children's books and health information to families.

Helping a child to achieve optimal health requires more than nutritious food and a safe environment.

Reading aloud to children nurtures their developing brains, builds stronger vocabularies and helps them to do well in school. The key to unlocking that experience can sometimes be as simple as putting a good book into the hands of a parent or child.

To provide books to parents and grandparents on Wilmington's East Side, Christiana Care partnered with volunteers from the Pre-kindergarten Reading Encouragement Program (PREP) and Wilmington Police Department.

"We knocked on doors and provided books to amazing families who were eager to read to kids," said Amanda Kay, M.D., MPH, FAAP, interim medical director of the Wilmington Health Center Pediatric Practice. "It is a precious thing to be able to provide books to families who don't have these resources."

Dr. Kay and others from the pediatric practice participated in a Sunday afternoon walkabout with Mike Wilson, PREP founder, and Wilmington Police Department officers, who are building community relationships through the Book 'Em reading program.

According to statistics from the U.S. Census, 86 percent of households in Wilmington's Census Tracts 9 and 29 with children under 18 live below the poverty level, and 82 percent live in a single-parent family home.

"Wilmington's East Side is one of the most impoverished neighborhoods in the city," said Bettina Tweardy Riveros, Esq., chief health equity officer and senior vice president of government affairs and community engagement at Christiana Care. "By working collaboratively in the community we can reach out directly to our neighbors and work to address the broad array of issues that can impact their health. We are grateful to have the opportunity to support our Wilmington neighbors."

The Rocco A. Abessinio Family Wilmington Health Center at Wilmington Hospital is a site for the Reach Out and Read program. Reach Out and Read is a national nonprofit organization that gives young children a foundation for success by incorporating books into pediatric care and encourages parents or caregivers to read aloud to children.

"Books are a staple in our office, and we encourage reading to children every day," Dr. Kay said. "Studies have shown that children who are read to are exposed to more words across their lifetime, develop early literacy and have improved listening skills. Reading aloud builds curiosity, motivation, improved self-esteem and academic success."

The walkabout also was an opportunity to engage neighbors in becoming partners in their own health. The team distributed health information and dental-care kits,



and they encouraged families to establish a relationship with a primary care provider. The goal is to connect all East Side households with children under age 5 with reading materials and information to help them manage their health.

"Wherever we went, we were greeted with enthusiasm and appreciation," Dr. Kay said. "If there weren't any children in the house, we were directed to neighbors who have children."

Riveros said Christiana Care intends to continue its support for PREP to ensure the program has the financial support necessary to reach out to all children under 5 on the East Side.

Christiana Care also was a major sponsor of the First Book First State event in December, at which hundreds of families and educators statewide had the opportunity to select free books for children in need. More than 45,000 books were distributed to families and programs at the event.

"Supporting families and children by supporting reading is one of the many ways we work to address the needs of the people we serve," she said. "Being respectful, expert caring partners to our neighbors and partnering with organizations that share our deep commitment to care for our community is The Christiana Care Way." ●

## Christiana Care partners in Delaware’s first Truck of Books Family Festival



Students hungry for something to read were a large part of the excited crowd at the book festival Christiana Care helped to sponsor in December.

A tractor-trailer full of free books, from the classics to Star Wars, drew children, families, and teachers to Brandywine High School in Wilmington on Saturday, Dec. 17. Christiana Care and other local organizations partnered with the First Book Network and the state of Delaware to give away 40,000 books to families and teachers in the Truck of Books Family Festival, a First State Initiative.

Hundreds of volunteers helped sort and oversee distribution of the books to local educators and families, with selections including bilingual and multicultural choices and books suitable for children and teens of all ages.

Registered educators were able to get up to 50 books for their classrooms and programs and each child at the event received up to 10 books to take home.

“Thank you so much!” said Victoria Celli-Pala, a 5th grade teacher in Colonial School District. “I came first thing this morning and was able to get every single one of my 5th grade students a book!”

Andrea Tinianow, Delaware director of Corporate and International Development, the primary organizer of the event, and Christiana Care’s Bettina Tweardy Riveros, Esq., chief health equity officer and senior

vice president of government affairs and community engagement, attended the festival to help out and share in the fun.

“We are committed to taking care of our neighbors and supporting the health of all members of our community,” Riveros said. “Part of caring for our children and adolescents and giving them healthy beginnings is our commitment to supporting reading and literacy. Reading builds relationships, fosters learning and advances knowledge, understanding and opportunity. Thank you to the volunteers and organizers of this First Book First State event for giving Delaware’s children happy and healthy beginnings through reading.”

Christiana Care also took advantage of the event to deploy community outreach and education team members who were on hand to share health information. They gave away educational material on cancer screenings and talked about cancer prevention and programs that help people with colonoscopies, mammograms, lung screening, smoking cessation, health system navigation and Healthy Families. ●





## Holiday meal nourishes spirits at St. Pat's

Joining him for lunch at the annual holiday event, Christiana Care's social work team is helping St. Patrick's Center patron Christopher Glover control his blood pressure and apply for Social Security benefits.

Plates were piled high with all the fixings of a festive holiday meal — turkey, ham, macaroni and cheese, corn, applesauce, rolls and even home-baked cupcakes, at Christiana Care's holiday luncheon at St. Patrick's Center in Wilmington this week. But for Vivian Pitts, by far the best part of the meal was the fresh tossed salad.

"I love veggies," said Pitts, wearing a festive jacket and striking red hat in the spirit of the occasion. "When I was growing up, we had a garden next to our house where we grew our own fresh vegetables, so we ate lots of healthy food. I take advantage of good vegetables for a strong body whenever I can."

Fresh fruits and vegetables are far from a daily staple for Wilmington's most vulnerable residents. Located on the impoverished east side of Wilmington, St. Pat's sits in what is classified as a "food desert" by the U.S. Department of Agriculture for its lack of access to fresh food. Common health risks for this population include obesity, chronic illnesses such as cancer, cardiovascular disease, diabetes and hypertension, and even premature death.

In addition to struggling with food insecurity — not knowing where the next meal will come from and little or no access to nutritious foods — those who rely on St. Pat's also face housing, transportation, financial and unmet medical and behavioral health challenges. To make matters worse, many go through these tough

times alone, without family connections — challenging in any season, but never more so than at the holidays and through the dark days of winter.

Matthew Burday, D.O., FACP, associate program director of Christiana Care's Internal Medicine Residency Program, was part of the team who traded in their stethoscopes for serving trays for the luncheons. He and his Christiana Care colleagues ensured that the guests had everything needed to enjoy their meal, from salad dressing to their favorite type of cupcake. Coming together as a community was particularly meaningful, he said, both for guests and for those who served.

"Being able to be part of this luncheon probably means more to me than it does to the people who are receiving this meal," he said, humbled by the gratefulness expressed by those enjoying the meal. "This is such a heartening experience. Being here provides exposure to a critical part of what Christiana Care is all about. In the end, it's all about the relationship."

Sister of Mercy Danielle Gagnon, RSM, recently named St. Pat's executive director, was touched by the relationships she witnessed at her first Christiana Care holiday luncheon.

"The love is in the details, and Christiana Care goes above and beyond, taking special care in the details," she said. "The resources provided for today's holiday luncheon give all of us at St. Pat's

a chance to come together, which is very special since we are, first and foremost, a community center with the emphasis on community. In the midst of this holiday season and throughout the year, our partnership with Christiana Care is a great opportunity.”

It’s a partnership that extends well beyond the holiday season. Three Wednesdays each month, Christiana Care volunteer teams prepare and serve bagged lunches at St. Pat’s, and Christiana Care social workers are embedded at the facility through a grant. Early in 2017, Christiana Care will expand its social work presence and assistance to homeless individuals with medical and behavioral needs.

James M. Ellison, M.D., MPH, Christiana Care’s Swank Foundation Endowed Chair in Memory Care and Geriatrics — who helped dish up many of the 200 meals — said the additional medical assistance will facilitate better care for homeless elders in our community.

“Homeless elders are an especially vulnerable group, struggling to survive under harsh conditions and often reluctant to seek medical care for health concerns that require treatment and monitoring in order to avoid significant and life-threatening complications,” said Dr. Ellison. “St. Pat’s is an extraordinary place. I can think of few programs where I’ve seen such a dedicated and empathetic group of people caring for a population in such need.”

Today’s holiday luncheon was a clear demonstration of the loving respite and support that St. Pat’s provides.”

### A joy to be involved

Unlike Pitts, who loves her salad, Christopher Glover admits he’s not a fan of most vegetables. For him, the ham was the highlight of the holiday meal. Thanks to Care Link Community Nurse Alicia Smalls, RN, Glover said he is at least learning the importance of cutting down on some of the unhealthy food choices that cause his blood pressure to climb.

“Christopher and I came up with a plan where he will start slow — give up one bag of chips a week to cut down on salt,” said Smalls. “He knows he will feel better if his blood pressure isn’t so high and his stomach isn’t upset. With little steps, our goal is to keep him out of the hospital.”

Christiana Care’s social work team also worked with Glover to help him secure Social Security benefits.

“They are my Christmas angels,” he said. “I have no family, and I don’t read or write all that well. They helped me a lot.”

One of those angels, Carmela Longobardi, MSW, spoke of the joy in seeing so many of her Christiana Care colleagues helping others and sharing the goodness of the holiday season with her St. Pat’s family.

“How could you not feel good to see the community come together at an event like this?,” she said. “We are called to be here. We are like family here at St. Pat’s — we know everyone by their first names.”

CONTINUED

**“This is such a heartening experience. Being here provides exposure to a critical part of what Christiana Care is all about. In the end, it’s all about the relationship.”**

MATTHEW BURDAY, D.O., FACP



Vivian Pitts enjoyed her fresh salad and a laugh with Dr. Matthew Burday.

**HOLIDAY MEAL** | CONTINUED

Despite being down on his luck, Craig, a Native American who chooses not to use a last name, was full of smiles as he left the table. The one-time chemical engineer fell on hard times when he had to pay off a second mortgage he took out to care for his aging and ailing parents at home.

“I promised my parents they would never go to a nursing home, and I was able to honor that promise,” he said. “I never expected to be in this situation as a result of it, I can tell you, but I would do it again to help them.”

Although he speaks four languages, Craig couldn’t find enough ways to express his gratitude to the Christiana Care team and to St. Pat’s for the delicious meal and warm welcome.

“Merci beaucoup! Dankeschön! Grazie! And Kala Christougenna!” he said, offering his new friends a thank you in French, German and Italian, and a Christmas greeting in Greek.

“Serving our community in this way is as much a part of our mission as the clinical care we provide in our offices,” said Omar A. Khan, M.D., MHS, FAAFP, physician leader of the Primary Care & Community Medicine service line and medical director of Christiana Care’s Eugene DuPont Preventive Medicine &

Rehabilitation Institute. “Interacting with our neighbors is how we live out The Christiana Care Way. It’s a joy to be involved here.”

Sandra Moody certainly felt the joy. The grandmother of seven admits she came to St. Pat’s hungry and hurting the morning of the holiday luncheon, but says the day turned out to be the “best thing that ever happened to me.”

“Christiana Care and St. Pat’s made my holiday,” she said. “Now I’m really in the spirit!” ●



**“Serving our community in this way is as much a part of our mission as the clinical care we provide in our offices. Interacting with our neighbors is how we live out The Christiana Care Way. It’s a joy to be involved here.”**

OMAR A. KHAN, M.D., MHS, FAAFP





“Christiana Care and St. Pat’s made my holiday.”

SANDRA MOODY



A team of about 20 Christiana Care physicians, nurses, social workers and friends planned, provided, cooked, served and cleaned up from the holiday meal and presented gift bags filled with first aid kits and helpful information about community resources to each of the more than 200 luncheon guests.

## Feb. 16

### FREE, ANNUAL COMMUNITY HEART MONTH LECTURE

7 p.m., John H. Ammon Medical Education Center

Learn about advances in cardiac care, new heart devices and cardiac procedures, so you can make the right heart care decisions for you and your loved ones.

Speakers include: Kirk Garratt, M.D., MSc., associate medical director and John H. Ammon Chair of Cardiology at the Center for Heart & Vascular Health; Anand Kenia, M.D., cardiac electrophysiologist, Christiana Care Cardiology Consultants; and Neil Wimmer, M.D., cardiologist, Christiana Care Cardiology Consultants

Light refreshments and valet-parking will be available. Seating is limited. Register by February 8 at <https://events.christianacare.org/event/heartlecture-2017/> or call 302-623-2273.

## Feb. 25



### PERIOPERATIVE PERSPECTIVE: LATEST TRENDS AND PRACTICES

7 a.m. – 3:30 p.m.

John H. Ammon Medical Education Center

The Perioperative Professional Nurse Council invites you to attend this 9th annual conference for nursing professionals, student nurses and surgical technicians, with national speakers and educational breakout sessions. For more information, contact Starr Fields, [sfields@christianacare.org](mailto:sfields@christianacare.org).

## Feb. 27

### CHAMPIONS OF SERVICE: CELEBRATING VOLUNTEERS — NOMINATION DEADLINE!



Christiana Care Health System is still accepting nominations for the annual Champions of Service: Celebrating Volunteers awards program in three categories:

- The Jefferson Awards, which celebrate the talent and dedication of Christiana Care employees who contribute volunteer hours in their communities and exemplify the concepts of service, leadership and caring.
- The Young Person Role Model award, for nominees aged 14-20 who participate in, or have organized, efforts to help those less fortunate than they are by providing information, material goods, education, entertainment or inspiration. Nominees not be an employee of Christiana Care.
- The Community Hero award. For adults, at least 21 years of age, who are passionate about serving others and have the initiative to make an improvement or meet an unmet need. Only individuals who do not work at Christiana Care may be nominated.

For more information or to nominate someone you feel is deserving, visit [www.christianacare.org/championsofservice](http://www.christianacare.org/championsofservice).

## Mar. 3

### 28TH ANNUAL UPDATE IN CARDIOLOGY

7:15 a.m. – 4 p.m., John H. Ammon Medical Education Center

Seating is limited. Registration is required by Feb. 24. This innovative and provocative presentation will examine many long held practices in the management of diseases of the heart and circulatory system. This symposium has been designed to provide physicians, physician assistants, nurse practitioners, nurses and other health care professionals current data regarding management and treatment of cardiovascular disease. Register at <https://cchs.cloud-cme.com/Cardiology2017>.

## Mar. 10

### DEMENTIA THROUGH THE LIFE CYCLE PRESENTED BY THE SWANK MEMORY CARE CENTER

8 a.m.-noon, John H. Ammon Medical Education Center

This free symposium is appropriate for primary care clinicians, nurses, social workers and other providers and will focus on the importance of treating the memory-impaired patient. Register at: <https://cchs.cloud-cme.com/dementia2017>. Preregistration is required. Contact Cyndy Fanning, [cfanning@christianacare.org](mailto:cfanning@christianacare.org) with questions.

## Mar. 11

### DIABETES UPDATE

8 a.m. – 4 p.m., John H. Ammon Medical Education Center

The 21st annual Diabetes Update is a full day educational opportunity to learn the latest information on diabetes and diabetes related co-morbidities, and to meet identified needs of diabetes clinicians in this area. This year's Saturday symposium will examine an array of progressive topics to include "Measures of Healthcare Quality," "The Artificial Pancreas," and "Hypoglycemia Associated Autonomic Failure," from some of this country's foremost leaders in these areas. Content will focus on the management of gestational diabetes, Type 2 diabetes, diabetic neuropathy and motivational interviewing of the patient with diabetes. This course is intended for endocrinologists, ophthalmologists, internal medicine and primary care physicians, as well as nurses and nurse practitioners, scientists, dietitians, physician assistants, and other health care professionals. To register go to <https://cchs.cloud-cme.com/Diabetes2017>.

### SAVE THE DATE!

March 24 **APRN PHARMACOLOGY UPDATE 2017**

Find these events and more online at <https://events.christianacare.org>.

## LeRoi S. Hicks appointed Hugh R. Sharp Jr. Chair of Medicine



LeRoi S. Hicks, M.D., MPH, FACP, has been appointed Hugh R. Sharp Jr. Chair of Medicine and physician leader of Christiana Care's Acute Medicine Service Line.

Dr. Hicks joined Christiana Care Health System in 2014 as vice chair of the Department of Medicine and Section Chief of General Internal Medicine. As section chief, Dr. Hicks supervised the Divisions of Hospital

Medicine and Ambulatory Medicine. His work included educational, clinical and quality initiatives such as interdisciplinary rounding and process redesign.

He is nationally known for his research on health care disparities. Dr. Hicks has served on several national committees including the National Council of the Society of General Internal Medicine and Board of Scientific Counselors to the National Library of Medicine. He has been a National Institutes of Health grant reviewer, and an editor and reviewer for multiple medical journals.

Dr. Hicks graduated from Howard University in 1991 with a bachelor's degree in medical technology. He completed his Doctor of Medicine degree at the Indiana University School of Medicine in 1995 and earned a Master of Public Health degree from the Harvard School of Public Health in 2001.

He completed his internal medicine (primary care) residency and was chief resident at Mount Auburn Hospital in Cambridge, Massachusetts. Following chief residency, he completed a fellowship in general medicine and faculty development at Brigham and Women's Hospital, where he served as a hospitalist from 1999 to 2011. He became the chief of Hospital Medicine at the University of Massachusetts, in 2011, where his team won four Champions of Excellence Awards for growth, financial sustainability and high-quality care. ●



## Vinay Maheshwari named vice chair of Medicine



Vinay Maheshwari, M.D., MHCDS, FCCP, has been appointed vice chair of the Department of Medicine.

Dr. Maheshwari has been practicing at Christiana Care since 2007. In addition to his clinical role as a critical care physician, he has been in various leadership roles including medical director of Respiratory Care, director of Medical Critical Care, and clinical practice leader of the medical intensivists. He has been involved in numerous committees including chairing the critical care, rapid response and sepsis committees.

In his new role as vice chair of Medicine he will continue to be responsible for supervising the medical directors of the Supportive and Palliative Care Program, the medical directors of the critical care and stepdown units, and the medical directors of Medicine-related specialty labs. He will continue to work as Medicine's primary administrative liaison to medical specialists and continue his role as associate physician leader of operations for the Acute Medicine Service Line.

Dr. Maheshwari has been the associate chair for specialty medicine and an associate physician leader of operations for the Acute Medicine Service Line since 2015, with responsibilities for strategic direction of the Supportive and Palliative Care Program, forging strong partnerships with specialty practices such as Gastroenterology, leading efforts to redesign care delivery in stepdown units, and developing solutions for early recognition and rescue of patients with clinical deterioration.

Dr. Maheshwari graduated summa cum laude with a degree in political science from Virginia Commonwealth University in Richmond, Virginia. He completed his medical education at the Medical College of Virginia at Virginia Commonwealth University, followed by medical internship and residency training in internal medicine at the Medical College of Virginia. He then completed fellowships in pulmonary, critical care and sleep medicine at the New England Medical Center at Tufts University Hospital. Most recently he received a master's degree in health care delivery science from Dartmouth College.

Dr. Maheshwari is board-certified in internal medicine, pulmonary and critical care medicine. He is a member of the Society of Critical Care Medicine and a fellow of the American College of Chest Physicians.

In 2011, he was the inaugural Christiana Care employee to complete the Leadership Delaware fellowship. He holds the rank of clinical assistant professor of medicine at the Sydney Kimmel Medical College at Thomas Jefferson University. ●

## Kunal P. Bhagat named chief of Hospital Medicine



Kunal P. Bhagat, M.D., FACP, has been appointed chief of the Division of Hospital Medicine for Christiana Care Health System.

As chief, Dr. Bhagat will work with members of the Hospital Medicine Division on educational, clinical and quality improvement initiatives, collaborate on medicine unit-based activities such as interdisciplinary rounding and process redesign

efforts, represent the Department of Medicine on many initiatives relating to patient flow from the Emergency Department to inpatient and intensive care units, and continue serving as chair of the Professional Excellence Committee for the Department of Medicine.

Dr. Bhagat was named Christiana Care Outstanding Teacher in 2012–2013 and has been recognized as one of the Top 10 Hospitalists in the nation by the American College of Physicians (ACP). He has received an Excellence in Hospital Medicine award (Delaware Chapter of the ACP), the Acute Care Hospitalist of the Year award from IPC-The Hospitalist Company, the 2016 Teacher of the Year from Christiana Care's Internal Medicine Residency Program, and was recognized as one of Delaware's "Top Docs (2016)," in Delaware Today Magazine.

He is a graduate of the Christiana Care Internal Medicine Residency Program and a Lean Six Sigma team leader.

Dr. Bhagat received his medical degree from the University of Kansas School of Medicine in 1994. 1994. ●

## Christiana Care welcomes cardiothoracic surgeon Franjo Siric



Cardiothoracic surgeon Franjo Siric, M.D., joined Christiana Care Health System in December.

Dr. Siric brings 15 years' experience and specialty training in cardiothoracic surgery to the Center for Heart & Vascular Health. Most recently he was a faculty staff surgeon and assistant professor in surgery at the Division of Cardiothoracic Surgery at University of Alabama at Birmingham.

Dr. Siric's special interests and training include minimally invasive mitral valve, aortic valve and aortic surgery; total arterial revascularization; complex and redo surgery of the aortic arch and descending aorta; surgical treatment of advanced heart failure; ventricular assist devices; and heart and lung transplantation.

He completed fellowships in cardiac surgery at the University of Zagreb, Croatia, Brigham and Women's Hospital in Boston and Cleveland Clinic Foundation. He received his medical degree and completed his general surgery residency at the University of Zagreb School of Medicine, and served as attending cardiac surgeon at University Hospital Rebro, Zagreb. ●



## Edmondo J. Robinson honored by One Village Alliance with Raising Kings Award

Chief Transformation Officer Edmondo J. Robinson, M.D., MBA, received the Raising Kings – Black History in the Making Contemporary Award from One Village Alliance, Jan. 17, at a special Martin Luther King Day reception held at the Mitchell Center for African American Heritage.

The honor recognizes Dr. Robinson for his work in mentorship, improving health and raising awareness for the critical needs of youth in the city of Wilmington and throughout the state of Delaware. The award was co-chaired by Billy Allen and Dr. Kim Allen, prominent members of the Wilmington community and advocates for support of Wilmington's youth. The event was attended by Delaware Sen. Chris Coons and Wilmington Mayor Michael Purzycki.

Dr. Robinson has served as a mentor and positive role model for youth and has been supportive of the work of One Village Alliance and Raising Kings since the inaugural event five years ago. In his acceptance speech he reiterated the message that he often shares with his mentees: "refuse to be outworked." ●



## Christiana Care welcomes Drew Fennell as chief officer of strategic communication and development

Drewry Nash Fennell, Esq., joined the senior leadership of Christiana Care in January as chief officer of strategic communication and development.

Fennell comes to Christiana Care from the office of former Delaware Gov. Jack Markell, where she served as chief of staff and oversaw the work of 16 cabinet secretaries and other senior staff. Before becoming Gov. Markell's chief of staff she served as policy director and deputy chief of staff.

As chief officer of strategic communication and development she is responsible for leading communications strategy and philanthropic efforts in alignment with Christiana Care Health System's strategic aims – optimal health, exceptional experience and organizational vitality – and serving as senior adviser to President and CEO Janice E. Nevin, M.D., MPH, on board and trustee engagement.

As a Delaware attorney, Fennell has more than 15 years of senior management experience within government and nonprofit agencies, guiding policy positions, communications strategies and fundraising. She has extensive experience working with both appointed and volunteer boards of directors throughout Delaware and currently serves as a board member of Delaware First Media – WDDE Public Radio and Equality Delaware.

Among her many accomplishments, Fennell has served as executive director of the Delaware Criminal Justice Council and was responsible for leading a team that won a federal grant to have Delaware participate in the Justice Reinvestment Initiative – a national program to safely reduce prison population through data-driven, evidence-based strategies.

Her work as the executive director at the American Civil Liberties Union of Delaware involved executing integrated issue campaigns related to topics such as child welfare, LGBT rights and more.

Fennell received her law degree from Rutgers School of Law-Camden, New Jersey, and her undergraduate degree from the University of Delaware in Newark. ●

## Karen Y. Browne appointed vice president, communications



Karen Y. Browne has joined External Affairs as vice president of communications.

In her new role, Browne is responsible for leading the health system's strategic communications, brand management and marketing, media relations, internal communications and content strategy.

An award-winning, senior communications leader, Browne joins

Christiana Care from DuPont, where she served in various roles since 2000. Most recently, Browne served as global communications director for DuPont Performance Materials and as communications manager for former CEO Ellen Kullman. Prior to DuPont, Browne worked in public relations and communications management for Shipley Associates, Inc., a Wilmington public relations firm, and Blue Cross Blue Shield of Delaware. ●



## Samantha A. DeParre promoted to nurse manager

Samantha A. DeParre, MSN, RN-BC, RNIII, has been promoted to nurse manager of the Vascular Access unit.

DeParre has worked for Christiana Care for more than nine years in the Emergency Department and in Behavioral Health. She moves to her

new position from her post as an RN in the Emergency Department. Prior to that she was an assistant nurse manager of Psychiatry.

In her various roles, she served as the Disabilities Project coordinator for the National Association for the Mentally Ill and as the health service administrator for Baylor Women's Correctional Institution, where she supervised health care for more than 300 inmates.

DeParre earned her Bachelor of Science in nursing from Immaculata University in 2010, and her Master of Science in nursing leadership/education from Wilmington University in 2012. ●

## Kathleen Eldridge named medical director, Christiana Care Hospitalist Partners



Kathleen Eldridge, M.D., has been named medical director of Christiana Care Hospitalist Partners and clinical director of Acute Care Services for The Christiana Care Medical Group.

Over the past three years, Dr. Eldridge served as associate medical director for Christiana Care Hospitalist Partners and helped to create a culture that highly values provider efficiency, quality of health care delivery and the employee

experience. The expansion of Christiana Care Hospitalist Partners is a hallmark of her leadership

In her new roles, Dr. Eldridge will be responsible for overseeing all administrative, recruitment and practice management functions for Christiana Care Hospitalist Partners, and will act as chief liaison between the Christiana Care Medical Group intensivists and Medical Group leadership.

A graduate of the Sydney Kimmel Medical College at Thomas Jefferson University, Philadelphia, Dr. Eldridge completed her residency and chief residency in internal medicine at the Warren Alpert Medical School of Brown University. She joined Christiana Care Hospitalist Partners as a staff hospitalist in 2011 and quickly gained recognition as an excellent hospitalist and clinician educator.

Dr. Eldridge has received several awards for her excellence in education and clinical care. She recently received the 2016 ACP Delaware Chapter Excellence in Hospital Medicine Award. ●

## Kari Mimnaugh appointed nurse manager of Surgical Critical Care Complex



Kari Mimnaugh, BSN, RN, CCRN, has been promoted to nurse manager of 2A, the Surgical Critical Care Complex (SCCC).

Mimnaugh was previously assistant nurse manager of the SCCC. She has more than six years' ICU experience.

She began her career at Medstar Franklin Square Medical Center in Maryland and worked in various roles in

the Intensive Care Unit. As the lead representative and advocate for quality and safe patient care, she was the chair of the Education and Practice Council and leader of the Code Blue and Rapid Response teams.

Mimnaugh also was instrumental in the development of a strenuous competency-based critical care education program that aided in the implementation of the systemwide sepsis education program at Medstar.

She is a member of the American Association of Critical Care Nurses and serves as an ambassador for the organization.

Mimnaugh received her BSN from the Chamberlain College of Nursing and is currently completing her MSN in leadership at Wilmington University. ●



## Nick Spadea promoted to chief perfusionist

Nick Spadea, BS, CCP, has been promoted to chief perfusionist. He has been the interim chief of Perfusion since June 2016.

In this role, he provides leadership and operational management to the Perfusion Services team, which every year performs more than 1,200 cases, including cardiopulmonary bypass, extracorporeal membrane oxygenation (ECMO), hyperthermic intraperitoneal chemotherapy (HIPEC), and cell saver and platelet gel sequestration. He provides oversight for quality and safety and directly manages clinical perfusionists and perioperative blood management technologists.

Spadea has been instrumental this year in providing leadership on several cardiac surgery initiatives, including the development of the ECMO Program.

He studied at Hahnemann/Drexel University where he received his Bachelor of Science in Cardiovascular Perfusion after completing a Bachelor of Science in exercise physiology at West Chester University, Pennsylvania. He has been certified as a clinical perfusionist since 1998. He joined Christiana Care in 2007. ●

## Publishing

**Rachel A. Joseph, Ph.D., MSN, MA, CCRN,** et al.

- “Placentophagia: Benefit or Myth?” *Nursing for Women’s Health*, October/November 2016.
- “Global Health Perspectives: Undergraduate Student Experiences in India.” *Neonatal Network Academy News*. July 2016.
- “Health literacy: A Cross-Disciplinary Study in American Undergraduate College Students.” *Journal of Information Literacy*. December 2016.
- “New Technology in the NICU; Challenges to Parents and Clinicians.” *Neonatal Network*. November 2016.
- “Oral Feeding in Infants After Tracheostomy.” *Journal of Pediatric Nursing*. December 2016.
- Transition from NICU to Home: Are the Parents Ready to Manage Any Emergency? An Evidence-Based Project. *Neonatal Network*

**Mike Powers.** “Biomed 101: Mentoring Makes a Difference.” *1technation.com*. January 2017.

**Robert L. Witt, M.D.** Book Chapter: “Recurrent Benign Salivary Gland Neoplasms.” pp. 63-70. *Advances in Oto-Rhino-Laryngology*. Nottingham, UK, Baltimore, USA. Bradley PJ, Eisele DW, eds. Karger Publisher. 2016.

**Robert L. Witt, M.D.,** “Extracapsular Dissection for Benign Parotid Tumors.” The Triological Society Meeting. New Orleans. January 2017.

**Robert L. Witt, M.D., Swati Pradhan-Bhatt, Ph.D.,** et al. Manuscripts:

- “Primary Salivary Human Stem/Progenitor Cells (hS/PCs) Undergo Microenvironment Driven Acinar-like Differentiation in Hyaluronate Hydrogel Culture. *Stem Cells*. 2016
- “Tuning Hydrogel Properties to Promote the Assembly of Salivary Gland Spheroids in 3D.” *ACS Biomaterials Science & Engineering*. 2016.

## Presentations

**Jill Carpenter, BSN, RNC,** and **Ann Will, BSN, RNC.** “Collaboration Between NICU and Free-Standing Emergency Room to Improve Proficiency With Neonatal IV Insertion and Lab Draws.” National Association of Neonatal Nurses annual conference. October 2016. Palm Springs, California.

**Melanie Chichester, BSN, RNC-OB, CPLC,** **Barbara Dean, BSN, RNC-NIC, CPLC,** and **Dina Viscount, MSN, APRN, CNS, RNC.** “Perinatal Loss Education: A 15-Year Reflection.” Association of Women’s Health, Obstetric and Neonatal Nurses convention. June 2016. Grapevine, Texas.

**Rachel A. Joseph, Ph.D., MSN, MA, CCRN,** et al.

- West Chester University Fall Research Day. Nov 2016. West Chester, Pennsylvania:
  - ▶ “Complementary Medicine & Spirituality: Preferred Modes of Health Care Among Indian Immigrants In the United States?”
  - ▶ “Facilitating a Study Abroad Program: Processes and Challenges.”
- Nursing Research Conference, Christiana Care Health System. November 2016. Newark, Delaware.
  - ▶ “Placentophagia: Benefit or Myth?”
  - ▶ “Complementary Medicine & Spirituality: Preferred Modes of Health Care Among Indian Immigrants In The United States.”
- “Health Seeking Behaviors of Indian Immigrants in the U.S. October 2016. Cincinnati, Ohio.

Processes and Challenges. National League of Nursing. September 2016. Orlando.

- “Why Become a Nurse: Factors That Influence Career Choice.” Sigma Theta Tau International Congress. July 2016. Capetown, South Africa.
- “Emerging Novice Nurse: A Study on Health Literacy.” Pediatric nursing conference, Philadelphia. June 2016.
- “Knowledge Exchange in Another Continent: Pearls and Perils.” Knowledge Crossing Borders Conference. May 2016. West Chester, Pennsylvania.

At the National Association of Neonatal Nurses annual conference, October 2016, in Palm Springs, California:

**Jineen Flagg, BSN, RN, SDS,** and **Kelsey Bristow, BSN, RN.** “Touch Touch Baby! Overcoming Barriers to Intentional Touch in the NICU.”

## Appointments

The Professional Advancement Council congratulates the following new RNIII nurses promoted in December: **Gary Bollinger, BSN, RN, CEN, MICN;** **Laura Schenck, MSN, RN, CNOR,** Christiana OR; **Marlo Bowser, BSN, RN-BC, 4D;** **Kelly Pollard, BSN, RN, CEN,** Christiana ED; **Stephine Taggart, MSN, RN, CEN,** Middletown ED.

The RN IV Panel wishes to congratulate **Kaci Rainey, MSN, RN IV, CEN,** of Christiana Hospital ED, on her promotion to RN IV.

## Awards & Achievements

The following Christiana Care nurses have received DNP or Ph.D., doctoral degrees. A project or dissertation title, and the university granting the doctorate, is included after the honoree’s name and credentials.

- **Donna Casey, DNP, APRN, CNE.** “A Strategy to Preserve Family Integrity, Promote Patient and Family Centered Care and Simultaneously Support a Safe Hospital Environment for Overnight Visitation.” University of Nevada, Reno.
- **Joseph Cipriano, DNP, APRN.** “Increasing Parental Knowledge Related to the Human Papillomavirus (HPV) Vaccine.” Rutgers University, New Jersey.
- **Rachel Joseph, Ph.D., RN, CCRN.** “Quality of Life of Parental Caregivers of Children with Tracheostomy at Home.” Dusquene University.
- **Jill Jensen, DNP, APRN.** “Decreasing Length of Stay in Emergency Department Observation Units: One Unit’s Experience.” University of Alabama.
- **Kandie Dempsey, DBA, MS, BSN, RN, OCN.** “Evaluation of a National Oncology Clinical Audit Workshop.” Wilmington University.

**Robert L. Witt, M.D.,** was named Top Peer Reviewer for the journal *The Laryngoscope* for the third consecutive year. ●

## THERAPEUTIC NOTES

## Immune checkpoint inhibitors using the immune system to treat cancer

By Cindy Barlow, Pharm.D.

Historically, the backbone of cancer treatment has included surgery, radiotherapy, and chemotherapy. Unfortunately, even with multimodal therapy it is estimated that more than half a million people in the United States will die as a result of cancer in 2016; therefore, additional treatment options are needed.

More than a century ago, researchers first conceived the idea of using the body's own immune system to fight cancer. Progress has been slow, partly because cancer cells and healthy cells resemble each other. To create a treatment that can kill the cancer cell without damaging the healthy cell is difficult. In recent years, significant advances have been made in understanding the interaction between the immune system and cancer (cancer immunotherapy). This has led to the development of drugs that can target the immune system. The FDA approval of immune checkpoint inhibitors has been one significant advance in the field of cancer immunotherapy.

Our immune system is made up of different types of cells, including but not limited to natural killer cells, B cells, and T cells. When the immune system is working properly, these cells work together to identify, attack and eliminate unhealthy cells such as cancer cells. Unfortunately, some cancer cells have the ability to escape detection or elimination by T cells, allowing the cancer cell to continue to grow and replicate. One way that escape of detection or elimination occurs is with the assistance of certain molecules on the cancer cell such as programmed death ligand (PD-L1/PD1) and cytotoxic T-lymphocyte antigen 4 (CTLA-4). These molecules act as a disguise to the T cell. Agents such as

immune checkpoint inhibitors target these molecules and prevent cancer cells from hiding or inactivating the T cells. T cells can then identify and trigger the cascade for cancer cell death, hence harnessing the patient's own immune system to fight the cancer.

Formulary examples of immune checkpoint inhibitors include ipilimumab (Yervoy®) and nivolumab (Opdivo®). Ipilimumab targets the CTLA-4 antigen and is FDA approved for the treatment of unresectable or metastatic melanoma. It is the first agent that has demonstrated an overall survival advantage for the treatment of advanced melanoma. Nivolumab, a PD-1 inhibitor is approved for several malignancies including Hodgkin lymphoma, metastatic or unresectable melanoma, metastatic non-small cell lung cancer, and advanced renal cell cancer.

Immune checkpoint inhibitors may cause unique events secondary to the drug increasing the amount of T cell activity. Initially, these drugs may cause it to appear as if the tumor is growing. This is called pseudo progression and occurs when a large amount of T cells are activated and enter the tumor, causing an increase in size. It may take several months for this to subside and a checkpoint inhibitor to demonstrate efficacy. Additionally, autoimmune related reactions may occur due to the activated T cells attacking the patient's own body approximately 6-12 weeks after starting therapy. There is a > 10% incidence of diarrhea, rash, pruritus, fatigue, and nausea. Life threatening events may also occur (< 10%), examples include colitis, gastrointestinal perforation, pneumonitis, hemolytic anemia, Guillain-Barre, and Steven Johnson syndrome. ●



### CHRISTIANA CARE COMPLIANCE HOTLINE

Christiana Care's Compliance Hotline can be used to report a violation of any regulation, law or legal requirement as it relates to billing or documentation, 24 hours a day, 7 days a week. Callers may remain anonymous. The toll-free number is: 877-REPORT-0 (877-737-6780).

✓ To learn more about Corporate Compliance, review the Corporate Compliance Policy online or contact Christine Babenko at 302-623-4693.

FORMULARY UPDATE | DECEMBER 2016

FORMULARY ADDITIONS

Medication – Generic/Brand Name	Strength/Size	Use/Indication	Comment
Ceftazidime-Avibactam/ Avycaz	2gm/0.5 gm vial	<ul style="list-style-type: none"> <li>• Multi-drug resistant gram-negative infections</li> <li>• Complicated intraabdominal and urinary tract infections</li> </ul>	

REVISED MEDICATION POLICIES

<b>Idarucizumab/Praxbind</b>	Stroke neurologists, as well as board eligible or board-certified attending anesthesiologists, cardiologists, hematologists, and critical care & emergency medicine physicians are permitted to prescribe idarucizumab.
<b>Prothrombin Complex Concentrate/Kcentra</b>	Stroke neurologists, as well as trauma attending physicians, board eligible or board-certified attending Middletown Emergency Department physicians, hematologists and critical care physicians, are permitted to prescribe human prothrombin complex concentrate.

QUALITY & SAFETY

# Best practice review

## EYEWASH STATIONS

**Q. DOES MY DEPARTMENT NEED AN EYEWASH STATION?**

A. Your department must have an eyewash station if corrosive chemicals or chemotherapy are used. Eyewashes are not required for chemicals classified as “irritants;” or for blood and body fluids.

**Q. HOW WOULD I FLUSH MY EYES IF MY DEPARTMENT IS NOT REQUIRED TO HAVE AN EYEWASH STATION?**

A. You may use sterile saline or any water source to flush your eyes when an eyewash station is not available.

**Q. CAN MY DEPARTMENT USE SALINE BOTTLES INSTEAD OF AN EYEWASH STATION?**

A. If your department uses corrosive chemicals or chemotherapy, you must have an approved eyewash station installed. Saline may be used for irritant chemicals or blood and body fluids.

**Q. WHAT DO I DO IF I NEED TO USE AN EYEWASH?**

- A.
- Go to the nearest eyewash station.
  - Push or squeeze the lever to activate the eyewash.
  - Begin to flush your eyes. Hold your eyes open with your fingers.
  - Flush for a full 15 minutes.
  - After your eyes have been flushed, report the incident to your supervisor and visit or contact Employee Health Services.

**Q. CAN AN EYEWASH BE INSTALLED ON A “SOILED” OR “DIRTY” SINK?**

A. In some instances, corrosive chemicals are located in a soiled room that may only have one sink. The eyewashes are inspected and flushed weekly, the spray nozzles are covered to prevent contamination and the eyewash would only be used in an emergency. The chemical risk from a corrosive material to the eyes is significant and would outweigh any reason to not have an eyewash installed.

**Q. WHO MAINTAINS THE EYEWASH?**

- If your department is located on the hospital campus or supported by CCHS, the eyewash station will be inspected and flushed weekly by Christiana Care Fire Protection Services.
- Those departments located off campus and not supported by Fire Protection Services must inspect and flush their eyewashes each week.

**Q. WHAT CAN WE DO TO HELP WITH COMPLIANCE?**

- A.
- Be sure the eyewash station is unobstructed.
  - Be sure the caps/dust covers are in place over the eyepiece(s). ●

.....

*If you have questions about this Best Practice Review, please contact the Content Expert: Occupational Safety: 733-3914, or Safety Hotline: dial 7233 (SAFE) from within Christiana or Wilmington hospital, or 623-7233 from outside.*



**CHRISTIANA CARE**  
HEALTH SYSTEM

External Affairs  
P.O. Box 1668  
Wilmington, DE 19899-1668  
[www.christianacare.org](http://www.christianacare.org)

PRSR STD  
U.S. POSTAGE  
PAID  
WILMINGTON DE  
PERMIT NO. 357

*Christiana Care is a private, not-for-profit regional health care system that relies in part on the generosity of individuals, foundations and corporations to fulfill its mission. To learn more about our mission, please visit [christianacare.org/donors](http://christianacare.org/donors).*

## Easier parking at Christiana Hospital is on its way



With a strategic swing of a 165-foot crane, construction on the new patient and visitor parking garage at the main entrance to Christiana Hospital reached a milestone on Jan. 28, with the installation of the final precast piece that completed the walls and floors.

Work continues on the next phase of the project, which includes elevators, stairs, lighting and landscaping. The four-level, 700-space parking garage is expected to open in July 2017, increasing access and convenience for patients and families.

The new garage complements the architectural design and brick facade of the hospital and will feature a covered walkway to the main entrance. As another added convenience, campus shuttles and DART buses will be able to pull directly into the garage to drop off and pick up passengers. ●