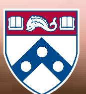
Hospital Expansion Update · 9-1-1 Advice from the Experts · Physical Therapy Evolution

synapse

THE CHESTER COUNTY HOSPITAL MAGAZINE | 2019 : VOL 2

building the NEST



Penn Medicine

CHESTER COUNTY HOSPITAL WELLNESS CALENDAR

PROGRAMS TO KEEP YOU WELL!

WELLNESS PROGRAM OFFERINGS

If you are looking to make healthier lifestyle choices, you will benefit from these educational programs offered by Chester County Hospital's Community Health and Wellness Services Department.

WEIGHT MANAGEMENT

We can provide the guidance you need to create realistic strategies for successful weight management and support you on your journey to a healthier lifestyle and weight loss.

- **Struggles and Solutions**– Monthly support for a healthier lifestyle and weight loss.
- **Nutrition Counseling** (610.738.2835)– Individualized guidance for healthy choices. For individuals seeking nutrition guidance for healthy eating, weight loss, or for disease prevention and management, our dietitians can see you without a prescription. Currently able to bill Independence Blue Cross (IBC), Personal Choice or Keystone Health Plan East (KHPE) for the free six-visit wellness benefit with no referral needed and no co-pay.

SMOKING CESSATION

For many, the first step to better health is quitting smoking. **We know it is not easy.** Our programs have a proven track record of helping people become ex-smokers.

- **Stop Smoking Now! Program**– Identify your triggers and develop a plan to quit.

DIABETES EDUCATION

Diabetes is an underlying condition that can complicate your health. The hospital offers programs to help you better understand diabetes and manage your daily health.

- **Reversing Pre-Diabetes**– Reduce your risk of getting type 2 diabetes with healthier choices.
- **National Diabetes Prevention Program** (610.738.2835)– Help for people with pre-diabetes or at high risk for developing diabetes.
- **Diabetes Self-Management Program** (610.738.2835)– Classes and counseling for those with type 1, type 2 or gestational diabetes.

CHILDBIRTH EDUCATION

Whether you are a first-timer or an experienced parent, we offer carefully crafted and comprehensive programs to support you during pregnancy, labor, postpartum and parenthood.

- **Prepared Childbirth**– Be ready for birth in a four-week series or a one-day class.
- **Maternity Unit Tour**– Visit labor and delivery, nursery, maternity, and NICU.
- **Calm, Confident Birth**– Address beliefs, fears and concerns about birth and parenting.
- **Sibling Class**– Help the future big brothers and sisters (ages 3-7) prepare for a sibling.
- **Newborn Care**– Understand how to take care of your baby before they come home.
- **Prenatal Breastfeeding**– Learn to breastfeed and where to find support.
- **Pumping and Returning to Work**– Continue breastfeeding after maternity leave ends.
- **Childbirth Refresher**– For parents who just need a reminder about giving birth.

HEALTHY BODIES

We offer high quality health education programs to address specific chronic health conditions. Special presentations, physician lectures, classes, screenings and support groups are available.

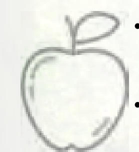
- **Heart Health**– Offerings include cardiovascular health risk assessments, blood pressure screenings, Hands-Only training and cardiac support meetings.
- **Cancer Support**– The Abramson Cancer Center has local support groups and programs focused on the emotional effects of cancer.

- **Bones and Joints**– Programs include pre-surgery education, unit tour and tailored physical therapy.

KEYNOTE SPEAKER REQUESTS

We have dynamic speakers who can address health care topics for your organization. Get started by calling 610.738.2542 to speak to a community health educator. Topics include:

- **Heart Health** (Risk Assessment, A-Fib, Strokes and Heart Attacks, Know Your Numbers)
- **Bone Health** (Osteoporosis, Arthritis, Joint Replacement)
- **Cancer Prevention** (Screening Recommendations, Prevention and Early Detection)
- **Women's Health** (Breast Health, Women and Heart Disease, Menopause, Pelvic Health)
- **Senior Health** (A Variety of Topics Available)
- **Screening Recommendations and Disease Prevention**



- **Nutrition** (Healthy Eating, Diet and Weight Loss, Super Foods)
- **Diabetes** (Prevention, Treatment, Diet and Lifestyle)

Program descriptions, schedules, fees, locations and registration information can be found at ChesterCountyHospital.org/wellness or by calling 610.738.2300 *(unless another phone number is noted).*

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DEAR NEIGHBORS

The cover story of Synapse features an account of grace and strength as we highlight our Mother-Baby unit and the Nesti family. In addition, most of us never think about calling 9-1-1 or what to keep in mind if we ever need to use this service. We've reached out to our local EMS partners to find out what they want the public to know.

We also highlight some of the community based initiatives our clinical teams have been working on including how the role of physical therapy is evolving to include forerays into pain management, and the hip fracture program that was implemented for patients to curb readmissions for age related falls. In addition, this issue discusses a screening tool that is being used to prevent a serious cardiac catheterization complication.

Last but certainly not least, we are just about four months away from opening our new Pavilion. This is an exciting time for our hospital and the community. This issue of Synapse looks at how the Hybrid OR's that will be added to our new Pavilion will benefit our patients.

Warm regards,

Michael J. Duncan
President and CEO

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synapse

SYNAPSE MAGAZINE SINCE 1981

Synapse is an award-winning publication produced by Chester County Hospital's Corporate Marketing Department. The articles provided in this magazine are solely for informational purposes. It should not be relied on or used in place of a physician's medical advice or assessment. Always consult a physician in matters of your personal health.

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to let us know what you think, to make suggestions about future topics or to change your mailing information.

meet the NESTI'S

Right around Thanksgiving 2017, Victoria and Bill Nesti of West Chester found out they were expecting triplets, and they began searching for hospitals with a Level III Neonatal Intensive Care Unit (NICU). They knew there was a good chance that their babies would be born prematurely or have other complications requiring highly specialized care. The Nesti's were pleasantly surprised to discover that Chester County Hospital has not only a Level III NICU but also a close affiliation with The Children's Hospital of Philadelphia, which would give them direct access to CHOP's services downtown if their babies needed them.

At the time, they never imagined that Chester County Hospital's NICU would become their home away from home for four-and-a-half months, or how much they would treasure their relationships with staff members who guided them through both triumph and tragedy, as Victoria relates:

"I unexpectedly went into labor at just 23 weeks. The likelihood of viability for our children at that point was statistically very, very slim and the chance of severe long-term disability very, very high. I was put on immediate bedrest, along with a cocktail of medications, to try to slow down labor. The Labor & Delivery staff did a phenomenal job of supporting my husband and me as we anxiously counted the minutes and prayed for more time.

We hung on nearly five more days before our son Weston was delivered, followed nearly a full day later by his brother, Carson, and sister, Svea."

There have been miraculous advances in caring for premature babies in the last several decades. But there are remaining hurdles that medicine and current technology can't address and, unfortunately, we ran right into one of them with both of our boys. Two days after birth, an ultrasound revealed massive uncontrollable bleeding on the brain, first in Weston and then in Carson. Their chances of long-term survival were slim and their quality of life, even if they could be sustained on life support, would be very poor. Bill and I had to let them go.

VICTORIA, BILL AND SVEA NESTI SHARING A QUIET MOMENT WITH NEW BABY NORA

SVEA

No parents ever want their child to die before them, but a small consolation is being able to say that you did everything you could to make it dignified and pain-free. The Chester County Hospital staff went to great lengths to find outfits for our sons to wear and a photographer to capture our first and last time holding our boys, as well as to give us enough time to gather close family around them. Each boy was baptized and prayed over before he died and we got to hold their tiny hands and feel their little kicks.

In the absolute worst of times, we saw the best of humanity at Chester County Hospital. There was not a single nurse or doctor who did not put every ounce of their talent and skill and compassion into the task at hand. Everyone played their part—from Labor & Delivery, to the NICU team, to the maternity staff who held me in their arms in the aftermath of such terrible loss.

We cried together, we prayed together, and we all watched anxiously over our daughter, Svea, to see what cards she would be dealt. She was just over a pound and her future did not look promising. Over the next 135 days, we came to appreciate the way that the NICU team cared for the whole child and family, and not just the immediate medical problems.

For example, the staff was diligent about daily physical therapy and helping us hold our baby, despite how fragile she was, because they knew that skin-to-skin contact helps babies bond with their parents and improves their outcomes. They were dedicated to monitoring oxygenation levels closely and weaning Svea off respiratory support at the right time so that she would not suffer lung or eye damage. We could see that the NICU was on top of the latest research, equipment, and best practices to ensure that our daughter would get the best foundation for a quality life.

The NICU staff also involved us in Svea's care by inviting us to participate in daily rounds. They encouraged us to ask questions and asked for our input in making decisions, based on what we were observing. It gave us a tiny bit of much-needed control during the most uncertain time of our lives.

We also appreciated how the staff took the time to celebrate every little milestone. We cherished the discovery of a poster celebrating our child making it to 25 weeks, 26 weeks, 27 weeks. The milestone card hung in her window proclaiming that she was held for the first time today, she had her first bath today, she tried drinking from a bottle today. The surprise party when she moved to an open-air crib from an advanced isolette. The hand-knit outfits and hats personally made by one of the doctors to celebrate Mother's Day, Father's Day, the Fourth of July. And finally, that last traditional photo of mom and dad holding their baby between them as they prepare to exit the NICU forever and go home.

We appreciated the nurses and doctors who went out of their way to share stories about their own premature children or children they had lost. The unit clerks who demanded perfect handwashing to ward off outside germs, and who fended off well-meaning but sniffly grandmas whose colds could pose a threat. The lead nurses who didn't hesitate to firmly order that the noise level be reduced to protect these fragile babies. The doctors who struck that perfect balance between utmost professionalism and real human caring, connection, and friendship.

Being in intensive care is incredibly emotional and being able to feel good about leaving your child in the hands

continued >

of strangers each day when you leave the hospital is essential. For us, feeling included in the decision-making process and feeling confident in the highly experienced nursing team and doctors were key.

Our daughter, Svea, our miracle baby, turned one this past April and so far, her most pressing issue is that she is a little on the petite side. She battled through a major heart surgery, some eye issues, a hernia repair, and multiple other complications, but she is doing well. If we had the opportunity to do it over again, my husband and I can honestly say that there is no other NICU or hospital in the country where we would have chosen to deliver our triplets. As a matter of fact, we found ourselves back in the Chester County Hospital NICU in late June 2019, after our second daughter, Nora, had to be delivered about four weeks early. I developed a rare but potentially dangerous pregnancy complication called HELLP syndrome, which affects the liver and the blood. In my case it caused elevated liver levels. We were extremely lucky that my doctors caught it in time, as I did not have traditional symptoms such as headache, abdominal pain, or high blood pressure.

SVEA RECEIVES SOME EXTRA CARE FROM ONE OF CHESTER COUNTY HOSPITAL'S VOLUNTEER CUDDLERS

Our NICU experience this time was different in the sense that our 34-weeker did not require all of the interventions that Svea did. But the care again was phenomenal and we enjoyed experiencing the new unit [it had been renovated since]. There were many babies in the ICU while Nora was there, but it felt very personal and very quiet most of the time due to the layout and the soundproofing, which is great for families and sensitive developing preemies. It was another terrific care experience, but we were thrilled that our stay this time around was much shorter and less eventful than our last one!

Chester County Hospital has received prestigious international recognition

Baby-Friendly Birth Facility

Baby-Friendly USA, Inc. is the U.S. authority for the implementation of the Baby-Friendly Hospital Initiative (BFHI), a global program sponsored by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). The Baby-Friendly Hospital Initiative works to improve the care of pregnant women, mothers and infants. The goal of the Baby-Friendly initiative is to protect, promote and support breastfeeding. The Centers for Disease Control and Prevention, Surgeon General, American Academy of Pediatrics, and many other health care groups encourage hospitals to become Baby-Friendly.

"Achieving Baby-Friendly Designation is a testament to Chester County Hospital's commitment to ensuring the healthiest start for all babies born at the hospital"

AMY C. LATYAK BSN, RN, CCE, CBC, COORDINATOR, CHILDBIRTH EDUCATION PROGRAM

In order to receive Baby-Friendly Designation hospitals must incorporate and follow the 10 steps to successful breastfeeding which include keeping mothers and babies together, feeding on cue, breastfeeding support groups, prenatal education about optimal infant feeding, teaching mothers how to initiate and maintain lactation, and safe formula preparation for bottle feeding babies. In addition, 100 percent of the hospital's Maternal/Child staff completed Baby-Friendly education and must perform infant care and exams in the mother's room.

In support of its Baby-Friendly designation, Chester County Hospital has also adopted a "Family Centered" model of treatment. This method ensures that education about infant care and feeding practices are offered and families are encouraged to make informed decisions about what is best for themselves and their babies.

"This designation recognizes hospitals and birth centers that provide new mothers with the information, confidence, encouragement and skills needed to successfully initiate and continue breastfeeding and that also promote mother-baby bonding for all new mothers and babies," Patricia Ward, MSN, RNC, Manager Mother Baby Unit, explained.

DIRECT FROM THE EXPERTS

emergency advice

Everyone knows to dial 911 in an emergency. But even though it's something we're taught from a very young age, calling 911 is actually an unusual occurrence. In fact, most of us have never had to do it. Here are some things local emergency services providers want you to know when calling 911:

tammy whiteman

NR-P, ADVANCED LIFE SUPPORT COORDINATOR, CHESTER COUNTY DEPARTMENT OF EMERGENCY SERVICES

"First and foremost, stay calm and stay on the phone. We recognize that people are calling 911 in an emergency when tensions and emotions are often running high, but it's important to take a deep breath, answer all of the telecommunicators' (dispatchers) questions to the best of your ability and follow their instructions."

"If you think you are having a stroke or heart attack, never pick up your keys. These are very time sensitive conditions. EMS can arrive on scene and get you to the appropriate intervention much quicker than if you try to drive yourself. You also run the risk of passing out or having your condition worsen while you're driving which could cause more serious injury to you or other drivers on the road."

"When in doubt, call 911. Don't ever feel like you shouldn't call and don't ever be embarrassed by it. Our county providers are highly trained volunteers and professionals available 24-7. We are here to protect and care for our community."

continued >

emergency… *continued*

charles brogan

CHIEF, GOOD FELLOWSHIP AMBULANCE & EMS TRAINING INSTITUTE

"We often hear feedback that the 911 telecommunicators ask too many questions. Telecommunicators will send the appropriate response team as soon as they know what and where the emergency is. Once emergency services have been dispatched, the telecommunciator will continue asking questions so they can monitor the situation. The telecommunicators relay real-time information to the responding EMS while they are on route, so they are ready to respond with appropriate action as soon as they arrive."

darren girardeau

MSN, BM, RN, PHRN, NEA-BC, CCRN, CEN, CFRN, DIRECTOR OF EMERGENCY SERVICES, TRANSPORT AND RADIOLOGY NURSING, CHESTER COUNTY HOSPITAL

"Having medical information readily available is extremely helpful. We do have electronic medical records, but they may not be shared among providers or they may not be up-to-date. Having an accurate list of current medications, health issues and drug allergies can save time in an emergency. If the information isn't readily available, you can also put all the patient's medications in a bag and bring them to the hospital with you."

"It's also important to let the telecommunicator know if you have pets and secure them if you can. If it's safe to leave the injured person, unlock the front door, turn on outside lights if it's nighttime, and tell the telecommunicator if there are any other special instructions for locating the emergency. It can also be helpful to call a family member or friend and have them meet you at the hospital."

PREPARE INFORMATION AND KEEP IT SOMEWHERE HANDY IN CASE YOU NEED TO CALL 911. The more information you can provide to the telecommunicator, the better. Here is the information the dispatcher will want to know:

- NAME OF THE PERSON WHO IS INJURED OR NEEDS HELP
- ADDRESS/LOCATION YOU ARE CALLING FROM, INCLUDING ANY CROSS STREETS OR OTHER IDENTIFYING INFORMATION
- HEALTH HISTORY OF THE PERSON WHO NEEDS HELP
- DRUG OR OTHER ALLERGIES THAT PERSON MAY HAVE
- CURRENT MEDICATIONS THAT PERSON MAY TAKE

Smart911 is a free service available to all Chester County residents. Smart911 allows you to create a secure safety profile for you and your family with information that is helpful to EMS responders in a 911 emergency. Visit www.smart911.com to plan ahead.

fred w. wurster III

BS, NRP, EMS CHIEF, MINQUAS FIRE CO. NO. 2

"Don't hang up on the telecommunicator until they tell you to do so. All Chester County telecommunicators are qualified to give emergency medical instructions over the phone. From controlling bleeding and administering aspirin to delivering a baby and performing CPR, they are trained to help the caller until EMS arrives. If you have children at home, do some pre-planning with them, especially if someone in the house has a specific medical condition. I have a shellfish allergy, so my children know how to get me my EPI pen and administer it if necessary. Emergencies can be especially scary for children. Preparing and having discussions with them ahead of time can make a big difference."

Nearly one-third of the American population is affected by chronic pain

#readthatagain

The evolution of physical therapy

INNOVATIVE APPROACHES FOR PAIN MANAGEMENT

Chronic pain affects nearly one-third of the American population, according to a 2011 report by the Institute of Medicine on advancing pain research care and education. Over the past several years, the use of prescription drugs to manage pain has increased exponentially. These drugs have not only proven to be largely ineffective, but also expose millions to highly addictive medications which often lead to substance use disorders and death.

Increasingly, non-pharmaceutical approaches, including physical therapy, are being recommended as a "first-line treatment" for pain management.

The Centers for Disease Control and Prevention (CDC) released a set of guidelines in March 2016 with the intent to limit opioid prescriptions to cancer treatments, palliative care, end-of-life care, and certain emergency situations. For any other instance of pain management, the CDC recommends "non-opioid approaches," like physical therapy.

Even when opioids are prescribed, the CDC recommends that patients receive the lowest effective dosage and that it be combined with physical therapy or another "non-opioid" treatment.

"Physical therapists and occupational therapists can play a big role in pain management," says Gina Ruppert, PT, CLT, a physical therapist at Chester County Hospital. "We have a lot of tools in our arsenal that don't involve medications. And although PT is often thought of as exercise or massage, it's more accurate to see it as an evolving, holistic approach."

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JILL TOWNSEND PT, CHT EVALUATING AN INJURY WITH A PATIENT

EDIE CAGGIANO-HALSEMA, PT, MSPT WORKING WITH A PATIENT

Incorporating alternative approaches to help combat the overuse of prescription medications is not new to the Penn Medicine Health System. Experts across specialties including Emergency Medicine, Behavioral Economics, Orthopaedics, Plastic Surgery, Obstetrics & Gynecology, and Psychiatry have been working for years to reduce the number and doses of opioid prescriptions given to patients through the development of new procedures and protocols. And, two years ago, Penn Medicine created the Health System-wide opioid task force, cementing itself as a leader in the fight against opioid addiction.

Jill Townsend, PT, CHT, lead hand therapist at Chester County Hospital, says the treatment physical therapists provide is a collaborative effort with their patients and health care providers.

"We identify what's causing their pain first and then work to help them understand their diagnosis and develop tools to help manage their pain," she says. "In the vast majority of cases, we're able to resolve the problem. In chronic cases, patients are given the tools to manage and control their discomfort."

That work is not entirely physical. Some of the effort involves helping patients to identify potential emotional or environmental triggers for their pain. Stress, for example, can increase physical discomfort, so Townsend and Ruppert help patients practice stress management principles through breathing, visualization, and relaxation techniques.

The physical aspect of pain can also be addressed through a variety of approaches that can improve circulation, decrease swelling, reduce muscle spasm, and treat pain. These include heat, cold, ultrasound and electric stimulation. Manual therapy (massage, mobilization and manipulation of joints and soft tissue) has also been proven effective in using the body's own ability to control pain.

Patients are given an individualized exercise program which helps to address their specific strength and flexibility deficits. Aerobic exercise, specifically, is another way of using the body's own defense against symptoms. Therapists also do ergonomic training, sleep education, and movement analysis, where the patient is taught how to move, sit, and stand more efficiently.

"Although we have guidelines and general indications, everything is based on clinical reasoning, which is understanding the science of the patient's pathology and implementing an individualized plan," Townsend says. "In other words, every patient's treatment is tailored to their particular needs and ability." An integral component of that process is a constant, open dialogue between the therapist and patient.

"Often through the course of treatment, a patients pain will change. It could even happen on a day-to-day basis," Ruppert says.

The challenge, Townsend says, is to have patients respect their pain without overanalyzing it. "Focusing too much on pain can increase pain."

As the role of the physical therapist continues to evolve and compliment current care protocols, it will allow patients to benefit from more holistic and well-rounded therapies for a variety of conditions.

Streamlining Care for Elderly Patients with FRACTURED HIPS

Hip fractures are one of the most feared injuries among older adults. But increasing evidence is showing that the faster they're treated, the better the patients will do. Recognizing this fact, Chester County Hospital launched the Geriatric Fractured Hip Program in May 2017.

Its foundation was borne from a Penn Medicine initiative, but the program has been—and continues to be—refined to Chester County Hospital's particular needs.

"We didn't have a standardized pathway for fractured hip patients to go to the operating room (OR) within 24 hours for surgical repair," says Linda Palma, Manager of Quality and Patient Safety at the hospital and one of the program's coordinators.

Caring for a geriatric hip fracture patient is a complex and nuanced process that requires precise coordination among a number of clinical disciplines, including emergency medicine, internal medicine, anesthesia, and orthopaedics. Representatives of each area were involved in streamlining that process with the goal of getting every patient to the operating room within 24 hours of their arrival at the hospital.

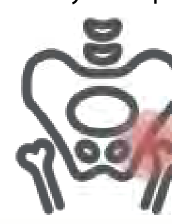
A recent study that tracked elderly patients who underwent hip fracture surgery between 2009 and 2014 found that those who had the surgery within 24 hours had lower rates of life-threatening complications, including heart attacks, pulmonary embolism, and pneumonia.

On average, elderly patients at Chester County Hospital, during fiscal year 2018, underwent hip fracture surgery within 26 hours of their arrival. But, Palma says, "we were very tough on ourselves. We measured from the time the patient arrived until they went to the operating room." For comparison, the International Geriatric Fracture Society tracks patients from the decision to admit them. "If we had been measuring it that way, it would trim a couple of hours off of each patient," Palma says. "It takes several hours to work up a patient."

There's one unavoidable challenge that casts the 26-hour average in a more favorable light: the patients themselves. During fiscal year 2018, the Geriatric Fractured Hip Program at Chester County Hospital treated 128 patients. Their average age was 80.

"This is an elderly population. Anything could be going on with a patient who has fallen and can't get up," says orthopedic surgeon and program coordinator Andrew Old, MD. "They could be having a stroke, they could be having a heart attack, things that are actually way more pressing than a hip fracture. These must be ruled out before the emergency room physician can get to, 'What is actually hurting you?' "

"Every month, we look at the patients who didn't get to the operating room within 24 hours," Palma says. "A lot of them come in on blood thinners and aren't medically stable to go to the OR. Often times, it is not as simple as they were just walking along, tripped, and fell. They're septic or they have pneumonia and they're weak and they fall, as a result. That underlying illness needs to be managed first."



Hip fractures, which can be associated with permanent impairment and an in-hospital death rate of seven to 14 percent, are expected to exceed 21 million globally over the next 40 to 50 years, with significant costs to health care systems. A study that analyzed Medicare claims data from 2002 to 2015 found that the incidence of hip fractures in older women in the U.S. is rising after more than a decade in decline—and the cost of those extra fractures was nearly $460 million.

"People are able to live a little longer and, therefore, start to run into problems such as osteoporosis," Dr. Old says. "Our ability to make people safe in the operating room is also improving. We don't have to put everyone under general anesthesia, so I think a lot more people may be qualifying to undergo the operation as well."

Given the complexity of the care and its increasing frequency, every efficiency should make a difference.

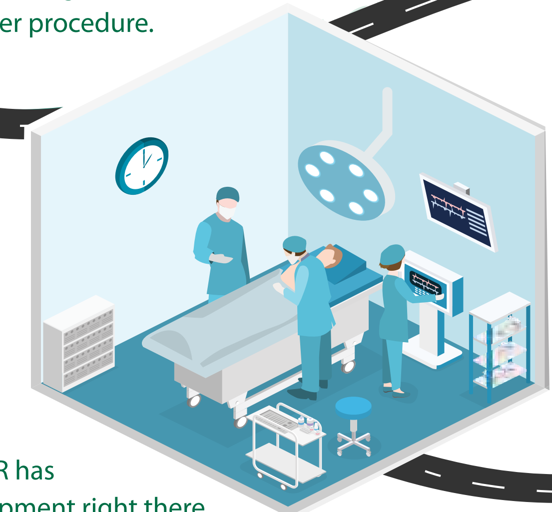
Let's talk about cars for a second. A traditional car runs on just a gasoline engine. A hybrid car, on the other hand, has that plus an electric motor. Both cars will eventually get you to the same location, but the mechanical process of getting there and the quality of the ride might be a little different.

A hybrid operating room works similarly. In a traditional operating room (OR), a surgical team uses typical surgical equipment to perform a procedure. In a hybrid OR, it's not just the surgical team and equipment — there are multiple types of specialists and many different types of equipment.

For example, if a patient is having heart surgery, it might not be just the cardiac surgeon and surgical nurses in the surgical theatre — there may also be cardiac interventionists and vascular surgeons.

Anesthesia is generally safe, but it does come with risks of complications, such as breathing or heart problems. These risks increase the longer you're under anesthesia. Also, longer durations of anesthesia have been associated with increased time spent in the hospital after surgery or having to return to the OR for another procedure.

Hybrid OR's and the Future of Medicine



A patient can be treated in either a traditional or hybrid OR. But just like the traditional or hybrid car, the surgical process and the patient experience might have some differences.

In 2020, Chester County Hospital will be opening a new hybrid OR for heart procedures.

If your heart surgery is performed in the hybrid OR, here's how your surgery might be different.

Imaging Tests During Procedures Will Be Quicker and Better

Having imaging tests, such as X-rays or ultrasounds, are a normal part of preparing for surgery. Sometimes, a surgeon will need additional images in the middle of a procedure — and in a traditional OR, those images can throw a detour into the surgery.

In a regular OR, the surgeon will need to use portable equipment that's brought in from another room. Taking time to bring in the equipment and set it up adds time to the procedure.

The longer your procedure, the more time you spend under anesthesia — the medicine that makes you fall asleep so you don't feel pain or remember the procedure.

The hybrid OR has imaging equipment right there, which can mean fewer delays, and less time under anesthesia.

"The hybrid OR lends itself to minimally invasive procedures, which usually means a quicker recovery time and less time spent in the hospital. You can get back to work and your daily activities much sooner."

MICHAEL BARBER, SENIOR VICE-PRESIDENT, CHIEF OPERATING OFFICER, CHESTER COUNTY HOSPITAL

More Likely to Have Minimally Invasive Surgery Instead of Open Surgery

In a minimally invasive procedure, the surgeon will make a few small cuts, rather than large incisions. "With the hybrid OR, we will be able to accommodate even more patients who need minimally invasive procedures than we already do," continues Barber.

Your Surgeon Will Have More Flexibility

Sometimes, surgeries don't always go quite as planned. During a minimally invasive procedure, it's possible that the surgeon will realize that they need to perform a more invasive surgery. Or, they may be using one mode of surgery, and decide that they need to switch to a different one.

In a traditional OR, this could prove complicated. The surgical team could potentially need to switch you to a different operating room. However, the hybrid OR is equipped to easily turn from a minimally invasive to a more invasive operative setting, and from one mode of surgery to another. Your surgeon will be able to update their method right then and there which is better for the patient.

"The hybrid OR gives you the best of both worlds – you get high-quality imaging, while also getting the space and visibility of a typical OR."

MARY KEHNER, BSN,MS,RN,CNOR, DIRECTOR, SURGICAL SERVICES

The Surgery Will Be More Precise — And Maybe More Successful

One of the more challenging parts of surgery is making sure that patients are in the right position. The hybrid OR comes with a table that can be tilted and inclined to many different positions, allowing the surgeon to maneuver patients into the best position for a specific procedure. The table is connected to imaging equipment. This equipment recognizes and follows the table position — without the surgical team having to do a thing — and captures images of the surgical area from almost any angle. This is extremely important. Getting a patient to the perfect position and allowing the surgeon to come in at the right angle, as well as having pictures from all different angles, makes it easier for them to be more precise. And the better the precision, the lower the risk of complications, and the greater the likelihood that the surgery will be successful.

The Operating Room Will Be Even Safer Than It Already Is

When you need surgery, you might be worried about your safety. And that's perfectly normal. In any type of operating room, safety is the top priority - rest assured that no matter which room you're in, the surgical team is looking out for your safety at all times.

While traditional ORs are very safe, the hybrid OR can increase safety even more:

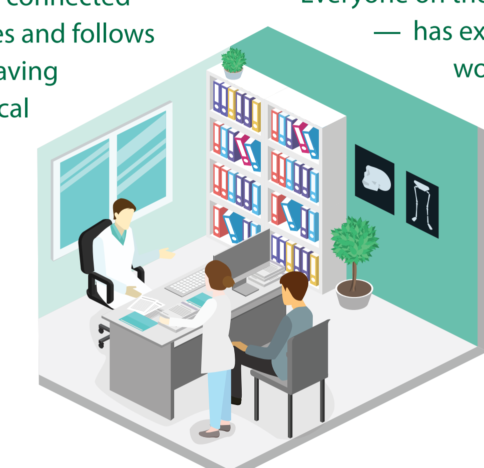
- **The imaging equipment will only use very low doses of radiation.**
- **The table can hold up to 550 pounds of patient weight, which means that obese patients will rarely be unable to have surgery due to their size.**
- **Patients in hybrid ORs may spend less time under anesthesia than patients in regular ORs, which lowers the risk of anesthesia-related complications.**
- **If a patient does need a more invasive surgery, the hybrid OR is equipped to handle it, and the staff is well-trained in going from a minimally invasive to an open procedure.**

Advanced Technology Only Goes So Far — And That's Why We're Here

When our hybrid OR opens in 2020, we will have some of the most modern, advanced equipment in the region. But it's not just the technology that makes our hybrid OR special.

"In every operating room at Chester County Hospital, the surgical team works together seamlessly" states Barber.

"Everyone on the team — surgeons, nurses, technicians — has extensive training and experience, and works together to deliver the best care. And we can't wait to bring those same levels of passion, expertise, and teamwork to the new hybrid OR's."



▶▶ LEARN MORE AT: chestercountyhospital.org/expansion

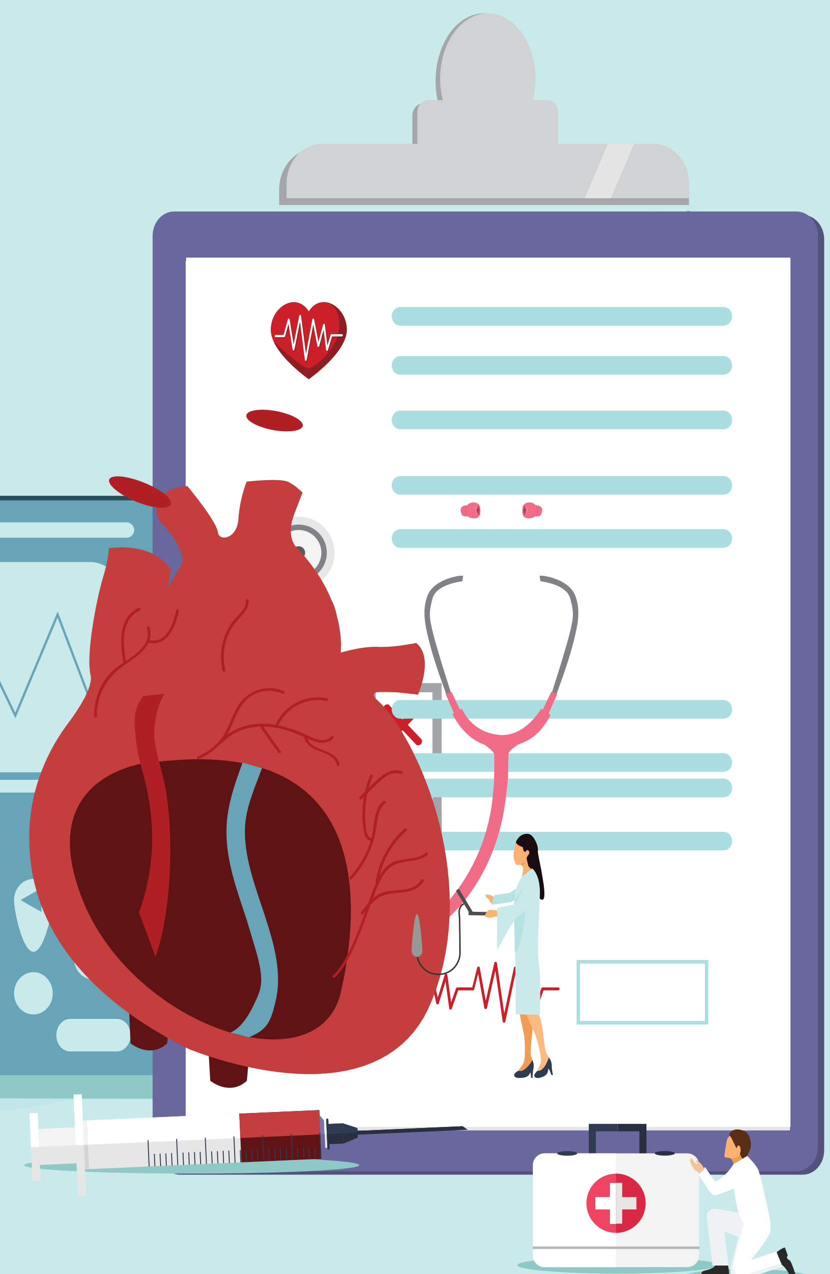
A simple screening tool... is curbing cardiac catheter complications

A few pointed questions are proving to be very effective in curbing a serious reaction to the contrast that's used for cardiac catheterizations.

The Pre-Cardiac Catheterization Screening Tool has been used for the last two years at Chester County Hospital to assess most patients' risk of bleeding and contrast-induced nephropathy (CIN) ahead of their catheterizations. (It's not used in emergency situations.) While it's become invaluable on both fronts, the tool has had the greatest impact on preventing CIN.

The contrast agents used in a catheterization can be harmful to the kidneys. Those who have had a heart attack, who have diabetes or a pre-existing renal disease are more susceptible than most. Once those risk factors, among others, are known, temporarily stopping any conflicting medications and ensuring the patient is adequately hydrated ahead of the catheterization is usually enough to prevent CIN. But if these risk factors are overlooked or not fully accounted for, the contrast could impair renal function, the condition that defines CIN.

In mid 2016, months prior to the tool's implementation, the risk adjusted rate was 4.15 for CIN in patients undergoing cardiac catheterization with percutaneous coronary intervention performed at Chester County Hospital. By early 2017, the rate dropped to 2.81 percent. And by the end of the tool's first year of use, it was down to 2.70 percent, which placed Chester County Hospital near the 90th percentile in the National Cardiovascular Data Registry Outcomes Report. >



How it works >

The Pre-Cardiac Catheterization Screening Tool was introduced to a multidisciplinary group -- which is part of a broader team of representatives from all Penn Medicine entities -- who refined the assessment by prioritizing and boiling down the risk of CIN to three yes-or-no questions. It also reappointed the responsibility of administering it.

The reduction in CIN cases coincides not only with the implementation of the tool but also with the nurse practitioners filling it out.

"I was initially nervous about adding another form to our initial assessment," says Jennifer McCullough, CRNP, Lead Cardiovascular Nurse Practitioner. "But, then I thought about it, and realized our team would be the best equipped to fill out the form because we're assessing every patient prior to their cardiac catheterization."

The screening tool, which was recently incorporated into the electronic medical record, supplements the medical history and physical exam that are conducted prior to a cardiac catheterization. It takes about three minutes to complete.

The first of the three questions asks if a patient is on angiotensin-converting enzyme inhibitors, angiotensin-receptor blockers, or diuretics. The second asks if a patient has received contrast within the last 48 hours. And the third asks if a patient will require additional hydration. High-risk patients are hydrated intravenously starting the night before their procedure, if they are inpatients, or a few hours prior to their procedure (inpatients and outpatients), as opposed to waiting until the morning of their procedure, which is standard protocol. (While the screening tool is new, the hospital has always had a hydration protocol.)

The nurse practitioner will also share any high-risk findings with the interventional cardiologist. There's a direct correlation between the amount of contrast and the potential for CIN. The less given, the less chance of CIN. So, it's critical that the interventional cardiologist evaluates the dose. The technologists and nurses are also aware of the dose throughout the procedure and will let the physician know when they're approaching the maximum dosage.

Why it's effective >

Prior to the screening tool, nurse practitioners and physicians were, of course, cognizant of the risk factors and dosage levels. However, the tool—and specifically, the three questions at the top of it—brings everyone's attention to the same trouble spots simultaneously.

"The screening tool helps raise awareness of individual patient risk and

it guides all of the providers to implement practices that decrease risk of CIN," McCullough says. "Ultimately, it makes us more accountable."

The treatment for CIN consists mainly of careful fluid and electrolyte management, although dialysis may be required in some cases. In either scenario, a hospital stay of anywhere from a couple to a few days will be necessary. So, the increased prevention of CIN since the screening tool's implementation, represents an improvement in health, which also equates to cost savings by way of shorter hospital stays and fewer readmissions.

With the screening tool's effectiveness, plans are under consideration to evaluate a different contrast agent—in addition to appropriate hydration—for oncology patients, those with chronic kidney disease, and diabetics. In the meantime, the Pre-Cardiac Catheterization Screening Tool will continue to be assessed and refined as needed by a monthly oversight committee.

DO YOU HAVE A PENICILLIN ALLERGY?

It may be time to put it to the test. Mounting evidence is saying that many people who have been diagnosed with a penicillin allergy are most likely not allergic to the family of penicillin containing antibiotics.

According to the American Academy of Allergy, Asthma & Immunology (AAAAI) about 10 percent of the population, or almost 33 million people, are labeled as being allergic to penicillin. This is because symptoms like a rash, an upset stomach, vomiting, diarrhea, and hives corresponding with penicillin use are often misinterpreted as proof of an allergy to the medicine. But even in those with a true penicillin allergy, 80 percent will grow out of it over the course of 10 years. That means about 29.5 million people are mislabeled. It's a scenario that's been described in some reports as an "epidemic."

"There are a lot of misgivings and misunderstandings. I've had plenty of people tell me that a penicillin allergy runs in their family [there's no evidence that it's hereditary]," says Shafinaz Akhter, MD, Chester County Hospital's Director of Antimicrobial Stewardship, which is a concept that the right antibiotic be used in the right dose and at the right time to kill or slow bacteria. "And health care providers have perpetrated it as well. We've not been good stewards of what we label an allergy."

So, what's the harm in a misdiagnosed penicillin allergy? The beta lactam family, of which penicillin is a member, actually refers to over 15 drugs that are given by mouth or injection to treat a wide range of bacterial infections, including a lot of the most common ones, such as strep throat and sinusitis. It's one of the most frequently used classes of antibiotics in the world.

The alternatives are often considered less effective, more costly, and more toxic. That means longer hospital stays (one day per patient, on average) and higher costs of care. But the issue runs far deeper. Going back to antimicrobial stewardship, the converse of that is that using inappropriate medicine may encourage the spread of antibiotic-resistant bugs.

Dr. Akhter also cites a couple of recent studies that showed that the risk of death was higher among those with leukemia, lymphoma, and endocarditis, an infection of the heart valves, when they received an antibiotic from outside the penicillin family.

"It's enormously harmful" to be mislabeled with a penicillin allergy, Dr. Akhter says. "And the fallout is enormously wide-reaching."

The only way to know for sure if you're allergic to penicillin is a skin test. Trouble is, it's rarely done.

"One of the big problems is the lack of medical knowledge through the ranks," Dr. Akhter says. "For the most part, medical students are still not being taught that penicillin allergies need to be challenged."

So take matters into your own hands. Have a discussion with your family doctor. Many allergies can be dispelled with a good family history alone. If needed, ask for a referral to an allergist for penicillin testing.

The test is comprised of three parts. In the first, either the back or a forearm is pricked with two forms of penicillin. Then, a small amount of each form is placed just under the skin. If both tests are negative, you'll probably undergo an oral amoxicillin challenge next. If that's also negative, it's very unlikely that you have a penicillin allergy. In all, the tests take around two hours—a small price considering the potential ramifications. "The risks of not knowing if you're truly allergic to penicillin," Dr. Akhter says, "are far outweighed by the significant risks of withholding this class of antimicrobial agents."

YOU MIGHT NOT BE ALLERGIC TO PENICILLIN ...AFTER ALL

CLOSE TO 30 million mislabeled
...some describe it an "*epidemic*"

▶▶ TO GET TESTED, CALL 800.789.PENN, OR VISIT chestercountyhospital.org

vital signs

HeartCare Center Pioneer Award

CCH was one of just 13 hospitals in the country to receive a **HeartCare Center Pioneer Award from the American College of Cardiology** for its commitment to advancing the cause of sustainable quality improvement for cardiovascular care. The honor is a testament to CCH's consistent, high-quality cardiovascular care through comprehensive process improvement, disease and procedure-specific accreditation, professional excellence, and community engagement. And it highlights CCH's outstanding commitment to quality for its patients, providers, and stakeholders. **Ralph Smith,** CCH's Cardiovascular Registry and Accreditation Manager, and **Sharon Delaney,** CCH's Director of Heart and Vascular Services, accepted the award at an expo in New Orleans.

Healthcare Hero Award

Studies have shown that human touch has a powerful impact on newborns growth and development. This is especially true for babies in the Neonatal Intensive Care Unit (NICU) and why **Susan Cacciavillano, RN, BSN, RNC,** and **Stefanie Steinberger, DPT, NTMTC,** worked to bring the "Cuddler" program, consisting of 34 volunteers that are specially trained to hold, rock and soothe prematurely born infants to Chester County Hospital. Cacciavillano and Steinberger were recently acknowledged in Main Line Today as "Health Care Heroes" for their efforts along with Marie Robinson, President Chester County Hospital Women's Auxiliary who, with the Auxilians, raised funds to renovate and open the Moore Neonatal Intensive Care Unit at Chester County Hospital. *To read the full story: www.mainlinetoday.com/Main-Line-Today/May-2019/2019-Healthcare-Heroes.*

LEAPFROG HOSPITAL SAFETY GRADE

The Leapfrog Group releases the new Leapfrog Hospital Safety Grades

Chester County Hospital was awarded an "A" grade from The Leapfrog Group, a Washington D.C. based organization that aims to improve health care quality and safety. The hospital is one of only 44 in Pennsylvania to receive this designation and the only health care facility in Chester County to earn this grade in spring 2019.

"This recognition exemplifies the hard work the hospital's care teams, medical staff and nurses do each day. They dedicate their lives to their patients and make safety a number one priority," said Michael J. Duncan, President and CEO.

"To be recognized nationally as an 'A' hospital is an accomplishment the whole community should take pride in," said Leah Binder, President and CEO of The Leapfrog Group. "Hospitals that earn an 'A' grade are making it a priority to protect patients from preventable medical harm and error. We congratulate hospital leaders, board members, staff, volunteers and clinicians who work so hard to earn this A."

Developed under the guidance of a national Expert Panel, the Leapfrog Hospital Safety Grade uses 28 measures of publicly available hospital safety data to assign grades to more than 2,600 U.S. acute-care hospitals twice per year. The Hospital Safety Grade's methodology is peer-reviewed and fully transparent, and the results are free to the public.

new physicians

Cardiology

Bhavna Mohandas, MD

Dr. Mohandas received a medical degree from the Medical College – Trivandrum. She completed an internship and residency at the University of Arkansas for Medical Sciences and in addition completed a fellowship at Temple University Hospital. Dr. Mohandas sees patients at West Chester Cardiology.

Dermatology

Jon Meyerle, MD

Dr. Meyerle received a medical degree from Yale Universtiy School of Medicine. He completed an internship at Walter S. Reed Medical Centers and his residency at National Capital Consortium. In addition – he completed a residency at Yale University School of Medicine. Dr. Meyerle sees patients at Main Line Dermatology.

Family Medicine

Meghan Belamorich , MD

Dr. Belamorich received a medical degree from Drexel University College of Medicine. She completed a residency at Reading Hospital and Medical Center. She is board certified in Family Medicine and sees patients at Christine Meyer, MD and Associates.

Internal Medicine

Kimberly Sabadish, MD

Dr. Sabadish received a medical degree from Hahnemann School of Medicine and completed a residency at Hahnemann University Hospital. She sees patients at Christine Meyer, MD and Associates.

Claiborne Childs, MD

Dr. Childs received a medical degree from Georgetown University School of Medicine and completed a residency at New York Presbyterian Hospital. He joins Chester County Hospital as a hospitalist.

Zeel Tamboli, MD

Dr. Tamboli received a medical degree from St. George's University and completed a residency at Stony Brook University School of Medicine. Dr. Tamboli is board certified in internal medicine. He joins Chester County Hospital as a hospitalist.

Qaiss Mohammad, MD

Dr. Mohammad received a medical degree from Istanbul University and completed his residency at New York Methodist Hospital. He is a hospitalist who will see inpatients at Chester County Hospital.

Infectious Disease

Amit Gangoli, MD

Dr. Gangoli received a medical degree from the Armed Forces Medical College. He completed his residency at Prince Bijey Singh Memorial Hospital and a fellowship in infectious diseases at the University of Pittsburgh Medicine Center. Dr. Gangoli sees patients at Eastern PA Infectious Disease.

Neurology

Eric Kaiser, MD

Dr. Kaiser received a medical degree from the University of Iowa Carner College of Medicine. He completed an internship, residency and fellowship at the Hospital of the University of Pennsylvania. Dr. Kaiser sees patients at Penn Neurology Westtown and Kennett Square.

Joyce Liporace, MD

Dr. Liporace received a medical degree from Johns Hopkins University School of Medicine. She completed a residency and fellowship at the Hospital of the University of Pennsylvania. She sees patients at Penn Neurology Westtown and Kennett Square.

Pediatrics

Sunil Muthusami, MD

Dr. Muthusami received a medical degree from the Institute of Medicine Services. He completed a residency at Nicklaus Children's Hospital in Miami and a fellowship program at Hershey Medicine Center. Dr. Muthusami is part of the CHOP Care Network - Newborn and Pediatric Care at Chester County Hospital.

Deborah Silver, MD

Deborah I. Silver, MD, is an attending physician in the Diagnostic and Complex Care Center at the Children's Hospital of Philadelphia. She received a medical degree from New York University School of Medicine and completed a residency at the University of California, San Diego Medical Center. She is board certified in Pediatrics. Dr. Silver is part of the CHOP Care Network - Newborn and Pediatric Care at Chester County Hospital.

Koryse Woodrooffe, MD

Dr. Woodrooffe is an attending neonatologist at CHOP Newborn and Pediatric Care at Chester County Hospital. She received a medical degree from Albert Einstein College of Medicine, and completed a residency in pediatrics at Cincinnati Children's Hospital Medical Center and a fellowship in neonatology at Cincinnati Children's Hospital Medical Center.

Podiatry

Caitlin Madden, DPM

Dr. Madden received a medical degree from Temple University School of Podiatric Medicine. She completed a residency in foot and ankle reconstruction, trauma and limb salvage at Penn Presbyterian Medical Center. She sees patients at Podiatry Care Specialists, PC. Her interests include trauma, reconstructive surgery and education. She is committed to working with her patients to help them return to full and active lives.

Jennifer Kim, DMD

Pediatric Dentistry

Dr. Kim attended dental school at the University of Pennsylvania School of Dental Medicine. She completed a residency at New York University College of Dentistry. She sees patients at Chester County Dentistry for Children.

Sleep Medicine

Brian Abaluck, MD

Dr. Abaluck received a medical degree at the Perelman School of Medicine at the University of Pennsylvania. He completed a residency at the University of Michigan Hospitals and a fellowship at Brigham and Women's Hospital.

Neonatology

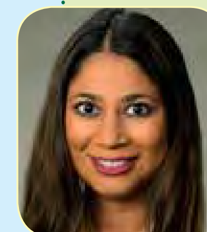
Hannah Chalal, MD

Dr. Chalal received a medical degree from George Washington University School of Medicine and completed a residency and fellowship in Neonatology at the Children's Hospital of Pittsburgh. Dr. Chalal is part of the CHOP Care Network - Newborn and Pediatric Care at Chester County Hospital.

Radiation Oncology

Kimberly Benjamin, MD

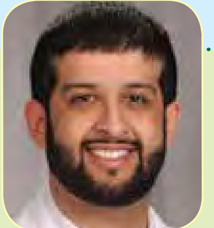
Dr. Benjamin received a medical degree from the University of Texas Southwestern Medical Center. She completed a residency at the University of Texas and a fellowship at Weill Cornell Medical Center. Dr. Benjamin is part of the Radiation Oncology practice at Chester County Hospital.



Sonal Mayekar, MD

Dr. Mayekar received a medical degree from Jefferson Medical College at Thomas Jefferson University. She completed an internship at Crozer-Chester Medical Center and residency at Rush University Medical Center. Dr. Mayekar is part of the Radiation Oncology practice at Chester County Hospital.

Urology



Arjun Khosla, MD

Dr. Khosla received a medical degree from Case Western Reserve University and completed a residency in general surgery at Thomas Jefferson University Hospital and a fellowship in minimally invasive urologic oncology at Beth Israel Deaconess Medical Center. Dr. Khosla sees patients at Midlantic Urology.

Pierre Ghayad, MD

Dr. Ghayad completed residencies in general surgery and urology at Mercy Catholic Medical Center and Wayne State University School of Medicine. Dr. Ghayad is a board certified in urology and is a member of the American College of Surgeons, American Urological Association and the Pennsylvania Urological Society. Dr. Ghayad sees patients at Midlantic Urology.

Craig A Landow, MD

Dr. Landow is a board certified urologist. He received a medical degree from Georgetown University and completed an internship and residency at the Hospital of the University of Pennsylvania. Dr. Landow sees patients at Midlantic Urology.

Steven Salva, MD

Dr. Salva received a medical degree from Jefferson Medical College at Thomas Jefferson University. He completed a residency in general surgery and urology at the Hospital of the University of Pennsylvania and Geisinger Health System. Dr. Salva sees patients at Midlantic Urology.

Obstetrics and Gynecology

Cathleen Brown, DO

Dr. Brown received a medical degree from the Philadelphia College of Osteopathic Medicine and completed an internship and residency at Tripler Army Medical Center. She will be working as part of the OB/GYN hospitalist team.

Teri Benn, MD

Dr. Benn received her medical degree from Loyola University Stritch School of Medicine in Chicago. She completed her obstetrics and gynecology residency at Barnes Jewish Hospital at Washington University in St. Louis. She is board certified in obstetrics and gynecology. Dr Benn sees patients at Penn Ob/Gyn Chester County.

Physical Medicine and Rehabilitation

Denis Rogers, MD

Dr. Rogers received a medical degree from Jefferson Medical College at Thomas Jefferson University. He completed residency programs at the University of Connecticut School of Medicine, Temple University Hospital and the Hospital of the University of Pennsylvania. Dr. Rogers sees patients at Main Line Spine.

TO FIND A DOCTOR, CALL 800.789.PENN, OR VISIT **chestercountyhospital.org**

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celebrating our philanthropic community

Chester County Hospital stands on a foundation of deeply rooted history, unique culture, and powerful philanthropy – values that still guide us today. As our campus footprint changes with our largest expansion project to-date, we want to honor our roots and thank our supportive community.

In January 2020, when the new front doors open, two wall installations will be revealed which pay tribute to the power of our community. Historical highlights, impactful gifts and donor stories will be featured, inspiring a new generation of compassionate, generous donors to influence tomorrow's advances in health care.

The future of healthcare is right HERE in Chester County. Your investment in the hospital provides essential resources for the very best in health care for your family, friends, and neighbors.

Chester County Hospital

To learn more about the installations or for giving options, please contact Ashley Kopp at 610.431.5266 or ashley.kopp@pennmedicine.upenn.edu.