

Spring 2019

Better Medicine

Lehigh Valley Health Network

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Better Medicine



FOR PROVIDERS BY PROVIDERS



LVHN LEADS IN ROBOTIC SURGERY

Program is the largest, most advanced in the region

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Sounding the Warning About E-Cigarettes and Vaping

By Rosa Gomez DeJesus, MD, and Mary Jane Hanson, CRNP, PhD

About the authors: Rosa Gomez DeJesus, MD, is an adolescent medicine pediatrician with LVPG Adolescent Medicine–17th Street. Mary Jane Hanson, CRNP, PhD, is a family nurse practitioner with LVPG Family Medicine–Albrightsville.



Rosa Gomez DeJesus, MD
Adolescent medicine



Mary Jane Hanson, CRNP, PhD
Family medicine

MOST TEENS KNOW THAT USING TOBACCO IS DANGEROUS, AND TEEN USE OF CIGARETTES AND OTHER COMBUSTIBLE SMOKING PRODUCTS has dropped in recent years. But the advent of electronic cigarettes (e-cigarettes) and vaping have reversed this decline.

According to the 2018 Youth Tobacco Use Survey, more than 3.6 million youth nationwide currently use e-cigarettes, making them the most commonly used tobacco product. E-cigarette use rose to nearly 21 percent among high school students and nearly 5 percent among middle school students in 2018.

As clinicians, it is imperative that we take steps to reverse this trend by educating young patients and parents who may believe that e-cigarettes and vaping are safer than traditional smoking. Here are four critical messages that we must get across:

E-cigarettes and vaping products contain nicotine: A typical cartridge for one of the most popular electronic delivery devices, JUUL, contains about as much nicotine as an entire pack of 20 cigarettes. E-liquids for vaping devices also contain nicotine.

Vaping aerosols contain other dangerous substances: Although aerosols from e-devices may lack tar and other carcinogens found in tobacco smoke, they contain harmful substances including heavy metals, benzene, ultrafine particles and flavoring chemicals (the flavors make them particularly appealing to youth). Vaping may cause lung damage, decrease ability to fight infection, trigger coughing and throat irritation, and increase cancer risks. Other harms have included burns from batteries catching fire and children ingesting poisonous liquid from cartridges.

Teens who use e-cigarettes are more likely to use traditional smoking products: Developing a nicotine habit through vaping can leave youth more prone to addiction from other drugs or additional sources of nicotine, including tobacco. Young people who start experimenting with e-cigarettes are six times more likely than nonusing peers to eventually end up smoking regular cigarettes.

E-cigarettes and vaping products are not FDA-approved cessation aids: Adult smokers who believe that switching to e-cigarette products will help them quit smoking need to be guided toward traditional smoking-cessation programs instead.



 TO REFER A PATIENT TO PRIMARY CARE, CALL 888-402-LVHN (5846).

Using the Quality Dashboard to Drive Better Care

By Michael Rossi, MD, MBA

About the author: Michael Rossi, MD, MBA, is Chief Physician Executive for Lehigh Valley Health Network and President of Lehigh Valley Physician Group. He is a Clinical Professor of Cardiovascular Medicine at University of South Florida Morsani College of Medicine.



Michael Rossi, MD, MBA
Chief Physician Executive

TO PROVIDE BETTER MEDICINE IN THIS NEW HEALTH CARE ERA, WE CONTINUE TO BE GUIDED BY THE INSTITUTE FOR HEALTHCARE IMPROVEMENT'S (IHI) TRIPLE AIM,

a framework that helps us produce better health, better care and better cost. By holding ourselves accountable for the overall well-being of our population, we create better health. By delivering an exceptional experience at every touch point, we provide better care. By embracing the fact that quality care costs less, we provide better care.

Quality Dashboard

The Quality Dashboard is a key component to help us achieve the Triple Aim and create a networkwide culture of measurement, goal alignment and transparency. Each year, a multidisciplinary group of physicians, clinical staff and administrators establishes Lehigh Valley Physician Group (LVPG) Quality Dashboard Metrics. This team evaluates more than 200 quality measures to determine the ones that will have the biggest impacts from both a clinical and operational perspective to drive better care.

For 2019, LVPG Quality Dashboard Metrics are:


- BMI screening and follow-up for patients ages 18 and older
- Pediatric weight assessment and counseling for patients ages 3 to 17
- Screening for clinical depression and follow-up plan for patients ages 12 and older
- Annual wellness visits for patients ages 18 and older
- Adolescent wellness visits for patients ages 12 to 21
- Child vaccination rates
- Colorectal cancer screenings for patients ages 50 to 75

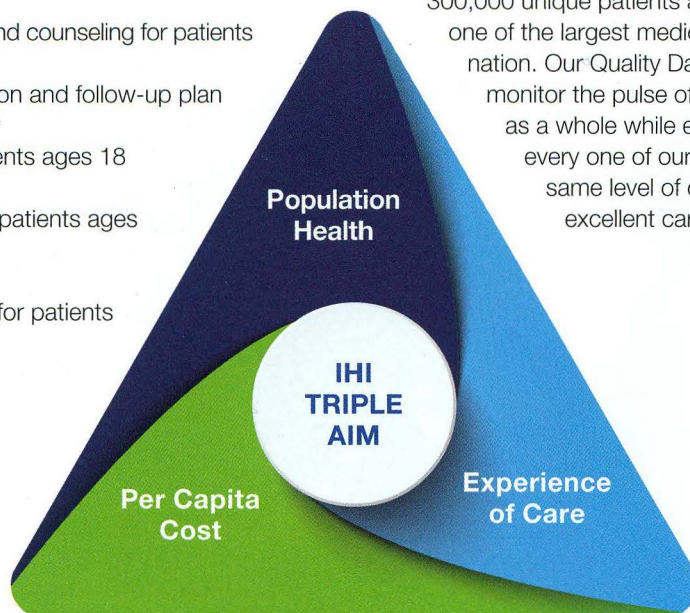
- Breast cancer screenings for women ages 50 to 74
- Hemoglobin A1c testing for patients ages 18 to 75 with a diagnosis of diabetes mellitus
- Diabetes eye exams for patients ages 18 to 75 with diabetes
- High blood pressure management
- Statin therapy for at-risk patients

By integrating these metrics into the Epic electronic medical record (EMR) system, we keep them top of mind and institute them into our daily patient interactions.

Work is underway

Our work on the 2020 Quality Dashboard has already begun. Some of 2019's metrics, including BMI, colorectal and breast cancer screenings, will likely stay constant. Others will reflect the current health trends and concerns of our patient population. Potential metrics under review include tracking opioid usage, depression remission and the percentage of patients who have advanced care planning measures that are documented in Epic.

As part of a network that cares for 300,000 unique patients annually, LVPG is one of the largest medical groups in the nation. Our Quality Dashboard helps us monitor the pulse of the community as a whole while ensuring that every one of our patients gets the same level of comprehensive, excellent care. 



Next-Generation Surgical Robot Comes to LVHN

Single port da Vinci SP® system is one of just 15 in the world



Angelo Baccala, MD
Urology



Martin Martino, MD
Gynecologic oncology

LEHIGH VALLEY INSTITUTE FOR SURGICAL EXCELLENCE AT LEHIGH VALLEY HEALTH NETWORK (LVHN) HAS ACQUIRED THE NEWEST

GENERATION of robotic surgery technology, the da Vinci SP® (single port) robotic surgery system, which makes it possible for surgeons to enter the body through a single incision. LVHN is the first network in the region, and one of only 15 health care providers in the world, to offer surgery with the da Vinci SP.

The U.S. Food and Drug Administration (FDA) has cleared da Vinci SP for urological procedures that are appropriate for a single-port approach. Future applications may include otolaryngology and colorectal procedures.

Enhanced flexibility and movement

"Any urological procedure that is done using a robotic approach can be performed with the da Vinci SP system using fewer ports," says Angelo Baccala, MD, Chief, Division of Urology, with LVPG Urology. "This includes cystectomy, partial nephrectomy, radical prostatectomy, adrenalectomy and ureteral surgery."

The da Vinci SP's surgical arm includes a flexible endoscopic camera and three instrument drives, which can be outfitted with a suite of uniquely articulating EndoWrist® SP instruments that mimic the movement of the human wrist, shoulder and elbow.

"These instruments provide access to all four quadrants of the abdomen, allowing unparalleled flexibility and movement and enabling us to work around nerves and other vital structures," Baccala says. "There's less tissue disturbance, which should lead to less pain and faster recovery times."

The da Vinci SP at Lehigh Valley Hospital (LVH)—Cedar Crest enhances the Institute for Surgical Excellence robotic surgery program, the largest and most advanced in the region. The program now includes 10 robots, with at least one at six LVHN hospital campuses, including LVH—Cedar Crest, LVH—17th Street, LVH—Muhlenberg, LVH—Schuylkill, LVH—Hazleton and LVH—Pocono. More than 50 surgeons, spanning 11 specialties, have performed more than 15,000 robotic procedures at LVHN since 2008.

Unmatched clinical expertise and experience

Martin Martino, MD, with LVPG Gynecologic Oncology, is Medical Director of the LVHN Minimally Invasive and Robotic Surgery

program. He notes that the expertise of the surgeons and the entire robotic surgery staff is just as critical as the technology. Since the inception of the robotics program, LVHN has been a leader in developing national guidelines to improve patient safety and is a founding member of the Robotic Training Network (RTN). Through this partnership, surgeons at LVHN collaborated with eight other leading academic centers – including Cleveland Clinic, Johns Hopkins and Duke – to develop a standardized surgical curriculum for teaching robotic surgery.

"By testing surgeons in a simulated setting, LVHN has taken a national leadership role to demonstrate how to perform minimally invasive surgery to achieve optimal outcomes," Martino says. "The da Vinci SP allows us to take the next step in using robotic technology to improve patient outcomes and enhance our position as a leading training center for surgeons from across the country."



TO REFER A PATIENT FOR ROBOTIC SURGERY, CALL
888-402-LVHN (5846).

1. "Proving the effectiveness of the Fundamentals of Robotic Surgery (FRS) Skills Curriculum: a single-blinded, multispecialty, multi-institutional randomized control trial." R.M. Satava et al. *Annals of Surgery*. Jan. 1, 2019; doi: 10.1097/SLA.0000000000003220.

Advanced Endocrine Procedures and Expertise

Patients have access to fellowship-trained endocrine surgeon



Thomas Diven, MD
Surgery

WHEN PATIENTS PRESENT WITH THYROID, PARATHYROID, ADRENAL GLAND AND OTHER ENDOCRINE ISSUES, Lehigh Valley Special Surgery Institute at Lehigh Valley Health Network (LVHN) offers a full complement of diagnostic and surgical options.

“Endocrine disorders can be challenging to diagnose and treat,” says surgeon Thomas Diven, MD, with LVPG General Surgery. “Primary care physicians shouldn’t feel that they have to handle everything on their own. We have excellent resources available, and we’re happy to see these patients and assist with their evaluations, regardless of whether they need surgery.”

Wide range of treatments

Primary care physicians typically identify potential endocrine issues in the course of a physical examination, or when patients complain of swallowing problems, a nodule they feel or other thyroid issues. In many cases, these problems also are detected as incidental findings on a computed tomography (CT) scan or ultrasound performed for another reason.

These problems can result from a number of underlying causes, including:

- Benign thyroid disease
- Parathyroid disease, such as hyperparathyroidism
- Adrenal disease
- Endocrine cancer

In most cases, biopsy is the first step in evaluating a patient and determining if surgery is indicated. For more serious thyroid issues, such as nodules or cancer, surgery remains the primary treatment.

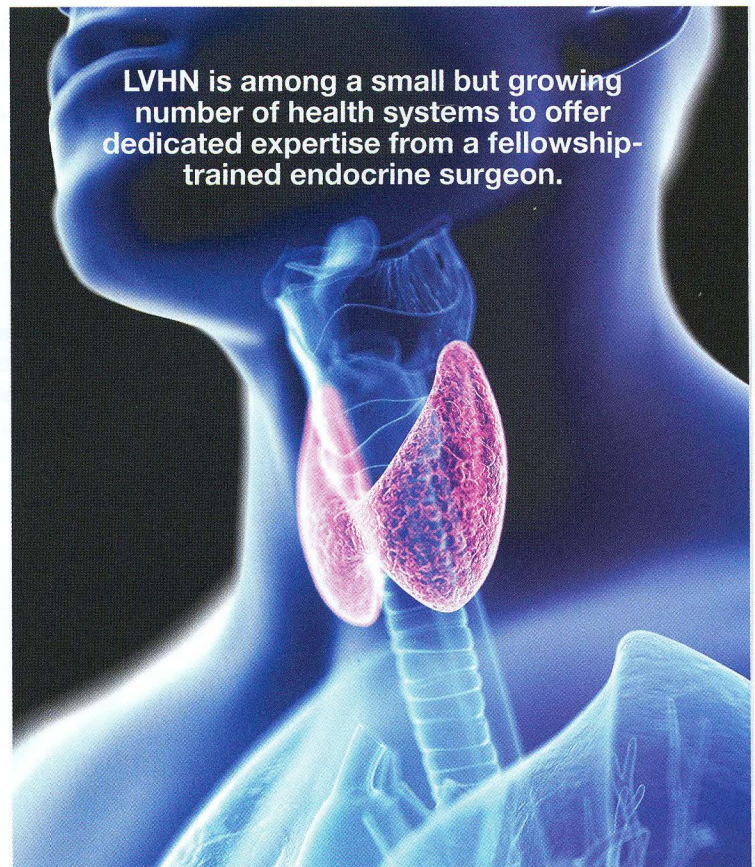
LVHN surgeons can perform the full range of endocrine surgeries, including parathyroidectomy, total thyroidectomy, thyroid lobectomy, lymph node removal, radical neck dissection and many others.

Expertise matters

Historically, most endocrine procedures were performed by general surgeons or surgical oncologists who found a niche

with these types of procedures over time. Today, however, LVHN is among a small but growing number of health systems to offer dedicated expertise from a fellowship-trained endocrine surgeon. Before joining LVHN in 2015, Diven completed a fellowship in endocrine surgery at NorthShore University HealthSystem in Illinois.

“Most physicians referring for a thyroid, parathyroid or endocrine issue assume that the patient will work with a general surgeon who happens to perform a lot of endocrine procedures,” Diven says. “There’s nothing wrong with that. But we do find that patients are more comfortable when they know they’re working with a surgeon who has extensive, dedicated training and expertise in this area. I’ve performed hundreds and hundreds of endocrine surgeries, and I can discuss all the options and specifics with patients.”



LVHN is among a small but growing number of health systems to offer dedicated expertise from a fellowship-trained endocrine surgeon.



TO REFER A PATIENT FOR ENDOCRINE SYSTEM TREATMENT, CALL 888-402-LVHN (5846).

LVHN to Offer New Brain Tumor Surgical Technique

Fluorescence-guided resection allows better identification of tumor tissue for improved removal



P. Mark Li, MD, PhD
Neurosurgery

FORTUNATELY, BRAIN TUMORS ARE RARE. AN ESTIMATED NEARLY 87,000 PATIENTS IN THE U.S. WILL BE DIAGNOSED WITH A PRIMARY BRAIN TUMOR IN 2019, according to the National Brain Tumor Society.¹ Still, when patients require diagnosis and treatment, they can receive excellent medical care locally.

Lehigh Valley Health Network (LVHN) has the depth of experience and volume to support a major multidisciplinary brain tumor center.

“We are one of the busiest brain tumor centers in Pennsylvania,” says P. Mark Li, MD, PhD, Chief, Division of Neurological Surgery, with LVPG Neurosurgery. “Our program strives to give patients the leading-edge care they deserve.”

ILLUMINATING HIDDEN BRAIN CANCER

As part of that mandate, LVHN’s brain tumor center will begin offering

fluorescence-guided resection in June 2019. The surgical technique uses an optical imaging agent, aminolevulinic acid hydrochloride (ALA HCL), that was recently approved by the FDA. “It’s the first significant breakthrough in surgical technology for brain tumors in a while, and we’re very excited to be able to offer it to eligible patients,” Li says.

With fluorescence-guided resection, brain tumors and their vasculature are made visible with the combination of the fluorescing agent and a special microscope filter. Typically, brain tumors can have fingerlike projections that interface with normal brain tissue.

“Fluorescence-guided resection should allow us to better identify little segments of tumor tissue from normal brain for improved removal. The better site resection we can achieve, the better the prognosis,” Li says. LVHN is the only hospital network to offer fluorescence-guided resection in the Lehigh Valley.

The new surgical technique has been cleared for high-grade primary brain tumors, such as glioblastoma and

grade 3 anaplastic astrocytoma and oligodendroglioma.

Specialized treatment team

LVHN’s brain tumor multidisciplinary program treats roughly 50 cases of glioblastoma annually as well as the entire spectrum of brain tumors in patients of all ages. The program features three neurosurgeons who have specialty training in brain tumor surgery, a team of radiation oncologists who specialize in the treatment of brain tumors with stereotactic radiosurgery (SRS), a large neuroradiology department, a dedicated neuropathologist and dedicated board-certified neuro-oncologist Tara Morrison, MD, with LVPG Hematology Oncology.

Patients meet with Morrison postoperatively for follow-up care. “My role is to manage their medications related to brain tumor, whether that be steroids, antiseizure medication or nausea medication, and coordinate long-term follow-up to monitor the tumor over time with imaging scans, symptom management and, if necessary, guiding chemotherapy and/or radiation,” Morrison says.

Collectively, the brain tumor team functions as a tumor board for consensus treatment decisions for every new diagnosis.

“We’re really proud of our brain tumor program and the advanced options and high quality of care we have to offer here,” Morrison says.



► LVHN is the only hospital network to offer fluorescence-guided resection in the Lehigh Valley.

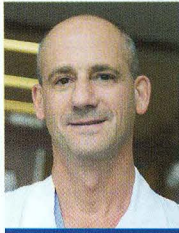


 **TO REFER A PATIENT FOR BRAIN TUMOR TREATMENT, CALL 888-402-LVHN (5846).**

1. “Quick brain tumor facts.” National Brain Tumor Society website. braintumor.org/brain-tumor-information/brain-tumor-facts.

Aggressive New Approaches Target Pancreatic Cancer

Providing leading-edge treatments close to home



Jeffrey Brodsky, MD
Surgical oncology



Alyson McIntosh, MD
Radiation oncology

WHEN JEOPARDY! GAME SHOW HOST ALEX TREBEK ANNOUNCED HE HAD METASTATIC PANCREATIC CANCER, the public was reminded of the seriousness of this diagnosis and limited options available for those with advanced disease. However, for patients who are not metastatic at presentation, emerging treatment modalities can provide powerful new tools to fight this cancer. Lehigh Valley Cancer Institute provides among the most aggressive pancreatic cancer treatments available anywhere.

Expanding surgical approaches

Surgery remains the most effective treatment for pancreatic cancers, requiring either distal pancreatectomy with splenectomy or pancreaticoduodenectomy (also called Whipple procedure). Occasionally total pancreatectomy is indicated. These procedures can be quite challenging. Procedures involving venous and/or arterial resection can carry significant risk.

Surgical oncologists at Lehigh Valley Cancer Institute, led by Jeffrey Brodsky, MD, with LVPG Surgical Oncology, have performed more than 300 pancreatic procedures in the past six years, including many cases with complex vascular resection plus or minus reconstruction. In fact, Brodsky and his colleague, Aaron Blackham, MD, also with LVPG Surgical Oncology, treat many borderline-resectable cases that other institutes would decline.

Without surgery, pancreatic cancer patients rarely achieve

long-term survival. However, many surgeons aren't comfortable with aggressive vascular resections," Brodsky says. "You need extensive experience to do them safely, and most hospitals perform just a handful of pancreatic resections per year. I've been doing aggressive pancreatic resections for over 25 years, while minimizing operative times, hospital stays and complications.

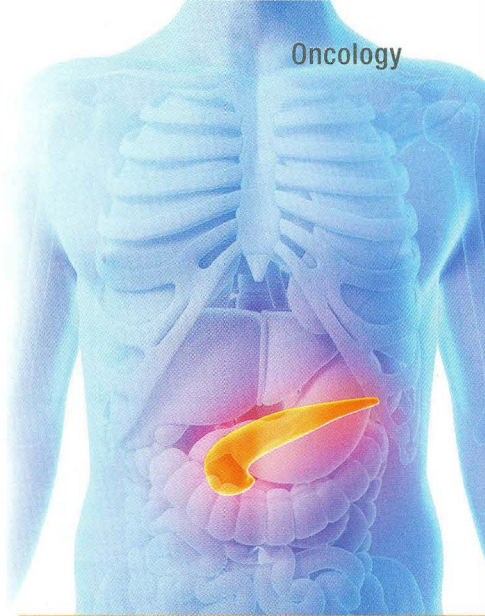
"It's rewarding to do these procedures, get patients out in six or seven days, and have them come back well enough to resume a good quality of life," Brodsky says.

Neoadjuvant radiation therapy

The Cancer Institute's standard approach for pancreatic cancer cases begins with a course of chemotherapy, followed by restaging the patient. Based on imaging results, patients either proceed directly to surgery or have a short course of stereotactic body radiation therapy (SBRT) first.

"In the past, we performed surgery before adjuvant treatment, but the paradigm is shifting toward neoadjuvant treatment," says radiation oncologist Alyson McIntosh, MD. "In many cases, we can treat borderline-resectable patients and shrink the tumor down to the point that surgery is an option."


Historically, radiation therapy approaches could not be added to chemotherapy without increasing toxicity, often resulting in patients not being able to receive a full course of chemotherapy. With



Surgical oncologists at Lehigh Valley Cancer Institute have performed more than 300 pancreatic procedures in the past six years.

the shorter fractionation of SBRT, radiation oncologists can achieve local control while allowing for a full course of chemotherapy. They also can get patients to surgery in about half the time – five treatments over a week and a half, versus five to six weeks for traditional radiation therapy.

Cancer Institute oncologists also use Calypso beacons, which allow for real-time tracking during radiation therapy. With the ability to track breathing motion, oncologists can narrowly target radiation to allow for smaller margins, sparing surrounding tissue.

"This is very leading-edge," McIntosh says. "Not many institutions feel comfortable performing these procedures, as they require a lot of complicated treatment and planning, as well as experienced surgeons and a very good physics team. Because we do them so often, we can do it very effectively." 

 TO REFER A PATIENT FOR CANCER TREATMENT, CALL **888-402-LVHN (5846)**.

Chest Wall Deformities Program Provides Specialized Care for Rare Disorders

Multidisciplinary team focuses on functional, cosmetic improvement



Sarah Jones Sapienza, MD
Pediatric surgery

THE CHEST WALL PROGRAM AT LEHIGH VALLEY REILLY CHILDREN'S HOSPITAL PROVIDES COMPREHENSIVE EVALUATION AND TREATMENT OF DISORDERS AFFECTING THE CHEST WALL, including pectus excavatum (PE) and pectus carinatum (PC). Chest wall abnormalities are associated with impaired cardiac and pulmonary function, as well as causing psychological stress.



Daniel Relles, MD
Pediatric surgery

Types of deformities
PE and PC are characterized by abnormal overgrowth of sternal and costal cartilages, resulting in chest depression or protrusion. PE is associated with cardiopulmonary impairment, while PC causes deformation of the entire

thoracic cage. The appearance of chest wall deformities often changes dramatically around the time of adolescent growth, and psychological symptoms related to body image issues may significantly impact quality of life.

“Early evaluation by a pediatric surgeon before a child reaches puberty is helpful for families to understand what to expect as their son or daughter matures and when intervention is optimal,” says pediatric surgeon Sarah Jones Sapienza, MD, with LVPG Pediatric Surgical Specialties.

Coordinated treatment


A multidisciplinary team of three pediatric surgeons, a thoracic surgeon, anesthesiologists, pain medicine experts, pediatric nurses, physical therapists and orthotists devise coordinated treatment plans tailored to the individual needs of pectus patients.

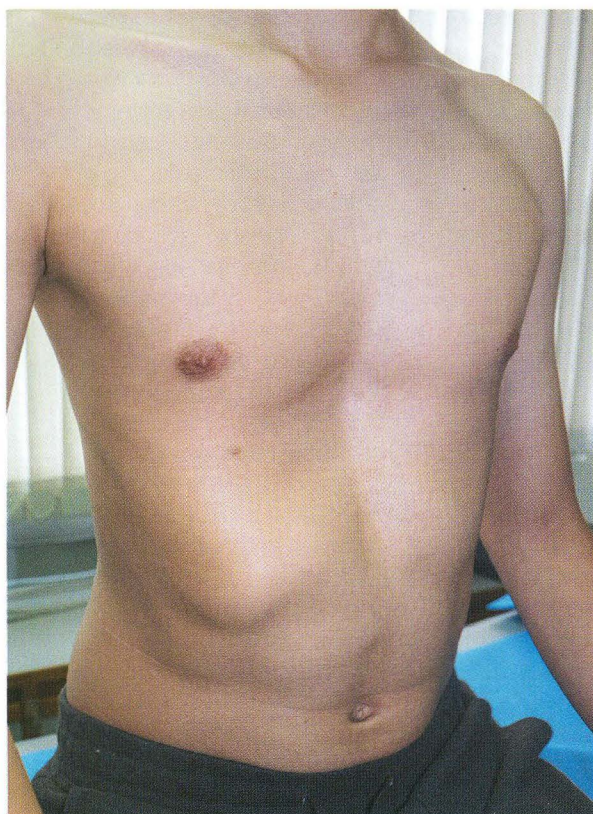
“Pectus excavatum and pectus carinatum are relatively rare conditions, and the surgical procedures used to treat these deformities require an experienced, dedicated team,” says pediatric surgeon Daniel Relles, MD, with LVPG Pediatric Surgical Specialties.

For patients diagnosed early with mild to moderate PE, a

focused exercise regimen and/or a nonsurgical vacuum bell approach may be appropriate. Surgeons employ the minimally invasive Nuss approach for more severe cases. An incision is made on each side of the chest wall so that customized steel bar(s) can be inserted under the sternum and attached laterally to the outer edge of the rib cage. After the sternum reforms (two to four years), the metal bar is removed in an outpatient procedure.

The open Ravitch procedure, which also involves placement of a metal bar in the chest, is very rarely performed in the pediatric population and is almost never a first-line treatment. With Ravitch, the steel bar remains in place. A custom-made external brace is most often used to correct a carinatum defect, although the Ravitch approach may be an option in severe cases or when bracing is ineffective.

All Nuss and Ravitch procedures are performed by two surgeons to minimize risk when the metal bar is passed between the heart and chest wall. In addition, the team uses the Rultract system for sternal elevation during the Nuss procedure to reduce risk for cardiac puncture and aortic injury. The Children’s Hospital also employs intraoperative cryoanalgesia for improved pain control. 



TO REFER A PATIENT FOR A PEDIATRIC CHEST WALL DEFORMITY, CALL **888-402-LVHN (5846)**.

► *The appearance of chest wall deformities often changes dramatically around the time of adolescent growth.*

Musculoskeletal Services Now Under One Roof on Hausman Road

Centralized expert orthopedic, rheumatology, physiatry and pain management services



Eric Lebbly, MD
Orthopedic surgery



Kristin Ingraham, DO
Rheumatology

WITH THE OPENING OF THE REGION'S PREMIERE MUSCULOSKELETAL CENTER—HAUSMAN ROAD, 798 Hausman Road, Suite 100, in Allentown, patients with injuries or conditions affecting joints, tendons, ligaments, bones or muscles can access the full spectrum of musculoskeletal services in one convenient location. It's near the Center for Orthopedic Medicine—Tilghman, the region's only campus dedicated to orthopedics.

"With two fellowship-trained joint surgeons, a fellowship-trained spine surgeon and board-certified rheumatology, physiatry and pain management team, patients with musculoskeletal ailments won't have to go anywhere else for treatment," says Eric Lebbly, MD, Chief of Orthopedic Surgery. LVPG Orthopedics and Sports Medicine—Hausman Road physicians are certified by the American Board of Orthopedic Surgery and have subspecialty expertise in hip and knee joint replacement, spine care and physiatry.

Collaborative care

The Musculoskeletal Center—Hausman Road brings together members of the Divisions of Surgery, Medicine and Anesthesiology, providing one-stop convenience. The Musculoskeletal Center provides X-ray services as well as a procedures suite where patients can receive lumbar epidurals under fluoroscopy for pain management.

"Now that we're all under one roof, it's easier for us to communicate with each other to give patients the best possible experience," Lebbly says.

Musculoskeletal Center—Hausman Road Practices

- LVPG Orthopedics and Sports Medicine
- LVPG Physiatry
- LVPG Pain Specialists
- LVPG Rheumatology



In fact, when Kristin Ingraham, DO, a rheumatologist with LVPG Rheumatology—Hausman Road had a question about a rare disease, "I just went right to the orthopedic surgeons and got it answered quickly," Ingraham says. Overall, "patients feel better when they know their doctors are communicating well with each other and it shows," she says. "Our electronic medical record system is very strong but being able to communicate in person takes it to the next level."

Easy access for patients

Designed with patients in mind, the large multispecialty suite isn't a new building, but a redesign of the entire first floor with its own parking lot.

"Patients can just park and go directly in," Ingraham says. To save time, patients can easily make multiple same-day appointments to see more than one provider at the Musculoskeletal Center.

Located on the ground level, Musculoskeletal Center—Hausman Road is designed for easy navigation for patients with musculoskeletal issues, such as osteoarthritis or rheumatoid arthritis. It features wide, well-lit hallways and spacious exam rooms to accommodate patients in wheelchairs and those with walkers and/or oxygen equipment. With separate waiting rooms, patient check-in is organized according to specialty. "It's a wonderful space. I'm excited to be here and patients are telling us they are too," Ingraham says.

In the future, chiropractic and advanced spine care services will be added at the Musculoskeletal Center. 🏠



TO REFER A PATIENT FOR MUSCULOSKELETAL CARE, CALL 888-402-LVHN (5846).

Rezum[®] Therapy Offers Minimally Invasive Treatment for BPH

Outpatient procedure provides alternative to medication, surgery



Clifford Georges, MD
Urology



Jatin Gupta, DO
Urology

UROLOGISTS AT LEHIGH VALLEY HEALTH NETWORK (LVHN) TREAT BENIGN PROSTATIC HYPERPLASIA (BPH) WITH THE REZUM[®] PROCEDURE,

a minimally invasive therapy that results in long-lasting improvement in symptoms while preserving sexual function.

BPH affects approximately half of all men by ages 51-60 and is associated with bladder outflow obstruction that results in lower urinary tract symptoms (LUTS) in a large proportion of BPH patients.¹ LUTS have a significant impact on quality of life.

Rezum procedure

In this transurethral procedure, the Rezum system applies thermal energy stored in sterile water vapor to enlarged prostate tissue in precise nine-second treatments. Cooling vapor condenses immediately on contact with the tissue, and stored thermal energy is released, causing cell death. Reabsorption of ablated tissue reduces the volume of prostate tissue adjacent to the urethra to relieve LUTS.

Rezum treatment is appropriate for small to medium prostate lobes.

Performed in an outpatient setting using sedation rather than general anesthetic, the one-time procedure is completed within approximately five minutes, and patients are able to return home without assistance.

“Rezum is a safe, effective treatment for a large percentage of men who have BPH-related symptoms,” says urologist Clifford Georges, MD, Director for LVHN Center of BPH and Men’s Health, with LVPG Urology. “Recovery is rapid and patients typically experience symptom relief within two to three months.”

Rezum advantages

Three-year clinical data comparing Rezum treatment with doxazosin and/or finasteride demonstrated sustained improvement in LUTS, urine flow, quality of life and preservation of sexual function. Rates of clinical progression of BPH were about five times lower over three years of a single thermal therapy procedure versus any drug treatments. Similarly, Rezum-related improvements in LUTS and urinary flow came without impacting erectile and ejaculatory function that occurs with high

frequency (<65 percent) with surgery.²

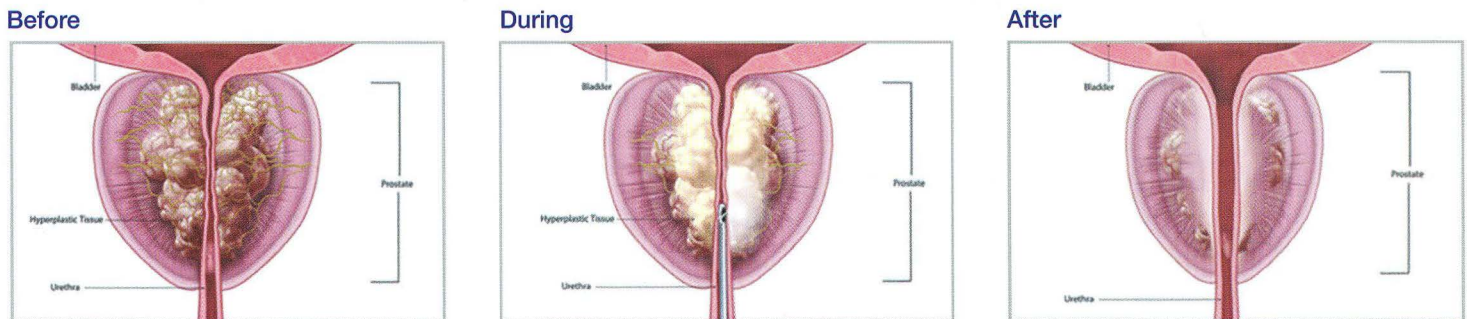
“Many men with BPH stop taking prescribed medication or do not consider surgery because of concerns about sexual dysfunction,” says urologist Jatin Gupta, DO, with LVPG Urology. “Rezum represents an important new treatment option to consider given low complication rates.”

Other BPH treatments

Not every patient with BPH is a candidate for Rezum therapy. Exclusion criteria include previous surgical/radiation treatment involving the prostate, a history of urinary retention and patients with a large prostate burden.² LVHN offers a full range of BPH surgical treatments, including:

- **Transurethral resection of the prostate (TURP)** – Considered the gold standard intervention,² TURP entails insertion of a resectoscope into the urethra to trim away excess prostate tissue.
- **Photoselective vaporization of the prostate (PVP)** – An alternative to TURP, PVP uses a cystoscope and laser to ablate excess prostate tissue.
- **Holmium laser enucleation of the prostate (HoLEP)** – Often used for patients with prostates too large (>100 g) for TURP or PVP, HoLEP involves anatomically enucleating the majority of excess benign prostate tissue. 🌐

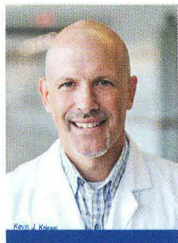
📞 TO REFER A PATIENT FOR UROLOGY TREATMENT, CALL 888-402-LVHN (5846).



1. “Rezum: a new transurethral water vapour therapy for benign prostatic hyperplasia.” J. Westwood et al. *Therapeutic Advances in Urology*. 2018; 10(11): 327-33.
 2. “3-year treatment outcomes of water vapor thermal therapy (Rezum system) compared to doxazosin, finasteride and combination drug therapy for men with benign prostatic hyperplasia: cohort data from the Medical Therapy of Prostatic Symptoms (MTOPS) Trial.” N. Gupta et al. *Journal of Urology*. 2018; 200(2): 405-13.

Expanding Otolaryngology Services

LVHN's comprehensive ENT care comes to Muhlenberg



Kevin Kriesel, MD
Otolaryngology

A NEW LVPG PRACTICE NOW OFFERS MULTISPECIALTY OTOLARYNGOLOGY CARE AT THE LEHIGH VALLEY HOSPITAL-MUHLENBERG CAMPUS. LVPG Ear, Nose and Throat-Muhlenberg builds upon the services offered by LVPG Ear, Nose and Throat-Pond Road, LVPG Ear, Nose and Throat-17th Street and LVPG Ear, Nose and Throat-Palmer Township. Specialty care includes:



Hearing restoration surgery and sinus surgery

Kevin Kriesel, MD, is an otology subspecialist with expertise in hearing restoration surgery, such as stapedectomy and ossiculoplasty, for patients with conductive hearing loss. He also performs tympanoplasty (tympanic membrane reconstruction) and mastoidectomy (for conditions such as cholesteatoma or mastoiditis). For rehabilitation of single-sided deafness or unilateral conductive hearing loss, Kriesel offers bone-anchored hearing aid (BAHA) implantation. He also provides all types of sinus surgery, from image-guided balloon sinuplasties to complex polyp removal or sinus tumor excision.



Head and neck cancer care

Head and neck surgeon Chetan Nayak, MD, is fellowship-trained in complex procedures including microvascular surgical reconstruction of the tongue, jaw and throat to provide function after resection. He collaborates with medical oncology and radiation oncology to provide comprehensive cancer care.

Nayak also offers robotic surgery to remove cancer of the tonsil or base of the tongue. This minimally invasive approach allows complete resection of the tumor without having to remove parts of the mandible or other vital structures.

Nayak aims to provide early diagnosis of lesions in the oral cavity, neck lumps or bumps, or concerning symptoms such as sore throat, hoarseness or neck swelling that persists longer than two weeks.



General otolaryngology care

Physicians from LVPG Ear, Nose and Throat-Pond Road rotate at the new practice to provide medical and surgical care for disorders of the ear, nose, throat, sinuses, larynx, oral cavity, upper pharynx and neck.




Audiology services

The practice offers a full spectrum of audiology services, including hearing testing, balance testing and hearing aid dispensing services.

"The success of our other LVPG ENT practices has demonstrated the growing need for this care in the Lehigh Valley," Kriesel says. He encourages providers to refer patients with any of the following issues:

- Airway obstructions
- Swallowing issues
- Decreased hearing, especially cases of sudden-onset hearing loss
- Chronic sinus infections or nosebleeds
- Recurrent sore throat or noisy breathing in adults or children
- Any condition that requires a second opinion

"We want referring physicians to know that we have all the capabilities for diagnosis and treatment, as well as any support that may be required from other specialists throughout Lehigh Valley Health Network," Kriesel says. "Patients who previously may have had to travel to Philadelphia or New York City can now get everything they need, close to home." 



TO REFER A PATIENT FOR EAR, NOSE AND THROAT CARE,
CALL **888-402-LVHN (5846)**.

LVH–Pocono Cardiac Rehabilitation Program Celebrates 40th Anniversary

Patients strengthen hearts under watchful eye of registered nurses and exercise professionals



Anil Gupta, MD
Cardiology

IN FEBRUARY 2019, THE CARDIAC REHABILITATION PROGRAM AT LEHIGH VALLEY HOSPITAL (LVH)–POCONO CELEBRATED 40 YEARS OF DOING ITS PART TO STRENGTHEN PATIENTS’

HEARTS. The cardiac rehabilitation facility – which holds the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) certification – remains the only one in Monroe County. It is 40 years old, and going strong.

and well-being by 50 percent,” says Anil Gupta, MD, with LVPG Cardiology and Medical Director of LVH–Pocono’s cardiac rehabilitation program. “Everything improves with cardiac rehab.”

As a result of this solid evidence, “more physicians are embracing the idea of cardiac rehabilitation and referring patients to the program,” says Linda Breen, clinical supervisor in cardiac rehabilitation at LVH–Pocono. That’s one of the biggest changes she has noticed in her 32 years with the cardiac rehabilitation program. “Doctors are realizing we’re a team and recommending cardiac rehab to their patients,” she says, and that’s what gets patients in the door. “The number one indicator of whether a patient goes to cardiac rehab is if their doctor recommends it,” Breen says.



Linda Breen
Clinical services

Data tracks benefits

“Evidence from AACVPR and LVH–Pocono patient data suggests that cardiac rehabilitation can reduce the risk for all-cause mortality by 30 percent, improve patients’ stamina and strength so they can get back to their previous activities, and improve their confidence

Structured and monitored program

The outpatient-based monitored exercise program helps improve outcomes in patients who have congestive heart failure, myocardial infarction, heart transplant, left ventricular assist device (LVAD) therapy, valve replacement, open heart surgery, angioplasty, stent implantation or other cardiac conditions.

Covered by most insurance plans, eligible patients can receive up to 36 one-hour exercise sessions under the supervision of specially trained registered nurses and master’s-level exercise physiologists. “The staff talks with patients about their medications, diet and exercise habits, and tailors a program for them based on their goals,” Gupta says.

While patients exercise at the facility, their heart rate, rhythm and blood pressure are monitored. “If someone has pain, arrhythmia or a change in response to exercise, we can do an EKG and/or contact their physician,” Breen says. “It gives patients comfort knowing we are right there to help.” A code cart and physicians with LVH–Pocono’s emergency department are also immediately available.

After patients complete the monitored program, they can opt to self-pay. This allows them to continue exercising at LVH–Pocono on their own, but still under the watchful eye of registered nurses and exercise professionals.

“Once patients see how well they’re improving, they want to continue,” Breen says. Some patients have been exercising at the LVH–Pocono cardiac rehabilitation gym for years.



 TO REFER A PATIENT FOR CARDIAC REHABILITATION, CALL **888-402-LVHN (5846)**.

LVH–Pocono Adopts Laborist Model for Labor and Delivery

Model of care provides for emergencies and promotes patient safety



Daying Zhang, MD
Obstetrics and
gynecology

TRADITIONALLY, WHEN PATIENTS CHOOSE AN OBSTETRICIAN FOR THEIR PRENATAL CARE, their obstetrician or an obstetrician on call from the practice rushes to the hospital for labor and delivery. But what happens if the patient needs an emergency C-section? Or the fetal heart rate plummets during labor and delivery and the obstetrician is still en route?

“Sometimes the traditional approach to OB-GYN maternity care doesn’t meet a patient’s needs,” says Daying Zhang, MD, with LVPG Obstetrics and Gynecology.

24/7 coverage

To increase patient safety, Lehigh Valley Hospital (LVH)–Pocono is adopting the laborist model of maternity care. A laborist (also known as an OB hospitalist) is an OB-GYN who exclusively works full time in the hospital to treat women in labor or to respond to obstetric emergencies.

“Laborists stay in the hospital 24/7, so there’s always coverage. If patients need us, we’re here because we live at the hospital,” Zhang says.

Under the LVH–Pocono laborist model, patients will see an obstetrician or midwife in the office for their prenatal care. For labor and delivery, patients with uncomplicated vaginal deliveries are managed by a midwife on rotation at the hospital. If a complication develops, such as a shoulder dystocia or the patient requires a C-section, an LVH–Pocono laborist will manage the delivery.

“LVH–Pocono midwives and laborists work together to make sure patients deliver safely. That’s the goal,” Zhang says.

LVH–Pocono laborists also can perform other emergency obstetric surgeries, such as a dilation and curettage, but they won’t be performing scheduled gynecologic surgeries, Zhang says.

“We have to prepare patients about who their laborist may be and pictures help,” Zhang says. Studies show that introducing laborists to patients in this way doesn’t negatively impact patient satisfaction in the long run, she says.

“Given the unpredictable nature of obstetrics, the laborist model is all about patient safety,” Zhang

Benefits of Laborist Model



An OB-GYN works exclusively full time in the hospital for 24/7 care of women in labor.




A physician is always available to respond to obstetric emergencies.



Laborists work together with midwives to make sure patients deliver safely.

Preparing for delivery

Under the laborist model, patients meet the laborist who will be delivering their baby at the time of delivery. Laborists don’t come to the office; they only provide care in the hospital. Given that some patients may want to know who will be delivering their baby, office obstetricians and midwives will be introducing patients to laborists by showing patients the laborists’ photos.

It also can help make prenatal visits safer and more organized. Under the traditional model in which obstetricians provide prenatal care in the office and race to the hospital for deliveries, “we ended up not having a lot of time to see patients in the office,” Zhang says. 



TO REFER A PATIENT FOR OB/GYN CARE, CALL 888-402-LVHN (5846).

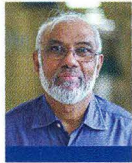
Around the Region

New Providers and Practice Sites

Now Serving Schuylkill



Robert McCauley, MD
LVPG
Endocrinology



Mohamed Meeran, MD
LVPG General
Surgery



Simi Rai, MD
LVPG Hematology
and Oncology

Now Serving Hazleton



Anthony Carrato, MD
LVPG Surgery



Shamsuddin Shaik, MD
LVPG
Endocrinology



Maria Pia Castillo, MD
LVPG Family
Medicine

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Denny John, MD
LVPG Neurology



Shahzad Kahn, MD
LVPG Neurology

Now Serving Pocono



Mary Ann Devine, MD
Intensivist
Service



Anirudh Kapoor, MD
LVPG Neurology



Kathleen Noll, MD
Anesthesia

New Obstetrics and Gynecology Providers



Christina Felten, MSN, CNM
LVPG Obstetrics
and Gynecology—
Pond Road



Michelle Huang, MD
LVPG Obstetrics
and Gynecology;
LVH—Cedar Crest
Labor and Delivery



Rebecca Langley, MSN, CNM, WHNP-BC
LVPG Obstetrics
and Gynecology—
Pond Road

New Bariatric Medicine Providers

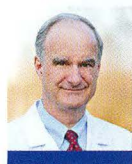


Monica Brandau, DO
LVPG General,
Bariatric and
Trauma Surgery—
Plaza Court; LVPG
Surgery—Health
and Wellness
Center, Hazleton

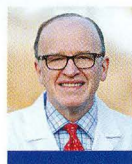


Sunil Daniel, MD
LVPG Bariatric
Medicine—1243
Cedar Crest

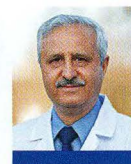
Now at LVPG Cardiology—Easton-Phillipsburg



Gary Costacurta, MD
Cardiology



Farhad Elmi, MD
Cardiology



Koroush Khalighi, MD
Cardiology



Chandulal Patel, MD
Cardiology



Rajeev Rohatgi, MD
Cardiology



Joseph Schiavone, MD
Cardiology



TO REFER A PATIENT TO CARE
BY LVHN PROVIDERS, CALL
888-402-LVHN (5846).

Hazleton

LVHN Cancer Center—Hazleton Earns Certification

LVHN Cancer Center—Hazleton has earned certification from the American Society of Clinical Oncology Quality Oncology Practice Initiative (QOPI®). This makes it the only QOPI-certified practice in lower Luzerne County.

Practices participating in the QOPI Certification Program can routinely evaluate practice performance against quality measures and standards established by oncology experts. They receive detailed reports to benchmark against other top-performing practices, and also learn from certification staff and surveyors to support and strengthen the effectiveness of

policies and procedures.

The certification process creates a culture of excellence and self-examination that helps practices deliver the best care to their patients. By becoming certified, a practice demonstrates its commitment to quality to patients, payors and the medical community.



QOPI Certification Program

Quality Cancer Care
Recognizing Excellence



TO REFER A PATIENT TO ONCOLOGY
CARE, CALL **888-402-LVHN (5846)**.



Specialty Care

Chronic Vein Condition Treatments Available

Lehigh Valley Health Network vascular surgeons offer comprehensive vein care and customized treatments that reduce vein-related pain and swelling in patients' legs while improving the health and appearance of lumpy veins.

Veins have valves that act as one-way flaps to prevent blood from moving backward. "If these valves don't work properly, blood leaks back into the veins and pools there," says vascular surgeon James Guzzo, MD, with LVPG Vascular Surgery and Chief, Division of Vascular and Endovascular Surgery.

"When blood pools in leg veins, it can lead to a condition called chronic venous insufficiency or CVI," says vascular surgeon Eric Wilson, MD, with LVPG Vascular Surgery and Chief, Department of Surgery, Lehigh Valley Hospital-Pocono.

Symptoms of CVI include varicose veins – swollen, twisted veins close to the skin's surface. Beyond the veins' sometimes unsightly appearance, CVI can cause leg pain, swelling, heaviness, fatigue or throbbing. Advanced vein disease also can lead to chronic leg wounds.

Depending on the type of vein issue present, procedures are done in the office or an outpatient setting. They can relieve leg pain caused by CVI, and have rapid recovery times:

- **Endovenous radiofrequency ablation** – A small catheter delivers a targeted pulse of energy that causes the vein to shrink and seal shut. Blood then naturally reroutes to surrounding healthy veins.
- **Sclerotherapy** – A chemical solution is injected into the vein, causing it to close and eventually be reabsorbed into surrounding tissue.
- **Microphlebectomy** – Small incisions are made to surgically remove larger veins.

 TO REFER A PATIENT TO TREATMENT FOR A CHRONIC VEIN CONDITION, CALL **888-402-LVHN (5846)**.

Lehigh Valley Reilly Children's Hospital


New Pediatric Unit Opens at Lehigh Valley Reilly Children's Hospital

A new inpatient pediatric unit featuring 30 private patient rooms opened at Lehigh Valley Reilly Children's Hospital in February. The unit has numerous amenities and features to give kids a comfortable place to get well, and families the space to support their child during their hospital stay.

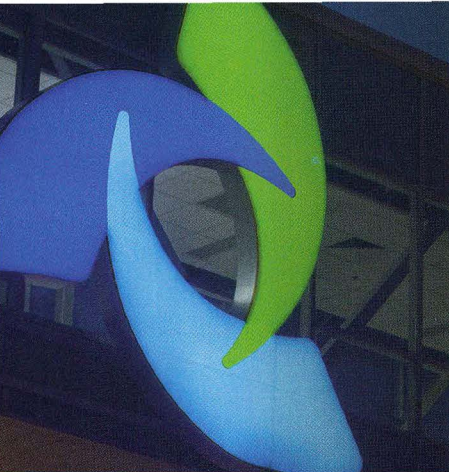
The new pediatric unit is located at Lehigh Valley Hospital-Cedar Crest on the fifth floor of Jandl Family Pavilion. The opening of the unit is part of a plan that will bring services from more than 30 pediatric specialties under one roof at Lehigh Valley Reilly Children's Hospital.

The new pediatric unit, at 24,000 square feet, has more than twice the space than the previous pediatric unit at Children's Hospital. The unit has a friendly environment for kids that includes patient rooms identifiable by colorful animals such as the "Blue Bear" room or "Red Rabbit" room. Each room has a playful design and décor, a sleeper sofa for parents to spend the night, a desk for parents who need to work while supporting their child, and plenty of storage. A family lounge on the unit has a bathroom, shower and laundry area that families can use.

The opening of the pediatric unit is part of the growth planned for the Children's Hospital following a generous gift from local business owners and philanthropists J.B. and Kathleen Reilly. Construction is underway on a dedicated lobby for Lehigh Valley Reilly Children's Hospital. The colorful and welcoming lobby will open in spring 2019. Expansion of the neonatal intensive care unit (NICU) and pediatric intensive care unit (PICU), and development of surgical, child-life and community health services for children also are planned.

 TO REFER A PATIENT TO TREATMENT FOR PEDIATRIC CARE, CALL **888-402-LVHN (5846)**.





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Continuing Education Conferences

MAY

23 Palliative Medicine Symposium

JUNE

5 Case Studies in Chemotherapy, Biotherapy and Immunotherapy Oncology Patient Management

SEPTEMBER

27-28 Fifth Annual Urology Symposium

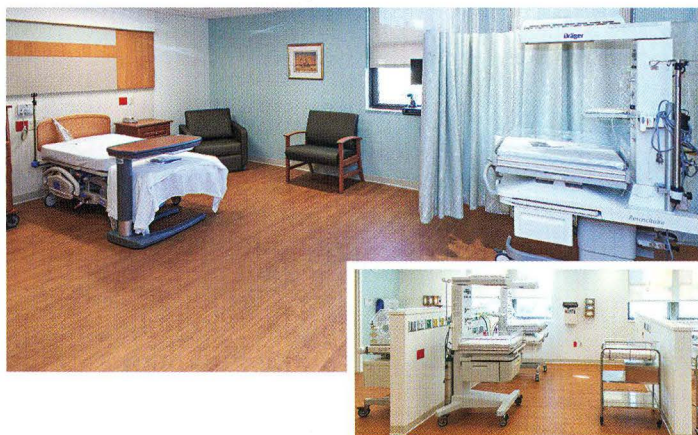
For information regarding these and other upcoming educational conferences, call the Department of Education at **610-402-2277** or visit go.activecalendar.com/lvhn-doe.

Dates and topics are subject to change.

10715M



Lehigh Valley Health Network



David Krewson, DO
 Obstetrics and gynecology



James Xenophon, MD
 Obstetrics and gynecology



Robert Zimmerman, DO
 Obstetrics and gynecology



Rebecca Rehatchek, CRNP
 Obstetrics and gynecology

Schuylkill

Expanding and Improving OB-GYN Care in Schuylkill County

Lehigh Valley Health Network is making access to obstetrics and gynecology care, as well as enhancing the labor and delivery experience, a priority in Schuylkill County.

In February, the new Family Birth and Newborn Center at Lehigh Valley Hospital (LVH)—Schuylkill—E. Norwegian Street opened. The \$7 million, 15,000-square-foot center offers five labor-delivery-recovery suites, two obstetric triage rooms, an operating suite, both a regular and isolation nursery, and nine family-friendly postpartum rooms.

To ensure women have access to high-quality OB-GYN care, LVPG Obstetrics and Gynecology has opened offices in Pottsville and Tamaqua. Board-certified OB-GYNs include David Krewson, DO, James Xenophon, MD, and Robert Zimmerman, DO, all fellows of the American Congress of Obstetricians and Gynecologists, and each is also certified in da Vinci® robotic surgery. Advanced practice clinicians Rebecca Rehatchek, CRNP, and Barbara Triebel, CRNP, complete the care team.



Barbara Triebel, CRNP
 Obstetrics and gynecology



TO REFER A PATIENT TO OBSTETRIC CARE, CALL 888-402-LVHN (5846).

Lehigh Valley Health Network (LVHN) includes eight hospital campuses: three in Allentown, including the region's only facility dedicated to orthopedic surgery, one in Bethlehem, one in Hazleton, two in Pottsville and one in East Stroudsburg, Pa.; numerous health centers caring for communities in seven counties; numerous primary and specialty care physician practices throughout the region; pharmacy, imaging and lab services; and preferred provider services through Valley Preferred. Lehigh Valley Hospital—Cedar Crest has been recognized among the top five hospitals in Pennsylvania by U.S. News & World Report for five consecutive years. Lehigh Valley Hospital—Cedar Crest, Lehigh Valley Hospital—17th Street and Lehigh Valley Hospital—Muhlenberg are national Magnet® hospitals for excellence in nursing.