

Fall 2015

# Better Medicine

Lehigh Valley Health Network

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# Transitioning to ‘Lean’ Practice Workflows

By Henry Liu, MD

*About the author: Henry Liu, MD, is the lead physician at [LVPG Family Medicine—1251 Cedar Crest](#).*



Henry Liu, MD  
Family Medicine

Working into the evening filling out forms . . . daily tasks assigned haphazardly . . . overall inefficiency leading to longer wait times for my patients. It was enough to make me want to scream at the person in charge.

Had I done that, I would’ve been screaming at myself. Because like most practices, our providers used to control their own schedules and workflow. Yet balancing clinical and administrative roles proved too large a job for most of us to manage optimally.

So two years ago we started redesigning health care delivery in our office using “lean” workflow principles. And it’s made everything run much more smoothly.

## **Transforming workflows**

Today, care is managed through “flow stations,” where a medical assistant (MA) or nurse acts as a “flow manager” for each provider.

Flow managers engineer providers’ schedules throughout the day to prioritize our time and eliminate inefficiencies. We share a common workspace, so communication is fast, easy and clear. Previously, providers told MAs what

we wanted to do at a given moment. Now the roles are reversed, and it's made a big difference.

For example, we revamped the way we handle forms, so by the time I receive them, they're almost completely filled out. When I receive patient messages, my flow manager gives me the ones requiring an immediate response.

Since adopting the new model, the amount of time providers spend on tasks outside of patient contact has declined by almost 30 percent. Patient wait times also have declined in every functional area.

### **Keys to a successful transition**

The workflow principles we've implemented could benefit any practice, and they represent a significant change. It requires champions at each level of the practice –providers, clinical staff, clerical and practice management. We couldn't have done it without extensive support from Lehigh Valley Health Network's own lean coaches.

For providers, making such a transition also means leaving your ego at the door, because you can find significant benefits by not being the boss of how you deliver health care.

To learn more about patient-centered medical homes at LVHN, call 888-402-LVHN.

— *Fall 2015*



# Advances in Tomosynthesis



Priya Sareen, MD  
Radiology

Lehigh Valley Health Network (LVHN) offers breast tomosynthesis, which takes multiple X-ray images and builds a 3-D image of the breast, at Lehigh Valley Hospital (LVH)–Cedar Crest, LVH–Muhlenberg and the Health Center at Trexlertown.

Recent studies have shown that adding tomosynthesis (3-D mammography) to conventional digital mammography was associated with decreased callback rates and increased cancer detection rates.<sup>1</sup>

LVHN recently upgraded its Selenia Dimensions® tomosynthesis units, manufactured by Hologic, by adding C-View software, which allows clinicians to reconstruct 2-D images from the 3-D data set, eliminating the need for an additional 2-D exposure. With C-View software, exams are shorter and more comfortable for the patient, and clinicians still are able to obtain images that allow them to better detect small abnormalities.

“Tomosynthesis may be especially useful in detecting cancer in women with dense breast tissue,” says Priya Sareen, MD, LVHN’s chief of mammography. Pennsylvania passed the Breast Density Notification Act in 2013, requiring providers to notify women with dense breast tissue about their density so they can make better decisions about additional screening methods.

“With the C-View software upgrade, we’re able to reduce the radiation exposure of a tomosynthesis exam to that of a traditional mammogram,” Sareen says. “Patients may be getting other types of radiology exams and treatments, and this helps keep their lifetime cumulative exposure low.”

1. "Breast cancer screening using tomosynthesis in combination with digital mammography." S. Friedewald et al. JAMA. 2014; 311(24): 2499-2507. doi:10.1001/jama.2014.6095



# Support Services Offered for Oncology Patients



Shanthi Lewis, MD  
Psychiatry



Kimberly Bruns, MSW, LCSW  
Oncology



Kathy Sevedge, RN  
Oncology

In addition to providing access to clinical trials and research-based treatments, Lehigh Valley Health Network (LVHN) provides oncology patients with a full continuum of support services from diagnosis through survivorship. Services are available for the 2,800-plus oncology patients treated annually at LVHN facilities, with support groups also open to patients treated elsewhere.

### **Beneficial services**

The National Comprehensive Cancer Network (NCCN) Distress Thermometer for Patients<sup>1</sup> is used to determine which patients require supportive services for issues related to finances, insurance, treatment options, discharge plans, housing and social/family problems. LVHN social workers dedicated to oncology also counsel patients, caregivers and children with parents diagnosed with cancer who experience depression or anxiety.

“Techniques such as relaxation, meditation and cognitive behavioral therapy can be beneficial,” says Kimberly Bruns, MSW, LCSW, who serves approximately 50 oncology patients a month at Lehigh Valley Hospital–Cedar Crest.

### **Medication management**

Although most cancer patients do not meet diagnostic criteria for a specific mental disorder, difficult emotional responses to a cancer diagnosis are common.<sup>2</sup> LVHN psychiatrist Shanthi Lewis, MD, treats oncology patients who require medication management for pre-existing psychiatric conditions or for comorbidity syndromes (e.g., mood disorders, anxiety, psychosis, fatigue, nausea or insomnia).

“Treating the whole patient is important in maintaining health and improving ability to adhere to care plans,” Lewis says. She also treats individuals caring for cancer patients. “Caregivers often have their own fears and beliefs regarding cancer and treatment while appearing to stay strong for their loved ones,” Lewis says. “This can lead to anxiety, guilt and apprehension about seeking help.”

### **Sharing experiences**

Oncology support groups include monthly meetings of the Metastatic and Advanced Breast Cancer Support Group and the Men Facing Cancer Support Group. The Support of Survivors (SOS) message hotline connects cancer patients with trained volunteers who survived cancer, and the Survivorship Program provides information and tools

to manage life after cancer.

The Survivor PLACE (Programs for Living After the Cancer Experience) Clinic features a multidisciplinary survivorship support team, including a nurse practitioner from the medical oncology practice. All recommendations from the visit to Survivor PLACE are shared with the patient's primary care physician.

In addition, the Legacy program helps patients lead purposeful lives post-treatment.

"Survivors need an opportunity to reflect and talk about their experiences," says Kathy Sevedge, RN, LVHN's director of cancer support services. LVHN also works closely with other agencies to access resources and services in the community.

1. "NCCN distress thermometer for patients." National Comprehensive Cancer Network website. [nccn.org/patients/resources/life\\_with\\_cancer/pdf/nccn\\_distress\\_thermometer.pdf](http://nccn.org/patients/resources/life_with_cancer/pdf/nccn_distress_thermometer.pdf).
2. "Adjustment to cancer: Anxiety and distress-for health professionals (PDQ®)." NIH National Cancer Institute. [cancer.gov/about-cancer/coping/feelings/anxiety-distress-hp-pdq#section](http://cancer.gov/about-cancer/coping/feelings/anxiety-distress-hp-pdq#section).

To refer a patient to oncology support services, call 610-402-CARE.

— Fall 2015

# LVHN to Join Memorial Sloan Kettering Cancer Alliance



LVHN's Brian Nester, DO, and Suresh Nair, MD (center), joined by MSK's Craig Thompson, MD (left), and José Baselgia, MD, PhD (right).

Lehigh Valley Health Network (LVHN) and Memorial Sloan Kettering (MSK) Cancer Center—the world's oldest and largest private cancer center—announced that an agreement has been signed for LVHN to join the MSK Cancer Alliance. Established in 2013, the MSK Cancer Alliance is a partnership between MSK and community oncology providers. Its goal is to bring current knowledge and advanced cancer care into the community setting. LVHN will be the second Alliance member.

For more than a century, MSK has generated scientific discoveries necessary to develop effective cancer treatments. “Today, we recognize the need to do more,” says MSK president and chief executive officer (CEO) Craig Thompson, MD. “Central to our mission is eradicating cancer, and through the MSK Cancer Alliance – and in collaboration with LVHN – we have a unique opportunity to share our knowledge and best practices with a wider patient population.”

“MSK chose LVHN because of our dedication to delivering high-quality, consistent cancer care, and because of the proven expertise of our physicians and medical teams,” says LVHN president and CEO Brian Nester, DO, MBA, FACOEP. “Our collaboration with MSK will save lives by bringing evidence-based, world-class standards to LVHN.”

## Fulfilling a vital need in cancer care delivery

MSK's desire to create the Alliance was fueled by an Institute of Medicine report that described the challenges of delivering high-quality cancer care as a "national crisis." As rapid advances in cancer science occur, there is a realization that the adoption of lifesaving breakthroughs in clinical practice takes enormous resources and often too much time, particularly in the community setting, where more than 80 percent of cancer care is delivered.

"MSK's strong desire to rapidly integrate these advances into the community setting will demonstrate real value to MSK and LVHN," says MSK physician-in-chief José Baselga, MD, PhD. "As knowledge is shared, we will quickly make the latest, most effective cancer treatments available to patients," says Suresh Nair, MD, director of LVHN's cancer program. "That's the bottom line: Providing more hope and better outcomes for patients."

## Looking ahead

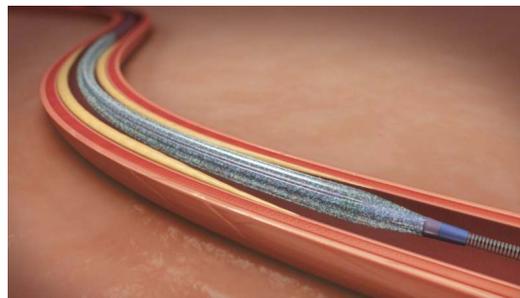
MSK and LVHN are now collaborating to determine how the organizations can best improve care for patients and enhance cancer research at both organizations. Once that process is complete and LVHN becomes an Alliance member early in 2016:

- Patients will benefit from expanded access to the more than 800 clinical trials at MSK, as well as the latest discoveries in cancer research, which may not be available at other community hospitals for years.
- LVHN physicians will discuss their complex cancer cases with MSK physicians, who have experience in treating rare forms of cancers and related blood disorders.
- LVHN physicians will visit MSK to observe new techniques.
- Both institutions will share educational resources and begin tracking data on quality, outcomes and patient satisfaction.

To learn more about the partnership, call 610-402-CARE.

# Leading-Edge Treatment for PAD Patients

Patients with femoropopliteal peripheral artery disease (PAD) may benefit from a new drug-coated balloon (DCB) that providers at Lehigh Valley Health Network (LVHN) are now implanting. Data from research trials shows the minimally invasive approach improves outcomes by reducing the need for repeat procedures commonly associated with other interventional PAD therapies.<sup>1-5</sup>



The Medtronic IN.PACT® Admiral® balloon catheter uses a paclitaxel coating designed to help prevent restenosis by inhibiting vascular smooth muscle cell proliferation. (image courtesy Medtronic).

## Treatment breakthrough

Although percutaneous transluminal angioplasty (PTA) for PAD produces excellent results immediately post-therapy, restenosis rates can be as high as 40 percent at six months.<sup>6</sup>

The Medtronic IN.PACT® Admiral® balloon catheter, approved by the FDA in January, uses a paclitaxel coating designed to help prevent restenosis by inhibiting vascular smooth muscle cell proliferation.<sup>5</sup> Paclitaxel is an FDA-approved antiproliferative agent used previously for multiple cancers, including breast and ovarian.

James Guzzo, MD, LVHN's chief of vascular surgery, was the first physician in Pennsylvania, New York and New Jersey to use the Medtronic DCB outside of clinical trials. Guzzo and his LVHN colleague, interventional cardiologist Kenneth Skorinko, MD, have treated more than a dozen patients for PAD with the new therapy and expect that approximately 50 LVHN patients annually will be treated with DCBs.



## Patient eligibility

Guzzo and Skorinko currently use the DCB as first-line treatment for most patients to help them avoid needing another procedure for restenosis that may occur after traditional angioplasty. It is an excellent choice for restenosis in patients treated with older-generation balloons and those with in-stent restenosis.

The release of two-year data will be studied to determine whether to broaden use of the intervention at LVHN. “The hope is to avoid the cycle of repeated endovascular interventions for patients who develop restenosis,” Guzzo says.

One-year data from a prospective, randomized multicenter trial reported 2.4 percent of those treated with the drug-eluting balloon required target lesion revascularization (TLR), compared with 20.6 percent of those undergoing standard balloon PTA.4 “We’ve had many things that look good for a year or two, then start to fade, but this looks more promising than a lot of things we’ve seen,” Skorinko says.

### Insertion technique

A traditional angioplasty balloon catheter is inserted through the blood vessels, across the blockage or narrowing, and inflated to partially open the blockage or narrowing. The DCB is then used to fully open the narrowed portion of the artery, and the balloon delivers the drug to the artery wall. Prior to inserting the DCB, atherectomy can be performed in appropriately selected patients to debulk a calcified lesion and improve contact between the arterial wall and DCB.



Kenneth Skorinko, MD  
Cardiology

[Watch a video to learn more about him.](#)

1. “Local delivery of paclitaxel to inhibit restenosis during angioplasty of the leg.” G. Tepe et al. *New Eng J Med*. 2008; 358(7): 689-99.
2. “The ‘DEBELLUM’ – lower limb multilevel treatment with drug eluting balloon – randomized trial: 1-year results.” F. Fanelli et al. *J Cardiovasc Surg (Torino)*. 2014; 55(2): 207-16.
3. “2-year results of paclitaxel-eluting balloons for femoropopliteal artery disease: evidence from a multicenter registry.” Micari et al. *JACC Cardiovasc Interv*. 2013; 6(3): 282-89.
4. “Drug-coated balloon versus standard percutaneous transluminal angioplasty for the treatment of superficial femoral and popliteal peripheral artery disease: 12-month results from the IN.PACT SFA randomized trial.” G. Tepe et al. *Circulation*. 2015; 131(5): 495-502.
5. “Medtronic drug-coated balloon receives FDA approval for treating peripheral artery disease in upper leg” [Medtronic press release]. January 5, 2015.
6. “Angioplasty and elective stenting of de novo versus recurrent femoropopliteal lesions: 1-year follow-up.” M. Schillinger et al. *J Endovasc Ther*. 2003; 10(2): 288-97.

To refer a patient to the Heart and Vascular Center, call 610-402-CARE.

# Precise Protocols for Endocrine Testing



Sharmila Subaran, MD  
Endocrinology



Roberta Hower, RN, MSN  
Endocrine testing



Deborah Herr, RN, MSN  
Endocrine testing

Timing may not be everything, but it's vital when diagnosing patients with endocrine disorders.

"The endocrine system is dynamic and follows the circadian rhythm, so that the setting and timing of the test are very important to interpretation because we may be looking for changes over a certain time period," says endocrinologist Sharmila Subaran, MD, medical director of Lehigh Valley Health Network's (LVHN's) endocrine testing service, which is located at the Diagnostic Care Center inside [Lehigh Valley Hospital \(LVH\)–Cedar Crest](#).

The service offers testing for patients with possible adrenal, pancreatic, pituitary or islet cell tumors, nephrolithiasis or hypoglycemia after bariatric surgery, as well as adrenal insufficiency secondary to chronic steroid use. The service is distinct in that it also tests pediatric patients. Common endocrine disorders in children include premature puberty or growth hormone deficiency.

"The expanse of our approved testing protocols make us truly unique," Subaran says. Written in-house, the complex protocols, organized by glandular function or common endocrine disorder, are continually updated in conjunction with developments in the endocrine system medical literature pertaining to both adults and children.

### **Comprehensive patient management**

For the most accurate diagnosis and clinical management, LVHN's endocrine testing protocols dictate how and when to administer adult and pediatric endocrine tests and detail the side effects to expect.

"Before endocrine testing, patients typically eat a meal or are given IV medication to stimulate or suppress hormone production," says Roberta Hower, RN, MSN, who works with Deborah Herr, RN, MSN, at the testing center. Combined, the two nurses have more than three decades of endocrine testing experience. "We help prepare patients and administer the tests to ensure the best lab data for clinical interpretation," Hower says.

### **Moving target**

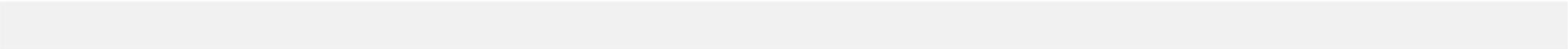
Many patients undergo blood draws at various timed intervals, according to protocol. Each collected timed vial is labeled and sent to Health Network Laboratories for analysis. "If we draw several labs at different times, the lab results will indicate specific times, such as '30-minute' time point," Subaran says.

Endocrine testing at LVH–Cedar Crest is available Monday, Tuesday and Thursday from 7 a.m. to 3:30 p.m.

Pediatric patients – and their parents – like it because they don't have to travel far. “We provide an important service to the community close to home,” Hower says.

To refer a patient for testing, call 610-402-CARE

— *Fall 2015*



# New Biomarker May Help Diagnose Alzheimer's Disease Earlier

Among the longstanding challenges in dealing with Alzheimer's disease is obtaining an absolute diagnosis, as differentiated from general dementia. Now, researchers are investigating a new, potentially disease-modifying entity for early Alzheimer's disease and mild cognitive impairment likely due to Alzheimer's disease.

As part of the research study, patients will be screened to see if they have the pathologic markers on their positron emission tomography (PET) scans or in their spinal fluid supporting the diagnosis of Alzheimer's disease. The agent, called AMARANTH, is in phase II/III clinical trials, and Lehigh Valley Hospital (LVH) is currently recruiting candidates.

"Once the damage occurs, we cannot repair it," says Lorraine Spikol, MD, neurologist and principal investigator for the study at LVH. "We want to be a part of trying to diagnose people earlier."



Lorraine Spikol, MD  
Neurology

## Measuring amyloid plaque formation

Researchers have long associated amyloid plaque formation with Alzheimer's, but typically its presence is discovered only during autopsy. The 24-month trial, sponsored by AstraZeneca and Eli Lilly and Company, is investigating a new oral  $\beta$ -secretase cleaving enzyme (BACE) inhibitor.<sup>1</sup> Investigators believe the agent may inhibit production of amyloid beta ( $A\beta$ ), ultimately preventing amyloid plaque formation and slowing disease progress.<sup>2</sup> The study is aimed at early stage Alzheimer's patients and those with mild cognitive impairment (MCI). MCI is accelerated memory decline in a patient who does not yet meet all criteria for dementia and is a risk factor for developing Alzheimer's disease.

The study is among the first to measure biomarkers of brain  $A\beta$  deposition as part of eligibility for the trial. Patients will undergo an amyloid PET scan or lumbar puncture for cerebrospinal fluid (CSF) sampling upon joining the study to screen for the presence of abnormal levels of brain or CSF amyloid. The same biomarker will be measured again toward the end of the study to evaluate any change from baseline in amyloid plaque formation.<sup>1</sup>

Postulating that abnormal levels of  $A\beta$  increase the likelihood that clinical symptoms are due to Alzheimer's rather

than another condition, the investigators will examine patterns of how degeneration progresses in patients.<sup>3-4</sup> Ultimately, they hope to be able to diagnose and treat Alzheimer's earlier.

## Seeking participants

The AMARANTH trial is currently enrolling participants at LVH. Investigators are seeking patients with mild Alzheimer's or MCI due to Alzheimer's.

1. "An efficacy and safety study of AZD3293 in early Alzheimer's disease (AMARANTH). <https://clinicaltrials.gov/ct2/show/NCT02245737?term=Amaranth&rank=4>. Accessed May 13, 2015.
2. "The beta-secretase enzyme BACE in health and Alzheimer's disease: regulation, cell biology, function, and therapeutic potential." Vassar R et al. *Neurosci*. 2009;29(41):12787-94.
3. "The diagnosis of mild cognitive impairment due to Alzheimer's disease: recommendations from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease." Albert MS et al. *Alzheimers Dement*. 2011; 7(3): 270-9.
4. "The diagnosis of dementia due to Alzheimer's disease: recommendations from the National Institute on Aging-Alzheimer's Association workgroups on diagnostic guidelines for Alzheimer's disease." McKhann GM et al. *Alzheimers Dement*. 2011; 7(3): 263-9.

To learn more or refer a patient for the trial, call 610-402-CARE.

# Finding Answers for Neck and Back Pain



Chirag Kalola, MD  
Physiatry

[Watch a video to learn more about him.](#)



Chris Lycette, MD  
Neurosurgery

[Watch a video to learn more about him.](#)



Gary Tarola, DC  
Chiropractic medicine

[Watch a video to learn more about him.](#)

Care for conditions such as back or neck pain often involves multiple specialists, and finding the right diagnosis can be challenging. Patients sometimes pursue a course of treatment for long periods without notable improvement. Or they may spend time researching surgical options, only to learn that surgery will not address their condition.

Lehigh Valley Health Network's (LVHN) Advanced Spine Center addresses those issues. It provides a virtual multidisciplinary center encompassing neurosurgery, pain management, chiropractic care and other treatment modalities within a unified program. Patients with back and neck issues are systematically evaluated, triaged and directed to appropriate treatment, with their progress continually monitored in a coordinated fashion.

"Our program is unique in its ability to offer a one-stop shop for spinal issues," says LVHN physiatrist Chirag Kalola, MD. "Providers can refer patients with back pain in the most general sense and know they will be evaluated and treated comprehensively."

### **Steps to reduce fragmentation**

The Advanced Spine Center strives to coordinate care management for back pain patients. "Historically, when patients hurt their backs, they might start in the emergency department or with their primary care provider," says LVHN neurosurgeon Chris Lycette, MD. "But just as often, they would turn directly to chiropractic care, acupuncture or physical therapy. They may later consult a surgeon who has no idea they have been receiving other care for years. Right from the beginning, the care journey is fragmented."

To reduce fragmentation, the Advanced Spine Center uses a unique triaging protocol, developed jointly by LVHN surgeons, physiatrists and pain management specialists. It incorporates the latest back pain guidelines from the American College of Internal Medicine, the American Pain Society and the American College of Radiology. The center also employs an advanced triaging software system and outcomes database used by only a few centers nationwide

"The evidence shows that fragmented care is almost always more costly," says LVHN chiropractor Gary Tarola, DC. "Time is wasted, inappropriate treatments may be applied, or appropriate treatments may be delayed. That

impacts cost of care and often can impact outcomes negatively.”

By taking an algorithmic approach to the patient’s condition, the center’s team can more accurately diagnose problems up front and move a patient into the appropriate treatment modality faster. The team also can identify more serious issues – such as underlying abdominal or rheumatological problems – earlier and provide appropriate care in a timely fashion.

### **How the triage process works**

For patients, the triage process begins with an interview with a nurse coordinator. A physiatrist then reviews the patient’s past treatment set as well as any imaging studies and determines the most appropriate next step.

Working with specialists across LVHN, the center can connect patients with care ranging from more conservative interventions (pain management modalities, clinical chiropractic care, rehabilitation therapy, medical acupuncture) to advanced surgical procedures.

When surgery is indicated, patients see fellowship-trained surgeons who are part of the Lehigh Valley Hospital (LVH) neurosurgery program – named high-performing by U.S. News & World Report for 2016–17.

The neurosurgery program provides a full range of surgical options, from minimally invasive microscopic surgery all the way to complex spinal reconstructions. LVH surgeons also have access to equipment such as neuronavigation systems that provide real-time imaging of the spine during procedures.

“The literature shows that centers performing more surgeries result in better outcomes statistically,” Lycette says. “We are an extremely busy surgical spine center and Level I trauma center. We deal with the most complicated spinal surgeries, offering a breadth of surgical care with the high volume and patient satisfaction numbers to back it up.”

### **Tight connections among specialists**

In addition to directing patients to the right treatment, the center continually monitors patients’ progress systematically. Specialists across all modalities collaborate closely throughout the care journey.

“From a functional and pain standpoint, if things aren’t improving, we need to redirect our energy and pursue a different treatment path,” Kalola says. “I’m embedded with our neurosurgeons and have daily interactions with them. We can collaborate on cases that I feel may warrant surgical intervention. Conversely, our neurosurgeons can discuss patients who they feel may benefit from nonsurgical modalities. That working relationship is paramount to efficiently managing these patients.”

The Advanced Spine Center brings this level of collaboration and care coordination to patients close to home.

“Twenty years ago, people thought they had to travel to Philadelphia to get good spine care,” Lycette says. “We set out to change that, and we believe we’ve become the flagship spine center for this region.”

To refer a patient to the Advanced Spine Center, call 610-402-CARE.

# Orthopedic Care Available in Hazleton



Joseph Horton, MD

Orthopedic surgery

[Watch a video to learn more about him.](#)



Peter Kozicky, MD

Orthopedic surgery

[Watch a video to learn more about him.](#)



Ammar Abbasi, MD  
Physiatry

[Watch a video to learn more about him.](#)



Daniel Gavio, DC  
Chiropractic medicine

[Watch a video to learn more about him.](#)



**Brittany Portonova, DPM**  
Podiatric surgery

Lehigh Valley Hospital–Hazleton offers multidisciplinary, integrated care for any type of orthopedic issue. Services include:

- Adult orthopedics
- Sports medicine
- Podiatric surgery
- Specialized care for hand, wrist, arm and elbow conditions
- Workers' compensation issue management
- Physical and occupational therapy
- Chiropractic services and therapy
- Massage therapy
- Physiatry
- Occupational medicine

### **Range of procedures**

The center has two board-certified orthopedic surgeons – Joseph Horton, MD, who has a sports medicine fellowship, and Peter Kozicky, MD, who completed a residency in orthopedic surgery. They perform a spectrum of procedures, including joint replacement, shoulder and knee arthroscopy, rotator cuff repair, carpal tunnel release and surgery for noncomplex hand issues.

“All of our providers consider one another’s specialties and strengths as we assess each patient,” says physiatrist Ammar Abbasi, MD, the center’s medical director. “Our goal is to get the patient to the correct provider as quickly as possible.”

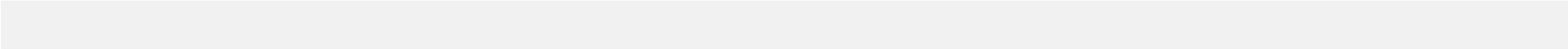
Horton gives the example of a patient who was experiencing hand numbness after he had treated her for a broken wrist. “I suspected carpal tunnel, but the patient required an electromyogram (EMG) to confirm the diagnosis,” he says. “I immediately referred the patient to Dr. Abbasi, who walked over with the results the same day, and we followed up by scheduling surgery. A process that might have taken weeks took just a few minutes.”

The center's staff includes an orthopedic physician assistant and a nurse navigator. "In addition to being the first contact for new patients, the nurse navigator also helps with insurance issues, facilitates appointment scheduling and checks in on our patients," Abbasi says.

### **'One-stop' experience**

Referring providers who are part of Lehigh Valley Health Network (LVHN), or any provider with privileges at an LVHN hospital, can access procedure notes and obtain patient updates through the electronic medical records system. "Our goal is to have a one-stop shopping experience for both patients and referring physicians," Horton says. "A recent patient who was referred to me for a shoulder issue was told by his primary care provider that if I couldn't treat the problem, I could get him to somebody who could. That's exactly the message we want to convey." Most services orthopedics patients might need are located inside the Health & Wellness Center at Hazleton, including imaging, laboratory and rehabilitation. It also includes a state-of-the-art fitness center, staffed with exercise physiologists and fitness trainers, where therapy patients can make a seamless transition from healing to maintaining and improving wellness by enrolling at a reduced yearly fee.

To refer a patient to orthopedics at LVH-Hazleton, call 570-501-4LVH.



# Hand Surgeon Specializes in Endoscopic Carpal Tunnel Syndrome



[Paul Sibley, DO](#)  
Orthopedic surgery

Lehigh Valley Health Network's (LVHN) capacity for timely diagnosis and treatment of hand and upper-extremity trauma and pathological conditions has increased with the addition of a new orthopedic surgeon.

Paul Sibley, DO, specializes in all aspects of hand and upper-extremity care, with particular emphasis on carpal tunnel syndrome (CTS). He recently joined VSAS Orthopaedics after completing a hand, upper-extremity and microsurgery fellowship at Ohio University–Grandview Medical Center's Hand Center of Southwestern Ohio. The fellowship training provided an advanced level of expertise.

## **About CTS**

A painful condition that causes tingling, loss of sensation and decreased hand function, CTS develops due to compression of the median nerve. Genetic predisposition and medical and physical conditions such as diabetes, thyroid disorders, age and hormonal fluctuations may place patients at risk for developing CTS.<sup>1</sup> Women are three times more likely to develop CTS.<sup>1</sup>

Conservative approaches to relieve symptoms include tendon-gliding exercises, anti-inflammatory medications, wrist splints and corticosteroid injections. However, these approaches may not always provide a permanent solution.

"Steroid injections can be very effective, but often are temporary," Sibley says. "A good result with an injection

often indicates a good result with surgery.”

## **Endoscopic tunnel release**

Carpal tunnel release is one of the most common surgical procedures in the U.S.,<sup>1</sup> and Sibley performed more than 700 surgeries during the past year, including the endoscopic technique.

The approach used by Sibley is accomplished in less than 10 minutes at LVHN’s Center for Orthopedic Medicine –Tilghman. “It’s a straightforward procedure that produces good outcomes and allows for a quicker return to work or other activities than open-release surgery,” he says.

## **‘Wide-awake’ surgery**

In addition, Sibley frequently uses the Wide Awake, Local Anesthesia and No Tourniquet (WALANT) protocol for surgical procedures on the hand, such as mass removals, trigger finger release and flexor tendon repair. The WALANT protocol relies on lidocaine with epinephrine, even allowing for surgical procedures in an office setting rather than an operating room. WALANT’s benefits include greater cost-effectiveness, lack of a need for sedation, reduced surgical scheduling delays, increased procedural efficiency and greater patient satisfaction.<sup>2</sup>

“Being able to test the strength of a tendon repair before closing the skin is preferable and provides for a better patient experience,” Sibley says.

## **ER consults, care**

Sibley, who enjoys research, is the lead author of a recently published evidence-based review on triceps tendinopathy.<sup>3</sup> He also provides orthopedic care as an on-call expert in LVHN’s Level I trauma center.

1. “Carpal tunnel syndrome fact sheet.” National Institute of Neurological Disorders and Stroke. [ninds.nih.gov/disorders/carpal\\_tunnel/detail\\_carpal\\_tunnel.htm](http://ninds.nih.gov/disorders/carpal_tunnel/detail_carpal_tunnel.htm).
2. “In-office carpal tunnel release.” Y. Lansinger et al. Ortho Know Online J. 2015; 13(6): 2.
3. “Evidence-based medicine review: triceps tendinopathy.” P. Sibley et al. J Hand Surgery. 2015; 40(7): 1446-48.

To refer a patient to orthopedics, call 888-402-LVHN.

# Clinical Partnership Forged with CVS Health

In early 2016, when Lehigh Valley Health Network (LVHN) patients fill certain prescriptions at local CVS/pharmacy® locations, LVHN providers will receive updates about their patients' prescription data through a secured electronic health record (EHR) system. Also, when patients seek care for minor illnesses and injuries at MinuteClinic®, the walk-in clinic inside select CVS/pharmacy stores, and with patient consent, LVHN providers will receive a visit summary describing the care patients received. This medical information integration is part of LVHN's new clinical collaboration with CVS Health.



Robert Begliomini, RPh, PharmD  
Pharmacy

“The collaboration allows direct communication to LVHN providers to help prevent gaps in care and follow-up,” says pharmacist Robert Begliomini, RPh, PharmD, LVHN vice president of operations and project lead for the CVS initiative. It is a growing trend for consumers to seek more accessible high-quality care for minor illnesses and treatments during hours convenient to their schedules to include evenings, weekends and holidays.

## Help with medical decision making

Enhanced communication about the patients LVHN and CVS Health collectively serve can aid in medical decision making and help ensure patients adhere to medication management.

Prescription medication noncompliance continues to be a nationwide problem that leads to poor health outcomes. It's estimated that 20 to 50 percent of patients don't comply with medical therapy.<sup>1</sup> Moreover, non-adherence to medication may account for 30 to 50 percent of treatment failures.<sup>1</sup>

The collaboration with CVS Health may help remedy the problem and reduce health care costs. If LVHN patients who select CVS as their pharmacy fail to pick up certain types of prescription medication, or if a CVS pharmacist needs to intervene on a prescription medication, that patient's LVHN provider will be notified.

“This collaboration offers LVHN providers a more complete picture of patients over time, which can help ensure patients adhere to important medications for chronic diseases,” says Begliomini.

## **MinuteClinic inside CVS/pharmacy locations**

There are three MinuteClinics in the Lehigh Valley: 2434 Catasauqua Road in Bethlehem, 5829 Tilghman Street in Allentown and 155 Main St. in Macungie. If patients who visit a MinuteClinic report they do not have a primary care provider, MinuteClinic can provide them with a list of hospitals, clinics and primary care physicians – including LVHN providers – in the area accepting new patients. Our goal is to make sure that patients establish a medical home for their overall health.

1. Medication Adherence Clinical Reference. American College of Preventive Medicine. [acpm.org/?MedAdherTT\\_ClinRef](https://www.acpm.org/?MedAdherTT_ClinRef).

To learn more about LVHN's clinical collaboration with CVS Health, call 888-402-LVHN.



# Urology Case Study: Team-based care provides effective intervention for penile cancer



Angelo Baccala Jr., MD

Urology

[Watch a video to learn more about him.](#)

Most physicians will never encounter a patient with a diagnosis of penile cancer. When the case includes multiple comorbidities, it becomes even more complex and technically challenging.

Typically such a patient would be referred to a large academic center for treatment. Today, Lehigh Valley Health Network (LVHN) can provide a comprehensive course of treatment locally for these difficult cases.

The following case study illustrates this process for a patient referred to Angelo Baccala Jr., MD, chief of urology at Lehigh Valley Hospital.

## Patient timeline

**8 April 2015:** 72-year-old patient presents with penile lesion, along with renal mass, bladder stones and elevated PSA levels.

Patient history includes:

- Dec. 21, 2014 – PSA measured at 8.57;

- Feb. 23, 2015 – CT imaging reveals left upper pole renal mass-cystic with soft tissue component anteriorly and superiorly; multiple bladder calculi; two right renal cysts.

**16 April 2015:** Repeat PSA subsequent to antibiotics measures 7.5.

**28 April 2015:** Renal scan reveals equal renal function.

Surgery for cystoscopy with cystolitholapaxy and penile lesion excision, and removal of multiple bladder stones.

Cystoscopy reveals penile lesion path-invasive squamous cell carcinoma, moderately differentiated, invading into the erectile tissue (corpus spongiosum), present at the peripheral specimen margin; deep specimen margin appears negative; lymphovascular invasion present. PSA measures 15.9

**28 May 2015:** MRI reveals no enlarged lymph nodes; enlarged prostate with bladder wall thickening secondary to obstruction. 12-core prostate biopsy performed; path-negative; enlarged prostate.

**12 June 2015:** Perform B/I inguinal lymph node dissection and total penectomy with perineal urethrostomy – tolerated well. Reveals corpus spongiosum invasion, no angiolymphatic invasion; squamous cell carcinoma, well differentiated; margins nodes negative.

**June–August 2015:** Interval care provided locally by patient’s local urologist.

**6 August 2015:** Follow-up office visit – incisions healing well; patient urinating well. Follow-up CT, labs and kidney surgery scheduled for October.

### **Positive outcomes for complex cases**

To provide timely, high-quality care for this case, many interventions had to be coordinated. The team-based model used in Baccala’s practice, LVPG Urology–1250 Cedar Crest, played a major role.

“This intervention required major oncologic and reconstructive surgery in an area that can be fraught with complications,” Baccala says. “So far, this patient has had a very good outcome. We seem to have beaten this. The collaboration of physician extenders with the surgeon in a team-based approach ensures timely, accurate, patient-centered care in a safe and reliable fashion.”

To refer a patient to urology, call 610-402-CARE.

# Managing Diabetes During Pregnancy

Type 1 and type 2 diabetes present multiple challenges for women who are or want to become pregnant. The Comprehensive Diabetes in Pregnancy Program (CDIPP), a collaboration among specialists from Lehigh Valley Health Network's (LVHN) division of endocrinology and metabolism and the division of maternal fetal medicine (MFM), provides coordinated, convenient care for these patients.

## Streamlining care, improving compliance

"Women with pre-existing diabetes are at risk for a host of complications, including [miscarriage](#), abnormal fetal growth, preeclampsia and birth defects," says program director and MFM specialist Meredith Rochon, MD. "Previously, these patients would have seen an endocrinologist and an MFM specialist separately. With CDIPP, we've adapted the medical home model to enable patients to see both subspecialists in one visit, thereby streamlining care and improving compliance."

Marc Vengrove, DO, chief of the division of endocrinology and metabolism, co-manages patients with Rochon. "Ideally, we'd like to start seeing patients six months to a year before they conceive," he says. "Too often, we see already pregnant patients with uncontrolled diabetes and others with type 2 diabetes who are taking medications that are not indicated for pregnancy."

Patients in the program report their glucose readings weekly to endocrinology. During monthly visits, Vengrove also reviews blood glucose control and adjusts medication doses. Rochon then sees patients to review ultrasound results and discuss other issues related to fetal health; many patients



**Meredith Rochon, MD**  
Maternal fetal medicine



have comorbidities including asthma, thyroid disease and histories of complicated pregnancies. Vengrove and Rochon discuss each patient's problems and progress during the visit.

Marc Vengrove, DO  
Endocrinology

### **Achieving better outcomes**

The program, which started at LVPG Maternal Fetal Medicine—3900 Hamilton Blvd. in Allentown, expanded to LVPG Maternal Fetal Medicine—Bethlehem Township in May, where Vengrove co-manages patients with MFM specialist Albert Sarno Jr., MD.

“We know tight glycemic control is associated with better outcomes; a preconception Hb A1c level of less than 6.5 percent is ideal,” Rochon says. “In our program, it's not unusual for patients to go from 12 percent to 5.5 percent. It's rare when we can't get diabetes under control.”

Note: Patients with gestational diabetes are cared for in LVHN's Diabetes in Pregnancy Program within the MFM division.

## **Using Technology to Improve Blood Glucose Reporting**

Although most CDIPP patients transmit their weekly blood glucose readings via fax or email, 40 patients are participating in a study of the Telcare Blood Glucose Meter, which automatically transfers readings to a secure HIPAA-compliant data repository via a cellular network. Vengrove, who received a \$24,000 grant from The Dorothy Rider Pool Health Care Trust to run the one-and-a-half-year study, hopes to determine whether innovative technologies like Telcare can improve reporting compliance.

To refer a patient to the Comprehensive Diabetes in Pregnancy Program, call 610-402-CARE.