



## Statement by Lehigh Valley Health Network

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Good morning Chairman Mustio, Chairman Readshaw and members of the Committee. I am Eric Bean, an emergency physician, board certified in both emergency and family medicine, at Lehigh Valley Health Network (LVHN) [www.lvhn.org](http://www.lvhn.org) centered in Allentown. I appreciate the opportunity to speak with you today and look forward to your questions. It was an honor to host Chairman Mustio and several of you for telehealth demonstrations this summer at LVHN where I believe you saw first-hand how telehealth can extend the reach of high-level, quality care to patients. As a physician, I'm trained to care for patients and their families. I lead passionate teams of healthcare providers which include our nurses. Working at a teaching hospital affiliated with a medical school, I help educate the future physician workforce. I'd like to speak to you about the importance of telehealth reimbursement to all of these groups.

First, let's talk about the patients and their families. At the conclusion of this statement you'll find a few examples of stories from our grateful patients. They are grateful for the timely access to care that wouldn't have been available without the use of technology. They are grateful for avoiding all the transportation costs and inconvenience they and their families would have incurred had they needed to leave their community to receive the highly specialized care they were able to receive via telemedicine. At LVHN we've increased access to scarce specialties like burn surgeons, intensivists, infectious disease and neurologists and we've collected data that indicates between 95% and 99% of patients who would have had to otherwise travel or be medically transported to see the proper specialist, now stay in their community after a telehealth visit with the proper specialist. Patients are grateful, families are grateful and the overall cost of care is less with more accurate diagnosis during the initial visit and avoidance of transportation. Our infectious disease telemedicine visits result in better antibiotic stewardship which as you know, not only reduces pharmacy and prescription drug costs but is an important factor in the need to combat antibiotic resistant disease.

LVHN is proud to have earned four consecutive Magnet designations, the most prestigious recognition for nursing excellence in the country. The American Nurses Credentialing Center (ANCC) awarded The 2013 Magnet Prize<sup>®</sup> to Lehigh Valley Health Network, for its innovation, "Telehealth Services—Cutting Edge Programs That Have Transformed Interprofessional Practice and Enhanced Patient Care Outcomes." Our nurses are very proud of, and are an integral part to the success of our telehealth services. In our 2010 peer reviewed study we found that our tele-ICU not only lowered mortality but also gave nurses back 90 minutes at the bedside during a twelve hour shift allowing them to provide the direct patient care those fragile patients need and allowing nurses to use the skills for which they were trained. Freeing up this time also allows time for nurses to assist and comfort family members who may be visiting and staying with their critically ill patient. In addition, having a tele-intensivist on duty and available from 7:00 pm to 7:00 am relieves the stress of nurses wondering whether to contact a sleeping physician in the middle of the night to alert them to a patient who may need urgent physician

assistance. Nurses are essential to the success of a good telemedicine visit and our nurses tell us they love the opportunity to apply their skills in this way.

Our hospitals are among the largest and oldest licensed teaching hospitals in Pennsylvania. They are among only 400 members of the Council of Teaching Hospitals and a partner with the University of South Florida in providing an innovative medical education program to train tomorrow's physicians. We are currently training over 240 residents in 20 residency and fellowship programs. As you might imagine, virtual visits come naturally to this new generation of physicians. Couple this new generation's desire and ability to utilize technology with the new data published this year by the Association of American Medical Colleges (AAMC) indicating the United States could see a shortage of up to 120,000 physicians by 2030 and I think you'll agree that more and more physicians will be delivering care via telehealth. Becker's Hospital Review reported in March of 2018 that Kaiser Permanente in California already conducts over 50% of their visits virtually. You might say the future is already here and that's why payment policies need to recognize and keep up with the way care is being delivered.

Before I close I'd like to draw your attention to one specialty that not only lends itself well to virtual visits but also is a focus of much public policy and that's behavioral health. One of the physician specialties already experiencing a shortage is psychiatry. The availability of a psychiatrist in small rural Pennsylvania communities is almost nonexistent. Medication Assistance Treatment (MAT), not only for psychiatric drugs but also for those used for treating substance use disorder (SUD) is a perfect example of a visit that can be done virtually, reaching more patients, helping with compliance because there is no stigma associated with walking into a specially designated clinic or office for those purposes. Paying for virtual behavioral health visits would go a long way in addressing this crisis of care.

Representative Day and Brown, perhaps you remember when Dr. Purcell examined the patient in our simulated lyme disease example she actually told the patient to sit still for a moment- "I'll come to you," during that virtual visit. LVHN firmly believes whether a provider comes to the patient by walking through the door, or zooming in virtually, that's a patient visit and needs to be reimbursed. We strongly support SB 780 and appreciate the work the committee is doing to give it a fair hearing.

Thanks again for the privilege of speaking with you. I look forward to your questions.

## Care From the Comfort of Home



It started with nausea, chills and weakness one night last August. Lois Welsh felt so bad her daughter called an ambulance to take her to Lehigh Valley Hospital–Hazleton.

Welsh's diagnosis surprised everyone. The normally active 74-year-old not only had pneumonia but also congestive heart failure (CHF), a chronic condition that limits the heart's pumping power. "It was a complete shock because I felt fine before that," she says. "I ended up in the hospital for 13 days."

### Support at home

After being discharged, Welsh was eager to get back to her favorite activities, including babysitting her two granddaughters and playing bingo. But she felt weak and unsteady. Welsh was relieved [home care](#) was available to help her while she recovered.

"When we first saw Lois she was suffering from dizziness and had fallen," says Marisel Mieses, RN, with Lehigh Valley Home Care–Hazleton (LVHC–Hazleton). "Our goal is to provide whatever therapy or care patients need."

Over the next six weeks, Welsh received regular visits from nurses, as well as occupational and physical therapists, to help her regain strength and balance. Mieses also taught her to use a new telehealth monitoring machine, available since August, to measure her blood pressure, weight and blood oxygen levels every day.

"It's easy to use with an automated blood pressure cuff, pulse oximeter and scale," Mieses says. Vital signs are automatically sent by modem to the Air Products Center for Connected Care and Innovation in Allentown where nurses remotely monitor data to ensure everything looks normal.

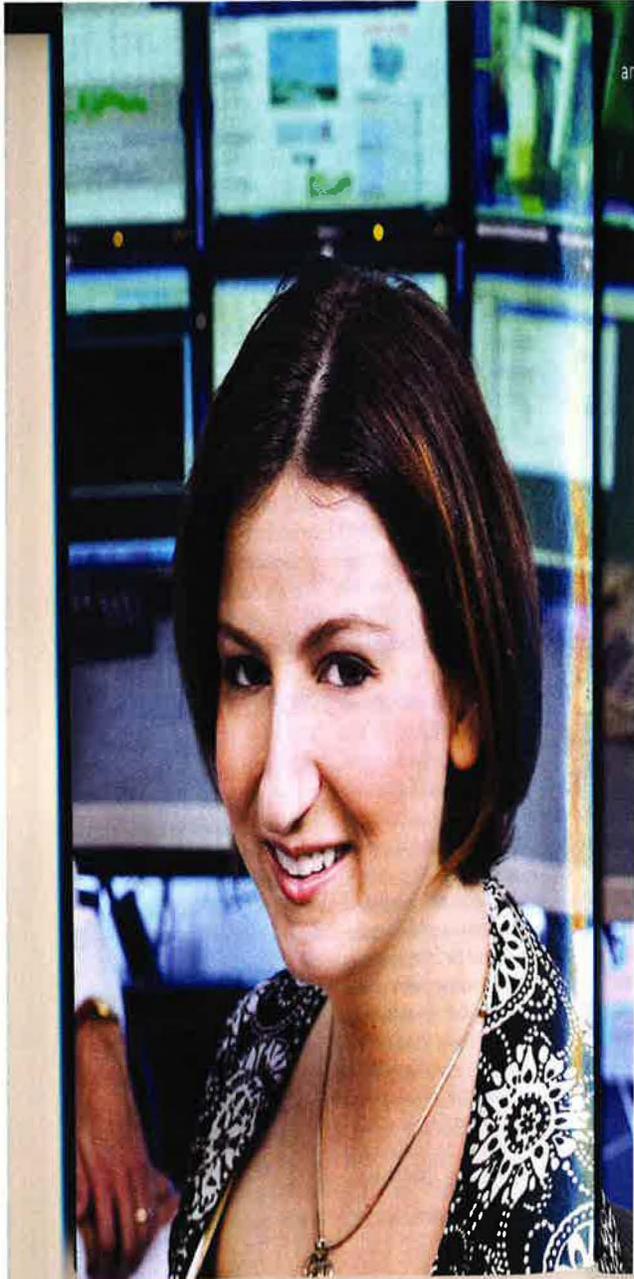
### Health crisis averted

The service proved to be a lifesaver when Welsh's blood pressure dipped dangerously low one day. Her cardiologist was immediately alerted and quickly readjusted her hypertension medication.

"We're seeing good outcomes with this new monitoring system," says Lynda Naperkowski, MSN, RN, Director, LVHC–Hazleton. "Only two of 24 patients have been readmitted to the hospital within 30 days."

Welsh and her family credit telemonitoring with bringing peace of mind and helping her recover faster. "My care team knew right away if I was sick," she says. "My energy is back now, and I feel great."

<https://www.lvhn.org/our-services/key-support-services/home-care/home-care-and-telehealth-monitoring-gave-lois-welsh-and-her-family-peace-of-mind-after-a-long>



# High-Tech Healing

She should have been at her high school dance. Instead, this teen was near death. Could a new kind of virtual medicine save her?

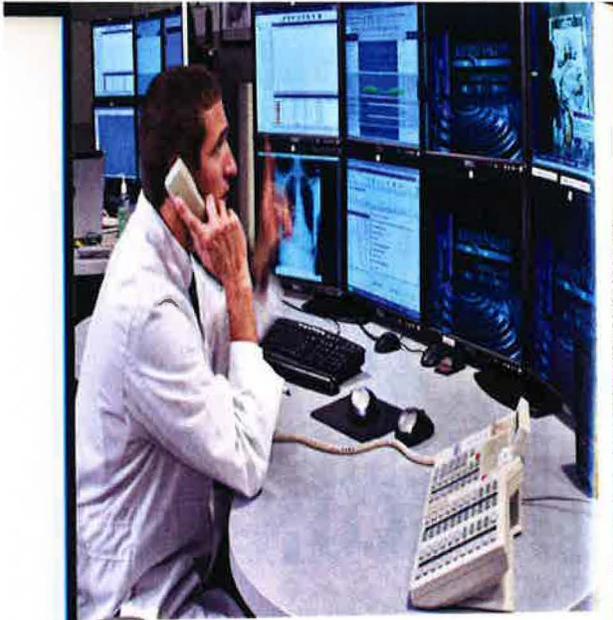
BY LISA COLLIER COOL

FOR WEEKS, Stephanie Heater had been looking forward to the January 2005 dance at her performing arts high school. But when the big day finally arrived, her party clothes sat forgotten in the closet. Stephanie, then a 17-year-old senior, woke up shaking with chills and vomiting repeatedly. Her temperature had soared to 104 degrees. Her parents, Michele and

David, gave her some Motrin to reduce the fever. But that didn't help. Too sick to get out of bed, Stephanie slept for a day and a half, missing the Snowball Dance. Then her hands turned cold, white and clammy.

Worried that Stephanie might be dehydrated, Michele and David took her to an urgent-care center near their home in Bethlehem,

PHOTOGRAPHED BY PAUL SMITH



Dr. McCambridge monitored every detail from the command center.

Pennsylvania. From there, she was sent to Lehigh Valley Hospital (LVH)-Muhlenberg. Her blood pressure was dangerously low, and veins in her arms had collapsed. Having seen another teenager with similar symptoms a year earlier, the ER doctor made a rapid diagnosis: Stephanie had toxic shock syndrome, a potentially fatal bacterial infection linked to tampon use. "Hearing we could lose our child hit me so hard that I almost fainted," Michele says. "I broke down in tears and said, 'Oh, my God. I thought it was the flu!'"

The ER doctor knew Stephanie needed specialized attention and monitoring and that she had to act quickly. She contacted the on-duty tele-intensivist (a doctor who uses

high-tech equipment to monitor a case from a remote site). In LVH's state-of-the-art ICU command center eight miles away, Matthew McCambridge, MD, a specialist in the care of critically ill patients, pulled up Stephanie's electronic chart on a computer screen. "I could see she needed life support. If we'd sent her to a pediatric ICU in Philadelphia, she would have died on the way, because her lungs and kidneys were failing." He advised an immediate transfer to nearby LVH-Cedar Crest, home to one of America's most advanced adult ICUs. But even with the best of care, her chances of survival were only 50-50.

Stephanie was rushed there by ambulance while her terrified parents

followed in their car. Within ten minutes, she was in an ICU bed, surrounded by the latest medical technology. The "eye in the sky," a remote-control camera mounted on the ceiling, let Dr. McCambridge zoom

and we fought to get her from minute to minute, then hour to hour."

Michele spent two weeks camped in the hospital waiting room, while David cared for the couple's 15-year-old son and visited daily. "At first, all

## Her lungs and kidneys were failing. Even with the best of care, her chances were only 50-50.

in on the tiniest details from the off-site command center. He watched Stephanie's eyelids flutter shut as the teen drifted into a medically induced coma while powerful antibiotics, steroids and sedatives dripped into her deflated arteries. Via two-way audio speakers, he helped talk the residents through complex procedures, including heart catheterization and the setup of a specialized ventilator. He also ordered kidney dialysis. An array of monitors sent real-time digital readings to his computer screen so he could make immediate adjustments in treatment.

"All night long, alarms went off because her blood pressure was unbelievably low," Dr. McCambridge recalls. For his entire shift, 7 p.m. to 7 a.m., he never left Stephanie's virtual bedside. Sitting at his white desk in the command center, which resembles an air-traffic control tower, he tracked her condition on eight computer screens as two critical-care nurses helped monitor 71 other ICU patients. "She was our sickest patient,

we did was cry and pray," says the stay-at-home mom. Little by little, Stephanie improved, and on day ten, doctors brought her out of the medical coma. After getting off the ventilator, she was alert enough to greet Michele one morning with a cheery "Hi, Mom!" Weeping for joy, Michele replied, "Hi, sweetheart."

On January 30, 2005, Stephanie went home. When she returned to school, a week later, the halls were draped with banners reading "Welcome back, Stephanie!" She graduated in June 2005 and sang her favorite songs at the ceremony to thunderous applause from friends and family. Although she doesn't remember most of the details of her illness, she wanted to meet the doctor who'd watched over her. Later that year, she visited the command center. "I thought the eye-in-the-sky camera was really cool," says the teen, who now works for a phone company and plans to start college this September. "I hugged Dr. McCambridge and thanked him for giving me my life back." ■

## The Heart and Soul of Hazleton



Home, specifically Hazleton, is where the heart is, especially for [Anthony Valente, MD](#), chief medical officer at [Lehigh Valley Hospital \(LVH\)–Hazleton](#). After graduating from Penn State College of Medicine in Hershey and completing his residency through the Scranton-Temple residency program, Valente came back home in 1991 to practice medicine in the community he loves.

“These are my friends, my neighbors, my family,” Valente says. “They are why I am here.”

### **No compromise care**

It’s his passion for this community that drives Valente’s dedication to bringing quality services and care to his patients. Providing award-winning programs right at LVH–Hazleton means that Valente doesn’t need to choose between his hometown and leading-edge medical care – and neither do his neighbors.

LVH–Hazleton is a certified Primary Stroke Center. Among its most impressive programs are Stroke Alert and award-winning MI Alert programs, which allow health care providers at LVH–Hazleton to quickly identify and assess stroke and heart attack patients and transfer them to a partner hospital when necessary.

### **Telehealth helps patients receive care right here**

Valente says one of the most exciting programs offered by Lehigh Valley Health Network (LVHN) is the telehealth program. “Being part of LVHN, we are able to offer additional patient services that we could not as a small community hospital,” says Valente.

Telehealth uses secure telecommunication technology to collaborate with LVHN specialists located in the Lehigh Valley and beyond to diagnose, monitor and treat patients who remain here in Hazleton. Among the telehealth offerings used in Hazleton are TeleNeurology, TeleBurn<sup>SM</sup>, TeleStroke, Advanced Intensive Care Unit (AICU) and TeleInfectious Disease.

“Recently, one of my patients came in with a strange set of symptoms,” Valente says. “He had a prolonged fever yet all the normal tests came back negative. Working through LVHN’s telehealth program, we determined that this patient had a rare tick-borne disease, not usually seen on this side of the Mississippi River.”

### **There’s no place like home**

After all, the programs offered by LVH–Hazleton and LVHN resources allow Valente to deliver quality medical care to his hometown.

“I sincerely enjoy taking care of the people here,” he says. “I would not want to be anywhere else.”

<https://news.lvhn.org/the-heart-and-soul-of-hazleton/>

## Bringing the Neurologist to You

*Teleneurology provides access to specialized care*



Traveling to another hospital while you are experiencing neurological symptoms is a hardship for people. It is particularly difficult for older people or people who suffer from chronic conditions. Telemedicine can resolve many of those challenges. “The concept is to bring care to where the patient is,” says neurologist [Nicole Purcell, DO](#), with LVPG Neurology. “Technology allows me to be in more than one physical space at a time to deliver specialized neurology services.”

### **Telemedicine brings specialty care to you**

With TeleNeuroSciences (TeleNS), remote locations are furnished with a high-definition camera, monitor and portable computer all placed on a wheeled unit that can easily be brought to your bedside or examination room. The unit also has the ability to attach diagnostic tools such as a stethoscope or otoscope (used for ear exams). At all times, a clinician, such as a nurse, assists with the exam as an extension of the physician. “On my end I have a camera-equipped laptop,” Purcell says. “I can see patients, and they can see me. But I can physically be anywhere as long as I have a secure Wi-Fi connection that supports the system.”

### **Almost like an in-person appointment**

Using TeleNS, Purcell can glean most of the information she would get from an in-person consultation. “I can talk to you, get a history, talk about medical problems and medications you take at home, and answer questions,” she says. “The only thing I can’t do is touch you, but a clinician on the other side helps facilitate a sensory exam.” Purcell also has access to medical records and can dictate notes that are entered into your home facility’s medical record system.

### **LVHN grows its telemedicine program**

Purcell provides TeleNS care to Lehigh Valley Hospital–Hazleton, Lehigh Valley Hospital–Pocono [by fall], and Lehigh Valley Health Network partner locations. “People like TeleNS because they can stay right at their home hospital,” Purcell says. “For some, that means having access to specialized care they might not otherwise receive.”

Learn more about [neurology services](#).

<https://news.lvhn.org/bringing-the-neurologist-to-you/>

## Get Health Care in a Whole New Way...LVHN Video Visits



Coughing? Sneezing? Aching? Sounds like a trip to the doctor is in order – or stay home and see a health care professional through an LVHN Video Visit.

1. Simply log onto your MyLVHN account.
2. Schedule a video visit appointment
3. See an LVHN provider on your mobile device or computer screen

LVHN Video Visits are for adults age 18 and older and only for minor illnesses or concerns, such as red eye (pink eye), cough/cold, lower back pain, urinary problems, ear pain, rash/skin problem or seasonal allergies. If you are experiencing an emergency, please call 911.

<https://news.lvhn.org/get-health-care-in-a-whole-new-waylvhn-video-visits/>

## How Telehealth Helps Heal Wounds



Difficult-to-heal wounds are a troubling problem experienced by people in long-term care or those with a chronic condition, such as diabetes. Healing those wounds and ensuring they don't become worse is important for a patient's overall health. At the transitional skilled unit (TSU) at LVH-17th Street, assessing and treating pressure wounds or other skin wounds is enhanced with the use of TeleWound interactive technology. As a Magnet hospital, our nurses use these connected technologies to provide care when and where a patient needs it.

Nurses take two pictures of wounds for consultation then the photos and background information are uploaded wirelessly to the secure TeleWound system. Certified wound care nurses access the data from their LVH–Cedar Crest office and then provide professional assessment and treatment advice.

**Great results**

Nurses quickly noticed benefits. “In the months since TeleWound launched, no wounds have progressed from stage 2 to 3, and all patients have received a consult within 24 hours,” says

Mindy Brosious, RN, BSN, telehealth clinical coordinator.

[https://www.lvhn.org/how\\_telehealth\\_helps\\_heal\\_wounds](https://www.lvhn.org/how_telehealth_helps_heal_wounds)