



## LEHIGH VALLEY HEALTH NETWORK



Lehigh Valley Health Network is speeding time to treatment, expanding patient access to providers and increasing productivity with TANDBERG video communications.

### CHALLENGE

Lehigh Valley Health Network (LVHN) is consistently recognized for operating some of the top hospitals in the United States by well-respected reporting organizations including US News and World Report and the Leapfrog Group, an organization that rates hospitals against national standards of safety, quality and efficiency. Comprised of three hospitals — two in Allentown and one in Bethlehem, Pennsylvania — and several community-based health centers, LVHN has an active medical staff of more than 1,100 primary care and specialty physicians.

With its three facilities and multiple health centers located in relatively high-traffic areas, LVHN was finding that providers often spent a fair amount of time traveling between facilities — reducing the amount of time they were spending with patients.

As Joe Tracy, vice president of Telehealth Services for LVHN, remarks, “A physician or provider behind the wheel cannot see patients — and there are plenty of patients to be seen.”

In an effort to address this issue and increase overall efficiency, LVHN brought Tracy on-board in early 2006 to help move its telehealth program forward. As Tracy recalls, “We were able to start with a blank slate in terms of selecting videoconferencing equipment. We knew we wanted to move to high-definition (HD) video equipment, so we brought in units from vendors with HD solutions, lined them up side-by-side right out of the box, and had our physicians look at a fetal ultrasound on each one — blinded as to which unit came from which vendor. They all chose the TANDBERG equipment.”





## SOLUTION

LVHN is using the TANDBERG equipment for a variety of applications — with one of the first being Psych Emergency Services (PES).

“Many times,” remarks Tracy, “we have PES providers who are located at our Muhlenberg campus in Bethlehem, and patients who come into one of our other hospital emergency rooms. Videoconferencing allows our PES staff — including physicians and mid-level providers — to beam into the other facilities that have limited resources and to evaluate patients there. This saves time and starts the evaluation and treatment processes sooner, which is all good for the patient. Everything we do is patient-centered.”

“That service,” continues Tracy, “has been working particularly well. We are at more than 40 evaluations a month.”

“Another good use of the equipment,” Tracy says, “is genetic counseling for high-risk obstetric cases. Perinatologists — high-risk pregnancy specialists — will tell you it’s often harder to recruit a genetics counselor than it is to get a perinatologist. Genetic counselors are in short supply and high demand. So our genetic counselors, operating from our Cedar Crest campus in Allentown, provide services to the Center for Specialized Medicine in Moosic, Pennsylvania and Grand View Hospital in Sellersville, PA. They use it five days a week, at least half a day. Our genetic counselors saw well over 400 cases via video during the past year.”

Obviously, eliminating the need for women in a high-risk category to travel is a major benefit, and they get all the services they would if they did travel to Allentown.

“They discuss family history, potential birth defects, and anything on an ultrasound that’s abnormal,” explains Tracy. “There is direct interaction between the genetic counselor and the patient. It’s really interesting — you have not only two-way video, but the counselors can share the same educational materials across the TANDBERG equipment as if patients were at our Cedar Crest facility, allowing them to see it and discuss it in real time.”

Tracy says that, with funds from a federal grant, LVNH will be installing TANDBERG equipment in three hospitals outside of its network, including two that have recently closed their obstetrical program, and will “provide a timely connection to our Labor and Delivery Unit, which is already equipped. Our Labor and Delivery Unit is also tied to our Advanced ICU, so if an obstetrics patient suddenly requires critical care, we can wheel our wireless unit into the patient’s room and a board certified intensive care physician can intervene and assist with the care of that patient.”

“The other big use for the TANDBERG equipment,” notes Tracy, “is for American Sign Language interpretation. In the past, when a deaf or hard-of-hearing person came into one of our emergency rooms, we would have to call an interpreter. Well, interpreters are not just standing by. It could take two hours or more before one would arrive. Now, using videoconferencing equipment, we connect to DEAF LINK in San Antonio, which provides remote video interpreting. This has and continues to do marvelous things for us in terms of providing more timely communication for that

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population of patients who present in an emergency situation or if they come in for some other unscheduled visit.”

That ability to start communication immediately helps not only the deaf or hard-of-hearing patient, but other patients as well.

As Tracy puts it, “Think about how busy ERs are. If you’re tying up a room just waiting for an interpreter for two hours, that’s a room somebody else can’t use. So this speeds time to treatment for everybody.”

## RESULTS

Citing the benefits of videoconferencing, Tracy points to “increased efficiency, expanded access to providers and, most importantly, providing services in a more timely manner. We are very patient-centered, so being able to evaluate and provide quality care to patients in a safe and timely manner is key.”

Because of this success, Tracy says LVHN is planning to expand its use of TANDBERG infrastructure products and endpoints.

“We created our own mobile cart,” he explains, “and TANDBERG equipment rides on it wirelessly, allowing us to bring equipment to patients in specific locations. We are also looking at a pilot program that would enable our hospitalists to facilitate patient discharges in a more timely manner. The size of our Cedar Crest campus from one end to the other is at least a 15-minute walk — it’s really a big place. Sometimes, the day’s last lab report or imaging study will come back and the patient is on one end of the campus but the hospitalist who can facilitate the patient’s discharge is on the other side of campus. We are going to place equipment in convenient locations where wireless units can be brought into the patient’s room so the hospitalist can discharge the patient from a unit in their office without further delay.”

In addition, remarks Tracy, “We are now seeing institutions that are willing to contract for services using telehealth to reduce the cost of transporting patients, which is very expensive and often the only way patients get seen. Telehealth is a win-win for everybody — some patients may reside in a nursing home or specialty care facility, and by not having to travel, they are getting the services they need without potentially missing other essential services, such a physical therapy. The hospitals that contract will reduce their transportation costs significantly for many patients, and our physicians will be compensated for those services under the contract. So this is good for the patients, saves money for the remote hospital, and it’s keeping us whole. As part of the pilot we are going to place equipment in convenient locations so it works for everybody.”

Tracy says LVHN recently received funding from the Dorothy Rider Pool Health Care Trust to start a telehealth program with the Allentown school district, in which the network will be providing services to three elementary schools.





"The school nurse will be able to connect with our pediatricians," says Tracy. "So a kid who comes in with an earache can be seen over the network and the ear examined remotely with a video scope. The doctor can do a general exam with the help of the school nurse and determine the appropriate course of action right away. We're hoping this will keep more kids in school and keep more kids healthy. Many times, parents take their kids to the ER for primary care, which is a big expense on everybody. This program will allow the students to be more efficiently evaluated so that parents may not have to leave work, pick up the child from school and then either go to the ER or make an appointment that might be days later. The doctor can also call in prescriptions so that the child begins receiving treatment in a more timely manner. This will reduce sick days for kids. The parents will love it. It is going to be a wonderful project."

Finally, Tracy says that LVHN is rolling out TANDBERG's Movi, which will enable users to connect to videoconferences with only a PC and USB camera.

"We are going to use Movi to connect doctors, but also to keep senior management and others from unnecessarily traveling back and forth between campuses for meetings," he remarks. "This will make us more efficient, while reducing our transportation costs."

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