



Telemedicine Helps Neurologist Touch Thousands of Lives

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In 1984, Leonard DaSilva returned to Brazil with his parents after living in the US for three years. His goal at the time was to study for the medical school entrance exams. An avid swimmer, DaSilva was asked to join his school's swim team upon returning to his native country. "I can practice maybe once or twice a week because I'm studying," DaSilva recalls telling the swim coach. "My swimming career is over."

Nevertheless, DaSilva signed on, and the team wound up in a state-qualifying event for the Brazilian national team. He went on to compete in the finals, but would slip at the start on what he describes as "old, concrete blocks." Despite his poor start, DaSilva caught and passed every other swimmer in the competition except one. As a result, he finished second, and missed participating in the World Swimming Championships by a scant one-one hundredth of a second. "It was just one of those things," he reasons today.

It also was likely one of the last times that DaSilva—currently chief of neurology for Specialists on Call, a Joint Commission-accredited provider of emergency telemedicine consultations, delivered via telemedicine—came up short in his impressive career. Swimming's loss, it seems, was health care's gain.

Building a foundation

DaSilva attended and received his medical degree from the Universidad Federal de Juiz de Fora in Brazil. Shortly thereafter, together with his new wife, he returned to the US to do his residency and build his career—a career that would center on his love for neurology. "It's the love of mystery," DaSilva explains of his affection for the field of neurology. "There's a different kind of process in neurology than in other medical specialties. When you localize a problem, your mind starts to work on identifying what the problem is. You go backward. It's a different thought process, and I love it."

DaSilva and his wife moved to Pennsylvania, and he began studying for the licensing exams to become a physician in the US. But he wanted to do more than simply study, so he began "knocking at hospital doors" in search of a residency opportunity, which he found at St. Luke's Hospital in Bethlehem, PA.

Initially, his role was limited to moving patient gurneys around the hospital. Then one day, Brazilian physician Fabio Dorville, MD, befriended DaSilva and took him under his wing. "Go buy yourself a white apron, a short one, because you're going to follow me around," Dorville said. It was the start of a three-year residency in internal medicine, which included using his knowledge of Spanish and Portuguese as a volunteer in the hospital's clinic. "I got to know all the physicians, and there was a superb internal medicine program at St. Luke's," DaSilva recalls. Still, with the completion of his residency, he once again felt the pull of neurology.

Opening new doors

DaSilva followed his tenure at St. Luke's with a three-year residency in neurology at the University of Texas in Houston. By that point he had a young family, so he moonlighted at the MD Anderson Cancer Center ICU for four years as a chief fellow, thanks in part to his background in internal medicine. He also gained valuable experience through his exposure to the University's stroke program. Then an opportunity came along at the Tallahassee Neurological Clinic, in Florida, that would catapult his career in a new direction. He became one of the first neuro-hospitalists in the country, a decision he says was one of the great choices in his life.

"It fits my personality," DaSilva explains. "I love to talk, I love to chat with people; to spend time with people. I like the urgency of things. I like to come in and take care of problems. I didn't realize how much I enjoyed that. I like to sit down, and being a hospitalist, I have the choice to do that. I can choose to spend five minutes with a patient, or half an hour. As a critical care physician, you cannot do the neurology part, and a neurologist cannot do the critical care part. When I blend both of them as a neuro-hospitalist, I love it. It was something that I found very fulfilling."

More doors began to open. About five years ago, DaSilva met Evan Allen, MD, who is currently the medical director of Florida Orlando Comprehensive Stroke Center and the Florida Hospital Neuroscience Institute, as well as a full-time teleneurologist with Specialists on Call. Allen was looking to build a stroke coalition in Florida. Together they founded the Florida Stroke Coalition.

Around the same time, they connected with Colin McDonald, MD, out of Boston, MA, who was looking to form a company that would provide stroke service to patients throughout Florida by way of telemedicine and videoconferencing. DaSilva jumped at the opportunity to participate part-time in this new venture, which was originally known as Brain Saving Technologies, but later changed its name to Specialists on Call under the leadership of Joe Peterson, MD. "It was really a different experience in my life," DaSilva recalls. "I had found a new and exciting field. It had an urgency part that I liked, and a responsibility for treating people that you never imagine you can touch. It's somebody's life that you can touch from far away, and they have no access whatsoever to a neurologist. I'm a click away from being available to treat this person. And for me personally, I could touch so many lives in so many ways. It was a wonderful feeling."

Growth and change

Today, DaSilva is the chief of neurology for Specialists on Call and one of the first full-time teleneurologists in the US. He has consulted with more than 5,000 patients via telemedicine, more than any other physician in the country. He loves his work and says the challenge is in being flexible when dealing with hospitals and emergencies in different parts of the country. "The patients' problems, ironically enough, do not change very much," explains DaSilva, noting that what does change is the perception in different areas of the country of how strokes are handled. "Half my work is the ability to deal with so many different backgrounds. And what I mean by that is hospitals are at all different levels of education and capability; you have to adapt to that. Not only do you have to adapt to the patient and the patient's education ability, or the language, or their background, but now, sitting at home or in your office, you have to understand the capabilities of a given emergency room. What is the doctor's experience handling this? What is the nurse's experience? So, we might be dealing with a hospital where they have only four emergency room beds, or with a system that has 3,000 beds. Or you may have a nurse and physician come in and say, 'I have never given tPA in my life. How can I do this?' And you have to guide them through it." Guiding, or teaching, is something DaSilva has always enjoyed. Twice

he received the Resident Teacher Award for Internal Medicine at St. Luke's, and he also earned the Resident Teacher Award for Neurology at the University of Texas. Asked why he enjoys teaching, DaSilva explains that he loves sharing information that could help change somebody's life for the better. But there's also a more deeply rooted reason.

As a child, DaSilva had a learning disability that he says took him more than 30 years to understand. It wasn't until his children were diagnosed with the same condition that he realized that, "I was not stupid; I just had a learning disability." His learning difficulties prompted him to focus on learning techniques. He broke down things into pieces to make them more easily understood—for himself, as well as others. "If I had trouble learning, other people will have trouble learning as well," he says. And I do that on a daily basis. I don't teach residents any more, but I do teach my patients. And when you talk to them, and help to shed some light—translate things into layman's terms so they can understand—their life becomes easier, because they understand their condition."

Telemedicine's changing face

Today, Specialists on Call covers more than 100 facilities—from small rural hospitals to large suburban hospitals—in 10 states. DaSilva and his colleagues, 46 private practice and academic, full- and part-time neurologists, conduct approximately 1,000 telemedicine consults each month. SOC, DaSilva explains, is contracted by hospitals that "don't have neurologists on staff," or have neurologists who have not agreed to take calls, or "weren't responding in a timely manner, and the hospital was unable to achieve stroke center status or maximize potential tPA patients."

The biggest change DaSilva has noticed over the years is the growing acceptance of telemedicine, and the way it has enhanced medicine overall. He explains that his conversations today with emergency room nurses and physicians are more patient-focused. Hospital staff has learned how to look for and identify a patient's problem, and report that information to DaSilva and other teleneurologists during the consult. "The hospital becomes a better hospital," he says. "The service becomes better. The physician who is receiving the instructions via telemedicine becomes a better physician because now he has another set of eyes teaching him what is going on. The nurse becomes better. And the winner in all of this is the patient."

DaSilva says that physician stubbornness is in large part the reason for resistance to telemedicine thus far. But there's a two-part fear that he says runs deeper. Beyond any cost factor involving new technology, it's the fear that another physician will step in and make the treating physician look like he or she doesn't know what they're talking about. That's compounded by the fear of losing a patient, which translates into lost income. Both fears are internal, DaSilva says, and neither is reality.

Once engaged, "physicians realize very quickly that we're there to supply them with a service; that we're there to help them," he explains. "We can actually make their lifestyle better, and help them make more money without having to leave their office. It takes about six months for them to see that change, and then physicians become our allies."

Here to stay

DaSilva believes that telemedicine is here to stay, "no ifs, ands, or buts." He explains that telemedicine enhances patient care, but it doesn't substitute for the physician—and that latter point is his greatest fear. He's concerned that people will believe the technology can substitute for the physician, and that health care consumers can simply go to a pharmacy and obtain a medical opinion. "All of us have limitations," he says. "The pharmacist has limitations, and the

technology has limitations. You cannot substitute for that. The danger is when people take that for granted.”

Still, he’s completely sold on the benefits of telemedicine outweighing any negative aspects. “Time is of the essence, not just in neurology, but all areas of healthcare,” DaSilva explains. “We have the tools to do telemetry measurement of vital signs, and even look at echocardiograms. Soon enough, follow-ups for chronic diseases might be done using telemedicine tools. Patients would come to the office when they need further evaluation or closer monitoring, saving time for patients and physicians. That’s where telemedicine is going to come in.”

And who knows more about time than a former swimmer who missed a World Swimming Championship by one-one hundredth of a second?

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