



Integrating Telehealth in the ED Increases Patient Access to Care and Delivers Improved Results

When a patient presents to the emergency department (ED) with symptoms of a stroke, clinicians need to act fast. Stroke patients who receive medical care within three hours of initial symptoms are less likely to suffer lasting effects than those who receive delayed care, according to the American Stroke Association. As the U.S. population ages, the prevalence of stroke and other neurodegenerative disorders will continue to rise.

This trend coincides with a diminishing number of available EDs around the nation. Between 1993 and 2013, ED visits increased by more than 40 percent, but the number of available EDs decreased by 11 percent, according to research published by The U.S. Department of Health and Human Services (HHS) in 2016.

The combination of these trends puts a strain on our hospital systems and compromises the ability of patients to receive the timeliest and most appropriate care possible. To alleviate this strain and improve care, particularly for patients with acute neurologic needs, hospitals have been implementing hospitalist programs and leveraging telehealth innovations. These non-traditional approaches connect patients with highly specialized experts in a flexible and on-demand manner.

Vituity, a physician-led and -owned, multi-specialty partnership is partnering with hospitals to deploy new delivery models and establish in-house programs. Among its offerings is a telehealth solution that connects Vituity's medical experts with physicians in the ED and inpatient settings for 24/7 advice on care delivery.

Becker's Hospital Review spoke with three Vituity physician leaders— Rick Newell, MD, Chief Transformation Officer; Yafa Minazad, DO, Vice President of Acute Neurology; and Arbi Ohanian, MD, Vice President of Acute Neurology – to learn more about the demand for integrated specialty services and how Vituity is using teleneurology to create an integrated experience.

Editor's note: Responses have been lightly edited for clarity and brevity.

Question: What are the unique specialist care needs of EDs and hospitals? Are they being met today?

Dr. Richard Newell: Hospital and ED specialist coverage needs vary based on the facility and the community in which it is located. However, in my experience, EDs have a significant and growing need for specialist coverage, regardless of the facility or community.

From a neurology standpoint, we're seeing a rapidly aging patient population and an increase in ED visits for neurovascular emergencies, neurodegenerative conditions, and other neurologic emergencies. We're also seeing more emergencies on the behavioral health side, so it's across specialties. It's estimated that approximately 10 percent of ED visits are due to behavioral health conditions, and we all know that EDs and hospitals lack the psychiatric support and resources needed to manage these patients.

At the end of the day, it's a strained system. We see prolonged ED stays, poorer patient outcomes, and a drop in patient satisfaction as a result of this lack of access to specialists.

Q: Why should a hospital consider implementing a neurohospitalist program?

Dr. Arbi Ohanian: There's a misconception that internal medicine physicians can manage all neurologic care, but neurology requires much more rigorous training than what is taught in an internal medicine residency. Neurology is a specialty of its own. To appropriately care for complex neurologic patients, it's best to have a neurohospitalist evaluate and manage that patient. At hospitals where we implement these programs, we see appropriate ordering of tests, decreased length of stay, better outcomes, and increased patient satisfaction.

Q: Can you describe how teleneurology works in the ED setting?

Dr. Yafa Minazad: We have a video-conferencing cart that is HIPAA-compliant in the emergency department. It provides physicians with the equipment to conduct neurological examinations and provide recommendations in a very timely manner.

Often, when a patient comes to an emergency department with stroke symptoms, the community neurologist will be notified and then will need to travel to the hospital, evaluate

the patient in person, and provide recommendations. This all takes a long period of time. With teleneurology, we're able to assess the patient immediately and make recommendations to the ED physician to begin treatment as quickly as possible. We can recommend tPA (tissue plasminogen activator), which is a strong clot-busting medication, or we can recommend intervention, which means mechanically going after the blood clot and pulling it out. When it comes to stroke, time is extremely critical. The longer tissue is deprived of blood flow and oxygen, the higher the chances the patient ends up with a life-altering deficit.

Q: Given your extensive stroke management experience, how has teleneurology changed the game for stroke treatment?

AO: I've been using teleneurology since I completed my training at UCLA where I was a stroke fellow. Back then, it was a novel technology. Now it's becoming the main approach for caring for stroke patients. Telehealth is one of the quickest ways for physicians to access patients. During a stroke, 1.9 million brain cells die per minute, so every minute matters. If a neurologist is not present at the hospital and needs to travel in, care can be delayed by up to 45 minutes. Using telehealth, we can access the patient immediately.

Q: How is the healthcare landscape changing with respect to integrated care, and why is that change significant?

RN: The healthcare landscape is changing because of several trends, most notably our rapidly aging patient population. It's estimated that every day 10,000 baby boomers turn 65. Some people affectionately call it, 'The Silver Tsunami.'

Other trends include a growing shortage of physicians, the consumerization of healthcare, and the emergence of disruptive technology. These trends are producing one of the largest and most transformational shifts we've seen in healthcare history. Given this shift, continuing to do things the way they've always been done will not suffice. Therefore, an integrated care delivery model, including telehealth services such as teleneurology, is imperative to manage this new state of healthcare.

Q: What are the impacts of an integrated model on different departments and care teams within a hospital?

YM: An integrated model ensures that care teams are sharing information, developing comprehensive care plans, and making joint decisions about clinical care. It works well for the ED to allow access to neurology care in a timely manner during neurological emergencies, such as stroke.

This model works for non-acute care needs as well. For example, when patients come in with non-emergency neurological issues such as a headache or Parkinson's symptoms, the ED physician may need a specialist's opinion

to determine whether the patient needs to be admitted, what medication to give them, or what imaging to do. An integrated approach takes the burden off the ED team, creating more alignment that results in higher quality care.

Q: What are the barriers to adopting an integrated model?

RN: There are several barriers to adopting an integrated care delivery model. These include: siloed departments, competing priorities, misaligned incentives, overwhelmed staff, and frankly, at many facilities, unengaged physicians. Just because there are barriers, doesn't mean it's not worth the effort of putting an integrated care model in place. The benefits are numerous, and the impact is profound.

Q: How do Vituity's teleneurology and neurohospitalist programs adapt to meet the needs of this growing patient population?

AO: Our programs are unique because we tailor them to the needs of each site. We're not a one-size-fits-all model. We provide the entire spectrum of acute neurological care, in addition to other supporting neuro services, such as neurodiagnostic (i.e. EKG). A customized, needs-based program creates cost efficiencies, and improves patient throughput and outcomes.

Not only does this customized approach deliver benefits for our partner hospitals, it allows us to create care models that leverage trained specialists to the fullest extent possible, so they can see more patients.

Q: As a provider, what is it about an integrated approach to patient care that you find most satisfying?

YM: It's a very rewarding way of working. Previously, we only used teleneurology in the acute setting and didn't have the luxury of caring for the patient throughout the continuum of care. Now, with teleneurology – both in the acute setting and the non-acute setting – we're able to evaluate a patient, give the recommendation, then follow-up, and walk through the hospitalization process along with the primary team including the hospitalist.

We also work closely with both neurosurgery and trauma services because they require support, such as neurocritical care and long-term continuous EEG monitoring in the ICU to be able to keep their critically ill patients in the hospital and avoid transferring them elsewhere.

Using teleneurology to create an integrated model means we are empowering hospitals to deliver effective and compassionate care. It connects me to more patients in need, and allows me to make a difference in their lives. ■

To discover more about Vituity's integrated teleneurology services, please visit: www.vituity.com/services/acute-neurology



As a physician-led and -owned, multispecialty partnership, Vituity has proactively driven positive change in the business and practice of healthcare for over 40 years. Our 3,000 doctors and clinicians provide a wide range of integrated acute care expertise. Serving over 6.3 million patients annually at 250 practice locations, our footprint continues to rapidly expand across the country as we partner with and support hospitals, health systems, clinics, payers, and employers. Our services span the entire acute care continuum including: emergency medicine, acute psychiatry, acute neurology, hospital medicine, critical care, anesthesiology, acute care surgery, telehealth, post-acute care, and outpatient medicine. Vituity's acute focus and compassionate care are the driving forces that have placed us at the heart of better care.