

# Dignity Health

## Hope and Healing Through Telemedicine

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By JIM ROXBURGH, RN, MPA

**T**elemedicine is rapidly becoming an essential part of modern health care. According to the American Telemedicine Association (ATA), there are approximately 200 telemedicine networks with 3,500 service sites operating today in America.

For Dignity Health, an integrated health care organization with a faith-based heritage, telemedicine plays a large role in bringing the most up-to-date, high-quality care to the diverse patients and communities it serves. Based in San Francisco, Dignity Health's 39 hospitals, ranging in size from large, tertiary-care facilities to small, rural community hospitals, are widely dispersed over three Western states. The organization also operates more than 400 care sites in 20 states. Telemedicine is one of the key tools to bring the same resources, diagnostic expertise and protocols to patients regardless of which Dignity Health facility they visit.

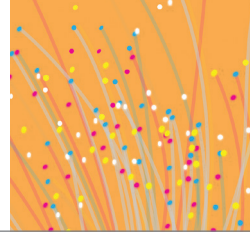
From a hospital perspective, telemedicine adds efficiency by allowing a single medical specialist — a neurologist or psychiatrist, for example — to cover multiple hospitals and be available to patients where and when needed at a fraction of the cost of an on-staff specialist at each facility.

From a patient perspective, the benefit is incalculable, particularly since access to such medical specialists can be a challenge in rural areas. From a community perspective, telemedicine innovations offer a new way of looking at population health management — not to mention new possibilities for addressing needs. Dignity Health's collaboration with Propeller Health to deliver an asthma management plan already has shown positive results for patients served by Dignity's pilot site at Woodland Clinic near Sacramento.

### THE TELEMEDICINE NETWORK

Dignity Health's telemedicine network began in 2008 in the Northern California- Sacramento service area, thanks to a generous grant from the Elliot Family Foundation. The Elliot family lost a loved one to stroke and gave a \$500,000 grant to the Mercy Foundation to improve stroke care. Although Dignity Health had a strong stroke program at its Sacramento hospitals — Mercy General Hospital and Mercy San Juan Medical Center — the Folsom, Calif., hospital had limited on-site neurology coverage and needed more rapid and available neurological consults. Dignity Health put in place robotic telemedicine (or remote presence technology) to bring the expertise in the Sacramento hospitals to patients who needed it in Folsom and the surrounding area.

Since its founding, the telemedicine network has spread to Dignity Health facilities across Northern California and Nevada and has grown to include other specialties, as well. The network has 31 partner sites and more than 60 robots through which specialists can be present at an acute care patient's bedside at a moment's notice. Teleneurology, telepsychiatry, and tele-intensive care remain the largest telemedicine applications, but others include pediatric critical care, neonatal intensive care, nephrologists who provide acute care, cardiologists, geriatricians and pulmonologists, all of whom are providing telemedicine services to patients in acute and ambulatory care settings.



Davin Lundquist, MD, chief medical information officer for physician integration and population health, chairs a leadership group focused on developing the capacity for virtual physician visits across Dignity Health. “There is great interest across our system in enabling our physicians to make virtual visits to patients’ homes through conferencing technology,” said Lundquist. “For example, we have a robust virtual visit program in the Sacramento area for geriatric patients who are homebound, and two pilot programs treating chronically ill patients — one in Central California and a second in the Phoenix area.”

#### EMS AND TELEHEALTH

One of the newest applications of Dignity Health’s telemedicine network is engaging with Emergency Medical Services (EMS) providers in the Sacramento service area. With stroke patients, time is of the essence. Dignity Health already has an early alert system in place that allows EMS workers to contact stroke centers while the patient is en route to the hospital, but this soon will be augmented with telemedicine capabilities that will allow physicians to actually beam into the ambulance and evaluate the patient before he or she reaches the hospital. With neurologic care, a difference of 10-15 minutes in getting treatment to the patient can have a tremendous impact on

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outcomes. Through telemedicine, we will have the essential information we need and begin advanced interventions before the patient ever arrives at the hospital.

Alan Shatzel, DO, medical director for the telemedicine network and for Dignity Health’s Neurological Institute for Northern California, founded the network and has helped guide its expansion. He sees continuing opportunities and potential for telemedicine at Dignity Health: “The

vision for the network is to continue to fill in these gaps to provide timely specialty care to patients when and where they need it – getting specialists to the patients’ bedside quickly and efficiently. Our patients want and deserve the highest level of care no matter where they live, and thanks to our Internet capabilities, secure broadband expansion, and remote presence technology, we’re able to provide it.”

#### MEETING PATIENTS WHERE THEY ARE

In Arizona, Dignity Health’s St. Joseph’s Hospital and Medical Center, located in Phoenix, administers a patient-centered medical home project (see story page 4). Telemedicine enhances the medical home through virtual “e-visits” that allow the physician to virtually visit chronically ill patients at home to assess their well-being: whether or not they are up to date with their checkups, taking their medications, feeling well, or in need of a visit to a clinic.

As Shez Partovi, MD, chief medical information officer for the Arizona service area, put it, “We recognize that care is moving toward the ambulatory setting and we are responsible for our patients whether they are inside the hospital or at home. As part of our Arizona Care Network and our Dignity Health Medical Group, we aim to use telemedicine to treat our patients throughout the full continuum, not just within the walls of the hospital.”

Establishing a patient telemedicine network for virtual physician home visits requires a great deal of preparation and process development: assuring that patients have the right equipment at home and have the knowhow to use conferencing software. For that reason the Arizona network is being rolled out in phases. The first trial phase is being conducted by Priya Radhakrishnan, MD, a telemedicine physician champion conducting e-visits with a panel of patients selected based on their needs for higher levels of care, such as chronic conditions or difficulty getting out for doctors’ appointments. The patients were enrolled in the program during their clinic visits, interviewed to ensure they were comfortable with the e-visits, and educated about the process.

Dignity Health considers these virtual home visits to be a first step toward comprehensive tele-

medicine outreach to our patients wherever and whenever they need our services. The current model is perfect for informational visits where the physician gains a general sense of the patient's health and wellbeing, but not for occasions when the physician needs to physically examine the patient. Once e-visits are in place across Dignity Health, vital sign monitoring for patients who are

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Lundquist believes the e-visit holds many ancillary benefits for both the patient and physician. "First, it's convenient for our patients. We are meeting the patients where they are, and we are more able to 'keep in touch' with them and they with us," he said. "Second, as physicians we see the patients' homes and learn the kind of things about their living conditions we could only learn from an old fashioned home visit. Finally, from a system perspective, virtual visits allow us to better manage physician capacity. Some of our physicians in new markets or with new practices may have extra capacity. These physicians could make virtual visits to patients wishing to see a physician right away when their own doctors are unavailable."

**ASTHMA MANAGEMENT**

In 2012, Dignity Health announced a project with Propeller Health, a Madison, Wis.-based software company, to study asthma management through use of an inhaler outfitted with a tiny monitoring device supported by a smartphone app. The randomized, controlled study enrolled 500 patients from two Dignity Health locations in central California. Early data from the study at Woodland Clinic, a Dignity Health facility near Sacramento, Calif., "resulted in improved asthma management among participants," the Dignity Health Founda-

tion reported. Based on the early results, the Dignity Health Foundation will be launching the \$3 million, multi-year Project T.E.A.M. (technology and education for asthma management) initiative to expand the project in size, scope and to 3 additional Dignity Health locations. According to the foundation, asthma affects nearly 3 million Californians, but for more than 3 in 5 of them, the chronic condition is poorly controlled.

"Those with lower incomes are much more likely to require repeated hospitalizations and have difficulty managing their disease," the foundation says in its case statement. "In addition to being responsible for nearly 400 deaths in California every year, asthma places a financial burden upwards of \$1 billion on California's health care system."<sup>1</sup>

Project T.E.A.M will combine the Propeller sensor and platform with community-based interventions to reduce costs and improve asthma management among vulnerable populations in South Sacramento, Southwest Merced/East Merced and South Kern County, three sites where Dignity Health serves as a major safety-net provider and where rates of asthma and underinsurance are among the highest in California.

The program collects personal and locational data and provides weekly reports to help patients and health care providers track asthma triggers and symptoms. Patients can see their information through a mobile app or an online dashboard, and receive email or text feedback to help them understand how to use the information — as well as to remind them how to use the inhaler properly.

Program participants will receive the Propeller sensor and mobile application system, an individual asthma care plan and educational support from a team of clinical and non-clinical providers. They also will receive home visits to assess the environment for possible indoor triggers of asthma. Trained peer health coaches will help participants keep up their asthma management program and help them coordinate with medical providers.

The idea is to identify and test asthma control programs that can be replicated and sustained in the communities Dignity Health serves. The ultimate goal is to improve the control of asthma for those most in need and prevent asthma-related costs and deaths in California.

Dignity Health has made a serious commitment to telemedicine from top to bottom. Whether it's bringing a distant, highly skilled specialist to a patient's bedside, or visiting with a chronically ill patient in his or her home, we see telemedicine as integral to our mission, which calls on us to provide compassionate, high-quality care with kindness to those most in need in the communities we serve. Telemedicine extends the reach of our care and allows us to offer hope and healing to more patients more efficiently and effectively.

**JIM ROXBURGH** is director of the Dignity Health Telemedicine Network based in Sacramento, Calif.

#### NOTE

1. Dignity Health Foundation, "Project T.E.A.M.: Building Healthy Communities through Technology and Education for Asthma Management," [http://dignity-healthfoundation.org/file/2014\\_11\\_Project-TEAM.pdf](http://dignity-healthfoundation.org/file/2014_11_Project-TEAM.pdf), (accessed Dec. 9, 2014).

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