



# Virtual Care Supports The Common Good

By CHRISTOPHER VEREMAKIS, MD

**A**fter completing my training program in critical care medicine more than 35 years ago, I joined Mercy Hospital St. Louis in Missouri, known then as St. John's Mercy Medical Center. Although I didn't fully appreciate it at the time, I was blessed to join a Catholic-based health care system built on the ideals of Catherine McAuley and the Sisters of Mercy.

Initially, it was the intellectual stimulation and the challenge of caring for critically ill patients that provided job satisfaction. Mercy provided an open-minded and innovative environment willing to challenge old modalities of care. Over the years, I began to embrace other aspects of the Mercy culture, including dedication to the common good and delivery of compassionate care for all.

But achieving the common good in medicine — meeting every patient's medical needs, no matter where the patient lives or whether the patient can afford medical care — is easier said than done. It is especially difficult as patients increasingly expect quick and easy access to high-quality, lower-cost health care services while hospitals and health care systems receive less reimbursement for that care.

With these pressures at play, how do you continue to do more with less so you can meet the common good?

Part of the answer lies in virtual care, which integrates telemedicine — technology that connects patients with health care team members in another location — with real-time electronic health record data and advanced analytics. This technology provides more efficient ways for virtual clinicians and bedside caregivers to work together as a new health care team to improve patient access and care while reducing costs.

## DECADE-LONG INVESTMENT

Mercy first began its virtual care journey 10 years ago. I've had the opportunity to help build our state-of-the-art virtual care programs from the ground up over the last decade, while also ensuring they continue in the Mercy tradition and contribute to the common good.

In 2015, we opened our four-story, 125,000-square-foot Virtual Care Center in Chesterfield, Missouri, which is the world's first facility dedicated entirely to care outside its own walls. The building houses 330 Mercy co-workers, but no patients.

Like our founder and the Sisters of Mercy who searched for people who needed their help, we are using technology to reach more patients in our communities to improve their health. This is especially important today as patients spend a longer time waiting for a doctor's appointment

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and, in many instances, cannot access the general or specialty care they require.

In 2013, the Commonwealth Fund examined wait times for doctor's appointments in the United States and 10 other countries. Of the survey respondents in the United States, 26 percent said they had waited six or more days to see their provider when they were "sick or needed care," and 24 percent of respondents had to wait four or more weeks to see a specialist.<sup>1</sup>

Telemedicine delivers care when and where it is needed, for all people — regardless of their socioeconomic status or whether they live in an urban or rural setting. Virtual care already has and will continue to improve patients' access to health care services.

#### **JUST A CLICK AWAY**

Across the country, more and more patients are looking for answers to their medical questions without setting foot in a doctor's office.

For the last few years, Mercy has offered e-visits, a service where patients who have an established relationship with a Mercy physician and have non-urgent symptoms — like coughing, heartburn, red eye, back pain, sinus problems and diarrhea — can log in to their electronic medical record, answer several clinical questions and receive a recommended treatment plan. All for the cost of a traditional co-pay, such virtual visits offer more convenience and a higher value to patients, while providing added time for physicians to care for more complex patients who must be seen in person.

The service is especially helpful for patients who do not have ready access to transportation, cannot afford to leave work, or live far from their primary care provider or in a physician-shortage area.

The United States faces potential shortages of as many as 90,000 physicians nationwide by 2025 and more than 300,000 nurses by 2020.<sup>2,3</sup> The

#### **ON THE COMMON GOOD**

**A**vera promotes the common good through keeping our staff, patients and stakeholders in touch with our spiritual heritage and the Christian ministry of healing. One way we do this is the Avera Daily Reflection, an emailed devotion based upon the Scripture reading for the day. It's a cool ministry because it offers a personal perspective from believers across the system, representing various denominations within the Christian faith. As a writer, it's an opportunity to express my faith and share a connection with others. As a reader, I find the messages helpful and uplifting, and a great way to start my day. The Avera Daily Reflection started in 2004. It involves 125 writers, including physicians, leaders, employees, Sisters and friends of Avera. There are over 1,300 subscribers from Avera as well as over 400 non-Avera subscribers.

*Donna Farris, Avera Health*



shortages especially affect rural communities. Across the country, about 1 in 4 people live in rural areas, but only 1 in 10 physicians practice in those areas.<sup>4</sup> Virtual care is vital to filling those gaps and providing patients with access to the primary care providers and specialists they need without having to travel far for care.

#### LIFESAVING SPECIALIST CARE

Virtual care not only provides increased access to a patient's primary care provider through services like e-visits, but also connects patients to specialists in other facilities.

Telestroke, for example, connects emergency room patients who are experiencing stroke-like symptoms with a stroke neurologist in another location. The local provider can administer tPA — the clot-busting drug approved to treat ischemic stroke — if the neurologist determines the patient is having a stroke and is a good candidate for the treatment. The drug is most effective when provided within three hours after symptoms begin, however, in the past, inexperienced emergency department providers have been reluctant to administer the high-risk treatment. Since launching telestroke in 33 Mercy hospitals across four states, tPA has been administered four times as often as before the introduction of telestroke and has resulted in improved patient outcomes. The use of virtual care to provide specialty services in urgent and emergent cases, like stroke, saves lives, reduces rates of serious disability and, ultimately, reduces costs since intervening sooner is likely to result in less ongoing care.

Many of Mercy's hospitals are in rural locations that were unable to treat stroke with tPA prior to the launch of telestroke. Now, virtual care allows patients in Tishomingo, Oklahoma, with a population of about 3,000, access to the same high-quality care from a neurologist as patients living 120 miles away in Oklahoma City.

#### INTENSIVE AMBULATORY PROGRAM

In 2012, nearly half of all adults in the United States had one or more chronic health conditions, and these patients accounted for 86 percent of health care spending in 2010.<sup>5,6</sup>

Virtual care allows us to connect to patients and monitor their conditions 24 hours a day, seven days a week, 365 days a year, through programs like Mercy's ambulatory virtual care service, which provides monitoring for chronically ill patients in

their homes. The program targets the 2 percent to 3 percent of patients with chronic conditions who account for about 30 percent or more of the entire U.S. health care budget.

One of Mercy's first home-monitoring program participants in September 2015 was an 87-year-old woman who had been hospitalized 13 times in the previous 24 months for reasons related to multiple chronic conditions, including two primary cancers, chronic obstructive pulmonary disease and congestive heart failure. Her goal was to remain at home and live independently.

Through the intensive ambulatory program, the care team can have a virtual visit with the patient on a computer or tablet and can use devices to monitor a variety of vital signs, including blood pressure, heart rate, weight and oxygen

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levels. The monitoring is preventive to keep small health concerns from becoming larger conditions that are disruptive to the patient's life and expensive to treat.

The goal of the intensive ambulatory program is to cut overall use of health care services and costs by 35 percent, while improving the patient's overall quality of life. If, for example, a patient has gained three or four pounds in two days, her respiratory rate has increased and her oxygen saturation has decreased, those could be signs of worsening heart failure. The care team can intervene, change the patient's medication and treat the problem before it gets too serious and requires an emergency room visit or a hospital stay.

In the program's pilot phase, participating patients had fewer hospitalizations, reported a better quality of life and saw cost reductions that exceeded pre-established goals. Now, more than 250 patients are enrolled in the intensive ambulatory program, and a more complete analysis is in progress using this larger group.

## A SECOND SET OF EYES

As with the intensive ambulatory program, having a second set of eyes on patients while they are in the hospital means clinical teams can intervene earlier, perhaps before a condition gets worse.

Mercy offers the TeleICU program, which remotely connects bedside teams in hospital intensive care units to specialists in another facility, using two-way, audio-visual technology combined with sophisticated monitoring and analytic software.

Mercy TeleICU teams monitor more than 475 ICU beds in multiple states, 24 hours a day, seven days a week. Since the program launched in 2006, results show marked improvements in patient outcomes, including a reduction in predicted mortality rates and decreases in average length of stay.

The TeleICU team does not provide daily bedside management of patients, but instead focuses solely on health trends by using advanced analytics to predict possible deterioration in a patient's condition. Having this team monitoring patient trends means the bedside care team can focus its efforts on providing high-quality patient care.

Additionally, the TeleICU program provides the kind of nighttime coverage that many facilities cannot provide because of limited physician availability. It's a partnership that is beneficial to both patients and clinical teams.

If the TeleICU team and the bedside caregivers can, for example, help patients avoid the development of sepsis — infection throughout the body — by closely tracking and monitoring a patient's health trends over time, it may prevent organ failure and save lives. Plus, it will keep health care costs down and get patients out of the hospital sooner.

The TeleICU program is available in all Mercy ICUs to all patients, regardless of their ability to pay for their care. This means all Mercy patients have access to the same high-quality ICU services and that second set of eyes, no matter their socioeconomic status or if they live in St. Louis, Missouri, or nearly 600 miles away in Ardmore, Oklahoma.

## FUTURE OF VIRTUAL CARE

Catherine McAuley and the Sisters of Mercy may not have predicted medicine could one day be delivered on a small electronic device, or that a team of specialists could monitor patients from hundreds or thousands of miles away, but I think they would be proud that through innovation, we

are helping to achieve the common good by caring for the health care needs of our communities.

I, for one, didn't foresee the advent and growth of virtual care when I began my career four decades ago, but I'm lucky to be on this journey with Mercy and other health care organizations that now are investing in the technology.

As more patients begin to trade a visit to a doctor's office or hospital for a virtual visit, we must not lose sight of our role in their health care — to provide the highest quality, safest health care services possible to all patients. After all, as health care providers, we made a pledge to serve the common good. Virtual care is helping us do just that.

**CHRISTOPHER VEREMAKIS** is medical director of inpatient services for Mercy Virtual, Chesterfield, Missouri.

## NOTES

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