



# Senior and Rural Healthcare Services and the Benefits of Technology

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In 2020 the world changed, as a worldwide pandemic emerged, threatening the lives of everyone, especially those with chronic health issues, seniors and other vulnerable adults. With COVID-19 on the rise, the healthcare community recognized the need to change – change in the way healthcare was delivered as the world shut down and individuals and families were isolated in their homes, cautioned to remain inside.

How could healthcare providers administer care, treatment or services to their patients, if those patients were too afraid to leave the safety of their homes? If ever there could be a silver lining in the dark and ominous cloud of COVID, it was one of the many challenges faced – a challenge to healthcare providers to find

innovative and effective ways to stay connected with patients. With the danger of the pandemic looming over the world, utilizing technology in the delivery of healthcare became the new frontier. Primary care providers, therapists, psychiatric providers and large healthcare systems began utilizing telehealth technology to connect with their patients.

One Arizona-based provider was no exception, allowing for a quick case study for the benefits that have been realized through telehealth programs.

Teri's Health Services (THS) is a fully integrated outpatient treatment center providing behavioral health and physical health services. Launched as a mobile healthcare company in 2017, at that time Teri Hourihan, Ph.D., LPC and founder of THS, brought evidence-based, trauma therapy to individuals across the state of Arizona. Growing into a larger organization, the company has expanded from Hourihan as the sole provider into a team of multiple therapists, registered nurses (RNs), intake and mobile clinicians, medical managers and directors. The result of the growth has been an increased ability to offer a greater inventory of services and provide care to larger numbers of those in need of medical attention. During this expansion, THS introduced physical and psychiatric services. For the company, as well as for just about all in the field, the impact of the pandemic presented challenges above and beyond the norm in the treatment of and service to patients.

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Says Gavi, the Vaccine Alliance – host of digital platform *VaccinesWork*, which presents research and works on global health and immunization – “The arrival of COVID-19 disrupted healthcare in various ways. Less urgent services were cancelled or postponed, while barriers imposed by curfews, transport closures and stay-at-home orders prevented some patients from attending appointments. Others avoided health centres and hospitals for fear of becoming infected themselves.”<sup>1</sup>

1 Geddes, Linda. 2022. “How the COVID-19 pandemic has affected healthcare around the world.” Last Modified 25 July 2022, accessed February 1. [https://www.gavi.org/vaccineswork/how-covid-19-pandemic-has-affected-healthcare-around-world?gclid=CjwKCAiAleOeBhBdEiwAfgmXf-sKkQuwpr9mQsjWvB8qMR9w7iyd5D2jB-MEtjomkOplvNk5g4To-mBoCsAoQAvD\\_BwE](https://www.gavi.org/vaccineswork/how-covid-19-pandemic-has-affected-healthcare-around-world?gclid=CjwKCAiAleOeBhBdEiwAfgmXf-sKkQuwpr9mQsjWvB8qMR9w7iyd5D2jB-MEtjomkOplvNk5g4To-mBoCsAoQAvD_BwE).

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Among the challenges THS set out to solve were how to care for patients who were enduring varying levels of “lockdown,” concerned about leaving home for fear of infection, was how to ensure the safety of patients, healthcare providers and staff. Additionally, patient numbers were up as a result of COVID; the danger of transmitting the disease was real. And, as the number of patients grew, a critical concern centered on how to accommodate the growing needs safely and effectively.

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Among the many solutions explored within the industry, telemedicine quickly rose to the top as a way of effectively and efficiently addressing many of these unforeseen challenges.

Notes a report in the *Cureus Journal of Medical Science*, “The current healthcare landscape lends itself to major changes,

including elevating the prominence of telemedicine. Recent technological advances and external pressures have driven telemedicine to the forefront of medical reality ... The convenience provided by this low-resource modality facilitates the intercommunication between physicians and offers a suitable alternative for patients who are medically or socially unable to see providers in person.”<sup>2</sup>

The early promise of telemedicine is referred to in the *Cureus* report, referencing the emergency declaration made in March 2020 by the Centers for Medicare & Medicaid Services (CMS). In the declaration was stated the need for providers to use telemedicine to provide patients care in hospitals, clinics, nursing homes and other settings across the states. Additionally, new policies have been implemented to better facilitate patient care, safety and privacy.

“It was at this point that telemedicine was introduced as one of the services that we would provide,” says THS CEO Hourihan. “We were able to treat many more

<sup>2</sup> M. X. Jin et al., “Telemedicine: Current Impact on the Future,” *Cureus* 12, no. 8 (2020).

patients than we would have been able to without it, and it kept our patients, providers and our team safe. It was a game changer, not only at THS, but across the industry as a whole.”

With the introduction of telemedicine at THS, the company experienced an increase in the number of new patient requests. These services, utilizing the Health Insurance Portability and Accountability Act (HIPAA)-compliant Zoom platform, allowed THS to provide counseling, primary care and psychiatric services to clients in the safety of their own homes.

“By utilizing Zoom, we could offer trauma-focused therapy for individuals, couples and families who were going through a major life change, or suffered past trauma that required care without the risk of the negative health impacts that might exist from coming into a physical space,” reports Hourihan. “This technology also allowed us to provide grief counseling for individuals and groups.

“Group therapy via telehealth allows for individuals to feel connected, to interact with others, while still adhering to social distancing recommendations. Utilizing this technology offered clients the ability to stay connected with a provider; it ensured they continued to receive the medications they needed to remain both physically and mentally healthy.” Hourihan notes that THS primary care services transitioned to telemedicine as well, ensuring annual checkups continued and, should a patient be ill, they were still able to meet with a provider from the comfort of their bed. “Truly, this technology was saving lives,” she says.

As advancements in treatment for combating COVID continued, organizations serving the senior communities began reaching out to THS, seeking in-person care for their residents. Hourihan identified that using a hybrid model of in-person care and telehealth services could allow this population to benefit from an in-person visit while still utilizing telemedicine for efficiency. In order to make the model effective, THS added nursing staff to expand the mobile team. The increase in staffing included medical assistants, emergency medication technicians and RNs. As a result, mobile medical staff was able to travel to and meet with the patient, complete a hand-on assessment and connect the patient with the provider via telemedicine.

Hourihan points to a March 2022 report in the publication *Health Informatics*,

“Application and Implementation of Telehealth Services Designed for the Elderly Population During the COVID-19 Pandemic: A Systematic Review.”<sup>3</sup> In the report, which concluded not enough telehealth services have been developed and implemented for the elderly population, it was noted, “[T]elemedicine visits have been reported even in cases in which the elderly patients were residents of a facility, and the RN assessment helped to supplement the physical exam.”<sup>4</sup> Hourihan says, “This mobile approach provides the comfort and assurance of a physical exam, while still utilizing telemedicine from the comfort of their home or residence.”

The impact of telehealth is evident. In this one case, centered on the results in a single effort – THS – the advent of the technology has resulted in an expansion of healthcare availability to those patients with chronic ailments most needing attention, as well as those effected by the pandemic. THS is now providing healthcare services not only in its original Maricopa County (greater Phoenix) but also in the state’s Yavapai, Gila, Pinal, Pima, and La Paz counties. In 2023, THS will begin providing services in Arizona’s Cochise, Coconino, Navajo, Apache, and Mohave counties.

In the case study of THS, telehealth technology was complemented by Contexture, Arizona’s health information exchange (HIE) system, to ensure healthcare continued during a time of disruption. Enrollment in the program – designed to provide secure access to patient health information as well as the secure exchange of patient health information between HIE and participating organizers and providers – addressed THS coordination of care efficiency, enabling more complete information and, therefore, better care and outcomes.<sup>5</sup>

“We recognize that our patients, especially in the senior community, aren’t always able to keep up with the appointments they go to, the doctors they see and the medications they take,” says Hourihan. “Utilizing the HIE system is a great

3 M. Haimi and A. Gesser-Edelsburg, “Application and Implementation of Telehealth Services Designed for the Elderly Population During the Covid-19 Pandemic: A Systematic Review,” *Health Informatics J* 28, no. 1 (2022).

4 *Ibid.*

5 Banner University, “Health Information Exchange,” Banner University Health Plans, <https://www.banneruhp.com/join-us/hie>.



way for us to be able to identify where patients are going, who they are seeing and what prescription medications they are taking in order to provide high quality healthcare.”

Hourihan also says the importance of a collaborator such as the HIE system is critical to reducing medication errors and adverse medication reactions, as well as limiting potential contraindications of medications. Backing her concern is a finding published in the *Journal of Biomedical Informatics*, which found that up to 18 percent of patient safety errors, and as many as 70 percent of adverse drug events, could be eliminated if the right information about the right patient is available at the right time.<sup>6</sup>

Advancements in HIE have extended the effectiveness of the collaboration. Included in the most recent developments are alerts used to monitor current patients, notifying their multidisciplinary treatment team of hospitalizations or emergency room visits. The alerts allow for patients’ outpatient providers at THS to follow-up with their subjects in real time, assisting with hospital step down care – that intermediate level of care between ICU and general medical-surgical wards – discharge planning and aftercare appointments. Knowing of a patient’s admission into a hospital or a treatment provided in an emergency room, THS is able to more quickly set patient goals, plans and objectives to reduce the likelihood of being readmitted to a higher level of care. “This coordination of care reduces burdens on hospitals and helps ensure our patients have the tools, resources and care needed to prevent hospitalizations,” says Hourihan.

Meanwhile, THS is one of many healthcare entities that are changing the way patients are being treated and served – much of the advancement due to the critical need for change that came with a pandemic of epic proportions. THS has found telehealth options to be an effective and efficient way to face the growing number of those in need of medical attention. The company has also found its collaboration with Contexture HIE to be a valuable tool in ensuring proper organization and coordination of treatments and services. The Gavi report mentioned earlier notes

6 David C. Kaelber and David W. Bates, “Health Information Exchange and Patient Safety,” *Journal of Biomedical Informatics* 40, no. 6, Supplement (2007).

that new insights into the disruption caused by COVID-19 could help strengthen health systems ahead of future pandemics.

This is the silver lining in what has been the bleakness of COVID's impact, and in the medical field's ability to cope with other interruptions as well. Gavi's conclusion, as researched by Catherine Arsenault and colleagues at the Harvard T.H. Chan School of Public Health, notes, "Given the widespread disruptions in health services ... our results call for rethinking pandemic preparedness and health system response. Health system resilience must become a central component of national health plans. Given the likelihood of future pandemics and other major shocks, there is an urgent need to design more resilient health systems capable of addressing a crisis while maintaining essential functions."

Hourihan's conclusion is similar. "As we use advanced HIPAA-compliant technology, bringing quality, safe, integrated healthcare to all communities in Arizona is occurring," she says. Underserved communities are not being served, but that can change. Individuals who have difficulty with mobility can receive care from the comfort of their own homes. Telemedicine has changed the way healthcare is delivered, but has not sacrificed the quality of care provided.

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### ***About the Authors***

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Trevor Cooke is the chief strategy and compliance officer at THS. Prior to joining the company, he was the senior director of quality and risk management and a member of the executive team at Aurora Behavioral Health Hospitals, a 238-bed inpatient psychiatric hospital system in Arizona. Cooke has worked in substance abuse and mental health since 2011, earning hands-on experience at outpatient treatment centers, residential treatment centers, medical detox facilities and inpatient behavioral health hospitals.

***Cassie Davis***

Cassie Davis is the director of business development at THS, and has worked in behavioral health for more than 10 years in a variety of roles. Davis began her career working with autistic children before transitioning to case manager responsibilities at a Serious Mental Illness–designated clinic. Following her graduation from Grand Canyon University in Phoenix with a bachelor’s in psychology and a master’s in industrial and organizational psychology, she began her healthcare career as a community liaison with Valley Hospital, a private psychiatric hospital in Arizona’s capital city that specializes in mental health and chemical dependency care.