Rural Telemedicine: “Haves” or “Have Nots”? 

From “The Promise of Telemedicine Depends on Bandwidth, Technology” by Craig Settles in The Daily Yonder, 8/29:

“Telemedicine can save money and lives, if rural communities have the equipment and infrastructure to put the technology to work.”

“Stephen Morris recalls his father’s battle with Parkinson’s disease. ‘He was in a rural county where they have general MDs and a hospice within 10 miles,’ Morris said. ‘But specialists were over two hours away. My family would have appreciated telemedicine. Several times my brother or I had to leave work, drive down, and help Mom take Dad to the closest equipped hospital, an hour from where they lived.’ ”

“Morris is principal of FoothillsNet, a broadband consultant for rural America. He believes telemedicine is incredibly difficult, if not impossible, without broadband. ‘I envision teleconferences with medical specialists hours away giving advice in real time and adjusting medicines to reduce costly ER visits and hospital stays,’ he said.”

“Telemedicine, until recently, was simple to comprehend. In 2015 Andrew Graley, formerly director of healthcare, government and education for vendor Polycom Solutions, defined it as ‘the remote monitoring of patient health data wherever they might be. Predominantly the patient is in their home, elderly, and suffering from a long-term condition or chronic disease.’ ”

“Today, it’s much more. Through telemedicine, healthcare providers can use intranet or internet networks to diagnose, administer, initiate, assist, monitor, intervene, or report a medical procedure. And the services can include mental and physical rehabilitation.”

“One thing hasn’t changed, however. Broadband may still determine whether rural residents are telemedicine’s ‘haves’ or ‘have nots.’ ”

When Minutes Matter—“Most of us associate ultrasounds with a prenatal procedure that helps moms and their doctors monitor a baby’s development during pregnancy. But the technology is an ER doctor’s best friend when it comes to diagnosing and treating injuries to muscles and many internal organs.”

“When seconds matter, portable ultrasound devices can deliver images from the scene of an injury, speeding up diagnosis and treatment. But images require bandwidth. The better the broadband connection, the higher the odds of a quicker response.”

“You are entitled to your own opinion, but you are not entitled to your own facts.” - Daniel Patrick Moynihan
RWHC Eye On Health, 10/16/17
“Some portable ultrasound machines are about the size of a thick, oversized laptop. Emergency responders at a car wreck outside of town or a house located in sparsely populated areas can feed ultrasound images, readings on heart rate or other vitals, and audio observations to physicians at a rural clinic or a major city hospital. In turn, physicians can more accurately instruct responders how to treat the victims.”

“Ultrasounds can determine if there’s internal bleeding, the extent of a fracture, whether a person is just suffering from indigestion or a heart attack,” says Michelle Alexander, clinical marketing director for Point of Care Ultrasound. “But if your connection is bad, a paramedic can lose valuable time getting to where there’s coverage.’ Her company is pilot-testing a product called SonicXpress that is designed to use satellite and existing cellular or WiFi wireless for reliable speed to transmit the data.”

“Broadband links between medical facilities and emergency responders with portable ultrasound devices can save lives. With more data reaching doctors, patients can get to and through the ER faster, or they can be routed to the correct medical facility to begin with. Communities’ healthcare administrators, emergency preparedness teams, and broadband planning teams should work together to create both the communication infrastructure and telemedicine equipment.”

“A telemedicine program now links physicians at Baystate Medical Center in Springfield, Massachusetts, with patients and physicians at more rural community-based Baystate Mary Lane Hospital (25-beds), Baystate Wing Hospital (74-beds) and Baystate Franklin Medical Center (90-beds). Medical areas utilizing telemedicine include critical care for ICU consults, inpatient and outpatient neurology, infectious disease, geriatrics, psychology, and cardiology among others.”

Telemedicine for Rural Mental Health—“In the U.S., on average, one in five people have a diagnosable mental illness,” said Dr. Edward Kaftarian, CEO of Orbit Health Telepsychiatry. “In some cases in rural America, that can double. However, the shortage of psychiatrist in rural areas is a tragedy that is unfolding before our eyes.’”

“Psychiatrists are medical doctors, and they understand if you have an illness in a particular part of the body that can affect your brain, and similarly the brain and the mind can affect parts of the body. Dr. Kaftarian says mental illness, in it’s extreme, can lead to death. ‘We have 30,000 Americans die every year from opioid addictions. That’s double the homicide rate in the country. We have over 40,000 suicides every year in the U.S., many as a result of mental illness.’”

“Dr. Kaftarian strongly believes broadband and telemedicine are a part of the solution to this problem. ‘There’s no need to delay projects to rural populations that need it the most, whether the networks are owned by communities, co-ops or whoever,’ he said.”

“Telepsychiatry requires good video and audio connections with guaranteed security, anywhere between 30 and 100 megabits per second. Slower speeds may be adequate, but doctors may lack enough bandwidth for simultaneously charting, accessing medical records, or consulting other information sources.”

“If you try to treat patients with lesser quality, you get less effective treatment” said Dr. Kaftarian. “If the experience for both the doctor and the patient is bad, both get frustrated, and they don’t want to continue.”

“The need for broadband speed isn’t limited to institutions and emergency responders. Medical and community stakeholders who want to leverage broadband...
have to remember that patients often receive telepsychiatry treatments in their homes. The quality and speed of residential broadband is problematic in many rural areas. Some are still on dial-up Internet connections. ‘For people that only have dial-up, video is a nonstarter. Even DSL is really pushing it as far as videos is concerned,’ Dr. Kaftarian concludes.”

Craig Settles is a broadband industry analyst, consultant to local governments, and author of “Building the Gigabit City.” His latest analyst’s report is “The Co-op’s Broadband Plan for Success.”

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“Telehealth: An Update on the Evidence”

From “Telehealth: An Update on the Evidence” in the Wisconsin Council on Medical Education & Workforce (WCMEW) Newsletter, September, 2017:

“WCMEW’s 2016 Report, A Work in Progress: Building Wisconsin’s Future Physician Workforce, highlighted that ‘the use of telemedicine is expected to leverage physician resources for all specialties. Gains in efficiencies through consumer use of e-health, changes in workflow, and increased use of remote/asynchronous care are expected to lower the demand for physician services.’ Relief workers attending to Hurricane Harvey-affected families even looked to telemedicine to treat pediatric flood victims, using a telemedicine station in a Dallas mega-shelter.”

“What does the evidence say about telehealth today? Are more hospitals and clinics providing access to telehealth services, and how are these options financed? The review below of practice, trends, and research further reinforce that telemedicine will continue to serve a key role in tomorrow’s health care. Therefore, how can we expect that increased use of remote health services will affect the health care workforce? And how can Wisconsin prepare the workforce for these inevitable reforms?”

**Telemedicine in Wisconsin**—“Thirty-one states currently mandate reimbursement of telemedical visits by commercial insurers, according to the American Telemedicine Association. The 2017 Coverage and Gaps Report details parity laws for each state. Wisconsin is not included in the majority of states with such a regulation for private insurance, though the Wisconsin Medical Examining Board continues to update and improve the state’s current rules for the practice of telehealth. Medicaid does provide coverage for some patients using telemedicine services, however. See below the U.S. map of telemedicine parity laws, by state (Source: American Telemedicine Association).”

“The most common form of reimbursable telemedical service is live video, but reimbursement varies widely depending on type of services (office visit, inpatient consult), type of provider, and patient originating site. In December 2015, Wisconsin became the 12th state to join the Federation of State Medical Boards interstate medical licensure compact, expediting interstate licensure for physicians. This portable licensure may contribute to increasing access to telehealth services, but its impact is yet to be evaluated.”

“As noted in in WCMEW’s August 2017 Newsletter, The Wisconsin Hospital Association is currently assessing the prevalence of telehealth in the state, and plans to release findings in mid-2018.”

**VA Leadership**—“The VA is often cited as a leader in the field of telemedicine. In 2015, the VA conducted over 2 million telehealth visits for 677,000 veterans. According to the VA, such remote services (including real-time medicine, home telehealth, and store-and-forward services) reduced hospi-
tal bed stays by 58%, hospital admissions by 32%, and psychiatric inpatient care by 35%.

One limit to the VA’s practices of telehealth, however, is a restriction that under current law, VA clinicians can only provide services to veterans across state lines if both the provider and the patient are in a federal facility. New federal legislation would update the law so that patients in a different state don’t need to travel to a VA facility for services, but would rather be able to receive telemedical treatment in a clinic or their home. This legislation was introduced in April 2017, and has since been referred to the Committee on Veterans’ Affairs.

What Does the Research Say?—“According to a robust, systematic review of the evidence by the Agency for Healthcare Research and Quality (AHRQ), ‘There is sufficient evidence to support the effectiveness of telehealth for specific uses with some types of patients, including: remote patient monitoring for patients with chronic conditions; communication and counseling for patients with chronic conditions; and psychotherapy as part of behavioral health. For other uses, such as triage for urgent care, telehealth is cited as offering value but limited primary evidence was identified, suggesting more studies are needed. Future research also should assess the use and impact of telehealth in new health care organizational and payment models.’ The review also sought to evaluate cost efficiency. Four reviews suggested that telehealth provided net benefits measured by reduced costs or utilization, while 11 reviews suggested potential benefit, 10 were inconclusive, and 7 found no or net negative benefits.”

“A recent American Hospital Association report states that over 65% of hospitals and health systems have implemented telehealth in at least one care unit, and the practice is likely to increase in the future. The recent publication provides case studies on how a variety of health systems are integrating telehealth practices today.”

“The good news is that there is little evidence that any current telemedicine services leave patients worse-off than visiting a clinician in person. As of 2014, there were no case laws holding that patients had been damaged by telehealth. Perhaps surprisingly, some services are actually more accurate when administered remotely compared to in-person. For example, ‘Acute care treatment via telestroke produces outcomes similar to those with treatment at tertiary care centers, and better than those non-telestroke community hospitals.’ ”

“According to a 2016 study published in the Journal of the American Medical Association, there is a significant increase in use of telemedicine services in the last decade, particularly for rural U.S. residents. From 2004 to 2013, telemedicine visits for rural Medicare enrollees increased by 28%, most of which occurred in outpatient clinics. Mental health visits accounted for over three-quarters of services received. However, while telemedicine visits are increasing, still fewer than 1% of rural Medicare beneficiaries utilized telemedicine for health services. This compares to an average annual rate of 12% of Veteran’s Affairs enrollees using such remote health services.”

“Through a 2017 analysis, RAND evaluated the behavior of 300,000 individuals with access to direct-to-consumer telemedical services, and found that unfortunately only 12% of interactions substituted traditional visits, while almost 90% indicated new uses of medical services. While each remote appointment cost significantly lower than an in-person visit, benefits were dwarfed by new use of services.”

“Designing systems that effectively support telemedicine for the right services and at the right time is an imperative for development of a robust, quality, and cost-effective remote health care delivery system. Only then can members of the workforce be adequately leveraged to provide telehealth services to patients in a sustainable and efficient manner.”
Below is an interview with Louis Wenzlow, director of HIT & strategic initiatives/CIO at RWHC about our behavioral telehealth pilot program.

Please briefly describe RWHC’s Behavioral Telehealth Network. What are the network’s key goals, timeline, and deliverables? What key questions is the project trying to address? Are there other similar projects in Wisconsin, perhaps in other geographic regions or medical disciplines using telehealth?

We started the project in late 2014, when we were awarded a three year HRSA Network Development grant to pursue it. The first year we worked with a good number of RWHC member hospitals and a consultant to plan an approach. The second year we identified our “pilot” organizations, developed project plans for all of the pilots, and then started doing the work required to go live, which happened in late 2016 and early 2017. We have another pilot project planned for later this year, and several other hospitals have expressed an interest in getting involved after that.

The primary goal has always been to increase access to behavioral health services in underserved rural Wisconsin communities. As everyone knows, I think, the behavioral health workforce shortage here is extreme, and it’s particularly difficult for rural communities to attract behavioral health professionals. By utilizing telehealth to mitigate the distance problem and by applying a network approach to identifying the resources, we’ve been able to get some of these services out to the pilot organizations and their communities.

In terms of deliverables, RWHC connects members seeking behavioral health professional services with those that have them; we implement the telehealth technology (the easiest part!), perform credential verification and reimbursement credentialing, serve as project managers from project kickoff to go-live, and facilitate the sharing of workflow maps, protocols and best practices.

I think many Wisconsin healthcare systems and some individual organizations have telehealth programs that provide face-to-face behavioral telehealth encounters and various other telehealth services (dermatology, telestroke, e-ICU, etc.). What distinguishes this project is that it is a network approach that includes both system and non-system rural hospitals working together to share their limited behavioral health professional resources.

Who are the primary stakeholders in the network and what are their roles? How were these partners selected? How is the project funded? (Please speak to why the specific sites of St. Croix Falls, Ashland, etc., were selected as provider sites, who identified the psychiatric professionals and why, and how the patient sites were selected.)

The primary stakeholders are the organizations participating in the program. We currently have three RWHC member hospitals (Memorial Medical Center in Ashland, St. Croix Regional Medical Center, and Western Wisconsin Health in Baldwin) serving as what we call Provider Organizations, which between them contribute blocks of time from two psychiatrists, one Psychiatric APNP, and one Psychologist; and three members (Upland Hills Health in Dodgeville, St. Clare Hospital in Baraboo, and Tomah Memorial Hospital) serving as Patient Organizations, where patients present for the services. These are all organizations that signed up to participate in the HRSA grant project and that—after our first year of planning—volunteered to serve in these roles in our pilots.

Funding to date has been through the HRSA Network Development grant. It looks like we will have one more extension year for funding through 2018. After that, Network activities will be funded by participation dues and potentially new grants. It’s no secret that behavioral health is generally not a revenue producing service, so we are doing everything we can to keep technology and other costs low.
What is the timeline for the project as related to both planning/development and operating activities?—The three Patient Organizations that have gone live took anywhere between eight and twelve months from contract signing to first patient visit. RWHC supported the effort in the ways I’ve described, but much of the hard work was done by patient organization staff who worked on process flow, patient intake, encounter, and post-encounter protocols, EHR customization to meet behavioral health practitioner needs, etc.

After all of the planning and preparation was completed, we scheduled mock patient encounters in order to test the planned workflows, equipment, and EHR functions. In all three pilots, the testing process resulted in the organizations deciding to delay patient go-lives until certain issues were ironed out, whether technology or workflow or staffing. It was never the same thing. Testing is important!

We think that bringing new organizations on won’t take as long, as we’ve learned a few things. But moving into our expansion phase, the main challenge will be identifying and recruiting additional behavioral health practitioner resources. That pesky workforce issue. The timelines for new participants will largely depend on how we do there.

Do you anticipate the project’s findings will be generalizable/transferable? If so, how? If not, what are its limitations?—You know the old saying, if you’ve seen one rural hospital, you’ve seen one rural hospital. And if you looked at the workflow maps for each of the pilots, you would see there’s some truth to that, with every organization having their own way of doing things, different EHR capabilities, process flows. It’s not like making a widget. That said, there’s no question that all of the pilots learned from each other. We often worked as a group to develop new protocols, which were then customized as needed by the different organizations. We used the same concepts and tools to organize and keep the projects on track. There was a consistent approach that I think benefited everyone. The farther we get down this road and the more implementations we experience, the more relevant transferable resources we will have to assist our current and future participants.

How does a project like this add to the discussion about health workforce in Wisconsin?—We knew that there were some efficiencies to be gained by reducing practitioner travel time and by providing access to pockets of excess capacity, but we are still in the situation of needing far more behavioral health practitioners than we currently have. Whether they are practicing in one location in person or in multiple locations virtually doesn’t materially change that fact. I think we need to continue efforts to increase the workforce, continue to emphasize practitioners practicing at the top of their licenses, and yes, telehealth also has a role. I’m not sure that this project adds much to the workforce dialogue. I’m all ears for more answers.

Why is it important to fund pilots like this project?—There are population density/volume issues in rural communities that require support for those populations to get equitable treatment. This is why we subsidized electric and telephone system buildouts to rural areas, why we need to do the same for broadband, as well as for access to healthcare. Low rural volumes, high joblessness and poverty rates, high rates of smoking and obesity, and the related higher chronic disease prevalence, are all reasons it’s important to fund rural. Beyond that, I think a network approach through which rural organizations collaborate on common problems is a good way to develop sustainable services that will generate value for the stakeholders and that can spread over time. As for behavioral telehealth specifically, Wisconsin is not a parity state, so commercial payers may or may not reimburse for the services, there’s nothing that requires it. The HRSA funding has allowed us to plan and build a framework for behavioral telehealth service provisions to underserved rural communities that would not exist without the grant. Patient volumes have increased every quarter since go-live.
Suicide & Lack of Mental Health Services

From “Suicide Trends Among and Within Urbanization Levels by Sex, Race/Ethnicity, Age Group, and Mechanism of Death—United States, 2001–2015” in the Centers for Disease Control and Prevention (CDC), Morbidity and Mortality Weekly Report, 10/6:

Problem/Condition—“Suicide is one of the top 10 leading causes of death in the United States. Substantial geographic variations in suicide rates exist with suicides in rural areas occurring at much higher rates than those occurring in more urban areas.”

Results—“Suicide rates increased across the three urbanization levels with higher rates in nonmetropolitan/rural counties than in medium/small or large metropolitan counties. Increases in suicide rates occurred for all age groups across urbanization levels, with the highest rates for persons aged 35–64 years. Rates of suicide by firearms in nonmetropolitan/rural counties were almost two times that of rates in larger metropolitan counties.”

Public Health Action—“Interventions to prevent suicides should be ongoing, particularly in rural areas. Comprehensive suicide prevention efforts might include leveraging protective factors and providing innovative prevention strategies that increase access to health and mental health care in rural communities.”

Leadership Insights: “Gen X-Forgotten Again”

The Leadership Insights series is by Jo Anne Preston, RWHC Workforce & Organizational Development Senior Manager. Back issues at www.RWHC.com.

“After last month’s newsletter “Supervising a Baby Boomer” went out, a Gen X colleague copied me on this lighthearted (I think!?) note that he sent out to his team: ‘Notice that the Generation X gets mentioned early in the article and then ignored after that. That’s ok because we Gen X’ers are used to being ignored.’”

“Oops. He’s right actually. Gen X is historically a smaller demographic (thanks at least in part to birth control pills). Up until the last couple of years, they were fewest in number at any generational diversity group discussion I facilitated. Their airtime got shortchanged, squeezed between two larger groups where more evident tension needed to be addressed. But as stated last month, the Gen X’ers have filled many leadership positions in the last few years and are currently similar in number to Gen Y in those roles, baby boomers having begun their exodus.

Gen X, you have positively and significantly impacted the workplace in many ways! “Allow me to make amends by listing what I appreciate most about your generation:

Meritocracy. You pushed the notion of, ‘Value me for results I can produce, not for how early I arrive, how late I stay, my tenure, or my title.’ You helped to change the focus from effort to outcome and that opens up time for everyone.

Business casual. Thank you for khakis, logo wear, and even in some situations, blue jeans Fridays. Not everyone will agree on this, but saying goodbye to uptight clothing makes a lot of people happier and more productive!

Early adopters of technology. My Gen X niece advised me early on, ‘You can’t be scared of the computer.’ (I was, she wasn’t). Your generation jumped in and didn’t worry about making mistakes while learning, something previous generations seemed to struggle with, perhaps due to protecting our position or image. Your generation was tech unafraid and that paved the way to innovation.

Work/life balance. Sort of. You challenged the idea that family and health be sacrificed for career success. I have heard many of you say that in striving for balance in achieving both career goals and valuing family and personal time, you have tried to have it all and that has caused significant stress. While we are all still trying to figure this balance thing out, your pushback on ‘work as king’ was the right thing to do. The health and families of generations before and after you benefit from your challenge.
**Asking WHY.** Because you asked why, we are less likely to do things just because that’s how we’ve always done it. Keep asking, innovating, and being the ones who work towards constant improvement and efficiencies. In business if we are not innovating, we are falling behind.

**Increased access to leaders.** Gen X influence has helped to ‘flatten’ organizational charts, reducing the hierarchical structure. Previous generations had more rules about who could approach whom in the organization, and there were communication barriers between the ‘people’ and the leadership. As a result of a generation generally raised to be more self-reliant at an early age, Gen X’ers moved the boundaries and as a result, access to corporate knowledge and wisdom is equal opportunity which sets the stage for increased employee engagement.

“Let it not be said that Generation X is forgotten. We may take these things for granted, but we owe you gratitude for the driving force for change that you have been and continue to be as your generation comes into leadership prominence.”

Contact Jo Anne Preston for individual or group coaching at jpreston@RWHC.com or 608-644-3261. For info re the RWHC Leadership Series go to www.RWHC.com/Services.aspx or contact Carrie Ballweg at cballweg@RWHC.com.

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