Health Evaluations



A Journal on Health Policy in Colorado

Fall 2016



Bringing TeleHealth Home

Colorado Steers the Tech Revolution Toward Real People

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Cartoon Corner by Mike Keefe



Elevations



THE COLORADO HEALTH FOUNDATION

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About the Colorado Health Foundation

HEALTH ELEVATIONS seeks to further the goals of the Colorado Health Foundation by highlighting problems that can be solved, illuminating the people who are making progress in solving them and provoking a new way of looking at complex health issues.

THE COLORADO HEALTH FOUNDATION works to make Colorado the healthiest state in the nation by ensuring that all Colorado kids are fit and healthy and that all Coloradans achieve stable, affordable and adequate health coverage to improve their health with support from a network of primary health care and community services. To advance our mission, the Foundation engages the community through grantmaking, public policy and advocacy, private sector

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Walking the Talk

he promise of technology to ease the delivery of health care and provide an all-access pass to healthier living has long been foretold. And frankly, sometimes oversold. We crave connections in order to feel fully human, and technology has not always been the right touch.

But telehealth technology – which is the delivery of care or the exchange of information between patient and provider using methods that are not face-to-face – is already changing the health landscape in Colorado.

This edition of *Health Elevations* attempts to map that changing landscape for telehealth across the state. We wanted to know where access to and quality of care is changing most in Colorado due to this technology. We wanted to know how and if underserved populations are being impacted, along with where those populations reside.

We explore telehealth access and ethics with Colorado veterans, Medicaid officials, homebound heart patients, Native Americans living on reservations, massive private insurance company representatives and overwhelmed mental health providers. Many consumers and providers love the technology, yet putting it in place and linking to the right providers is not as easy as flipping a switch.

Change is never easy to take hold, but it does often signal progress and evolution. At the Colorado Health Foundation, we've spent nearly 10 years sharing *Health Elevations* with you, our loyal readers. We've spotlighted both problems and solutions in the health and health care field through this print and online publication. Perhaps most importantly, we've been fortunate to tell personal stories that bring forward the most important aspects of the critical issues we all care about. However, this will be the last edition of *Health Elevations*.

Just as in telehealth, the way we access and consume information now changes at the speed of light. Sharing quality stories about health in Colorado is still pivotal – if not more important than ever – to how we communicate as a foundation, but we are shifting efforts toward a more timely and accessible fulltime outlet – our website. I'm pleased that the Foundation is launching a new website in the coming months, along with an organizational blog that will give us a space to rapidly respond to critical issues, regularly discuss the hows and whys of our work, the impact of grantee work and, most importantly, what it takes to make health everyone's business in Colorado.

Stories matter. They open the door to the details and reality we all need to understand to drive better health. I want to thank the staff and writers who have provided all of us with a plethora of stories, images and videos of how health takes shape in our state. (All of them will be available on the new website). Until we launch the blog, we hope you enjoy this final printed edition on telehealth. Make sure to sign up at www.ColoradoHealth.org/ JoinUs to be on our email list for the latest updates and more on the new blog.

Aren Mc Jul Mellen

Karen McNeil-Miller, President and CEO The Colorado Health Foundation

Telehealth Bytes

A telemedicine program in the Northwest United States called Health Buddy, for chronically ill patients needing care at home, showed **savings of \$312 to \$542** per patient per quarter, according to a study published in Health Affairs in 2011.

Colorado recommends, but does not require, that the **first encounter between a mental health provider and the client be done in person**, even if telemedicine is encouraged for subsequent visits. Use of telehealth services in the United States is expected to grow from 250,000 "visits" in 2015 to

3.2 million in 2018, according to a 2015 report by the National Conference of State Legislatures.

Treat George Jetson

By Michael Booth, Editor in Chief Photography by James Chance

Sam Mata, with the Veterans Affairs National Telehealth Training Center in Denver, demonstrates the facility's training dummy and teleheath link, as Marlys Withrow-Hill observes.

The Long-Foreseen World of Telehealth is Actually Here

he lure of telehealth comes in large part from hearing the countless series of frustrating or unproductive health encounters that good technology might improve.

The Army veteran from southeastern Colorado with brain trauma and claustrophobia who resists driving two hours to the VA La Junta Clinic for an appointment, let alone four hours to see a specialist in Denver.

> The family of a suicidal teenager in rural Jefferson County waiting two hours in a western suburb emergency room, then taking a one-hour transport to University of Colorado Hospital, then waiting hours more only to learn the teen would not be admitted for inpatient care.

And the most mundane situation of all: shivering in a doctor's waiting room to get checked for a bad case of the sniffles. A recent academic study showed the average appointment takes a total of 121 minutes, but only 20 of those minutes are spent seeing the doctor. The other 101? Traveling and waiting.

Now, a promising set of developments is conspiring to solve these sticky health system problems: Technology improving even as it gets cheaper. Lawmakers removing barriers to telehealth access and payment. Providers looking to integrate care and meet consumers where they want to be treated. And the laws of supply and demand working to solve provider shortages. "Technology is getting better and making a lot of this more possible," said William Jones, MD, telestroke director for UCHealth and a member of the telehealth steering committee for University of Colorado Hospital. "There are a lot of irons in the fire in telehealth." Even those departments that have been cautiously studying telehealth services "in weeks and months are about to become more active," Jones said.

Fifty-year-old cartoons of characters like George Jetson talking to doctors on a videophone are now, finally, consumer reality in Colorado and other states.

"It started with 1,000 songs in your pocket on the iPod, and now you've got in your pocket all the computing power of a desktop from 10 years ago," said Brent Bowman, a leader for expansion and innovation with Kaiser Permanente Colorado. "The term we use is 'life integration.' We want to integrate your life and patterns; technology is an extension of who we are."

Chris Sadri, a Kaiser Permanente patient, said her doctor suggested she try a video-health appointment in early summer. Sadri sees her doctor regularly for diabetes management and orthopedic issues in her hand.

The transition wasn't bug-free, but the results were good. Sadri first tried to connect on a Chrome notebook but was told by Kaiser's technicians its system didn't work with Chrome's system. So Sadri switched to video on her smartphone with the technicians' help.

"It feels a little strange initially, but it's a good thing," Sadri said. "It saved time in me driving down to the office, and I hope it saved (her doctor) time so she has time for other patients. If you don't have some basic knowledge of how your phone works, or your computer, it might hold you back from doing it. It can be rather frustrating. But it was an adventure, and I hope to continue that adventure. It's a good thing for patients and doctors, especially patients who aren't able to get out of the house."

Technology is getting better and making a lot of this more possible. *William Jones, MD, telestroke director for UCHealth and a member of the telehealth steering committee for University of Colorado Hospital* Some of the most visible signs of telehealth's burgeoning growth in Colorado include:

- Major insurance providers like Anthem, United Healthcare and Kaiser Permanente making video-from-home visits with doctors a standard choice for nearly all clients in 2016. A state law taking effect January 1 is pushing that change, ordering insurers to treat telehealth visits equally with in-person visits throughout the state.
- Rapid spread of delivering behavioral health services from counseling to addiction treatment by video appointments in extended hours accommodating working patients' needs.
- Fast adoption of remote-controlled robot aids for quick diagnosis, especially in time-sensitive fields like stroke treatment and burn units.
- Telehealth promotion by overburdened government agencies, such as the Department of Veterans Affairs placing tablets in rural veterans' homes for video communication with remote providers.

This edition of *Health Elevations* magazine attempts to map a rapidly changing landscape for telehealth in Colorado. Where is change happening most rapidly and who is pushing for it? How are underserved populations being included in the revolution? What still needs to change – in infrastructure, government policy and everyday practice – to successfully extend telehealth services to all who could benefit? How are patients and providers reacting to the new ways of "seeing" each other?

The answers can be surprising. Sasha Stiles, MD, who works for a national doctors' group that contracts with Anthem in Colorado to provide new video-health appointments, said telehealth is improving her skills 35 years after medical school.

"I find I'm a better brick-and-mortar doctor now that I've done telehealth," said Stiles, who talks to patients via video connection from her home as well as commuting to other states for in-person obesity medicine. "Half the people I see online are in bed because they're sick and can't go to work, and the other half are at work on their lunch break.

"You get better at getting to specific questions and answers, and your verbal cues are much sharper," said Stiles, whose primary career was with an HMO. "I have to listen to coughs online and listen hard. And there are about 10 really pertinent questions for each case. You have to be really pertinent and precise in telehealth, and that helps you outside telehealth as well."

One surprising assessment from Colorado health leaders is that broadening access to telehealth is actually a marketing challenge. Consumers may have always imagined a video talk with their doctor, but getting them to use it once they have it is not simple.

"Right now, about 16 million Americans have it as a covered benefit, and I'd suggest many still don't know about it," said John Jesser, director of LiveHealth Online for Anthem's national for-profit



insurance company. "Anthem is not a consumer products company. And we need to do that direct-to-consumer marketing."

"There's a degree of reticence, both on the part of physicians and some consumers as well," agreed Bowman of Kaiser Permanente. "It's most easily adopted between a patient and a provider who already have a strong relationship and partnership. The right circumstances have to come up for a patient to want to try it, and it has to be the kind of condition that can be handled that way."

Policy barriers remain that may hinder the natural growth of telehealth services. To promote adoption of telehealth by skeptical providers, states have to guarantee that payers offer the same reimbursement for a service provided by telehealth as they do for inperson visits. (Colorado took care of that by passing House Bill 1029 in 2015, which goes into effect January 1, 2017.)

Half the people I see online are in bed because they're sick and can't go to work, and the other half are at work on their lunch break.

Sasha Stiles, MD, a Colorado-based telehealth provider

And many private insurers are launching their video-visit offers to consumers by contracting with special telehealth-focused doctor groups who draw on physicians based in many states. Most states still have laws requiring doctors providing treatment to patients inside their borders to have a license to practice in that state, a daunting task for national physician groups. Professional bodies and regulators are working to create a national licensing standard for physicians, similar to current nursing licensure compacts that allow nurses in dozens of states to practice across borders. Telehealth is often touted as a proven way to reduce expensive and unnecessary ER or urgent care visits. Studies show that a high percentage of the colds, rashes, urinary infections, stomach ailments and pink eye cases seen in ER or urgent care settings can be treated effectively by phone or video encounter.

A Colorado Health Institute report published in October 2014 summarized a meta-analysis of 18 randomized control trials of realtime video-health consultations. The health outcomes were just as good as in-person visits in 14 of those trials. A trial of psychology services did not turn out as well as in-person counseling, but nursing and cardiology care delivered by video proved more effective.

But the paradox of telehealth is what worries government and private payers – easy access is easy access. Clients that might have let their condition resolve on its own might use a telehealth visit, costing a Medicaid payer, say, \$25, or a private payer \$50. "Telehealth may increase overall use of medical services, driving up total health care costs," the CHI report warned.

It may take a few years of widespread availability of real-time video visits to see overall costs: Reductions in ER and hospital admissions that cost thousands of dollars each would still yield system savings even if there were a small uptick in cheaper, minor-ailment appointments by video link. Health care leaders in Colorado offer other cautions when enthusiasts talk of telehealth as a cure-all to health delivery.

While an increasing number of insurers cover video visits and other telehealth services, many provider offices will need time and assistance setting up the technology and integrating it into their practices. Blue ribbon panels assisting the Colorado State Innovation Model office are recommending expansion of telehealth as one tool to integrate medical, behavioral, dental and other care in the patientcentered home model.

Another common caveat is that putting a provider on a telehealth link can make a system more efficient, but it does not solve a wider provider shortage in many health specialties.

Setting up a child psychiatrist in a home or central office with video links to other locations can cut down on the psychiatrist's driving time between facilities. It can save time for patients who may be in rural areas or reluctant to leave home, noted Douglas Novins, MD, chief of psychiatry at Children's Hospital Colorado and a distancetreatment expert at the University of Colorado Anschutz Medical Campus in Denver.

But there's already a shortage of child psychiatrists even along the Front Range, Novins noted. "I spent two hours yesterday on my clinic



to Alaska – that's two hours less of me practicing in Denver," he said, as part of a longer Q&A beginning on page 24 of this magazine.

"We still have a shortage of providers," agreed Jay Shore, MD, chief medical officer of AccessCare and director of telemedicine at the University of Colorado Helen and Arthur E. Johnson Depression Center. "Telehealth can be a force multiplier, but ultimately, the bigger issues are still around the total number of providers."

While University of Colorado Health is on the verge of adding telehealth services in departments like neurology, emergency psychiatry and urgent care, among others, its deepest commitment right now is in telestroke.

"When someone comes in with an acute stroke, from when their symptoms started you have 4.5 hours to make a determination. And the earlier the better, meaning they are more likely to benefit and less likely to have complications," Jones said. "Many of the rural areas in our state don't have that resource in any way."

Such a rural area may not see a high volume of strokes, but when it does see one, the value of quick treatment is "incalculable," Jones said, not only to the quality of life of the patient, but "imagine keeping that person from being institutionalized or homebound. The costs start mounting up and up from places you can't even imagine."

Through telehealth, UCHealth can have one of its stroke experts available for video consult to a partner hospital within 15 minutes, and the average to rural hospitals is closer to seven or eight minutes, Jones said. "Faster than I can drive from my house to University Hospital," he said.

The equipment at the remote hospital can range from a sophisticated robot that can drive itself around an ER to a simple PC with a good camera and microphone. The UCHealth doctor who is on call works with a laptop set up for telestroke and can also look at X-rays or CT scans sent by the remote hospital.

Even more recent is a mobile telestroke unit set up in a UCHealth ambulance. The ambulance has specialized crews trained in stroke treatment, a mobile CT scanner, and the cameras and other connections that connect to the same on-call group of stroke specialists.

Through telehealth, UCHealth can have one of its stroke experts available for video consult to a partner hospital within 15 minutes.

Adding in other uses of high tech, UCHealth has geo-mapped highrisk stroke areas in Aurora and Colorado Springs, and rotates the



The UCHealth Mobile Stroke Unit uses telehealth to beam specialist support to and from a carefully outfitted ambulance.

ambulance to those areas for 12-hour daytime shifts. The system will be part of a national study on health and cost-effectiveness, Jones said. If it does prove as effective as expected, four or five such units would cover most needs in the greater metro area, he said.

Surprisingly, a key lesson learned is about people, not technology, Jones said. Early efforts proved how important it is to have providers and assistants highly trained in stroke protocols at the remote sites. "That amount of effort pays off hugely when the emergency does come around," Jones said.

Patients and their families have been overwhelmingly accepting of the technology so far, he added. "They think it's great they get to see a high-end specialist hundreds of miles away, and they know it wouldn't be available to them otherwise."

"Robot rounds" may be the newest marriage of science fiction technology to daily medical care.

The first deployment for the SCL Health system, which encompasses hospitals such as St. Joseph's in downtown Denver, Lutheran and Good Samaritan in the northwest metro area, and other partnerships, is through a venture with National Jewish Health and Platte Valley Medical Center. Called Tele-ICU, the partnership places a robot in the Platte Valley ICU, controlled by a mouse pad and computer connection at National Jewish. The robot transmits a high-quality video image of the patient and can be maneuvered to focus on any area, while also sending vitals signals. "Everybody's getting used to it right now," said Peter Kung, SCL Health system vice president of virtual health. "Over the next couple of months, our goal is to deploy it on a greater scale so we're able to deliver that National Jewish expertise into the community."

All of the SCL Health ventures deeper into telehealth are done with intention and careful forethought, Kung said. "Telehealth is pivotal to the direction we are going," he said. "The right lens to have on is to treat every patient as if they were a family member. If we keep that lens on, doesn't it make sense if our care teams can monitor and deliver care to that family member where they are?"

Telehealth is pivotal to the direction we are going. The right lens to have on is to treat every patient as if they were a family member.

Peter Kung, SCL Health System vice president of virtual health



Team members (from left) Meghan Wilson-Zuccarello, Mary Retzlaff, Brandi Schimpf (on gurney) and Bob Voitl administer their care according to Leigh's requests.







Telehealth Glossary

The common terms thrown around in discussions of telehealth and telemedicine are as fluid as the technology itself. We choose some of the more useful terms and descriptions here, in search of a shared language as Colorado moves deeper into this brave new world.

Telehealth – the delivery and exchange of health information, education, patient encounters and provider consultations through any technology other than traditional face-to-face office visits. Some evolving definitions of the word exclude older services delivered only by voice-over-phone connection, but most consider it to include all exchanges made that are not in-person.

Telemedicine, telepsychiatry and telemental health – Telemedicine refers to delivery and exchange of physical medicine through technology. Interestingly, "telemedicine" was the semiofficial state government term for all telehealth services but was statutorily changed to "telehealth" in House Bill 15-1029. Telemental health is an emerging term meant to cover mental health access through technology, whether by client appointments on video link, telephone consultations or other means. Telepsychiatry is a subset of telemental health, indicating the presence of a psychiatric MD and any accompanying prescription drug management or inpatient hospital requirements.

Telemonitoring – a more passive form of telehealth than a live video appointment. It often involves providing a homebound patient with tools to record and transmit important health information, such as blood pressure, blood sugar levels or weight, to a central case manager.

Telehome care – home technology that is quickly moving beyond monitoring and straight to video visits using the consumer's own smartphone, tablet computer or desktop with camera. The "visits" must be routed through the provider's security or encryption systems for patient privacy.

Telepresence – using a robot camera or other remotely controlled health tool to make a diagnosis or assessment of a patient by long distance. See descriptions for telestroke programs elsewhere in this magazine.

Teledermatology – one of the fastest-growing forms of telehealth, thanks in part to cheap high-resolution cameras now ubiquitous on everyone's smartphones and tablets. A remote dermatologist can ask for live video and suggest camera angles to the patient, or a health system can store images taken by patients and attached to emails for review by the provider at a convenient and efficient time.

Real time – usually refers to a live videoconference or link to patient, where the provider and patient can see each other and can interact nearly as they would in a face-to-face encounter.

Latency – any delay in transmission of the picture or audio in a telehealth encounter. (Anyone who has Skyped on a bad connection has seen this phenomenon.) It can create awkward stepping on each other's sentences or long pauses.

Peer-to-peer telehealth – providers talking to each other over a video link, often for specialists to offer education to general providers or consult on individual cases. This is commonly occurring now in specialties from renal to burn care, and expanding every month.

Patient portal – a secure internet sign-on that allows patients to contact their provider, review medical tests and records, access health education materials and seek appointments. Most provider networks develop a patient portal before they move to full video appointments.

Peripheral devices – measurement or monitoring devices that plug into, for example, a tablet computer providing a video link. The peripherals can be stethoscopes, blood pressure cuffs, audiology tools or a pulse oximeter, among others.

Telehealth Clinical Technician (TCT) – a designated job category in the Department of Veterans Affairs with alternative titles in other provider organizations. The TCT works at the patient's end of the telehealth link, handling the cameras or other technology, educating the patient and following the remote provider's instructions to gather information, among other duties.

Store-and-forward – uploading a patient record or a digital photo for a distant provider to review at another time. The technology is used often in dermatology and other specialties.

Originating site – the location of the patient when telehealth is used, whether at home using a smart device or in an office at a local primary or mental health clinic.

Distant site – the location where the distant provider is housed and offering health information or treatment by remote means to the originating site.



INSURERS RUSH TO



Consumers have quickly grown to expect it, and government is quickly moving to demand it.

So the largest payers of health insurance claims in Colorado are in turn ramping up their consumers' access to video doctor visits from their comfortable couches and other high-tech innovations long foretold but only recently fulfilled.

Anthem, Kaiser Permanente and United Healthcare now offer their millions of Colorado clients access to immediate provider care using a smartphone, laptop, tablet or desktop computer with a video link, though not all are equally bold yet in their advertising of the features. Kaiser, for example, quietly rolled out a video-visit option in the late winter and early spring, wanting to test its systems and procedures before feeling overwhelmed by 700,000-plus potential patients.

Only the Colorado state Medicaid system, currently being rebranded as Health First Colorado, has taken a slower technology approach among the largest health insurance plans.

Medicaid officials say they are intrigued by the possibilities of video health visits to offer convenience to 1.3 million state clients and make their burgeoning system more efficient. (See Q&A on telehealth's future with Health First Colorado (formerly Medicaid) medical director Judy Zerzan, MD, MPH, on page 18.) But Health First Colorado has many issues to work out first on privacy, security, access by lower-income patients and state budget implications, Zerzan said. The state is likely a couple of years away from widespread video-health access among Medicaid clients.

The other large insurers are now wrestling with how to market their new consumer technologies, and how to accommodate and direct expected demand once Colorado clients realize the new opportunities.

"I'd say the majority of Americans don't know this is something they can do," said John Jesser, national director of Anthem's LiveHealth programs that offer video access to providers. "So we have a big marketing challenge."

"You're not just going to flip a switch for a doctor and have half their patient visits be on video," said Brent Bowman, who directs Kaiser's new video efforts in Colorado. "Nor will half the patients jump on board for video with a doctor they may only see every five years. It may be a slow ramp-up, but I do think it's here to stay."

The Colorado Legislature accelerated telehealth change for the biggest payers in the 2015 session, when it passed House Bill 1029, going into full effect this coming January 1. Before the bill, insurers only had to pay for telehealth visits in demographic regions of less than 150,000 people, under the theory that some rural clients would not find specialty care without telehealth. The main provision of the new bill expands where nongovernment insurers must pay for telehealth to all of the state, including metro areas, and requires equivalent payments for telehealth services compared to charges for the same inperson service.

Embrace Telehealth

Spurred by the law and the relentless push of technology and consumer curiosity, here is a quick summary of what the largest private insurers are doing. For insight into Medicaid's plans, go to page 18.

Anthem

The large for-profit insurer began rollout of video health a few years ago in states where laws easily accommodated it, and this year went fully live in Colorado. The system encompasses both physical and mental health encounters via telehealth.

The service Anthem offers is for nonemergency consultation, 24 hours a day, seven days a week, every day of the year. For Anthem members, the service costs the same copay or other shared cost they would pay for their policy's provision on an in-person encounter for the same treatment. Nonmembers can use the LiveHealth Online system for \$49 each encounter.

Anthem uses the national contractor American Well to supply boardcertified doctors who have licenses to practice in various states. A patient first sees a list of licensed providers that can be sorted by specialty, experience, age and gender. The patient then shares information about the complaint and any relevant medical history, enters an insurance policy number and picks a local pharmacy. That puts the patient in a "virtual waiting room"; a doctor is assigned, reads the relevant medical information and then appears with an average wait time of 10 minutes or less, according to Anthem.

The doctor might be anywhere – working from home or an office in Florida, Ohio, California or elsewhere. Physicians work in 10-hour shifts to cover round-the-clock demands and are trained in "web-side manner," including how to adjust lighting or cameras to get the best information. Because many consumers ask if their existing doctor is available on video, Anthem is also working with local providers it contracts with to see who wants to join telehealth services.

The most common video health encounters involve rashes, earaches, pink eye, colds and coughs, diarrhea and headaches, Jesser said. The doctor is not paid on the basis of delivering a diagnosis or completing a prescription, only for time. About 20 percent of the time, the patient needs a lab test or a face-to-face visit going beyond the video encounter. In mental health, the system is set up to schedule counseling within four days of the first contact, often sooner. The client can work with a chosen therapist's calendar or say, "I want to see someone tomorrow no matter who it is." Extended appointment hours, 7 a.m. to 11 p.m., make it convenient and private for people with jobs. The system employs psychologists and licensed social workers as counselors.

"Telehealth is not for every kind of condition," Jesser said. "It's the same as with an office visit – you don't always need that either. It's just one more step on the health care continuum."

Kaiser

Kaiser Permanente, the Colorado HMO giant, laid the groundwork for video telehealth during years of precocious emphasis on patient portals, nurse advice telephone lines, emails to providers, lab tests and medical records available online from any web connection, and more.

Even so the addition of full video visits with a Kaiser provider, from the comfort of a patient's smart device has been handled quietly and delicately, according to Kaiser officials.

"It's not something you can force," Bowman said.

Kaiser has actually facilitated video visits for five years, Bowman noted, but those years involved a video link between a patient sitting with a provider in one Kaiser location and talking by video with another provider at a different Kaiser location. That might mean a primary provider helping a patient in the Parker offices talk to a specialist working in the larger Denver offices.



More recently, Kaiser added the ability for patients to take a still photograph of a condition – say, a new rash – with their own smartphone or digital device, and attach that photo to an email into the secure Kaiser provider system.

This spring, Kaiser went full video: Patients signing or calling into the Kaiser appointment system can now choose the option of a video visit from home, with a provider working at a special Kaiser office for video-trained staff. It will not be their usual primary provider, but there are other perks: Kaiser is experimenting, for example, with extended hours for the video appointments in geographic areas where patients find it a challenge to travel to care, such as the new Summit and Eagle County offices.

"It's kind of a soft rollout," Bowman said. "We kind of use word of mouth, a little more heavily promoted in the mountains." So far, the Kaiser experience has borne out the plan of a quiet opening.

"The adoption rate is not as fast as we'd expected," Bowman said. On the management side, there were literal bandwidth glitches, trying to find enough line capacity to handle video calls. And on the consumer's side, the paradox of too much choice becoming paralyzing to actually making a choice has sometimes come into play.

"It's daunting for us to communicate all the ways you can access us," said Kaiser regional spokeswoman Amy Whited. "Phone, video, text, in person – any time you have more than a couple of options, it becomes complicated."

United Healthcare

United Healthcare's telehealth expansion echoes some of what Anthem is doing in Colorado. The large national for-profit insurance company cites a shortage of 45,000 primary care physicians nationwide, and says that 10 million consumers were already benefiting from telemedicine each year. United Healthcare also cites a Harris Poll of consumers where 27 percent said they would prefer telehealth visits if they were available.

United Healthcare started in video telehealth by offering video visits to clients who are part of self-funded insurance plans at major employers. Since then, the insurer has expanded the offering to traditional employer insurance plans it offers as well as individually purchased plans.

Like Anthem, United Healthcare contracts with American Well for some of the video-based doctors, but also works with Doctors On Demand, which is also used by SCL Health in Colorado.

The insurer says each video costs less than \$50, and the encounters are handled under the same copay or deductible rules that the member's original plan would require for the same kind of treatment. That compares, United Healthcare says, to the \$80 cost of a minor treatment at a provider's office, \$160 at an urgent care center, or \$650 and up for minor emergency room visits. United Healthcare also plans to add local providers into the system as demand grows and doctors are trained, allowing more members to use their familiar providers for the video visits.

Telehealth is not for every kind of condition. It's the same as with an office visit – you don't always need that either. It's just one more step on the health care continuum.

John Jesser, national director of Anthem's LiveHealth

The providers who work with the major payers are sometimes attracted by the flexibility of online work and equally challenged by those shifting demands.

Sasha Stiles, MD, of Louisville is a contractor with American Well, taking video calls from Anthem patients and others at her home setup of three screens. One screen is for talking with the patient; one screen is for talking to American Well technicians about connectivity or prescription issues; and a third screen allows Stiles to look up specialty medical questions, such as travel shots required for India.

American Well finds doctors who are licensed in multiple states, and doctors like Stiles tend to work 30- to 40-hour shifts in a week. Stiles gets up early to see East Coast patients; others with a different lifestyle are on the West Coast shifts. A typical load is three to six patients in an hour, Stiles said, with the majority complaining of sore throats, colds, sinus or bronchial infections, urinary tract problems and rashes. "Bread-and-butter family medicine," she said.

The service is not meant to be the patient's ongoing doctor – it's a transitional service, and then the insurer can help the patient find a primary care home. About once a week, Stiles said, a patient has chest pain or a kidney stone and should clearly go to the ER, but is reluctant to make the trip and spend the money until ordered to by an online doctor.

"I saw a poor woman last night – it was after work and she'd picked her kid up from the babysitter; the father was estranged. The child had severe hand, foot and mouth disease and was hysterical. I'm watching her chase the kid around the house while she's on her cellphone, with other kids at home. She could not have gone in for a visit and waited for hours, not in her position," Stiles said.

"So many people say, 'I don't have a doctor anymore'. I hear that every single day. Or, 'My doctor doesn't have an opening for a month'. It's a niche that needs to be filled," Stiles said. "People need care when they need it. And busy doctors' offices are sometimes not giving the education they should. When I can get someone to actually listen online, that's something I'm doing more of now than when I was in private practice, for sure. I can change their health."

Fast Company

The Colorado Telehealth Network Is High-Speed Help for Health

The Colorado Telehealth Network channels federal grants and subsidies throughout the state to provide broadband telemedicine links where local providers can't afford expensive upgrades. Links for video visits, patient records and imaging are vital to integrating care and consulting with distant specialists, and the network now stitches together 200 behavioral and physical medicine sites in 63 of Colorado's 64 counties.





Bennote

funny thing happened on the way to expanding telehealth in northern Colorado.

Seems that one of the patients being monitored at home after congestive heart failure suddenly showed up in the statistics as 8 pounds heavier in one day. This puzzled and alarmed nurses at the Rehabilitation & Visiting Nurse Association for Weld and Larimer counties.

After a heart failure, rapid weight gain could mean malfunctioning kidneys that aren't clearing fluids properly. So a nurse called. The patient's response surprised the nurse – the patient hadn't yet weighed in on the remotely monitored scale that day.

They chatted some more and then realized that the patient's sister had stepped on the scale during a visit and also tried the blood pressure cuff. Mystery solved, marking another successful day in the promise of telehealth to help patients stay healthier and happier in their homes.

"It's good to know you're really watching. Thanks a million," the patient told the nurse.

More importantly for the future of the trend, the northern Colorado nurses' group noticed remarkable results across a broad range of patients using their remote monitoring equipment, purchased in a 2013 grant from the Colorado Health Foundation. Of 28 patients enrolled in the homemonitoring program with congestive heart failure, hypertension, diabetes, chronic obstructive pulmonary disease and other chronic illnesses, none was admitted to the hospital during the next year for their monitored condition.

"It's good to know you're really watching. Thanks a million," the patient told the nurse.

Though comorbidities vary across home-nursing populations, national averages show that about 29 percent of home health agency clients are admitted to the hospital in a given year. The difference made by the patientcentered aims of home monitoring is clear to Lori Follett, executive director of the northern nurses that have since merged with the Colorado Visiting Nurse Association. Follett hopes to update the telehealth equipment and expand the program.

"It truly does help prevent readmissions. Our patients were really positive about it. They felt they were getting more attention to their health and had high satisfaction. That gave them peace of mind," Follett said. Carla Cherry, 64, of Greeley, credits her home monitor with helping to save her life. She was living at home with congestive heart failure, COPD and asthma. The daily weight checks told her nurse one day she was massively retaining fluids, a sign her heart was not pumping well, and she wound up first in the emergency room and then the ICU. She ended up shedding 20 pounds of extra fluids.

She's no longer using the same device, but has a machine checking in with a United Healthcare nurse for daily weight monitoring. She also answers a few routine questions, and if something's wrong, the nurse calls. "It's my independence," Cherry says of the monitoring devices. "And if I can get the extra help, then I get to stay home. It's where I belong."

In a year where video medical appointments from a smartphone are quickly becoming commonplace in the consumer health world, northern Colorado's telehealth concept was modest. But it was targeted carefully at a group of patients whose quality of life and costs could be greatly impacted by some simple technology.

The nursing association provides home care services that range from skilled nursing care to rehabilitation after injury or illness, to nonmedical essential services, such as grocery shopping, errands, housekeeping or assistance to shower. "Keeping people in the least restrictive environment possible," as Follett put it.

In 2013, they had about 90 employees and a daily census of 300 skilled nursing patients and 300 more nonmedical clients. "We really wanted to focus on reducing readmissions to hospitals and unnecessary ER visits," Follett said, in patients that had been seriously ill. "There are times as an agency we are, and if we can visit people twice a week but do telehealth the other days of the week, that gives us a much better picture of that person."

The grant was for boxy telehealth units and communications software that link to a regular phone line. (Newer versions link through cell technology as more homeowners give up their land lines.) The box is linked to a blood pressure cuff, a pulse-oxygen sensor, a weight scale and in some cases, a thermometer to track fevers that might be linked to infection. The unit could also be programmed to ask hundreds of questions, but the nurses kept questions to a simple few: Do you have shortness of breath? Can you rate your pain on a scale? Are your ankles swollen?

A screen could also be programmed with modules adapted to the patient's needs, such as diet education and advice for diabetic or heart patients, or wound care self-checks for open heart surgery patients.

The box could be programmed to give a voice prompt at a preset time every day, reminding the patient to connect and measure each item. All the information was transmitted to the nursing association offices for the

& Control

Using Tech to Give Patients a Bigger Role in Health

case worker to monitor. If there were any troubling signs before the next in-person visit, the nurse could contact the patient and the patient's primary care provider.

Providing the bridge between the primary care provider and the patient was one benefit of the technology, Follett said. But it also became an unforeseen motivator of the patients themselves. "Times are changing," Follett said. "It used to be that whatever the doctor said should happen would happen. Now we see patients doing their own research, wanting to be more proactive. This is a way for them to be more proactive. Telehealth makes them feel there's something they can do."

During the year the grant ran, though there were no readmissions for the original conditions, monitoring did lead to 49 interventions with patients. Sometimes that just meant a high blood pressure reading and a call to the

This is a way for them to be more proactive. Telehealth makes them feel there's something they can do.

Lori Follett, executive director, Rehabilitation & Visiting Nurse Association for Weld and Larimer Counties physician to check in. Without the monitors, a patient with high blood pressure from mere anxiety might go to the ER for fear of a heart problem, Follett said. "The 49 interventions avoided much more potentially serious situations," she said.

In its next telehealth effort, the northern Colorado nursing group will link with a local safety net clinic's patients for home monitoring and interaction via sleek tablet technology.

"Home care is a perfect marriage for that," Follett said.







with Health First Colorado (formerly Medicaid) Medical Director Judy Zerzan, MD, MPH

Editor's note: Colorado's 1.3 million clients in Health First Colorado, the state's Medicaid program, present both opportunities and challenges in fulfilling the promise of telehealth. We sat down with medical director Judy Zerzan, MD, to understand where the state program is in exploring, budgeting and dispersing new technology opportunities.

Pushing Telehealth Out:

Where has the Health First Colorado/Medicaid system adopted or encouraged telehealth?

I think one of the hard things in telehealth is talking about what we mean. For us, the video interaction idea in telehealth is called "video medicine." And then "telehealth," for us, means remote home health monitoring – scales that send the person's weight, things like that. I will say that before now, we felt we were ahead of the curve. I have the first draft of our telehealth policy manual from January of 2009. So we were way early. That being said, I think we're behind the curve now in terms of how we deliver telemedicine and what that looks like. Probably the biggest barrier we still have in here is that where the member is, looking into a video camera for example, there has to be an originating provider with them in the room. So that doesn't allow for the "sitting at home on the couch" kind of example.

How has that come to be that bump in the road? Is it your decision? Is it federal mandates?

That is an interesting question. That was how we set it up in the beginning. In 2009 we didn't have face time and fancy things on our phone; the technology really was located in doctors' and nurses' offices. And that has changed, but we haven't really updated our policy. Some of the places it was so important in Colorado was those rural and frontier places; this was originally designed for someone in a Canon City office to talk to a specialist up here in Denver.

You said we're behind the curve now. Does that mean you want to make changes?

Yes, we've been looking at what other states are doing and how we might modernize. One place we will be looking at early is the places where mental health care providers could be included, since telepsychiatry and telemental health have been two areas that have worked well. Another example of something we haven't added yet is nursing home care. It would sure be fantastic, when there's a provider at the nursing home who is asking, "Does this patient need to go to the emergency room? Can I figure out what's wrong with him or her from the nursing home instead of packing them up and moving them?" So there are areas we are looking at.

One of the places in telemedicine we've been working on is "e-consult." A test group started this week. It's something that San Francisco and Oklahoma have some great data behind. It allows for a primary care provider to send an email and attach pictures to a specialist, and say, "Can I get your opinion on what's next?" And we pay \$10 to the primary care provider and \$20 to the specialist. We are just starting with rheumatology to see how the system works. Early data from places that use it shows it really cuts down on the time it takes to see the specialist; 70 to 80 percent of cases are able to be taken care of by the email interaction, meaning that percentage never has to go see the specialist.

Where Does Medicaid Fit In?

This piloting that we're doing, we hope to expand once we see how the system works and how people like it. The specialists and primary docs where it's been done love it because it gets a lot done, often the primary care provider learns something, and they do get paid something for it; you get it down to a couple of minutes because the specialist just knows the information. And the member likes it because they don't have to wait forever to get into a specialist. It's win-win-win.

How close are you to a scenario where Medicaid clients could consult with a provider on their own smartphone, or take a picture of something related to their condition and send it directly to a provider? Is it about the reimbursement rules?

There's a couple of things that need to be in place. The rule would need to be changed, and that's a set process. The medical services board, our rulemaking body, has to approve it after we make a proposal. It also involves how we pay for it. As you probably know, this coming budget year is not looking so good, so anything involving Medicaid expansion would have to be carefully thought out. A third piece that needs to be in place that's another potential barrier is that there needs to be HIPAA (Health Insurance Portability and Accountability Act) compliant software. Figuring out how to get the existing systems onto your phone could be a data cost, and some of our clients don't have big data plans for that. How do you get the right technology and make sure it works?

The telehealth law passed in the last session only applies to private insurers, not to Medicaid. But still it's worth looking at how we can go about it – do we wade in on our own or learn from private insurers' experience?

You had mentioned needing to know if there are budget implications. Why would there be new costs to the Medicaid budget? If those people are already getting seen for things, why does it matter to Medicaid whether you reimburse for an office visit or for a video visit by their smartphone?

We need to have pieces in place to make sure that visit really happened: What's the documentation? How might we audit something like that? Or how might the federal government come in unasked (laughs) and audit it for us? We'd want to make sure that things were set up in a way we could monitor it, make sure high-quality things were happening, make sure HIPAA-compliant software was being used – all those pieces. That's the tricky part.

One reason it's difficult to assess is that in the private sector that has tried telehealth, a lot of it has been done in a managed care setting, which is different from our setting. States like Maryland that have begun telehealth expected some increases in usage but also expected savings in places like

the ER. They decided it was worth it, but those are only educated guesses until you see it in operation.

And it's harder for us to assess that guess here because the telemedicine benefit we do have is not used that much yet. It's mostly done by small rural hospitals and for a benefit we have in speech and language assistance. So to open that up has to be carefully considered.

Have you had other long-term telehealth functions in place over the years?

We have had a nurse advice telephone line for years. It's free, and now those providers do have the ability to prescribe over the phone for certain conditions. A urinary tract infection is a good example; the questions and responses are pretty straightforward. (Patients) can call the nurse advice line; the nurse can get the medication prescribed and ask where they want it sent. So there are absolutely non-face-to-face ways to deliver health care. We contract with Denver Health to provide the staffing for the nurse advice line.

How will you go about making these changes in telehealth? Do you have an internal blue ribbon committee?

We have a process where we start by looking at what other states do, what do other insurers do, is there federal policy on this, what does Medicare do, and putting that all together to see what that looks like. Then we have internal discussions to talk about what are the most important things to change. Then (we have) external stakeholder discussions. Then more questions back and forth. Then we have a final policy and it enters the rule-making process and a budget review and a rate review. It often takes a year for that whole process. We'd also need to get authority from our partners at the Centers for Medicare & Medicaid (Services), and that can take another six months.

How do federal officials feel about telehealth? Are they reluctant? Are they pushing it?

I'd say it's a neutral answer. I'm part of the national Medicaid directors group. It's been a pretty heated topic for the last couple of years – how are people doing it and what does it look like. Places that have learned a lot include Alaska – where if you don't do telehealth, you're traveling on a small plane – and Wyoming. Those are places we can look to and learn from.

We're getting a new Medicaid management and billing system up and running October 31 of this year. Our old system was state of the art in the 1970s. It was difficult to add or change things. The new system will be – should be – much more flexible, and we'd be able to do a lot more. That holds some promise for us to be able to change the (telehealth) benefit.



Telehealth Clinical Technician Betty J. Wood and VA Eastern Colorado spokesman Daniel Warvi demonstrate VA technology that allows remote providers to consult on exams, saving many Colorado vets hours of driving time.

Bringing for Veterans

f there were an institution anywhere in the nation facing enormous challenges for which telehealth would seem to offer tantalizing solutions, it would be the Department of Veterans Affairs.

Tens of thousands of soldiers returning from physically and mentally crippling overseas deployments in need of ongoing health care. Rural and small-town heroes languishing hundreds of miles from care. A cashstrapped and oft-beleaguered federal administration always in search of more providers and more locations to serve a mushrooming clientele.

And so, indeed, the VA has for decades now tried to push the telehealth frontier in Colorado and across the rural and frontier West.

The early evidence is in black-and-white photos of 1950s-era VA psychologists in Nebraska trying a "two-way television link" for mental health counseling. Trace from there a direct line to the Eastern Colorado VA in 2016, more than 50 years later, placing new tablet computers directly in the homes of rural veterans so they can "see" their doctor by videophone from their living rooms.

In between, through that five decades of technology and health change, have been a relentless series of experiments and upgrades to the Eastern Colorado VA's embrace of telehealth technology. One constant, said Marlys Withrow-Hill, the division's home-based telehealth program manager, is empathy for what an ailing veteran goes through to get care.

"After a long drive, some veterans are so mad at their provider and the system that they won't even fully reveal their conditions. They're too angry to have a good visit," Withrow-Hill said. "There are things people don't bring up when they are distracted by anger, exhaustion and frustration. By the time they get in to see their provider in Denver, they are wiped. And then they still have to make it back home."

Long veteran waiting times for appointments in Colorado and other states have prompted negative headlines and congressional queries. The Colorado Springs VA clinic, part of the Eastern Colorado unit and home to the state's largest concentration of veterans, had wait times of at least 31 days for more than 10 percent of appointments in a six-month period in 2014-15, according to an Associated Press article. That made the clinic the 12th worst out of 940 VA clinics and hospitals nationwide, and far above the national average of 2.8 percent late appointments. Colorado, like other states, has a large inflow of veterans returning from overseas conflict, but also has a general population surge from a robust economy and attractive lifestyle, VA officials said at the time.

The VA's Eastern Colorado unit alone takes care of 126,000 enrolled veterans. Glendale also houses the offices of the VA's larger Region 19, encompassing hundreds of thousands more veterans in Montana, Oklahoma, Utah, Wyoming, Idaho, Nevada, Nebraska and the portions of Colorado not covered by the Eastern Colorado offices.

Just under 1,000 of those veterans are now using home telehealth in Eastern Colorado, and 33,000 use video telehealth at a local clinic to get specialty care from long distance, said Doug Van Essen, facility virtual health coordinator for the Denver VA Medical Center.

"We've seen it grow progressively throughout the years, and especially in the past three years it has blossomed," Van Essen said.

Roy Hamilton is a Colorado Springs veteran who lost a leg in a motorcycle accident just before he left the U.S. Army. The upbeat Hamilton said it's important to him to remain active, walking his dog, going on bike rides and water-skiing with an adaptive-abilities group. While he has seen the scheduling pressures on the VA at its local clinics, he said videoconferencing with VA doctors and consultants helped speed the fitting of a special waterproof prostheses.

Telehealth efforts in Colorado's VA started in 2004, with high-risk veterans with chronic conditions and high volumes of care visits. Telemonitoring devices using their home phone lines could gather daily health readings and transmit them to a central office, which could then alter care accordingly.

Even that simple technology resulted in cuts in hospitalization of as much as 50 percent due to better care coordination.

Demand for video telehealth visits from satellite VA offices grew as "more and more soldiers returned from Iraq and Afghanistan, many with mental health factors," Van Essen said. "One thing that made them uncomfortable was driving long distances and being at a large hospital with a large number of people."

Care Back Home Through Telehealth

Pace County veteran Roy Hamilton, here greting his daily doses of exercise on

El Paso County veteran Roy Hamilton, here getting his daily doses of exercise on his bike and with his dogs, used U.S. VA telehealth connections to adjust the design and fit of his prosthesis.

Improved and cheaper video technology made it possible for the VA to set aside remote clinic offices in Pueblo, La Junta or other locations, and set up live video visits with providers in Denver, Salt Lake City or other major medical centers.

The video visits can be a big boon for the providers, too. A specialist scheduled for a rotation in Pueblo could spend four hours or more of the day driving to and from the Denver home office. Technology in remote stethoscopes has improved, for example, to the point where a doctor listening remotely can hear more than an in-person visit in a noisy clinic.

They are overtaxed and running to the max like all the other VA facilities. But I'm blessed with my health.

Roy Hamilton, El Paso County veteran

"A primary care clinic in a tiny place like Salida can basically have all the access they would in Denver, given our specialist connections," Withrow-Hill said.

Audiology is one of the booming specialties employing more telehealth. Hearing problems are rampant in veterans returning from loud training or combat zones. Few rural VA clinics can afford the specialty. But specially designed audiology "carts" in a small-town clinic can test a local veteran's hearing and then offer critical adjustments to a hearing aid once it is delivered.

"The technology is now catching up with what we want to do," Withrow-Hill said.

What she wants to do next is help the VA region dive even deeper into her favorite new technology: tablet computers allowing veterans to securely talk to their provider from the comfort of home. "For me, the greatest issue is still why are we dragging these patients into clinics when we could see them at home," she said.

Veterans may qualify for the tablet computer connection by the severity of their condition, the remoteness of their home or various mental health needs. In addition to the live video link for appointments, the tablet can also be the portal for the veteran's connection to medical records, test results and proactive health advice. Thirty thousand of the 90,000 actively seen veterans in Eastern Colorado's division are using the personal health portal, Van Essen said. The tablets can be loaded with various apps tailored to the veteran's needs. Veterans with suicidal thoughts or expressions have started using "Hope Box," an app that collects family photos, personal notes and other items that can remind the user of reasons to keep living.



More than 300 of the tablets have been set up in Colorado veterans' homes, Withrow-Hill said, "and more are going out the door every day."

One Vietnam-era veteran who was shown the new technology at a southeastern Colorado clinic called it "Buck Rogers-type stuff," said VA Eastern Colorado spokesman Daniel Warvi.

The seemingly long wait for telehealth to move from science fiction to real life is ending now, Withrow-Hill said. "It's here."

VA Tries to Connect a Far-Flung Region to Embrace Telehealth



Telementa Behavioral Health was the Earliest Driver of Electronic Well-Being

psychiatrist who works with Colorado Access clients from a home office in Evergreen wanted to demonstrate to her colleagues what telehealth meant to her practice and to her patients.

She got out a Colorado map and started adding up the miles between the 11 medical clinics where she "sees" patients via a video link from her home. It took her a while. The total? A whopping 33 hours of driving time would be required to go see her client list in person at those 11 clinics.

"And we have people who live in the metro area who are switching to a video counseling session to save themselves an hour and a half of roundtrip driving time every time they go out of their house," said Rachel Dixon, director of telehealth programs for Colorado Access and its telehealth branch, AccessCare.

Behavioral health has long been the leader in developing telehealth connections in Colorado, from equal parts geographic necessity and style of practice. Mental health, emergency psychiatry and addiction treatment are even less accessible than medical care in Colorado's rural and frontier counties. And when it comes to discussing intimate problems, video technology is often proving to be a comfort rather than a distraction for counselors and their patients across the state.

"Telemental health is really catching fire across organizations," said Jay Shore, MD, chief medical officer for AccessCare and a researcher and teacher in telehealth at the University of Colorado Anschutz Medical Campus in Denver. "An overwhelming body of research in telemental health has been building since as early as 1959. There's a high level of patient satisfaction."

Health leaders look to the Colorado State Innovation Model grant to make telemental health widely available to even more patients. The federal SIM grant, meant to foster primary care providers' integration of physical and behavioral health services for patients, includes expansion of telehealth access among its primary goals.

It's rare to talk to a provider who is not at least familiar with telemental health.

Rachel Dixon, director of telehealth programs for Colorado Access and AccessCare

"The growth in interest and demand is huge in just the last couple of years," Dixon said. "Now it's rare to talk to a provider who is not at least familiar with telemental health and how to get more services into the practice that way." Colorado Access, which is both an insurance plan provider and a Medicaid case manager, consults with primary practices on telehealth and links them with an identified supply of behavioral providers.

The main barrier right now, Dixon said, is in supply. "There's just a psychiatry shortage. It's a constant obstacle for everyone," she said.

Multiple categories of clients are growing comfortable with telemental health encounters, providers said. Younger clients who spend time with

video on Skype, Facebook and other sites find video counseling quite natural. Elderly clients who are spared a long drive for an in-person visit can focus on their everyday state of health rather than be distracted by fatigue or irritation.



cameras. (Source: U.S. Department of Veterans Affairs)

"Here's another example," Shore said. "Think of a traumatized female. I'm a big, loud guy. Some women who have had trauma with males might see video as a level of comfort. Patients adapt to it very quickly if done correctly."

Mind Springs, a large nonprofit mental health system on the Western Slope, has been adapting how to do it "correctly" for years, driven in large part by the sprawling territory it covers. The network includes 14 offices scattered in 23,000 square miles, with many of its psychiatrists preferring to live and work in mountain resort towns or along the Front Range.

The Mind Springs model until now has relied on remote patients coming into one of the 14 local offices to use a secure video connection to the remote psychiatrist or psychologist. Now it has added software systems that allow secure connections from the patient's home device. Mind Springs, formerly Colorado West, is also contracting with emergency rooms throughout Western Colorado to provide instant access to psychiatrists through the ER's computer and camera.

"So many ERs are not comfortable with handling psychiatric emergencies and psychiatric medications," said Michelle Hoy, Mind Springs executive vice president. "Having a consultation with a psychiatrist is huge."

How the telehealth option is presented to patients makes a big difference in whether they accept the format, Hoy said. If providers say, "This is all we've got," there is resistance, she noted. But if they emphasize quicker access to care, over a secure and high-definition TV link, acceptance rises quickly.

Even something as simple as a zoom in or out camera button for the patients to control makes them more comfortable, Hoy said. A small amount of control goes a long way. "We all want to look good. It's the little things that count."

Will You Accept This Call?

Extending Telehealth to the Underserved



Editor's note: Long before telehealth finally broke widely into consumer markets, innovators in health delivery in Colorado were experimenting with ways to use technology to provide access to hard-to-reach places and hard-to-reach people. Douglas Novins, MD, is associate professor of psychiatry in the Centers for American Indian and Alaska Native Health and the Division of Child and Adolescent Psychiatry at the University of Colorado School of Medicine, and also head of psychiatry at Children's Hospital Colorado. At each of these places, Novins and colleagues for years have reached out through video connections to locations near and far in search of more humane and efficient care. We talked with Novins about how early telemental health efforts have evolved over the years.

What was the first video-health effort you were involved in?

We received funding at (the University of Colorado Anschutz Medical Campus) around the year 2000 from the U.S. Department of Agriculture, which had put out an ad for people to work on telemedicine and mental health in rural communities. The technology had gotten better, and it seemed feasible with their funding. It allowed us to buy these big, bulky CRT videoconferencing units, bundling six standard land lines and use them as a single pathway; with six lines you could get a decent – but not great – video connection. We did that to five tribal communities from our building at the Anschutz campus.

The services we started early on were a child mental health consultation to a hospital in South Dakota run by the Indian Health Service. They'd had 10 years of child psychiatrists working in the hospital as part of the federal pay-back-your-medical-school-loans program, but after that they couldn't get a new person to come there. So they'd built up a clinic of all these kids and a good reputation at the reservation they served. Then all of a sudden it was gone. They had a general psychiatrist, but they were not necessarily comfortable with certain age groups or needs. They also had a nurse practitioner who needed more support. So we started a consultation service. Families would come in struggling, and we'd do clinical sessions with the family and provider in the room, and a treatment plan – often one-time consultations. We did that program for about seven years. It was a two-way conversation. Another early program was geriatric consultation to a hospital in Alaska. There we were focused on a pretty ill geriatric population, and there was not a lot of native mental health expertise at the time. They were consulting to internal medicine folks on people with complex neuropsychiatric cases, and that ran for a few years.

You've also pioneered some work with the U.S. Department of Veterans Affairs.

The one we've done with the VA is the biggest. It really took off. We started with service on one reservation in South Dakota. Now the VA runs it and it has six reservations: in Oklahoma, Arizona, Wyoming, Montana and Idaho. At those reservations, there's basically nothing for mental health services for Native Americans, and no expertise in veterans' mental health issues. So we do it around videoconferencing. A psychiatrist here does weekly clinics, supported at the remote location by a tribal representative who is a VA employee. That tribal representative is key on the other end - they help the veterans get their proper benefits. And a tribal outreach worker is the eyes and ears of the psychiatrist on the ground. It's a veteran who is well-respected and well-connected in the community, makes sure people are doing OK, lets people know about the clinic, encourages them to seek care. If they miss, (tribal outreach workers) go out and find them. That's been a critical component. The psychiatrist is doing the assessment, the clinical care, the psychotherapy and medication management, and doing it from a room at Anschutz.

Have you tried video health in the important area of substance abuse?

It's a relatively newer thing, started in about 2005 to 2006. There's a residential substance abuse facility in Alaska. We help the providers there with psychiatric assessments. And we help with medication management; we provide supervision and backup. We do like visiting in person if there is funding. Each psychiatrist involved from here has to get up there twice a year. We get to see about two-thirds of our patients in person at some point in their care. But meeting people in person in addition to the video is particularly important to establishing and maintaining relations with the other providers and staff up there. We can provide stability – we're now the longest-serving members of that residential treatment program on the clinical side. We can provide that continuity, and institutional history, even 2,500 miles away. A lot of rural communities may get a provider that will move on in a couple of years. Sure, we get trained in cities and we like cities. That's where we want to stay. The chances of luring one of us to a rural community for 10 years or more is pretty low.

How has any of this work or experimentation translated to different kinds of health care consumers in Colorado, as the technology improves and the demand changes?

I took over as head of psychiatry at Children's Hospital a couple of years ago. We've been a little slower than I'd like, but there are a few things going on. So the first is an internal need: We now have a network of emergency and urgent care facilities across the Front Range. It's a network of care; as we open those facilities, people come in with their kids for a variety of issues, including kids in a mental health crisis. The standard practice before was put that kid in an ambulance and transport to the Aurora hospital to see an emergency psych staffer. It was very expensive, very inefficient and tough on families. After waiting where you first came and then the transport and then waiting in Aurora, it could take six to eight hours to be evaluated. Then there's a 50 percent change you will go home anyway, and it's 12 hours later. Or we admit you and send you to the inpatient facility back to where you came from in Highlands Ranch. So early in 2015, we started doing them all by telemedicine. We get a call, we set up videoconferencing, and see the kid and the family by video wherever they have first come in for care, and figure out where they need to go. It's made care much more efficient, and in fact, families like it a lot, which was a concern by many in the hospital system.

Another thing we are working on right now – how can we support rural primary care facilities with pediatric mental health? We have a pilot program with a pediatric practice in Durango. We have a psychiatrist who is doing consultation with practitioners down there. It's grant-supported. Our child psychiatrist is both seeing the patient through video link and talking with the local provider.

Are there other areas that look promising with home telehealth services?

We are working on some telehome services. We have patients in highly specialized subsets like the eating disorder unit and autism spectrum disorders and intellectual disabilities with mental health crises. So how can we use that expertise to support kids when they go back home? Can we do telehome or have primary clinics host a clinic that we provide remotely?

When you began some of those efforts more than 15 years ago, did you expect video health would be happening faster?

In some ways, I've been very surprised how slow the uptake has been. For us, it has worked so well since we first started. The technology in 2000 was clunky, but the tech turns out to be the easy piece of it. More of it is the long distance – making that still work – and how you structure clinics. We were able to figure out those things very quickly, from our perspective – create effective and efficient services just as if we were there. There was a lot of resistance. Lots of questions whether it was equivalent to in-person care, privacy, technology. Things didn't really tip in the acceptable direction until about five years ago. It's still not moving as quickly as I think it could, at least in parts of the system. Diffusion of innovations in health care, it takes a long time –15 to 20 years – for these things to get out. If I wear my research hat, that's what I'd say.

Overall, patients really like it. On average, they find it very convenient when you consider what they'd have to go through to see us face-to-face. We had patients coming up from La Junta to Denver for VA services. To not have to do that really long drive is a big change. People feel they can form a good relationship with us, and we feel the same way. Patients have been much more comfortable with this than I think providers have been. Resistance has come mainly from providers and their comfort with the program. In Alaska, once every 24 months or so, the patient really resists it and struggles getting comfortable with the video unit. But it's the rare exception now.

Have there been other challenges to video health that were a surprise?

There are still insurance reimbursement issues for some services. And there are also liability issues. What happens if you're working with a child and there's an emergency, and they're in a home 150 miles away and you don't have the backup you would if you were working with a pediatric practice? How do you plan for those kinds of contingencies?

Have you encountered any cultural differences with the communities you serve that have implications for longdistance telemedicine or telepsychiatry?

There are inherent cultural challenges in doing telemedicine. The biggest is that you've got urban providers giving service to a rural community they've never visited and may not understand very well. So they need to have a sense of the community and what's important there: the local calendar of events, what's coming up, visiting websites for local news, asking questions about what's going on in the community, knowing how important school settings are in a small community – that kind of thing.

Any other lessons learned that you'd like to share?

Here's one thing people don't realize about telemedicine: Unless we change the way we practice, it's a zero-sum game. I spent two hours yesterday on my clinic to Alaska – that's two hours less of me practicing in Denver. That's redistribution, and it's good for rural areas. But if in child psychiatry we don't have enough people to take care of patients that are here in Denver, then you're not really changing things from a whole-population perspective. So a question is how can we use telemedicine to expand the number of providers? One answer is that I can use it to help and support other people who are providers, even if I'm not there.



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Visual Guide to the Telehealth Issue

In a typical week, veteran Roy Hamilton enjoys running, biking, kayaking, and more. He does all of this with the support of Adaptive Adventures and doctors who he meets with personally and remotely, using telehealth technology, to stay healthy and maintain the specialized prosthetic legs designed especially for him and his active lifestyle. To watch the video, go to <u>www.ColoradoHealth.org/Journal</u>.





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The Foundation is launching a new website in the coming months, along with an organizational blog that will give us a space to rapidly respond to critical issues, regularly discuss the how's and why's of our work, the impact of grantee work, and most importantly, what it takes to make health everyone's business in Colorado. This will be the last edition of *Health Elevations* – read more on page three.

Sign up to receive email updates from us and to be notified about the launch of our new website and blog by sending in the attached postcard or going online at www.ColoradoHealth.org/JoinUs.