



Atrium Health

Now part of **ADVOCATEHEALTH**



Transforming Health Care Delivery Through Virtual Care

Executive Summary

For well over a decade, Charlotte, North Carolina-based Atrium Health, now part of Advocate Health, has been using the tools of technology to streamline patient access to care, reduce wait times and improve the patient experience. As the COVID-19 pandemic emerged, Atrium Health built on its pioneering foundation in virtual care to, in a matter of weeks, create and implement innovative programs to bring care directly into patients' homes, free up hospital beds and limited supplies, and increase efficiencies within the clinical setting.

Those programs now have expanded throughout the medical system to hospitals, schools, community clinics, in-home and on-demand services, as well as urgent and primary care settings.

By taking advantage of advances in medical technology, paired with the expertise of its clinicians, Atrium Health has spearheaded virtual care initiatives throughout the Carolinas, Georgia, Alabama and beyond that offer cost-effective and efficient solutions to industry-wide problems, including clinical staff shortages and burnout. More importantly, it is delivering convenient access to care for the most vulnerable members of the communities it serves – addressing the medical needs and social determinants of health that influence well-being and quality of life for those who are underprivileged or who have a generational or cultural distrust of institutional health systems. Through these efforts, Atrium Health is achieving better health outcomes and measurable increases in satisfaction among patients and staff.

Integrating virtual health care services into traditional care offers a model for the future of health care in America and a strategy that points the way toward the holy grail of health care: delivering the best medical care efficiently, resulting in improved health and lower costs.

From primary care to hospital at home, virtual nursing, behavioral health and rural health, through innovation and adaptation, Atrium Health – as part of Advocate Health – is helping reshape the future of how and where care is delivered.

Atrium Health Virtual Care by the Numbers:



More than
30
virtual programs



15
facilities with
eICU services

47



emergency departments with telestroke services



More than
20,000
school- and community-based virtual visits



More than
125,000
Behavioral health integration visits annually and another
13,700 such visits in emergency departments



57,000
COVID-19 patients
served on “observation
wing” of virtual hospital
at home

More than
8,400



acute care patients served via
hospital at home, saving over
30,000 bed days.

Introduction

Spending on health care in the United States far exceeds that of other countries but, when it comes to health outcomes – such as disparities in access to primary and hospital care, administrative barriers related to insurance, high rates of chronic disease such as diabetes, suicide prevention and mental health-related illness and mortality – the U.S. ranks at or near the bottom compared to other countries.¹



For us, our virtual capabilities are one way we have been able to set ourselves apart as a best place to receive care, as well as the best place to provide care.

– Katie Kriener, Senior Vice President, Virtual Health for Advocate Health

With what it calls its “for all” mission, Atrium Health has assumed a leading role in tackling some of these pressing health care challenges, with special focus on how to reach and care for underserved and marginalized populations and eliminate disparities in care, especially among people of color. An integrated, non-profit health system with more than 70,000 employees (called teammates) serving patients at 40 hospitals and hundreds of care locations, Atrium Health is extending its reach and its ability to improve health, elevate hope and advance healing for all through its advances in virtual care.

Virtual health care at Atrium Health is “part of a larger, transformative shift of the entire care model that we would not be able to make without the virtual component and the ability to deliver health care and related services through technology,” said Katie Kriener, senior vice president of virtual health for Advocate Health and its Southeast region medical group operations, which comprise the entirety of the Atrium Health footprint. It involves “looking at the whole person and creating technical connectivity between providers, between

patients and clinicians, improving patient activation with greater, more timely access” and compiling data that measures outcomes.

The need is growing across the country, and particularly in the Southeast, Kriener said, due to high rates of chronic disease, an aging population “and the need to lower the cost of care, because we are in an unsustainable health care cost growth system.”

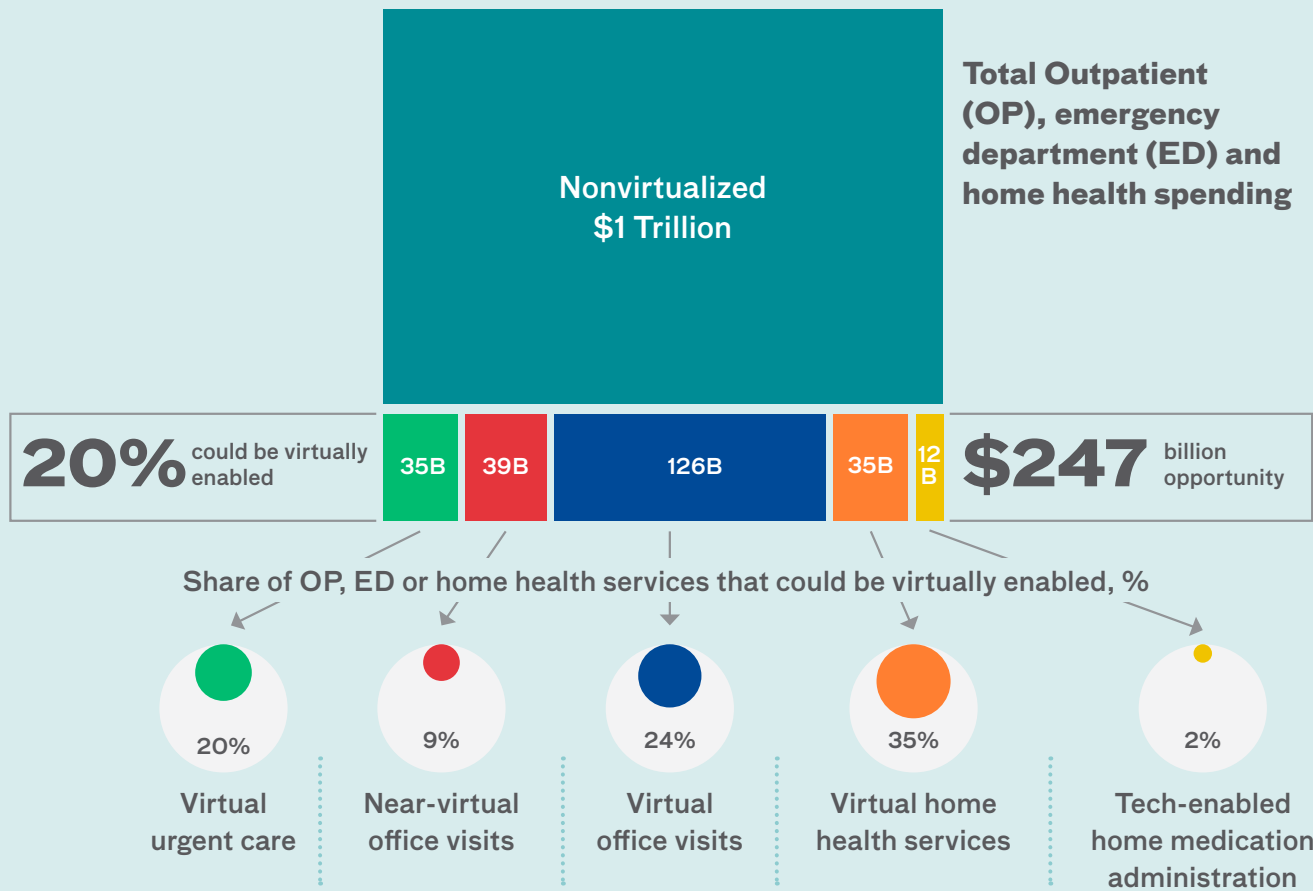
Atrium Health’s virtual health strategy is multipronged and embedded in planning throughout the system at a scale that is groundbreaking.

“Our vision, both within Atrium Health and throughout the larger Advocate Health enterprise, is to be a national leader in operationalizing a highly coordinated and connected virtual health program that’s driving the values and the measure of success that we’ve set for ourselves,” Kreiner said. She hopes it will be a model “that others want to follow, and that would then allow patients to connect to anyone, anywhere, anytime, when clinically appropriate.”

McKinsey & Company estimates 20% of Medicare, Medicaid and commercial outpatient, emergency department and home health spending could be virtually enabled, providing an opportunity to increase access and convenience while improving both cost and outcomes.²

“For us, our virtual capabilities are one way we have been able to set ourselves apart as a best place to receive care, as well as the best place to provide care,” Kreiner added. “We are redefining how, when and where care is delivered to help people live well.”

Around 20% of all Medicare, Medicaid and commercial outpatient, emergency department and home health spending could be virtually enabled.



McKinsey & Company

Near-virtual office visits are services that require lab tests or diagnostics, with a portion of the visit requiring in-person interaction (for example, a blood draw), but the consultation with the physician or the review of the lab test results is virtual.²

Atrium Health Hospital at Home

Atrium Health’s signature virtual platform is the Atrium Health hospital at home program. It has been widely heralded in medical journals and media for its innovation, practicality and simplicity. In just three years, it went from the drawing board to being what is believed to be the largest hospital at home program in the nation.

At the start of the COVID-19 pandemic, Atrium Health recognized the urgent and unprecedented need for medical services at a level that would swamp hospital systems and strain providers across the country and the world. It responded swiftly and effectively by ramping up virtual

health care initiatives on site and expanding into the community.

Atrium Health was well-positioned to meet the challenge.

“We had developed significant competencies in virtual health care going back 10 years,” said Colleen Hole, vice president of clinical integration for Atrium Health, chief nurse executive for the Atrium Health medical group and also the administrator of the Atrium Health hospital at home program.

That experience included virtual patient visits and physician consults at bedside, as well as transition care combining virtual interaction with in-person visits by community paramedic teams for discharged patients who were unable

to manage their care on their own at home.

“In March of 2020, we were watching what was happening in Italy and New York,” she said, “and we saw the numbers in hospitals going up in a scary way.”

The hospital at home program was initially developed to provide services to COVID patients who did not require hospital care. Most patients were monitored by a team of virtual registered nurses who provided education, support and care escalation, as needed. Other patients needed hospital-level care, but were stable enough to be cared for in the home with virtual nurse monitoring, virtual visits with a provider and a daily visit in the home by a trained paramedic to take vital signs, deliver treatments and ease the anxiety of isolation. Services of a chaplain, social worker and physical therapist could also be made available, if needed.



At a time when there were critical shortages of personal protective equipment (PPE), visiting paramedics needed only two changes, per patient, each day, rather than multiple changes needed by hospital staff going in and out of patient rooms. Treating less-severely affected patients in their homes also limited exposure of clinical staff in the hospitals and, by keeping contagious patients away from others, helped avoid further spread of the virus within the community.



This is hospital-level care. It's not home health on steroids, it is a completely different model, leveraging our capabilities across the board.

– Colleen Hole
Vice president of clinical integration and administrator of hospital at home program for Atrium Health.

“It was a crisis move,” said Hole. “In normal times it would have taken us a couple of years” to implement such a program. With resources pulled from all parts of the system serving as many as 130 patients at the peak of the pandemic, she said, “it was like having another hospital.”

In Atrium Health's program, the home-based patient is treated and discharged like an inpatient.

“This is hospital-level care,” she said. “It's not home health on steroids, it is a completely different model, leveraging our capabilities across the board.”

Now, the program has expanded, from 10 to 40 community paramedics who work together with 14 nurses dedicated to hospital at home, and six providers – such as physicians and advanced practice providers (nurse practitioners or physician assistants) – who provide care at home, treating conditions from acute, to chronic condition exacerbation and even post-surgical. By directly observing patients in the home, the paramedics can also assess additional needs, such as food insecurity or social challenges that may affect overall health, and connect them with the appropriate resources.

“It's a three-legged stool of physicians, nurses and paramedics who are undergirded by a team of social workers, therapists and others,” Hole said.

Hole believes the virtual model, integrated within the overall system, is here to stay. With a typical daily census of approximately 35 patients during the summer of 2023, the system intends

to be able to care for 200 patients daily in the hospital at home model by 2025, she said, “which is like having an additional hospital you don’t have to build.”

“Our patients strongly prefer this model, by 10 points in surveys,” she added.

As the population grows and ages, Hole expects virtual health care services will be in greater demand. It is being embraced by people of all ages because of the convenience, the ability to access care on demand and the chance to avoid sitting near sick people in a physician’s waiting room.

Additionally, as the cost of delivering care in this format can be as much as 25% lower than in a bricks-and-mortar hospital, widespread acceptance and use of the model also has the potential to slow the inflationary growth of health care costs for consumers, over time.

The advantages of virtual options for medical services are clear and Hole expects investments in this area will grow. Inpatient hospital care will always be needed, she said, but if home-based care is appropriate, it reduces the risks of falls, hospital acquired infections and other concerns.

“If you can avoid hospitalization, in particular for an older, fragile population, it makes much more sense in every way,” she said.

Hospital at Home Scope of Services



Remote Patient Monitoring
2-way audio/video connectivity



24/7 Virtual RN
Assessment & Monitoring



Twice daily in-home
Community Paramedic or
RN Visit



Daily Virtual Visit
with Provider



IV Infusion/Meds, Oxygen,
Resp Care & other therapies



EKG



Labs

Working with Payors

Payment models include private and public insurers, as well as grant funding. The Centers for Medicare and Medicaid Services (CMS), in November 2020, granted waivers for telehealth flexibilities and emergency waivers for hospital at home care. Since then, recognizing that such care is safe, effective and helpful for many patients, CMS extended the telehealth waivers and its Acute Care at Home waiver, which is funded through the end of 2024.

At the state level, however, embracing a payment model is coming much more slowly. Only nine state Medicaid programs extend coverage to hospital at home programs, including North Carolina, which began coverage in November 2023.

Regulatory oversight and working with payors are evolving processes as cost-savings, patient and care team enthusiasm, and effectiveness of virtual care become more recognized, said Molly McColl, Advocate Health’s vice president for virtual and global health care.

A positive byproduct of the devastating pandemic was the “consistency from a federal, state and commercial perspective that virtual health was going to be covered” in the same way that a brick-and-mortar medical visit would be covered, she said.

That allows virtual care to be deployed where it makes the most clinical sense and gives patients the benefit of knowing their virtual medical visit would be covered, as if they had driven to the doctor's office for an in-person visit.

While exponentially expanding the services of virtual health overall, Atrium Health has been gathering critical data that will tell the story of the cost savings, health impacts and quality of life improvements that have been achieved.

“We knew it was going to be important, and we knew we had to take advantage of the volume we were seeing, to be able to make sure we were deploying it effectively,” McColl said.

Atrium Health has a comprehensive virtual health dashboard that tracks growth metrics, payer metrics and utilization, working with population health experts to think through strategies and assure that quality outcomes are tracked.

“We have robust reporting around, for example, antibiotic prescribing,” she said, “because it was a concern that, through the use of virtual health, we would see an increase in antibiotic use. We continue to monitor these trends and have not seen any difference in patterns between virtual and in-person care.

School- and Community-based Virtual Health Care

A program that preceded Atrium Health's hospital at home program established a new standard for the system's goals of breaking down barriers to improve access as well as connecting more people to the convenience of receiving care how, when and where they want it. Its school- and community-based virtual health care offerings started with a pilot program in a single rural school in 2017. With generous support from philanthropic partners³, Atrium Health has since expanded to offer on-site virtual care in more than 150 schools, colleges and community sites, serving more than 20,000 adults and children.

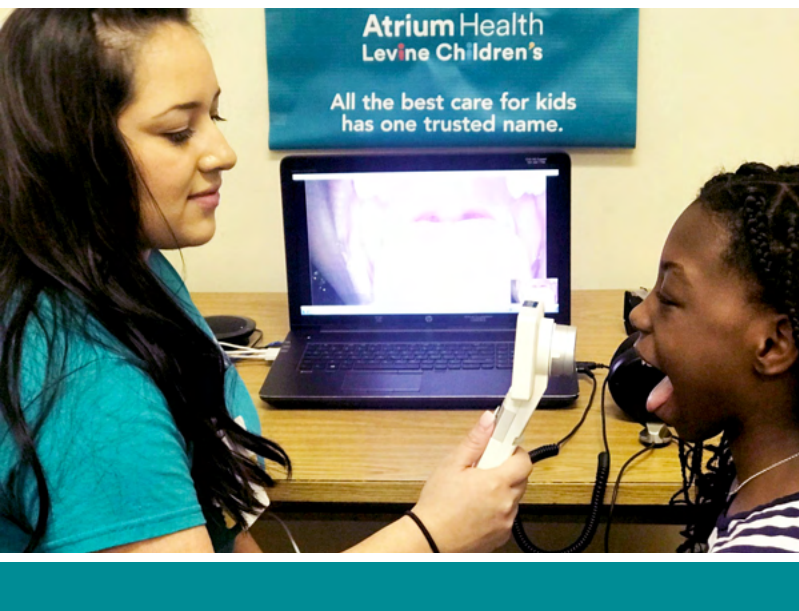
What drove the initiative was the urgent need for student access to health care, said Atrium Health pediatrician Dr. Patty Grinton, who founded the school clinic program. Children were missing school days, health problems were prolonged by delays in care and parents, unable to leave work during the day, frequently brought children to an emergency room at night for care that could have been better accomplished in a primary care setting.



“

After reviewing the outcomes, we proved our hypothesis that by seeing children during the day at school, we could reduce the impact on our emergency departments. It also resulted in more class time for the students and less missed work for parents.

– Dr. Lyn Nuse
Pediatric Primary Care Medical
Director, Atrium Health Levine
Children's Hospital



Grinton said the idea for school-based care came to her one day during the spring of 2016, during high pollen season. She received a call from a school nurse inquiring about a student with swollen eyes.

A swollen, injected eye can be due to infectious pink eye, which would require the student to be dismissed from school early. However, during the spring, swollen eyes are more often attributed to allergies.

Grinton recalls thinking to herself “if I could video connect with the school nurse and see the student, I could determine whether the eye swelling was due to infection versus allergies. If it was allergies, the student would not be contagious – she could remain in school and avoid an early dismissal.”

The introduction of video for virtual care, along with digital diagnostics and high-resolution camera images, brought that wish to reality and led the way to a comprehensive virtual care program that addresses parental needs, overcomes access barriers and supports school staff.

School nurses often are responsible for several schools in a region, and many schools have no nurse at all, so Atrium Health employs telepresenters who are trained through a partnership with a local community college. When a child is sick at school, the nurse or other designated school employee contacts a parent or guardian for permission, then calls for a nearby telepresenter who travels to the school with the equipment needed to conduct an exam and connect virtually to a pediatric health

care provider. The pediatrician can do an exam remotely and parents can observe remotely, without having to leave their jobs. Decisions are made about medication, either administered on the spot or ordered for pickup from a pharmacy, and when the child can return to class.

“In addition to improving access, one of the primary objectives of the school-based virtual care program was addressing ‘avoidable’ visits to the emergency rooms,” said Dr. Lyn Nuse, pediatric primary care medical director for Atrium Health Levine Children’s. “Our initial pilot took place in a rural district where we saw the highest rate of emergency department use for conditions that could easily be managed within a primary care office. However, children were being brought to the ER in the evenings instead.

“After reviewing the outcomes, we proved our hypothesis that by seeing children during the day at school, we could reduce the impact on our emergency departments. It also resulted in more class time for the students and less missed work for parents,” Nuse said.

The program has been a boon to children, their parents, local health systems and the schools, leading to a 32% reduction in preventable emergency department visits, a 50% return-to-classroom rate since schools reopened after COVID shutdowns and an average, estimated financial benefit to parents of \$352 per remote patient visit, due to avoiding lost wages, emergency room copayments, travel costs and other expenses.⁴

Grinton said teachers and other school staff began asking to have access to the same in-school virtual health care being offered to students. Then parents expressed interest, too.

Following a successful pilot with Charlotte-Mecklenburg Schools (CMS), Atrium Health Levine Children’s launched school-based virtual care⁵ in 20 CMS elementary schools during the 2022-23 school year. Ten middle and high schools received behavioral health teletherapy services through the program. Within three years, Atrium Health expects to offer virtual care at 50 CMS schools and behavioral health telemedicine at 31 of the district’s schools, one of seven North Carolina school districts the school-based virtual care program serves.



To meet the needs in both rural and urban communities, Atrium Health has also expanded the program beyond schools into community colleges, community centers, faith-based facilities, a YMCA – and even an apartment complex, as well as elsewhere throughout the Atrium Health service territory. Partnering with community groups, such as the Latin American coalition and respected religious and community leaders, increases the level of trust and acceptance of care, even among people who have never had regular medical care.

Recognizing the growing behavioral health needs among young people, Atrium Health has also built a successful school-based virtual therapy program, building on nearly three decades of history delivering in-person, school-based therapy. Launched in 2020, it is now available in 133 schools in North Carolina and South Carolina. By making tele-therapy easily accessible, Atrium Health has seen a rise in parents consenting to therapy for their children and increased participation in family therapy with their students.

The idea is that “we want to be in your backyard, so that if you need care, accessing it is not the challenge,” said Grinton.

Primary Care Settings

Atrium Health’s integration of virtual care services in primary care is based on a philosophy that, for

consumers, it should be simple and easy to see a primary care provider, said Dr. Matt Anderson, senior vice president and virtual health medical director for Advocate Health and Atrium Health’s senior medical director for primary care. Primary care should be available when needed and in the manner that is most acceptable to patients, he said.

“We want to provide frictionless access in the most personalized way, and that is where virtual really comes in,” Anderson said. “By offering the option of an in-person office visit or a virtual visit via a video device at home, patients can choose what works best for them and their specific needs. If it’s a three-month follow-up for monitoring blood sugar, for instance, or for a prescription refill, the video option is convenient and timesaving.”



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– Dr. Matt Anderson, Senior Vice President and Virtual Health Medical Director, Advocate Health; Senior Medical Director For Primary Care, Atrium Health

Another option is an e-visit, in which patients log into an online portal, answer basic questions to describe the problem and the information is sent to a provider who can make an assessment, call in a prescription or recommend an in-person visit if one is needed. E-visits can be particularly useful when the patient's schedule doesn't align with the provider's availability. Instead of having to rearrange schedules, the ability for patients to receive care asynchronously helps make sure they get what they need with as little friction as possible.

"We want to give patients options and let them decide," Anderson said.

Virtual visits aren't for everyone, and there are some conditions that require hands-on care, he said. In the fall of 2023, Atrium Health was seeing 5% to 7% of its monthly primary care visits virtually. For urgent care visits, 12% of patients utilize the virtual options, with around-the-clock, on-demand availability that counted more than 50,000 visits in 2022.

As an example, if a patient wakes up with a fever in the middle of the night, instead of going to an emergency room, that patient can log on and see a health care provider in a two-way interaction and, where appropriate, have a prescription called into a 24-hour pharmacy.

Virtual access enables greater flexibility for primary care physicians to tap into the expertise of a specialist, when needed, through virtual electronic consultation, or e-consults. This gives the primary care physician, who is trained as a generalist to treat a wide range of illnesses, the expertise and guidance of a medical specialist. This enables patients to receive the best care on-the-spot, rather than facing delays in getting an appointment with a specialist and potentially having to travel some distance, especially in rural areas where the availability of specialty care may be limited.

Traditionally, the health care model has been one-size-fits-all, Anderson said.

"As I see patients get more comfortable with virtual care, and as payment (from insurers) becomes stable, I think we'll see an increasing percentage of visits in primary care practices occurring virtually, perhaps 10% to 20%, or more," he said.

Anderson noted that will be even more likely as home test kits, such as those for flu and COVID, become available to detect a wider range of respiratory viruses and other infections.

In September 2023, Atrium Health began offering 24/7 virtual primary care visits. It allows patients to schedule an appointment with a family medicine physician and establish a virtual primary care relationship, allowing ongoing care from a dedicated physician who is familiar with the individual and their personal medical history.⁶

For clinicians, the opportunity to treat more patients in settings of their choosing and achieve greater control over their own time may help reduce the kind of exhaustion that was reported in a 2022 American Medical Association survey, which found that half of 11,000 physicians and other clinicians reported feeling stressed and burned out. In primary care, 70% of physicians and 89% of residents reported burnout.⁷

At Atrium Health, a survey of providers' experiences with e-consults told a different story. Dr. Robert Levy, a family practice physician with Atrium Health Primary Care Cabarrus Family Medicine, wrote:

"This is by far the most helpful addition to clinical medicine that has been implemented since I started practicing 15 years ago. Every day in primary care, dozens if not hundreds of clinical questions come up that may require specialty expertise, but this may often be limited by extensive waiting time, therefore leaving the primary care provider to try to manage or workup medical problems that are outside the broad scope of training. Since starting to utilize e-consults, I can say my patients are getting better, more cost-effective care, fewer unnecessary tests and treatments and are VERY satisfied that so much more can be done in their medical home. I practice full scope family medicine (inpatient, outpatient, newborns through geriatrics, and obstetrics) and tend to manage a lot on my own, but now feel like the level of care I am delivering has risen to a new level of excellence. Thank you so much!!"

The additional freedom created by Atrium Health's virtual offerings is being further enhanced by its continued investments into the latest technologies, with a special emphasis in being the "best place



Virtual health care is going to grow, both in the hospital setting and in the home. Rural counties don't necessarily have the volume (of patients) to support hiring a large staff of physicians, but we need those services. Virtual care models afford us the ability to provide the services needed.

– Dr. Paul D'Amico, Chief Medical Officer, Atrium Health Anson, Atrium Health Union and Atrium Health Union West

to care” for its providers, as well as to receive care for its patients. In 2023, Atrium Health became the first health system in the nation to implement a new artificial intelligence tool which securely captures the conversations between the provider and the patient during both in-person and telehealth visits.⁸ The tool then transcribes the clinically relevant content, which can be loaded into a patient’s electronic medical record. This increases the accuracy of the clinician’s notetaking and saves them considerable time, allowing them to better focus on spending more time with patients and less time on paperwork.

Virtual Health Care in Rural Settings

The on-demand advantages of virtual care provide a huge convenience to patients in receiving care close to home or in the home. Perhaps nowhere is that more evident than in rural America. It is especially pronounced in Southern states where, between 2007 and 2018, approximately 10% of rural counties lost one or more hospitals to a closure – leaving those counties without a hospital nearly half the time, resulting in longer travel times to seek hospital care.⁹

As such, the medical technology underpinning virtual health care is especially needed in rural areas, where hospitalization in a far-off location makes it harder for families to visit, where

resources are scarcer and isolation may delay in-person care. Video, digital wearables and other equipment enable smaller hospitals and clinics to offer sophisticated services locally, in schools, hospitals and community centers that reduce costs and provide access to comprehensive health care in areas where poverty, workforce shortages or geography require creative solutions.

Atrium Health is creating programs that extend the reach of its clinical excellence to more sites of service, increasing access and efficiency. One such example is at Atrium Health Anson, a 15-bed hospital in Wadesboro, North Carolina.

“What makes this approach to care different is that we have primary care embedded in the physical footprint of the hospital,” said Seth Goldwire, vice president and facility executive for Atrium Health Anson and nearby Atrium Health Union West. “As specifically related to telehealth, we have established several partnerships with schools to provide primary care services and mental health services for students. We also offer additional telehealth services for substance abuse and virtual cardiology, from the outpatient standpoint, and have expanded it to offer cardiology coverage in the inpatient unit,” employing digital monitors and home-based devices to manage hypertension, heart failure and more.

Within the hospital, patients who are likely to get out of bed or are otherwise at risk of falling can be observed remotely using “virtual sitters,” who

can alert a nurse, if needed, said Teresa Cochran, director of nursing at Atrium Health Anson.

Acceptance of virtual health care is growing, said Cochran. Patients who initially resisted home-based monitoring have embraced it, she said, and as internet connectivity in rural areas improves and reimbursement for services from insurers and government-sponsored programs becomes more seamless, virtual care will be more widely available.

“Virtual health care is going to grow, both in the hospital setting and in the home,” said Dr. Paul D’Amico, chief medical officer for Atrium Health Anson, Atrium Health Union and Atrium Health Union West. “Rural counties don’t necessarily have the volume (of patients) to support hiring a large staff of physicians, but we need those services. Virtual care models afford us the ability to provide the services needed.”

Technology-enhanced virtual care offerings at Atrium Health Anson include virtual cardiology. The leaders there are also working toward establishment of virtual oncology care, in which a patient can receive a chemotherapy infusion locally under the care of a remote oncologist, without having an hour or more drive into Charlotte.

“As we grow the services,” D’Amico said, “we’re growing the technology and growing the impact we can have.”

Behavioral Health Care

Atrium Health maintains an intentional focus on virtual health deployment and organizational commitment, as well as investment into its virtual health team. Within its bricks-and-mortar operations, Atrium Health incurs losses of roughly \$90 million per year in uncompensated or undercompensated behavioral health care. Yet, because of its “for all” mission to provide care for vulnerable populations, it has continued to invest into behavioral health in the virtual space as well.

Caring for the whole patient means addressing the mental health needs of patients through all stages of life. During the pandemic, the need for such care became more urgent as prolonged isolation, work and social instability, school closings, domestic stress and other factors affected more people.

Seeing the need, Atrium Health immediately ramped up its virtual behavioral health programs in all care areas, including hospital, home, school, community and primary care settings.

In 12 acute care hospitals in the system’s Charlotte market, consult teams are available, offering care that is not only efficient, but also is available in rural hospitals where there is no psychiatrist on staff. A virtual patient navigation and transition care program allows patients who have been treated in the emergency department to be followed up with at home. A virtual navigator checks in with the patient up to 45 days after discharge, offering the kind of support that can prevent self-harm and the need for return to emergency care.

Reaching outside the hospital, Atrium Health’s virtual integration into its primary care program is serving patients in 74 primary care practices in Macon, Georgia, and Charlotte, North Carolina, supporting more than 400 primary care providers. With virtual behavioral health consultations available on demand in primary care practices, combined with its other virtual behavioral health programs, it is believed that Atrium Health is now the largest provider of such services in the nation.

It is estimated that up to 40% of adults have symptoms or a diagnosed mental health issue, said Dr. Wayne Sparks, a psychiatrist and Atrium Health’s senior medical director for behavioral health services. Atrium Health’s virtual behavioral health program, with more than 100 psychiatrists and 35 advanced practice providers, allows treatment of far more individuals than could be seen in an office setting.

“A patient in a primary care practice may already be on medications,” said Sparks, noting that many primary care physicians prescribe

medicine to manage depression and anxiety. But when “a primary care provider lacks the training or comfort to go higher on medications, they would often refer the patient to a psychiatrist and be frustrated because of the wait times.”

That’s where a virtual consult team can help.

A clinical team, which includes a psychiatrist, guides and provides back-up to the primary care doctor in treatment and can recognize when a patient’s needs reach a level where in-person psychiatric care is called for. Patients who have a long-standing relationship with a primary care doctor often feel more comfortable



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– Dr. Wayne Sparks
Senior Medical Director, Behavioral Health Services, Atrium Health



receiving behavioral health care within that setting, rather than having to go to a psychiatrist’s office, Sparks said.

“Within our outpatient virtual behavioral health care, we’ve had great outcomes with this,” said Sparks, including dramatically reducing no-show rates, especially for those with chronic, severe mental illness. “They are able to maintain care virtually and, when they need medication, they come in to get it.”

Atrium Health’s tele-consults for behavioral health have resulted in positive outcomes for its patients. Fifty-six percent of these patients had at least a 50% reduction in their PHQ-9 scores, which is tied to a depression assessment, during the first six months of 2023, and 40% met the definition of remission. Similarly, 43% of patients saw at least a 50% reduction in their GAD-7 scores, which measures anxiety. Among patients who expressed suicidal ideation when enrolling into Atrium Health’s virtual behavioral health program, 80% no longer had such ideations at the conclusion of their individualized program.

Atrium Health plans to continue expanding these services.

Addressing substance abuse

“During the pandemic, addiction problems worsened,” said Sparks. “We’re seeing that the need for addiction treatment and psychiatric treatment has not leveled off – if anything, it has intensified. We had a mental health crisis way before the pandemic, and the pandemic brought it out.”

An addictions team, including a psychiatrist and an internal medicine doctor with an addiction fellowship, is available to treat psychosocial aspects of substance abuse as well as the associated physical health problems, such as hepatitis, gastrointestinal issues or cardiovascular problems. Atrium Health offers addiction consultations with acute care hospitals virtually, enabling care in rural areas, where a doctor might be an hour away from the hospital but can have equipment in the office for evaluations and referrals, as needed. In-person appointments are scheduled for patients at

least twice a year but, increasingly, patients and practitioners are growing more comfortable with virtual visits, Sparks said.

One strength of Atrium Health programs, according to Sparks, is that the system is focused on the region it serves, rather than being spread out among dozens of virtual start-ups across the country.

“We are here locally; we know the resources; we know next steps needed for our patients and how to get them there,” he said. “Most of our providers do some virtual and some in-person. We are still ‘boots on the ground,’ and we use virtual care as an extension.”

Advantages of Virtual Nursing for Staff and Patients

During what has been called the “great resignation,” an estimated 30% of the nation’s nurses quit, citing inflexible work hours, stress, understaffing and burnout.¹⁰ Atrium Health’s virtual nursing program, which began as a way to monitor and care for COVID-19 patients, has become a permanent part of the health system, relieving burnout and winning praise from patients and nurses alike, said Patricia Mook, senior vice president for enterprise nursing operations and professional development at Advocate Health.

Virtual nurses work remotely from home or in a designated room, called a bunker, and observe patient rooms via video monitors. Each virtual nurse watches over about 10 patients and can monitor vital signs, conduct admission assessment and discharge instructions, teach family members about what will be needed at home and summon a nurse or doctor to the room if needed. They serve as patient safety monitors, assist with pain assessment and charting and provide emotional support. The program has resulted in higher patient satisfaction scores, less overtime, fewer hospital-acquired infections and a decrease in response time to call bells.



Our virtual nursing allowed us to get to the level of nurse-patient ratio that we needed, by retaining nurses who couldn’t work at the bedside, but could do this work virtually. We are able to mentor new graduate nurses or new hires with an experienced nurse behind the camera. Our new nurses are excited about this innovation and we are using it as both a recruitment tool and a retention tool.

– Patricia Mook
Senior Vice President, Enterprise
Nursing Operations and
Professional Development,
Advocate Health

“It’s a collaborative partnership between a bedside health care team and a virtual nurse in two-way conversation,” Mook said.

The system makes it possible for nurses nearing retirement or who are physically unable to work on the floor at bedside to share their expertise and extend their working life.

“Our virtual nursing allowed us to get to the level of nurse-patient ratio that we needed, by retaining nurses who couldn’t work at the bedside, but could do this work virtually,” Mook said. “We are able to mentor new graduate nurses or new hires with an experienced nurse behind the camera. Our new nurses are excited about this innovation and we are using it as both a recruitment tool and a retention tool.”

In its original form, a rolling cart was equipped with a video camera, screen, speakers and some necessary accessories. The cart was rolled into the patient room near the bedside, so the patient could be seen by and converse with the nurse. In recent construction projects, Atrium Health has been equipping new patient rooms with the wiring and other infrastructure needed to expand the program broadly, making it a fixture in the rooms.



While virtual nursing is a tremendous tool for the nurses, the concept has also proven popular with patients and their family members. With in-room video capabilities, it's possible for a family member to take part in a consultation with the attending physician during a hospital stay. It has also been shown to reduce the number of falls by patients who attempt to get out of bed, as the virtual nurse can quickly intervene verbally and summon help.

One of the most fulfilling aspects of the virtual nursing program was quickly realized during the pilot program, early in the pandemic. It was a

time when no visitors were allowed into patient rooms and hospital staff were often covered head-to-toe in face masks and other personal protective equipment.

“We had patients tell us how much they appreciated the virtual nurse,” recalled Mook. “Often times, they were scared and they were lonely, so what they truly appreciated was being able to see the face of their nurse on the other end of the connection. It was the only face they would see and the only time they were able to see someone smile.”

Conclusion

The future of health care in America will require better health outcomes, cost containment and enhanced patient and provider experiences. Virtual health care, seamlessly woven into the overall health care system, enables Atrium Health – and Advocate Health, as a broader enterprise – to provide the best possible care to the greatest number of patients in a way that is efficient, sustainable and places the patient’s needs first.

“Care is care,” said Kriener, the senior vice president of virtual health for Advocate Health. “Delivering care through technology or virtually is a tactic we’re successfully using to care for our patients and reach underserved populations and communities. It allows us to do more, be better and go faster to help more people live well.”

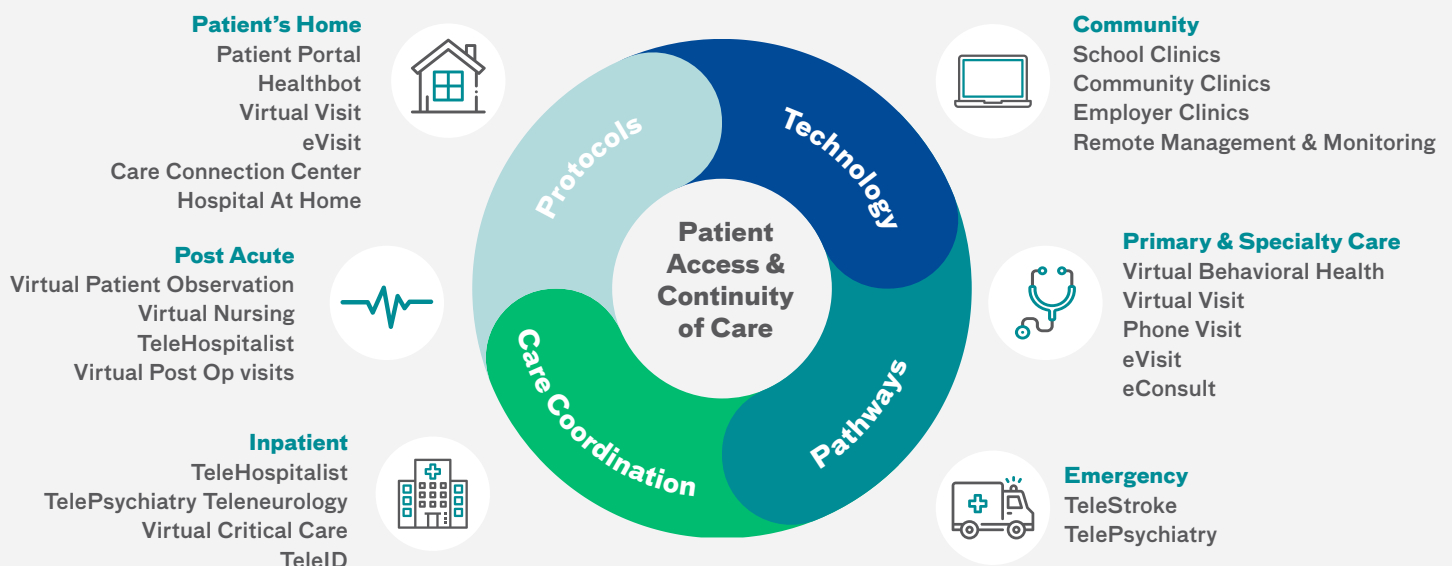
“We deliver options,” said McColl, Advocate Health’s vice president for virtual and global health care. “We want consumers to be able to engage with their care team in the way in which they desire and is clinically appropriate.

“At the same time, we want to ensure our virtual capabilities are a core competency throughout our footprint,” she added. “This speaks volumes to patients who are choosing a provider. It is a strength in recruiting the best physicians, nurses and other talent into our system. It is truly a differentiator that sets Atrium Health, Advocate Health and Wake Forest University School of Medicine – our academic core – on the leading edge of care delivery and life-science technology, today and for decades to come.”

Atrium Health’s long-term investment and vision is bringing excellent care to patients in their homes and communities, supporting the health system’s mission to improve health, elevate hope and advance healing – for all – by creating a new model of health care for the future others are working to emulate.

“The biggest priority for us, moving forward, is integrating virtual care into every aspect of care that strategically makes sense and is financially sustainable,” McColl said. “That is foundational to our success.”

Patient-Centered Virtual Care Continuum



References

- ¹ <https://www.commonwealthfund.org/publications/fund-reports/2021/aug/mirror-mirror-2021-reflecting-poorly>
- ² <https://www.mckinsey.com/industries/healthcare/our-insights/the-next-frontier-of-care-delivery-in-healthcarenote>
- ³ <https://atriumhealth.org/community/health/accesstocare/shelbychildrens>
- ⁴ Improving Health Access with School-Based Virtual Care, Atrium Health Levine Children’s Hospital research
- ⁵ <https://atriumhealth.org/about-us/newsroom/news/2022/transformational-gift-from-bank-of-america-supports-program-aimed-at-reducing-health-disparities>
- ⁶ <https://atriumhealth.org/about-us/newsroom/news/atrium-health-now-offering-24-hour-virtual-primary-care>
- ⁷ <https://www.cbsnews.com/news/doctor-burnout-primary-care-medical-workforce-mental-health/>
- ⁸ <https://atriumhealth.org/about-us/newsroom/news/atrium-health-ai-solution-improved-documentation-experience>
- ⁹ <https://sph.unc.edu/sph-news/nearly-10-of-rural-counties-in-the-south-are-losing-hospitals/>
- ¹⁰ <https://www.forbes.com/sites/debgordon/2022/05/17/amid-healthcares-great-resignation-burned-out-workers-are-pursuing-flexibility-and-passion/?sh=792038177fda>



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