



**EQUUM**  
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## CHALLENGE

US hospitals are currently facing significant challenges related to workforce shortages, access to care, and rising costs due to an aging population and limited healthcare professionals. Limited access to healthcare providers is a concern, especially in rural and underserved areas, which leads to delayed treatment. Addressing these challenges will require a collaborative effort between healthcare providers, policymakers, and the public to ensure that all Americans have access to affordable, high-quality healthcare.

## SOLUTION

Telehealth offers a promising solution to US healthcare challenges by allowing healthcare providers to deliver care remotely. This technology can increase access to care in underserved areas, alleviate the shortage of healthcare professionals and reduce costs for patients and their families to make healthcare more accessible and affordable. Overall, the use of telehealth technology has the potential to revolutionize healthcare delivery in the US by providing a more efficient, cost-effective, and accessible way for patients to receive care.

**"Today's hospitals and health systems are confronting a generational shift in the labor force, higher acuity patients and skyrocketing costs of care. Clearly, new solutions are needed, as it would take years to find and train a new generation of physicians, nurses and allied health professionals to fill all of these vacancies, and many of these other problems may become the new normal if we don't act now."**

**COREY SCURLOCK, MD, MBA, EQUUM'S FOUNDER AND CEO**

## EQUUM MEDICAL AND THE NEXT-GEN DIGITALLY ENABLED CLINICAL WORKFORCE

At Equum Medical, we're dedicated to tackling the challenges faced by hospitals and healthcare systems with innovative solutions that enhance patient care and address staffing issues. Our Lighthouse series showcases the real-world impact of our services through successful partnerships and positive outcomes. At Equum, each success story comes from designing the right solution for each partner. Schedule a session with the Equum team to get started on learning how virtual care can fulfill your telehealth ambitions today.



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## How Equum Medical has Helped a Small Northeastern Hospital Survive and Thrive

Equum Medical's critical care team partnered with a critical access hospital (CAH) in the Northeast to provide tele-intensivist consultations using portable video monitoring technology. The digitally-enabled specialists were fully licensed in the state and could prescribe medications and document in the hospital's electronic medical records system. The partnership resulted in improved patient care, timely transfers, increased daily census, and the hospital's CAH designation renewed for two full years.

### Benefits

- Hospital's daily census has risen and stayed well clear of minimum threshold
- Hospital's CAH designation renewed for two full years instead of usual one
- Patient transfers done in a timely fashion
- Patient outcomes improved

## Virtual care through Tele-ED helps a critical access hospital survive and thrive

### CHALLENGE

A critical access hospital (CAH) in the Northeast, owned and staffed by a family medicine practice, was struggling to survive. Even the smallest hospitals, with 10 beds or fewer, are important to the communities being served as they are often the only places to go for emergency care for many miles. Sending emergency patients on a long-distance journey for trauma care puts them in jeopardy, and medical transport is expensive and often unavailable.

The physicians all had busy schedules with medical office visits, so they took turns staffing the hospital. Often, especially at night, a patient would be placed in an observation bed for up to 23 hours awaiting a transfer decision. As these generalist physicians were not trained in trauma care, those decisions were sometimes difficult. Like all other CAHs, the hospital also faced Medicare's 96-hour limit on total length of inpatient stay.

The physician group lacked the capital to invest in new services. The hospital's average daily inpatient census had fallen below a key threshold; it faced losing the extra reimbursement that comes with CAH status, which would have triggered its closure.

### SOLUTION

Equum's critical care team was brought in to ensure that ED boarders were triaged quickly to reduce unnecessary transfers, but it soon became apparent to both parties that the partnership could be taken much further. Today, an Equum tele-intensivist does regular consults each day. The hospital uses portable video monitoring technology with zoom capability that allows Equum physicians to evaluate patients in minute detail, suggest care strategies and closely follow the patients to prevent their being transferred to inappropriate levels of care. These digitally enabled specialists are fully licensed in the state and can prescribe medications as well as document in the hospital's native electronic medical records system.

### OUTCOMES

The hospital's daily census has risen and stayed well clear of the minimum threshold. The success of the partnership with Equum is also evident in the hospitalist group's decision to add wound services and imaging to the original facility, while a few of the medical group doctors were shifted to a second hospital the group is starting.

In just the first six months under contract, Equum's team was able to help improve the care being provided enough so that the hospital's CAH designation was renewed for two full years instead of the usual one. Patient transfers are done in a timelier fashion, and patient outcomes have improved.





## Equum Medical's Virtual Sitter Program Revolutionizes Patient Monitoring

Equum Medical's Virtual Sitter program helps a mid-sized Midwest hospital by eliminating the need for one-to-one sitters for at-risk patients. The program uses audiovisual technology and highly trained safety specialists to prevent falls and elopements, and free up nursing assistant resources. The program quickly expanded to include psych and neuro patients, revolutionizing patient monitoring in the hospital.

### Equum Monitoring by the Numbers\*

- Hours of patient monitoring: 1,797
- Hours of neuro patient monitoring: 722
- Documented adverse events avoided: 335
- Falls prevented: 186
- Elopements prevented: 97
- Hours of nursing time returned to patient care: 1,400

\*30-day performance snapshot

### Benefits

- Successful in preventing falls and elopements in at-risk patients
- Expanded to include psych and neuro patients
- Frees nursing assistants to return to regular duties, enabling RNs to work at the top of their licenses

## Virtual sitters an instant success in patient safety

### CHALLENGE

A mid-sized Midwest hospital was facing the same problems as almost everyone else in post-pandemic healthcare: a toxic brew of staff shortages, higher patient acuity, a behavioral health crisis, skyrocketing costs and plunging margins. The system was spending hundreds of thousands of dollars each quarter on one-to-one sitters for patients at risk of falls, self-harm and elopement.

### SOLUTION

Equum Medical stepped in with its Virtual Sitter program, using audiovisual technology provided by one of Equum Medical's partner ecosystem companies. That system allows 360° visualization of patient rooms, as well as digital audio so that patients engaging in potentially harmful activity can be redirected while bedside staff are alerted. On the other end of the feed is Equum's highly trained team of safety specialists working from Equum's Virtual Care Collaboration Center (VCCC) near Nashville, Tenn. Each specialist can keep as many as 16 patients safe simultaneously.

The solution eliminates the need to divert critical nursing assistant resources to sit in at-risk patients' rooms, a practice that costs more than \$125,000 per room annually. Equum is one of the pioneers in remote sitting and is the first to pair that service with highly experienced RNs, who oversee the safety specialists and can step in when there is a case involving the need for medical intervention. Virtual safety specialists keep at-risk patients in bed, meet routine requests, speak with families and more.

### OUTCOMES

Originally, the engagement was for monitoring medical-surgical patients – many with dementia – who are at risk of falls and harms such as pulling at tubes and lines or trying to flee the premises. And Equum was immediately successful in doing so; in just the first three weeks 186 falls and 97 elopements were prevented. Seeing the possibilities in this service the system's nurse leadership asked if psych patients in two units could be added to the patients being monitored. After some training, that was accomplished, and it was so successful that it was rolled out to the whole hospital just four days after implementation.

Another task Equum has undertaken for the hospital is monitoring neuro patients, many with traumatic brain injuries. They lack awareness of their surroundings and can be especially impulsive in getting out of bed. At the same time the nature of their injuries is such that they simply cannot afford to fall.

Importantly, Virtual Sitter gets nursing assistants back to regular duties, freeing RNs to work at the top of their licenses.





## Equum Medical Revamps Statewide Health System

A Southwest statewide health system struggled with inconsistent telehealth services, leading to physician burnout and inefficient patient flow in emergency departments.

### Equum Solutions at-a-glance

- Equum Medical's Tele-Critical Care and Tele-ED solutions
- Episodic to round-the-clock ICU coverage
- Standardized workflows and protocols
- Board-certified intensivists working with onsite staff
- Timely care for acutely ill patients in ICU and ED

### Benefits of Equum Medical

- Reduced patient flow delays and improved health outcomes
- Interest in system wide Tele-Critical Care rollout
- Growing enthusiasm for Equum's Virtual Nursing solution
- Discussions for an enterprise-wide approach underway

## A statewide system heads toward enterprise-wide telehealth

### CHALLENGE

A highly integrated statewide health system in the Southwest has telehealth services that vary from hospital to hospital. These implementations lack common technologies, workflows and missions, legacies of prior pilots and the exigencies of Covid. One facility within this system needed overnight and weekend coverage for its intensive care unit, a direct result of physician burnout and interest in a better work-life balance. Additional help was needed to improve patient flow in the emergency department by helping to steer boarders – less emergent patients lined up on gurneys in the hallways surrounding the ED – to more appropriate venues for treatment.

### SOLUTION

Equum Medical supplied the hospital with its Tele-Critical Care and Tele-ED solutions. Equum can provide episodic to round-the-clock coverage of ICUs through telehealth consults and management, helping to standardize workflows and protocols and guide house staff and hospitalists through procedures. Through the dual program, a team of board-certified intensivists works with onsite staff to ensure acutely ill patients get timely care in the ICU or ED. Delays in patient flow result in longer patient length of stay and adverse health outcomes.

### OUTCOMES

The implementation of Tele-Critical Care had an immediate impact on staff satisfaction and care venue outcomes. The positive effects were so significant that the hospital's leadership team began to share the benefits with other hospitals in the system within weeks of the implementation. As the benefits became more apparent, discussions about standardizing Tele-Critical Care across the entire health system began to take shape. Meanwhile, the success of Equum Medical's Virtual Nursing solution in another U.S. system generated significant interest, and discussions were already underway for a system-wide rollout, led by the system's chief nursing executive. These early successes were recognized by the organizational leadership, highlighting the impact of Equum Medical's solutions on staff and care outcomes.





## Equum Medical Transforming Rural ICU with Tele- Critical Care

Equum Medical provided virtual critical care services to a remote rural hospital, becoming its virtual ICU department.

### Equum Solutions at-a-glance

- Equum Medical's Tele-Critical Care service effectively became the hospital's critical care department during the COVID surge
- Equum physicians virtually rounded on patients twice daily and were available for any ICU needs in the meantime
- Equum enabled the hospital to retain critically ill patients, avoiding transfers to a hospital more than 100 miles away

### Benefits of Equum Medical

- Enabled hospital to maintain modern medicine in a remote area where patient transfers are problematic
- Equum's team turned around a desperate situation for a patient.

## Telehealth transforms care at a remote Critical Access Hospital

### CHALLENGE

A remote hospital faced the challenge of an understaffed critical care department during a surge in patient demand. The hospital had previously relied on a specialist for critical care, despite the specialist not being trained for that specific role. Additionally, the hospital aimed to retain critically ill patients instead of transferring them to the nearest facility located a significant distance away. This challenge highlighted the need for a reliable and efficient solution that would address staffing shortages and improve patient care.

### SOLUTION

Equum Medical, a leading telehealth provider, introduced its Tele-Critical Care service to address the hospital's staffing challenge. As demand stabilized, Equum Medical continued to care for high-acuity patients in the ICU, conducting virtual rounds twice daily and remaining available for any ICU needs in between. This approach allowed the hospital to maintain quality care and support its staff more effectively. The remote hospital is part of a national network of rural hospitals, offering various essential healthcare services to the local community.

### OUTCOMES

With the help of Equum Medical, the remote hospital has successfully maintained modern medical practices in an isolated location where patient transfers are challenging. Equum Medical has played a significant role, essentially serving as the hospital's virtual ICU and providing crucial support to the in-house medical team. A notable example of their impact involved a patient with multiple health issues who required critical care on two separate occasions. Each time, Equum Medical's team managed to stabilize the patient's condition, allowing for transfer to a long-term care facility for rehabilitation and eventually, discharge home. This demonstrates the effectiveness of Equum Medical's telehealth solutions in enhancing patient care and addressing staffing challenges in remote hospitals.





## Nocturnist Coverage Relieves ICU Staff Burnout and Improves Quality of Care

Equum Medical provided nocturnist coverage to a rural medical center's ICU, improving physician retention and patient outcomes while reducing burnout and costs.

### Equum Solutions at-a-glance

- Nocturnist coverage provided by Equum Medical for uninterrupted care and better patient outcomes.
- Revived ICU care by allowing intensivists to get rest while still providing high-quality care to patients.
- Improved quality of life for staff, leading to better care and better outcomes.

### Benefits of Equum Medical

- Returning physicians to day shifts leads to better retention and attraction of new physicians.
- Enhanced staff satisfaction and improved quality of care.
- Better outcomes and clinical data reflecting the facility's commitment to transformational care.

## Taking the Night Shift: Handoffs to tele-intensivists relieves overburdened staff with no drop-off in care quality

### CHALLENGE

A once small rural community hospital in the Gulf Region that has transformed itself organically into a nearly 200-bed stand-alone regional medical center offering highly specialized services such as open-heart surgery, cancer care and neurology has an ICU staffed by highly qualified intensivists. Medical leadership understood the value of continuity of care for patients in critical condition and that studies have clearly shown that outcomes decline when intensivists are not present. As the pandemic raged, the ICU became overburdened, while costs of overnight coverage soared. Inevitably, for most physicians, burnout became a bigger and bigger issue.

### SOLUTION

The medical center contracted with Equum Medical to provide nocturnist coverage. Initially, it was to let intensivists have a reprieve from COVID care, allowing them to get some sleep knowing their patients are well taken care of. As COVID waned, it became more of a quality of life offering, meaning that intensivists know they have backup for nights and weekends all year long.

### OUTCOMES

Returning physicians to day shifts from Monday to Friday has been very important in terms of retaining current physicians and attracting new ones amid a national shortage of specialists and subspecialists. That is a major advantage for a facility with ambition to compete with major health systems in the area. Along with the quality of life comes better care and better outcomes, as staff are more satisfied with their work and primed for their shifts.







## Tele-Pulmonology: Hospitalists, and specialists breathe easier knowing expert eyes are on respiratory patients

### CHALLENGE

Pulmonologists are hard to find. The field has evolved over the past few decades from stand-alone consultant to integral part of ICU care, working alongside intensivists to treat flareups of respiratory conditions such as asthma, pneumonia, emphysema and chronic obstructive pulmonary disease (COPD). Graduating MDs, looking for better work/life balance, have been less inclined to choose the demanding pace of pulmonology-critical care medicine. As a result, fewer than 5,000 pulmonologists remain in practice nationally, according to the Association of American Medical Colleges. Meanwhile, COPD is rising in morbidity and mortality, and more than 16 million Americans have the disorder.

### SOLUTION

Equum Medical Inpatient Clinical Services Platform provides hospitals with 24/7 access to board-certified pulmonologists, part of its full range of virtual multi-specialty care. Being able to provide that high level of care means fewer patient transfers, of critical interest to rural and exurban hospitals that want to keep patients in the community.

Equum pulmonologists use whatever technology that is available on the hospital end, including digital stethoscopes that allow them to listen in real time to the patient's lungs and heart. Based on diagnostic data and patient/family interviews, Equum can either deliver care plans to the treating physician through the electronic medical record or if it's clear what's needed immediately, find someone in another specialty qualified to do a procedure.

### OUTCOMES

The typical patient pulmonologists see presents with shortness of breath. Most often it is a "COPD exacerbation" associated with airway inflammation and physiological changes. Staff need to be ready for anything; one patient presented with acute shortness of breath and possible heart attack. An Equum pulmonologist believed something else was going on and quickly ordered a CT scan that revealed several large blood clots in the patient's lungs. Instead of being wheeled in for an invasive cardiac catheterization, the patient was able to be treated with drugs to dissolve the clots.

The program meets such an obvious need that staff and leadership at client hospitals have actively supported its use. Pulmonary physicians say they appreciate Equum because it gives back hours to their workday for improving care.

#### Acute Care

Telemedicine has evolved to include specialty care coverage for hospitals needing assistance with specialty services. Tele-Pulmonary care allows physicians to remotely care for a range of pulmonary diseases including COPD, pulmonary embolism, and hypoxia in locations where specialty providers are scarce. Innovations at Equum facilitate this care divide and partner with patients and providers to breathe easier.



– Mario Fusaro, MD,  
Chief Innovation Officer  
at Equum Medical





## A doctor who has truly lived the patient experience

### CHALLENGE

Physician burnout has emerged as a formidable challenge within the healthcare system, precipitating an alarming exodus of providers from the realm of care delivery and exacerbating the scarcity of physicians in the United States. The demanding nature of the medical profession, coupled with heavy workloads, bureaucratic red tape and the relentless pressure to provide high-quality care, has taken a toll on the well-being of physicians. Prolonged exposure to chronic stress, long working hours, and the emotional burden of dealing with patient suffering have contributed to high rates of burnout. The consequences are profound: disillusioned and emotionally exhausted physicians are increasingly opting to leave clinical practice or retire early, aggravating the prevailing shortage of healthcare professionals.

Work-life balance and unlocking the potential for providers to contribute to care delivery have been enabled by telehealth. And in many cases, this is why doctors chose this profession in the first place. Alin Gragossian, DO, an intensivist at Equum Medical, brings a unique understanding to treating seriously ill patients. She spent more than a decade honing her skills in emergency and critical care medicine. Unlike her peers she also spent a lot of time in the ICU as a patient. She had a heart transplant, and as a result of the drugs she was administered she needed both hips replaced. All before turning 33.

Alin was diagnosed with dilated cardiomyopathy, a condition in which the heart chambers enlarge to the point of preventing normal blood flow. If it goes on long enough, it can lead to heart failure, as it did in her case. She was finally told that her heart muscles were so damaged that only a transplant could save her. She was transferred to the University of Pennsylvania system where on Jan. 15, 2019, 11 days after being placed on the heart transplant waiting list, she was, as she wrote in her Instagram blog, "reborn with a new heart, all thanks to a selfless organ donor."

### OUTCOMES

While Alin could do in-person care, she relishes the opportunity to work with patients and providers at many types of hospitals. "Being immunocompromised, telehealth allows me to continue to work with patients and collaborate with colleagues while at a distance, which I consider a better option for my health and situation. Telehealth supports my choice," she says of her move to telehealth at Equum.

Her experiences have changed her outlook on work and life. She has worked with the American Heart Association and Donate Life America and serves as a member of the Transplant Community Advisory Council of the American Society of Transplantation, focusing on heart failure awareness and the importance of registered organ donation.

Dr. Alin Gragossian's personal journey is an example of how the power of telehealth is positively impacting care delivery today.

“Being immunocompromised, telehealth allows me to continue to work with patients and collaborate with colleagues while at a distance, which I consider a better option for my health and situation. Telehealth supports my choice.”



– Alin Gragossian, DO





## Improving care and physician training, virtually

### CHALLENGE

In order to stave off burnout and achieve healthy work-life balance, many younger physicians are now joining companies that enable them to deliver technology-enabled care. Traditional thinking that stresses bedside care is evolving, and technology adoption rates for inpatient care are steadily rising to where hybrid care models – bedside and virtual- are becoming more standard. Change takes time in healthcare. To foster a change in mindset among physicians and encourage their acceptance of telehealth, it is vital to emphasize the benefits of increased accessibility, convenience, and efficiency in delivering quality care to patients. By highlighting the potential to enhance patient engagement, streamline workflows and improve overall healthcare outcomes, physicians can be motivated to embrace telehealth as a valuable and effective mode of care delivery.

### MEET EQUUM INTENSIVIST ADAM KEENE MD, MS:

In his prior role as the director of a 10-bed neuroscience ICU in a tertiary care medical center, Dr. Adam Keene spent most workdays coordinating the care of fewer than a dozen patients at a time. These patients often had multiple subspecialty teams assisting with their care, leaving only a few critical decisions to make. The amount of resources put into treating these patients far exceeded what was available to most critically ill patients in the United States.

Today, that scenario is still playing out in large academic medical centers. But for most hospitals and systems, resources are much more limited. As healthcare confronts multiple challenges of costs, rising patient acuity and the exodus of burned-out physicians and other clinical staff, this disparity is only getting worse. Gaps in care that impact quality, safety, patient satisfaction and outcomes are widening.

### EXPERIENCE

At Equum Medical, Adam joined a cadre of highly trained medical subspecialists who fulfill most of their clinical and educational duties virtually. Via a variety of telehealth technologies, Adam is able to apply his years of training and experience in critical care medicine, infectious diseases and neurocritical care to the bedside of patients in some of the most remote and resource-limited hospitals in the country: "Not only am I able to see many more patients in a single day, but the amount of benefit derived by my personal involvement in the care of each of these patients is much greater. This has been extremely fulfilling."

Telemedicine has greatly expanded his ability to teach other medical professionals. Previously, as the director of a large critical care medicine fellowship, Adam would spend most time teaching one or two doctors who were toward the end of their five to eight years of clinical training. Now as an Equum Intensivist practicing telemedicine, Adam rounds at multiple hospitals daily and finds that he is able to teach many more providers. They range from medical residents to general practitioners, nurses, nurse practitioners and physician assistants. "At some of the more remote community hospitals where I do virtual rounds, they may be the only clinicians providing care at the bedside. The amount of up-to-date knowledge that I can convey to them is immense."

Dr. Adam Keene's personal journey is an example of how the power of telehealth is positively impacting care delivery.

“Not only am I able to see many more patients in a single day, but the amount of benefit derived by my personal involvement in the care of each of these patients is much greater. This has been extremely fulfilling.”



– Adam Keene, MD, MS

