NUANCE

Rural healthcare in America

Exploring the rural care crisis and the rise of digital health solutions.

Contents

INTRODUCTION

In America's rural counties, hospitals and clinics are a "centerpiece of economic viability".[1] But how can we maintain these vital centers of wellbeing for towns and citizens in the face of diminishing budgets, physician shortages, and the strain of COVID-19?

More than half of America's hospitals are rural.[2] According to research by the American Hospital Association, for every dollar spent by a rural hospital, it supports a further $2.30 of additional business activity,[3] and they're usually the largest or second-largest employer in the area.[4] For every physician, there are tens of other ancillary medical personnel and people in support roles required to keep a hospital or clinic running. Rural hospitals care for and employ generations of families—which makes it even more devastating for a community when they close.

And many of America's rural hospitals and clinics are at a very high risk of closing. In the past 10 years, 137 rural hospitals have shut down completely, with a record high of 19 closures in 2020 alone. There's also a large proportion that have reduced the range of services they offer due to limited resources.[5]

This means patients are forced to travel further to access treatment. For example, more than a third of Georgia's 155 counties don't have a hospital.[6] Citizens are making cross-county journeys to access the care they need, and, in many cases, they must even cross state lines. This drop in care accessibility has a direct negative effect on patient outcomes; rural hospital closures have been linked to an almost 6% rise in in-patient mortality rates within the service area—even higher for Medicaid patients (11.3%).[7]

In this paper, we'll explore some of the challenges America's rural hospitals, clinics, and ambulatory surgery centers (ASCs) are facing today, and how those challenges are making it more difficult for providers to deliver consistent, quality care for their patients.

We'll also consider how telehealth, speech recognition, and other AI-powered technologies can help care providers look after their community more sustainably. The paper will highlight some examples of how small and

rural hospitals and clinics are using these technologies to reduce their costs, allow physicians to spend more time with patients, and keep vital healthcare services within their communities.

INCOME

Costs for rural healthcare dramatically outweigh revenue

Rural hospitals and clinics must meet the same mandates as their urban counterparts, but without the budget, high volume of privately insured patients, and local access to resources and specialists.

Lower patient volume makes it harder for small rural hospitals and clinics to manage their high fixed operating costs. And a higher proportion of subsidized patients mean revenue remains low, as rural hospitals get more than half of their revenue from Medicare (45%) and Medicaid (11%),[8] mostly from residents aged 65 and over,[9] who are more likely to require significant and ongoing medical support.

To add even more difficulty, rural populations are less likely to have health insurance than their urban counterparts,[10] and many under-65s aren't eligible for Medicaid—with 12 states including South Dakota, Georgia, and Texas yet to expand the program.[11] Most urban areas, on the other hand, have a large pool of patients with high-deductible private or workplace insurance policies that ensure hospitals, clinics and ASCs get reimbursed.

There's further cost for rural healthcare providers too: on the infrastructure side, many rural hospitals and clinics are reliant on aging IT equipment and outdated on-premises hardware. This often requires a full-time IT

team tasked with maintaining expensive, resource-heavy server rooms and outdated technologies.

These factors all combine to create an enormous demand on limited resources. According to research by the Chartis Center for Rural Health, nearly half of rural hospitals were operating in the red at the start of 2020.[12] And for those hospitals, clinics, and ASCs that manage to keep their doors open, there's another major challenge: finding physicians to care for their citizens.

The average hiring cost for a general practice physician is estimated to be nearly $350k

BRAIN DRAIN

There aren't enough physicians for rural populations
Although 20% of Americans live rurally, only 10% of physicians operate in those areas.[13] Supply is even lower for specialisms like neurosurgery and mental health; for example, patients in almost half of the USA's non-metropolitan counties don't have local access to a psychiatrist.[14]

So why are there so few clinicians working in rural counties? The simple answer is that recruiting physicians and other skilled medical staff to rural areas is difficult—and expensive. For example, leading physician recruiter Merritt Hawkins estimates that the average hiring cost for a general practice physician is nearly $350k,[15] a figure that may be minimal for an urban hospital to pay but represents an enormous financial burden for already-struggling rural clinics.

Research shows that physicians who train in rural residencies are two to three times more likely to practice in a rural area once they're fully qualified,[16] which is a promising statistic—but rural hospitals and clinics need to be able to attract them first. It can be difficult to tempt new graduates away from urban centers that benefit from large private patient populations, opportunities to explore different specialties, access to the latest equipment, and often proximity to advanced research institutions.

Attracting established physicians adds yet another layer of difficulty; on top of all the other draws of large urban teaching hospitals, a likely step down in salary to join an under-resourced clinic or hospital can be a hard sell.

COVID IMPACT

COVID-19 has exacerbated decades-old challenges
It's impossible to assess the current state of healthcare without considering the impact of COVID-19, which makes the gaps in quality care left by budget cuts and personnel shortages even more evident.

For many hospitals and clinics, bankruptcy was a real risk before the pandemic—and the increased financial pressures brought about by COVID-19 made it unavoidable, as evidenced by a record year of closures. Elective surgeries—paid privately or covered by insurance—were postponed or cancelled due to stretched resources and infection risk, cutting off a reliable source of income for many hospitals and ASCs.

Critical Access Hospitals were inundated with COVID-19 patients, spilling over to other sites in the surrounding area and further restricting counties' capacity for other patients. Estimates place the cost of treating an uninsured coronavirus patient at more than $40,000, with patients often needing major interventions and intensive care.[17] Emergency funding did little to replace the significant drop in revenue and rise in costs, as a large proportion of rural hospitals and clinics were already struggling to combat years of underfunding.

Despite overwhelming odds, many hospitals, clinics, and ASCs have managed to survive by rapidly adapting the way they interact with and care for patients. For example, COVID-19 has greatly accelerated tech adoption for triage, appointments, and ongoing care. In the following section, we'll explore the progress rural healthcare providers have made—and the impact it's had on their communities.

TELEHEALTH SOLUTIONS

Telehealth is on the rise—though barriers remain
In just the first five months of the COVID-19 pandemic, 41% of Americans postponed emergency or routine care due to exposure concerns, according to the CDC.[18] This hesitation to attend in-person appointments led to telehealth demand rocketing; in April 2020, telehealth use for office visits and outpatient care was 78 times higher than in February 2020 as stay-at-home orders came into force.[19] It's since stabilized, but clinicians are still using telehealth technologies 38% more than pre-pandemic. West Virginia United Medicine, for example, went from 25

telemedicine appointments in all of 2019 to 50k in April 2021 alone.[20]

Similarly, Dr. Jesse Affonso, an orthopedic surgeon at Cape Cod Orthopedics and Sports Medicine PC in Massachusetts, now conducts around 20% of his appointments via a telehealth platform.[21] "A telehealth program with efficient patient throughput, quality care, and effective documentation drives significant financial benefits," said Dr. Affonso.

As well as helping people get care faster, telehealth solutions can also give rural populations access to a wider range of care without the need to travel. There are significant benefits for hospitals and clinics, too; by making physicians more efficient, and reaching patients that may not have access to appointments otherwise, rural facilities can increase the number of appointments and boost revenue. With Medicaid and Medicare now covering a much wider range of telehealth services and expanding their criteria for patients, it's easier for hospitals to get reimbursed.[22]

However, there are still some stumbling blocks in the way of widespread telehealth adoption. First, it requires patients to have compatible devices and a reliable connection, which isn't guaranteed, especially in rural counties.[23] Also some patients, particularly those in older age brackets, may be resistant to discussing their health over a video call—and may have concerns over security and privacy.

And finally, there are many medical issues that simply can't be dealt with remotely, which means hospitals and clinics that want to take advantage of technology will need to look elsewhere to support in-person appointments.

SPEECH RECOGNITION

Speech recognition and ambient clinical intelligence are boosting revenue, attracting new talent, and helping physicians focus on patients
Increasingly, healthcare providers are embracing advanced technologies like speech recognition to help their physicians and ancillary staff complete documentation more efficiently and spend more time with patients. Solutions like Dragon Medical One (DMO) and the Dragon Ambient eXperience (DAX) enable medical professionals to use speech recognition and ambient clinical intelli-

gence for notes, care summaries to patients, referral letters to colleagues and for other administrative tasks that take up hours of their time—or need to be outsourced to transcription companies.

> AI-powered solutions potentially help hospitals treat more patients with fewer physicians

These highly versatile tools can help rural hospitals solve some of their biggest challenges. For example, with less time spent on documentation for each patient, physicians can see more patients during clinics. This ensures more people get access to care and helps improve revenue.

AI-powered solutions are also useful for addressing staffing issues in rural hospitals. As well as potentially helping hospitals treat more patients with fewer physicians, introducing industry-leading tools makes rural hospitals more attractive to new doctors. By establishing themselves as forward-thinking, tech-focused employers, rural hospitals can encourage recent graduates to practice in non-metropolitan areas—helping combat the brain drain that many regions experience.

Highly secure and based in the cloud, DMO and DAX are part of a larger shift of hospitals and clinics moving on from aging infrastructure and freeing up much-needed resources. With fewer on-premises systems, they will no longer rely on large IT teams that spend their time maintaining legacy tools, leading to further savings.

Tanner Health System, a 181-bed acute care center in Carrollton, Georgia, has seen dramatic savings with DMO—cutting a $2M annual transcription bill down to just $613. But the savings aren't the only benefit of using speech recognition.

"Providers are more relaxed with the patients, and patients appreciate these more natural interactions. You're not looking down at a keyboard and clicking. Instead, they see you talking about what's going on with them, and that allows them to see how much you've listened. It helps you bond better with the patients," said Dr. Bonnie Boles, CMIO for Tanner Health System.

With speech recognition, clinicians aren't glued to their computers, typing out notes while they talk to patients—

NUANCE

and with DAX, they don't even have to wait until after a consultation is finished to complete their documentation. It's the first step in an industry-wide shift to "the exam room of the future", where patient documentation essentially writes itself, leaving physicians more time to focus on engaging with their patients.

At Dr. Affonso's orthopedic surgery clinic in Cape Cod, he no longer needs to bring a computer into his exam room at all thanks to DAX. He can record conversations with his patients using the DAX mobile app, which then intelligently converts the transcript into a clinical note that's uploaded to the EHR for review. That time saving means he's able to see three or four extra patients every day.

"I'm no longer scrambling to get out of the room to start frantically typing to document the note," says Dr. Affonso. "This technology really allows you to focus more on the art of medicine. And the art of medicine is to develop strong patient relationships and to tease out challenging or difficult issues. DAX has eliminated the clerical burden that had been competing with my time with the patient and allowed me to be present and engaged during the visit."

DMO and DAX ensure everything is recorded in greater detail with more speed and accuracy, helping establish continuity of care. In short, better documentation leads to better patient outcomes.

CONCLUSION

With the right support and technology, rural hospitals can help their communities thrive
Rural hospitals, clinics, and ASCs are certainly fighting an uphill battle. Shrinking budgets and increasingly complex circumstances are making it difficult—and often impossible—for healthcare providers to operate sustainably.

Communities rely on their healthcare centers. To continue to serve their patients effectively, small hospitals and clinics should consider shifting the way they work and focus on smart technology investments that can help them achieve multiple goals.

Speech recognition and ambient clinical intelligence are two powerful tools that can not only help clinicians see more patients and boost revenue, but also let them focus more closely on each patient in turn. With more

Dragon® Medical One

Fully documented patient care—anytime, anywhere
Dragon Medical One (DMO) is Nuance's purpose-built, cloud-based speech recognition solution for physicians, nurses, and other clinical staff. This allows clinicians to use their voice to securely capture the patient story more naturally and efficiently—anywhere, anytime.

Backed up by our latest AI-powered speech recognition engine that's HITRUST CSF-certified and hosted securely in Microsoft Azure, DMO provides a consistent and personalized clinical documentation experience across solutions, platforms, and devices regardless of physical location.

Learn more about DMO

Dragon® Ambient eXperience

Clinical documentation that writes itself™
Designed to help physicians focus more closely on their patients and spend less time writing up notes, Dragon Ambient eXperience (DAX) securely and intelligently transcribes notes from appointments in real time.

Saving an average of seven minutes per appointment, physicians can cut their documentation time in half. And, most importantly, more than 80% of patients say their physician is more conversational and personable with DAX.

Learn more about DAX

engagement during consultations, physicians can gather more detail and insight—so the patient knows they've been heard and receives the best care possible.

Cost-efficient, versatile, and effective, a smart approach to adopting these AI-powered technologies could be the decision that keeps the doors of rural hospitals, clinics, and ASCs open for decades to come.

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