RURAL MATERNITY INNOVATION SUMMIT

Site Report

Abstract

This report summarizes the insights from six rural maternity programs, as presented at the 2024 Rural Maternity Innovation Summit in Clifton, TX.

Erin E. Sullivan, PhD, Benjamin Anderson, MBA, Mark Deutchman, MD

University of Colorado School of Medicine Rural Program

University of Colorado Anschutz Medical Campus

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Glossary

ALSO: Advanced Life Support in Obstetrics

ANMC: Alaska Native Medical Center

CAH: Critical Access Hospital

CNA: Certified Nursing Assistant

CNM: Certified Nurse Midwife

CRNA: Certified Registered Nurse Anesthetist

EMBRACe: Equity for Moms and Babies Realized Across Chatham

FCTA: Federal Tort Claims Act

FP-OB: Family medicine physician (Family Physician) who performs normal deliveries.

FP-OB+surgical: Family medicine physician (Family Physician) who performs both normal deliveries and cesarean sections (C-sections).

FQHC: Federally Qualified Health Center

GME: Graduate Medical Education

IMQCC: Iowa Maternity Quality Control Collaborative

L&D: Labor & Delivery

MCC: Maternity Care Center

OB-GYN: Obstetrician-Gynecologist

PHS: Piedmont Health Services

RHC: Rural Health Clinic

RMOMs: Rural Maternity Optimization Model

RRT: Rural Residency Track

SCF: Southcentral Foundation

UNC: University of North Carolina

WIS: Women Infants Services

Notes on Terminology

Use of maternity care: We have chosen to use the terms “maternity care,” “maternity programs,” or “maternity services” as they encompass a broader range of care and services related to pregnancy. Some Summit attendees referred to their rural maternity care programs as “OB programs.” We have edited these references to “maternity programs.” Obstetrics (OB) is a medical specialty focusing on pregnancy and childbirth, often dealing exclusively with the clinical and surgical aspects of pregnancy. Finally, maternity care unit, OB unit, L&D, and birthing center are equivalent terms.

FP-OB: This refers to a family medicine physician (Family Physician) who performs normal deliveries. While all family medicine physicians are trained to handle normal deliveries during residency, not all choose to continue this practice after residency.

FP-OB+surgical: This refers to a family medicine physician (Family Physician) who performs both normal deliveries and cesarean sections (C-sections).

Introduction

Access to maternity care plays a major role in the health of pregnant women, their infants, and the rest of the family.[1-4] Those living in rural areas experience diminished access to healthcare,[5] which may result in poor health outcomes, an increased incidence of pregnancy complications, and even maternal and infant morbidity and mortality. Locations lacking adequate access, many of which are rural, are known as Maternity Care Deserts.[6] (For a map of maternity care deserts, see Figure 1.) Examining the root causes of this is like peeling back the layers of an onion. At the outermost layer are the considerable distances to physical facilities for safe birth and the absence of healthcare professionals who are trained in providing safe maternity care to staff those facilities.

Adding to those issues is the concern that many rural hospitals stop providing maternity care or close altogether. Between 2010 and 2023, 80 rural hospitals closed completely and an additional 66 converted to a facility that no longer provides inpatient services.[7] In 2023, 72 rural hospitals were predicted to be at highest risk of financial distress, and an additional 294 were predicted to be a mid-highest risk.[8] Further, about half of the existing rural hospitals do not provide birth services at all.[9] This may require patients to travel even further for access to maternity care, which can be particularly hard on those who lack adequate transportation.

The staffing issue stems from the difficulty of recruiting and retaining a skilled team of professionals, and maintaining their proficiency in low-volume environments, which can also be a barrier to recruitment. An effective team of professionals includes clinicians who deliver prenatal, intrapartum, and postpartum care; plus nurses and a range of others who can provide anesthesia, respiratory therapy, and other pregnancy and newborn-specific care. And they must be able to provide stable, 24/7/365 care. The absence of any one of them can lead to failure of maternity care. Clinicians providing intrapartum care include obstetricians, family medicine physicians, and certified nurse midwives. Family medicine physicians are the most widely distributed of those clinicians, being nearly ubiquitous in rural communities, while obstetricians and certified nurse midwives tend to be located disproportionately in urban areas.[16,17,18] In rural communities, physicians must also simultaneously provide a broad range of non-maternity care needs for the community-at-large, making family medicine physicians best poised to increase maternity care access where supportive facilities and other team members are present.[18,19]

Hospitals that stop providing maternity care are often a prelude to those hospitals closing completely. Table 1 below lists several reasons they may stop providing maternity care or close completely.[10]

Table 1. Reasons Hospitals Stop Providing Maternity Care or Close Completely

- Insufficient patient volume to justify services provided.
- Low payments due to a large percentage of Medicaid or uninsured patients.
- State's failure to expand Medicaid.
- The negative impact Medicare Advantage has on hospital finances.
- Loss of physicians, nurses, or other essential staff due to burnout, poor pay, or poor working conditions.
- Too many subspecialists who can't share the work interchangeably.
- Not enough full-scope family medicine physicians who can cover all care, share call, or create a viable long-term physician workforce.
- High liability insurance costs.
- Scope of care limitations or birth volume requirements.
- Difficulty in recruiting essential staff because of an undesirable location, lack of community amenities, or poor reputation of schools.
- Poor community support ("bypass of local care").
- Lack of tax support.
- Aging or outdated facilities.
- Poor governance:
    - Running a rural hospital like an urban hospital, e.g., spending too much on subspecialty care to the neglect of primary care.
    - Financial mismanagement of billing and collection procedures or outright fraud.

Source: Author compilation from multiple sources and experience.

Eighteen million women of reproductive age live in rural counties[11] and over 2 million of these women live in counties with low or absent access to maternity care.[6] This may lead to increased complications, more interventions, unplanned out-of-hospital births, or pre-term births.[12-15] It also creates an equity issue, as difficult access is particularly apparent in communities identified as low income and having a majority Black or African American residents[18] who are known to experience high rates of maternal morbidity and mortality.[20]

Despite these problems, there are rural communities where maternity care is accessible, high-quality, and sustainable. This report details six such communities that can serve as examples others can emulate.

Background

In March 2024, leaders from six innovative and sustainable rural maternity programs were invited to the Rural Maternity Innovation Summit in Clifton, Texas to share their innovations for maintaining local maternity services in their communities. Representatives from the National Rural Health Association, Federal Office of Rural Health Policy, T.L.L. Temple Foundation, and Stroudwater Associates identified these programs based on a maximum variation sample strategy, which intentionally spanned all geographic regions of the U.S. (For a map of site locations, see Figure 2; and for comparative site data, see Appendix 1.) Each organization that attended the Summit was represented by 1–4 participants so that different clinical, operational, and financial perspectives from each innovation site were shared. Each site had 20 minutes to present their rural maternity innovation, followed by 25 minutes for discussion and questions. The content for this report was generated via analysis of the transcripts of the presentations, slides provided by each site, as well as subsequent discussions and conversations related to creating, sustaining, and leading the innovations.

Objective

The objective of this report is to summarize the site innovations presented at the March 2024 Rural Maternity Summit.

The Power of Partnership: Fairview Hospital

Great Barrington, Massachusetts

> *…Everybody's competing at some level. And that's one of my takeaways… is how can we do things where there's some level of partnership. [How do] we figure out how to create and craft a win-win situation. And we got to figure that out, because that's the only way we're going to be able to sustain things.*

Background

Fairview Hospital is situated in the westernmost part of Massachusetts, close to the New York and Connecticut borders. It is part of Berkshire Health System, which includes a 300-bed community teaching hospital 25.2 miles away (Berkshire Medical Center). Fairview, designated as a critical access hospital (CAH), serves a primarily rural area known as South County in the southwestern corner of Berkshire County. Berkshire Health System includes one additional, recently re-opened (as of March 2024) CAH—North Adams Regional Hospital—which serves North County. Fairview's catchment area is around 25,000 people and subject to seasonal population fluctuations due to tourism.

Maternity Services

Fairview Hospital provides comprehensive maternity services with access to mammography, ultrasound, and gynecology services as part of its broader women's health services. The hospital places a strong emphasis on providing local, high-quality maternity services. Despite financial and operational pressures from the broader health system, which would prefer to consolidate services in larger centers, Fairview has maintained its maternity unit, partly due to its high patient satisfaction scores and the community's preference for local care. The hospital's maternity unit has maintained patient experience scores in the 99th percentile for over ten years.

Maternity care at Fairview is organized around four key principles:

- **Access** for the community and primary service area.
- **Quality** for justification to offer service.
- **Affordability** to be competitive and acceptable to patients and their families.
- **Sustainability** to financially contribute to hospital-wide performance.

Partnering with an FQHC

From 1997–2006, Fairview had a hospital-owned OB-GYN service model, which consisted of two MDs and one certified nurse midwife (CNM). In 2005, when the CNM retired, the model was supported by three MDs. At the time, Fairview performed roughly 140–160 deliveries per year, with 100–120 gynecological surgical procedures contributing to the revenue. However, the OB-GYN hospital-based practice was financially struggling, losing $600,000–$750,000 annually.

In 2007, Fairview Hospital formed a strategic partnership with a Federally Qualified Health Center (FQHC) to manage these financial challenges. It wrote and agreed (in principle) to a memorandum of

understanding, subject to the FQHC receiving an approval for an "expansion of services" to allow for an additional 330-expansion grant. The FQHC applied for and received the grant, which provided an additional $600,000 annually, significantly helping to offset the losses of the OB-GYN service line. This ultimately helped bring the practice to a better-than-break-even financial state.

In 2007, as part of the partnership, the OB-GYN practice was integrated within the FQHC, meaning that the three doctors who were originally employed by the hospital were now employed by the FQHC. According to Tony Rinaldi, former executive vice president at Fairview Hospital, making this shift for the physicians—who may have perceived a loss of control in shifting employers—required, "we [were] able to talk them through the MOU and give them some [reassurance that] if it didn't go, well, they can come back to work for the hospital… there was a lot of hand holding, and a lot of relational capital that we used… to ensure that if something didn't go right, that we would be there to stand behind it."

Financial Strategies

The collaboration led to significant long-term savings for the health system, estimated at nearly $10 million over several years. For Fairview, transitioning the OB-GYN practice to the FQHC meant that the malpractice insurance costs for the three doctors would be covered under the Federal Tort Claims Act (FCTA), which saved about $200,000 annually in malpractice premium costs. This transition not only helped reduce the annual deficit by mitigating one of the substantial recurring expenses, but also contributed to shifting the operating margin for these professional services to at least break-even or better.

By streamlining operations and integrating services with the FQHC, Fairview reduced overhead costs, improved financial performance, and redirected resources to patient care and operational needs. The partnership between Fairview and the FQHC was structured to share financial risks and benefits equally. The FQHC had to present its financials quarterly, ensuring transparency and mutual support based on the financial health of both the OB-GYN practice and the FQHC as a whole.

Starting in 2013, Fairview and other CAHs in Massachusetts benefited from special legislative efforts that adjusted reimbursement models to better reflect the actual costs of services. For instance, the CAHs advocated for—and succeeded in getting—Medicaid reimbursement to align more closely with Medicare principles, significantly improving the financial viability of services provided to Medicaid patients.

In addition to cutting losses supporting the clinician group, Fairview hospital benefitted financially from the hospital revenue generated by the OB-GYN clinicians, both in the birth unit and from gynecologic surgical procedures. This allowed the hospital to make an annual community benefit financial contribution to the FQHC based on the needs and performance of OB-GYN services. Historically, that has been about $150,000. However, in FY 2024, the hospital planned to increase its financial contributions to $400,000 if the OB-GYN practice deficit reached a predetermined threshold. This contribution supports the FQHC's continued operation of maternity services and provides sustainable services for the community.

Staffing

Fairview's approach to care emphasizes the importance of staff engagement, fostering a culture where they are motivated and committed to the community. This directly translates into high-quality patient care and high patient satisfaction scores. Through its engagement strategies, both staff and patients feel cared for and valued, enhancing community trust and loyalty.

The hospital has employed various staffing models over the years, including the integration of midwives and restructuring of physician roles, to balance cost-efficiency with high-quality care. As of 2024, the FQHC practice was staffed with four full-time OB-GYNs. This adjustment enabled approximately 150–160 deliveries annually and helped manage increased financial pressures on the FQHC.

Community and Patient Engagement

Overall, Fairview Hospital's connection with its community is characterized by a strong commitment to maintaining essential healthcare services locally, guaranteeing operational transparency, and actively participating in community health initiatives. These efforts establish Fairview as a vital part of the community's wellbeing, not just a healthcare provider.

Partnership and Perseverance in Reviving Maternity Services: UNC Chatham Hospital

Chatham County, Siler City, North Carolina

"Change happens at the speed of relationships" is a truism… Relationship is all encompassing.

Background

UNC Chatham Hospital is a CAH that began in a physician's home in 1933 and became a county hospital in 1953. Located in Siler City, in the west region of Chatham County that contrasts sharply with the more affluent eastern portion of the county, the hospital serves a significant Spanish-speaking population, with high poverty (28.9% in Siler City vs. 8.9% total in the county) and uninsured rates (32% of Silver City residents below age 65 are uninsured). Chatham Hospital was acquired by the University of North Carolina (UNC) Health System in 2008, which is a non-profit, integrated system owned by the state and based in Chapel Hill. UNC Health includes 14 hospitals across 20 campuses throughout North Carolina. Its mission is to improve the health and well-being of North Carolinians.

Maternity Care Center (MCC)

After coverage issues forced the closure of its original labor and delivery unit in 1991, it prioritized reopening and maintaining essential services to provide local, accessible services to expectant mothers who would otherwise need to travel significant distances to larger cities. UNC Chatham MCC had its rebirth in the plan to increase the presence of rural primary care physicians in North Carolina. In 2011, UNC Department of Family Medicine Residency Program started a rural residency track (RRT) in partnership with Piedmont Health Services (PHS) FQHC in North Orange County – Prospect Hill Clinic. This proved very successful, with more than 80% of graduating family medicine residents continuing in rural primary care practices after graduation (more than 80% at 5+ years). With this success, the new RRT was started in 2019 and funded through UNC Health with PHS as a partner in Siler City. The MCC was part of the commitment to the RRT and training of rural PCPs spearheaded by UNC Department of Family Medicine, UNC Health, and PHS.

With the commitment to open Chatham Hospital's MCC as a Level 1 maternity care center, the hospital leaders re-imagined Chatham County's rural maternity services to address care gaps for mothers and infants within Chatham County, specifically to provide local, accessible services (prenatal ultrasound, prenatal testing, and high quality perinatal, peripartum, and postpartum care). They also decreased maternal travel time to a delivery unit, addressed the cultural and language needs of patients, and trained medical staff to create and maintain a safe and welcoming environment where mothers felt heard and true partners in their care.

The hospital's efforts to open the MCC had significant community involvement. Through several grants and building on models of community engagement to address maternal and infant morbidity and mortality—which was a priority of the North Carolina legislature—EMBRACe (Equity for Moms and Babies Realized Across Chatham) was formed. EMBRACe is a program that assesses the needs of the community through listening sessions with women and community partners, and works with the

community healthcare organizations (county health department, Chatham Health Alliance, county social services, community clinics) to create a leadership steering committee that coordinates community health initiatives.

In September 2020, the Chatham Hospital MCC re-opened. As of 2024, it currently delivers 200 infants per year, with a goal of increasing to 300.

Staffing

The staffing model emphasizes a collaborative, multi-disciplinary practice environment where 3 FP-OBs, 3 FP-OBs+surgical, 1 certified nurse midwife (CNM), 1 medical director, who is an OB-GYN and certified registered nurse anesthetists (CRNAs) work together to provide comprehensive care. The collaboration between different disciplines is essential for maximizing the range of cost-effective services that a Level 1 Maternity Center makes available to patients in a rural hospital setting.

Physicians. UNC Chatham's model includes FP-OBs and FP-OBs+surgical who provide care at the MCC, as well as inpatient hospital care to adult and pediatric patients. An OB-GYN is integral to the staffing model, providing obstetric and gynecologic clinical and surgical care. The staffing model is also designed to support training and education, particularly through family medicine residency medical and nursing students, to build a pipeline of healthcare professionals committed to serving rural populations.

Nurses. CRNAs are able to work without direct anesthesiologist supervision and provide surgical coverage within the MCC during deliveries and other obstetric procedures. A CNM and specialized nursing staff, including those trained in labor and delivery, are critical within this model. Historically, high turnover rates within nursing created a significant challenge for UNC Chatham. The hospital remedied this by elevating pay to the health system standard, along with ongoing training and recruitment efforts.

Financial Strategies

UNC Chatham managed the financial challenges of providing rural maternity care with strategies that included securing support from the larger UNC Health System and external grantors, collaborating with external organizations, and optimizing resources.

Working with UNC Health. Debates with UNC Health about the viability and structure of rural health services created significant financial and systemic challenges for UNC Chatham. The leadership within the hospital and broader UNC Health System plays a crucial role in determining the scope and nature of services offered. Policy decisions at the state and system level significantly affect the hospital's operations and its ability to serve the community effectively. UNC Chatham benefits from belonging to a larger health system due to access to a broader pool of resources and financial risk sharing across the system.

External Collaborations and Partnerships Collaborations and partnerships allow UNC Chatham to extend its reach, share resources, and in some cases, secure additional resources.

- **FQHCs:** FQHCs often receive federal funding to care for underserved populations, and partnering with them helps UNC Chatham provide comprehensive care to more patients, including prenatal and postnatal services. UNC Chatham MCC and PHS FQHC share physician and midwifery staff, which is viewed positively by both the medical staff and patients.
- **State and legislative support:** The hospital actively engages with state and legislative bodies to secure support and funding for rural healthcare initiatives. This involvement also helps in shaping policies that are favorable to the sustainability of rural health services.
- **Educational programs:** UNC Chatham incorporates educational components into its service model, which includes training residents and other medical students. These programs can attract funding and resources from educational grants and scholarships, contributing indirectly to the hospital's financial health.
- **Community public health initiatives:** UNC Chatham aims to improve health outcomes, maximize hospital resources, and reduce the need for high-cost emergency care through community-based public health programs.

Optimizing Resources. The hospital focuses on efficient resource management, including staffing models that use family medicine physicians and CRNAs to provide a broad range of services. This reduces the need for a larger number of specialists and helps control costs. UNC Chatham also invests in technology to improve operational efficiency (e.g., streamlining administrative processes) and patient care (e.g., reducing errors and enhancing patient monitoring), which can lead to long-term cost savings.

Community Engagement

UNC Chatham has a multi-faceted community engagement approach, which includes:

- Community education initiatives (e.g., health fairs or workshops) to raise awareness and build relationships within the community.
- Regular community health needs assessments with Chatham Health Alliance to identify community priorities and assist UNC Chatham in tailoring its services.
- Supporting local economic development by hiring locally and supporting local businesses.

The near shutdown of maternity services at UNC Chatham in August 2022 was primarily driven by the impact of COVID-19 and nursing turnover, and exacerbated by the high cost of travel nurses—although issues with the anesthesia services contract and financial and operational challenges compounded by the pandemic were contributing factors. The degree to which the community and hospital staff came together to advocate for the continuation of maternity services, when learning of the near shutdown, is notable. As Dr. Hannapel, chief medical officer at UNC Chatham, explained:

> "The community came together in so many ways. They showed up in great numbers to our hospital board meeting, which was advertised as a public meeting but was not. They went to local government commissioner's meetings and Health Department Board Meetings, held their own meetings, and wrote letters of community support to hold UNC Chatham Hospital and UNC Health to the promise to open the MCC. What came from this was changing the conversation from purely a financial issue to a multifaceted, nuanced conversation that

centered around health equity and keeping promises. An MCC Taskforce was convened and, over the following 16 months, four main issues were addressed: staff recruitment and retention, quality and safety, marketing and development, and community trust."

What started out as a way to address primary care providers in the rural setting has grown to be much larger than just an educational mission. Community involvement led to the establishment of a task force to address transparency and trust, and stabilize the future of maternity care at UNC Chatham. An additional positive outcome as part of the resolution to avoid a shutdown was UNC Health's re-evaluation of their financial strategy to focus on maintaining essential services, like maternity care. This shift reflected a broader understanding by UNC Health of the hospital's role and obligations to the community. The UNC Health Foundation provided $250,000 to fund the necessary staffing resources to keep maternity services open in FY23.

A Physician and Nurse-led Culture of Service: Mahaska Health

Oskaloosa, Iowa

> *When our teams serve one another in a healthy, collaborative environment, we can serve patients and families in need with a higher level of care… Ultimately, culture combined with kindness and empathy really moves the needle.*

Background

Mahaska Health, located in southeast Iowa in the city of Oskaloosa, has a population of 13,000, but serves 70,000 patients across 14 counties. Mahaska Health is classified as a CAH with four designated Centers of Excellence in maternity care, cardiology, general surgery, and cancer care. It is one of nine CAHs in Iowa that is Joint Commission-accredited, emphasizing its compliance with high standards of care and patient safety. The organization prides itself on a physician and nurse-led culture, with a medical leadership team comprising 12 physician medical directors and one nurse practitioner. Mahaska's leadership plays a supportive role to serve the caregivers who directly deliver patient care. They believe providing exceptional healthcare is a collaborative effort that begins with a strong foundation of a healthy culture. When hospital teams build trust among themselves and commit to collective excellence, it leads to positive patient outcomes. This commitment extends to every care team member. Mahaska Health ranked 96th in employee satisfaction out of 4,200 healthcare systems nationwide. By establishing a culture of mutual respect, support, and accountability, teams can focus more on serving patients with expert care and expanding services for the region.

Maternity Care & Birthing Center

Approaching 300 deliveries annually, Mahaska's Birthing Center is staffed by a team of two OB-GYNs (a husband-and-wife team living in the community) two FP-OBs, and two FP-OBs+surgical. The medical director is one of the four FP-OBs, with two more joining in October 2024 and August 2025. Since 2020, the physician team has grown from four to six, and will total eight in 2025.

Caesarean sections (c-sections) are performed by general surgeons, FP-OBs+surgical, or OB-GYNS. Any of the general surgeons, FP-OBs and OB-GYNs can assist with c-sections and share call 24-7. Either an OB-GYN or FP-OB is on call 24/7, with three general surgeons available for c-sections. A certified registered nurse anesthetist (CRNA), nurse supervisors, and an OR team is also on call 24/7. The FP-OBs+surgical are fellowship trained and perform their own c-sections.

The Birthing Center Director is an RN and the Center's staffing model establishes one labor and delivery (L&D) nurse in-house at all times. When the L&D unit is open, there are always two L&D nurses available. The nursing supervisor attends all deliveries and is Neonatal Resuscitation Program (NRP)-certified, typically taking the role of caring for the newborn during deliveries. This model dedicates professional support to both mother and baby throughout the delivery process. In 2024, the Center plans to add two additional RNs, plus four full-time and two part-time patient care technician positions to alleviate clerical and busy work from the nursing team. This will enable nurses to focus more on one-on-one patient care.

Continuous Learning and Quality Improvement

The Birthing Center focuses on continuous employee training and quality improvement. Participating in the Iowa Maternity Quality Control Collaborative (IMQCC) has helped it review and update all its policies and protocols. As part of its work in IMQCC, Mahaska Health implemented projects and standardized protocols focused on postpartum hemorrhage and preeclampsia management. In addition, it brought Advanced Life Support in Obstetrics (ALSO)[21] training in-house, becoming a designated regional trainer to certify physicians and nurses in the program.

The Birthing Center is adding a focus on perinatal mental health, which includes managing postpartum depression and anxiety, recognizing the importance of mental health alongside physical health and the expansion of its holistic approach to maternity care.

Future Workforce Capacity

By expanding its workforce to meet growing demands, Mahaska Health is increasing its capacity to care for patients while also aiming to improve employee job satisfaction and retention. The focus on supporting employee training, offering additional certifications, or allowing the pursuit of advanced roles helps with maintaining a cadre of skilled healthcare professionals capable of serving its rural population. At the same time, leadership is maintaining a focus on the future of its workforce. Mahaska Health hosts high school, undergraduate, and medical students to introduce them to rural practice. It is also in the process of formalizing a Family Medicine with Obstetrics and OB-GYN residency rotation with the University of Iowa. As CEO Kevin DeRonde explained, “We have a 10-year recruitment plan for physicians and mid-levels. We enjoy talking with high school, college, and medical students weekly. Our team hosted 68 med students and high school kids who rotated through our hospital just this last year and we get to recruit them. We are grateful that our providers love hosting students.”

Financial Strategies

In 2017, the hospital endured a $5 million loss, but has since turned around financially. The CEO and CFO attribute the turnaround to rebuilding and reinvesting in the team and the facility, which led to increased care volume and high employee satisfaction scores. Mahaska Health finances its rural maternity care model through a combination of state grants, strategic management of payer contracts, revenue optimization, and operational strategies.

State Grant. The hospital received a $750,000 grant from the State of Iowa, distributed over three years ($250,000 per year). This grant is a substantial boost for its facility and indicates state support for its efforts in providing obstetric care.

Revenue Management and Payer Contracts. The hospital has focused on managing its revenue streams and contracts with various payers. It noted an increase in Medicaid due to managed care and has worked on contracts that pay a slightly higher percentage as a result of the State of Iowa’s successful application for Medicaid reimbursement for all Iowa hospitals through the Centers for Medicare & Medicaid Services (CMS).

Cost Management. The hospital actively manages its outpatient cost-to-charge ratio, which affects how much Medicare and other payers reimburse it. This careful management of costs versus charges helps maintain financial sustainability.

Strategic Staffing, Service Expansion, and Physician Relationships. Through strategic staffing, expansion of services, and peer-to-peer physician communication, which includes outreach to regional hospitals and communities, Mahaska Health is effectively increasing its service area and patient base. This contributes to higher utilization rates and, subsequently, increased revenue.

Focus on Downstream Revenue. The hospital considers the comprehensive impact of maternity services on the organization's financial health, including the ancillary services that patients use throughout the continuum of care, such as lab, radiology, and clinic services.

Community and Patient Engagement

Mahaska Health's community and patient initiatives include collaborating with a local photographer for newborn pictures, hosting baby fairs, and Lunch-and-Learn community meetings. It also hosts free education and care opportunities like Women's Health Night, Men's Tractor Ride, and Public Cholesterol Screenings. It is actively working to expand services to communities in need—especially high-risk populations—and strengthen its partnership with tertiary care centers in Des Moines and Iowa City.

Investing in the Patient Experience: Goodall Witcher Hospital

Clifton, Texas

> *And the better the experience, the happier everybody is... I think our innovation was really putting more dollars [into] some very noticeable things...and… creating the relationships and really bringing back that personal touch.*

Background

Goodall Witcher Hospital, situated in the small town of Clifton (population 3,513 in 2022), in Bosque County, Texas, was established in 1939. It has a long-standing commitment to meeting the needs of its local community. In 2018, the community voted to support its transition to a hospital district, adopting a governance structure supported by an elected board authorized to impose property taxes to fund healthcare services. The hospital integrates community needs and hospital capabilities to provide personalized, comprehensive healthcare.

Maternity Program

Goodall Witcher evolved its maternity program in recent years to address five key challenges:

1. Physician burnout due to call schedule.
2. Outdated facilities.
3. Low volume.
4. Poor community perception.
5. Competition with larger maternity programs within about 45 minutes of Clifton.

Its overall strategy elevated maternity care to a flagship program by investing in the patient experience. Upgrading outdated maternity facilities with new flooring and re-painting made the space more welcoming and comfortable. It also upgraded medical equipment, which included the purchase of new ultrasounds and anesthesia machines. These improvements are critical to maternity care and help enhance patient satisfaction. And, by extending services beyond the main hospital through satellite maternity clinics in rural areas, such as Whitney and Gatesville, it's been able to improve access to prenatal care, reduce travel time for routine check-ups, and foster closer patient-provider relationships.

Staffing

Physicians. To maintain a high quality of care, Goodall Witcher recruited a more diverse physician team—which included female and Spanish-speaking providers—to better reflect and serve its community's demographics. Specifically, its maternity care is culturally sensitive and linguistically adept to serve the Hispanic population within the community. To aid in provider recruitment, CEO Adam Willmann determined the hospital needed a minimum of four full-time FP-OBs+surgical to implement a call schedule that would create a better work-life balance for the physicians. As he explained, "I needed four physicians to make the call schedule work, because the reason we get high-quality physicians isn't the money… It's the life… It's [that] all the doctors get to be a part of the[ir] family."

The hospital transitioned from an independent physician group model to an employee model. This shift not only facilitated better control over recruitment and retention, but also made jobs more attractive by providing physicians with benefits, such as retirement plans and health insurance funded by the hospital. Goodall Witcher recognized the challenges of maintaining obstetric skills in a low-volume setting and supported its physicians in maintaining competency through continuing education and practical experience, which included mission trips or other external training opportunities. The hospital also established a relationship with a maternal fetal medicine specialist who family physicians can contact to ask questions, ensuring that patients receive care in the community.

Overall, the family medicine staffing model has created a stable, supportive, and community-focused environment that attracts and retains skilled providers while ensuring high-quality care for patients. In fact, physicians now reach out to Goodall Witcher seeking employment. In the future, Goodall Witcher wants to increase the talent pipeline by assisting with the expansion of a local FP-OB residency training site.

Nurses. With a low-volume of maternity cases, Goodall Witcher uses its L&D nurses in other departments when they are not engaged in child birthing activities. This cross-utilization optimizes labor costs and maximizes the utility of staff, contributing to financial efficiency. The hospital plans to work on improving nursing recruitment and retention in the future.

Financial Strategy

Goodall Witcher Hospital implemented strong financial oversight by bringing in a new CFO to manage critical access hospital finances effectively, which included optimizing cost reporting for maximum Medicare and Medicaid reimbursement. It leverages its maternity services to qualify for disproportionate share hospital adjustments, providing additional funding for hospitals that serve large numbers of low-income/Medicaid patients. These payments help make the service financially sustainable. The transition to a hospital district provides critical community financial support for sustaining and expanding healthcare services.

The hospital now employs a strategic approach to financing its maternity model, which also blends community support, strategic investments, and the maximization of the reimbursements it receives. It pragmatically views this as a way to retain long-term customers and drive long-term success: if patients have a positive experience, that translates to an increase in patient volumes, turning maternity care into a revenue generator. And, by integrating maternity care with broader hospital services—such as laboratory tests, ultrasounds, and other prenatal care services—and leveraging the associated increased hospital visits, it created a more financially robust and sustainable model.

Community Engagement

Goodall Witcher Hospital employs several effective strategies to engage the community in its activities, in order to remain closely connected to the needs and preferences of the local population.

Community-Based Governance. As a hospital district, Goodall Witcher is governed by an elected board, which means the community has a direct say in the oversight of the hospital. This model fosters a strong alignment with community interests and needs.

Transparency in Operations. Goodall Witcher maintains transparency in how it utilizes community resources and funds. This is crucial for maintaining community trust and support, particularly in relation to the use of tax revenues.

Community Feedback and Involvement. The hospital actively seeks and incorporates feedback from the community regarding its services. This includes engaging community members in discussions about facility upgrades and service expansions, so that that these changes meet the actual needs of the residents.

Local Recruitment and Staff Engagement. By hiring locally and involving staff in decision making, especially around facility improvements and operational changes, the hospital's employees—who are also community members—will have a vested interest in the success of the hospital.

Education and Outreach Programs. Goodall Witcher extends its engagement through educational programs that address health needs specific to the community. It also provides prenatal classes and participates in health fairs to increase awareness and preventive care practices among local residents.

Partnerships with Local Organizations. The hospital collaborates with local schools, businesses, and other organizations to expand its reach and impact. These partnerships help address broader social determinants to health and enhance the overall wellbeing of the community.

One Team for Sterling: Sterling Regional MedCenter

Sterling, Colorado

> *…we're all one team. We're all taking care of the patients and Sterling.*

Background

Sterling Regional MedCenter is part of Banner Health, a large health system headquartered in Phoenix, Arizona, employing more than 50,000 staff and operating 30 hospitals, which includes three academic medical centers in six states (AZ, CO, NE, WY, NV, CA). Sterling, located in northeastern Colorado, is a 25-bed acute-care hospital serving a population of approximately 14,000.

Rural Maternity Optimization Model

Banner's solution to rural Maternity Care Deserts is a multi-state initiative across 10 rural facilities that provide women and infant services (WIS). Guided by its mission to make healthcare for rural women easier so life can be better, it aims to provide a maternity care experience that exceeds expectations through clinical excellence, support, and integration. Across its 10 rural facilities, it delivers 1,200 newborns per year. Banner's solution to the challenges posted by the geographical diversity of its rural locations, staffing, and costs is its Rural Maternity Optimization Model (RMOM), which is the cornerstone of the Rural WIS Consortium.

The Rural WIS Consortium

The Rural WIS Consortium operates on a dyad partnership model, which consists of a designated physician or midwife and a nurse from each of the 10 rural sites. This dyad structure is designed for comprehensive oversight, standardized care, and provides a platform for sharing knowledge and resources among facilities across the diverse geographical locations Sterling serves. The goal of the WIS Consortium is to work as one team to develop and implement a model that delivers standardized, safe, and high-quality maternity services tailored to the unique challenges of those working in rural healthcare settings to decrease the cost of care and streamline processes. The consortium seeks to deepen organizational accountability and comprehensive oversight across all participating facilities.

Key activities for the consortium include:

1. Creating a charter to guide its activities and priorities, which are designed around the defined needs and wants of its members.
2. Meeting monthly to better understand and address the specific needs of each facility.
3. Collaborating with members for continuous improvement in service delivery.

The Rural WIS Consortium works in conjunction with the Women's Health Clinical Consensus Group to help guide clinical practices and guarantee accountability for metrics and outcomes, adapting standards to rural healthcare environments. Sterling has integrated with RMOMs and several system-wide initiatives at Banner to support their rural maternity program development and priorities.

Talent. Universally, all WIS consortium members agree on the importance of prioritizing talent recruitment, retention, and development through various strategies, which include enhanced training programs and support mechanisms for staff. The consortium supports each site in determining the appropriate mix of healthcare providers based on specific site needs, such as family medicine with surgical OB capabilities (FP-OB+surgical), OB-GYNs for support in GYN services, and midwifery care. Given the geographic dispersion of the sites, market growth and delivery volumes influence the scope of practice and the provider mix at each site.

In Sterling, family medicine physicians with surgical OB training primarily provide obstetric care for Sterling's 200 births per year. In March 2024, the provider mix included four Banner-employed FP-OBs+surgical, two private practice FP-OBs+surgical, and one OB-GYN. The OB-GYN acts as a chief supporter and resource provider, while also primarily providing GYN services, contributing positively to financial aspects and enabling outreach to even more remote areas. Sterling is also part of the North Colorado Family Medicine Residency Program, focusing on training residents in rural obstetrics with an emphasis on surgical obstetrics. Two family medicine residents spend their second and third years of training in Sterling after completing their first year of residency in Greeley, Colorado, 92 miles away. The initiative has led to successful recruitment and retention of family medicine physicians who practice obstetrics in rural areas. Sterling is also leveraging local educational institutions, such as junior colleges with nursing programs to feed nurses into the local hospital system, and with high schools to create a sustainable talent pipeline.

Quality, Patient Safety, & Customer Experience. RMOM at Sterling Regional MedCenter has created several strategic initiatives to enhance patient safety and quality of care, particularly in the context of rural maternity services. Some of the include education and training opportunities available, such as:

- **Rural Nurse Onboarding Programs.** Formalized training programs (e.g., intense training at Banner University Medical Center in Phoenix) include cross-training at larger facilities and prepares nurses hired for rural communities for their local settings.
- **Continuing Medical Education (CME) and Simulation.** CME opportunities and simulation-based learning bolster ongoing training and support for physicians and nurses. These are essential for maintaining high standards of care and guaranteeing that staff are up-to-date with the latest practices.
- **High-Risk Obstetrics Conference.** Part of the educational initiatives include access to specialized conferences aimed at disseminating best practices and the latest knowledge in high-risk obstetrics, specifically tailored for rural healthcare providers.
- **Advanced Life Support in Obstetrics (ALSO).** The ALSO course[21] is incorporated for all physicians, medical residents, and nurses, which significantly enhances their ability to manage obstetric emergencies effectively.

The hospital has worked on the standardization of care protocols, particularly protocols related to fetal monitoring, so all healthcare providers adhere to a high standard of patient monitoring, reducing variability in care and enhancing patient safety. It also uses telehealth and remote support—particularly in emergencies or complex cases—so expert advice is available when needed. The Phone a Friend

program allows rural nurses to consult with nurses at larger medical centers (e.g., North Colorado Medical Center in Greeley) to review cases together, seek a second opinion, or receive decision-making support in complex or high-pressure situations, 24/7/365.

Financial Performance & Efficiency. The financial strategy for Sterling Regional MedCenter's Rural Maternity Care model is a multifaceted approach, integrating state support, innovative revenue generation strategies, and the strategic use of technology to sustain and enhance rural maternity care. This model underscores the importance of adaptive financial strategies in maintaining essential healthcare services in rural communities.

Funding for Graduate Medical Education (GME). The Rural Training Track,[22] which is crucial for developing a pipeline of healthcare professionals skilled in rural obstetrics, receives funding through a combination of state-supported rural funds and the operational revenue generated by the residents in their clinics. In the clinic, one preceptor can supervise four residents, so the clinic can see more patients and provide better access for patients in the community. This funding mechanism supports the training of residents without relying solely on traditional GME funding streams.

Rural Health Clinic Status. Sterling Regional MedCenter benefits from its designation as a Rural Health Clinic (RHC). This designation provides certain financial benefits, such as enhanced reimbursement rates for Medicaid patients. This is particularly advantageous for high-risk patients because it allows for billing for individual visits rather than a bundled charge. This unbundled billing approach increases revenue for services provided to a patient population with complex healthcare needs and significant social determinants of health, better capturing the value of the comprehensive care provided.

Cost Efficiency through Telehealth and Technology. The model incorporates telehealth services and other technological innovations to improve cost efficiency. Remote fetal monitoring for high-risk pregnancies and telehealth consultations reduce the need for patients to travel long distances for care, thereby increasing access and potentially reducing overall healthcare costs for both the provider and the patients.

Community Engagement and Integration

In Sterling, there is an overall emphasis on creating a unified community approach to caring for patients. Partnerships exist across different healthcare providers and systems so that comprehensive care is available to all those who live in the community. As Dr. Sarah Moore explained,

> There is this attitude that we are all one community and we are here for the patients of Sterling…we have a monthly meeting and everybody who's providing prenatal and obstetric care comes to that meeting, no matter what hospital system they're from, and we all talk through morbidity, mortality, what are we doing well, what are some struggle areas, and go through the high-risk OB list so that everyone who's on call is aware of those high risk patients before they come into the hospital. And that has continued to build that community and that collegiality of we're all one team. We're all taking care of the patients and Sterling.

An Integrated Maternity Care Model for Alaska Native Communities: Southcentral Foundation

Anchorage, Alaska

We really figured out one integrated system to make it easier for the customer-owners.

Background

Southcentral Foundation (SCF) is dedicated to working with the Alaska Native Community to achieve wellness through health and related services. The Southcentral/Anchorage Service Unit includes 55 rural villages and a service area that stretches about 2,000 miles from west to east. A hallmark of SCF's system is the customer-owner model, based on the premise that American Indian and Alaska Native (AIAN) people own their health system and should fully engage with their healthcare through SCF's model of shared responsibility and active participation in healthcare decisions.

Maternity Program

SCF's maternity program was designed to address geographical challenges faced by pregnant women from across Alaska, ensuring that even those who are most remote receive high-quality, culturally respectful, and comprehensive prenatal and postnatal care tailored to their specific needs and circumstances. For rural areas, SCF deploys providers and specialists to remote locations, either physically or via telemedicine, to help local providers care for pregnant women in their region of Alaska. In addition to providing direct care to women, these regional trips often involve education and training to local staff to improve their comfort in providing their own high-quality obstetric care to women.

Maternity care is regionalized in Alaska: most villages have a clinic staffed by a community health aide who works with providers at a regional service hub to provide prenatal care at the clinic. Some of the larger villages may also be staffed by a nurse practitioner, physician assistant, or family medicine physician. Pregnant customer-owners go to their regional hub as needed prenatally (i.e., for ultrasounds or antenatal testing). If they are found to have a high-risk pregnancy, they can be referred to the Alaska Native Medical Center (ANMC) in Anchorage. For low-risk pregnancies, birthing services are located in most regional hubs and staffed by family medicine physicians and nurse midwives. Expectant parents travel from their home to their regional hub at 36 weeks to deliver in a medical facility that is prepared for obstetric and newborn services. There are approximately 1,500 births per year at ANMC and each region has 100-500 births per year. A minimum of 100 births per year is needed to keep a regional maternity unit functional.

For high-risk pregnancies, customer-owners are transferred to Anchorage at the appropriate time for their diagnoses (some as early as 22 weeks, but most at 32-36 weeks) so they are close to comprehensive medical care when they go into labor. ANMC provides housing facilities to accommodate pregnant customer-owners who need to be close to the hospital prior to delivery. ANMC, often in conjunction with Alaska Medicaid, also assists with travel arrangements for pregnant women who need to be in Anchorage for delivery. This includes providing travel and lodging for rural customer-owners, which reduces the financial barriers for accessing high-quality care while ensuring timely and

appropriate care, potentially reducing more significant health expenditures downstream. After childbirth, SCF provides comprehensive postpartum care to new mothers, which includes follow-up visits and support for returning to their home villages.

Staffing

The care for customer-owners who are pregnant uses a multidisciplinary and highly integrated staffing model. This includes nurse midwives, OB-GYN physicians, maternal fetal medicine physicians, and other specialists who can deliver a wide range of services from prenatal care to specialist consultations. There is one nurse case manager for every region in Alaska, and they play a crucial role in coordinating care, especially for high-risk pregnancies. Case managers review every referral and so all necessary preparations are made for appointments, helping to streamline the care process and optimize outcomes.

For women from the Anchorage area, SCF uses integrated primary care teams to deliver maternity services. These teams include a variety of healthcare professionals, such as primary care providers, nurse midwives, dieticians, behavioral health consultants, and integrated pharmacists. This team-based approach gives pregnant women access to holistic care that addresses all aspects of health. Beyond the primary care teams, SCF has specialists in OB-GYN, maternal fetal medicine, and pediatric subspecialties so pregnancies with more complex health needs are met. Specialists are available to support the primary care team or take over care when specialized interventions are necessary. SCF's commitment to continuous professional development, which includes training in innovative practices and quality improvement processes, keeping the staff at the cutting edge of maternity care practices.

Financial Strategy

SCF sustains its rural maternity program through a blend of funding sources to help maintain financial stability. Alaska Medicaid is the most significant source of funding for pregnant women. They also access funds through private insurance and the Indian Health Service (IHS).

For inpatient obstetric care at ANMC, SCF co-manages facilities with the Alaska Native Tribal Health Consortium. Joint facility management allows for shared financial responsibilities and resources while maximizing the use of facilities for patient care.

Community Engagement

SCF employs several strategies to engage the Alaska Native community effectively in its healthcare services, with a strong focus on cultural sensitivity and community involvement. By integrating these strategies, it not only prioritizes community engagement but also guarantees that its healthcare services are effective, respectful, and aligned with the cultural values and health needs of the communities it serves. This approach fosters a deep sense of community ownership and partnership, leading to improved health outcomes and sustained engagement.

Cultural Training for Providers. All SCF providers receive cultural training to understand the values, traditions, and specific health needs of the Alaska Native communities they serve. This training helps

providers build trust and communicate effectively with customer-owners to make the healthcare experience more relevant and respectful of cultural nuances.

Support for Cultural Practices. Recognizing the importance of traditional practices, SCF supports and integrates traditions into its healthcare services when possible. For example, SCF acknowledges and incorporates traditional healing practices alongside Western medicine to support holistic wellness approaches valued by the community.

Local Hiring and Training. SCF strives to hire and train local community members as part of its workforce. This strategy provides employment opportunities as well as culturally congruent and linguistically appropriate care. SCF hires community doulas from the same cultural backgrounds as the customer-owners to provide supportive care and companionship during their stay in Anchorage. This is supported by a community grant, as explained by Misty Nix, a clinical specialist nurse at SCF:

> "It is a community grant supported indigenous doula program. We love that program because when our customers are coming in, and they have no one with them... But if we can bring in someone who is from their culture and from their community, to be able to provide that [connection and trust], that handhold and that person to be at their bedside, that allows us to embrace their culture and support them culturally while they're with us."

Community Input and Governance. SCF incorporates community input into its governance and service design. This approach includes regular consultations with community members to identify their primary health priorities and needs, so that services are aligned with the actual needs and preferences of the Alaska Native populations.

Outreach and Education Programs. SCF runs various outreach programs aimed at educating the community about health issues, preventive measures, and available services. These programs are designed to be culturally appropriate and are often delivered in settings where community members gather, enhancing engagement and participation. Rural prenatal customers receive support via educational resources and classes, such as prenatal yoga and childbirth education, which are accessible online to accommodate those who cannot attend in person.

Feedback Mechanisms. Regular feedback mechanisms enable community members to provide ongoing input on their experiences and satisfaction with the services provided. This feedback is crucial for continuous improvement.

Lessons Learned

Rural maternity care faces unique challenges and opportunities that can profoundly impact the health and well-being of those communities. Drawing from the various experiences and models presented by six innovation sites, several innovative ideas have been identified that can inform best practices and policy development. These ideas span governance, staffing, quality and patient experience, volume, costs and revenues, governmental support, and operational models.

Governance

Effective governance is crucial for sustaining rural maternity care services. Hospital CEOs, CFOs, and boards must understand the importance of maternity care, not only for the hospital's mission, but also for the community's prosperity. Maternity care services are essential to the livability and viability of rural areas. Governance must also involve a keen understanding of the financial aspects, such as accurately assessing fixed and variable costs and understanding the downstream financial impacts of maternity care. Over-assigning costs and under-assigning benefits can skew financial evaluations, potentially leading to misguided decisions regarding service provision.

Staffing

A flexible and versatile staffing model that maximizes the use of physicians, nurses, and other healthcare workers who can perform multiple clinical roles is crucial to providing comprehensive care in rural settings. In smaller rural hospitals, full-scope family medicine physicians (FP-OB and FP-OB+surgical) are essential, as they can handle clinic, inpatient, and maternity care encompassing prenatal, delivery, and postpartum care, as well as newborn, pediatric, ER, and nursing home duties. Cross-trained nurses who can work in various areas also contribute to the efficiency and sustainability of the staffing model. In larger rural sites, the addition of OB-GYNs or midwives must be carefully weighed against the necessity of skill maintenance by FP-OB and FP-OB+surgical in the same setting.

At the majority of the innovation sites, family medicine physicians are the cornerstone of rural medical staffing, particularly those trained in surgical obstetrics. Their ability to provide a wide range of services makes them invaluable: family medicine physicians can take care of all ages and genders and can share the call duties, creating a viable system that supports patient satisfaction by having the same physician providing care for mothers, babies, and the rest of the family. In contrast, OB-GYNs have a more limited scope of care, which in an environment with a low volume of deliveries, would make it difficult to sustain services, staffing, or share call duties.

Developing a supportive and engaging work environment, offering competitive benefits, and creating a manageable call schedule are crucial given the current crisis in recruitment and retention in the healthcare workforce. Supporting existing staff and fostering a "grow your own" mentality through local training and residency programs contributes to long-term staff stability. More specifically, partnering with, or having a formal affiliation with nearby family medicine residencies or rural family medicine obstetrics training tracks can create a pipeline of future staff, ensuring a steady supply of trained physicians. This approach is cost-effective and supports high patient satisfaction by offering continuous and comprehensive care.

Quality and Patient Experience

Ensuring high-quality care and a positive patient experience requires ongoing training (particularly team-based training), regular case conferences, and clear protocols for risk management and transfers. Standardization of care through training is vital for maintaining patient safety across multiple sites. In addition, cross-utilization of staff and continuous training improve efficiency as well as service quality. Linking with tertiary care is also critical for rural maternity programs: these connections support staffing, training, consultation, and smooth transfers, so that rural sites can maintain high-quality care standards and manage more complex cases effectively. The physical facilities and the personal care patients experience play significant roles in attracting and retaining them, while providing culturally appropriate care and services that are respectful and relevant to the community. Finally, several innovation sites reported that employing local community members can further enhance patient satisfaction and outcomes.

Financial Strategies and Management

Implementing strong financial oversight, optimizing cost reporting, securing state and federal grants, and managing payer contracts can effectively turn around financially struggling programs. By focusing on downstream revenue from associated services like lab tests and ultrasounds, those programs may also achieve financial sustainability. It is crucial to analyze costs and revenues to understand the financial sustainability of rural maternity care services and to use accurate and comprehensive data to ensure that decisions are evidence-based.

Finance and other administrative leaders must view maternity care as part of a larger healthcare delivery ecosystem. For example, growing an outpatient surgery program may help offset the cost of maintaining 24/7 access to anesthesia services. An increase in Medicaid inpatient days for mothers and babies can lead to substantial payments through the 340B program. Finally, favorable Medicaid encounter rates in Rural Health Clinics from seeing pediatric patients may offset a financial loss from deliveries; further, billing for prenatal and perinatal services via their rural health clinics or FQHCs can help organizations receive rates that do not create further financial losses.

Decisions to continue supporting, or discontinue, maternity care can have direct, secondary, or tertiary impacts on other parts of the organization, and failing to factor those broader system impacts into decision-making can lead to missed opportunities, financial losses, or new fiscal challenges. For example, an acute care hospital in the Mid-South region of the U.S. almost discontinued its obstetrics program, but realized the impact of that decision would mean that the hospital's Medicaid payer mix would drop to the point where the organization would no longer be eligible for the 340B program, which generated $2.5m per year for the hospital.[23]

One of the most significant challenges in rural maternity care is determining the minimum number of annual deliveries required to sustain local maternity services. While data from our innovation sites provided insights into this "floor" number, it remains an area that needs further research and analysis with a larger sample size. The viability of rural maternity care often hinges on maintaining sufficient delivery volumes to justify the resources and staffing required.

Governmental Support

Governmental support, both at the state and local levels, is essential for the sustainability of rural maternity care. Four innovation sites provided examples of critical state-level support (Fairview, Mahaska, UNC Chatham, Southcentral Foundation), while Goodall-Witcher demonstrated how local hospital district taxing support can significantly impact the viability of maternity services. Community support, when the hospital meets local needs, can lead to successful funding at the local and state level.

Ownership Status: Independent vs. Affiliated

Independent hospitals and those affiliated with larger systems each have unique benefits and challenges when it comes to providing maternity care. Independent hospitals excel in flexibility, community engagement, and tailored care models, but face financial and resource limitations. (See Table 2 for a list of benefits and challenges in independent hospitals.) In contrast, hospitals within larger systems benefit from greater resources, financial stability, and collaborative care models, but may struggle with reduced autonomy and slower decision-making. (See Table 3 for a list of benefits and challenges for affiliation with larger health systems.) The tensions, whether independent or affiliated, must be resolved on an individual basis with the underlying goal of preserving local access to maternity care.

Table 2. Independent Hospitals Benefits and Challenges

Benefits	Challenges
Local Control and Flexibility: Can make decisions quickly based on the immediate needs of its community without potential impediments of a larger bureaucracy. Ability to implement innovative care models, or new ideas, more rapidly.	Financial Vulnerability: May experience limited financial resources and funding. They often struggle with financial stability, especially when faced with low patient volumes and high operational costs.
Strong Community Engagement: Closer ties to its local communities enables it to engage more effectively with local populations and tailor services to meet specific needs. This fosters strong community trust and support.	Resource Limitations: Limited access to advanced medical technology, specialized staff, and broader resource pools that larger systems can provide may affect the quality and range of services it offers.
Tailored Staffing Models: Employing staffing models that suit its specific operational needs—such as cross-utilizing labor and delivery nurses in other departments during low-volume periods—can optimize labor costs.	Recruitment and Retention Issues: Less competitive salaries and benefits compared to larger health systems may make it challenging to recruit and retain skilled medical staff.

Source: Author compilation

Table 3. Benefits and Challenges of Belonging to a Larger Health System

Benefits	Challenges
Access to Resources and Expertise: A wider pool of resources, including advanced medical technologies, specialized staff, and shared services can enhance the quality of care and operational efficiency.	Reduced Autonomy: Less control over decision-making and the need to align with broader strategic goals and policies of the larger system may limit the ability to respond quickly to local needs.
Financial Stability and Risk Sharing: Larger systems provide financial support and risk-sharing mechanisms that can help hospitals manage financial challenges more effectively. This includes access to funding for capital projects and operational deficits.	Bureaucracy and Slower Decision-Making: Being part of a larger system may result in more bureaucratic processes and slower decision-making, which may hinder the hospital's ability to innovate or address urgent local issues promptly.
Educational and Training Opportunities: Hospitals within a system benefit from broader educational and training opportunities for staff, enhancing their skills and improving patient care.	Potential for Service Consolidation: Larger systems might prefer to consolidate services to achieve economies of scale, which can lead to the reduction or closure of certain local services, affecting accessibility for the community.
Collaborative Care Models: Larger systems facilitate the implementation of collaborative care models, which standardizes care and improves patient safety across multiple sites.	

Source: Author compilation

Conclusion

Women in the United States make approximately 80% of healthcare decisions for their families, yet often go without healthcare coverage themselves.[24] Connecting with women through high-quality, equitable maternity care services leads to significant improvements in community health. Although there are formidable barriers to building and sustaining these services, innovative examples of successful maternity care models exist across the United States, despite environmental challenges. As with each of these innovation sites, leaders must view access to these services as a mandate essential to the future of rural America and innovate to support their success.

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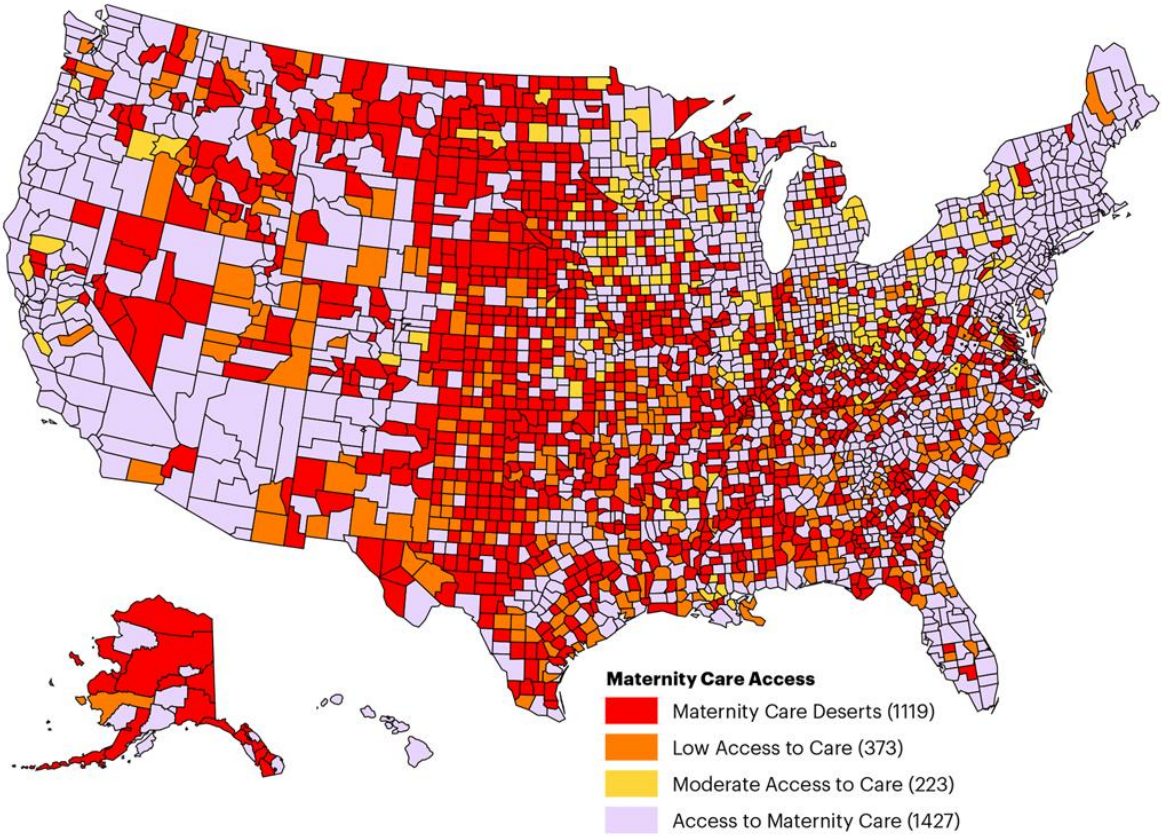
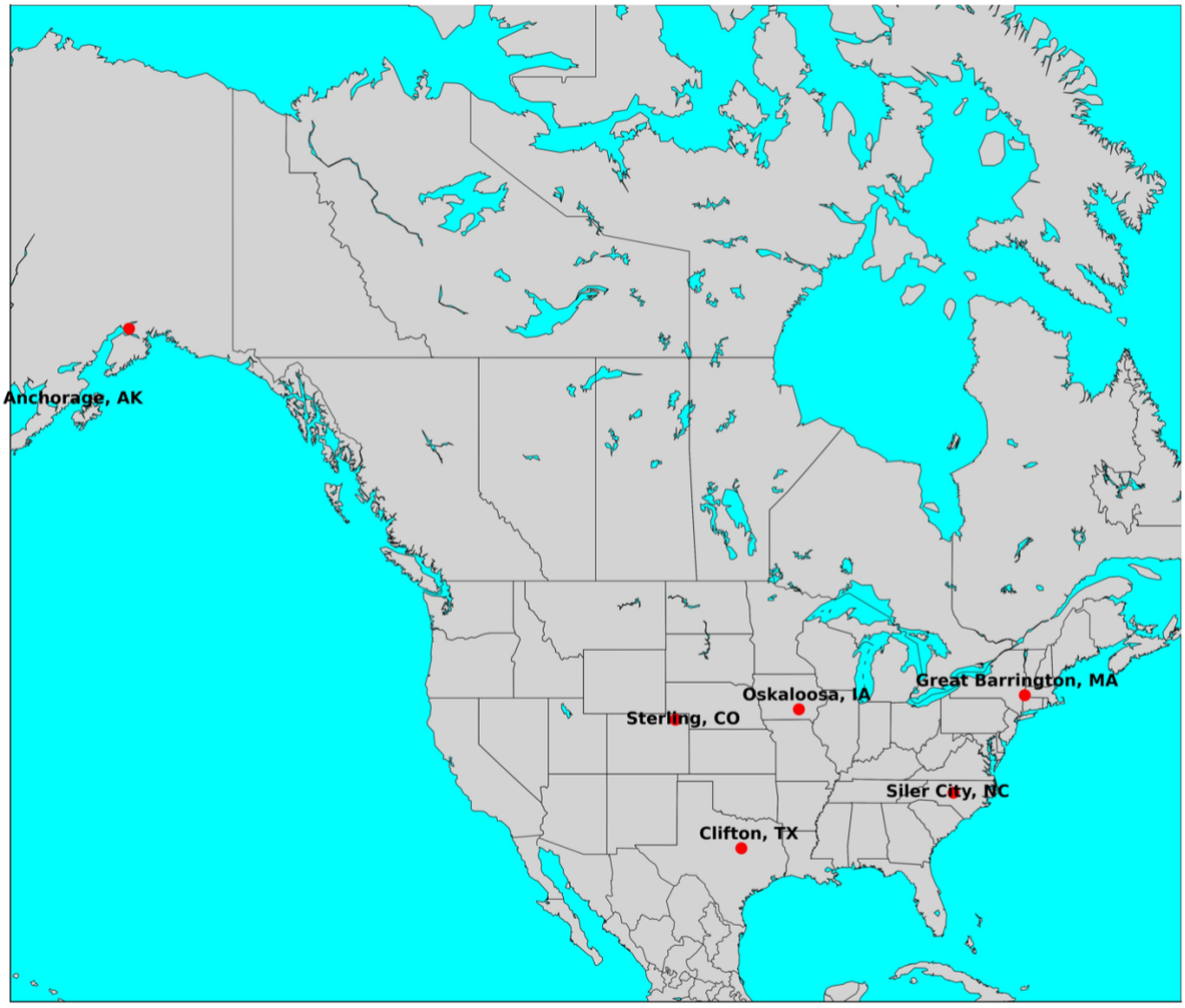
Figure 1. Map of U.S. Maternity Care Deserts, 2020



Source: Nowhere to Go: Maternity Care Deserts Across the U.S., March of Dimes, 2022. Data source: U.S. Health Resources and Services Administration (HRSA), Area Health Resources Files, 2021.

Figure 2. Map of Six Innovation Site Locations



Source: Created by author

Appendix 1. Comparative Site Data

Innovation Site At-A-Glance Comparison Table

Innovation Site	Fairview Hospital	UNC Chatham Hospital	Mahaska Health	Goodall-Witcher Hospital	Sterling Regional MedCenter	Southcentral Foundation
Town Name	Great Barrington	Siler City	Oskaloosa	Clifton	Sterling	Anchorage
State	MA	NC	IA	TX	CO	AK
Region	Northeast	Southeast	Midwest	South	Mtn West	Alaska
Town Population	6,852	8,074	13,000	3,513	14,000	287,145
Service area population	25,000	30,000	70,000	12,000	26,000	70,000 AIAN
Special populations?		Hispanic, African-Am		Hispanic	N. Africa; Prison	American Indian Alaska Native (AIAN)
Hospital beds	25	25	25	25	25	182 @ ANMC
CAH or PPS	CAH	CAH	CAH	CAH	CAH	N/A
Independent or system- affiliated	Berkshire Health System	UNC Health	Independent	Independent	Banner	Independent
HPSA* score	15	15	16	14	10	20
Medical information						
# Deliveries per year (2023)	147	267	300	65	200	1,519
Staffing model	4 OB-GYNs employed by an FQHC	3 FP-OB+surgical, 3 FP-OBs, 1 medical director/OB-GYN, 1 CNM, CNAs	2 OB-GYNs, 2 FP-OBs, and 2 FP-OB+surgical; 3 general surgeons can perform c-sections; CRNAs, nurses	4 FP-OBs+surgical	4 Banner employed FP-OB+surgical, 2 private practice FP-OBs, and one OB-GYN.	Remote locations vs. Anchorage model varies, see description above.

Source: Author compiled from multiple sources

*HPSA = health professional shortage area

FY22 Health System Operational Summary

	SCF - AK	Chatham - NC	Fairview - MA	Mahaska - IA	GWH - TX	Sterling - CO	Avg
Primary Service Area (PSA) Population*	N/A	29,905	24,803	26,809	11,968	25,928	23,883
5-Yr Pop Change*	N/A	2.3%	1.6%	1.5%	2.2%	0.3%	1.58%
Uninsured % - 2025*	N/A	14.0%	2.8%	6.0%	11.5%	10.0%	8.86%
MHHI	N/A	Lower than NC median of $59K	Close to MA median of $87K	Close to IA median of $64K	Mostly below TX median of $65K	Mostly below CO median of $78K	--
Medicare IP Share 2022 Change (2018-2022)*	N/A	27.8% +8.7%	29.1% +3.8%	46.2% +7.4%	11.2% -10.2%	39.3% -0.2%	30.7% +1.9%
Medicare IP Mkt Position*	N/A	2nd	2nd	1st	3rd	1st	--
Current Year Delivery Estimate (PSA)*		267	147	288	65	259	205
5-Year Year Delivery Projections (PSA)*	N/A	238	121	236	58	211	173
OB 5-YR Proj. Trend*	N/A	-10.9%	-18.0%	-17%	-10.8%	-18.6%	-15.1%

*Data from Meritave; compiled by Stroudwater

Comparison of Infant Mortality, Low Birth Weight, and Prenatal Care Rates in Innovation Site Counties and States

	SCF - AK	Chatham - NC	Fairview - MA	Mahaska - IA	GWH - TX	Sterling - CO	US Avg
County/Borough	Anchorage	Chatham	Berkshire	Mahaska	Bosque	Logan	--
Infant Mortality – County per 1,000	4.6	6.5	5.6	5.1	5.9	5.1	5.4
Infant Mortality – State per 1,000	7.4	6.7	3.2	4.0	5.3	5.0	5.4
Low Birth Weight % - County	6.6%	8.8%	8.5%	6.7%	7.6%	8.0%	8.5%
Low Birth Weight % - State	6.9%	9.4%	7.5%	6.8%	8.7%	9.5%	8.5%
Prenatal Care in 1st Trimester % - County	76.8%	76.1%	81.6%	83.5%	69.0%	78.1%	78.3%
Prenatal Care in 1st Trimester % - State	75.0%	74.9%	84.4%	81.1%	67.0%	77.4%	78.3%

Source: Data from https://data.hrsa.gove/maps/mchb; compiled by Stroudwater

Innovation Site Financial Data

	SCF – AK	Chatham - NC	Fairview - MA	Mahaska - IA	GWH - TX	Sterling - CO	Avg
County/Borough	Anchorage	Chatham	Berkshire	Mahaska	Bosque	Logan	--
Operating Revenue	N/A	$42,361	$99,002	$73,456	$38,611	$59,207	$62,527
Operating Expenses	N/A	$45,151	$75,810	$67,055	$36,420	$55,884	$56,064
Operating Income/(Loss)	N/A	($1,871)	$23,192	$6,401	$2,192	$3,322	$6,647
Operating Margin	N/A	(4.3%)	23.4%	8.7%	5.7%	5.6%	7.8%
Increase/ (Decrease) in Net Position	N/A	$187	$32,619	$10,044	$3,559	$3,768	$10,035
DCOH	N/A	0	190	81	83	0	71
Average Payment Period	N/A	157	18	32	21	12	48
Days in Net A/R	N/A	32	33	57	54	41	43

Source: Data from Summit participant financials; compiled by Stroudwater