

The Clinical and Business Cases for Opening a Maternity Care Unit in a CAH



Chatham Hospital is a 25-bed Critical Access Hospital (CAH) located in Siler City, NC. The hospital, accredited by The Joint Commission, provides surgical, medical, pediatric, maternal and emergency services. Community-based outpatient services also are offered. The 10-bed emergency department provides full-service around-the-clock care. In 2008, the hospital was acquired by University of North Carolina (UNC) Health. UNC Health Care bases a helicopter for transport on the grounds of Chatham Hospital.

Until 1991, the hospital had a maternity care unit; however, as is the case at many small rural hospitals birth numbers declined, local obstetricians discontinued services, and the maternity unit closed leaving Chatham County without any obstetrical services. While there are clinics that provide affordable prenatal care, there is no birthing center in Chatham County. Clients of these clinics located in the western end of the county, must travel 45 minutes or more to places like UNC Hospital in Chapel Hill to deliver.



To address this service gap Chatham County Department of Health, Piedmont Health Services, UNC Family Medicine and local medical providers and non-profits joined forces with UNC Chatham Hospital in Siler City to dedicate a wing of the hospital for the new maternity unit.

The Clinical Case

Maternity care units in rural hospitals across the United States are closing at unprecedented rates, 8 in rural North Carolina since 2017. These closings place thousands of mothers into difficult, even life-threatening positions. Women must travel farther to receive care, a major challenge for those who may not have access to transportation. Chatham County ranks in the bottom quarter of North Carolina counties for average distance between home and a hospital offering childbirth services, at 25 miles.

Prenatal care is essential to the healthy growth and development of a child as well as the health of the mother. Seventy-two percent of women in Chatham received early prenatal care in 2015, higher than the state average of 68% and an increase from 2011; however, 4% of births had very late or no prenatal care. Six-hundred-and-forty children were born to Chatham residents in 2016, and 10% of those were considered low weight births. Nine percent of Chatham babies were born prematurely, or before 37 weeks.

In Chatham County in 2019, infant mortality rates were 260 percent higher for Black/African-American babies than non-Hispanic/Latinx White babies. The low and very-low birthweight rate is also higher for African-American newborns (21.4%) and Hispanic/Latinx newborns (11.6%) when compared to non-Hispanic White newborns (9.3%).



The Chatham Hospital Community Health Needs Assessment (CHNA) and the Community Health Assessment survey is a collaborative effort between the Chatham County Public Health Department and Chatham Hospital. The process allows establishment of health priorities and culminates in an action plan to address these priorities. The Chatham Health Alliance (Alliance) formed in March 2015 is comprised of Chatham Hospital, the County, Piedmont Health and other local agencies and organizations. Meeting monthly, Alliance members collaborate on health issues, planning and coordinating efforts to ensure that the most pressing health concerns are addressed.

In 2016 a team of UNC students were recruited by the Alliance to conduct a needs assessment to identify gaps and opportunities in medical transportation in Chatham. In November 2017, the Alliance held the first in a series of “Community Conversations,” to better understand the issues and opportunities in different communities across Chatham.

In its 2018 report and based upon its community conversations and survey results, the Alliance identified access to healthcare as its top priority and prenatal care and birthing as public health priorities. In 2019 the Alliance reported that labor and delivery services would return to Chatham Hospital, Siler City.

The Business Case

Behind the closings of maternity units lie the larger issues of funding and availability. Smaller rural and community hospitals often have difficulty recruiting health care providers specifically trained to provide prenatal and delivery care. Even if these hospitals can attract health care professionals to provide these services, many lack the financial resources that larger hospitals have to make a team of specialized physicians and other providers possible.

Chatham Hospital is committed to a low risk model and pregnant mothers may register after 36 weeks. Although low risk it still offers cesarean sections. Mothers who deliver at Chatham are discharged quickly, usually after one night. High-risk patients, such as women carrying twins and breech babies, will be transferred to UNC Medical Center in Chapel Hill.



Typical clinical models would be financially unsustainable. In response, administrators at Chatham Hospital and the UNC Department of Family Medicine designed a model that integrated strategic business decisions with evidence-based clinical care. In North Carolina CAHs are paid allowable cost which makes it a financially viable option for maternity services. Also, opening the rural maternity unit shifts low-risk deliveries to Chatham Hospital, increasing capacity for higher-acuity deliveries at UNC hospitals.

Care is provided by a team of physicians and midwives. Primary care physicians trained in obstetrics and surgery will provide the bulk of the care at the maternity unit. CRNAs will play a central role in obstetric care of patients when surgery is required. An obstetrician from UNC

Health will be available to consult. The program also plans to graduate three residents from UNC's rural and underserved family medicine residency track each year, educating physicians who are specifically prepared for and dedicated to rural maternal care.

UNC was engaged through Department of Family Medicine and hired community focused health workers to facilitate discussion, engaged philanthropic partners in preplanning and then engage in regulatory elements about the hospital transfers of high risk to UNC and others home. Ultimately this model demonstrated how maternity care in a CAH can be positioned to benefit both the CAH and health system while providing much needed care to the community.

The \$2.6 million Maternity Care Center opened in September 2020 with 3 labor and delivery rooms, 2 post-partum rooms, a triage room and 2-bed nursery. Administrators expect 120 deliveries in the first full year and as many as 350 annually.

Embracing Equity and Eliminating Disparities

The overall racial composition of Chatham County is 72.1% white, 12.4% Black, 12.5% Hispanic/Latinx, and 3% other. The majority of the Hispanic/Latinx population is located in and around Siler City (51% Hispanic/Latinx). There are notable economic and health inequities in the county. Black/African-American households are two times more likely and Hispanic/Latinx households are three times more likely to be living in poverty when compared to White non-Hispanic/Latinx households.

In 2019, Chatham County had a median income of \$66,857, an unemployment rate of 3.9%, and poverty rate of 13.3%. Siler City, located in the western part of the county, has a median income under \$35,000 and an unemployment rate of 9.8%. Taken together, these point to inequities across our community that coincide with well-documented outcomes across the state and country.

Chatham Hospital, a recipient of the AHA Carolyn Boone Lewis Equity of Care Award anticipated the importance of easing the new unit back assimilating cultural dynamics, the needs surrounding the population and ensuring that community voices have a say in the program's development. The planning process included a series of listening sessions with residents of Chatham County with a particular focus on the Spanish-speaking residents of Siler City, who make up half of the town's population.

It was determined that Chatham residents desire a hospital environment that is culturally and linguistically accessible and an environment of compassionate care in which mothers feel they are truly being heard and respected by their healthcare providers. Latina mothers in particular expressed a need for physicians and health care providers who are fluent in Spanish, as opposed to having to communicate their concerns through an interpreter.



In addition, in 2020 women's, maternal and infant health were established as a new health initiative for Chatham County. In response, the Alliance created "Equity for Moms and Babies Realized Across Chatham," or EMBRACe, a collaborative effort to

ensure successful and equitable birth outcomes for all women and babies in Chatham as a response to this need.

Conclusion

Strategic partnerships like the one between UNC Health and Chatham Hospital that cut across the care continuum enable rural hospitals and health systems to improve access and advance the health of their communities. They provide capital, clinical resources and technical assistance necessary to design and implement a strategy for an innovative service.

Broad community engagement through organizations such as the Chatham Health Alliance and other local agencies and organizations are required to optimize the outcome of health planning. Community engagement at the citizen level is imperative to the success new services.

Devising innovative strategies to sustain and launch rural hospital maternity units is a critical public health priority for ensuring positive health outcomes for moms and babies. It can be done, but it takes a team of dedicated partners with a vision of the future and the inspiration to break from the status quo. As a result, expectant mothers across Chatham County can now deliver at a hospital within close range, rather than drive a longer distance to give birth.

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