Obstetric Delivery Services and Workforce in Rural Wisconsin Hospitals 2024

WISCONSIN OFFICE OF
Rural Health

August 2024

Acknowledgements

The Office of Rural Health would like to thank University of Wisconsin-Madison Master of Public Health candidates Julia Ledger and Mollie Olson for their efforts, dedication, and patience with their mentor, Penny Black, in writing this report. We would also like to thank the subject matter experts who willingly shared their time and insights with the study team:

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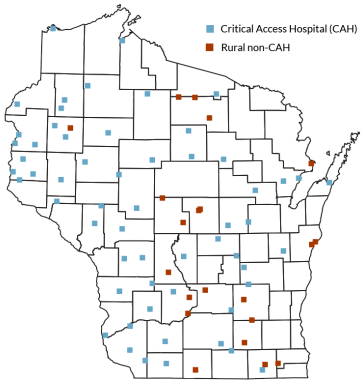
Executive Summary

IN JULY 2023, THE WISCONSIN OFFICE OF RURAL HEALTH CONDUCTED A STUDY ON OBSTETRIC DELIVERY SERVICES AND WORKFORCE IN RURAL WISCONSIN HOSPITALS

01 BACKGROUND

- 79 Critical Access Hospitals (CAH) and rural non-CAHs were included in this study
- Women of childbearing age make up about **1/6th** of Wisconsin's total population
- From 2012-2021, there was a **14% decrease** in rural births



02 OBSTETRIC SERVICES

The number of Wisconsin rural hospitals providing OB delivery services continues to decline, following national trends

- **47%** of Wisconsin CAHs provide delivery services (national average = 40%)
- The most common reasons for OB unit closure were **provider coverage, low birth volumes,** and **low reimbursement rates**
- **Over 8 out of 10** hospitals said they were confident they would still be providing services in the next 5 years

03 WORKFORCE

Responding hospitals utilize a variety of provider types to attend deliveries and C-sections

- **2/3** of responding hospitals that deliver babies utilize more than 1 provider type
  - The most common combination is obstetrician + family physician
- Family physicians attend deliveries in **over half** of responding hospitals
  - This shows the need for FPs in rural healthcare

04 GOOD NEWS

In spite of growing concerns and challenges for OB units, there are examples of creativity and hope to reverse current trends

- **UW-Madison** started the first rural OB-GYN residency program in the country, connecting passionate practitioners with the communities that need them
- **Tamarack Health Hayward Medical Center** and **SSM Health Monroe Clinic Hospital** are two examples of hospitals committed to providing service to rural women through unique models of care, such as utilizing both OB-GYNs and FM-OBs

05 IMPLICATIONS

Hospital respondents and key informants echoed that closing an OB unit is never a decision that a hospital wants to make

- Although Wisconsin is doing well, there are **several key areas for improvement**
  - The **state maternal mortality rate has increased** in the past 10 years
  - This rate is **disproportionately high** for Wisconsin's non-Hispanic Black, non-Hispanic Asian, and Hispanic mothers

06 NEXT STEPS

Our investigation illuminated **several opportunities for improvement from hospitals and subject matter experts**, which we direct to policymakers and hospital leadership.

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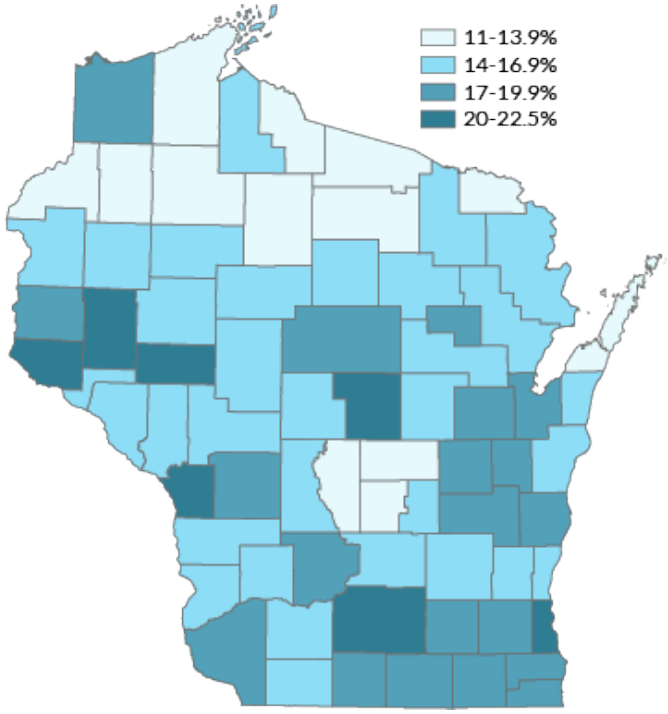
Purpose

The purpose of this study was to provide an update to the original Wisconsin Office of Rural Health Obstetric Delivery Services and Workforce in Rural Wisconsin Hospitals 2018 report.[1] This report provides a 5-year update on the availability of hospital-based obstetric services in rural Wisconsin, workforce trends, and factors that lead to closures. Additionally, potential opportunities for intervention are identified and current models of success that can lead to more equitable health outcomes for women and infants living in rural Wisconsin are highlighted.

Background

Women of childbearing age, ages 15-44, constitute about 16% of Wisconsin's total population.[2-6] For rural counties, women of childbearing age constitute about 15% of the total population, compared to 18% in urban counties. As women of childbearing age are 1/6th of Wisconsin's population, it is important to consider healthcare accessibility and the specific needs of this group.

Women of Childbearing Age - Percent of Total Population by County

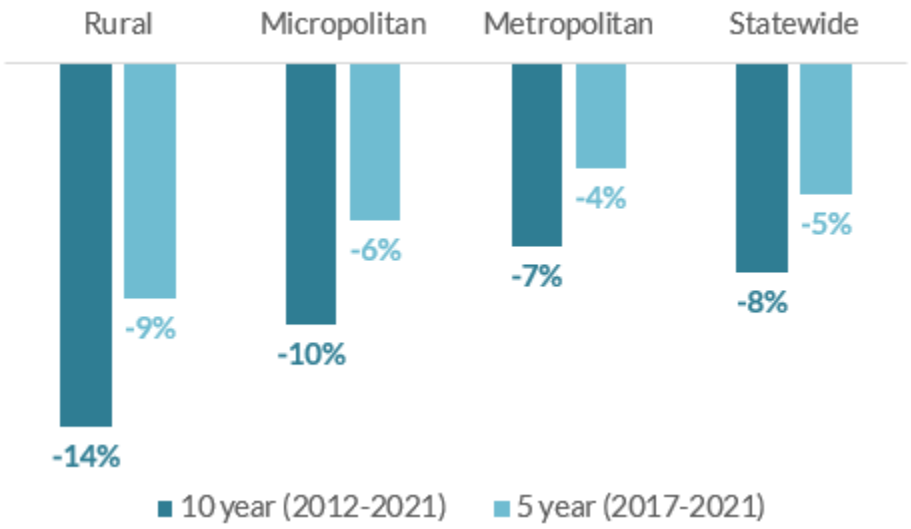


Source: US Census Bureau, 2017-2021 American Community Survey 5-Year Estimates

In the United States, there are growing concerns about the increased risks for maternal mortality and morbidity for women in rural areas compared to those in urban.[7,8] Additionally, it was found that in rural areas, women are more likely to have a higher number of children and be younger when they give birth for the first time.[9]

Wisconsin's annual birth rate and fertility rate have been decreasing since 2007.[3] Wisconsin rural counties have seen the sharpest decrease in number of births, with a 14% decrease over the last 10 years compared to the statewide and metropolitan trends of 8% and 7% decreases, respectively.[10] The combination of closing obstetric (OB) units, a decreasing fertility rate, and an aging population will have long term effects on the state's population structure and possible workforce challenges. This is worth further research and serves as a call to action to assess and address the state of obstetrics care in rural Wisconsin.[3]

Decrease in Births by Core-Based Statistical Area



Sources: WI DHS birth data (2012-2021); Core-Based Statistical Areas (CBSA) determined by March 2020 delineations of Wisconsin counties by the United States Office of Management and Budget

The Wisconsin Office of Rural Health Obstetric Delivery Services and Workforce in Rural Wisconsin Hospitals 2018 report found:

- 70% of rural hospitals that deliver babies utilize more than one type of provider to provide obstetric delivery care. The most frequent combinations are obstetricians and family physicians; obstetricans, family physicians, and general surgeons; and family physicians and general surgeons.
- 11 Wisconsin hospitals closed OB units in the previous 10 years (2009-2018).
- 81% of rural hospitals that deliver babies provide basic obstetric care and 19% provide specialty care. No respondents provided subspecialty care.
- 99% of women of child-bearing age live within a 30-minute drive-time for hospital-based obstetrics care; however, this number does not account for other places to give birth, e.g., a birth center, or the level of care needed.

This report serves as an update to the 2018 Obstetric Delivery Services and Workforce in Rural Wisconsin Hospitals. This update provides information on a 5-year difference (2018-2023), which includes the years of the COVID-19 pandemic, giving unique insights to the trajectory of obstetrics in Wisconsin. The report includes obstetrics delivery service and workforce trends, as well as hospital needs, challenges, and successes.

Approach

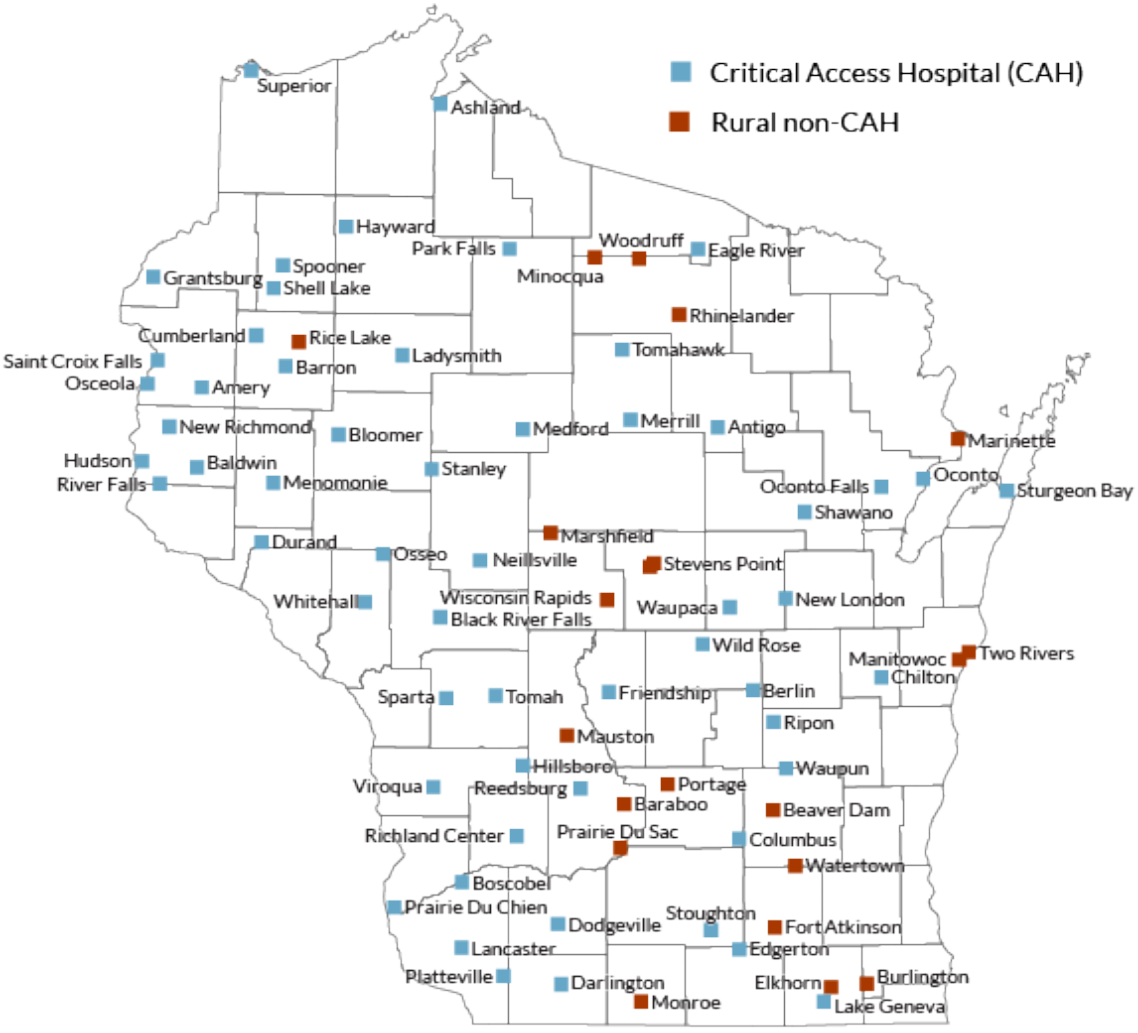
Hospitals were selected for inclusion in the study if they were designated as a Critical Access Hospital (CAH) or if they were in an area defined as rural by the Federal Office of Rural Health Policy.[12] "Critical Access Hospital" is a designation given to eligible hospitals by the Centers for Medicare and Medicaid Services for the purpose of reducing the financial vulnerability of these hospitals.

An electronic survey was distributed to the 79 selected hospitals in July 2023. The 2023 survey largely replicated the 2018 version, but with added open-ended questions used to identify opportunities for intervention and success. Complete responses were received from 40 of 58 (69%) CAHs and 11 of 21 (52%) rural non-CAHs for a total response rate of 65%.

In addition to survey responses, birth data was obtained from the Wisconsin Department of Health Services. This dataset included facility- and county-level data for the calendar years 2012-2021. This data was combined with news media reporting of recent closures and used to verify hospital responses, supplement incomplete responses, and to calculate state-wide trends.

Finally, interviews with subject-matter experts, including healthcare providers and maternal healthcare researchers, were conducted to gain insight into what the field of obstetrics is experiencing and how rural hospitals are dealing with challenges.

Wisconsin CAHs and Rural Non-CAHs in this Study



Results

Obstetric Services: Availability of Care

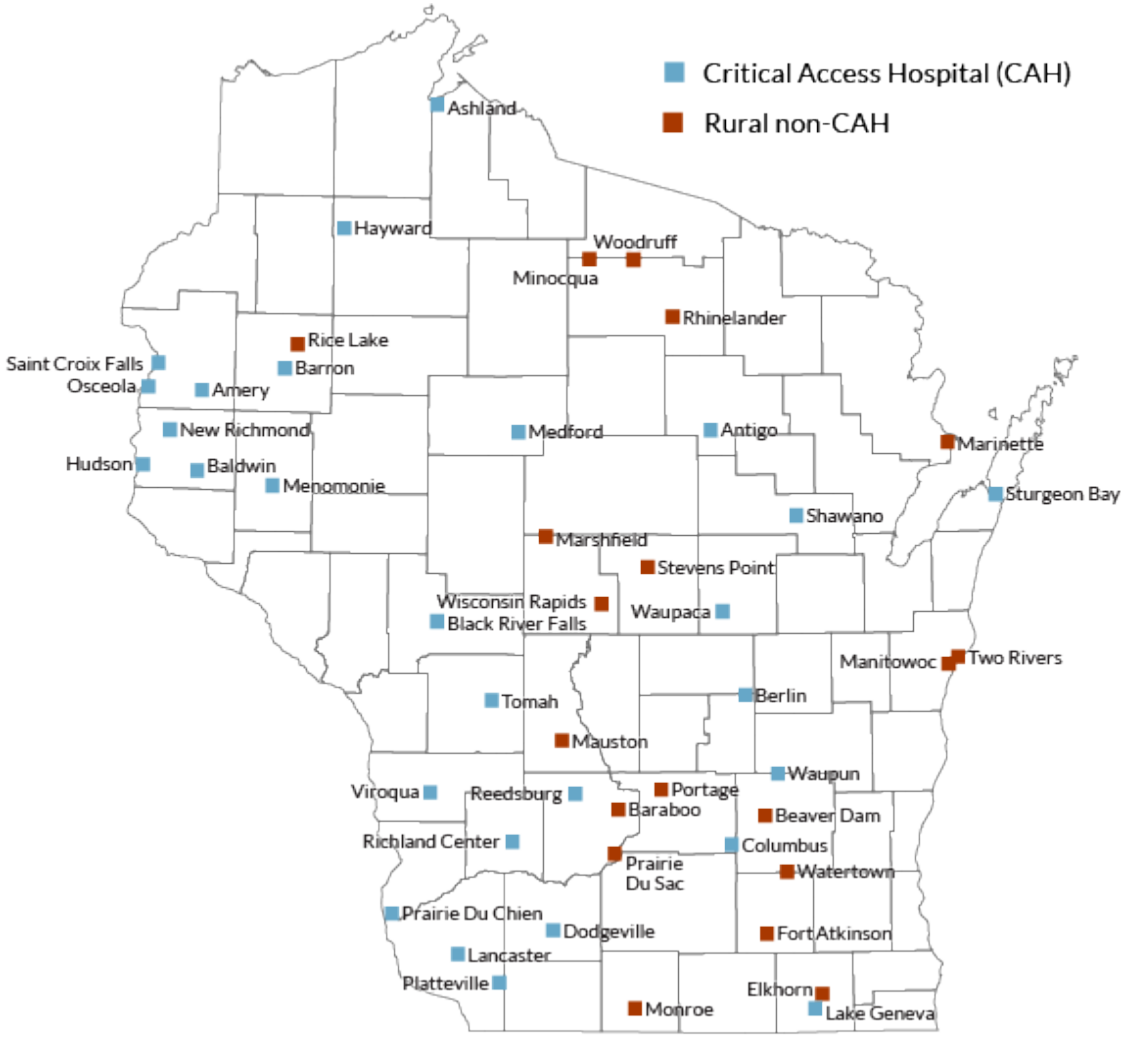
Fifty-seven percent (57%) of rural hospitals in Wisconsin provide obstetric delivery services. Although this percentage is unchanged from the 2018 report, an additional 17 rural non-CAH hospitals were included in this study. Forty-eight percent (48%) of Wisconsin CAHs provide obstetrics services, compared to the national average of 40%.[13,14]

Rural Hospitals that Deliver Babies

Deliver babies?	CAHs (n=58)	Rural non-CAHs (n=21)	Total (n=79)
Yes	28	19	47
No	32	2	32

Source: 2012-2021 WI DHS birth data, adjusted or confirmed by survey responses and hospital websites

Rural Hospitals that Deliver Babies



Note: This map reflects only hospitals included in this study, it does not include non-rural, non-CAH hospitals that provide obstetric delivery services.

Obstetric Services: Level of Care

The American Council of Obstetricians and Gynecologists and Society for Fetal Medicine define three levels of obstetric care:[17]

- Basic care - uncomplicated obstetric and neonatal care
- Specialty care - limited complicated obstetric and neonatal care
- Subspecialty care - full complicated obstetric and neonatal care

When asked about the value of knowing what level of care hospitals are providing, Megan Hardy, BSN, RN, Wisconsin Association for Perinatal Care, commented, "…one of the biggest benefits is understanding access to care, what resources are available in different locations. It helps us start to understand and be able to address some of the systemic issues that exist across the state and how we can help." When these values are not reported, patients lack information about the level of care they are able to access. In addition, the Department of Health Services noted in a 2022 report on maternal mortality, "The state should fund a strong Levels of Care system so that critical access hospitals can assess for labor and other medical conditions requiring urgent action and transfer appropriately."[18]

Level of Obstetric Care in Rural Hospitals

	CAHs (n=19)	Rural non-CAHs (n=10)	Total (n=28)
Basic Care	14	3	17
Specialty Care	4	5	9
Subspecialty Care	0	2	2
Information not provided	1	0	1

Source: Obstetric Services and Workforce survey, July 2023

Obstetric Workforce

The obstetric workforce is crucial to the services that can be offered to patients. A representative of Mayo Clinic stated that "excellent birthing services to patients requires 24/7 coverage from OB-GYN physicians".[19] However, other provider types, specifically family physicians, can and do attend deliveries, especially in rural areas.[11] The 2018 Obstetrics Report found that about 70% of rural hospitals surveyed use more than one type of provider to attend deliveries, and in 79% of surveyed hospitals, family physicians attended deliveries (and were the sole provider in 12% of surveyed hospitals). These frequencies have slightly decreased with our 2023 sample of rural hospitals respondents, but there are still two-thirds of responding rural hospitals that stated that family physicians attend deliveries.

What do hospitals need?

"Assistance from the State in recruiting OB/GYNs to rural Wisconsin. For example, limits of lawsuits to reduce risk, and state-sponsored signing bonuses, reduction in state income tax specifically for OB/GYNs who deliver babies."

– Rural Hospital President

Provider Types Attending Deliveries

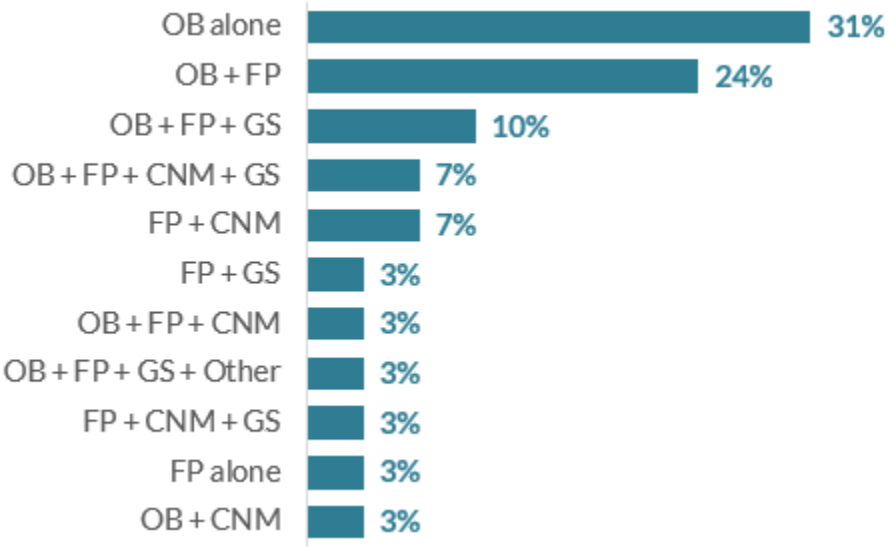
Rural hospitals across Wisconsin employ a variety of provider types to deliver babies, with the most common being obstetricians. Sixty-six percent (66%, n=19) of rural hospitals utilize more than one provider type for deliveries, the most common combination being obstetricians and family practitioners.

Of the hospitals that responded to the survey and perform deliveries (n=29):

- Obstetrician-gynecologists (OB-GYNs) attend deliveries in 83% of hospitals (31% alone and 52% with other providers)
- Family physicians attend deliveries in 66% of hospitals (4% alone and 62% with other providers)
- General surgeons attend deliveries in 28% of hospitals, and
- Certified nurse midwives attend deliveries in 24% of hospitals

Obstetricians and family physicians continue to be the most common types of providers attending deliveries in rural Wisconsin hospitals, with over half of responding hospitals (66%) utilizing family physicians to provide obstetric delivery care. This shows the importance of and dependence on this provider type in rural healthcare, especially while we continue to see a shortage of OB-GYNs. General surgeons and Certified Nurse Midwives (CNM) are also highly involved in obstetric care in responding hospitals. CNMs and OB-GYNs are more likely to be involved in deliveries in higher-volume birth hospitals.[20]

Percent of Rural Hospitals by Type(s) of Providers Attending Deliveries



OB: Obstetrician/Gynecologies
FP: Family Physician
GS: General Surgeon
CNM: Certified Nurse Midwife

Source: Obstetric Services and Workforce survey, July 2023

Types of Providers Delivering Babies in Rural Hospitals

Hospitals with:	CAHs (n=19)	Rural non-CAHs (n=10)	Total (n=29)
Obstetricians/Gynecologists			
Number (percent) of hospitals	14 (74%)	10 (100%)	24 (83%)
Average number of providers/hospital*	1.4	3.7	2.2
Family Physicians			
Number (percent) of hospitals	15 (79%)	4 (40%)	19 (66%)
Average number of providers/hospital*	4.1	1.7	3.2
Certified Nurse Midwives			
Number (percent) of hospitals	5 (26%)	2 (20%)	7 (24%)
Average number of providers/hospital*	0.5	0.3	0.5
General Surgeons			
Number (percent) of hospitals	7 (37%)	1 (10%)	8 (28%)
Average number of providers/hospital*	0.6	0.2	0.5
Other			
Number (percent) of hospitals	1 (3%)		1 (3%)
Average number of providers/hospital*	0.05	0	0.03

*Average number of providers in each hospital that utilized this provider type
Source: Obstetric Services and Worforce survey, July 2023

Provider Types Performing C-Section

The 2018 Obstetrics Report found that 16% of Wisconsin rural hospitals only had a family physician performing Cesarean deliveries (C-sections).[1] The number of C-section births has increased nation-wide from 5.5% (1970) to 32% (2017).[11] This is of importance due to the increased dependency of rural physicians to deliver babies. One hundred percent (100%) of hospitals that responded to the survey and deliver babies perform C-sections.

Obstetricians are the most common provider type involved in C-sections in responding rural hospitals. They perform C-sections at 86% of responding rural hospitals and are the sole provider at 45% of these hospitals. Family physicians provide C-sections at 34% of responding rural hospitals and are the sole provider at 7% of these hospitals. General surgeons perform C-sections at 38% of responding rural hospitals and are the sole provider at 3% of these hospitals.

Types of Providers Performing C-Sections in Rural Hospitals

	CAHs (n-19)	Rural non-CAHs (n=10)	Total (n=29)
OB alone	6 (32%)	7 (70%)	13 (45%)
FP alone	2 (11%)	0	2 (7%)
GS alone	1 (5%)	0	1 (3%)
OB + FP	2 (11%)	1 (10%)	3 (10%)
OB + GS	3 (16%)	2 (2%)	5 (17%)
FP + GS	1 (5%)	0	1 (3%)
OB + FP + GS	4 (21%)	0	4 (14%)

Source: Obstetric Services and Workforce survey, July 2023

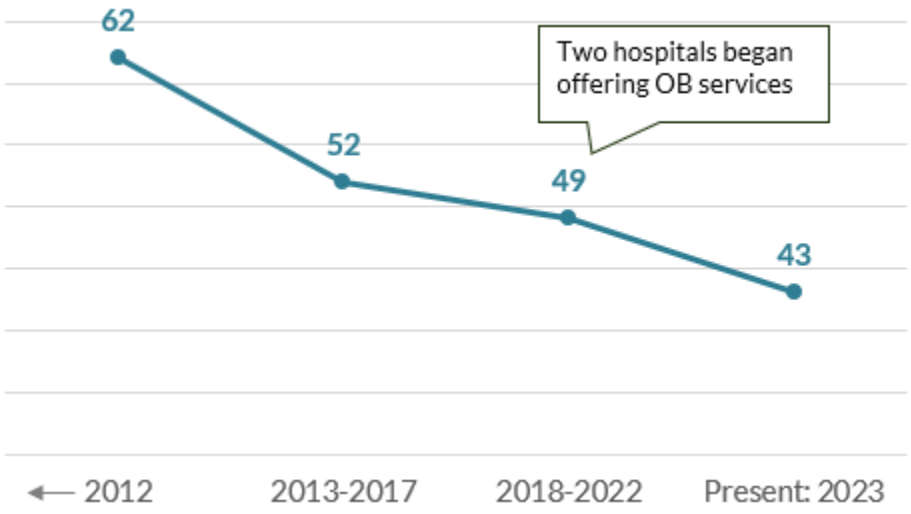
Trends in Delivery Services: Closures and Contributing Factors

It is important to note that the COVID-19 pandemic occurred in the middle of our study period (2018-2023). It has had uncertain ramifications for obstetric workforce and delivery trends. The long-term effects are still unknown.[4] However, there have been preliminary observations, especially with regard to the OB workforce. The already declining OB workforce endured further strain during the COVID-19 pandemic as they offered essential care that could not be postponed. Common issues that contributed to OB provider strain were PPE supply shortages, the challenges of virtual communication, patients testing positive for the COVID-19 virus, and limiting birthing support teams for mothers (due to needing to limit the amount of people at appointments).[21] Additionally, Wisconsin birth volumes were at their lowest in 2020, then had a slight increase in 2021. It will be of utmost importance to study how the COVID-19 pandemic affected rural hospitals' obstetric services in this way.

Using birth data, survey responses, and media coverage,[22,23] we found that 8 rural hospitals discontinued obstetric services within the past 5 years, 3 rural hospitals discontinued services in the last 6-10 years, and 10 hospitals stopped delivering babies more than 10 years ago. The data is unclear regarding the remaining 15 rural hospitals that do not currently deliver babies; they either never delivered babies or discontinued this service more than 10 years ago. Due to the lack of clarity, these 15 hospitals are not included in the graphic on the next page. On the bright side, 2 hospitals began offering delivery services between 2018 and 2022.

> *"It is important for policy makers to understand that each time a rural maternity service closes, it puts the women and newborns at risk in those communities. Most of what drives the closing of small units is inadequate reimbursement for a highly specialized, labor intense (no pun intended), and potentially high-risk event."*
> – Rural Hospital Vice President for Nursing

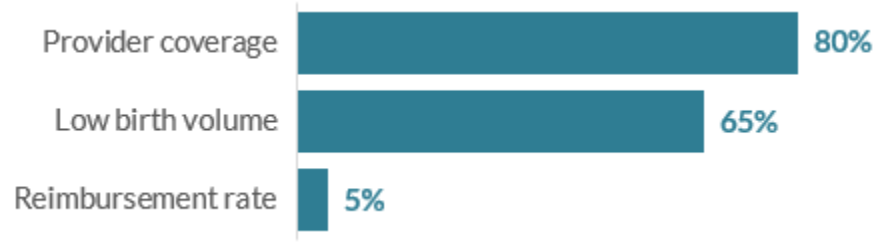
Number of Rural Hospitals Providing Obstetric Delivery Services



According to survey responses, only one hospital that currently provides OB care predicted that it was likely their obstetric unit would close in the next 5 years. Fourteen percent (14%) of respondents said that it was too difficult to predict at this time, while 83% of hospitals said they were confident they will still be offering obstetric delivery services in the next 5 years.

Of the survey respondents that stated that their obstetrics unit had previously closed (n = 20), 16 hospitals selected provider coverage was an important factor in their decision, 13 selected birth volume, and one selected reimbursement rates. It was surprising that only one hospital selected reimbursement rates, however, several open-text responses later in the survey identified reimbursement rates as a challenge, indicating that this is a concern to more than just one hospital. Knowing these risk factors may intersect, it was not surprising to see that the majority of respondents selected multiple factors as having an impact on the decision to discontinue delivery services.

Percent of Rural Hospitals Reporting Reasons for Obstetric Unit Closure



Note: Values do not add up to 100% due to respondents selecting multiple factors
Source: Obstetric Services and Workforce survey, July 2023

Provider coverage

Recruiting and retaining the full range of providers needed to operate an obstetrics unit 24/7 is a challenge to many rural hospitals. This will continue to present a challenge as provider shortages are expected to worsen as applicant numbers decrease, more residents subspecialize, and providers retire.[28,29] This trend is pertinent in Wisconsin as there was an 8% decrease in applications for OB-GYN residencies this year.[30] Upon closing units in Northern Wisconsin, Mayo Clinic Health System cited provider recruitment as one of the largest contributing

causes.[20] "Mayo Clinic Health System has been aggressively recruiting for several open OB-GYN positions over the past two years. These relentless efforts have been unsuccessful in filling these critical physician openings, reflecting a worsening OB-GYN physician shortage across the country."[23] Some hospitals have begun solely hiring family physicians, which eases the hiring burden but may leave them at risk of not meeting the requirements for some designations.

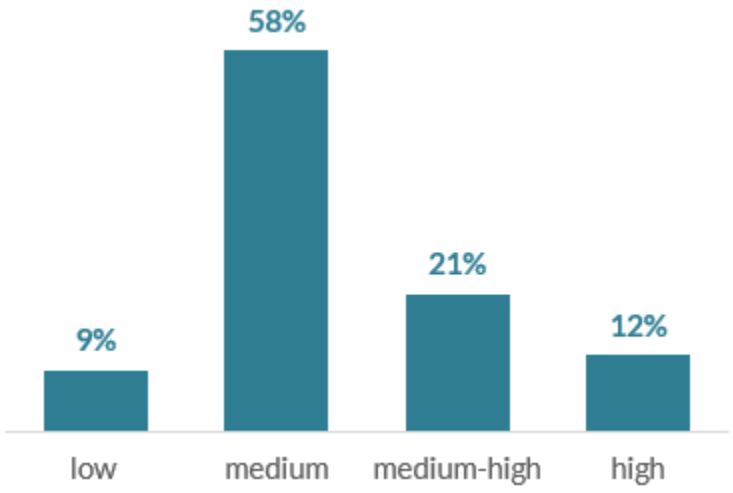
Low birth volume

A recent U.S. rural hospital study categorized birth volumes for rural facilities as

- low: 10-110 births
- medium: 111-240 births
- medium-high: 241-460 births, and
- high: >460 births

The study reported that hospitals with less than 240 births per year were of the highest risk of an obstetric unit closure.[27,31] Based on these numbers, of the 47 CAHs and rural non-CAHs in this study that deliver babies, 4 are low-volume, 28 are medium-volume, 10 are medium-high volume, and 5 are high volume hospitals.[10] With the majority of Wisconsin CAH and rural-non CAH hospitals being low to medium birth-volume hospitals, and with decreasing numbers of births, it is necessary to note this common challenge and promote interventions to reduce the financial and skill-based risks associated with low birth volumes so hospitals can continue to give quality obstetrics care to their patients. It is vital that these low delivery volume hospitals can continue operating as they are often the only local option.[17]

Percent of Rural Hospitals by Birth Volume Categorization (five-year average, 2017-2021)



Source: 2017-2021 WI DHS birth data

Reimbursement rates

As of 2017, Agency for Healthcare and Research Quality data show that live births are the third leading cost of hospital costs from all payers.[24] A high proportion of births, especially in rural areas, are reimbursed by Medicaid.[7,25] In 2021, 35% (21,527) of all births in Wisconsin were financed by Medicaid.[24] Medicaid covers nearly half of all rural births in the nation.[28] Medicaid reimbursement rates are about half of what commercial insurance pays for both vaginal births and C-sections, further exacerbating the financial pressures on rural hospitals.[7]

Trends in Delivery Services: Innovative Practices

Although inherent characteristics of many rural Wisconsin hospitals may categorize them as at risk for discontinuation of obstetric services, creative thinking and strong leadership are helping several hospitals sustain access and quality of obstetrics care. SSM Monroe Clinic Hospital and Tamarack Health Hayward Medical Center present two successful models operating in different rural realities. In addition, the University of Wisconsin-Madison's Rural Obstetrics Residency Program is proactive in the development of the rural hospital workforce.

Tamarack Health Hayward Medical Center

Tamarack Health Hayward Medical Center presents a successful example of adaptation to changing dynamics. This critical access hospital has an annual birth volume around 135 and is an important resource for its community. In recent years, their model pivoted from recruiting general surgeons, to specifically targeting FM-OBs (family medicine doctors with a specialty in obstetrics) trained to perform C-sections. After the shift, they developed a Q4 call schedule of three FM-OBs, and one OB-GYN. They also receive help from a retired OB-GYN willing to pick up C-sections and mentor new doctors. Luke Beirl (PharmD, MBA), CEO, considers this to be a model of sustainability made up of a broad scope and redundancy. These changes came as a result of leadership listening to their community's needs and being resourceful with the reality of provider availability in Wisconsin. Low birth volume hospitals need to exist in rural Wisconsin to ensure an equitable birth experience for all, and Hayward is an example of one that is not just trying to survive, but to thrive.

SSM Monroe Hospital

Monroe Hospital is employing another model of success for obstetrics care in rural Wisconsin. It is part of the SSM Health Medical Group, with an annual birth volume of 500 and close proximity to Madison. In their obstetrics department, they have four OB-GYNs and two FM-OBs. This allows the doctors to have more cross-coverage, helping with work-life balance, support, and Monroe's birth volume. They have a strong teaching culture of over 70 years and were one of the first sites to be identified for the new UW-Madison rural OB-GYN residency program. Lori Rodefeld, the Medical Education Manager, states that there have been over 1,000 medical students trained at Monroe, and they get the broad experience of being an OB-GYN in a rural place with great infrastructure. She also states that much of the success of Monroe is a result of the hospital's strong engagement with the community.

University of Wisconsin-Madison Rural Obstetrics Residency Program

The University of Wisconsin-Madison created the nation's first women's health rural residency in 2017.[34] The program works to develop the rural obstetric workforce by providing an opportunity to experience rural practice for interested students. "Increasing amount of exposure to rural areas during training exponentially increases the likelihood of practicing in a rural area, which supersedes growing up in a rural area," says Dr. Ryan Spencer, MD, MS, FACOG, program director.[35] Though this program alone cannot backfill the open positions, it places Wisconsin at the forefront of innovative solutions. A number of hospitals have partnered with the program including SSM Health Monroe Hospital, Western Wisconsin Health, and Marshfield Medical Center.

Dr. Spencer says that hospital obstetric unit closures is a complex and multifactorial issue, which can make it challenging to get large organizations to work together on such problems. However, working in this field has shown him that others working in obstetric rural health are very dedicated individuals; these issues are not

being ignored and people are very engaged. He lists interest and engagement from both hospitals and potential residents as a highlight of the program. However, it is not without challenges; sustainable funding to appropriately run the program remains insecure.

Recommendations

Making the decision to close an obstetrics unit is something a hospital never wants to do. This sentiment is echoed in survey responses and key informant interviews.

> *My selfish hope is that we can do everything we can to not ever be in a situation where we have to decide whether to close or not close our OB department, that's a place I never want to be and I don't want to hand my responsibility off [to others] to have to make that decision. Because I can't imagine how painstakingly difficult that is. No matter what kind of leader you are, no matter what kind of community you're in, that's a really difficult decision to make.* - Luke Beirl

Wisconsin is doing comparatively well when it comes to maternal health care, but there are several key areas for improvement. Although Wisconsin is in the top 10 states for the lowest maternal mortality rate overall, the rate of maternal mortality has increased in the past 10 years.[39] This rate is five times higher for non-Hispanic black women than non-Hispanic white women, and the Wisconsin Department of Health Services stated that in 2016-2017 (the most recent years of available data), Non-Hispanic Black, Non-Hispanic Asian, and Hispanic mothers accounted for almost half of pregnancy-related deaths, but only a quarter of pregnancies in the state.[18,40] Ninety-seven percent (97%) of the total pregnancy-related deaths were determined to be preventable.[18] The availability of obstetric providers and services influences these health outcomes. Therefore, action must be taken to ensure and protect the future of Wisconsin for all groups.

All of the recommendations below came from the surveyed rural hospitals and the subject matter experts that were interviewed.

For Policymakers

Expand Medicaid and increase reimbursement rates

The issues exacerbated by current Medicaid reimbursement rates were a recurring theme in interviews with subject matter experts and in survey responses from Wisconsin hospitals. Medicaid expansion is important for improving the health of Wisconsin's population and creating funding flows to rural hospitals. Senate Bill 110, introduced in March 2023, seeks to extend pregnant women's Medicaid coverage to 12 months postpartum in Wisconsin.[41] This is worthy of support, as yearly, at least 25 women in Wisconsin die due to maternal mortality-related deaths (during pregnancy or within the first year after giving birth).[40] In 2017, the most recent year of data, this number was 43.[18] Two-thirds of these yearly deaths are in the year after giving birth, showing the criticality of access to care in this time postpartum.[40] The funding from expansion may also offer temporary relief to obstetrics units if hospitals use it to cross-subsidize. However, expansion alone may not be enough.[42]

An adjustment of Medicaid reimbursement rates is also necessary. For both vaginal delivery and C-section delivery for an uncomplicated pregnancy that includes all routine pre- and postpartum care, the reimbursement rate is only $1,149.[32,43,44] In May 2023, the American Hospital Association recommended updating reimbursement rates and that Congress should support the Rural Hospital Support Act to help hospitals overcome financial barriers.[45] It is necessary to increase these rates so that rural Wisconsin hospitals can have the funding they need to ensure Wisconsin continues to be a safe place to give birth.

> *"Medicaid reimbursement and reimbursement for obstetrical care needs to change. Reimbursement and revenue does not come close to aligning with the cost of care required to realize improvements necessary to maternal and child health outcomes. Also, state and federal funding is necessary to allow those Hospitals who still deliver to expand services to meet the growing demand. This is a public health crisis."*
>
> – Rural Hospital CEO

Invest in rural economic development

Wisconsin's decreasing birth volume and changing rural demographics are concerning to hospitals. It would be worthwhile for policymakers to implement economic development to revitalize the workforce in rural areas and to support recruitment to rural healthcare. There is emerging information showing that OB unit closures strain rural economies.[9] A recent nation-wide study looked at rural counties that closed their OB units between 2012-2019 and found that there was decreased economic activity, a decreased workforce, and decreased reproductive populations in post-OB facility closure counties compared to prior to OB unit closures.[9] These findings provide evidence for the relationship between healthcare access and economic growth and show the systematic effects of OB unit closures. According to Dr. Carrie Henning-Smith, Co-Director of the University of Minnesota Rural Health Research Center, "It's really important to acknowledge that we can't survive without rural areas…[T]hey're the lifeblood of so many things; of food and energy and recreation and beauty and open space." This is a sentiment that is shared by many Wisconsin residents; rural places are necessary to our state economy and Wisconsin identity.

Reduce the cost and increase coverage of provider liability insurance

Obstetric-specific medical liability insurance is disproportionately expensive. A family physician that provides the full range of primary care without obstetric care pays half the medical liability insurance premiums as a family physician that also provides obstetric care. In addition, OB-GYNs face lawsuits at a higher rate than almost all other professions.[46] The laws regarding medical liability insurance prevent providers from being able to attend births at multiple facilities because the insurance doesn't cover all locations.[20] This is especially problematic in rural areas where OB-GYNs often work at multiple hospitals that can't afford a full-time provider.

For Hospitals

Utilize telehealth and simulations

There is some evidence that birth volume correlates with health outcomes in rural hospitals as skill level becomes a concern.[8,27] However, there are methods to maintain skill levels such as simulations and telehealth for provider-to-provider support.[48,49] Low birth volume does not equate to unsafe as there are methods that can be utilized to maintain skills. As Luke Beirl reflected on this topic, "there's no reason you have to sacrifice quality experience or health outcomes." Though, more research should be done to improve these tools to better support all providers and build confidence. Also, telehealth should not be relied upon solely as complicated pregnancies will still require accessible in-person services.

Partner with provider residency and fellowship programs

The UW Madison Rural Residency program previously discussed is proof this concept is possible. There is interest in rural careers and training in rural areas emboldens confidence in doing so. The program has received as many as 200 applications in a year for a single residency spot.[15] In 2023, the University of Wisconsin-Madison obtained funding for a rural Family Medicine-OB fellowship.[50] ProMedica Monroe Regional Hospital in Michigan recently started a family medicine rural fellowship that even includes a telemedicine component.[51] More residencies and fellowships for all provider types should be supported to help create a sustainable workforce. There is scientific evidence that rural training programs or experiences grow the number of providers practicing in rural areas, as well as engaging students who grew up in rural areas (even starting prior to college).[52] "It means thinking long term, if there are ways to get information about healthcare careers into the K-12 arena in rural areas, I think that's really important," said Carrie Henning-Smith, Co-Director of the University of Minnesota Rural Health Research Center when asked about recruitment to rural health.

Utilize non-traditional models of care

- Increasing collaboration with certified nurse midwives is consistently recommended, both in the literature, and from our hospital respondents.[11] In February 2023, ForwardHealth reported that services performed by licensed midwives are to be reimbursed at the Wisconsin state Medicaid rate.[55]
- The use of doulas could also be helpful for rural populations. The "Mama's First Act" would require state Medicaid to cover doulas and midwives, something that would be beneficial for hospitals and patients.[56] Evidence in the literature demonstrates improved health outcomes and cost-effectiveness resulting from intrapartum doula care.[57]
- The "hub and spoke" model provides a desirable model of care for rural communities. The "hub" is a larger healthcare facility with level III or IV maternal care that serves as a regional perinatal care center that the "spokes," or smaller hospitals that provide basic care for the majority of low-risk pregnancies, can give referrals to, consult with, or train with.[20]

Resource for Hospitals

The Alliance for Innovation on Maternal Health's "Obstetric Emergency Readiness Resource Kit" was created in response to the increasing number of hospital-based obstetric unit closures in rural areas. This resource kit may be especially helpful to hospitals staff that do not provide obstetrics care other than in cases of emergency. It seeks to ensure equitable pregnancy outcomes in rural areas and to mothers of all races and ethnicities.[47]

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