2024 Report on Oregon's Birthing Hospitals

Oregon Perinatal Collaborative

How to use this report

While this report was prepared to present a full picture of the current state of Oregon's birthing hospitals with recommendations for improvement, we understand that stakeholders may also want to access certain information within the report. To support easy navigation to specific content, we have included a roadmap below with hyperlinks to each section.

Executive Summary

In 2024, the Oregon Perinatal Collaborative (OPC) visited each of Oregon's 47 hospitals that provide labor, birth, and postpartum services to learn about their strengths and challenges, build relationships, and gather information to ensure that our quality improvement work is responsive to the real needs of Oregon communities and hospitals. OPC works directly with these hospitals, the Oregon Health Authority, and other stakeholders to improve maternal and childhood health outcomes in Oregon through collaboration, implementation of best practices, and policy change. While OPC's work is statewide, our organization began in the Portland metropolitan area and the process of building relationships with hospitals outside of the I-5 corridor or within the larger health systems needs ongoing attention.

OPC received funding from the Oregon legislature in 2023 to establish core staffing and improve our reach and impact as Oregon's state Perinatal Quality Collaborative. Our top priority with this funding was to establish open lines of communication and build relationships with essential partners, including each birthing hospital in Oregon, so that our improvement work reaches every birth. OPC created an open-ended interview process for these visits to learn from nurses, maternal and newborn providers, quality improvement specialists, and leaders at each hospital. We used a standard interview process at every hospital, including questions about the major drivers of maternal mortality identified by the Oregon Maternal Mortality & Morbidity Review Committee.

While we expected to find some common experiences and concerns among Oregon hospitals, we were astounded to find that the key areas of concern and core needs were essentially universal across the state from Critical Access Hospitals in rural and frontier counties to Level IV regional centers in urban areas:

Everyone we met was struggling with:

- Staffing challenges
- Sicker patients
- More patients with unmet basic needs

All hospitals had a need for:

- Protected time for quality improvement work,
- Funding and programs to increase the perinatal and behavioral health workforce
- Payment reform to provide adequate reimbursement for increasingly complex perinatal care.

There were also crucial differences in the needs of rural and urban hospitals and unique concerns and needs in different parts of the state and across roles within the health care workforce. We have tried to capture the full depth and breadth of knowledge shared with us in these visits in a way that will be useful to all our partners including policymakers and funders.

The nurses, physicians, midwives, and hospital leaders at these visits across the state welcomed us with open arms, shared with honesty, and often expressed gratitude and relief that someone was asking how they were doing and where change was needed. These many experts in pregnancy, birth, and postpartum care are dedicated, innovative, caring *and* overburdened, burned out, and concerned about the things they are seeing. We in the OPC have been deeply impacted and motivated by these visits. We hope that this report provides insight and actionable information to everyone working to make Oregon a safe and welcoming place to be pregnant, give birth, be born and thrive within healthy communities.

Silke Akerson, MPH, CPM, LDM

Executive Director
Oregon Perinatal Collaborative

Birth in Oregon

Most of the approximately 40,000 births per year in Oregon occur in one of the 47 birthing hospitals across the state. These birthing hospitals provide labor, birth, and postpartum services within a range of staffing models. Delivery attendants in the hospital include obstetrician-gynecologist physicians (OB), Certified Nurse Midwives (CNM), family practice physicians with additional obstetric training (FP-OB), and maternal fetal medicine physicians (MFM). Many of the birthing hospitals have wide catchment areas and serve rural and frontier communities. Oregon has 15 Critical Access Hospitals that provide birthing services. Birth volumes at Oregon hospitals vary significantly. In 2023, Oregon birthing hospitals welcomed as few as 28 babies and as many as 3,361. While almost 90% of Oregon births occur in a hospital with an annual birth volume of over 500, almost half of the 47 hospitals have annual birth volumes less than 500.

For the purposes of this report, we use the following terms, based on annual birth volume, for hospital size:

Very small hospitals:
less than 250 birth per year

Small hospitals:
250 to 700 birth per year

Mid-size hospitals:
700 to 1,500 birth per year

Large hospitals:
more than 1,500 births per year

Approximately 4% of Oregon births are planned community births, occurring outside the hospital in homes and freestanding birth centers. There are 12 freestanding birth centers in Oregon. Delivery attendants at community births include Certified Professional Midwives (CPM) who are licensed in Oregon as Licensed Direct-Entry Midwives (LDM), Certified Nurse Midwives (CNM), naturopathic physicians with a certificate in natural childbirth, and traditional midwives.

To promote risk appropriate maternal and newborn care, the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics have established levels of care with related standards for hospitals. Level III and IV hospitals have the ability to provide specialized care for high-risk birthing people and newborns while Level I and II hospitals provide care for low and moderate risk patients and stabilization for transfer of care to higher level facilities as needed. Oregon hospitals confirm their levels locally and there is no state verification or oversight. There are 9 level III/IV NICU's across the state. Of note, maternal and newborn levels of care designation are not necessarily the same but are considered in coordination with one another.

Although Oregon rates relatively well for most birth outcomes in comparison to other U.S. states, there is still significant room for improvement. The March of Dimes publishes a national report card, as well as one for each state annually on key measures of maternal and newborn outcomes and Oregon has consistently received an A or B for multiple years.

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The March of Dimes 2023 National Report Card as well as one for each state annual on key measures of maternal and newborn outcomes.

2023 Oregon Report Card

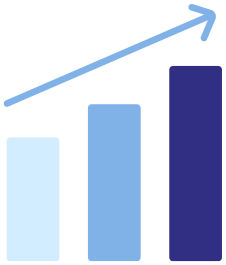
2023 Oregon Report Card

1

OREGON'S B GRADE

Oregon was one of six state to receive a B grade, with only 1 (Vermont) receiving an A.

2



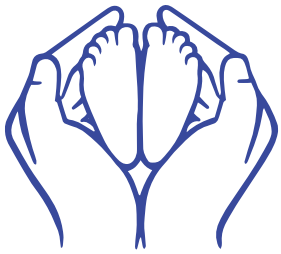
PRETERM BIRTHRATE

Oregon's preterm birth rate of 9.0, while less than the national average of 10.4, was the highest that Oregon has seen in the past 10 years of reports and the rate for American Indian/ Alaska Native Oregonians was 1.3x higher at 12.9.

3

INFANT MORTALITY

The infant mortality rate in Oregon has been decreasing over the past decade and was 4.5, compared to the national average of 5.6 though similar disparities were seen with the infant mortality rate among babies born to Black women and birthing people being 1.9x higher at 8.5.



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LOW-RISK CESAREAN RATE

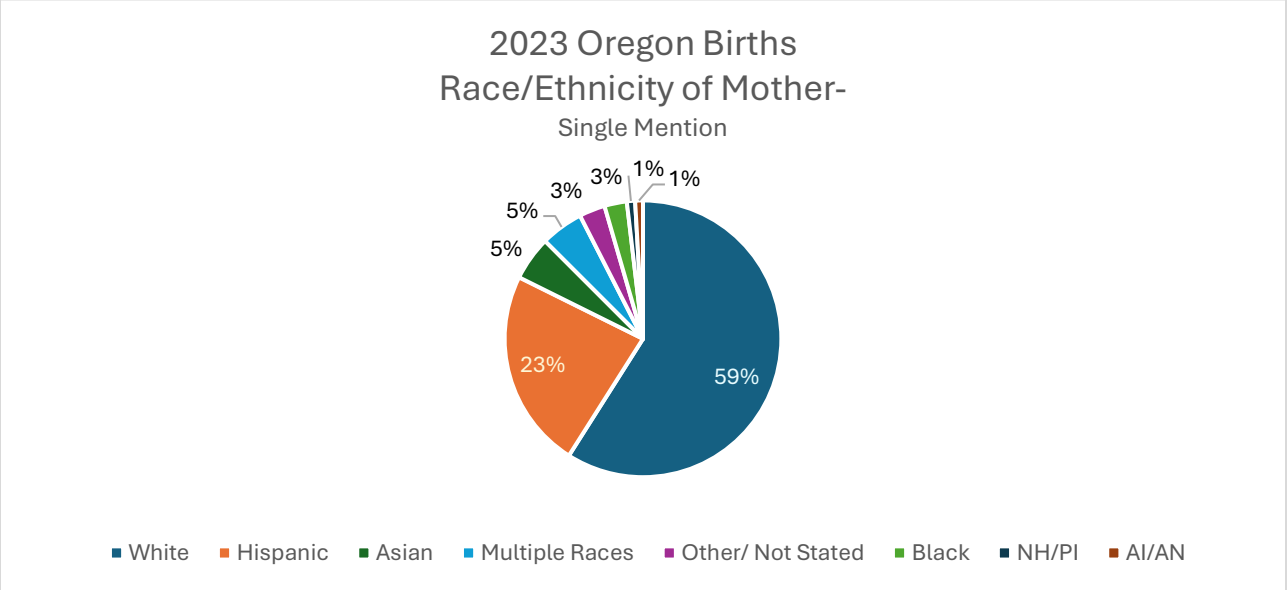
The rate of low-risk cesarean births was 24.0 percent which was lower than national average of 26.6 percent in the 2023 report and has improved since the last report.

5

VULNERABILITIES

The leading causes of maternal mortality in Oregon are mental health conditions and substance use disorders.

Finally, the maternal mortality rate in the March Dimes report was also lower than national average, but higher than the last report. Over the past 10 years, the number of maternal deaths in Oregon has ranged from 4 to 12 per year though it is thought to be undercounted due the way these deaths are identified. The Oregon Maternal Mortality and Morbidity Review Committee, established in 2018 and made up of governor appointed people from multiple roles, reviews these tragic events to identify factors that contribute to the deaths, sharing the findings with the public through biennial reports. The leading causes of maternal mortality in Oregon are mental health conditions and substance use disorders.



Source: https://shorturl.at/zTOS9

The Oregon Perinatal Collaborative

The Oregon Perinatal Collaborative (OPC) is Oregon's Perinatal Quality Collaborative (PQC). Each state in the US has a PQC that works to improve maternal and infant health outcomes through quality improvement. The OPC was established in 2012 and relied on volunteer leadership and cyclical grants until 2023 when funding for core staffing was secured through the Oregon legislature. The OPC Governing Board and Steering Committee include representatives from health care organizations, hospitals, public health, community-based organizations and advocacy groups and are responsible for prioritizing and monitoring the work of the OPC. The OPC creates and implements quality improvement initiatives and programs with birthing hospitals and other partners. In 2025, 25 hospitals will complete the Severe Hypertension quality improvement initiative that started in 2024, ongoing programs to support Critical Access Hospitals and improve community birth to hospital transfers will continue, and workgroups will begin to address newborn resuscitation and substance use disorders in pregnancy.

Key Findings

Several common themes quickly emerged in our visits with Oregon birthing hospitals. Across the state, hospitals are faced with a range of staffing challenges, inadequate reimbursement for complex care, and increasing patient needs both clinically and socially. In rural areas, hospitals face unique challenges related to additional financial pressures, maintaining acute care skills, and navigating transfers to higher-level care with limited resources. The hospitals we visited consistently pointed to structural, system-wide issues that urgently need attention from health systems, policymakers, and other stakeholders to improve maternal and infant health in Oregon.

Key Challenges Facing Oregon Birthing Hospitals

- staffing challenges
- inadequate reimbursement
- increasing patient needs
- rural hospital challenges

All recurring themes from these visits are included in this report beginning with the most universal and continuing with those that were more specific to certain regions, settings, or roles. It should be noted that visits were to hospitals, and while maternal and newborn providers also shared information about prenatal and postpartum clinic and community-based care, this report is not intended to provide a full picture of perinatal care outside of the hospital.

Staffing

Birthing hospitals in Oregon are facing significant staffing challenges. Staffing issues were the most common concern shared and were present in every one of the 47 hospitals visited. Three areas of staffing concern were most prominent: workforce shortage, nurse staffing requirements, and establishing and maintaining nurse and provider knowledge and skills. While the nursing shortage was acutely felt in all parts of the state, issues with provider recruitment were more of a concern in rural areas.

Workforce Limitations

Hospitals, health systems, and clinics across the state are struggling to fully staff birthing units, prenatal clinics, and other positions that impact perinatal care.

Nurses

The nursing shortage is having a marked impact on hospital birthing units in Oregon. Hospitals reported that a significant number of labor-trained nurses retired or left the field during and after the covid-19 pandemic, exacerbating the already serious shortage. Many hospitals in the state are still struggling to fully staff nurses for their birthing units and some hospitals still have a high number of traveler nurses. Most hospital birthing units in the state are working with a large proportion of new nurses (with 2 years of experience or less) which has major negative impacts on the units.

Hospitals with a high proportion of new nurses report that they need to spend a large amount of time on training which leaves limited time for quality improvement and other projects. As many birthing units require nurses to not only be competent in the highly specialized area of labor management, but also triage, operating room circulation, and postpartum care of both maternal and newborn patients, it takes significant hours of initial training and years of practice to develop and maintain competency. These hospitals expressed concern about skill, experience level, and inadequate or inconsistent clinical response in their units, especially during night shifts (which have a higher proportion of new nurses). Training new nurses is particularly challenging in low-volume hospitals. Some small hospitals can send new nurses to higher volume hospitals for training and that has been helpful but also involves significant cost and staffing strain.

Some small and mid-size hospitals report challenges in retention of labor-trained nurses and described a cycle of resource-drain where they invest in training new nurses and then those nurses leave for multiple reasons, including higher pay and more consistent hours and experience at a higher volume hospital once trained. Competition for a limited pool of nurses is significant between hospitals, including between some hospitals within the same health system. Many small hospitals find it difficult to compete with rising nurse wages in larger hospitals.

Maternity & Newborn Providers

In conversations with Oregon hospitals about the central issues impacting care, provider staffing came up as a major issue for about half of Oregon's birthing hospitals. Obstetricians and Certified Nurse Midwives make up most maternity providers in urban and suburban areas while family practice physicians with obstetrics training are more common in small and Critical Access Hospitals. Family practice physicians with obstetrics training are essential to staffing many of Oregon's smaller hospitals as they can fill multiple roles and provide full family care to offset the low volume of births. A number of mid-size and large hospitals seem to be doing well with a combined CNM and obstetrician staffing model.

Most hospitals, health systems, and clinics outside of urban areas are struggling to hire and retain maternity care providers in their communities. This is especially pronounced in eastern and southern Oregon. The maternity provider staffing situation is dire in the smaller Critical Access Hospitals and presents an imminent threat of closure of birthing services in some of these hospitals. A significant number of hospitals are relying on high-cost locum physicians because they are unable to hire permanent staff. Some hospitals report that they have had a maternity provider position listing open for a year or more. Rural hospitals are struggling with both provider recruitment and retention.

Some areas of the state are also struggling to find newborn providers, (pediatricians, family practice physicians, and neonatal nurse practitioners) especially to provide hospital care for newborns during the delivery stay. These hospitals report that this problem is driven by productivity pressures on primary care providers and the challenges of frequent call shifts for low-volume, high risk scenarios for these providers that no longer exist for most of their adult primary care counterparts. There are several areas of the state where hospitals report significant concerns around network adequacy for pediatric providers in general.

The provider shortage in rural areas seems to be impacted by several different factors:

- Smaller number of providers willing to relocate to rural areas
- Decreasing number of family practice physicians with obstetric scope
- High number of positions open due to retirements with aging provider pool
- Housing shortage and gap between salary and cost of housing, especially on the coast and in the Columbia Gorge

Mental and Behavioral Health Workforce

Oregon communities need more mental health support from clinicians with perinatal specific training across the full continuum of care in the hospital, prenatal clinic, and community.

Social Workers

Hospitals reported an urgent need for social workers in the hospital, prenatal clinic, and community. Many hospitals and clinics have limited or no social work support and are scrambling

to provide referrals and resources without training or time for this additional work. Hospital social workers are needed to provide immediate support for people in mental health crisis and/or to support safe transition to the community for ongoing support and resource needs. The absence of social work support is especially challenging when there are increasing numbers of patients who arrive in the hospital with unmet basic needs such as housing. The lack of social workers adds significantly to the workload for both providers and nurses. The inadequate number of social workers (and other types of counselors) in the community means that referral times for counseling in almost all areas of the state were quite long (1-6 months).

Psychiatric Providers

All but 2 hospitals reported a need for more psychiatrists and psychiatric nurse practitioners, particularly those with training and experience in caring for pregnant and postpartum patients. In many areas of the state, maternity providers report that there is no patient access to psychiatric care outside of emergencies or limited provider-to-provider consultation. This lack of psychiatric providers leaves diagnosis and prescribing medications when needed during pregnancy, postpartum, and breastfeeding to maternity providers with limited scope, training, and comfort in this area.

Additional Workforce Limitations

Hospitals across the state also report staffing concerns beyond maternity and newborn specific positions that are impacting care. There are concerns about staffing respiratory therapists, anesthesia providers, radiologists, technicians, and front office staff. Concerns include both low numbers of qualified candidates, as well as ancillary positions being eliminated in some cases to address budget constraint.

Nurse Staffing Requirements

The new 2024 Oregon nurse staffing requirements have caused major strain for hospital birthing units and have been especially challenging for small hospitals. While nurses and administrators understand the important safety and quality intent of the new law, many report that it is incompatible with the birthing unit workflow which involves major fluctuations in census due to the unpredictable nature of birth.

Small and mid-size hospitals report that the nurse staffing law has required them to be overstaffed much of the time which has exacerbated already substantial financial pressures on these units. The smallest hospitals report that the nurse staffing requirements are simply incompatible with their volume when they may have one birth per week. Many nurse leaders in small and rural hospitals expressed concerns that the nurse staffing requirements will lead to closures of birthing services at Oregon hospitals.

Staffing & Quality Improvement

Hospitals consistently reported that staffing issues are a major barrier to having time to work on quality improvement, developing and updating protocols/orders, and drills and simulation. In many hospitals nurse managers are working on the floor when staffing is low, so they do not have time for other tasks. This is exacerbated by a trend statewide towards a reduction in protected time for quality improvement and other tasks besides patient care. Many hospitals report that quality improvement and practice support such as nurse educator positions have been cut or hours have been limited. OPC has seen a decrease in hospital capacity to engage in quality improvement, though interest and desire to participate is high.

Staffing & Closed to Admission

Several hospitals reported that not having enough staff on the unit increasingly results in closing to labor admissions and needing to transfer patients to other hospitals. In some part of the state this means that patients cannot count on giving birth at the location they planned. The new nurse staffing requirements have exacerbated this already challenging situation. In some areas of the state this has meant that low-risk patients are diverted to higher acuity hospitals solely based on staffing, not related to patient need, resulting in patient anxiety and inappropriate use of limited high-risk resources. For some patients this can mean that they end up giving birth far from their home community which presents significant financial and social challenges. In some small hospitals, simply having 1 labor patient and 1 postpartum patient at the same time means that they must close to further admission.

Staff Burnout

Reports of staff burnout were widespread across the state. Nurses and providers talked about the need for a healthier work environment with a more humane pace.

In some urban areas, staff also expressed significant concern for their safety due to patient and family behavior. In some small and mid-size hospitals people shared their stress and concern that there is no back-up capacity for staffing. For example, an obstetrician in a small hospital broke her arm and the birthing unit simply had to close to admissions until they could find temporary coverage by contracted providers (usually referred to as locum coverage).

> ***"We are overworked, sleep-deprived, burnt out, traumatized."***
>
> Obstetrician in an urban hospital

> ***"We are constantly being asked to do more with less."***
>
> Nurse Manager in a rural hospital

Worsening Health

All of Oregon's 47 birthing hospitals shared concerns about worsening baseline health status and increasing acuity among pregnant patients. Pregnant people have historically been a relatively healthy patient population, but they are increasingly getting sicker. This shift towards worsening health among people of childbearing age is consistent across the state and includes an increase in chronic health conditions such as diabetes and hypertension among young patients.

> ***"I feel shocked now if we have a low-risk patient."***
>
> Obstetrician in a suburban mid-sized hospital

Experienced nurses and providers report increasing numbers of patients with more clinical and social risk factors who need more complex, labor-intensive care. Hospitals are seeing fewer low-risk patients, more patients with preexisting conditions, and unmet basic needs like housing. For most hospitals their census isn't going up, but acuity is, which means more nurse and provider hours are needed per patient without any increase in payment. This increased need for complex care exacerbates already existing staffing challenges, needs for expensive equipment, and "boarding" issues where the hospital does not have an adequate number of beds or rooms to care for the number of patients needing care. Hospitals are also seeing higher acuity newborn cases that stem from maternal complications, comorbidities and the high prevalence of prenatal SSRI use.

Common conditions complicating pregnancy in Oregon:

Hypertension	**Advanced maternal age**	**Homelessness**	**Obesity**	**Food insecurity**
Diabetes & gestational diabetes	**Substance use disorders**	**Anxiety & depression**	**Poverty**	**Complex mental illness**

The worsening health status of pregnant people in Oregon puts a particular financial strain on small and rural hospitals because it negatively impacts their census, revenue, and resources. The financial burden of providing the level of support needed is not sustainable for the small number of patients and the financial loss when transfer to a higher level of care is necessary for the patient's condition for even a handful of patients can be consequential.

Financial Strains

The hospitals we visited reported that the financial strain on prenatal clinics and hospital birthing units is substantial and disproportionate to many other areas of medical care. Low-volume birthing units are unable to achieve a net profit, and many of them operate at a loss, while even high-volume birthing units struggle with financial sustainability. Some providers and nurses pointed out that pregnancy, birth, and postpartum care are undervalued financially even though they provide the highest rate of economic return in terms of population health benefits.

Pregnancy, birth, and postpartum care are paid for primarily in two parts in most settings:

- The global obstetric fee – covering prenatal, birth, and postpartum care and paid to a provider group or an individual provider
- The Diagnosis Related Group (DRG) facility fee – covering the cost of staff, services, and materials in the hospital and paid to the hospital

Many of the people we spoke to pointed out that current reimbursements are inadequate to cover the costs of care. The global obstetric fee payment structure, which was based on low-risk pregnancy and birth care all being provided by the same provider or provider group, does not cover the costs of complex, high acuity patients that need time-intensive care across a range of providers, practices, and facilities. For example, in the case of a pregnant person with substance use disorder, mental health issues, and a medically complicated pregnancy who needs to be seen in her home community and at a maternal fetal medicine clinic in another city by a CNM, a social worker, a peer support specialist, and a Maternal-Fetal Medicine physician, the infrastructure and personnel needed to support her needs in her home clinic far exceeds the amount paid by the global and the rest of the care must be charged outside the global, and in some cases is not covered. This means that, in many places, needed services are simply not provided. Hospitals expressed concern that current payment structures penalize rural providers, clinics, and some hospitals that are frequently providing comprehensive and complex prenatal care but are unable to bill for the birth when the patient needs to give birth at a higher acuity hospital. The low global obstetric fee is an issue with both Medicaid and private insurance payers.

Similarly, the design of hospital reimbursement through DRG facility fee payment does not adequately address the cost of the infrastructure needed to care for patient needs, especially for Medicaid patients. This is especially concerning when patients are in the hospital for an extended period of time for expensive monitoring and care or because they cannot be safely transitioned to the community due to inadequate housing or support. The DRG facility fee payment can negatively impact all hospitals but especially small hospitals and those with higher rates of unreimbursed needs, as every unit must provide a baseline level of resources and support for birth and this investment is difficult to cover with low volumes and low reimbursement. The unpredictable timing of birth with resulting peaks and lulls in hospital volumes combined with the increasing productivity pressures on hospitals make it hard to staff units, especially during peaks of births.

Rural Strengths & Needs

Oregon's small, rural, and critical access hospitals provide essential services to birthing families in their communities, often with limited resources. Policymakers are increasingly recognizing that the pregnancy, birth, and postpartum services they offer are crucial to maintaining vital rural communities. These hospitals have unique strengths and needs that were highlighted during our visits.

> ***"We do a really good job with what we have but there is a lot we don't have!"***
>
> Nurse manager in a frontier Critical Access Hospital

Strengths

Rural hospitals in Oregon are deeply connected to the communities they serve and are innovative in the strategies they use to provide essential care with limited resources. Nurses and providers in these hospitals maintain a high level of skill often across a wide range of roles. Labor trained nurses often work in the emergency department or the medical surgical department as well and fill in throughout the hospital as needed. Nurse managers in these hospitals are often working on the floor as well as providing administrative support. Family practice physicians in rural hospitals often also play multiple roles including primary care, maternity care, pediatric care, surgery, and emergency medicine.

Need for Connection & Support

Rural hospitals, and especially Critical Access Hospitals (CAH) shared that they need more connection with each other and more support and resources for quality improvement and education. Birthing units, providers, and nurses in these hospitals are dealing with unique challenges and they want peer support to combat isolation and to learn from each other. Multiple Critical Access Hospitals independently suggested that OPC create a regular meeting for this purpose and in collaboration with several CAH leaders and the Office of Rural Health we held the first quarterly CAH maternal and infant health meeting in November of 2024.

Establishing & Maintaining Skills

Small hospitals are focused on building and retaining acute care skills without regular clinical practice. Every birthing hospital must maintain skills for responding to potential childbirth emergencies from preeclampsia to postpartum hemorrhage, emergency cesarean delivery, and newborn resuscitation. Maintaining these competencies in settings with low birth numbers and rare complications requires significant resources and time for staff education and simulation. This

burden is a major concern for low-volume hospitals and is a driver of the threat of closure of birthing units.

Small and rural hospitals want and need more support for education and simulation. Some of these hospitals have significant support for simulation from the hospital or health system but most do not. Several hospitals suggested that simulation support could be an important role for the Oregon Perinatal Collaborative, and we are now studying the creation of a mobile simulation unit similar to one already established in Iowa to meet this need.

Maintaining critical skills for surprise high-risk cases (such as preterm labor with imminent birth) is especially important because rural hospitals sometimes must stabilize and care for patients that are well outside of their risk guidelines while they arrange for safe transfer to a higher level of care. This can be especially important in some parts of the state where winter weather may delay or prevent transfer at times.

Easy access to continuing education and training for both maternity care and primary care nurses and providers who care for pregnant patients is needed as well. For example, with lower volumes of pregnant patients compared to overall patient volume and consistently evolving guidelines, teams caring for both pregnant and non-pregnant patients with diabetes or hypertension need access to timely information on updates for needs of pregnancy-specific care to ensure the appropriate protocols and orders are used.

Consultation, Referral & Transfer

Rural hospitals consistently shared concerns about barriers to high quality consultation, referral, and transfer to a higher level of care when needed. Many of their concerns were shared by maternal Level I and Level II hospitals across the state, not just those in rural areas. These hospitals regularly need to refer or transfer pregnant, postpartum, and newborn patients to a higher level of care but face a series of challenges to smooth and timely referral and transfer. Transfer times are frequently longer than might be understood in the community and commonly range from 2 to 8 hours. Delays in transfer to an appropriate level of care are a major safety concern and can be associated with preventable morbidity and mortality.

Transfer

Hospitals report that Level III and Level IV receiving hospitals are closed to admission/transfer more frequently which has reduced the availability of timely transfer. There are significant flaws in transfer systems and communication pathways. Some providers described experiences of calling around for hours trying to find a hospital that could accept a patient. Others described having to transfer patients to hospitals that were much farther away than anticipated, making the transfer a bigger hardship for the patient and family. Winter weather, fires, and road closures were a significant barrier to transfer in some parts of the state.

Hospitals shared an even greater level of concern about current barriers to newborn transfer than maternal transfer. They noted increased delays with neonatal specific transfer teams in the

Portland area. One hospital reported that the wait time for a transfer from their hospital can vary from 1.5 to 8 hours depending on availability.

Many providers at rural and Level I hospitals expressed frustration at a lack of understanding from receiving providers at Level III and Level IV facilities about their capacity, resources, and needs around transfer. They shared about common experiences of getting pushback from receiving facilities about whether a patient actually needs a higher level of care and expressed a desire for receiving providers to believe their assessment about what is beyond their capacity or skill. At the same time rural providers and nurses also shared about times that they felt confident about keeping a patient at their facility but were required by the hospital or health system policy to transfer a patient.

There was a desire for a more thoughtful approach to ensuring that patients get the level of care they need while maximizing local care and recognizing that all locations need to increase their skill with higher risk care as the health of the pregnant population declines. The providers and nurses at rural and Level I hospitals are asking hard questions about how to balance the needs in their community, safety, and limited resources in their own hospitals.

Consultation & Referral

There is a major need for improvements in consultation and referral for high-risk pregnant people to Maternal-Fetal Medicine providers, not just in rural areas but in cities outside of the I-5 corridor as well. Communities across Oregon have significant numbers of high-risk pregnant patients but, in most of the state, those patients need to travel 1 to 3 hours for Maternal-Fetal Medicine (MFM) appointments. Even in a population center like Bend, maternal fetal medicine access is limited to a visiting doctor one day per month.

Travelling for MFM visits is a great financial burden for patients, many of whom have transportation issues. There is a need for greater access to consultation and co-care relationships between local clinics and MFM practices in population centers. There is a desire for MFM practices to have regular appointment times in smaller cities once a week or once a month to reduce patient travel burden.

Additional Themes

While some themes were present in all or most hospital visits, there were other significant themes that were less universal but still impactful for understanding birth in Oregon and Oregon's birthing hospitals. The following themes illustrate important problems that need attention but are more specific to certain regions, settings, or roles.

Divert/Closed to Admission

Portland metro area hospitals are frequently on divert/closed to admission due to staffing issues, most commonly not enough nurses. This is a source of patient dissatisfaction, significant stress for providers who spend significant time calling around to find a hospital and accepting provider to send their patients, delays in care, and tension between hospitals in the metro area. Rural and non-metro hospitals are concerned about the difficulty they are experiencing transferring patients to a higher level of care when these receiving hospitals are often closed to admission. Nurses and providers expressed concern about patient safety and delays in care when patients are moved around. A number of hospitals asked a version of this question:

What is safer, going to a hospital that is at or beyond a staffing guideline (but not beyond staff assessment of their capacity) or interruption in a care plan and potential delay in receiving care?

There was a common concern that the nurse staffing requirement sometimes forces hospitals to go on divert unnecessarily. Some Portland metro hospitals requested a convening on the divert issue to make a coordinated plan for improvement. The OPC had convened such meetings during the COVID pandemic and can do so again.

The Level III and IV NICUs had the greatest concern about being closed to admission because they need to have space available for newborns that need the highest level of care. These NICUs shared that they need to have a process (and insurance coverage) to transfer less acute newborns to lower level NICUs in order to have beds available for higher acuity newborns. Level IV NICUs find themselves at or beyond capacity with increasing regularity.

Language Needs

A significant number of hospitals reported major concerns about unmet language needs for their pregnant patients. Unmet language needs were most significant in east Multnomah County, Hermiston, Pendleton, and agricultural communities in the Willamette Valley. Many sites shared that they are experiencing significant limitations with telehealth interpreters. Some sites described concerns about unintended consequences from the interpreter requirements in Oregon statute that they think limit access to interpretation. There was a strong desire for more Spanish-language providers and nurses rather than interpreters to improve the quality of care. Hospitals shared that it

has been especially challenging to find interpreters for the following languages: Mayan dialects, Pacific Islander languages, Amharic, and Haitian Creole.

Providers expressed concern that pregnant people with language needs don't get the same level of care even with well-meaning providers. Providers need additional time in prenatal and postpartum visits when an interpreter is involved but many systems do not provide or allow for this, and one large health system recently removed the additional 15 minutes of appointment time that had been allotted for interpreter visits.

Cesarean & Vaginal Birth After Cesarean (VBAC)

Providers and nurses in Oregon's low-volume hospitals are concerned about maintaining competency and response time for cesarean deliveries, especially emergency cesareans. Family practice physicians expressed a desire for a program for them to rotate into a larger hospital (maybe once a year) to gain more experience and maintain skills. Many hospitals report new challenges in trying to reduce or maintain their NTSV cesarean delivery rate with some confusion about what is driving the rate.

Many areas of the state have no access to Vaginal Birth After Cesarean (VBAC). In fact, there is no access to VBAC anywhere in eastern Oregon (St. Charles - Bend in central Oregon is the only hospital east of the Cascades with this option). The primary cesarean rate is a significant safety concern in some communities without VBAC access because of the increasing risk of placenta accreta and surgical complications with each cesarean and potential need for delivery in a higher acuity setting after multiple cesareans.

Community Birth Transfers

There has been notable improvement in hospital relationships with community birth midwives and smooth community birth transfers in most parts of the state. There is significant engagement with the existing OPC Community Birth Transfer Partnership (a statewide community birth to hospital transfer improvement program) and there was new interest in the program among hospitals just learning about it in the OPC visits. Hospitals in the mid-Willamette valley and Klamath Falls reported significant tensions and safety concerns related to community birth transfers. The hospitals in these areas want support to improve relations and safety of community birth transfers.

Medical Distrust

Some hospitals reported a high level of distrust in the medical system and health care providers in their community. They described high levels of refusal of Vitamin K prophylaxis, Hepatitis B vaccination, and oxytocin prophylaxis. Some hospitals also reported a high level of mistrust of the Family Connects postpartum home visiting program. Medical mistrust was most concentrated in Lane County and southwestern Oregon.

Newborn Resuscitation

Many hospitals shared concerns about skills and team coordination for newborn resuscitation. Hospitals with a high number of new nurses, new respiratory therapists, and a decrease in pediatric providers in their community who provide hospital care to newborns were especially concerned. OPC is in the process of creating a newborn resuscitation improvement initiative in response to this concern.

Access to Care

Access to prenatal care, and primary care, are significant issues in much of the state, especially in the Portland metro area. There were a number of reports that is difficult to get patients scheduled for prenatal care in the Portland metro area due to both administrative and provider staffing issues. In many clinics it is challenging even to get existing patients scheduled, not just new patients.

There were a range of CCO and insurance portability issues impacting access to care across Oregon. These were most pronounced in areas where neighboring counties had different CCOs and in border areas (especially on the California border). For example, for many people living in Tillamook County, the closest care would be in Lincoln County but the CCOs are county-specific, so these people must travel 1 hour or more to access care.

Supplies & Equipment

Some of Oregon's small and rural hospitals shared about significant concerns and financial barriers related to supplies and equipment. It is cost prohibitive for some of these hospitals to have equipment that is considered standard such as central monitoring for fetal heart tones. They also expressed concerns about the high cost of some disposable supplies that expire that they need to purchase repeatedly but generally discard without using (such as intrauterine vacuum devices for hemorrhage).

Health Literacy

Some hospitals expressed concern about having the time, skills, and materials needed to meet the needs of patients with low literacy and low health literacy. Concerns were especially pronounced for patients with need for a language interpreter as well as low literacy.

Drivers of Maternal Morbidity & Mortality

The Oregon Maternal Mortality & Morbidity Review Committee and the Centers for Disease Control have both identified key drivers of preventable maternal morbidity and mortality. In Oregon (and across the US) the most significant drivers of preventable maternal mortality and morbidity are mental health conditions, perinatal Substance Use Disorders (SUD), pregnancy-related hypertension, and postpartum hemorrhage.

In our visits we spoke with each birthing hospital about these 4 drivers of maternal mortality and morbidity to understand the current state of care and to identify needs and areas for improvement. During these conversations it became clear that we also need to include a 5th driver of maternal mortality and morbidity: poverty and social determinants of health. All the other drivers, but especially mental health conditions and substance use disorders (which are often intertwined), are deeply impacted by poverty, unmet basic needs, and other social determinants of health.

This section outlines the current state for each major driver of maternal morbidity and mortality and the key resources and interventions needed for improvement.

Poverty & Social Determinants of Health

Current State

All Oregon birthing hospitals shared concerns about an increase in unmet basic needs such as housing, transportation, food, and social connection among pregnant people. Across the state, providers and nurses shared about how hard it is to provide appropriate care and referrals for patients with complex needs when they have limited social work support and limited appointment time, and the referral resources aren't able to meet the volume of need in their communities.

Poverty is having major impacts on maternal and newborn health and healthcare in Oregon. Hospitals report substantial housing and food insecurity and transportation limitations across the state. These issues were aggravated by wildfires in some parts of the state. There is a lack of affordable housing in every part of the state and wait lists for existing affordable housing are often too long for pregnant people to get housed before the birth of their child.

There are high transportation needs in many areas of the state particularly in some rural areas where the OHP-covered transportation service providers will not allow car seats, infants or children, making the service inaccessible for many pregnant and postpartum people. Providers noted that pregnant people experiencing houselessness, transportation issues, mental health conditions, and/or perinatal SUD are less likely to access prenatal care and get screenings and preventative health care.

Providers and nurses across the state expressed concern about increasing social isolation among pregnant people and new parents. Many expressed alarm at how many new parents had no social

support system and lack basic life skills such a planning meals or making appointments. They shared that there has been a marked increase in social isolation since the covid-19 pandemic.

Almost every hospital that we visited described an urgent need for more social work support in the hospital for pregnant and postpartum people and in prenatal clinics. Many hospitals and clinics have limited or no social work support and are scrambling to provide referrals and resources without training in this area or time for this additional work. Current structures mean that there is inadequate staff, time, or training to provide appropriate support for the increasing number of patients with high social needs. Providers report spending prenatal visits focused on referrals for basic needs and running out of time for important prenatal care.

> ***"We need more social workers!"***
> Many nurses and providers across the state

Some hospitals and clinics have case managers, navigators, Community Health Workers (CHWs) or other alternate staff that fill some of the needed roles, but they share that they still need social work support as well. Hospitals in rural areas report that they have major challenges recruiting social workers. Some hospitals reported a need for more connection with and capacity from Family Connects, Nurse Family Partnership, and other home visiting programs.

Ways to Address Poverty and Social Determinants of Health Needs Identified by Hospitals

- Increase social worker workforce
- Increase social worker, CHW, or other support role access in prenatal clinics & hospitals
- Increase low-income housing
- Improve transportation resources that are accessible to people with infants and children
- Increase accessible food resources
- Policy and community solutions to social isolation
- Training on trauma-informed care for providers and nurses
- Increase home visiting program capacity including Spanish-language visits
    - Training for prenatal providers and staff on how to promote home visiting programs
- More postpartum support groups
- CCO portability so people can access care where it is available

Mental Health Conditions

Current State

Hospitals across the state reported an increased incidence of anxiety and depression among pregnant and postpartum people and a lack of resources to provide appropriate care for people with complex mental health conditions. Maternity providers are concerned that they are seeing many pregnant patients with mental health diagnoses who do not have a mental health provider. Some hospitals that are tracking this information report that about 1/3 of pregnant patients take

and SSRI medication. Providers and nurses report they are challenged to care for patients who have mental health conditions and substance use disorders. They also note that they are seeing mental health issues that are aggravated by increased social isolation and trauma.

There is increased awareness among providers and nurses about Perinatal Mood and Anxiety Disorders (PMAD) and most hospitals and clinics across the state are now routinely screening for them. A number of providers and nurses expressed concern about screening for PMAD without adequate referral resources or time in the visit to address positive screens. Pediatric providers are essential for postpartum mental health screening because infant visits are more frequent and continue past 6 weeks postpartum. Some hospitals and health systems have implemented a 2 week (or earlier) maternal postpartum visit which has been helpful for postpartum mental health screening and referral.

Mental health services are inadequate in almost all areas of the state, and they are very limited in most rural areas. Some prenatal clinics have integrated behavioral health but find that the need is more than they can cover and they are unable to continue seeing patients past the initial postpartum period. Referral to counseling is a slow process in all parts of the state, even for time-sensitive PMAD, with wait times of 1-6 months depending on the community. Referral to psychiatric providers is even more limited and is simply unavailable outside of emergency situations in some parts of the state. Many areas of the state only have access to psychiatric providers via telehealth which has significant limitations for some patients. Some maternity providers report that they need to admit a patient to the hospital in order to get them psychiatric care.

In this context of limited mental health providers, many maternity providers are prescribing and managing mental health medications at the edge of their scope and comfort level because there is no one else to provide the care. Many primary care providers are not comfortable continuing to prescribe established medication treatment during pregnancy and postpartum which further aggravates the situation. Maternity and primary care providers need easier access to perinatal-specific psychiatric consultation and referral to provide appropriate care. Some providers were already aware of the Oregon Psychiatric Access Line but many were not. OPC shared this resource with at least 20 hospitals, though it should be noted that there is not a perinatal specific line/ resources.

Almost every hospital that we visited described a critical need for more social workers, counselors, and psychiatric providers to meet the needs of pregnant and postpartum people with mental health conditions. There are a high number of unfilled mental health positions in many parts of the state and in many hospitals with particular challenges recruiting social workers and psychiatric providers in rural areas. All areas of the state need more peer support services such as support groups for perinatal mental health. The Portland and Eugene areas have a higher concentration of peer support services but the need is still greater than the existing services.

In rural areas there is often only one behavioral health provider that provides SUD treatment services and cares for people with the full range of mental health needs. Providers and nurses shared with us that pregnant and postpartum patients with depression and anxiety often don't want to receive mental health care at these organizations because of high provider turnover and discomfort about receiving care in these organizations due to stigma or safety concerns.

Mental health conditions have significant impacts in hospital birthing units. Hospitals are challenged to provide appropriate care and keep staff safe when they have laboring and postpartum patients in psychosis and when patients or family members have abusive, threatening, or violent behavior. Some nurses reported that the increase in significant postpartum anxiety is impacting staffing needs during the hospital state.

Mental Health Needs Identified by Hospitals

- Increase social worker workforce
- Increase access to social worker, CHW, or other support role in prenatal clinics & hospitals
- Increase psychiatric provider workforce
- More culturally specific providers and resources
- Provide PAMD training to mental health workers
- Provide training on psychiatric medications in pregnancy and breastfeeding to primary care & maternity providers
- Mental health training for hospital nurses
- Training for lower acuity hospitals on caring for people with severe postpartum depression including when to transfer to higher level care
- Training on trauma-informed care
- Create an intensive outpatient program (IOP) and inpatient mental health care options that will support postpartum patients in having their baby with them and address perinatal specific needs, such as bond/attachment.
- Increase home visiting program capacity and Spanish language home visiting
- Provide training for prenatal providers and staff on how to promote home visiting programs
- More postpartum support groups & peer support
- Create perinatal-specific Oregon Psychiatric Access Line consult service
- Best practice and system support for caring for patients who are in psychosis or crisis during labor including access to a psychiatric nurse who can come to the birthing unit
- CCO portability so people can access care where it is available
- Improve mental health payments from private insurers

Perinatal Substance Use Disorders

Current State

Perinatal Substance Use Disorders (SUD) were the most common area of clinical concern during the hospital visits with all but a handful of hospitals sharing that it was a key concern for them. About half of the hospitals reported a notable increase in patients with perinatal SUD in recent years. Many hospitals, in both urban and rural areas, reported an increase in walk-in patients to birthing units with active substance use who did not receive prenatal care.

Across most of the state there are a limited number of providers and nurses with training, experience, and comfort caring for pregnant and postpartum people with SUD. There are

significant concerns from staff and from people with lived experience about bias against people with perinatal substance use disorders. There are tensions between harm reduction concepts and hospital needs for uniform policies. Hospital providers often do not know the long-term outcomes for patients they see in the hospital with substance use disorders and the lack of knowledge of successful recovery stories can contribute to bias and staff burn out caring for the complex needs of families impacted by SUD.

There was a huge outpouring of gratitude for Nurture Oregon and Project Nurture sites where they are available combined with concern about their sustainability as most sites are grant-funded. There was a strong desire for more integrated, wrap-around, perinatal SUD treatment programs everywhere in the state! Two large hospital systems in the state are in the process of implementing perinatal SUD quality improvement measures.

Many areas of the state have few or no providers who are comfortable offering Medication for Opiate Use Disorder (MOUD) in pregnancy and no local treatment programs for pregnant people. The availability of MOUD has improved some with the dropping of the X waiver for prescribing buprenorphine. There are no local options for inpatient treatment for pregnant people or people with infants and children in most areas of the state. Separation from infants and children is a major barrier to treatment. Hospitals noted that caring for people with perinatal SUD requires more nurse and provider hours without an increase in payment. Providers and nurses shared that it is challenging to access the resources patients need during the birthing hospitalization so that the person is set up with treatment, housing, etc. before discharge.

There are a wide range of SUD screening and urine toxicology screening practices across the state with a desire for more evidence-based recommendations and consistent practices between hospitals. There are tensions in many hospitals between maternal and newborn providers about the use of universal verbal SUD screening versus urine toxicology screening.

Most hospitals in the state have implemented Eat, Sleep, Console to care for newborns who have been exposed to opiates and find that it is effective. Several hospitals report that they are experiencing more challenges caring for fentanyl-exposed newborns and that the Eat, Sleep, Console model can be challenging when the mother or birthing person is withdrawing and unable to provide much newborn care. A small number of hospitals have not implemented Eat, Sleep Console and may need support to do so.

Nurses and providers shared that they have a strong desire to be able to contact a support organization prenatally to plan for safe care of babies born to parents with active substance use. Many report that they seek this type of support from DHS and are frustrated that DHS cannot provide this resource. The relationship with DHS is good in some areas of the state but there are significant concerns about DHS capacity, responsiveness, and bias in other areas. Concerns about DHS capacity and responsiveness are highest in eastern and southern Oregon where DHS staffing is low.

Lack of CCO portability presents a particular challenge for people with perinatal SUD who may be receiving treatment in one location but be required to travel long distances to get medical care for themselves or their children because the treatment program is distant from their home CCO coverage area.

The most common substances of concern in perinatal SUD are fentanyl and methamphetamines (often in combination). Methamphetamine use alone is more common in some areas of southern Oregon. Cannabis use in pregnancy is widespread and a growing concern for providers and some pregnant people. Hospitals tracking use in different areas of the state reported that close to half of pregnant patients are using cannabis. Concerns about potential infant withdrawal symptoms from kratom use were reported on the coast.

Perinatal SUD Needs Identified by Hospitals

- Increased payment for perinatal SUD care (global OB fee cannot pay for complex integrated physical and behavioral health that is needed)
- Expansion of Nurture Oregon and Project Nurture sites
- Sustainable funding for Nurture Oregon and Project Nurture sites
- Dedicated social worker in prenatal clinics and on birthing units
- More housing resources
- More peer support and doulas for people with SUD
- Training to reduce bias for providers and hospital nurses
- Training on best practices for SUD screening and urine toxicology
- Training for providers to manage MOUD and hospitalization for medication induction
- Training on care of fentanyl exposed infants
- Training on substance use and breastfeeding
- Training on Eat, Sleep, Console for hospitals that use it rarely or have not yet implemented
- Training on appropriate opioid prescribing after cesarean section
- Outreach to help people in active substance use get into prenatal care
- System and support for prenatal family care planning with capacity for ongoing follow-up
- More local treatment programs for pregnant and postpartum people
- More residential treatment options for pregnant people and parents with infants & children
- Good consultation with addiction medicine and psychiatric providers for maternity providers especially in rural areas
- CCO portability for people traveling for SUD treatment and/or due to housing instability
- Training or guidance on balance of harm reduction and safety during hospital stay
- Quit resources and safety information related to marijuana use in pregnancy & breastfeeding
- Perinatal SUD best practice updates

Pregnancy-Related Hypertension

Current State

Most Oregon hospitals have done significant quality improvement work in this area and feel confident with treatment of pregnancy-related hypertension and preeclampsia. Increasing rates of hypertension in the pregnant population mean that nurses and providers are gaining more experience because of regular, recurring practice. Most hospitals in the state have done some amount of quality improvement work related to severe hypertension and preeclampsia.

Many hospitals already track timely treatment of severe hypertension, the primary process measure for quality improvement in this area. Some hospitals have developed a nurse-initiated order set to facilitate timely treatment, but providers and nurses are not always aware of this and use can be inconsistent. Some hospitals have already established a process for a postpartum blood pressure check within 3 days of hospital discharge for people who are at higher risk, but most hospitals still need work to implement this improvement measure.

Identification and timely treatment of severe range blood pressures in postpartum patients who present to the emergency department is a primary area of concern. Some providers and nurses would like more education on medications for severe hypertension. Some hospitals with multiple obstetric practices, older providers, or higher number of locum obstetricians struggle to establish consistent practices for treating severe hypertension between providers. Some providers and nurses shared concerns about overdiagnosis of hypertension leading to unnecessary inductions and other interventions.

Hypertension Needs Identified by Hospitals

Many of the pregnancy-related hypertension needs identified by hospitals during these visits have been incorporated into the current Oregon Perinatal Collaborative Severe Hypertension Initiative. 25 hospitals are currently enrolled in this initiative.

- Population-level hypertension prevention
- Protected time for quality improvement
- Insurance coverage for and systems for smooth access to automated blood pressure cuffs for home monitoring
    - Especially challenging to provide BP cuffs when need is identified during delivery hospital stay rather than prenatally
- Nurse and provider education especially related to:
    - Blood pressure medications
    - Magnesium for seizure prophylaxis
    - Nurse-initiated order sets
- Support for simulation/drills including:
    - Pre-scripted drills
    - Drills for preeclampsia and seizures

- Easy access to high-quality consultation
- Support for implementation of postpartum blood pressure checks
- Insurance coverage for postpartum blood pressure checks
- Data support
- Support for improvement work with emergency departments including algorithm
- Sample nurse-initiated order sets

Postpartum Hemorrhage

Current State

Most hospitals have done significant quality improvement work in this area and feel confident with hemorrhage response. Most hospitals have integrated both TXA and the JADA (a low-level vacuum device inserted into the uterus to increase pressure on the uterine myometrium and compress blood vessels to slow bleeding) though they have varying levels of confidence about its use. Some hospitals are seeing an increase in rates of hemorrhage and are unsure about the cause at this point. Some are looking at a possible association between higher rate of inductions and hemorrhage. Low volume hospitals would benefit from simulation support for maintaining postpartum hemorrhage skills.

Access to Blood Products for Postpartum Hemorrhage

Most urban hospitals report that they are satisfied with their access to blood products for postpartum hemorrhage. Most small and rural hospitals have concerns about access to necessary blood products for postpartum hemorrhage especially when a massive transfusion protocol is needed. Small and rural hospitals are focused on using medications early for postpartum hemorrhage to minimize need for blood products. Access to platelets is a particular area of concern for small and rural hospitals as they do not have platelets in house.

The time it takes for small and rural hospitals to get additional blood products when needed is a significant safety concern. Time to receive additional blood products varied from 30 minutes to 3.5 hours depending on the hospital. A significant number of hospitals shared times of 2 hours and more. Winter weather has caused delays in getting more blood in some areas. There were particular concerns related to access to more blood products in northeastern Oregon. Hospitals in that region reported that there are no platelets in the whole corridor from Tri-Cities, Washington through Northeastern Oregon, to Nampa, Idaho.

The time it takes for some Portland metro area suburban hospitals to receive more blood products varies widely depending on traffic. One hospital reported that additional blood could take 20 minutes to 2 hours.

Postpartum Hemorrhage Needs Identified by Hospitals

- Support for high quality hemorrhage simulation especially in rural hospitals
- Supply sharing among small hospitals for expensive supplies that expire (like JADA)
- Improved access to blood products for rural hospitals

State of Maternal & Newborn Quality Improvement in Oregon Hospitals

Hospitals, nurses, and providers across Oregon are doing important work towards maternal and newborn quality improvement (QI) but they need protected time, training, and support to give it more focus and maximize the impact. During the visits with Oregon's birthing hospitals, we were able to identify strengths and gaps in current quality improvement efforts.

The capacity for maternal and newborn quality improvement varies widely among Oregon's birthing hospitals. Individual hospitals and hospital systems that have more dedicated quality improvement and nurse educator positions and protected staff time for quality improvement have higher engagement in QI, more QI projects, more data-driven QI, and more satisfaction in being able to see improvements from QI efforts. Many Oregon hospitals do not have QI staff or protected staff time for QI. Even in sites that report larger quality departments in the hospital, there was often limited perinatal experience or direct support for birthing units. In these hospitals QI falls to unit nurse leaders who have very limited time to engage with this work. Time for quality improvement is especially limited in hospitals where the nurse administrator works on the floor without protected time for QI.

Some birthing hospitals in Oregon have very low engagement with perinatal quality improvement. These hospitals may track quality measures, often for regulatory purposes, and provide nurse and provider education and/or simulation training but they do not engage in specific quality improvement projects where an aim is identified, changes are tested, and improvement is measured. This is not due to a lack of interest in quality improvement and is based in lack of protected time, quality improvement training, and/or support from the hospital or health system.

Hospitals that are within a closed health system or have a high number of providers employed by the health system have an advantage in quality improvement as they may be able to require all parts of their care teams to participate in trainings and QI projects. Areas chosen for focus in maternal and newborn quality improvement are driven by the following factors: accreditation requirements; other regulatory requirements (including CMS Birthing Friendly Designation); health system QI priorities; and areas of conflict, concern, or poor outcomes.

Most Common Areas of Hospital Maternal & Newborn QI Focus

Topics are ranked by frequency:

1. Hemorrhage
2. Hypertension
3. Simulation/drills
4. Safe reduction of NTSV c-section rate
5. Decision-to-incision time & emergency c-sections
6. Team communication & shared decision making (ex. TeamBirth)
7. Breastfeeding
8. Updates to protocols & standing orders
9. Perinatal SUD
10. Newborn metabolic screening
11. Newborn resuscitation
12. Emergency department & obstetric complications
13. Skin-to-skin (general or O.R. specific)
14. Bilirubin screening
15. Gestational diabetes management
16. Elective inductions (including impact on c-section rate)
17. Social drivers of health screening
18. Oxytocin use
19. Newborn sepsis
20. Fetal heart rate monitoring

Summary of Needs Identified by Oregon Birthing Hospitals

The 2024 OPC visits with Oregon's 47 birthing hospitals give us a clear map of what is needed in our state to improve the health of Oregon mothers, birthing people, and babies.

Needs Identified by Oregon Birthing Hospitals

1. **Workforce development and retention**
    - Social workers!
    - Family practice physicians with obstetrics training
    - OB trained nurses
    - Psychiatric providers
    - Certified Nurse Midwives
    - International Board-Certified Lactation Consultants (IBCLCs)
2. **Improved access, systems, and relationships for consultation, referral and transfer**
    - Psychiatric and maternal fetal medicine consultation
    - Perinatal OPAL consult line
    - Telehealth support for specialized care such as newborn resuscitation
3. **Increased payment & payment reform**
    - Alternative to global OB that recognizes the hours and staff needed for complex, time-intensive care that involves range of providers, practices, and facilities
    - Anchor payments or other funding to keep small birthing units open that includes resourcing significant education/ simulation and weathering lulls in census.
4. **Simulation support**
    - Almost every hospital expressed a desire for more simulation and education support
    - Low-volume hospitals and hospitals that are not part of a larger hospital system especially need this support
    - Highest need for support with skills for shoulder dystocia, hemorrhage, surprise breech, emergency cesarean section, newborn resuscitation
5. **Partnership of small hospitals with larger hospitals for training**
    - Cesarean skills for rural family practice physicians
    - OB training for new nurses
6. **Expansion of Project Nurture and Nurture Oregon sites**
7. **Protected staff hours and dedicated positions for quality improvement and nurse education**

8. **QI toolkits, model policies, and sample order sets with adaptations for low-volume hospitals**
9. **Quality improvement support especially in these areas:**
    - Perinatal SUD
    - Newborn resuscitation
    - Safe reduction of NTSV cesarean
    - Induction
        - Concerns about excess inductions creating burden on already stressed systems and staffing and impacting ability to respond to acute care needs
10. **More access to in-person Spanish-language interpreters**
11. **More interpreters for Mayan languages, Pacific Islander languages, and Haitian creole**
12. **Telehealth support for emergencies like newborn resuscitation**

Oregon Perinatal Collaborative Response

These hospital visits have been incredibly useful for the Oregon Perinatal Collaborative, and we have already taken action based on the valuable input from our many partners across the state. We will continue to integrate this. As of December 2024, we have taken the following actions based on our learning from these hospital visits to improve maternal and infant health in Oregon.

OPC Actions in Response to Hospital Visits

- Developed and adapted OPC severe hypertension initiative to address specific concerns
- Integrated learning from these visits into the ongoing development of an upcoming HRSA-funded initiative in partnership with Comagine Health to improve care and outcomes for pregnant and postpartum people with substance use disorders
- Provided written comment and attended OHA Health Evidence Review Commission meeting to advocate for OHP coverage of automated blood pressure cuffs for pregnancy-related hypertension
- Created quarterly Critical Access Hospital maternal and infant health quality improvement meetings in partnership to provide a venue for peer support, education, and quality improvement assistance
- Initiated planning for a 2025 newborn resuscitation improvement initiative
- Provided policy recommendations to improve maternal and infant health to:
    - Senator Lisa Reynolds' team working on Momnibus legislation
        - Special focus on a bill for the 2025 legislative session to improve access to perinatal SUD treatment and expand Nurture Oregon, Project Nurture sites
    - The Oregon Health Authority
    - The Oregon Rural Practice-Based Research Network
    - Senator Wyden's team working on the federal Keep Obstetrics Local Act intended to prevent the closure of rural birthing units
- Added a family practice physician and a CNM serving rural areas to OPC governing board
- Initiated program development and budget planning for a future OPC mobile simulation unit
- Began planning for webinar serries to meet identified continuing education needs
- Initiated planning for a convening on identified issues related to divert/closed to admission and transfers

Key Recommendations

In an effort to maximize the impact of this project and the collective knowledge that has been shared with us, we have prepared a set of key recommendations for hospital leadership, policymakers, payers, and funders for actions to improve maternal and infant health in Oregon.

Recommendations for Policymakers

1. Prioritize investment in maternal and infant health at the state and county level
    - Pregnancy and infancy are critical periods that offer an opportunity for the most cost-effective health investment
2. Study and create policy to support an integrated healthcare system where hospitals and clinics across sometimes competing organizations can work together to meet the need of patients
3. Create an alternative obstetric payment model that recognizes the hours and staff needed for complex, time-intensive care that involves range of providers, practices, and facilities
4. Provide anchor payments or other funding to keep small and rural birthing units open
5. Fund wraparound integrated physical and behavioral health programs for people with perinatal substance use disorders like Nurture Oregon and Project Nurture
6. Provide funding and support systems to train more social workers, nurses, and family practice physicians, with attention to cultural and linguistic diversification.
7. Provide funding and support programs for development of local health professionals in rural Oregon (such as Oregon AHEC)
8. Provide funding and support programs to increase the number of bilingual healthcare providers and healthcare interpreters for targeted languages
9. Create policy to ensure payment for transfer of newborn patients from level IV NICUs to lower level NICUs to provide balance across the NICU system so all newborns can get the level of care they need
10. Continue funding for the Oregon Perinatal Collaborative to improve maternal and infant health in Oregon
11. Fund simulation support for low-volume hospitals to maintain critical skills

Recommendations for Hospital & Health System Leadership

1. Prioritize maternal and newborn health in your hospital or health system
2. Create or preserve practice support positions with quality improvement training and responsibilities
3. Provide protected staff time for quality improvement and education
4. Support opportunities for collaboration between hospitals and hospital systems
5. Create or preserve programs to provide training opportunities in high volume hospitals for nurses and physicians in low-volume hospitals
6. Support your hospital's participation in Oregon Perinatal Collaborative quality improvement initiatives
7. Fund health care interpreter training for bilingual staff
8. Fund social work or related positions that support both clinicians and patients in the complex needs of the population served in your facilities.
9. Invest in work to create a healthy workplace that meets the needs of staff and reduces burnout

Recommendations for Payers

1. Prioritize payment for best practices that will improve maternal and newborn health outcomes
    - Investment in appropriate pregnancy and infant care will provide short and long-term cost savings
2. Create an alternative obstetric payment model that recognizes the hours and staff needed for complex, time-intensive care that involves range of providers, practices, and facilities
3. Create a system to pay for complex, team-based, integrated perinatal SUD care as modeled by Project Nurture and Nurture Oregon sites
4. Provide payment for transfer of newborn patients from level IV NICUs to lower level NICUs to provide balance across the NICU system so all newborns can get the level of care they need

Recommendations for Funders

1. Prioritize maternal and newborn health projects for long-term population health improvement
2. Fund high quality research and policy development for the areas outlined in the policy section
3. Fund wraparound integrated physical and behavioral health programs for people with perinatal substance use disorders like Nurture Oregon and Project Nurture
4. Fund simulation support for low-volume hospitals to maintain critical skills

Appendix A

2024 OPC Birthing Hospital Outreach Meetings Protocol

Background

The Oregon Perinatal Collaborative plans to visit each of the 47 birthing hospitals by the end of 2024 in an effort to build collaborative relationships for quality improvement and to collect information to improve the effectiveness of our initiatives. OPC has had great success in engaging hospitals in the Portland area and along the I-5 corridor in previous initiatives, but we have been less effective at reaching hospitals in other areas of the state. With new funding from the Oregon legislature, we are now able to prioritize reaching every birthing hospital in the state to increase the impact of our quality improvement efforts and to ensure that our initiatives are responsive to the needs of rural communities and small hospitals.

Sample Scheduling Email

Dear [name],

I am reaching out on behalf of the Oregon Perinatal Collaborative to schedule a listening session with maternal and newborn staff leaders at your hospital to learn about the challenges you face in providing care and how the OPC could support you in quality improvement. This visit is part of an OPC initiative to meet with all 47 birthing hospitals in Oregon to build relationships and to ensure that our quality improvement initiatives are responsive to the real needs of Oregon hospitals and communities.

Dr. Leo Pereira (OHSU Ob-Gyn) and myself would like to schedule a 1-hour in-person meeting at your hospital with your maternal clinical lead, L&D nurse manager, newborn clinical lead, newborn nurse manager (if applicable), and an administration or quality leader. We welcome participation in the meeting from the person in charge of maternal and infant health data at your hospital, obstetric, family practice, or midwifery practices that deliver at your hospital, and other team members that you think would be appropriate. Dr. Pereira and I are available to travel to your hospital on the following dates. Please let us know which of these dates would work best for your team or if we need to look at dates further out.

[List available dates]

The Oregon Perinatal Collaborative is a statewide quality improvement organization that works with hospitals, healthcare providers, local and state governments, health organizations, and families to improve maternal and neonatal health in Oregon. We hope to build a strong working relationship with every birthing hospital in Oregon.

We look forward to meeting with you!

Facilitator Instructions

Each meeting will be attended by Silke Akerson or another OPC staff member with Dr. Leo Pereira or another clinician on the OPC governing board when available. We will prioritize in-person meetings whenever possible.

Meeting scheduling for each hospital should include:

- OB clinical lead
- L&D nurse manager
- Newborn clinical lead
- Newborn nurse manager (if applicable)
- Lead administration
- Quality improvement staff

Meetings should be welcoming, warm, and provide ample space for hospital staff to share about their experiences and ask questions. OPC staff will keep detailed notes of each meeting and record hospital answers to all questions to compile in a spreadsheet which will be used to create a final report and to inform program development.

Meeting Outline

Welcome and introductions

1. Introduce OPC and ourselves
2. Communicate intent of meeting:
    a. We want to learn about your experience and how OPC can support you in improving care and,
    b. Share information about what OPC can offer to you
3. Participants introduce themselves

Questions

1. What are your biggest struggles in caring for pregnant people and newborns?
2. What quality improvement projects have you recently or currently been working on?
3. Can you share about your current practices and systems for addressing hypertension and preeclampsia?
4. What resources or support do you need to improve care for hypertension and preeclampsia?
5. Can you share about your current practices and systems for caring for pregnant and postpartum people with mental health conditions?
6. What resources or support do you need to improve care for pregnant and postpartum people with mental health conditions?
7. Can you share about your current practices and systems for caring for pregnant and postpartum people with Substance Use Disorders?

8. What resources or support do you need to improve care for pregnant and postpartum people with Substance Use Disorders?
9. Can you share about your current practices and systems for treating postpartum hemorrhage? What resources do you need to improve treatment?
10. What is your current access to blood products for postpartum hemorrhage? What concerns or needs do you have around access to blood products?
11. What else do we need to know to work with you in a way that will be useful and effective for you?
12. Can you confirm the best current contact information for the following people at your hospital (if applicable):
    - OB clinical lead
    - CNM lead
    - L&D nurse manager
    - Newborn clinical lead
    - Newborn or postpartum nurse manager
    - Quality improvement
    - Lead administration

Offer/present

1. Share information about current and upcoming OPC initiatives and resources and CBTP
2. Introduce OMDC and share about start-up funding for participation in OMDC (for small non-participating hospitals)
3. Share how OPC initiatives can help hospital meet Joint Commission, CMS, and other requirements
4. Ask if anyone on the team wants to participate in development of hypertension or SUD initiatives
5. Ask if anyone on the team is interested in becoming more involved with OPC

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