



Obstetrical Care Outcomes Assessment Program: A White Paper in Three Parts

Part I: Quality Improvement in the Delivery of Maternity Care

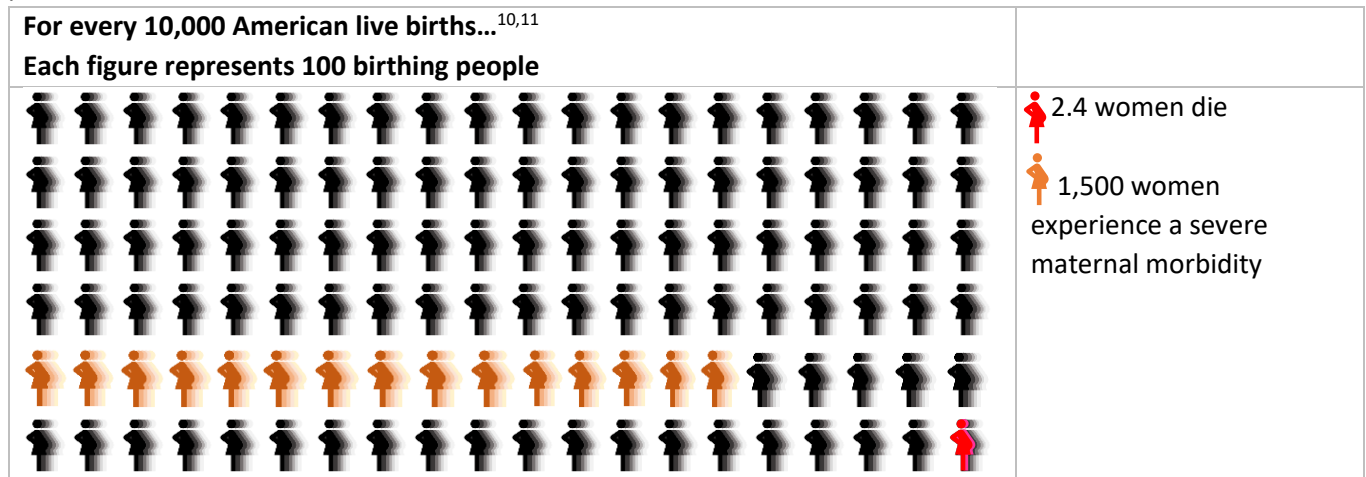
Funded by a generous grant from [United Healthcare](#).

Profiling American Perinatal Care: From National to Local

Perinatal care is failing birthing people and their babies. The United States has a much higher maternal mortality rate than other economically comparable countries. This rate has grown throughout the COVID-19 pandemic.¹ Maternal mortality rates rose in 2020 compared to 2018-19 and clinical levels of depression increased from 11% pre-pandemic to 36% in 2020.^{1,2,3} Cesarean births, commonly referred to as C-sections, while potentially life-saving, are an invasive surgery that can result in maternal complications and/or death. C-section rates are higher in the United States at 32% of births than in many other countries that range 4% to 44%.^{4,5,6} C-section may be unnecessarily used (overuse) while services such as screening for and treating perinatal depression and anxiety may not be used when indicated (underuse), often leading to life-long complications.⁷

Action Step: Read and share how rising mortality is profiled in [New York Times](#), [Wall Street Journal](#), and by [National Public Radio](#).

Outcomes stratified by race show unequal morbidity and mortality burden especially for black and American Indian/Alaska Native populations.^{1,8} **Part II** of this series will outline disparities, social determinants of health, and OB COAP’s added value in identifying and intervening in disparate outcomes. Severe maternal morbidity, defined as life-threatening complications related to birth, are also common, occurring in 1.5% of births (see image below).⁸ Similar to mortality rates, morbidities are much more common among black than white women. Most of these deaths, and injuries, are believed to be preventable through changes in clinical care and in the perinatal social environment.⁹



Birth in Washington State

Washington state’s birthing population is similar to the birthing population nationally (see comparison below).^{12,13} While both c-section and mortality rates are lower than national rates, both are higher than comparable countries. A robust but informal Maternal Mortality Review Process reviews each maternal death but has yet to effectively reduce mortality rates or reduce disparities within communities of color and those with socioeconomic and other challenges.¹⁴ Data alone are not enough to change practice and improve population health. A collaborative community, feedback to individual delivery sites and individual clinicians, and support for site-level internal quality improvement are needed.

Birth Nationwide	Birth in Washington State
3.6 million babies born every year	85,000 babies born every year
Fertility rate: 560 per 10,000 women 15-44 years	Fertility rate: 540 per 10,000 women 15-44 years
C-section rate: 3,200 per 10,000	C-section rate: 2,500 per 10,000
Maternal mortality rate: 2.4 deaths per 10,000	Maternal mortality rate: 0.9 per 10,000



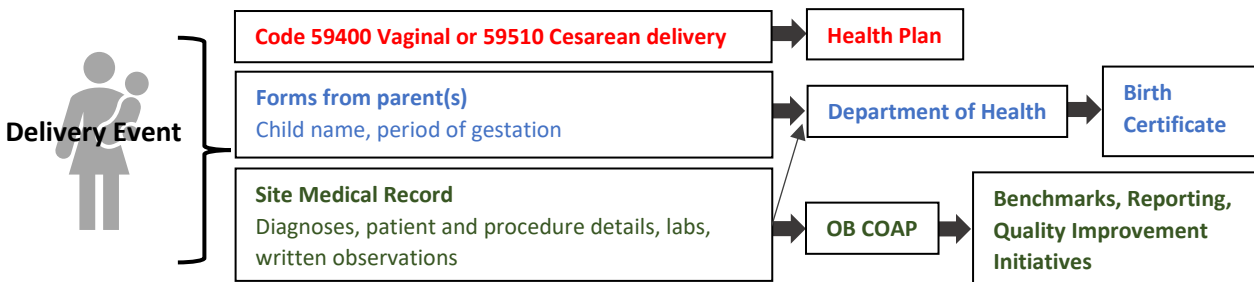
Understanding Health Care Data

Birthing people need a health care delivery system built upon health data infrastructure that partners with patients and health professionals to meet needs, improve care, and build a healthier next generation. To understand how to effectively reduce maternal morbidity and mortality, we must understand what happens to cause injury or death. Each delivery event generates multiple types of health care data including claims or administrative data, birth certificate data, and data in the medical record or clinical data. See below for detail on how these three types of data compare and how they are used in quality improvement and research.

	Claims or Administrative Data	Clinical Data ¹⁵	Birth certificate data ¹¹
What we can see	Procedure(s) done Amount charged	Demographics, diagnoses, granular clinical details such as cervical dilation, procedural details such as time and technique, lab results, and written observations Roles and accountability	Birth outcome, age and race of gestational parent, limited diagnoses, method of birth, period of gestation, birthweight, and parity
Source	Information submitted by a health professional, care team, or delivery site to a health plan	Medical record	Submitted by delivery site to Department of Health
Use	Reimbursement	Tool for health professionals and delivery sites to manage an episode of care or condition to improve health	Collected for all births, as mandated by state and Federal law
How to Access	Claims databases From health plans	From a delivery site From aggregated registry	State Departments of Health

Action Step: See birth data dashboards at the Washington State Department of Health [here](#).

Clinical data, information taken from a medical or health record, is needed to understand what happened during a clinical episode and make changes necessary to improve processes of care that lead to outcomes. Administrative data cannot be used to understand processes of care and make clinical changes for improvement. See **image** below for information on how data flows from a delivery event.



Administrative data can also be incorrect.¹⁶ A study on cesarean sections found that using ICD-10 codes was only accurate in 12.6% of cases for the outcome being studied and was therefore not reliable.¹⁷ Administrative data, reflecting what gets paid for rather than what happened, is unable to tell health professionals or care teams that a patient was not treated for acute severe hypertension within an hour of diagnosis or how much time in active labor was allowed prior to a c-section.¹⁵ Stratification by socioeconomic factors, race, ethnicity, social determinants of health, risk factors, and detailed process measures are essential to identifying and addressing inequities. While administrative data lacks this granularity and specificity, clinical data can be used to target opportunities for change and establish benchmarks for understanding where change can and should occur.



Application of Care Outcomes Assessment Programs to Health Care Improvement

The Foundation for Health Care Quality's Care Outcomes Assessment Programs (COAPs) use **clinical data** from medical records to compare processes of care and build **collaboration** across health professionals, health care disciplines, delivery sites, and systems. Obstetrical COAP (OB COAP) is built on this framework and has grown from a pilot project in 2010 to a program currently collecting data from almost a third of deliveries in the state. The program is modeled after Cardiac COAP, which has been part of clinical care in Washington state since the late 1990s in response to growing demand for accountability and a desire to improve care across institutions rather than only within centers of excellence.^{18,19,20} When applied to cardiac care, COAP's framework for improvement has resulted in measurable and meaningful improvement in processes of care such as reducing blood transfusions and faster removal of assisted ventilation devices, both of which can have a detrimental impact on a person's life, long after cardiac surgery. Cardiac COAP has lowered intra and post-operative blood transfusion from 43% to 24% and increased early extubation (i.e., post-operative ventilation time of less than six hours) from 42% to 71% in coronary artery bypass surgery.²¹ These successes show that the COAP framework improves processes of care that matter to patients across hospitals.

Maintaining the crucial COAP tenet of collaboration, OB COAP members represent births occurring in large urban hospitals, regional referral centers, small rural hospitals, and in homes and freestanding birth centers. OB COAP recognizes the importance of including **data from all birth settings and health professionals from across the care spectrum**. These comparative data are critical to understanding and improving care and birth outcomes regardless of where a childbearing person chooses to give birth.²² Similarly, having representation from all maternity care professional types (i.e., obstetricians, family practice physicians, maternal fetal medicine specialists, hospital-based and community-based midwives, hospitalists, and nurses) in the quality improvement conversation is essential to patient safety, shared learning, and an integrated and effective system of care.²² OB COAP quality improvement successes include:

- An increase in collection of cord gases from ~33% to over 60% across participating sites following a targeted educational effort to increase awareness of why, when, and how to collect.
- A three-fold increase in the rate of timely treatment of acute severe hypertension intrapartum or postpartum at one of OB COAP's largest participating sites.
- Identification of significantly higher rates of 3rd and 4th degree lacerations following vaginal birth among Asian patients resulting in targeted and ongoing improvement efforts.

Participants have reported benefiting from:

- Improvements in patient charting and documentation
- Increased reimbursement by comparing clinical documentation to coding
- Examination of metrics by health care professional, type, and role which allows for accurate attribution of outcomes and significant improvement in health care professional confidence in reports

OB COAP improves patient care in partnership with member delivery sites and health professionals, allowing collaboration and transparency to replace competition and siloed efforts, and increases the health of birthing parents and their babies.

Action Step: Learn more on the [OB COAP website](https://www.qualityhealth.org/wp-content/uploads/2022/11/OB-COAP-White-paper-2022.pdf) about partnering to improve care for pregnant people and babies, **ensure your hospital is a member**, and read **Part II: Social Determinants of Health and Equity**.



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- ³ Hoyert DL. Maternal mortality rates in the United States, 2020. *NCHS Health E-Stats*. 2022.
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- ⁶ Centers for Disease Control and Prevention. National Vital Statistics System. Accessed: February 2022. Available: www.cdc.gov/nchs/nvss/births.htm
- ⁷ Neiger R. Long-Term Effects of Pregnancy Complications on Maternal Health: A Review. *J Clin Med*. 2017;6(8):76. Published 2017 Jul 27.
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- ¹³ [https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm#:~:text=In%202020%2C%20861%20women%20were,20.1%20in%202019%20\(Table\).](https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2020/maternal-mortality-rates-2020.htm#:~:text=In%202020%2C%20861%20women%20were,20.1%20in%202019%20(Table).)
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