QUALITY IMPROVEMENT AMONG COMMUNITY MIDWIVES IN OREGON STATE

Update and How-To Guide

In response to quality and safety concerns reported by midwives and receiving providers, the Oregon Midwifery Council launched a Quality Improvement (QI) program in 2012. Midwives in Oregon and and across the United States engage in quality improvement efforts as an extension of our commitments to safety and lifelong learning. In creating a specific Quality Improvement program in Oregon we were able to identify, strengthen, and define efforts and strategies that are at the heart of midwifery. This has been an incredible learning experience, and I am excited to share our experience with you.

As we have developed our QI initiative, we have learned from models of QI in other health care settings, examined the Smooth Transitions transfer improvement program in Washington State, and made adjustments for the unique needs and assets of our own state. The result has been meaningful improvements in care for Oregon families.

IN RESPONSE TO REQUESTS FROM OTHER STATES DEVELOPING SIMILAR PROGRAMS, WE HAVE COMPILED THIS REPORT.

HERE YOU WILL FIND:

- Interim findings on outcomes
- An overview on QI in midwifery settings
- Step-by-step guide on how Oregon has implemented QI that you can adapt for your midwifery community

We as midwives are called to our profession out of our passion for the safety and wellbeing of the families we serve. QI can be a natural extension of who we are and what we do. I am honored to share what the midwives of Oregon have learned with you

Sincerely,

SILKE AKERSON, CPM, LDM

Executive Director

Oregon Midwifery Council

INTERIM FINDINGS
OREGON MIDWIFERY COUNCIL (OMC) QUALITY IMPROVEMENT PROGRAM

Identifying and effectively tracking and monitoring desired outcomes are critical to any Quality Improvement program. Based on the available data, we are optimistic about outcomes for planned community births in Oregon following our ongoing QI efforts.

Vital Statistics/Birth Certificate Data

Our ability to rely on birth certificate data significantly improved after changes were made in 2012 to more effectively track intended place of birth and intended birth provider. These changes enabled OMC to more accurately track the outcomes of planned community births that transfer to the hospital.

2012-2013 Outcomes Prior to Quality Improvement

Oregon planned out-of-hospital births:

- The 2012 perinatal mortality rate was 3.90/1000 with 4 term fetal deaths[1] and 4 term neonatal deaths[2] out of 2046 births.[3] (Overall Oregon perinatal mortality rate for 2012 was 2.00/1000.[1,2,4])
- The 2013 perinatal mortality rate was 4.80/1000 with 6 term fetal deaths[5] and 4 term neonatal deaths[6] out of 1876 births.[7] (Overall Oregon perinatal mortality rate for 2013 was 1.60/1000.[5,6,8])

2015-2016 Outcomes After Quality Improvement

Oregon planned out-of-hospital births:

- The 2015 perinatal mortality rate was 0.98/1000 with 1 term fetal death[9] and 1 term early neonatal death[10] out of 2035 births. (Overall Oregon perinatal mortality rate for 2015 was 1.39/1000.[9,10,11])
- The 2016 perinatal mortality rate was 1.03/1000 with 0 term fetal deaths[12] and 2 term early neonatal deaths[13] out of 1934 births. (Overall Oregon perinatal mortality rate for 2016 was 1.44/1000.[12,13,14])

	COMMUNITY BIRTHS Perinatal mortality rate (term fetal and neonatal death)	OREGON OVERALL Perinatal mortality rate (term fetal and neonatal death)
Prior to Quality Improvement		
2012	3.90/1000	2.00/1000
2013	4.80/1000	1.60/1000
Following Quality Improvement		
2015	0.98/1000	1.39/1000
2016	1.03/1000	1.44/1000

The combined 2015-2016 perinatal mortality rate for planned community births in Oregon was 1.01/1000. This rate is in line with outcomes for babies in studies on planned community birth in well-integrated midwifery systems such as the UK[15] and Canada[16] .

Limitations of the findings

While any loss is tragic, the actual number of perinatal deaths occurring during planned community births is very small. It is thus difficult to observe whether trends over time are "real" or just due to random chance. Additional years' worth of data will need to be analyzed in the future to determine whether the trend observed here continues or was a statistical anomaly.

1 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2014). Oregon Vital Statistics Annual Report 2012, vol. 2. Table 7-19, Term Fetal Deaths by Planned Attendant and Planned Place of Birth, Oregon Occurrence, 2012. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME2/Documents/2012/table719.pdf

2 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2014). Oregon Vital Statistics Annual Report 2012, vol. 2. Table 7-20, Term Early Neonatal Deaths by Planned Attendant and Planned Place of Birth, Oregon Occurrence, Preliminary 2012 Birth Cohort. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME2/Documents/2012/table720.pdf

3 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2014). Oregon Vital Statistics Annual Report 2012, vol. 1. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME1/Documents/2012/12v1.pdf

4 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2014). Oregon Vital Statistics Annual Report 2012, vol. 1. Table 2-38, Planned Attendant by Planned Place of Birth, Oregon Occurrence, 2012. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME1/Documents/2012/table0238.pdf

5 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2015). Oregon Vital Statistics Annual Report 2013, vol. 2. Table 7-19, Term Fetal Deaths by Planned Attendant and Planned Place of Birth, Oregon Occurrence, 2013. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME2/Documents/2013/table719.pdf

6 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2015). Oregon Vital Statistics Annual Report 2013, vol. 2. Table 7-20, Term Early Neonatal Deaths by Planned Attendant and Planned Place of Birth, Oregon Occurrence, Preliminary 2013 Birth Cohort. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME2/Documents/2013/table720.pdf

7 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2015). Oregon Vital Statistics Annual Report 2013, vol. 1. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME1/Documents/2012/12v1.pdf

8 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2015). Oregon Vital Statistics Annual Report 2013, vol. 2. Table 2-38, Planned Attendant by Planned Place of Birth, Oregon Occurrence, 2013. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME1/Documents/2013/Table0238.pdf

9 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2016). Oregon Vital Statistics Annual Report 2015, vol. 2. Table 7-19, Term Fetal Deaths by Planned Attendant and Planned Place of Birth, Oregon Occurrence, 2015. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME2/Documents/2015/Table719.pdf

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12 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2017). Oregon Vital Statistics Annual Report 2016, vol. 2. Table 7-19, Term Fetal Deaths by Planned Attendant and Planned Place of Birth, Oregon Occurrence, 2016. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/OHA/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME2/Documents/2016/Table719.pdf

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14 Oregon Health Authority (OHA), Public Health Division, Center for Public Health Practice, Center for Health Statistics. (2017). Oregon Vital Statistics Annual Report 2016, vol. 2. Table 2-38, Planned Attendant by Planned Place of Birth, Oregon Occurrence, 2016. Oregon Department of Human Services/Office of Communication Resources: Salem, Oregon. Retrieved from OHA website: https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME1/Documents/2016/Table0238.pdf

15 Brocklehurst P, Hardy P, Hollowell J, et al. (2011). Perinatal and Maternal Outcomes by Planned Place of Birth for Healthy Women with Low Risk Pregnancies: The Birthplace in England National Prospective Cohort Study. BMJ: Oxford, England. 2011;343:d7400. https://doi.org/10.1136/bmj.d7400

16 Hutton EK, Reitsma AH, Kaufman K. (2009). Outcomes Associated with Planned Home and Planned Hospital Births in Low-Risk Women Attended by Midwives in Ontario, Canada, 2003–2006: A Retrospective Cohort Study. Birth. 2009;36(3):180-189. https://doi.org/10.1111/j.1523-536X.2009.00322.x

UNDERSTANDING QUALITY IMPROVEMENT IN THE COMMUNITY MIDWIFERY SETTING

As individual midwives and as a community, we never "arrive" at a finished set of skills and a fixed understanding of best practices. We constantly evaluate and improve our skills, systems, and understanding. Quality Improvement is a process that helps our communities consistently provide excellent care.

What is Quality Improvement?

Quality improvement (QI) is the combined and ongoing efforts of a group of people to understand problems and make changes that will lead to better outcomes in a particular system (for example, community midwifery care in a state or region). QI is widely used in healthcare but is also used in many other contexts.

QI takes a systems approach with the goal of changing processes to proactively improve outcomes.

How do you "do" QI?

There are many ways to launch and implement a QI program. One model we found useful in Oregon is the PDSA model[1]. We started by first identifying a problem. Then:

- **PLAN:** Plan a change or test of how something works.
- **DO:** Carry out the plan.
- **STUDY:** Look at the results. What did you find out?
- **ACT:** Decide what actions should be taken to improve.

We then repeated PDSA as needed until our particular goal was achieved. For example, Emergency Medical Services (EMS) delay in transfer and misunderstanding of newborn resuscitation was identified as a safety concern following several cases of neonatal death or morbidity. We conducted case reviews to gather more information. Our first action was to provide feedback and information to the EMS teams involved. Due to high turnover within EMS, we saw this approach did not improve outcomes. Next, we approached the issue from a systems perspective. We convened a working group of midwives, receiving providers and paramedics who together created a curriculum on best practices for community birth transfers for all provider types with a focus on neonatal resuscitation issues. The pilot curriculum was tested in two smaller classes with EMS workers and and it was then made available as a webinar through the state of Oregon to all EMS workers in June of 2018.

1 *Associates in Process Improvement. (2008). Plan-Do-Study-Act (PDSA) Cycle. U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, Innovations Exchange: Rockville, Maryland. Retrieved from https://innovations.ahrq.gov/qualitytools/plan-do-study-act-pdsa-cycle*

STEPS FOR LAUNCHING QI IN YOUR COMMUNITY

There is no one right way to engage in QI efforts. The unique position that community midwifery holds in the health care system means that traditional models will need to be adapted to accommodate our resources and infrastructure. However, our flexibility can also be an asset that facilitates innovation that leads to improved outcomes. Here are a few starting points for a QI program in your community:

Identify barriers and concerns

Start with conversations with all stakeholders (including birthing families) to help identify safety concerns and any barriers to getting started with QI in your community, such as:

- Legal status, lack of protected peer review
- Tension in midwifery community
- Fear or resistance based in our history of persecution

Translate traditional QI methods to community midwifery needs

- Identify strategies that work within the financial constraints of midwifery communities
- Recognize that midwifery communities are usually working informally without structures that are in place for other health care QI efforts
- Start small

Keep it simple!
Basic steps for getting started can include:

- Identify a problem
- Build relationships and seek input
- Communicate about the problem as a shared responsibility and a systems issue
- Try a strategy to address the problem
- Study if your strategy was effective
- Try again

Learn from existing models

The Smooth Transitions program, developed by the Washington State Perinatal Collaborative, provides one example of how to launch a QI initiative. Learn more here: http://www.washingtonmidwives.org/documents/Smooth-Transitions-Hospital-Transport-QI-Project.pdf

SAMPLE MIDWIFERY QUALITY IMPROVEMENT PROGRAM ELEMENTS

Every community will assemble a QI program that best meets their unique needs. Here are some elements that Oregon found to be useful in our QI program.

Accurate and useful data collection

In Oregon, midwives worked to change the state birth certificate to accurately capture planned and unplanned OOH births by provider type. Midwives also successfully advocated for MANA stats participation collection by all Licensed Direct-Entry Midwives (CPMs) in the state.

Transport Improvement

Midwife representatives of the community now meet annually with willing receiving hospitals to talk about how transports are going, identify patterns or concerns that have arisen, and make plans as a team to improve transports and coordination of care.

Targeted continuing education for specific safety concerns

Oregon midwives gathered data and input (from both midwives and receiving providers) about safety concerns or gaps in knowledge and created continuing education workshops to address each area of concern.

Mentorship for new midwives or midwives new to an area

Experienced midwives ensure that new midwives are informed about community standards, given contact information for consultations, referrals, and transport and are connected with midwives to call with questions.

Guidelines for peer review and incident review

Oregon midwives created guidelines for satisfying and effective peer review including detailed guidelines for a longer case review with experienced midwives any time that there is a case that meets certain criteria (including any mortality, NICU admission, transfusion, emergency transport, or concern from another midwife or community member).

Development of practice standards and informed consent templates

The Oregon midwifery community worked to define practice standards that the community of midwives agree to use. The practice standards provide a container for practice, can be used to communicate expectations to new midwives, and are a useful reference point in peer review and in addressing concerns.

Create a process for addressing concerns about a midwife or practice

Our community created a process to work directly with a midwife or practice through case review and practice review to improve the midwife or practice's understanding of the concern and, if needed, to create a plan for quality improvement. The process is created, understood, and supported by the community.

Midwife participation in broader public health efforts

Oregon midwives join and participate in a wide variety of maternal-child health efforts in order to be part of quality improvement for all mothers and babies and to develop relationships and mutual understanding with different provider types and policy makers. Some places midwives have experienced productive participation include:

- State Perinatal Collaborative or Perinatal Advisory Committee
- State Rules Advisory Committees for things that affect our clients like newborn screening etc.
- Public Health or Human Services Coalitions