Understanding and Addressing the Drivers of Infant Mortality in Maine

RECOMMENDATIONS

January 2020

QUALIDIGM

Recommendations

In this section, we propose recommendations, provide the rationales for the recommendations, and offer examples of implementation steps. The recommendations are presented by the strategic areas outlined in the Ideal Comprehensive Perinatal System of Care for Maine framework developed through this project. The strategic areas include: 1) Infrastructure to Support the Strategies and Actions for the Ideal Comprehensive Perinatal System of Care for Maine; 2) Access to Services; 3) Workforce and Training; 4) Referrals, Coordination and Collaboration; 5) Family Engagement and Education; 6) Policies and Programs; and 7) Assessment, Monitoring and Evaluation.

The recommendations are based on the following key principles:

- Evidence-based practices, tools, and resources are used, if available; and if not available, the practices, tools and resources used are tested.
- The actions selected are coordinated and non-duplicative across the strategic areas as well as other related initiatives in the state.
- The actions are informed by the knowledge and experiences of national and state organizations, and parent and family advisors.
- The goals/outcomes, timelines and resources needed for the actions are explicitly identified at the outset of all initiatives.

Some of the recommendations are broad and general; others are very specific. Some may be accomplished in the short-term; others may require multiple years to fully accomplish.

Strategy 1: Infrastructure to Support the Strategies and Actions for the Ideal Comprehensive System of Perinatal Care in Maine

A critical first step in addressing the findings of this project and the recommendations is to convene a statewide Work Group under the auspices of the MDHHS Commissioner, in collaboration with the Children's Cabinet and other state agencies. Members of the Work Group should include public and private sector leaders and key stakeholders (large and small hospitals, primary and specialty care clinicians, and others who are involved in caring for or providing services to women of reproductive age). Women and family members must be represented as well. While all recommendations in this report are subject to review and consideration by multiple stakeholders, the Work Group is one in particular that requires initial outreach to key leaders in the Maine DHHS, other public sector officials, and the private sector to seek and secure their support and buy-in.

RATIONALE A successful initiative of this size and scope must have an infrastructure and process in place to define, support and prioritize the work; leaders who can provide a vision, influence and the ability to identify and/or allocate resources; stakeholders with expertise and experience who can assist in the design and implementation of the actions; and clear goals, timelines and

resources. We recommend that the Work Group use the Components of an Ideal Comprehensive Perinatal System of Care in Maine framework to guide the planning, implementation and evaluation of the work.

Strategy 2: Access to Services

These services include the full-range of services/programs/resources needed by the perinatal populations in Maine at every level of risk and need. The services include: screening, inpatient and outpatient (general and specialty) medical care, community-based social and support services and education. They cover women's health, obstetrics, pediatrics, mental health and substance use. To ensure access, no barriers should be in place.

RATIONALE Access to the full range of services needed are critical to ensuring the best possible maternal and newborn outcomes in Maine. The project identified many opportunities to improve access to all types of screenings and other services for women and infants. Currently, screenings are inconsistently performed across topic areas, with different tools being used for the same screening. With the closures of several maternity units in rural areas, access to local maternity care has become increasingly challenging for many families living in these communities.

Strategy 3: Workforce and Training

This strategy addresses two aspects of the workforce that provides care to perinatal populations across the state. The first issue addresses the shortages in the workforce, particularly in rural areas of the state; the second addresses training across all providers and staff who care for these populations.

RATIONALE Access to the right care at the right time in the right place can only happen if there are available workforces to provide the care. Primary care, general and high-risk maternity care, and pediatric care must be available to families. With the closures of obstetrical services in rural communities over the past several years, some women have been limited in their access to local hospitals for Labor and Delivery, as well as prenatal and post-partum providers (obstetricians, midwives, Family Medicine providers, nurses and social workers). It also has been reported that women must wait for, or travel long distances to, specialty obstetrical care. Four Maternal Fetal Medicine physicians based in Portland provide coverage/consultation for high-risk women across Maine. Shortages also have been found among general pediatricians, as well as specialists (neonatologists). Currently, neonatologists are in the two NICU's at Maine Medical Center in Portland and Northern Light Eastern Maine Medical Center in Bangor. To fill shortages, some of the rural communities use locums, which do not provide continuity of care. Nursing shortages, specifically in-home visiting, also have been reported. Shortages in mental health providers generally, but also those with perinatal expertise specifically, have been noted. Additionally, for providers who see pregnant women and infants, the project identified several areas of training needs: risk assessments, screenings and resources, telehealth, cultural competency, bias, and current topics such as trauma-informed care and shared decision-making.

Strategy 4: Referrals, Coordination and Collaboration

This strategy includes mechanisms to ensure that: 1) women and infants undergo risk assessments to identify their needs, 2) women and infants are referred to facilities and community-based services that meet their needs; 3) there are communications and collaborations between and among providers sharing patients (with the patients' consent); and 4) perinatal activities are coordinated across the continuum of care.

RATIONALE Referral mechanisms between hospitals and community services must be in place to ensure that the needed services can be accessed, and barriers are eliminated. The sharing of patient information across caregivers facilitates coordinated care, and the coordination of perinatal activities such as Quality Improvement (QI) activities in hospitals will strengthen the projects and their results through shared learning.

Strategy 5: Family Engagement and Education

This strategy covers patient/family/provider engagement, and education provided to patients/ families by providers and their staff. Family Engagement involves goal setting, care plan development, and shared decision-making, and often includes Family Advisors in practices. The provision of comprehensive educational materials to patients/families during perinatal visits and hospital stays is a critical part of these interactions. The recent trend to establish patient and family advisory groups to provide meaningful input is an important step that that should be encouraged and supported by hospitals and provider organizations.

RATIONALE Family engagement is a key component of family-centered care, and shared decision-making can only occur if families are engaged and informed. The project found that educational materials are not being consistently provided, in terms of content as well as timing, and are often hard to access.

Strategy 6: Public Policies and Programs

This strategy includes: data analyses to determine potential changes to public policies and programs (including services reimbursed and providers who can receive reimbursement), and the implementation of changes to improve maternal and newborn outcomes. An important component of this strategy is collaboration with national, state and local professional organizations and advocacy groups.

RATIONALE Sound, evidence-based policies and programs are needed to influence the equitable allocation of resources and to enhance and sustain the impact of other actions. Maine has the potential to build on renewed commitment of the legislative and executive branches of State government through entities like MaineCare and the Maine CDC. These should be in collaboration with commercial payers, professional organizations and advocacy groups such as the American College of Obstetricians and Gynecologists (ACOG), the American Academy of Pediatrics (AAP)-Maine, the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), Maine Children's Alliance, Maine Public Health Association, the March of Dimes, and others.

Strategy #7: Assessment, Monitoring and Evaluation

This strategy includes: data collection and analyses to assess the effectiveness of new and enhanced models and activities, the development and dissemination of regular public health reports of maternal and infant outcomes, additional reviews of fetal and infant deaths, and improvements in the public data collected on births and infant deaths in Maine.

RATIONALE Assessment, monitoring and evaluation are key health care and public health functions that assure accountability. It is especially important to conduct these activities for new initiatives to determine if they are effective or need to be changed.

Table 4 | Recommendations and Examples of Action Steps by Strategy

RECOMMENDATIONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
Strategy 1 Infrastructure to Support the Strategies and Actions for the Ideal Comprehensive System of Perinatal Care in Maine	
1.1 Establish and maintain a Work Group.	• Determine who leads and facilitates the Work Group, resources needed (e.g., staffing). • Identify members and expectations. • Gain endorsement for Ideal Perinatal System of Care conceptual framework and establish goals and measures/outcomes of success. • Convene the Work Group and sub-groups, and establish a meeting schedule. • Develop and implement dissemination plan for tracking activities and reporting progress (e.g., annual reports or dashboards).
1.2 Determine a perinatal regionalization approach for the State of Maine to ensure access to risk-appropriate care for mothers and infants.	• Complete the process to officially designate the levels of perinatal care (LOC) at all Maine birth hospitals – already underway using the CDC LOCATe tool; other approaches such as guidance or regulations could also be considered in the future. • Strengthen the maternal and newborn referral and transport systems from community hospitals to hospitals with higher LOC. • Develop and implement a communications plan for providers and the public re: LOC available at each birth hospital. • Identify and implement other perinatal strategies such as satellite ambulatory Maternal and Child Health (MCH) services and telehealth consultations in rural communities.
1.3 Align and coordinate the Work Group with the Maine CDC MCH Block Grant and the MFIMR (Maternal, Fetal, Infant, Mortality Review) panel to enhance the efforts across these entities and avoid duplication.	• Include the Work Group leadership or designee(s) in the MCH Block Grant needs assessment and application, and MFIMR panel. • Include the Block Grant and MFIMR leadership or designee(s) on the Work Group for sharing information and joint planning.

RECOMMENDAT IONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
1.4 Align and coordinate the Work Group with the work of the PQC4ME to enhance the work across these entities.	• Include the Work Group leadership or designee(s) in the PQC4ME (Perinatal Quality Collaborative for Maine). • Include the PQC4ME leadership or designee(s) on the Work Group for sharing information and joint planning.
1.5 Align and coordinate the Work Group with the work of the Maine Rural Transformation Team and similar high-level state initiatives to enhance efforts across these entities.	• Include the Work Group leadership or designee(s) in the Rural Transformation Project. • Include the Rural Transformation leadership or designee(s) on the Work Group for sharing information and joint planning.
1.6 Incorporate into all strategies and actions considerations of cultural sensitivity and bias (structural and implicit), as appropriate.	
Strategy 2 Access to Services	
2.1 Design and implement a study to identify the areas of the state, particularly the rural areas, where gaps in services related to perinatal health exist.	• Use the results of this project to inform the study design. • Determine the study methodology, and identify the study topics such as: o Women's health, reproductive life planning and contraception o Primary and specialty inpatient and outpatient midwifery, obstetrical, pediatric, mental health and substance use services o Other community-based services such as domestic violence and case management o Cost of pregnancy-related care under MaineCare and private payers, and in rural and urban areas

RECOMMENDATIONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
2.2 Prioritize, design and implement new or enhanced models of care/ services.	• Identify existing evidence-based models that can be replicated in Maine; test new models, as needed. • Select the topics/models to be implemented and evaluate: ○ Increased access to LARC (Long-acting Reversible Contraception) and other contraceptives through: a) provider training, and b) collaborations with Maine Family Planning and Planned Parenthood of Northern New England (could include co-locating Family Planning/Substance Use service models). ○ Tobacco/nicotine treatment (including vaping) programs for pregnant women, and adolescents/women of reproductive age before and between pregnancies. ○ Additional community-based prenatal and reproductive health care services such as the Centering Pregnancy Group Care Model in areas where there are gaps. ○ Outreach to other New England states, and organizations such as NNEPQIN (Northern New England Perinatal Quality Improvement Network) to identify and assess/adapt successful policies and programs. ○ New and/or enhanced perinatal care coordination models. ○ HRSA/ACOG Alliance for Innovation on Maternal Health (AIM) modules to improve maternal outcomes (this also could be done through PQC4ME). ○ ACOG's Emergencies in Clinical Obstetrics (ECO).

RECOMMENDATIONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
2.3 Identify and implement perinatal risk assessment and screening tools, and resources to address the results of the assessments and screenings.	• Identify tools that are evidence-based, if possible; develop and test new tools, as needed. • Develop guidance and training on the use of the tools, including documentation of the screening and results in the medical record (e.g., EMR). • Identify topics such as the following to be covered: o Clinical/genetics risk assessments. o Depression and other mental health conditions. o Substance use. o Domestic violence. o Newborn screening and immunizations. o Oral health. o Social determinants of health (e.g., transportation, housing, food insecurity). o Assessment of language and cultural needs of new and vulnerable populations. • Mental health and substance use co-morbidities. • Create and disseminate a comprehensive package of risk assessment and screening tools.
Strategy 3 Workforce and Training	
3.1 Design and implement strategies/models to fill the identified workforce shortages (clinical, mental health, substance use) across the state.	• Use the study to identify the specific workforce shortages and locations to target (Recommended Action 2.2). • Select, develop and implement strategies and models: o Telehealth, including assessment of broadband capabilities, provider interest and target areas for telehealth. o Clinical rotations of community-based providers through the Level III/IV hospitals to increase their knowledge and skills. o Clinical training program related to deliveries in non-traditional settings such as Emergency Rooms in rural hospitals and Maine Emergency Medical Services. o New or enhanced care coordination programs and services. o Midwifery Advanced Practice RN program. o Identification and pursuit of federal workforce shortage programs and funding for medically underserved areas.

RECOMMENDATIONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
3.2 Design, implement, and evaluate trainings for perinatal providers.	• Determine the timing, frequency, modalities, target audiences (e.g., obstetricians, pediatricians, midwives, nurses, social workers, care coordinators/community health workers, multidisciplinary groups), and topics such as: o Screening procedures, tools, resources and referral mechanisms (e.g., social determinants of health, mental health, substance use, domestic violence and oral health). o Cultural sensitivity and structural and implicit bias in caring for diverse/vulnerable populations (e.g., persons of different races/ethnicities, immigrants, low income persons and those living in rural areas—also see Recommended Action 1.6). o Reproductive life planning using existing tools such as One Key Question ("Would you like to be pregnant in the next year?"). o Other topics such as infant mortality, the Maine Perinatal System of Care, trauma-informed care, family engagement/ shared decision-making, breastfeeding, and telehealth to link primary and specialty care providers for consults and education. o Identify training materials using available existing national and state materials, if available and desirable; ensure that the messaging in the trainings is consistent with messaging from public and private sector organizations in Maine. o Design and conduct evaluations of the trainings.
3.3 Design, implement and evaluate trainings for providers who see perinatal populations, but whose focus is not perinatal populations.	• Determine the timing, frequency, modalities, target audiences (e.g., primary care providers, substance use and mental health providers, staff from state agencies such as the Office of Child and Family Services), and topics such as: o Mental health – safe medications to take during pregnancy; and the signs, symptoms, and prevalence of depression and other mental health conditions during and after pregnancy. o Risks of substance use, including marijuana, during pregnancy on the woman and infant; and the risks of relapse post-pregnancy. o Connections between pregnancy and domestic violence. o Reproductive life planning such as One Key Question. o Obesity and pregnancy.

RECOMMENDATIONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
3.4 Design, implement and evaluate trainings or modules on perinatal topics for students.	• Determine methods, specific target audiences (e.g., medical, nursing, social work and public health students) and topics such as: o Reproductive and perinatal epidemiology. o Perinatal System of Care in Maine. o Cultural competency and structural and implicit bias in perinatal care. o Perinatal programs and services.
Strategy 4 Referrals, Coordination and Collaboration	
4.1 Establish written procedures and agreements for maternal and neonatal referrals and transports between community-based birth hospitals and providers, and Level III/IV hospitals.	• Include in the procedures and agreements: the specific steps to make referrals and set up the transports through EMS; and ongoing communications between the referring and accepting providers during the hospital stay and at discharge. • Monitor and report referral and transport activity on a regular basis. • Also see 1.2 above.
4.2 Establish and implement mechanisms for referrals to community-based programs and services such as Early Intervention (EI) at perinatal care sites (hospitals and practices).	• In collaboration with community-based service providers, establish written procedures for referrals. • Document referrals made in the patient's medical record.
4.3 Coordinate and collaborate (including the sharing of results) on perinatal activities such as PQC4ME QI (Quality Improvement) projects at the birth hospitals and birth centers	• Determine the forums, timelines, and specific activities to report; report on activities.
Strategy 5 Family Engagement and Education	
5.1 Conduct and assess provider trainings on family engagement and shared decision-making.	• See implementation steps outlined in 3.3 above.

RECOMMENDATIONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
5.2 Create a comprehensive package of maternal/family education materials.	• Identify the topics to be covered in the package of education materials (e.g., breastfeeding, family planning, safe sleep, postpartum depression, etc.). • Develop guidance for providers about how and when the materials are distributed.
Strategy 6 Public Policies and Programs	
6.1 Design and implement an analysis of eligibility (including opportunities for expanding eligibility), participation, services and costs for public policies and programs that can optimize maternal and infant outcomes.	• Identify the programs/policies to analyze (e.g., MaineCare, Public Health Nursing, Maine Families, SNAP, WIC, TANF, EI). • Conduct analyses and produce report of findings.
6.2 Examine payment strategies, provider performance incentives and quality improvement initiatives to improve birth outcomes and lower costs.	• Identify the payment strategies, provider performance incentives and QI initiatives to analyze (e.g., MaineCare and commercial insurers). • Conduct analyses and produce report(s) of findings.
6.3 Implement and evaluate evidence-based public social media campaigns on select perinatal topics.	• Identify the target audiences (e.g., women of reproductive age; pregnant and post-partum women and their families; low, medium, and high risk women) and the topics to be covered (e.g., safe sleep practices (already underway), tobacco and other substance use, postpartum depression) • Develop and implement the campaigns using existing national and state materials, if available and desirable; ensure messaging is consistent with messaging from public and private sector organizations. • Evaluate the campaign(s).

RECOMMENDATIONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
6.4 Ensure that eligible women and their families receive the services that promote optimal birth outcomes.	• Clarify and streamline referral processes for public programs available to Maine families (e.g., PHN, Maine Families, MaineCare, SNAP, WIC, TANF, EI). • Produce regular reports on program enrollments, and periodic reports on clinical outcomes and costs.
6.5 Design and implement a website of perinatal resources.	• Create a plan to develop (or enhance an existing website) and maintain a website; plan should include: the content, staffing and funding needed. • Identify resources such as: Eat Sleep Console, Snuggle ME, Cribs for Kids, Text4Baby, Period of Purple Crying, Up, Up and Away, etc.; and links to national and regional organizations; screening tools, and best practices. • Implement the website and develop a continuous marketing and communications plan to assure optimal access and use of resources.
Strategy 7 Assessment, Monitoring and Evaluation	
7.1 Assess the effectiveness of new and enhanced models and activities using QI methods and data collection, and/or other appropriate evaluation methods.	• Design and implement evaluations of new and enhanced models. • Use PQC4ME to engage hospitals, rural health centers, birth centers and others to test and evaluate QI interventions; disseminate and scale effective interventions.
7.2 Develop and distribute regular public heath reports or dashboards of maternal and infant outcomes.	• Determine the content of the reports/dashboards and sources (e.g., Vital Statistics, Maine and national Kids Count reports, America's Health Rankings Maternal and Child Health reports, triennial Maine State Community Health Needs Assessment reports, etc.). • Develop and implement a dissemination plan that includes the reporting frequency, and presentations at meetings such as the PQC4ME.

RECOMMENDATIONS	EXAMPLES OF SPECIFIC IMPLEMENTATION STEPS
7.3 Enhance the MFIMR panel reviews and reporting.	• Increase the number of infant deaths reviewed by the MFIMR panel (HRSA recommends that state with fewer than 100 annual deaths review all deaths). • Review all fetal deaths (for policy changes and education)—e.g., knowledge gap re: ACOG/SMFM resuscitation at threshold of viability; and the 2013 home birth deaths. • Produce and disseminate annual reports of the reviews.
7.4 Improve Vital Statistics data, including accuracy, timeliness and reporting.	• Identify changes to be made and timeline for making changes, including the development of an electronic system of fetal deaths.