Strengthening the Perinatal System of Care (PSOC) in Maine

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Agenda

- Review Perinatal System of Care Work over the last 2 years
- Discuss implementation of work: Maternal and Newborn Levels of Care (LOC) work and Quality Improvement related to the Perinatal System
- Discuss potential goals and work for next year and how it aligns with your work

Review of Perinatal System of Care Work: Building Perinatal Systems

Infant Mortality Needs Assessment (2019-20)

Improve Care for Pregnant People with SUD and SEI

- Implement Eat, Sleep, Console at Birth Hospitals
- Plan of Safe Care
- MaineMOM Initiative

Safe Sleep Campaign (2019-present)

Perinatal System of Care Workgroup (2020-present)

- Hospital Maternal and Newborn Levels of Care- LOCATE Subgroup
- Risk Assessment for Preterm Delivery Subgroup
- Maternal Transport Subgroup
- Updated EMS Protocols on Obstetric Emergencies and Newborn Care

Upcoming Work (Present)

• Develop policies for expanded Pregnancy and Post-Partum Coverage

• Join Alliance for Innovation on Maternal Health (AIM) QI Work with the Early Childhood Comprehensive Systems (ECCS) Grant

Review of Perinatal System of Care Work: Overarching Goals and Outcomes

1) Achieve healthy pregnancies & the best possible maternal & birth outcomes in all areas of the state, and across all populations

- Reduce the Infant Mortality Rate to 4 deaths per 1000 live births over the next 5 years in Maine. (Current 5.5 infant deaths per 1000 live births)
- Reduce Maternal Morbidity and Mortality Rates up to 12 months post-partum

2) Ensure all mothers and infants receive the right care in the right place at the right time through perinatal regionalization efforts

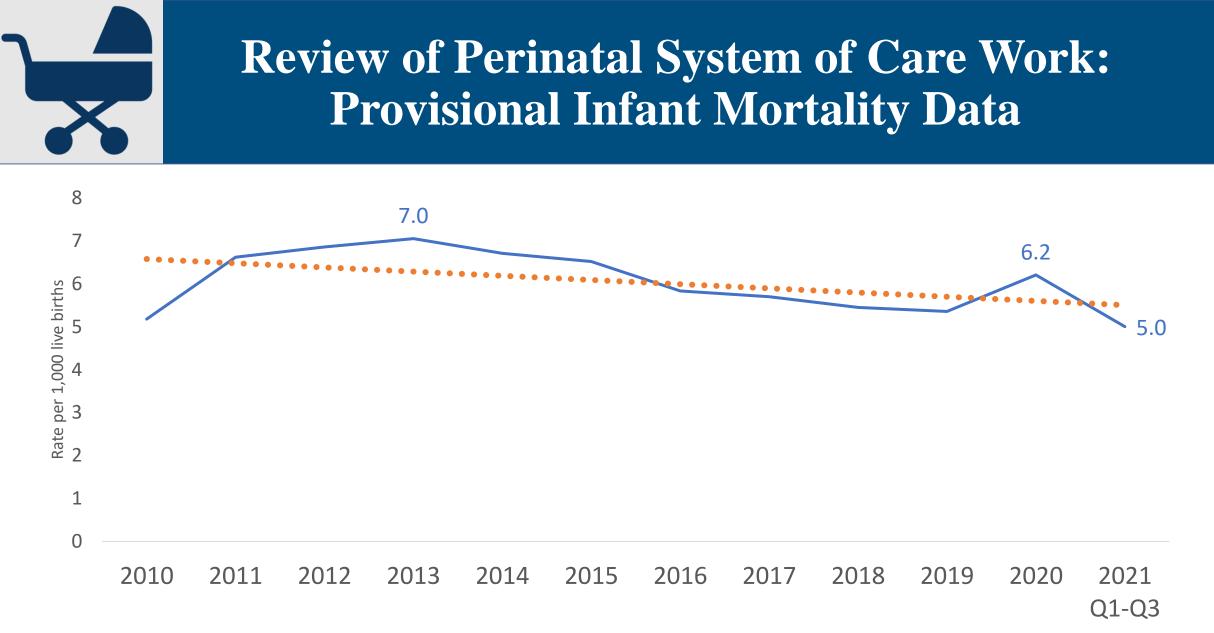
- Ensure access to perinatal care for all areas of the state, especially rural, so that all women and infants receive timely and high-quality care
- Assure appropriate transport of women and infants
- Measure: % of VLBW babies (<1500g) are born at Level 3 or higher hospitals, Goal 90% (Healthy People 2010/2020) (Current 85.2% in 2017)

Review of Perinatal System of Care Work: Foundational Work at DHHS

- Identified 4 Priority Areas for Rural Health Transformation after 4 Rural Health Listening Sessions in 2019
 - Engaging Communities
 - Strengthening Statewide Infrastructure
 - Support Regional Models for High-Need Services (including Perinatal)
 - Develop Rural Care Model and Payment Pilots
 - Several groups recommended looking at how EMS/Office of Rural Health set up trauma system for blueprint for perinatal system

Review of Perinatal System of Care Work: Overview of the Maternal and Neonatal Levels of Care (LOC) Process

- Over 40 states have done work on perinatal regionalization and over 20 states have done the LOCATe tool
- Jan-March 2020: Hospitals completed Federal CDC LOCATe tool
- Spring 2020: Initial Data Review: Maine CDC Maternal Child Health Team, MCH Epidemiologists. Perinatal Nurse Outreach Educator; Data sent to Federal CDC for analysis
- Fall 2020: MCDC sent hospitals request for data clarification
- Winter 2020-21: MCH team reviewed how hospitals' self assessed level of care for maternity and newborn LOC vs LOCATe tool analysis
- February-August 2021: MCH team set up 1 hour virtual site visits with 26 birth hospitals and 3 of 7 nonbirth hospitals to review findings
- September 2021: Follow-up visits completed with level 2 and 3 birth hospitals
- Winter-Summer 2021: Maine DHHS worked on draft guidance document around LOC with feedback from hospitals and providers
- Fall 2021: Finalized hospital LOCs and guidance document
- 2022: LOC guidance in place; Develop plan to pilot maternal transport data collection tool and risk assessment tool



Erika Lichter

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Source: Death certificate data, Maine CDC Data, Research and Vital Statistics/Program 2020 and 2021 data are provisional and subject to change.

Maine Center for Disease Control and Prevention

Review of Perinatal System of Care Work: Pregnancy Associated Deaths

There were **6** pregnancy associated deaths in 2020. **5 of 6** occurred **between 43 days and one year** of delivery. 5 1 0 Pregnant at the time 0 - 42 days after delivery 43-365 days after delivery

Erika Lichter

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Source: Maine DRVS linked death and birth data, 2020 and Maine MFIMR medical abstraction.

Note: These data are provisional and subject to change.

Next Steps on Implementing Perinatal System of Care Work



Level of Care (LOC) Guidance LOC Map Hospital Notification of Changes in Level of Care



Align work with Federal Government Emphasis on Maternal Health

CMS Guidance: evidence-based best practices for hospitals in managing obstetric emergencies (HRSA RMOMS Opportunity CDC HEAR HER Campaign



Maine QI Projects: PQC4ME- AIM Bundle-Maternal Hypertension

Risk Assessment Tool for Preterm Labor

Maternal Transport Data

Building Systems Focusing on Maternal-Child and Family Health

Implementation of Work: Level of Care Guidance Final Document



MAINE Perinatal and Neonatal Level of Care (LOC) 2022 Guidelines

Effective January 2022

Adapted with permission from the Washington State Department of Health (DOH) Perinatal and Neonatal Level of Care 2018 Guidelines

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Introduction

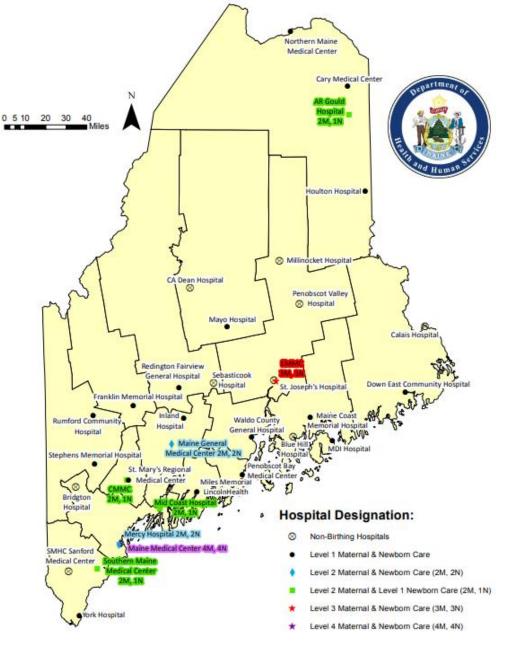
In 2020, Maine Department of Health and Human Services (DHHS) asked all of the hospitals in Maine to complete an assessment from the Federal CDC on maternal and neonatal Levels of Care (LOC) using the LOCATe tool as the state works towards strengthening the perinatal system of care and reducing infant and maternal morbidity and mortality rates. In 2021, DHHS and the Maternal and Child Health Team at the Maine CDC met with each hospital to review their LOCATe tool results and determine the appropriate maternal and newborn LOC. In order to help hospitals assess their facility's capabilities and LOC, Maine DHHS developed this guidance document which is adapted from the Washington State Department of Health's Washington State Perinatal and Neonatal Level of Care 2018 Guidelines. This document follows national guidance, including the American Academy of Pediatrics Levels of Neonatal Care and Guidelines for Perinatal Care recommendations to use uniform, nationally applicable definitions, and consistent standards of service^{1,2} to improve neonatal outcomes. The guidance is also consistent with American College of Obstetricians and Gynecologists and Society for Maternal-Fetal Medicine's Obstetric Care Consensus: Levels of Maternal Care that was updated in August 2019.³ The Guidelines don't require individual hospitals to provide the entire scope of service within a LOC; variation may be needed to meet the Guideline objectives and the unique goals of a hospital or region. This document will be reviewed every 3 years.

It is expected that these guidelines will help:

- improve the outcome of pregnancy,
- increase access to appropriate care for pregnant people and newborns, and
- optimize allocation of resources.

This is not a regulatory document. Maine DHHS uses this document as a reference for hospitals applying for Level I, Level II, Level III, or Level IV designations.

Maine Hospitals by Level of Maternal & Newborn Care, January 2022



Implementation of Work: LOC MAP

Hospital Name	lcon	Newborn	Maternal	OB Phone	Hospital	
		Level of	Level of	Number	Phone	
		Care	Care		Number	
AR Gould Hospital		1	2	207-768-4468	207-768-4000	
Cary Medical Center	•	1	1	207-498-1179	207-498-3111	
Central Maine Medical Center (CMMC)		1	2	207-795-2530	207-795-0111	
Down East Community Hospital	•	1	1	207-255-0242	207-255-3356	
Eastern Maine Medical Center (EMMC)	*	3	3	207-973-8730	207-973-7000	
Franklin Memorial Hospital	•	1	1	207-778-6394	207-778-6031	
Houlton Hospital	٠	1	1	207-521-2130	207-532-2900	
Inland Hospital	٠	1	1	207-861-3100	207-861-3000	
Maine Coast Memorial Hospital	٠	1	1	207-664-5464	207-664-5311	
Maine General Medical Center	•	2	2	207-248-5230	207-626-1000	
Maine Medical Center	*	4	4	207-662-2589	207-662-0111	
Mayo Hospital	•	1	1	207-564-4293	207-564-8401	
Mercy Hospital	•	2	2	207-553-6300	207-879-3000	
Mid Coast Hospital		1	2	207-373-6500	207-373-6000	
Miles Memorial/LincolnHealth	٠	1	1	207-563-4536	207-563-1234	
Mount Desert Island (MDI) Hospital	•	1	1	207-288-5082	207-288-5081	
				Ext. 1352		
Northern Maine Medical Center	•	1	1	207-834-1515	207-834-3155	
Penobscot Bay Medical Center	•	1	1	207-301-8343	207-301-8000	
Redington-Fairview General Hospital	•	1	1	207-858-2405	207-474-5121	
Rumford Community Hospital	•	1	1	207-369-1208	207-369-1000	
Southern Maine Medical Center		1	2	207-283-7350	207-283-7000	
St. Mary's Regional Medical Center	٠	1	1	207-777-8280	207-777-8100	
Stephens Memorial Hospital	•	1	1	207-744-6151	207-743-5933	
Waldo County General Hospital	•	1	1	207-505-4140	207-338-2500	
York Hospital	•	1	1	207-351-2129	207-363-4321	

Non-Birthing Hospitals

- Blue Hill Hospital
- Bridgton Hospital
- SMHC Sanford Medical Center
- Sebasticook Hospital
- CA Dean Hospital

- Penobscot Valley Hospital
- Millinocket Hospital
- Calais Hospital
- St. Joseph's Hospital

Implementation of Work: Hospital Notice of Maternity and/or Newborn Care Changes

• <u>Temporary or Permanent Termination of Maternity and/or Newborn Care</u>

• Hospitals should provide notice of temporary closure at least 30 days prior to the effective date, and 120 days prior to the effective date, for a permanent termination of service. In cases when such notice cannot be done, the hospital should provide notice soon as reasonably practical for a temporary termination of service, by sending a Change in Service Notification to the Maine Department of Health and Human Services Division of Licensing and Certification (DLC)

• <u>Change in Level of Care for Maternity and Newborn Services (Level 1, 2, 3, or 4)</u>

- Provide notice of at least 30 days and within 120 days notice for a proposed change in LOC to the Maine CDC Maternal and Child Health Program Director who will notify the DHHS Chief Child Health Officer.
- The hospital and the Maine CDC Maternal Child Health Team will meet to discuss the LOC designation and reach agreement on the level of care.

Implementation of Work: CMS Guidance

- CMS issued guidance on best practices for managing obstetric emergencies in December 2021
- The Condition of Participation for Quality Assessment and Performance Program requires hospitals to develop, implement, and maintain an effective, ongoing, hospital wide, data-driven quality assessment and performance improvement program
- CMS is encouraging hospitals to implement evidence-based best practices for the management of obstetric emergencies, along with interventions to address other key contributors to maternal health disparities
- Highlights Alliance for Innovation on Maternal Health (AIM)/ACOG patient safety bundles
- Adopted annual reporting on new structural quality measure for Hospital Inpatient Quality Reporting (IQR) that asks hospitals to attest whether they participate in a statewide and/or national maternal safety quality collaborative and whether they have implemented safety practices or bundles to improve maternal outcomes
- Aligns with Perinatal Quality Collaborative Work

Implementation of Work: HRSA RMOMS Funding Opportunity

- <u>Rural Maternity and Obstetrics Management Strategies Program (RMOMS)</u> Funding to improve access to, and continuity of, maternal and obstetrics care in rural communities through regional aggregated care, coordination of a continuum of care, use of telehealth, and the implementation of financial sustainability strategies. Geographic coverage: Nationwide Application Deadline: Apr 5, 2022 Sponsors: Federal Office of Rural Health Policy, Health Resources and Services Administration, U.S. Department of Health and Human Services
- 5 Awards; up to \$1,000,000 a year for 4 years
- Eligibility requirements
- All domestic public and private entities, including nonprofit organizations, for-profit businesses, faithbased and community-based organizations, tribes, and tribal organizations
- Have demonstrated experience serving, or the capacity to serve, rural underserved populations
- Represent a network composed of participants that include at least 3 healthcare organizations and is inclusive of the 6 required network partner types. 1) at least two rural hospitals or Critical Access Hospitals (CAH); 2) at least one FQHC 3) at least one Medicare certified Rural Health Clinic (RHC), to the extent which these entities are in the network service area and engaged in maternal and obstetrics care 4) at least one Level III and/or Level IV facility 5) regionally and/or locally available social services (home visiting, Head Start) and 6) the state Medicaid agency.
- Has not previously received an award under this program for the same or similar project

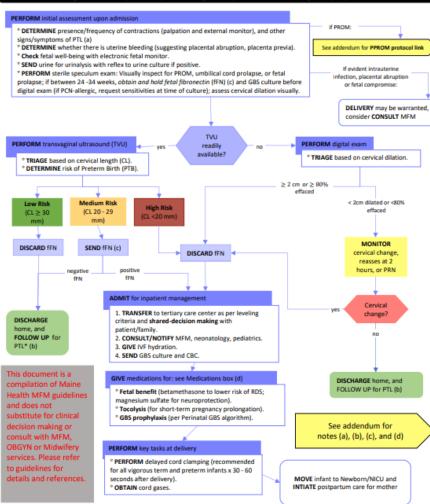
Implementation of Work: Quality Improvement/Pilots

- Maine joined the <u>Alliance for Innovation on Maternal Health (AIM) | ACOG</u> QI work in October 2021 under The Perinatal Quality Collaborative for ME (PQC4ME) at the Medical Association Center for Quality Improvement (CQI)
- PQC4ME is linked to the Northern New England Perinatal Quality of Care Network (NNEPQIN) based at Dartmouth-Hitchcock.
- Previous PQC4ME projects include the implementation of Eat, Sleep, Console to improve care for Substance Exposed infants, improving Safe Sleep practices. and pilot testing of Maternal Naloxone post-delivery (in process)
- Under the Early Childhood Comprehensive Systems (ECCS) grant, the Maine CDC designated funding to the PQC4ME to help support AIM Bundle implementation and additional projects
- Maternal Hypertension will be the first AIM bundle in Maine. The QI Project kick off will be on January 26, 2022, 12 noon 1 pm (webinar) and is open to any interested Maine birth hospitals and other clinical teams. Click on this link to <u>REGISTER</u>.
- Other Northern New England states are working on AIM bundles: New Hampshire- maternal SUD; Vermontpost-partum hemorrhage

Implementation of Work: PQC4ME will Pilot Algorithm for Preterm Labor Birthing and Non-Birthing Hospitals



Algorithm for patient presenting with pre-term labor signs/symptoms



Links to MFM Obstetric G	uidelines and Protocols		
MFM Preterm Labor Guideline	All MFM Obstetrical & Perinatal Guidelines	(d) Preterm Labor	
MFM PPROM Protocol	(d) Preterm Labor		
MFM Corticosteroid for Fetal Lung Maturity Guideline			
MFM GBS Early Onset Prevention Guideline	Fetal Benefit		
MFM Maternal Fetal Transport Guidelines	Maine Perinatal Outreach website: www.mmc.org/perinatal-outreach		
MFM Magnesium Sulfate for Neuroprotection Guideline			
Preterm Labor Signs/Symptoms and Diagnosis	(b) Follow-up after Evaluation for PTL and discharge		
menstrual-like cramping, low back pain uterine contractions vaginal discharge	^o Instruct patient to call with additional signs or symptoms of PTL ^o Schedule a Prenatal visit within 1 - 2 weeks ^o If started, complete 48-hour steroid window as an		
he diagnosis of preterm labor is based upon the resence of regular uterine contractions accompanied y a change in cervical dilation, effacement, or both, ir initial presentation with regular contractions and ervical dilation of at least 2 cm. (ACOS Practice Bulletin No. 71. Management of preterm labor. October 2016.)	outpatient, see Medication box (d)		
Fetal Fibronectin Criteria	ed the following criteria should be met		
 Amniotic membranes are intact. Cervical dilation is minimal (< 3 cm). Sampling is performed no earlier than 24 weeks, 0 da a. The test is not recommended for routine screeni 	ays and no later than 34 weeks, 6 days of gestation. ng of the general obstetric population. ruling out preterm delivery that is imminent (ie, within isult have not been evaluated fully.	Tocolysis Use for short- term pregnancy prolongation (to allow time for patient transfer, medications administration for fetal benefit); give a tocolytic for up to 48 hrs.	
 Perform sterile speculum exam and rotate the provid to absorb cervicovaginal secretions. Subsequent atte Collection kit). 	empts may invalidate the test. (Use only the Hologic	GBS prevention	
	ution. Break shaft at score mark.	\	
 Remove swab and immerse Dacron tip into buffer sol Align shaft with cap and push down tightly. Label specimen with patient's name, DOB, and collect If not immediately sent to lab, specimen must be refr 	tion date and time.		

Recommendations To lower risk of respiratory distress syndrome, intraventricular hemorrhage, necrotizing enterocolitis, and neonatal death, give a corticosteroid course to all patients 24 - 34 weeks gestation: ° Betamethasone: 12mg IM every 24 hours x 2 doses. - if betamethasone unavailable, may use: ^o Dexamethasone: 6mg IM every 12 hours x 4 doses. *Note: After MFM/NICU consult, timing of administration at periviability (20+0 - 25+6 wks) should be guided by the family's decision regarding neonatal resuscitation, (Periviable birth, Obstetric Care Consensus No. 6, American College of Obstetricians and Gynecologists. Obstet Gynecol 2017;130:e187-99.1 Rescue Corticosteroid Course for Patients < 34 0/7 Weeks: f a patient has received a previous corticosteroid course > 14 days previously (though can be provided as early as 7 days from prior dose), AND at risk of delivery within the next 7 days AND < 34 0/7 weeks, give corticosteroid course *Note: Repeat courses or serial courses (more than two) are not recommended. Whether to administer a repeat course of corticosteroids with preterm, premature rupture of membranes is controversial, and there is insufficient evidence to make a recommendation for or against. *Because corticosteroid treatment for < 24 hours is still associated with reduction in neonatal morbidity and mortality, the first dose of corticosteroids should be administered even if the ability to give the second dose is thought to be unlikely (e.g., PPROM with suspected early labor). Patients Between 34 0/7 and 36 6/7 Weeks Antenatal corticosteroids may be of benefit to infants born in the late preterm period. A steroid course is recommended for patients who are considered at high risk of delivery within 7 days and who have not received a previous course of antenatal steroids For neuroprotection at < 32 weeks gestation, give: Magnesium sulfate 4 gram bolus, followed by 1 gram/hour for up to 24 hours First Line: ≤ 32 weeks, give ONE of the following: Indomethacin: 50-100 mg by mouth loading dose followed by 25-50 mg by mouth every 6-8 hours, not to xceed 48 hours total treatment Nifedipine: 20-30 mg by mouth loading dose, then 10-20 mg by mouth every 6-8 hours First Line: 32 - 34 weeks, give: Nifedipine: 20-30 mg by mouth loading dose, then 10-20 mg by mouth every 6-8 hours *Note: Tocolysis is contraindicated when risks of use outweiah potential benefits (e.a., in case of nonreassuring fetal status, severe preeclampsia or eclampsia, maternal bleeding with hemodynamic

on/Transfer MFM via ONE CALL: (207) 662 - 6632 or NL-EMMC (207) 973-9000

Medications

reterm Birth (PTB) Medication Considerations

Instability, chorioannionits, PROM, or ogent-specific maternal contradictions with indeptormediate of the second second

DRAFT version 5 - 03/23/2021

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PQC4ME will Pilot Data Collection Form for Maternal Transports

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1 F	cility:				Form Date: 470721												
3	DATE OF TRANSPORT	TIME OF 1st CALL TO MFM	PATIENT ARRIVAL AT HOSPITAL TO DECISION TO	TIME EMS WAS REQUESTED	EMS ARRIVAL TIME	EMS SERVICE	METHOD OF TRANSPORT	RECEIVING	SENDING FACILITY STAFF SENT	TRANSPORT DELAYS	CANCELLED TRANSPORT	GESTATIONAL AGE	PRIMARY DIAGNOSIS	PLURALITY	- MEDICAL RECORD #	COMMENTS	
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Implementation of Work: DHHS is Working to Build Systems Focusing on Maternal-Child and Family Health

Perinatal System of Care (Prenatal -1)

Early Childhood Comprehensive Systems (ECCS) Program (Prenatal-3)

Help Me Grow (Birth to 8)



Maine Department of Health and Human Services

Discuss potential goals and work for next year and how it aligns with your work (Will be narrowed to 3-4). These were discussed at the Quarterly Perinatal System of Care Meeting in December 2021

- 1. Continue to build infrastructure to Strengthen the Perinatal System of Care in Maine
- 2. Provide hospitals feedback on QI efforts with annual data collected from birth certificates
- 3. Start implementation of AIM Bundles in Maine as part of ECCS grant
- 4. Continue to build pathways for maternal transport
- 5. Gather more information on gaps in the perinatal system around health equity
- 6. Develop workforce capacity- look at simulation opportunities for delivery rooms, OB emergency training in rural non-birth hospitals for First Responders, ED staff
- 7. Provide education around preconception health, chronic disease management during pregnancy, and post-partum health
- 8. Continue work around improving care for pregnant people with SUD/OUD and Substance Exposed Infants

Thank You!

DHHS Commissioner's Office

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Maine CDC

- Maryann Harakall, MCH Program Director, Maryann.Harakall@maine.gov
- Angie Bellefleur, ECCS Project Director, <u>Angie.Bellefleur@maine.gov</u>
- Kelley Bowden, MS, RN, now Retired Perinatal Outreach Nurse Coordinator for the Maine CDC

Consultant

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