How PQC4ME is Reducing Maternal and Infant Mortality in Maine

Jay A. Naliboff, MD
Nell Tharpe MS, CNM, CRNFA, FACNM
Kelley Bowden, MS, RN
Consultants, PQC4ME

Outline

- Brief overview of PQC4ME
- Projects
  - Safe Sleep
  - Infant Mortality Report
  - PTL algorithm/Maternal Fetal Transport data collection
  - AIM Severe Hypertension Bundle
  - Universal Postpartum Naloxone

PQC4ME

- All 50 states have a Perinatal Quality Collaborative
- PQC4ME created in 2018, goal is to improve perinatal outcomes, utilizing evidence-based practices, representing the full range choices and care options, and including all interested stakeholders in the process
- Implements statewide QI projects; supports facility/hospital QI projects
- Priorities are identified via needs assessments, qualitative and quantitative data, MCH Title V priorities, MFIMR reports, and advisory groups (e.g., PNM)
- Steering Committee has open membership; meets quarterly
- Collaborates with NNEPQIN (New Hampshire and Vermont)
- Project funding from foundations and state/federal government

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Mission and Vision

- Vision:
  - All women and families will have seamless access to the maternity and newborn care they want and that is indicated, across the perinatal continuum. The maternity care system actively facilitates this access, including respect for the woman's chosen practitioner(s) and birth setting. The vision will be accomplished by bringing together all stakeholders from across the maternity and newborn care systems to focus on and improve the quality of care and experience of women and newborns throughout the perinatal period in every care setting.
- Mission:
  - Improve the state of perinatal health care in Maine, under the direction of expert perinatal clinicians utilizing evidence based practice when available, who represent the full range of choices and care options, with inclusion of all interested stakeholders in the process, without undue influence from any one sector.

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PQC4ME Kick Off

- October 1, 2019
- Focus on Safe Sleep in conjunction with Maine DHHS Commissioner Lambrew's goal to reduce infant unsafe sleep deaths
- Convened meeting in central Maine, hospitals encouraged to bring an interprofessional team, local and national speakers
- Goal: All birthing hospitals in Maine achieve Safe Sleep Certification from Cribs for Kids
  - Benefits: Free, many could already achieve the bronze level-infant safe sleep policy, staff education, patient education

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KNOW THE ABCs OF SAFE SLEEP

A ALONE IN THEIR CRIB

B ON THEIR BACK

C CLEAN, CLEAR CRIB

D DRUG-FREE HOME

SAFESLEEP – MAINE –
SafeSleepForME.org

Department of Health and Human Services
DIRIGO
MAINE

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Statewide Projects

- **Public outreach** on Radio, Television, Social media and Search engines
- **Materials for Distribution** of Board books, Magnets, Rack cards, Window clings and were provided for **healthcare settings**
- **Education/training** for hospitals, home visitors, public health nurses, WIC, OCFS, staff, others
- **PQC4ME Quality Improvement** project: Neonatal nursery crib audits, collating the data and reporting it back, learning sessions open to hospitals and community organizations

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On-Going Activities

- Crib reimbursement program
- Maternal, Fetal and Infant Mortality Review Panel
- Translation of materials
- Public outreach

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Safe Sleep Results

- 26 (now 24) birthing hospitals are Safe Sleep Certified
  - Maine 2nd state in country to achieve statewide certification
  - Some hospitals have increased their level of certification from bronze to silver or gold level
- 50% reduction in unsafe sleep infant deaths in year One
  - 10-12 deaths per year down to 6 per year
- Next steps include sustainability of success, maintenance of Cribs for Kids Certification

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Infant Mortality Report (foundation funded)

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.

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PTL Algorithm and Maternal Fetal Transport Data Collection Tool Workgroup and Pilots

- Workgroup developed tools
- Presentation to statewide nurse leadership group
- Goal: Pilot tools as follows
  - 3 non-birthing hospitals PTL algorithm specific to non-birthing hospitals
  - 3 birthing hospitals PTL algorithm
  - 3 birthing hospitals MFT data collection tool
- Data collection for 6 months
- Project evaluator Therese Fitzgerald

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Maternal Transport Data Collection

DATE OF TRANSPORT	TIME OF 1st CALL TO MFM	PATIENT ARRIVAL AT HOSPITAL TO DECISION TO TRANSPORT (LENGTH OF	TIME EMS WAS REQUESTE	EMS ARRIVAL TIME	EMS SERVICE	METHOD OF TRANSPO	RECEIVING FACILITY	SENDING FACILITY STAFF	TRANSPORT DELAYS	CANCELLED TRANSPORT	GESTATIONAL AGE	PRIMARY DIAGNOSIS	PLURALITY	EDICAL RECORD	COMMENTS
(MMDDYY format)	(24hr format)		(24hr format)	(24hr format)		(Drop Down List)		(Drop Down List)	(Drop Down List)	(Drop Down List)		(Drop Down List)	(Drop Down List)		

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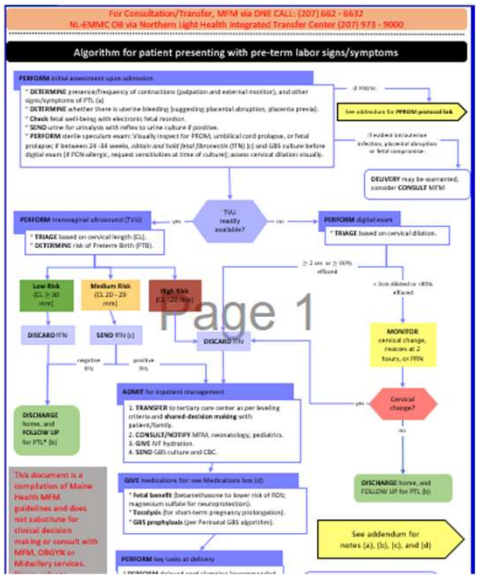
Thanks to Melody Narramore, York Hospital and Marc Minkler, PM for EMS-C in Maine

Preterm Labor



Thanks to Nicole Goldberg

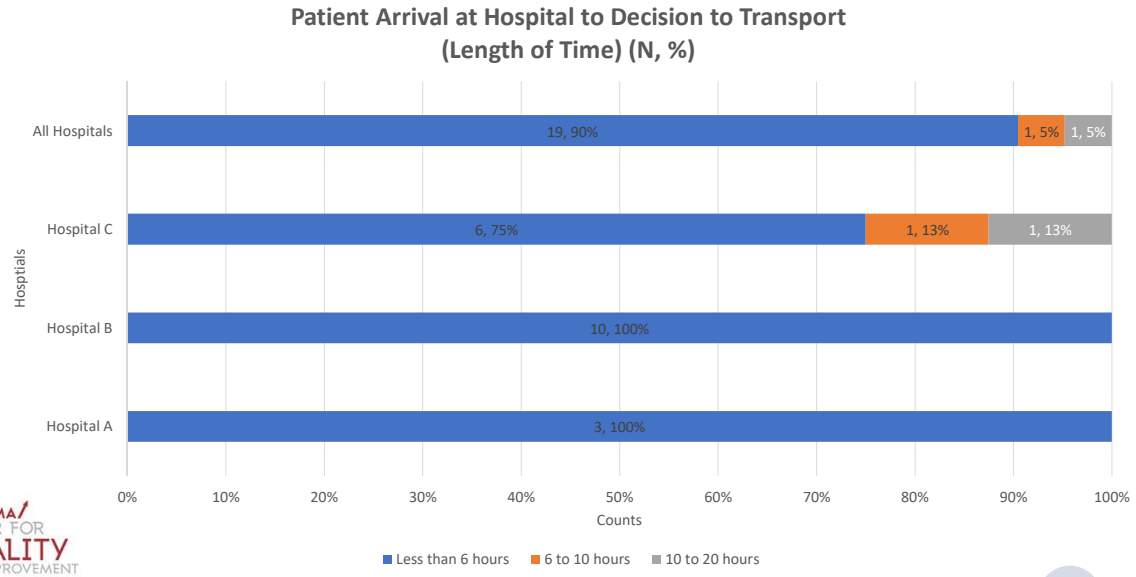
Transport and Preterm Labor Data

May to September 2022

Therese Fitzgerald, PhD, MSW

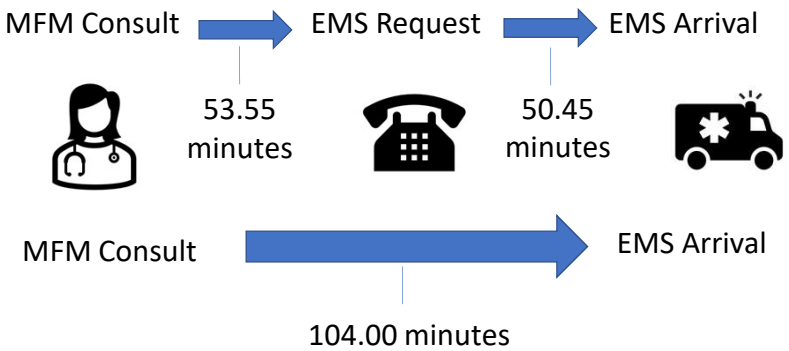
Transport Data (n=21)

- Total of 28 transports
- Primary Diagnosis: Postpartum to be with newborn - Removed from further analysis as the less urgent nature of the transport skews wait time results.
- The following analysis focuses on the remaining 21 transport cases.



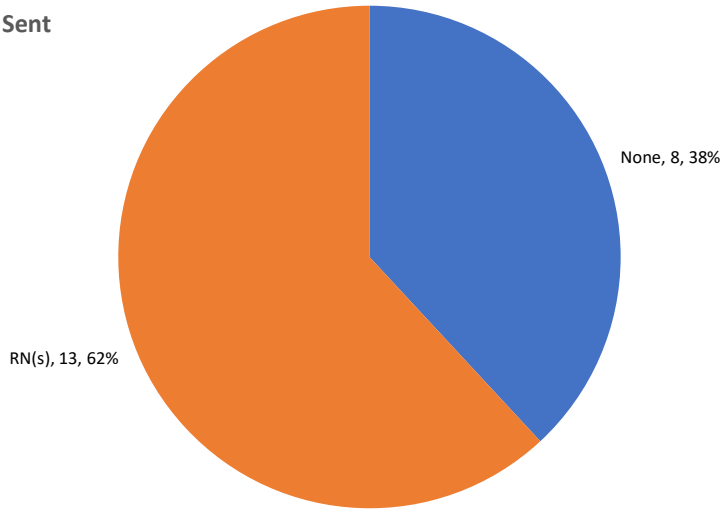
(N=21)

Average Wait Times (N=20)

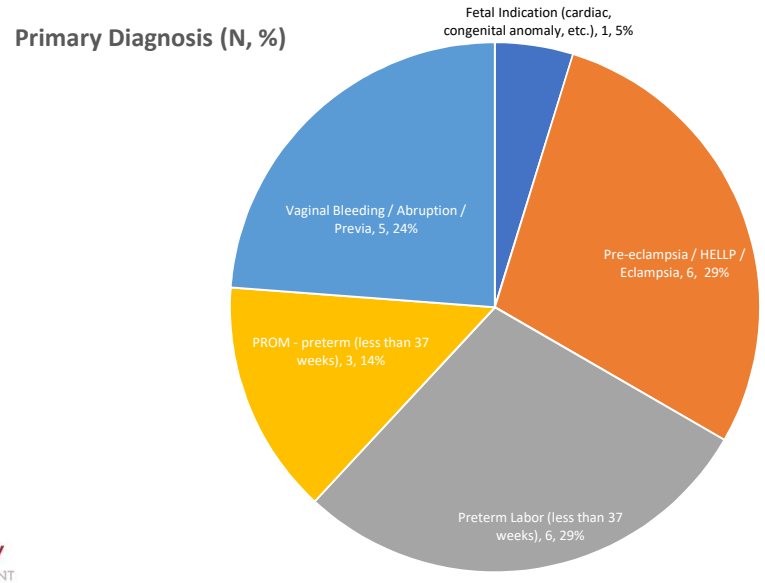


Missing data = 1

Sending Facility Staff Sent (N, %)

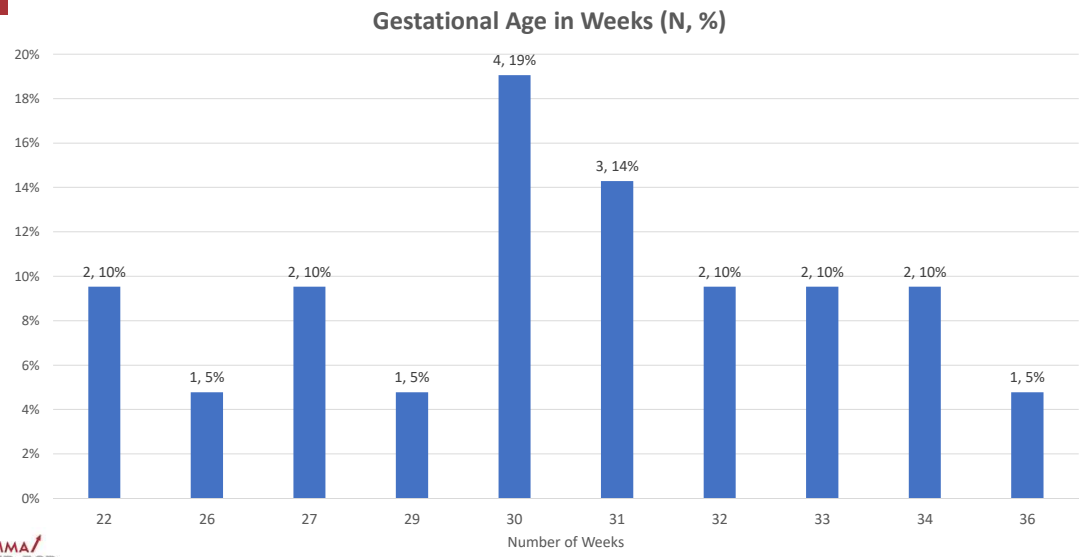


(N=21)



(N=21)

19



(N=20, Missing data =1)

20

Preterm Labor Algorithm Data (N=12)

May to September 2022

Therese Fitzgerald, PhD, MSW

Actions taken based on the physical exam and tests (Check all that apply) *

MFM notified/consulted	3	25.0%
Patient admitted for management/observation	1	8.3%
Patient admitted for delivery	3	25.0%
Patient transferred to another facility as per leveling criteria and shared decision-making with patient and family +N=3 PTL; N=1 moderate bleeding with complete placenta previa)	4+	33.3%
Patient discharged home	5	41.7%

*N=12; Some respondents chose multiple answers, therefore, percentages will not total 100%.

Next Steps

- Meet with original workgroups
- Finalize recommendations and report
  - DRAFT recommendations include:
    - Expand use of PTL algorithm statewide
    - Create Patient Education materials aligned with algorithm
    - Notify EMS as soon as decision made to transport
    - Local conversations with EMS providers and birthing hospitals
- Present to state nurse leaders and other interested groups

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AIM Severe Hypertension Bundle

- Review of data
  - Maternal Mortality
  - Infant Mortality (a driver of Preterm Birth)
- Case Reviews
- Transport Conferences
- Existing work
  - Maine Medical Mutual asking members to complete Relias Module on Hypertension
- Survey of Members

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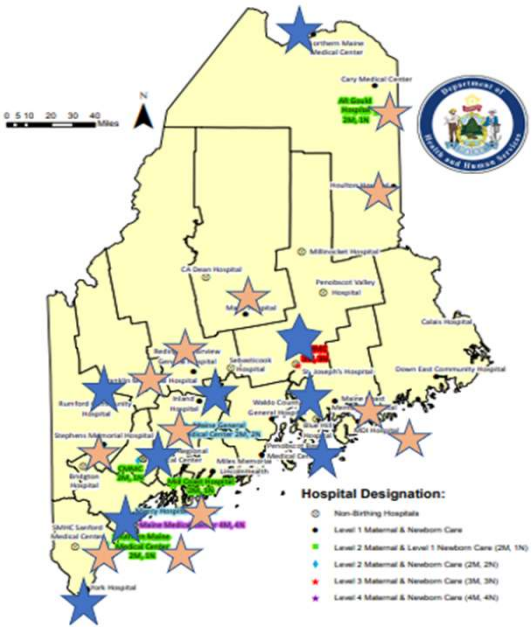
Cohort 1 & 2 Hospitals

Goal=24 Hospitals
AIM Bundle Legend
= Cohort One (9)
= Cohort Two (12)
Not enrolled =3



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Current SMART Goal

- SMART
  - Specific
  - Measurable
  - Achievable
  - Relevant
  - Time-bound
- Treat 85% of patients presenting with acute onset severe hypertension within the first hour
- Additional/Alternate SMART Goal: 80% of team members will participate in a severe hypertension simulation by November 30, 2023

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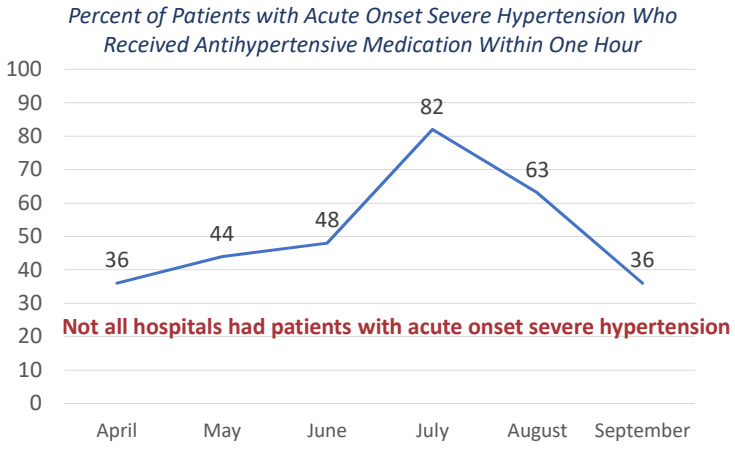
Data Overview-Cohort One (9 Hospitals)

Of a total of 143 patients with acute-onset severe hypertension seen between April and August, 65 were treated within 1 hour.

Overall treatment rate was 45% across all 9 participating hospitals



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Next Steps and Contact information

- Learning Sessions
- Data collection and monitoring
- Technical Assistance
- In person statewide interprofessional conference June 7th near Augusta
- Contact for more information:
  - kelleybowdenrn@gmail.com
  - Ashlee Crowell-Smith, Project Manager at acrowell-smith@mainemed.com

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UNIVERSAL POSTPARTUM NALOXONE : A QUALITY IMPROVEMENT PROJECT TO REDUCE POSTPARTUM MATERNAL MORTALITY

PERINATAL QUALITY COLLABORATIVE FOR MAINE (PQC4ME)

MAINE MEDICAL ASSOCIATION CENTER FOR QUALITY IMPROVEMENT

JAY NALIBOFF MD, FACOG

NELL THARPE CNM, MS, FACNM

Project Support

•This project was supported by Discretionary Grants from the Maine Health Access Foundation and the Bingham Program; staff support by the Maine Medical Association Center For Quality Improvement; and by in-kind contributions from the Franklin Community Health Network Healthy Community Coalition.

•We report no commercial support or conflicts of interest.

Learning Objectives

- Describe the concept of harm reduction and how it applies to substance use disorder.
- Explain the rationale for universal distribution of naloxone to postpartum people.
- Describe three factors necessary for the pilot's success.

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BRIEF REPORT

Universal Postpartum Naloxone Provision: A Harm Reduction Quality Improvement Project

Naliboff, Jay A. MD, FACOG; Tharpe, Nell CNM, MS, FACNM

Author Information

Journal of Addiction Medicine ():10.1097/ADM.0000000000001118, December 6, 2022. | *DOI:* 10.1097/ADM.0000000000001118

Article accepted by the *Journal of Addiction Medicine*.
Abstract at https://journals.lww.com/journaladdictionmedicine/Abstract/9900/Universal_Postpartum_Naloxone_Provision__A_Harm.121.aspx

The Aim of the Pilot Project

Three-Pronged Aim:

1. Reduce postpartum maternal mortality due to opioid overdose.

   a. The project will increase community access to naloxone by providing a naloxone- containing "first aid kit" to every postpartum person at hospital discharge.

2. Reduce implicit bias by healthcare workers.

   a. Educating nursing staff and providers about implicit bias and harm reduction strategies to minimize stigma that leads to discrimination against people affected by opioid use.

3. Foster relationships between community resource providers and hospitals.

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Guiding Principle Is Harm Reduction

- ***Harm reduction focuses on positive change.***
- Working with people without judgement, coercion, discrimination, or requiring that they stop using drugs as a precondition of support.
- Harm reduction when applied to substance use refers to policies, programs and practices that aim to minimize negative health, social and legal impacts associated with drug use, drug policies and drug laws.
- Source: https://www.hri.global/what-is-harm-reduction

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Does The Project Conform To This Definition?

- Anti-bias education is a crucial component of harm reduction.
- Universal provision of naloxone aims to prevent overdose deaths without shaming or identifying people who use substances.
- Increasing saturation of naloxone in the community improves the odds of surviving an overdose.
- Facilitating interaction between community prevention agencies and birthing units reduces gaps between hospital and home.
- All of these aspects of the project are consistent with the principles of harm reduction.

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The Problem

- 13% of maternal mortality in Maine in 2020 and 50% of maternal mortality in New Hampshire in 2020 was due to opioid overdose in the first twelve months postpartum.
- In Maine in 2020, two thirds of women who died within one year of pregnancy were identified as substance users.
- A recent Massachusetts study showed 50% of opioid overdoses in the first twelve months postpartum occurred in women without identified opioid use disorder(OUD) https://onlinelibrary.wiley.com/doi/abs/10.1111/add.14825.

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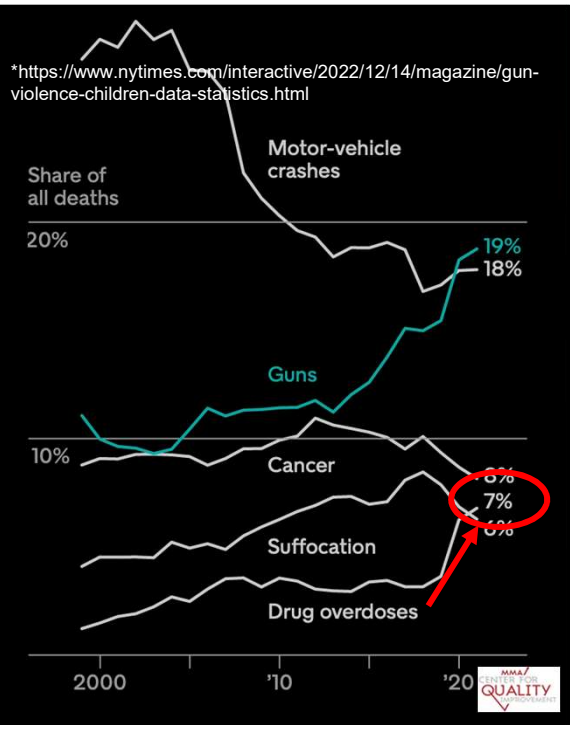
Leading Causes of Death for Children 1 Through 18*

"Fatal drug overdoses are predominantly attributed to opioids. Women of childbearing age are among those at greatest risk, underscoring the need to understand the overlapping risk of fatal poisoning in children."

Hunter, et al. (2022) An examination of fatal child poisonings in the United States using the National Violent Death Reporting System (NVDRS), 2012–2017. Clinical Toxicology, 60:3, 342-347. DOI 10.1080/15563650.2021.1955913

*https://www.nytimes.com/interactive/2022/12/14/magazine/gun-violence-children-data-statistics.html



Why Every Postpartum Person?

- It's difficult to predict who might need naloxone. *
- Universal distribution :
  - Increases saturation of naloxone in the community. In the first five months of 2022, 22.6% of people in Maine who survived reported overdose were given naloxone by a community member.**
  - Avoids stigmatization towards people who use drugs.
  - Decreases implicit bias and increases acceptance of all birthing people.
  - Avoids the perceived risk of involving DHHS if kit is accepted.
  - Includes mechanisms in place for indirect mention of naloxone in health or billing records.

* https://onlinelibrary.wiley.com/doi/abs/10.1111/add.14825.

** https://mainedrugdata.org/maine-cumulative-monthly-overdose-report-for-january-through-may-2022/

Pilot Project Site

- Franklin Memorial Hospital
  - Small community hospital in West Central Maine
  - Member of Maine Health.
  - Level I Obstetrical Service with four OB/Gyns and one CNM.
  - 237 births in 2020, 222 in 2021.
- Franklin County is predominantly rural and white.
- Top 5 employers: MAINEHEALTH, SUGARLOAF MOUNTAIN CORP., VERSO PAPER HOLDING LLC, WALMART / SAM'S CLUB, JARDEN PLASTIC SOLUTIONS.

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The Pilot Project

- Staff and providers participated in a validated survey* about attitudes toward caring for people who use drugs. The survey was repeated six months after the start of the project to measure changes in attitudes.
- An educational curriculum was developed and placed on the hospital NetLearning platform for completion by OB office staff, providers, and hospital OB unit nursing staff.
- The components of the curriculum include an introduction to the project, modules on implicit bias and harm reduction, and a tutorial on teaching about naloxone administration.

*Watson H, Maclaren W, Kerr S. Staff Attitudes Toward Working With Drug Users: Development of the Drug Problems Perception Questionnaire. Addiction. 2006; 102, 206-215

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The Pilot Project

- Every postpartum person was provided a naloxone-containing first aid kit prior to hospital discharge.
- Nursing staff educated the postpartum person regarding overdose symptoms and naloxone administration.
- The first aid kit also contained:
  - Supplies for newborn care including a digital thermometer
  - A CPR facemask
  - Naloxone use instruction card
  - Instructions on how to access local recovery resources, and
  - A poison control magnet
- Although postpartum people may decline naloxone; the emphasis is on *providing* the take-home kit and not just offering it.

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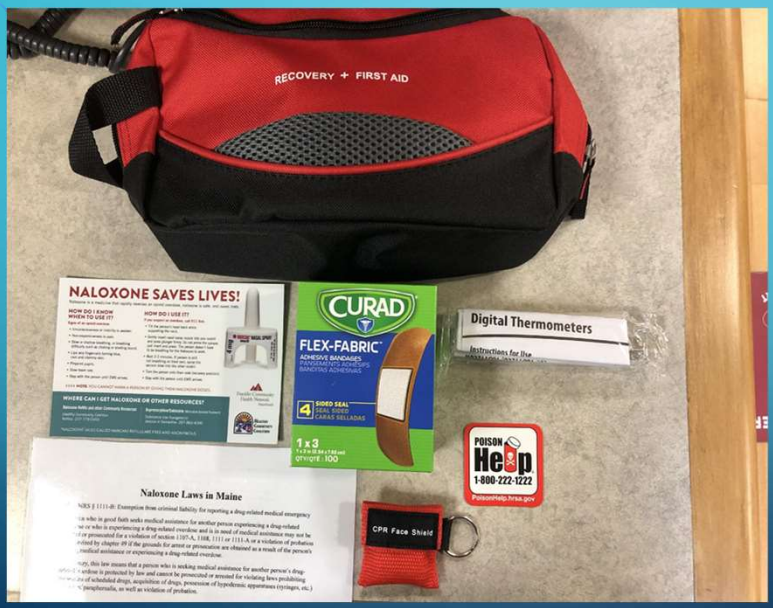

The Take-Home First-Aid Kit

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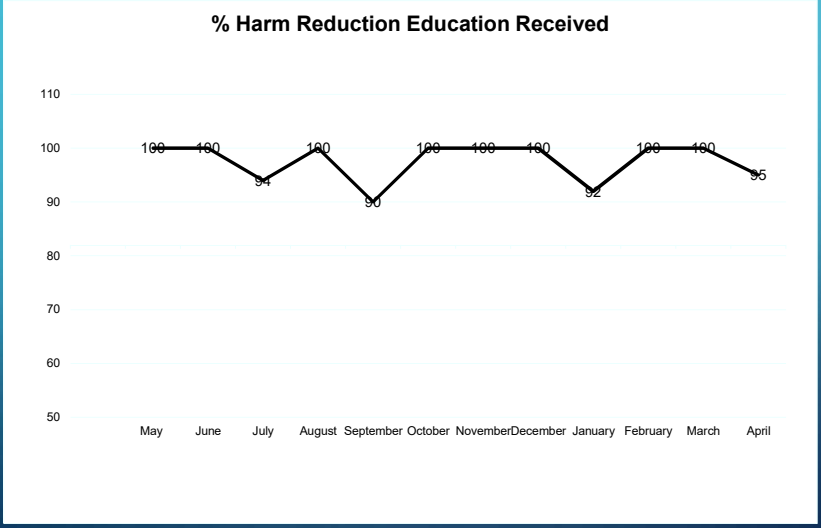
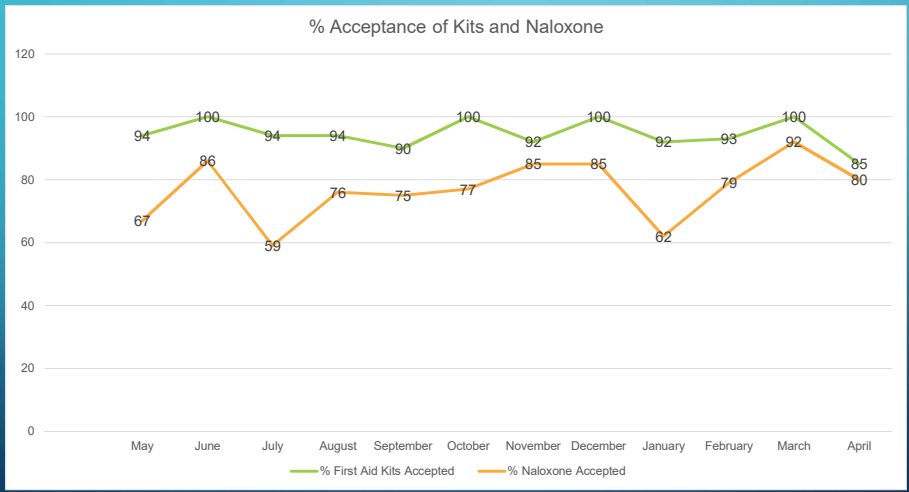
Harm Reduction Education Received



Percentage of Postpartum People Receiving Harm Reduction Education: Cumulative total 97% (192/197)

First Aid Kit and Naloxone Acceptance(%)



Percentage of Postpartum People Accepting the First Aid Kit and Accepting Naloxone Cumulative Totals:

- **Kit-94% (186/197)**
- **Naloxone 76% (150/197)**

Cumulative First Aid Kit and Naloxone Acceptance Rates

- First Aid Kit - 94%
- Take-Home Naloxone Dosepak - 76%
- The First Aid Kit is very popular, especially with the digital thermometer as part of it.
- Nursing and provider attitudes are critical in naloxone acceptance.

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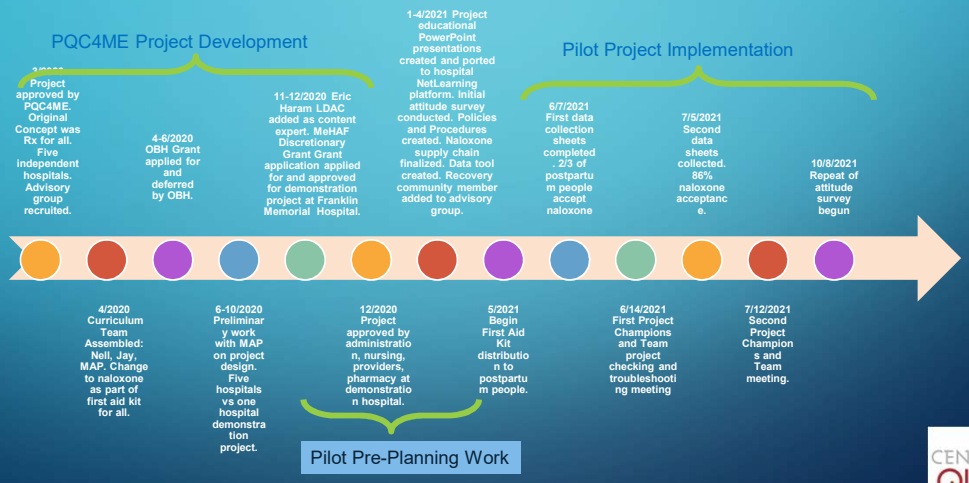
A Quick Overview of the Timeline



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Pilot Challenges Encountered

- Pilot Planning Phase
  - Evolution from initial plan
  - Project funding
  - Curriculum development
  - Nursing scope of practice rules
  - Community reactions
- Implementation Phase
  - Incomplete data sheets
  - "Data collection fatigue"
  - Staff and provider turnover (50% turnover of Birthing Unit staff due to burnout, retirement, and vaccine mandate)

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Requirements for Success

- Buy in from providers, nursing staff, hospital administration.
- Strong in-house champions.
- Stable supply of naloxone with no cost to people in Maine.
- Frequent communication with project champions and project leadership.
- Preparation by office staff at prenatal visits so that people aren't surprised to be offered naloxone at discharge.
- Ongoing support, problem-solving, and feedback about results.

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Follow-up and Next Steps

- Pilot data collection ended April 2022.
  - Since pilot ended 89% of postpartum people took home the first-aid kit.
  - 73% also took home Naloxone
- Project expanded to two other Maine hospitals.
- Suicide prevention resources now included in kit.
- Online toolkit created to facilitate further expansion.

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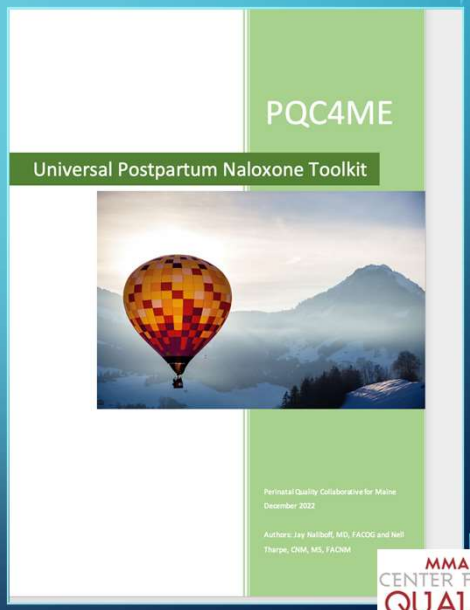
PQC4ME Universal Postpartum Naloxone Project Toolkit

- Project guide & checklists
- Educational modules
- Sample policy
- Scripting for clinical staff
- Public relations materials
- Project FAQs
- Data & naloxone tracking sheets
- https://www.mainemed.com/maternal-perinatal-and-child-health-improvement.



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QUESTIONS?

PROJECT CONTACTS:

JNALIBOFF@ME.COM

NELLTHARPE.CNM@GMAIL.COM

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