



Massachusetts Perinatal and Neonatal Quality Collaborative

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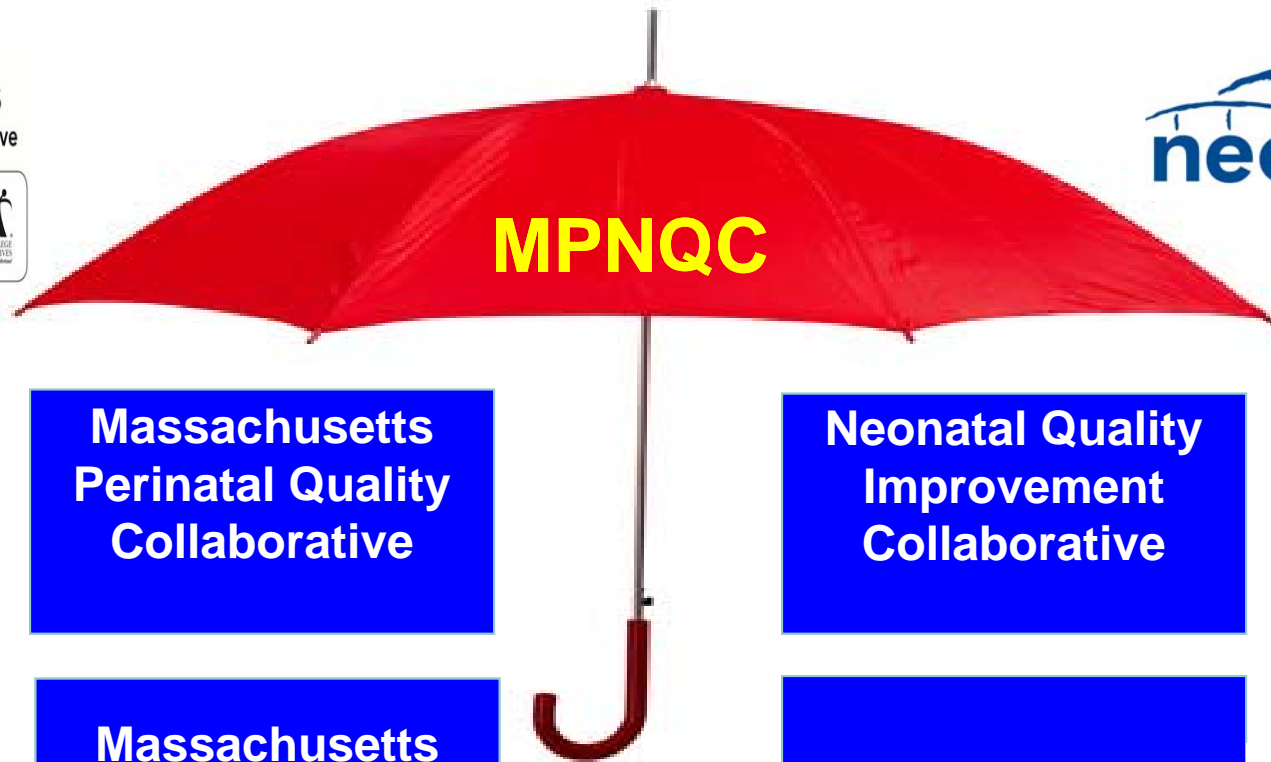
April 29, 2015



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Massachusetts
Perinatal Quality Collaborative



Massachusetts
Perinatal Quality
Collaborative

Neonatal Quality
Improvement
Collaborative

Massachusetts
Department of
Public Health

March of Dimes





Clinical Areas of Focus

1. Use of breast milk among VLBW infants
2. Early Intervention enrollment among VLBW infants
3. Appropriate use of antenatal corticosteroids in women at risk of preterm delivery
4. Improve care for infants with neonatal abstinence syndrome (NAS)
5. Severe pregnancy-related morbidity
6. Implementation of hospital-based safe sleep practices



Improvement Strategies

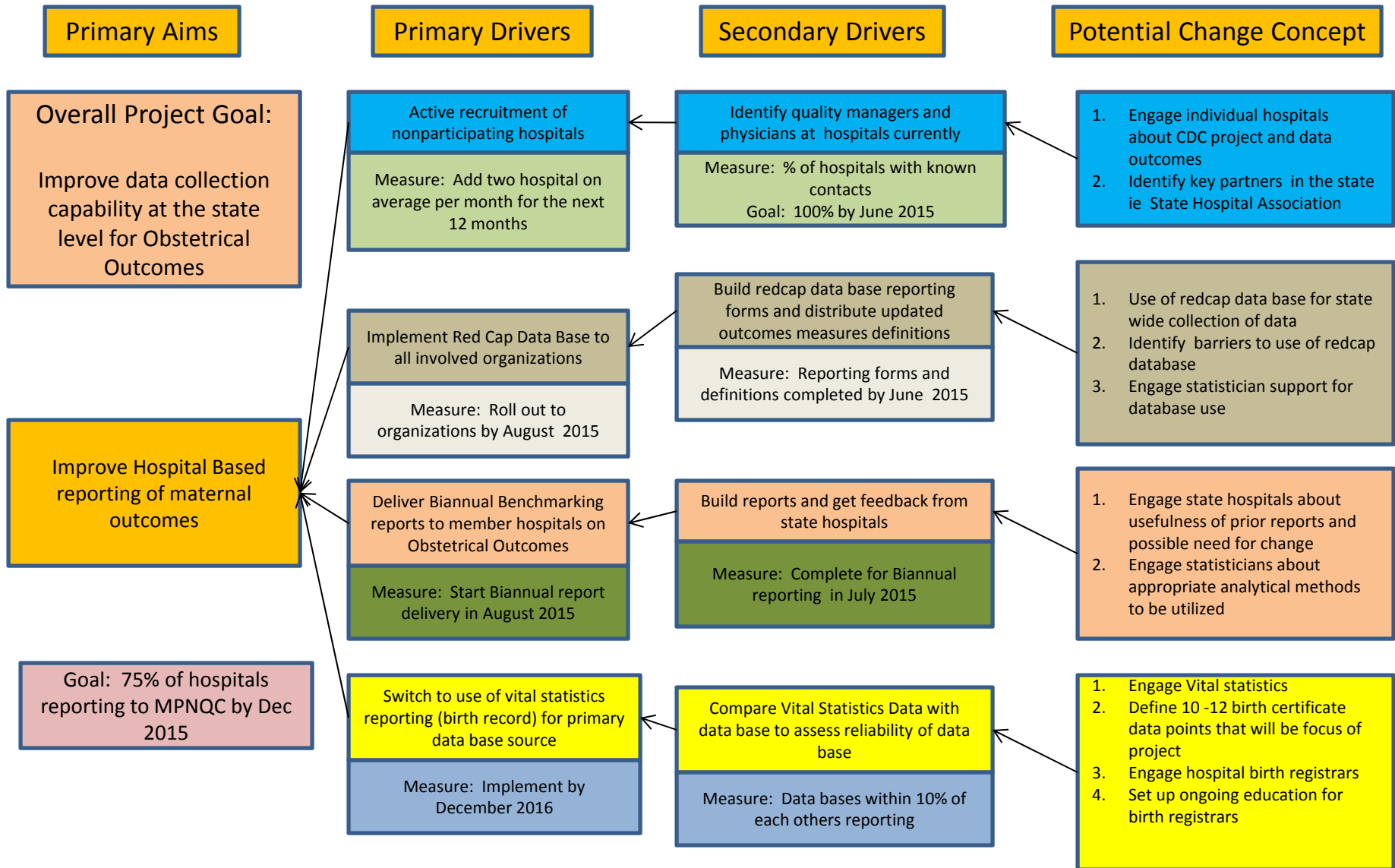
1. Improve Clinical Care
 - Clinical practices
 - Clinical outcomes
2. Increase hospital engagement
3. Enhance/develop data systems



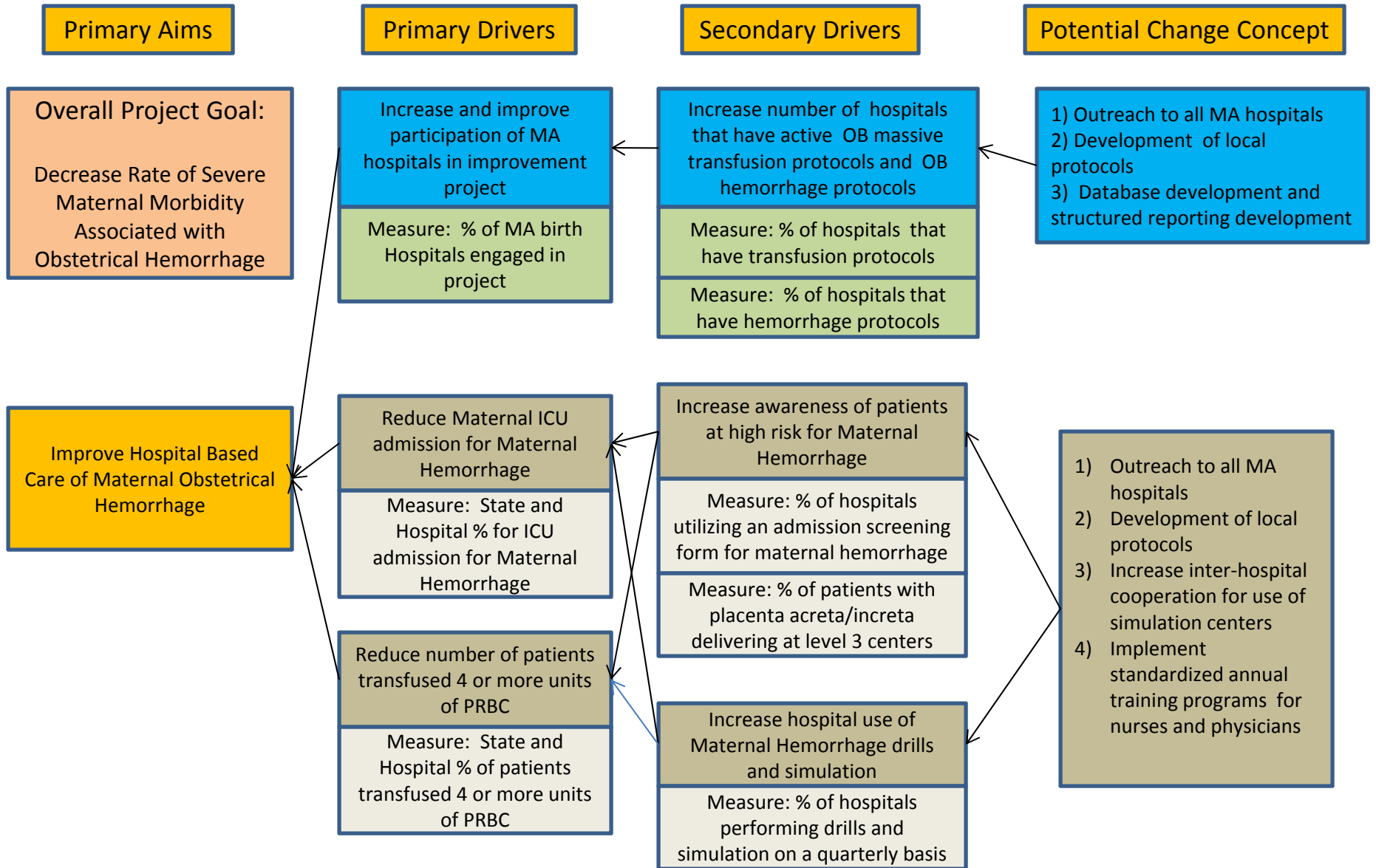
Severe pregnancy-related morbidity

- Overall Goals:
 1. Improve data collection capability at the state level for obstetrical outcomes
 2. Decrease the rate of severe maternal morbidity associated with obstetrical hemorrhage
- Performance Measures:
 1. Increase number of hospitals reporting maternal outcomes to MPQC from 34 to 46 (75%) of state birthing hospitals by the end of 2016
 2. Reduce the number of ICU admissions for maternal hemorrhage (State and Hospital %) and the number of patients transfused 4 or more units of PRBC

Severe Morbidity Project: Data Outcomes Portion



Severe Morbidity Project: Hemorrhage





Use of breast milk among very low birth weight infants

- Overall Project Goal:
 1. Increase the use of human milk in very low birth weight infants

- Performance Measures:
 1. Increase the use of any human milk prior to NICU discharge or transfer for VLBW infants in MA to 75% in 2 years
 2. Increase the use of exclusive human milk prior to NICU discharge or transfer for VLBW infants in MA to 10% in 2 years

- Outcome Measure:
 1. Percent of VLBW infants receiving any or exclusive human milk in the 24 hours prior to NICU discharge or transfer

- Balancing Measures
 1. Rate of NEC and any late infection during hospitalization
 2. Length of stay
 3. Growth during hospitalization

NeoQIC Human Milk Improvement Initiative

Primary Aims

Overall Project Goal

Increase the use of human milk in very low birth weight infants in Massachusetts

- 1) Increase the use of any human milk prior to NICU discharge or transfer for VLBW infants in MA to 75% in 2 years
- 2) Increase the use of exclusive human milk prior to NICU discharge or transfer for VLBW infants in MA to 10% in 2 years

Outcome Measures: Percent of VLBW infants receiving any or exclusive human milk in the 24 hours prior to NICU discharge or transfer

Balancing Measures

- 1) Rate of NEC and any late infection during hospitalization
- 2) Length of stay
- 3) Growth during hospitalization

Primary Drivers

Inadequate parental education

Inadequate breast milk initiation

Required Process Measure: Time (hours) to administer mother's own milk (oral care or enteral)

Inadequate breast milk continuation

Required Process Measure: Any human milk used at DOL 7, 14, 21, 28

Inadequate preparation for support of breastfeeding in the home after discharge

Secondary Drivers

Lack of education at prenatal consultation

Required Process Measure: Document parent education on human milk benefits at prenatal consultation.

Lack of postnatal education in the NICU

Early pumping is not initiated

Recommended Process Measure: Time (hours) to first pumping

Early hand expression is not initiated

Mothers do not pump regularly

Inadequate time performing skin to skin

Recommended Process Measure: Any skin to skin performed on DOL 7, 14, 21, & 28

Lack of access to hospital-grade pumps for mothers

Lack of technical support for mothers

Recommended Process Measure: documented contact with an IBCLC or equivalent personnel in first 72 hours of life

Lack of motivational support for mothers

Lack of training in establishment of direct breastfeeding

Recommended Process Measure: Any mothers' own milk at 3 months post-discharge (will be collected by DPH on WIC mothers only)

Potential Change Concepts

- 1) Train to NICU staff to educate families
- 2) Develop education materials for families
- 3) Develop prompts in the EMR to document education delivery

- 1) Training L&D, postpartum and NICU staff to facilitate early pumping and hand expression
- 2) Improve availability of pumps on L&D

Systematic monitoring of pumping and skin to skin by NICU staff

Hospital-grade pumps provided for all mothers

- 1) Improve NICU coverage with IBCLCs, peer-counselors, etc.
- 2) Development of peer-support breastfeeding groups

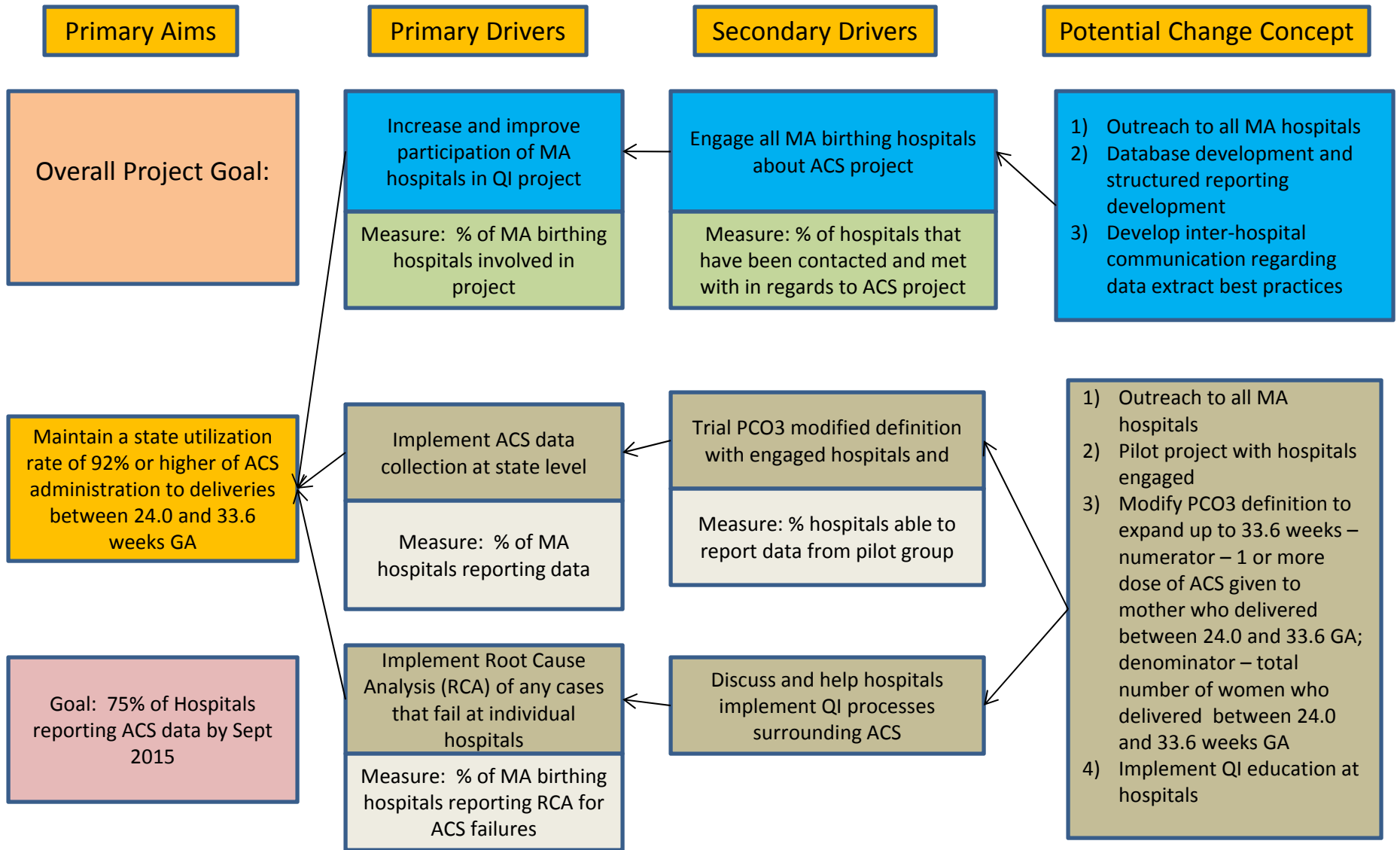
Establish home feeding regimen that maximizes direct breastfeeding prior to discharge



Appropriate use of antenatal corticosteroid in women at risk of preterm delivery

- Overall Goal:
 1. Increase the percentage of mothers of infants with gestational age less than 34 weeks who receive any ACS
 2. Improve ACS reporting on the birth certificate
- Performance Measure:
 1. Using VON data as the gold standard, improve the accuracy of hospital-based reporting of ACS by 90% by the end of 2017

Antenatal Corticosteroid (ACS) Project

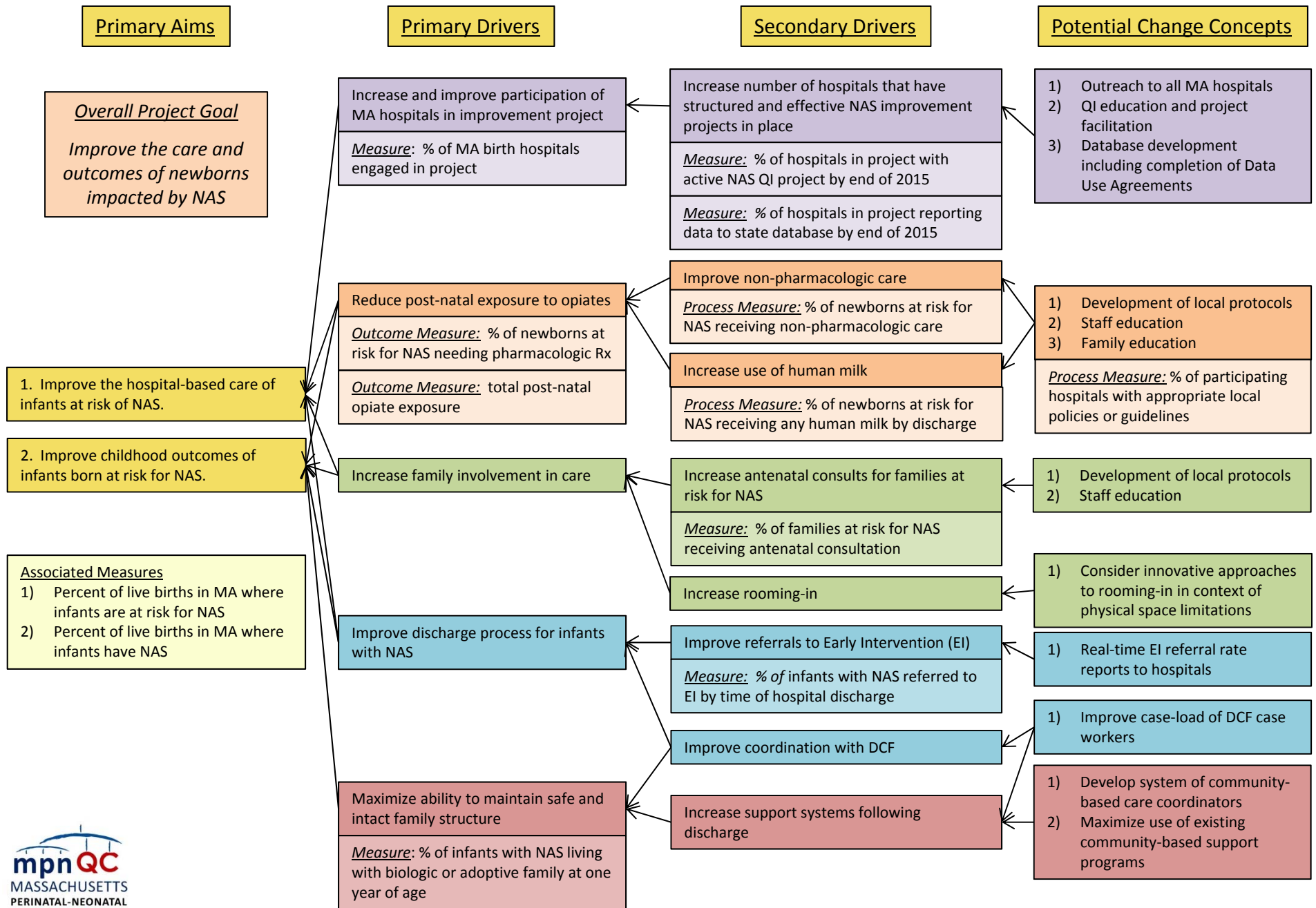




Neonatal abstinence syndrome

- Overall Goal:
 1. Decrease percentage of infants at risk for Neonatal Abstinence Syndrome (NAS) requiring pharmacologic therapy
- Performance Measure:
 1. Through increased use of non-pharmacologic interventions, decrease the number of infants at risk for NAS needing pharmacologic therapy by 20% from baseline by the end of 2017

NeoQIC Neonatal Abstinence Syndrome Improvement Project





Implementation of hospital-based safe sleep practices

- Overall Goal:
 1. Increase the percentage of eligible infants engaging in safe sleep practices in the NICU

- Performance Measure:
 1. Greater than 75% of level III NICUs to integrate safe sleep practices into the routine care of infants by the end of 2017
 2. Increase NICU staff awareness about safe sleep practices and SIDS
 3. Increase the percentage of infants being managed with appropriate safe sleep practices by the time of discharge from NICU by 50% among all participating NICUs by the end 2017

Safe Sleep Practices (SSP) in the NICU

Primary Aims

Primary Drivers

Secondary Drivers

Potential Change Concepts

Overall Project Goal

Increase the percentage of eligible infants engaging in safe sleep practices in MA NICU's.

- 1) Increase the percentage of eligible infants engaging in SSP in MA NICUs to 90% in 2 years.
 - a. Supine position
 - b. Head of bed flat
 - c. Removal of positioning devices from crib
 - d. Removal of unsafe objects from crib

Outcome Measures: Percent of eligible infants in MA NICU's engaging in each as well as all of the safe sleep practices.

Balancing Measures

- 1) Length of stay
- 2) Prevalence of reflux
- 3) Prevalence of apnea, bradycardia, and/or desaturations
- 4) Prevalence of positional plagiocephaly

Inadequate staff education

Required Process Measure:

1. Completion of online NICHD module on safe sleep practices by nurses.
2. Documentation of SSP vs NTP by nurses in daily flowchart.
3. Documentation of SSP vs NTP by MD/NNP in daily progress note.
4. Presence of crib card with appropriate designation (SSP vs NTP) at bedside.

Inadequate parent education

Required Process Measure:

1. Documentation of parental education on safe sleep practices when infants become eligible.
2. Rate of engagement in SSP after hospital discharge.

Staff are unaware of the association of unsafe sleep practices and infant mortality.

Staff believe that supine and/or flat positioning increases 1) aspiration/choking episodes, 2) reflux-associated discomfort and/or apnea, bradycardia, and desaturations episodes.

Lack of education at prenatal consultation

Recommended Process Measure:
Documentation of SSP education in provider prenatal consultation note.

Lack of parent education in advance of infant discharge from NICU

Recommended Process Measure:

1. Documentation of parent education by nursing staff member when infant is deemed eligible for SSP.
2. Use of crib card to reinforce infant's sleep designation.
3. Documentation of parent education of SSP as part of discharge preparation checklist.
4. Prevalence of engagement in SSP by parents after hospital discharge (if follow-up data can be obtained).

- 1) Increase staff knowledge about unsafe sleep practices and infant mortality.
- 2) Increase staff knowledge about lack of association of SSP with aspiration, reflux, and apnea/bradycardia/desaturations.

Inclusion of SSP discussion at all prenatal consultations.

- 1) Increase parent knowledge about association of unsafe sleep practices and infant mortality.
- 2) Model SSP weeks or months prior to NICU discharge.
- 3) Contact parents after hospital discharge to inquire about engagement in SSP.



Acknowledgements

MPQC

- Bonnie Glass, Chair
- Mark Manning, Vice-Chair
- Glenn Markenson, Former Chair

NeoQIC

- Munish Gupta, Co-Chair
- Alan Picarillo, Co-Chair

March of Dimes

- Alexis Travis, MPQC Project Director
- Ed Doherty, March of Dimes Director

MDPH

- Lauren Smith, Former Medical Director
- Susan Manning, CDC Assignee