

# The Michigan INFANT MORTALITY REDUCTION Plan Update



University of Michigan Health System  
Ann Arbor, Michigan  
Michigan Department of Community Health  
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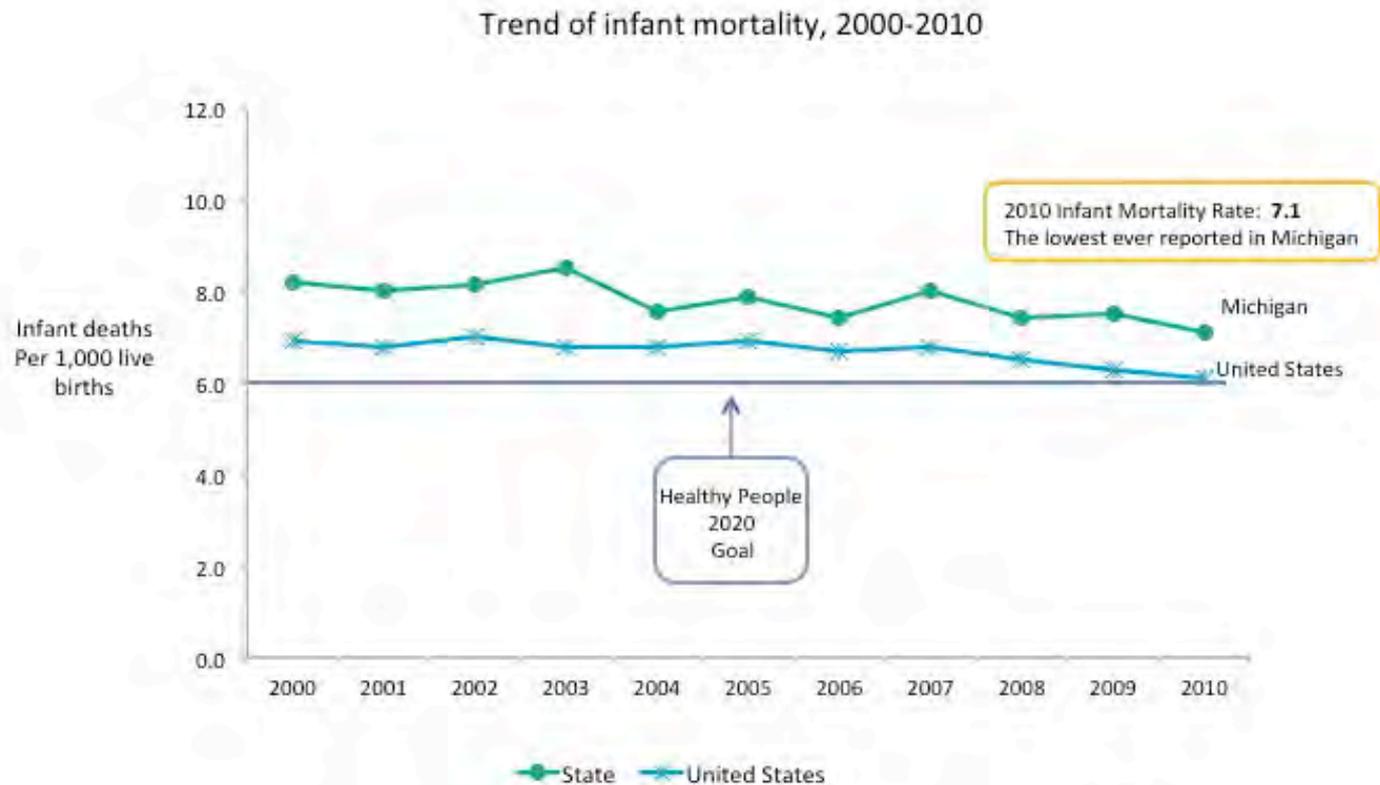
# TEN minutes!



🌀 Try to explain the history of the earth in ten minutes!

## Public Health Crisis: Too Many Michigan Infants are Dying

**Michigan's Infant Mortality Rate has not changed significantly in the past 10 years and remains higher than the US rate**



Source: Michigan Resident Birth and Death Files, MDCH Division for Vital Records & Health Statistics  
Prepared by: MDCH MCH Epidemiology Unit, 6/28/2012

# Provisional Infant Mortality Data - 2011

## Infant Deaths, Live Births and Infant Mortality Rates by Sex and Race, Michigan Residents, 2011

Provisional Death File<sup>1</sup>

Vital Event	All Races			White			Black		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
Infant Deaths	738	389	349	400	213	187	297	154	143
Live Births	114,159	58,723	55,435	84,172	43,367	40,805	21,950	11,181	10,768
Infant Mortality Rate	6.5	6.6	6.3	4.8	4.9	4.6	13.5	13.8	13.3

**Note:**

<sup>1</sup>Death numbers subject to revision. Rates are per 1,000 live births. **Revised April 26, 2013.**

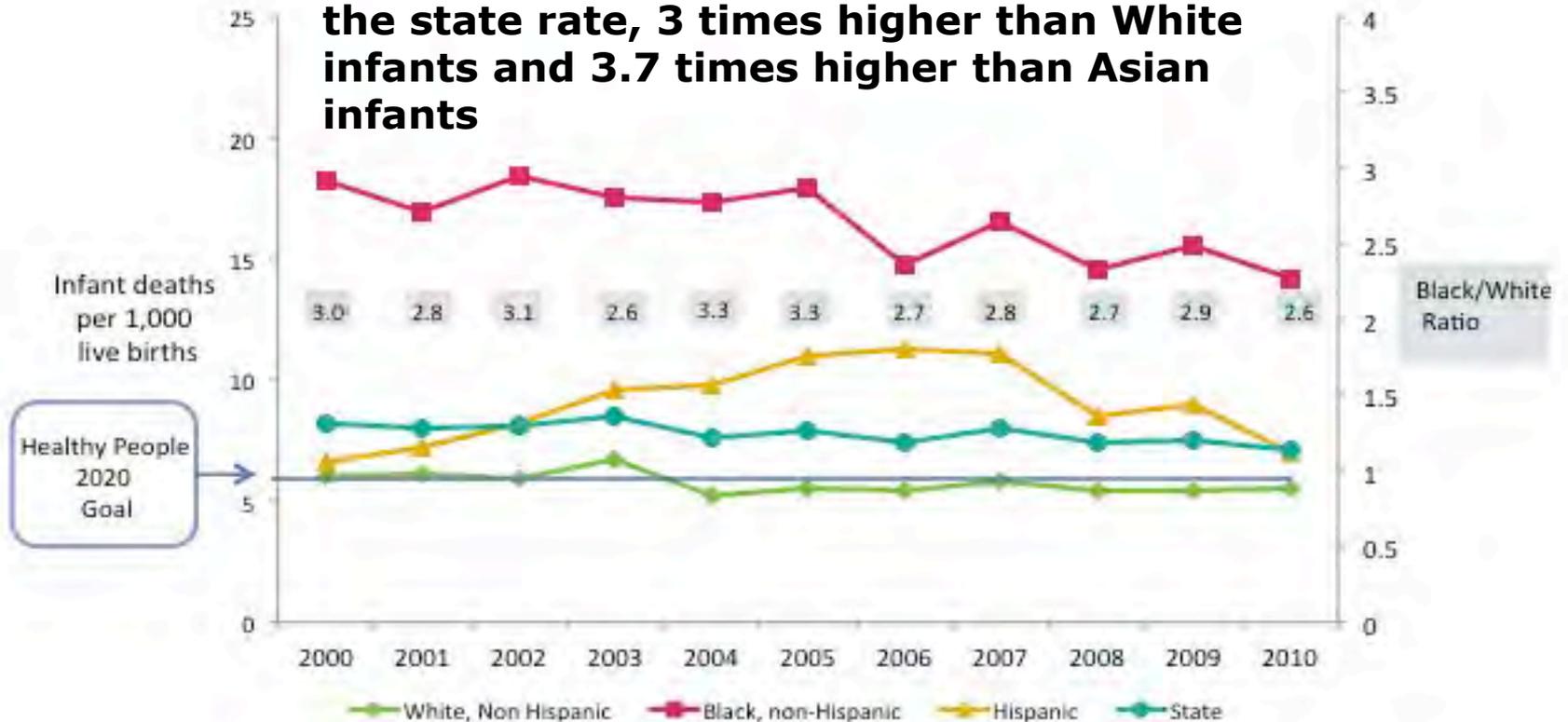
**Sources:**

Division for Vital Records and Health Statistics, Michigan Department of Community Health.

# Michigan Infant Mortality Rate Race Specific

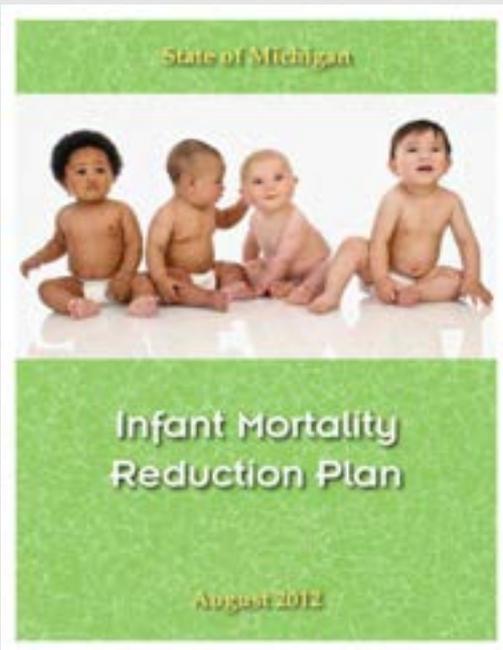
MI infant mortality by race/ethnicity, 2000-2010

**The infant mortality rate among Black and American Indian infants is more than twice the state rate, 3 times higher than White infants and 3.7 times higher than Asian infants**



Source: Michigan Resident Birth and Death Files, MDCH Division for Vital Records & Health Statistics  
 Prepared by: MDCH MCH Epidemiology Unit, 6/28/2012

# Infant Mortality Reduction Plan



1. Implement a Regional Perinatal System
2. Promote adoption of policies to eliminate medically unnecessary deliveries before 39 weeks gestation
3. Promote adoption of progesterone protocol for high risk women
4. Promote safer infant sleeping practices to prevent suffocation
5. Expand home-visiting programs to support vulnerable women and infant
6. Support better health status of women and girls
7. Reduce Unintended Pregnancies
8. Weave the social determinants of health in all targeted strategies to promote reduction of racial and ethnic disparities in infant mortality

## Strategies and Goals 2012 – 2015

1. **Implement a statewide coordinated perinatal system using a regional model, and follow the recommendations and guidelines developed by Michigan's perinatal providers in Perinatal Regionalization: Implications for Michigan (2009). Full document found at <http://www.michigan.gov/mdch/0,4612,7-132-2942-216919--,00.html>.**
  - a. Develop an implementation plan based on activities identified by Michigan Perinatal Advisory Committee, including an infrastructure to support a statewide perinatal system. Work with Michigan Health & Hospital Association, Michigan State Medical Society, Michigan Osteopathic Association, American Congress of Obstetricians and Gynecologists-Michigan Section, Michigan hospitals, local health departments, emergency medical services, Medical Services Administration, American Academy of Pediatrics-Michigan Chapter, Medicaid health plans, Children's Special Health Care Services, physician trade associations, nurses trade associations.
  - b. Add perinatal consultant resources to support implementation, monitoring and consultation.
  - c. Pilot the coordinated perinatal system implementation activities in a rural and urban region of the state. Use findings of the Spectrum Health System Neonatal Intensive Care Unit (NICU) follow up pilot and recommendations from Northern Lower Michigan perinatal stakeholders.
  - d. Coordinate development of the perinatal system with other appropriate units of Michigan's health care services: Emergency medical services, Stroke/ST Segment Elevation Myocardial Infarction (stroke and heart attack emergency service system), Medical Services Administration, Michigan Primary Care Transformation Demonstration Project, Certificate of Need, etc.
  - e. Publish the experiences of regional pilot programs.
  - f. Modify statewide roll out of the coordinated perinatal system model to incorporate results of the pilot programs.
  - g. Analyze birth outcome data from pilot programs.
  - h. Identify statewide roll out plan based on input from the Michigan Perinatal Advisory Committee, NICU follow up pilot experience, and perinatal system pilot experience (rural and urban).
  - i. Develop an evaluation plan for impact of implementation of coordinated perinatal system including metrics related to better health (infant mortality rates, low birth weight rates, preterm birth rates, cesarean-section rates, entry into prenatal care, appropriate for level of obstetric care, patient satisfaction with care, etc.
  - j. Utilize the experience of Michigan Quality Improvement Consortium of the Vermont Oxford Network (VON) to improve outcomes of NICU graduates and processes of birthing hospitals.

# Implement a Regional Perinatal System



## Statewide Perinatal Coordinated System



# What is the perinatal period?

- The time beginning before conception and continuing through the first year of life (March of Dimes, TIOP II, 1993)

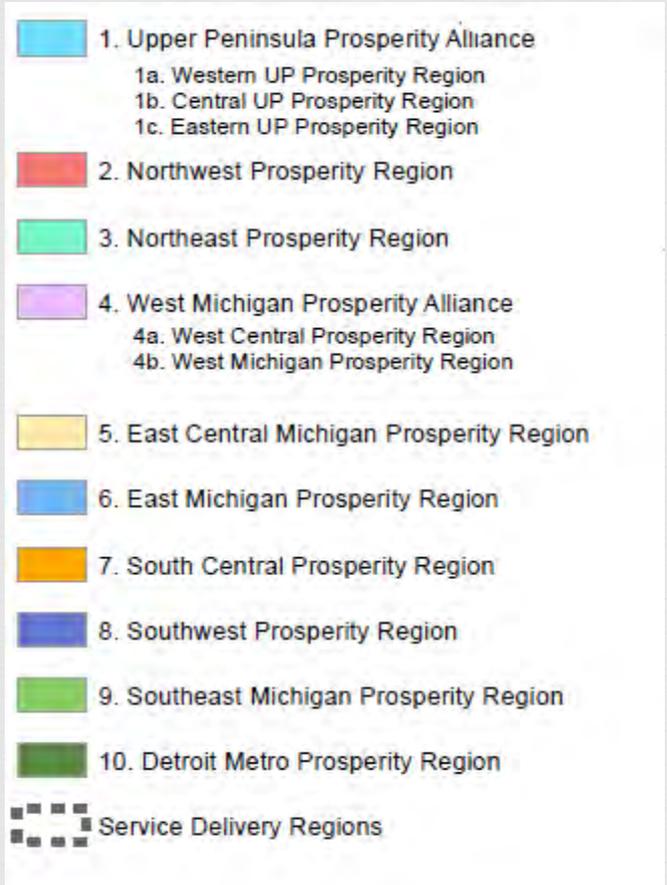
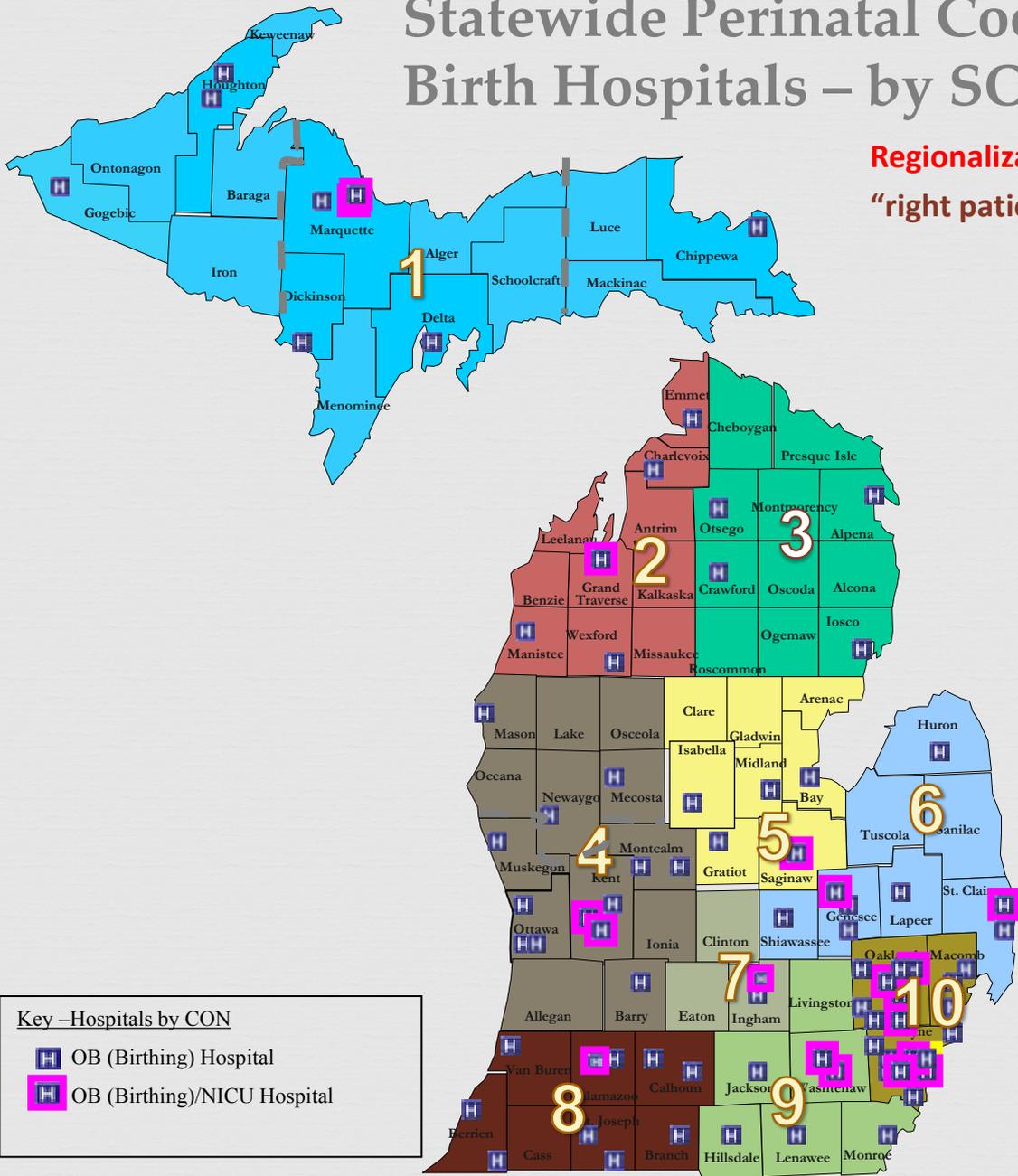
# The concept of regionalization

- Regionalization implies the development, within a geographic area, of a coordinated, cooperative system of perinatal health care...to accomplish the following objectives:
  - (1) quality care to all pregnant women and newborns,
  - (2) maximal utilization of...perinatal personnel and...facilities, and
  - (3) assurances of reasonable cost effectiveness.”

# Statewide Perinatal Coordinated System Birth Hospitals – by SOM Prosperity Regions

**Regionalization ≠ Centralization**

**“right patient - right care - right time.”**



**Key –Hospitals by CON**

- OB (Birthing) Hospital
- OB (Birthing)/NICU Hospital

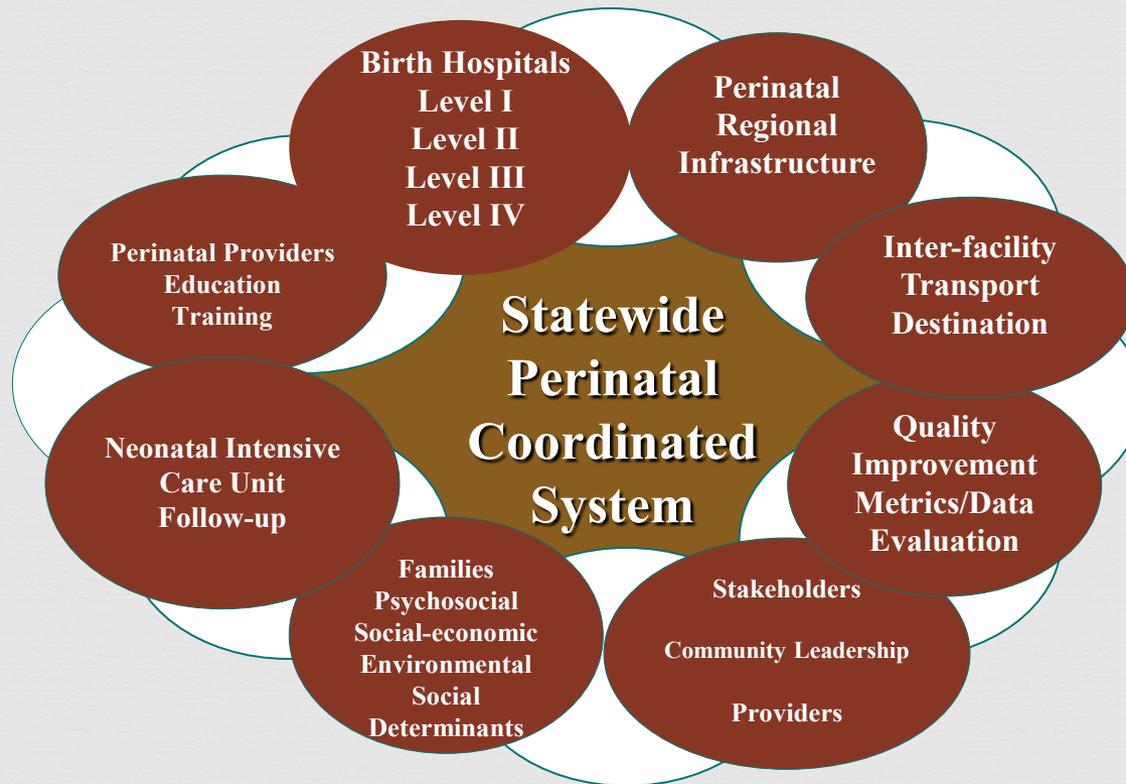
# What is Perinatal Regionalization?

- Provides framework for medical and social services to ensure the health and well being of mothers and their infants
- A model for organizing and maximizing resources in a defined geographic area
- Provides an infrastructure for quality improvement
- Services are organized to maximize quality and efficiency using existing resources
- The term “region” may be thought of as a “medical service area”

# What is Perinatal regionalization?

- Regionalization ≠ Centralization – it is knowing the resources within the geographic region
- It is knowing and understanding the resources in the area.
- Collaboration among birth hospitals, emergency rooms, NICU, local health departments and other community agencies to provide the best care for the circumstances unique to a family for the most positive birth outcome for mother and neonate.
- System ensures that mothers and neonates have timely access to the appropriate level of care

# What is involved in a perinatal system?



- Provision of risk-appropriate care for maternal/fetal and newborn
- Consistent standards of service; evidenced based care
- Collaboration among regional entities providing services to women, infants & families

# Statewide Perinatal Coordinated System



2013 Updates

# Statewide Perinatal Coordinated System Development Structure

Revised: 08/26/2023

## INFANT MORTALITY STEERING TEAM

### Committees

#### Perinatal Level of Care (LOC) Guidelines

**PRIORITY: 1**

Purpose: Ensure Michigan Perinatal Level of Care Guidelines are consistent with nationally approved guidelines for perinatal care.

Activities: Develop and conduct process for LOC guideline review and revision; update existing LOC guidelines, endorse and distribute

#### LOC Implementation

**PRIORITY: 3**

(Follows LOC Guidelines)

Purpose: Develop authoritative process for Special Care Nursery (Level II) and NICU (Level III/Level IV)

Activities: Work with CON NICU workgroup to provide consultation, assist with creation of a robust survey tool

[NOTE: This is an internal MDOH & LARA Committee]

#### NICU Follow-up

**PRIORITY: 2**

Purpose: Ensure that all Michigan residents have access to appropriate evidence-based NICU follow-up care that is fully integrated with the infant's medical home.

Activities: See NICU Follow-up Workgroup Schematic

#### Perinatal Service System

**PRIORITY: 4**

(Follows LOC Guidelines)

Purpose: Identify and define the components of a perinatal service system; develop a model that integrates the components; assure geographic equity across the state.

Activities: Identify and develop policy, process and procedure changes needed to support these systems

#### Quality Improvement/Evaluation

**PRIORITY: 5**

Purpose: Evaluate the long- and short-term impact of perinatal regionalization activities.

Activities: Develop and implement quality improvement/evaluation plan, integrate with Vermont Oxford Network (VON)

#### Education/Training

**PRIORITY: 6**

Purpose: Ensure all providers are appropriately educated regarding evidence-based perinatal delivery in Michigan.

Activities: Assess need for provider education and develop targeted education strategies

CON NICU Workgroup

West MI NICU Project  
-Kent-  
-Muskegon-  
-Ottawa-

MIHP / CSHCS Linkage

NICU Risk Assessment

NICU Pre- Post- Discharge Home Visitation

Medical Home and Community Integration

Developmental Assessment Program (DAP)

Northern MI Perinatal Integration Model of Care

Southeast MI Project

Northwest MI Telemedicine Project

Perinatal System Data

EMT/Trauma T80

MI Collaborative Quality Initiative

### KEY

- Currently working
- Being formed
- Not yet in place
- Committee work completed

## Perinatal Level of Care (LOC) Guidelines

### **PRIORITY: 1**

Purpose: *Ensure Michigan Perinatal Level of Care Guidelines are consistent with nationally approved guidelines for perinatal care.*

Activities:

Develop and conduct process for LOC guideline review and revision; update existing LOC guidelines, endorse and distribute

# Perinatal Level of Care Guidelines Committee

- Endorse National Level of Care Guidelines by AAP/ACOG signed by Dr. Matt Davis, Chief Medical Executive, MDCH in May, 2013
- [Endorsement Weblink](#)
- Distribution of endorsement to professional organizations
- Committee completed its charge

## LOC Implementation

### **PRIORITY: 3**

*(Follows LOC Guidelines)*

Purpose: Develop authoritative process for Special Care Nursery (Level II) and NICU (Level III/Level IV)

Activities: Work with CON NICU workgroup to provide consultation, assist with creation of a robust survey tool

[NOTE: This is an internal MDCH & LARA Committee]

# Level of Care Implementation Committee

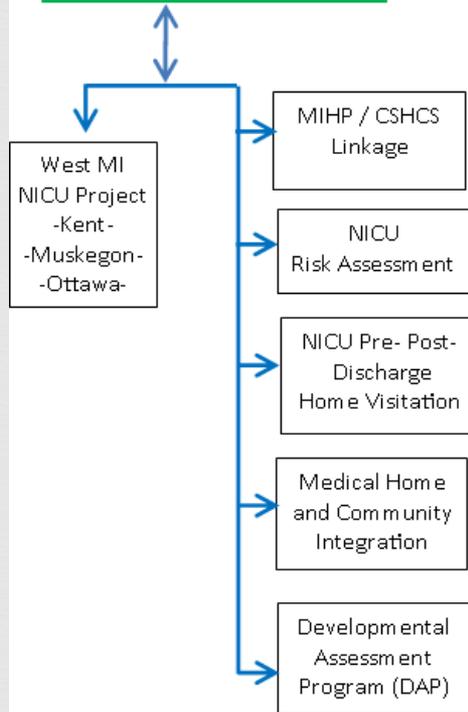
- Internal group working with Certificate of Need (CON) on NICU Bed Standards
- Draft language incorporates special care nursery beds (Level II)
- [Draft CON NICU-SCN Bed Utilization Link](#)
- CON Commissioners voted to accept the language in their September 17, 2013 meeting

## NICU Follow-up

### PRIORITY: 2

*Purpose: Ensure that all Michigan residents have access to appropriate evidence-based NICU follow-up care that is fully integrated with the infant's medical home.*

*Activities: See NICU Follow-up Workgroup Schematic*



# Statewide NICU Follow-up Committee



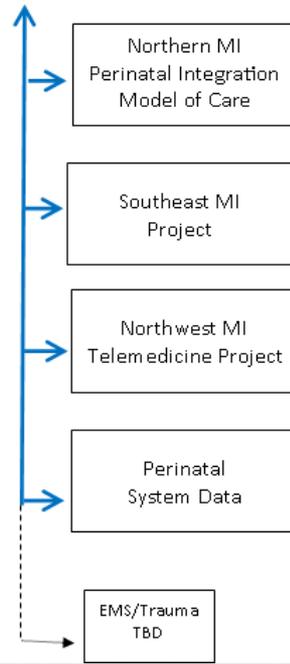
- Three Active Workgroups
  1. MIHP/CSHCS Workgroup
  2. NICU Risk Assessment Workgroup
  3. Developmental Assessment Program (DAP) Workgroup
- Two more workgroups will form in 2014
  1. Medical Home and Community Integration
  2. NICU Pre-Post Discharge Home Visitation
- West Michigan NICU Project in Kent, Muskegon & Ottawa Counties and Helen DeVos Children's
  - Multidisciplinary Developmental Assessment Clinic
  - Home Visitation Component
  - NICU Coordinator

**Perinatal Service System**

**PRIORITY: 4**  
*(Follows LOC Guidelines)*

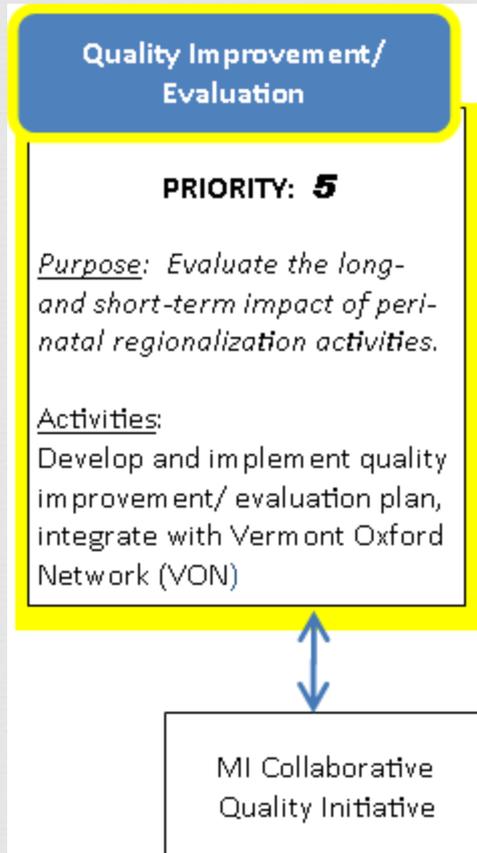
*Purpose: Identify and define the components of a perinatal service system; develop a model that integrates the components; assure geographic equity across the state.*

Activities: Identify and develop policy, process and procedure changes needed to support these systems



# Perinatal Service System Committee

- Committee in the formation stage
- Several projects are under this category
  - Northern Michigan Perinatal Integration Model of Care
  - Southeast Michigan Project
  - Northern Michigan Telemedicine Maternal Fetal Medicine Project



# Quality Improvement | Evaluation Committee

- Committee is forming – identified two co-chairs
- Evaluation for Statewide Perinatal Coordinated System is a process – structure – outcome evaluation
- Michigan Collaborative Quality Initiative
  - NICUs have state collaborative to work on quality issues
  - Vermont Oxford Network

## Education/Training

### **PRIORITY: 6**

Purpose: *Ensure all providers are appropriately educated regarding evidence-based perinatal delivery in Michigan.*

Activities: Assess need for provider education and develop targeted education strategies

# Education | Training Committee

- This committee has not formed yet

# Reminder

- ❑ When it is about infants, it is about mothers
- ❑ When it is about mothers, it is about women of reproductive age



**Comprehensive Perinatal System of Care**



# Infant Mortality Reduction Strategy



- Goal: families to have access to appropriate levels of high quality, safe and effective care
- Meet the needs of infants at risk for neonatal complications
- Reduce incidence of maternal death due to obstetric complications

HEALTHY MOTHERS & HEALTHY INFANTS

# Contact Information



☞ Infant Mortality Website: [www.michigan.gov/infantmortality](http://www.michigan.gov/infantmortality)

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