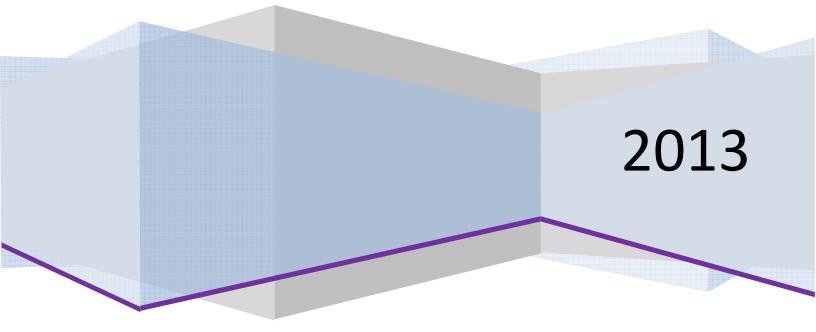
Minnesota Task Force on Prematurity

# **State of Prematurity**

Recommendations to reduce preterm birth rates and improve the care of infants born prematurely in Minnesota



#### A. FINAL 2013 EVIDENCE-BASED RECOMMENDATIONS TO REDUCE PRETERM BIRTH RATES AND IMPROVE THE CARE OF INFANTS BORN PREMATURELY IN MINNESOTA

- i. Create legislation to continue and extend the lifetime of the Minnesota Task Force on Prematurity (legislative rule, H. F. No. 25, Article 2) through 2014. *[Attachment B.]*
- ii. Continue activities to promote the consistent use of the Discharge Planning Checklist for Late Premature Infants (34 0/7 36 6/7 weeks completed gestational age) (discharge planning checklist) [Attachment A].
  - i. Develop an electronic toolkit to serve as a companion to the discharge planning checklist, which will provide additional technical assistance and references to birthing hospitals regarding the unique needs of a late preterm infant.
  - ii. Incorporate the discharge planning checklist into the discharge process through the electronic medical record [*Attachment A*].
- iii. Create a perinatal practice collaborative to make recommendations on perinatal health in Minnesota.
- iv. At a minimum, require hospitals to submit data quarterly to the Minnesota Hospital Association on the number of inductions and C-section deliveries that do not meet medical criteria for need and that occur before 39 weeks gestation.
- v. Encourage the development of public awareness strategies to raise awareness about prematurity issues (such as the March of Dimes' 39 Week campaign) and continue to support and collaborate with organizations in the future development of such campaigns or initiatives.

# **B. BACKGROUND**

Premature birth affects one in eight babies in the United States and one in ten babies in Minnesota. Babies born prematurely, before 37 weeks gestation, may suffer from increased risk of lifelong disabilities, including cognitive and learning problems, cerebral palsy, neurological problems, respiratory problems, and vision and hearing loss. These infants are also at an increased risk for conditions such as Attention Deficit-Hyperactivity Disorder (ADHD), Sudden Unexpected Infant Death (SUID), and recurrent hospitalizations. Prematurity is the leading cause of infant mortality and newborn death. The consequences of an infant born prematurely also have considerable emotional and financial impacts on families and communities.

### C. PURPOSE OF REPORT

The Minnesota Legislature established the Minnesota Task Force on Prematurity in 2011. Legislative language in 2011, First Special Session 9, Article 2 (27) directs the Commissioner of Health to convene a Task Force on Prematurity to evaluate and make recommendations on methods for reducing prematurity and improving premature infant health in the state. The Task Force submitted an initial report on November 30, 2011 that detailed the current state of prematurity in Minnesota to the chairs of the legislative policy committees on health and human services. This report tracks progress made by the Task Force as of January 15, 2013. It contains the Task Force's final recommendations, including any draft legislation necessary for implementation, to the chairs of the legislative policy committees.

## D. UPDATE OF NOVEMBER 2011 REPORT

### **COSTS OF PREMATURITY**

In addition to prematurity being the leading cause of infant mortality and newborn death, the Institute of Medicine estimated that the annual societal economic burden associated with preterm birth in the United States was at least \$26.2 billion in 2005, or \$51,600 per infant born preterm.<sup>1</sup>. Nearly two-thirds of these societal costs were a result of direct medical care services. In 2010, it was reported that 7,200 infants (10.2 percent) were born prematurely in Minnesota, which amounted to over \$371 million in cost of care, for just the first year of life. The most recent data for Minnesota shows a slight improvement in the preterm birth rate at 9.9 percent or 6,980 preterm births in 2011.<sup>2</sup>. While this indicates an annual cost of \$360 million, it is not inclusive of the indirect costs to parents and caregivers, such as time away from work and stress of caring for an infant born prematurely.

- 1. Institute of Medicine, Preterm Birth: Causes, Consequences, and Prevention http://www.nap.edu/catalog/11622.html
- 2. The Centers for Disease Control and Prevention, National Vital Statistics Reports. Births: Final Data for 2010, Vol. 61 No. 01, August 2012. Available at http://www.cdc.gov/nchs/data/nvsr/nvsr61/nvsr61\_01.pdf. Accessed 11/1/12.

#### STATISTICS

On an annual basis, the March of Dimes gives each state a grade by comparing its rate of preterm birth to the March of Dimes 2020 goal of 9.6 percent. Minnesota has earned a B on its 2012 Prematurity Report Card for its rate of 9.9 percent of all live births less than 37 completed weeks of gestation.<sup>1.</sup> This marks an improvement for the state from its 10.2 percent rate in 2010. Minnesota has also seen a slight decrease in the rate of late preterm infants born; 7.1 percent in 2011 from 7.3 percent in 2010. Minnesota has pledged to adopt the Association of State and Territorial Health Officials goal of an 8 percent reduction in the preterm rate by 2014.

1. March of Dimes Prematurity Report Card <u>http://www.marchofdimes.com/mission/prematurity\_reportcard.html</u>

### **UPDATE ON 39 WEEK POLICY**

Early elective inductions are scheduled before the beginning of spontaneous labor, prior to 39 weeks gestation, and lack medical indication. Compared to births occurring after 39 weeks, they are associated with significantly higher rates of serious neonatal complications and also with higher rates of cesarean section. The Minnesota Department of Human Services (DHS) sought to lower the occurrence of early elective inductions with an initiative called the Evidence-based Childbirth Program. The program, which commenced in January of 2012, specifies hospital policy and procedural criteria that are known to be effective in lowering rates of early elective inductions. Delivery hospitals serving Minnesota Health Care Programs (MHCP) members can apply to be reviewed for compliance with these criteria; if approved, the inductions performed at the hospital would be exempted from additional claims documentation strictures.

By the fall of 2012, over 98 percent of births to MHCP members occurring in Minnesota hospitals were at Evidence-based Childbirth Program approved facilities.<sup>1.</sup> Considering hospital reporting requirements were subsequently rescinded from the law, it is presently unknown exactly how effective the program has been in reducing the incidence of early elective inductions. However, federal requirements for the Hospital Inpatient Quality Reporting Program (IQR) now contain a chart-abstracted measure for elective inductions prior to 39 weeks of gestation; elective induction includes both scheduled cesareans and inductions. Data collection begins in January 2013 and aggregate quarterly data for this measure, by hospital, will be released by the US Centers for Medicare and Medicaid Services (CMS) beginning in 2015. In response to recognizing the

importance of this data collection, the Task Force has proposed a more aggressive recommendation in this report to assure that data is collected and shared with the Minnesota Hospital Association on a quarterly basis.

1. Minnesota Department of Human Services data; 2012. Fritz Ohnsorg.

### **UPDATE ON IDENTIFIED DUTIES**

The Task Force must report the current state of prematurity in Minnesota and develop recommendations on strategies for reducing prematurity and improving premature infant health care in the state by considering the following:

(1) Standards of care for premature infants born less than 37 weeks gestational age, including recommendations to improve hospital discharge and follow-up care procedures. A survey sent to birthing hospitals indicated an acute need for discharge procedures for late preterm infant (infants born between 34 0/7 and 36 6/7 weeks gestation). These infants are not always cared for in a neonatal intensive care unit (NICU) and therefore their special health care needs sometimes go unrecognized. Therefore, the Task Force developed a discharge planning checklist for use in birthing hospitals [Attachment A]. The discharge planning checklist is designed to properly assess the health of infants born between 34 0/7 and 36 6/7 weeks gestation prior to discharge and provide appropriate follow-up procedures that differ from those of a full-term infant. The Task Force recommends that all birthing hospitals in Minnesota consistently utilize the discharge planning checklist to ensure appropriate hand-off and follow-up care of the late preterm infant.

It is also the Task Force's recommendation that the Minnesota Department of Health collaborate with the Minnesota Hospital Association to encourage adoption of the Discharge Planning Checklist for Late Premature Infants (34 0/7 - 36 6/7 weeks completed gestational age). In addition, the Task Force recommends measuring the extent of use and conducting a follow up evaluation of the discharge planning checklist.

# (2) Coordination of information among appropriate professional and advocacy organizations on measures to improve health care for infants born prematurely.

The Task Force recommends increased coordination of information among appropriate professional and advocacy organizations on measures to improve health care for infants born prematurely. The suggested approach would be for the Task Force to act as the hub for groups such as the Minnesota Hospital Association's Perinatal Advisory Group and the Minnesota Perinatal Quality Collaborative to report quarterly on activities to ensure coordination. Members from each of these collaboratives will be invited to join the Task Force.

# (3) Identification and centralization of available resources to improve access and awareness for caregivers of premature infants.

The Task Force developed and disseminated a brochure: <u>Premature Babies: An Early</u> <u>Beginning</u>, [Attachment C] which outlines resources available to families in Minnesota who have had a premature baby. The Task Force has also placed web-based resources in a centralized location <u>http://mnprematuritycoalition.org/related\_links</u>. Links have been established to the information on the Minnesota Parents Know website <u>www.mnparentsknow.info</u>. The Minnesota Departments of Education and Health have also developed three video clips for the Minnesota Parents Know web site related to prematurity: <u>Preemies and Parenting Issues</u>, <u>Preemies and Their Health</u>, <u>Preemies and Their Development</u>.

# (4) Development and dissemination of evidence-based practices through networking and educational opportunities.

The Task Force has shared evidence-based practices by networking at the following events:

- MN Perinatal Organization Conference 2012 (distributed discharge planning checklist to all attendees)
- The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) MN Section Conference 2012 (exhibit booth)

As well as hosting speakers from the:

- Ohio Perinatal Collaborative
- Minnesota Organization on Fetal Alcohol Syndrome
- Minnesota Perinatal Quality Collaborative
- Minnesota Hospital Association

(5) A review of relevant evidence-based research regarding the causes and effects of premature births in Minnesota.

A review was conducted and will continue to be addressed. Relevant evidence-based research is noted in the November 2011 report: <u>*Current State of Prematurity in Minnesota.*</u> <u>http://archive.leg.state.mn.us/docs/2011/mandated/110907.pdf</u>

(6) A review of relevant evidence-based research regarding premature infant health care, including methods for improving quality of and access to care for premature infants. A review was conducted and will continue to be addressed. Relevant evidence-based research is noted in the November 2011 report: <u>Current State of Prematurity in Minnesota.</u> <u>http://archive.leg.state.mn.us/docs/2011/mandated/110907.pdf</u>

# (7) A review of the potential improvements in health status related to the use of health care homes to provide and coordinate pregnancy-related services.

Policies relating to use of health care homes and coordination of care specifically for premature infants or prenatal care have not been identified. However, broader legislation has passed that could improve care for these groups or could be used as potential models of improved care in the future.

- Pediatric care coordination- Effective July 1, 2012, the Minnesota Department of Human Services (DHS) is developing a pediatric care coordination service for children with high-cost medical or high cost psychiatric conditions who are at risk of recurrent hospitalization or emergency room use for acute, chronic, or psychiatric illness, who receive medical assistance services. DHS will base the certification and payment structure on those established under Health Care Homes. (Ch 247, art 1, sec 11)
- Health Care Delivery System Coordination- The 2010 Legislature mandated DHS to develop and implement a demonstration testing alternative and innovative health care delivery systems, including accountable care organizations. DHS has contracted with delivery systems as voluntary demonstration sites that will be paid under alternative arrangements and be required to track and report on quality measures as established by Minnesota Community Measurement. Demonstration sites will include Minnesota Health Care Programs (MHCP) fee-for-service recipients and managed care enrollees

and support a robust primary care model and improve care coordination (e.g. health care homes) for recipients. (Laws 2010, First Special Session chapter 1, article 16, section 19)

# (8) Identification of gaps in public reporting measures and possible effects of these measures on prematurity rates.

It is recognized and accepted that public reporting of select health care quality measures is crucial in supporting efforts to improve the care that results in high quality outcomes. Public reporting of a variety of health care quality measures has progressed in Minnesota, yet the adoption and use of measures specific to the quality of prenatal, obstetric, and neonatal care is yet to be addressed.

Quality of care measures of interventions that prevent preterm birth, improve survival of preterm newborns, or otherwise improve birth outcomes should be considered for inclusion in future public reporting of health care indicators. Stakeholders including clinicians, facilities, managed care, public health, human services, advocacy groups, community-based support organizations, patients and parents should be involved in considering the development and use of such measures.

The Task Force recommends that quality of care indicators be developed and selected with the goal of supporting continuous quality improvement efforts, and should be plausibly tied to sustaining progress in lowering prematurity and improving birth outcomes.

### E. SUGGESTED SUPPORTIVE SERVICES

#### Access to home visiting services

Home visiting services provided to at-risk families has been shown to be an effective service strategy for very young children and their families, improving outcomes in lifelong health and wellbeing, school readiness, and economic self-sufficiency. These voluntary, home-based services, ideally delivered prenatally through the early years, connect parents with trained professionals who provide health and caregiving information and support. Targeted investments in home visiting address early adversities and promote healthy birth outcomes, maternal mental health and safe environments for young children. The goals of these services include improving pregnancy outcomes including decreasing prematurity, promoting school readiness and promoting family health.

Home visiting is family focused and strengths based. Effective programs respond to the unique needs of each individual family, build on family strengths and work to empower parents. Programs collaborate and coordinate with other community services to ensure that families are receiving all the services they need. Services begin as early as possible, optimally prenatally. Home visiting programs support and encourage families to utilize preventive health care and connect with a primary health care provider. For all of these reasons, home visiting is a resource that supports the health of women during pregnancy reducing the risk for premature birth and supports families with children who have been born prematurely.

# F. CONCLUSION

Prematurity is a complex and costly issue whose full set of causes is still unknown. We do know that that biological, environmental, social and health care system level factors all play a key role in birth outcomes. While healthcare reform continues to evolve in Minnesota we have an opportunity

before us. Minnesota is poised to become a leader in improving birth outcomes and providing care for families who are impacted by prematurity. While the solution to solving premature births is still undetermined, providing the infrastructure for prevention when possible; and the resources and education to those who work and live with prematurity, is tantamount. The evidence-based recommendations contained in this report provide a blueprint to address these challenges.

#### ATTACHMENT A

Discharge Planning Checklist for Late Premature Infants  $(34\ 0/7 - 36\ 6/7$  weeks completed gestational age)

Feeding & Nutrition
The infant should be feeding 8-12 times per day.
The infant has established a successful feeding regimen (breast or bottle) as demonstrated by 6-8 wet diapers/day,
established stooling pattern and the absence of cardiorespiratory compromise during the feeding experience.
Twenty-four hours of successful feeding; ability to coordinate sucking, swallowing and breathing while feeding.
If weight loss greater than 7% in 48 hours, consider further assessment before discharge.
Passage of one stool spontaneously. Adequate urine output, recommended should equal 6-8 wet diapers/day.
Jaundice
Pre-discharge bilirubin measurement with use of a percentile based nomogram to predict the risk of
hyperbilirubinemia in newborns and to guide follow-up. <u>http://www.bilitool.org</u>
Procedures for follow-up of all newborns within 24 to 48 hours by a physician or pediatric nurse. If this cannot be
achieved, decisions regarding timing of discharge or other follow-up must be based on risk assessment.
Provide adequate equipment, such as bilirubin lights and blankets, and non-invasive TcB measurement device or lab
services for timely TSB test.
* If infant is discharged < 72 hours of age, s/he should be examined within 2-3 days of discharge. Pre-term infants'
bilirubin levels will peak later than full-term infants.
Thermoregulation
The infant is physiologically stable; Axillary temperature: 36.5-37.4 C (97.7-99.3 F)
The infant has demonstrated adequate maintenance of normal body temperature fully clothed in an open bed with
normal ambient temperature (20-25°C).
Respiratory
The infant maintains oxygen saturation on room air. Free of respiratory distress – RR <60 no grunting, flaring or
retractions or cyanosis.
Vital Signs
Vital signs should be within normal range for 12 hours preceding discharge.
Heart Rate 100-160 beats per minute.
Free of episodes of apnea and/or bradycardia (either not on medication, or, if to be discharged on medication, free
of events on prescribed treatment)
Immunizations, RSV & Screenings
Critical congenital heart disease screening (CCHD); Oxygen saturation should be obtained in the right hand and one
foot. Screening that has a pulse oximetry reading of ≥95% in either extremity with a ≤3% absolute difference between the
upper and lower extremity would be considered a pass. (Pediatrics 2012;129;190)
Appropriate immunizations, RSV prophylaxis if indicated, and state metabolic screening tests are completed.
Risk Assessment for Severe RSV Disease: High Risk for Severe RSV Disease: 🛛 Yes 🛛 No
RSV Qualification: Prematurity CLD CHD Other Screening: Yes No Date:
Hearing screening completed; appropriate pass/fail follow-up report completed.
Conduct an observation period in a car safety seat, preferably their own, before hospital discharge. This should be
performed with the infant carefully positioned for optimal restraint and the car safety seat placed at an angle that is
approved for use in the vehicle. It should last a minimum of 90 to 120 minutes or the duration of travel, whichever is
longer. (PEDIATRICS 2009;123;5,6,11,26)
If the infant fails the car seat evaluation, follow appropriate pass/fail recommendations.
http://preemies.about.com/od/takingyourpreemiehome/f/CarSeatTest.htm

Potential Referrals and Appointments Needed Before Discharge
Primary health care follow up appointment within 2-3 days of discharge, or 5-7 days if seen by PHN within 2-3
days after discharge. Encourage health care providers to provide an opportunity for caregivers to stop in and weigh their
infant on the clinic scale on their way home after being discharged.
Lactation Specialist
Family Home Visiting Nurse
PHN Referral
WIC. Assure the caregiver receives prescription for special formula if necessary.
http://www.health.state.mn.us/divs/fh/wic/adirectory.html
Early Intervention Services, Part C (Help Me Grow) MN's Infant and Toddler Intervention System, 866-693-GROW
http://www.health.state.mn.us/divs/fh/mcshn/ecip.htm
Family Voices of MN Parent to Parent Network, 866-334-8444
http://www.familyvoicesofminnesota.org/parent-to-parent/
Caregiver Education
The infant's caregivers have received information, training, or have demonstrated competency in the following areas:
Feeding is the first priority
Expected pattern of urine and stool frequency for the breastfeeding or formula-fed neonate (verbal and written
instruction is recommended). Assure a voiding chart is provided for parents to track frequency.
Assessment for jaundice/jaundice symptoms <a href="http://www.marchofdimes.com/baby/sickbabycare_jaundice.html">http://www.marchofdimes.com/baby/sickbabycare_jaundice.html</a>
Meticulous and frequent hand washing and minimize exposure to crowded places.
Identification of common signs and symptoms of illness, such as hyperbilirubinemia, sepsis and dehydration
http://www.preemievoices.com/pdfs/9018%205%20Reasons%20Handout%20MECH.pdf
Special Needs of a Late Preterm Baby <u>http://www.preemievoices.com/pdfs/11110_Late_Preterm_Baby.pdf</u>
Infant's hospital course and current condition
Medication administration
Appropriate responses and contact information for complications or an emergency
RSV prophylaxis and immunizations http://www.preemievoices.com/pdfs/11110 RSV MECH.pdf
Car seat safety (other newborn safety issues include the need for smoke/fire alarms, and hazards of secondhand
tobacco smoke and environmental pollutants) http://www-odi.nhtsa.dot.gov/recalls/childseat.cfm
Provision of a safe sleep environment, including Back to Sleep information.
http://www.healthychildcare.org/PDF/SIDSparentsafesleep.pdf
Use of a thermometer to assess an infant's axillary temperature
Assessment and provision of appropriate layers of clothing
Umbilical cord, skin and newborn genital care
Shaken baby http://www.health.state.mn.us/divs/fh/mch/fhv/strategies/sbs/edprotocolbirth.html
CPR http://depts.washington.edu/learncpr/infantcpr.html
Postpartum Depression Assessment and Education
Newborn/infant developmental milestones and what to do if there are concerns <u>http://parentsknow.state.mn.us/</u>
Tummy Time http://www.healthychildcare.org/pdf/SIDStummytime.pdf
Cues, stress, states (including home environment sensitivity to lights and sounds)
Comments/Issues

# ATTACHMENT B

11/06/12 03:22 PM HOUSE RESEARCH JF EC002

1.1 A bill for an act

1.2 relating to health; amending the duties and reporting dates for an existing task

1.3 force on prematurity; amending Laws 2011, Session chapter 9, article 2, section 1.4 27.

1.5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

1.6 Section 1. Laws 2011, Session chapter 9, article 2, section 27, is amended to read:

1.7 Sec. 27. MINNESOTA TASK FORCE ON PREMATURITY.

1.8 Subdivision 1. Establishment. The Minnesota Task Force on Prematurity is

1.9 established to evaluate and make recommendations on methods for reducing prematurity

1.10 and improving premature infant health care in the state.

1.11 Subd. 2. Membership; meetings; staff. (a) The task force shall be composed of at

1.12 least the following members, who serve at the pleasure of their appointing authority:

1.13 (1) 15 representatives of the Minnesota Prematurity Coalition including, but not

1.14 limited to, health care providers who treat pregnant women or neonates, organizations

1.15 focused on preterm births, early childhood education and development professionals, and 1.16 families affected by prematurity;

1.17 (2) one representative appointed by the commissioner of human services;

1.18 (3) two representatives appointed by the commissioner of health;

1.19 (4) one representative appointed by the commissioner of education;

1.20 (5) two members of the house of representatives, one appointed by the speaker of

1.21 the house and one appointed by the minority leader; and

1.22 (6) two members of the senate, appointed according to the rules of the senate.

1.23 (b) Members of the task force serve without compensation or payment of expenses. Section 1. 1

2.1 (c) The commissioner of health must convene the first meeting of the Minnesota

2.2 Task Force on Prematurity by July 31, 2011. The task force must continue to meet at

2.3 least quarterly. Staffing and technical assistance shall be provided by the Minnesota

2.4 Perinatal Coalition.

2.5 Subd. 3. Duties. The task force must report the current state of prematurity in

2.6 Minnesota and develop recommendations on strategies for reducing prematurity and

2.7 improving premature infant health care in the state by considering the following:

2.8 (1) ensuring adherence to standards of care for premature infants born less than 37

2.9 weeks gestational age, including recommendations to improve utilization of appropriate 2.10 hospital discharge and follow-up care procedures;

2.11 (2) coordination of information among appropriate professional and advocacy

2.12 organizations on measures to improve health care for infants born prematurely; and

2.13 (3) identification and centralization of available resources to improve access and

2.14 awareness for caregivers of premature infants;

2.15 (4) development and dissemination of evidence-based practices through networking

2.16 and educational opportunities;

- 2.17 (5) a review of relevant evidence-based research regarding the causes and effects of
- 2.18 premature births in Minnesota;
- 2.19 (6) a review of relevant evidence-based research regarding premature infant health
- 2.20 care, including methods for improving quality of and access to care for premature infants;
- 2.21 (7) a review of the potential improvements in health status related to the use of
- 2.22 health care homes to provide and coordinate pregnancy-related services; and
- 2.23 (8) identification of gaps in public reporting measures and possible effects of these
- 2.24 measures on prematurity rates.

2.25 Subd. 4. Report; expiration. (a) By November 30, 2011 January 15, 2015, the

2.26 task force must submit a final report to the chairs of the legislative policy committees

2.27 on health and human services on the current state of prematurity in Minnesota to the

2.28 chairs of the legislative policy committees on health and human services, including any

2.29 recommendations to reduce premature births and improve premature infant health in 2.30 the state.

2.31 (b) By January 15, 2013, the task force must report its final recommendations,

2.32 including any draft legislation necessary for implementation, to the chairs of the legislative 2.33 policy committees on health and human services.

2.34 (c) (b) This task force expires on January 31, 2013 2015, or upon submission of the 2.35 final report required in paragraph (b) (a), whichever is earlier.