Maternity Practices in Infant Nutrition and Care in Minnesota

In 2007, CDC administered the first national **M**aternity **P**ractices in **I**nfant **N**utrition and **C**are ("mPINC") survey. All hospitals and birth centers in the U.S. that provide maternity care were invited to participate. This report describes specific opportunities to improve mother-baby care at hospitals and birth centers in Minnesota in order to more successfully meet national quality of care standards for perinatal care.

For more information about the mPINC survey, visit www.cdc.gov/mpinc

Changes in Maternity Care Practices Improve Breastfeeding Rates

Breastfeeding provides optimal nutrition for infants and is associated with decreased risk for infant morbidity and mortality as well as maternal morbidity.[1] Maternity practices in hospitals and birth centers can influence breastfeeding behaviors during a period critical to successful establishment of lactation.[2] The literature, including a Cochrane review, found that institutional changes in maternity care practices to make them more supportive of breastfeeding increased initiation and duration of breastfeeding.[3]

Strengths in Breastfeeding Support in Minnesota Facilities

Pie chart of prevalence	Documentation of Mothers' Feeding Decisions	Staff at 98% of facilities in Minnesota consistently ask about and record mothers' infant feeding decisions.	Standard documentation of infant feeding decisions is important to adequately support maternal choice.
Pie chart of prevalence	Availability of Prenatal Breastfeeding Instruction	Staff at 94% of facilities in Minnesota include breastfeeding education as a routine element of their prenatal classes.	Prenatal education about breastfeeding is important because it provides mothers with a better understanding of the benefits and requirements of breastfeeding, resulting in improved breastfeeding rates.

Needed Improvements in Minnesota Facilities

Pie chart of prevalence	Appropriate Use of Breastfeeding Supplements	Only 25% of facilities in Minnesota adhere to standard clinical practice guidelines against routine supplementation with formula, glucose water, or water.	The American Academy of Pediatrics (AAP) and the American College of Obstetricians and Gynecologists (ACOG) Guidelines for Perinatal Care recommend against routine supplementation because supplementation with formula and/or water makes infants more likely to receive formula at home and stop breastfeeding prematurely.
Pie chart of prevalence	Adequate Assessment of Staff Competency	Only 16% of facilities in Minnesota annually assess staff competency for basic breastfeeding management and support.	Implementing comprehensive assessment of staff training and skills for basic breastfeeding management and support establishes the foundation for quality infant feeding care. Adequate training and skills assessment are critical to ensure that mothers and infants receive care that is consistent, evidence-based, and appropriate.
Pie chart of prevalence	Adequate Assessment of Staff Competency	Only 24% of facilities in Minnesota annually assess staff competency for basic breastfeeding management and support.	Implementing comprehensive assessment of staff training and skills for basic breastfeeding management and support establishes the foundation for quality infant feeding care. Adequate training and skills assessment are critical to ensure that mothers and infants receive care that is consistent, evidence-based, and appropriate.
Pie chart of prevalence	Use of Combined Mother/Baby Postpartum Care	Only 9% of facilities in Minnesota report that most healthy full-term infants remain with their mothers for at least 23 hours per day throughout the hospital stay.	Mother-infant contact during the hospital stay helps establish breastfeeding and maintain infant weight, temperature, and health. Rooming-in increases breastfeeding learning opportunities and duration and quality of maternal sleep, and reduces supplemental feeds.

Breastfeeding is a National Priority

Breastfeeding protects mothers' and infants' health.[1] *Healthy People 2010*[4] includes breastfeeding as a national priority and it is recommended by a number of health professional organizations.[5]

Establishing evidence-based, breastfeeding-supportive maternity practices as standards of care in US hospitals and birth centers will help meet *Healthy People 2010* breastfeeding objectives and will help improve maternal and child health nationwide.

Department of Health and Human Services

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The CDC mPINC Survey

The CDC mPINC survey was mailed to all US maternity facilities, with the request that it be completed by the person most knowledgeable about the facility's maternity practices related to infant feeding and care.

86% of the 99 eligible hospitals and birth centers in Minnesota responded to the 2007 CDC mPINC survey.

Each participating facility received its facility-specific benchmark report in October 2008.

For more information about the mPINC survey, visit www.cdc.gov/mpinc

Results of the 2007 CDC mPINC Survey: Minnesota

Minnesota **Composite Quality Practice Score*:** 65
Minnesota **State Rank[+]:** 19

mPINC Dimension of Care	Ideal Response to mPINC Survey Question	Percent of Facilities with Ideal Response[‡]	MN Rank[+]	MN Subscale Score* (out of 100)
Labor and Delivery Care				62
	Initial skin-to-skin contact is ≥30 min w/in 1 hour (vaginal births)	38	30	
	Initial skin-to-skin contact is ≥30 min w/in 2 hours (cesarean births)	32	23	
	Initial breastfeeding opportunity is w/in 1 hour (vaginal births)	40	40	
	Initial breastfeeding opportunity is w/in 2 hours (cesarean births)	47	14	
	Routine procedures are performed skin-to-skin	17	22	
Feeding of Breastfed Infants				76
	Initial feeding is breast milk (vaginal births)	73	22	
	Initial feeding is breast milk (cesarean births)	72	12	
	Supplemental feedings to breastfeeding infants are rare	25	15	
	Water and glucose water are not used	46	49	
Breastfeeding Assistance				82
	Infant feeding decision is documented in the patient chart	98	-	
	Staff provide breastfeeding advice & instructions to patients	90	-	
	Staff teach breastfeeding cues to patients	81	17	
	Staff teach patients not to limit suckling time	38	21	
	Staff directly observe & assess breastfeeding	82	29	
	Staff use a standard feeding assessment tool	69	9	
	Staff rarely provide pacifiers to breastfeeding infants	22	29	
Contact Between Mother and Infant				71
	Mother-infant pairs are not separated for postpartum transition	53	23	
	Mother-infant pairs room-in at night	58	37	
	Mother-infant pairs are not separated during the hospital stay	9	46	
	Infant procedures, assessment, and care are in the patient room	2	29	
	Non-rooming-in infants are brought to mothers at night for feeding	90	-	

mPINC Dimension of Care	Ideal Response to mPINC Survey Question	Percent of Facilities with Ideal Response‡	MN Rank+	MN Subscale Score* (out of 100)
Facility Discharge Care				54
	Staff provide appropriate discharge planning (referrals & other multi-modal support)	39	11	
	Discharge packs containing infant formula samples and marketing products are not given to breastfeeding patients	41	14	
Staff Training				41
	New staff receive appropriate breastfeeding education	3	37	
	Current staff receive appropriate breastfeeding education	24	30	
	Staff received breastfeeding education in the past year	28	40	
	Assessment of staff competency in breastfeeding management & support is at least annual	24	48	
Structural & Organizational Aspects of Care Delivery				65
	Breastfeeding policy includes all 10 model policy elements	16	11	
	Breastfeeding policy is effectively communicated	79	31	
	Facility documents infant feeding rates in patient population	40	44	
	Facility provides breastfeeding support to employees	52	36	
	Facility does not receive infant formula free of charge	13	15	
	Breastfeeding is included in prenatal patient education	94	-	
	Facility has a designated staff member responsible for coordination of lactation care	74	20	

* Facility practices in 7 dimensions of care ("subscales") contribute to the overall "Composite Quality Practice Score." Possible item, subscale, and overall scores range from 0 to 100, with 100 being the highest, best possible score.

+ State ranks range from 1 to 52, with 1 being the highest rank. In case of a tie, both states are given the same rank.

‡ Calculation excludes facilities' responses that indicate prevalence is "unknown" for the practice measured in a given item.

- State ranks are not shown for survey questions with 90% or more facilities reporting ideal responses.

Improvement is Needed in Maternity Care Practices and Policies in Minnesota

Many opportunities exist in Minnesota to protect, promote, and support breastfeeding mothers and infants. To take action on this critical need, consider the following:

- Examine Minnesota regulations for maternity facilities and evaluate their evidence base; revise if necessary.
- Sponsor a Minnesota-wide summit of key decision-making staff at maternity facilities to highlight the importance of evidence-based practices for breastfeeding.
- Pay for hospital staff across Minnesota to participate in 18-hour training courses in breastfeeding.
- Establish links among maternity facilities and community breastfeeding support networks in Minnesota.
- Identify and implement programs within hospital settings—choose one widespread practice and adjust it to be evidence-based and supportive of breastfeeding.
- Integrate maternity care into related Quality Improvement efforts including:
    - Consistent delivery of optimal care
    - Improving patient flow
    - Improving patient experience & loyalty
    - Engaging physicians in a shared quality agenda
    - Increasing staff efficiency
    - Optimizing hospital-to-home transitions

- Develop a plan to ensure adherence to the Joint Commission's recently revised (July 2009) Perinatal Care Core Measure Set to include exclusive breastfeeding at discharge in hospital data collection starting with April 1, 2010, discharges.

Questions about the mPINC survey? Information about the mPINC survey, benchmark reports, scoring methods, and complete references available at: www.cdc.gov/mpinc For more information:

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May, 2010

References

[1] Ip S, Chung M, Raman G, et al. Breastfeeding and maternal and infant health outcomes in developed countries. Rockville, MD: US Dept of Health and Human Services, Agency for Healthcare Research and Quality; 2007.
[2] DiGirolamo AM, Grummer-Strawn LM, Fein S. Maternity care practices: implications for breastfeeding. Birth 2001;28:94-100.
[3] Fairbank L, O'Meara S, Renfrew MJ, Woolridge M, Snowden AJ, Lister-Sharp D. A systematic review to evaluate the effectiveness of interventions to promote the initiation of breastfeeding. Health Technology Assessment 2000;4:1-171.
[4] US Dept of Health and Human Services. Healthy People 2010 midcourse review. Washington, DC: US Dept of Health and Human Services; 2005. Available at http://www.healthypeople.gov/data/midcourse.
[5] Organizations including but not limited to: National Quality Forum; American Academy of Pediatrics; American Association of Family Physicians; American College of Obstetricians and Gynecologists; Association of Women's Health, Obstetric, and Neonatal Nurses; American College of Nurse Midwives; Academy of Breastfeeding Medicine; American Public Health Association; World Health Organization.