Maternity Practices in Infant Nutrition and Care in Tennessee

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 Tennessee 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 Tennessee Facilities

Pie chart of prevalence	Documentation of Mothers' Feeding Decisions	Staff at all (100%) facilities in Tennessee 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 92% of facilities in Tennessee 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 Tennessee Facilities

Pie chart of prevalence	Appropriate Use of Breastfeeding Supplements	Only 13% of facilities in Tennessee 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 10% of facilities in Tennessee 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	Initiation of Mother and Infant Skin-to-Skin Care	Only 29% of facilities in Tennessee initiate skin-to-skin care for at least 30 minutes upon delivery of the newborn.	Upon delivery, the newborn should be placed skin-to-skin with the mother and allowed uninterrupted time to initiate and establish breastfeeding in order to improve infant health outcomes and reduce the risk of impairment of the neonatal immune system from unnecessary non-breast milk feeds.
Pie chart of prevalence	Provision of Hospital Discharge Planning Support	Only 14% of facilities in Tennessee provide hospital discharge care including a phone call to the patient's home, opportunity for follow-up visit, and referral to community breastfeeding support.	The American Academy of Pediatrics (AAP) clinical practice guidelines recommend examination of the newborn by a qualified health care professional within 48 hours of hospital discharge in order to assess breastfeeding. Ensuring post discharge ambulatory support improves breastfeeding outcomes.

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.

89% of the 72 eligible hospitals and birth centers in Tennessee 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: Tennessee

Tennessee **Composite Quality Practice Score*:** 57
Tennessee **State Rank[+]:** 40

mPINC Dimension of Care	Ideal Response to mPINC Survey Question	Percent of Facilities with Ideal Response[‡]	TN Rank[+]	TN Subscale Score* (out of 100)
Labor and Delivery Care				53
	Initial skin-to-skin contact is ≥30 min w/in 1 hour (vaginal births)	29	44	
	Initial skin-to-skin contact is ≥30 min w/in 2 hours (cesarean births)	29	28	
	Initial breastfeeding opportunity is w/in 1 hour (vaginal births)	45	45	
	Initial breastfeeding opportunity is w/in 2 hours (cesarean births)	39	24	
	Routine procedures are performed skin-to-skin	14	30	
Feeding of Breastfed Infants				73
	Initial feeding is breast milk (vaginal births)	69	29	
	Initial feeding is breast milk (cesarean births)	58	28	
	Supplemental feedings to breastfeeding infants are rare	13	37	
	Water and glucose water are not used	66	33	
Breastfeeding Assistance				74
	Infant feeding decision is documented in the patient chart	100	-	
	Staff provide breastfeeding advice & instructions to patients	83	38	
	Staff teach breastfeeding cues to patients	79	23	
	Staff teach patients not to limit suckling time	27	39	
	Staff directly observe & assess breastfeeding	76	41	
	Staff use a standard feeding assessment tool	54	30	
	Staff rarely provide pacifiers to breastfeeding infants	14	42	
Contact Between Mother and Infant				62
	Mother-infant pairs are not separated for postpartum transition	29	42	
	Mother-infant pairs room-in at night	57	38	
	Mother-infant pairs are not separated during the hospital stay	26	18	
	Infant procedures, assessment, and care are in the patient room	5	20	
	Non-rooming-in infants are brought to mothers at night for feeding	68	38	

mPINC Dimension of Care	Ideal Response to mPINC Survey Question	Percent of Facilities with Ideal Response‡	TN Rank+	TN Subscale Score* (out of 100)
Facility Discharge Care				26
	Staff provide appropriate discharge planning (referrals & other multi-modal support)	14	43	
	Discharge packs containing infant formula samples and marketing products are not given to breastfeeding patients	19	30	
Staff Training				47
	New staff receive appropriate breastfeeding education	2	41	
	Current staff receive appropriate breastfeeding education	15	45	
	Staff received breastfeeding education in the past year	30	38	
	Assessment of staff competency in breastfeeding management & support is at least annual	51	17	
Structural & Organizational Aspects of Care Delivery				62
	Breastfeeding policy includes all 10 model policy elements	10	26	
	Breastfeeding policy is effectively communicated	78	32	
	Facility documents infant feeding rates in patient population	35	46	
	Facility provides breastfeeding support to employees	58	29	
	Facility does not receive infant formula free of charge	9	21	
	Breastfeeding is included in prenatal patient education	92	-	
	Facility has a designated staff member responsible for coordination of lactation care	57	41	

* 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 Tennessee

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

- Examine Tennessee regulations for maternity facilities and evaluate their evidence base; revise if necessary.
- Sponsor a Tennessee-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 Tennessee to participate in 18-hour training courses in breastfeeding.
- Establish links among maternity facilities and community breastfeeding support networks in Tennessee.
- 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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[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.