[the following information appears on page 1 of each State Report]

Maternity Practices in Infant Nutrition and Care in Puerto Rico

State Map

In 2009, 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 Puerto Rico 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 Puerto Rico Facilities

	Provision of Breastfeeding Advice and Counseling	Staff at 86% of facilities in Puerto Rico provide breastfeeding advice and instructions to patients who are breastfeeding, or intend to breastfeed.	The American Academy of Pediatrics (AAP) recommends pediatricians provide patients with complete, current information on the benefits and methods of breastfeeding to ensure that the feeding decision is a fully informed one. Patient education is important in order to establish breastfeeding.
	Documentation of Mothers' Feeding Decisions	Staff at 92% of facilities in Puerto Rico consistently ask about and record mothers' infant feeding decisions.	Standard documentation of infant feeding decisions is important to adequately support maternal choice.

Needed Improvements in Puerto Rico Facilities

	Appropriate Use of Breastfeeding Supplements	Only 14% of facilities in Puerto Rico 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.
	Adequate Assessment of Staff Competency	Only 15% of facilities in Puerto Rico 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.
	Provision of Hospital Discharge Planning Support	Only 0% of facilities in Puerto Rico 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.
	Initiation of Mother and Infant Skin-to-Skin Care	Only 31% of facilities in Puerto Rico 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.

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.

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[the following information appears on page 2 of each State Report]

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.

15% of the 30 eligible hospitals and birth centers in Puerto Rico responded to the 2009 CDC mPINC survey.

Each participating facility received its facility-specific benchmark report in Spring 2011.

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

Evidence-based maternity care supports mothers' decisions and increases the chances that mothers will meet their personal breastfeeding

Improvement is Needed in Maternity Care Practices and Policies in

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

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

- 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 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:

Division of Nutrition, Physical Activity, and Obesity

National Center for Chronic Disease Prevention and Health Promotion

Centers for Disease Control and Prevention

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[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.

Results of the 2009 CDC mPINC Survey: Puerto Rico

Puerto Rico Composite Quality Practice Score*: 58

Puerto Rico **State Rank[+]:** 44

mPINC Dimension of Care	Ideal Response to mPINC Survey Question	Percent of Facilities with Ideal Response[‡]	PR Rank[+]	PRSubscale Score* (out of 100)
Labor and Delivery Care				50
	Initial skin-to-skin contact is ≥30 min w/in 1 hour (vaginal births)	31	42	
	Initial skin-to-skin contact is ≥30 min w/in 2 hours (cesarean births)	23	45	
	Initial breastfeeding opportunity is w/in 1 hour (vaginal births)	31	50	
	Initial breastfeeding opportunity is w/in 2 hours (cesarean births)	14	52	
	Routine procedures are performed skin-to-skin	29	14	
Feeding of Breastfed Infants				50
	Initial feeding is breast milk (vaginal births)	36	52	
	Initial feeding is breast milk (cesarean births)	21	52	
	Supplemental feedings to breastfeeding infants are rare	14	38	
	Water and glucose water are not used	31	52	
Breastfeeding Assistance				76
	Infant feeding decision is documented in the patient chart	92	-	
	Staff provide breastfeeding advice & instructions to patients	86	35	
	Staff teach breastfeeding cues to patients	93	-	
	Staff teach patients not to limit suckling time	29	45	
	Staff directly observe & assess breastfeeding	79	33	
	Staff use a standard feeding assessment tool	23	1	
	Staff rarely provide pacifiers to breastfeeding infants	67	49	
Contact Between Mother and Infant				63
	Mother-infant pairs are not separated for postpartum transition	8	52	
	Mother-infant pairs room-in at night	67	29	
	Mother-infant pairs are not separated during the hospital stay	31	23	
	Infant procedures, assessment, and care are in the patient room	23	1	
	Non-rooming-in infants are brought to mothers at night for feeding	67	49	

mPINC Dimension of Care	Ideal Response to mPINC Survey Question	Percent of Facilities with Ideal Response‡	PR Rank+	PRSubscale Score* (out of 100)
Facility Discharge Care				53
	Staff provide appropriate discharge planning (referrals & other multi-modal support)	0	52	
	Discharge packs containing infant formula samples and marketing products are not given to breastfeeding patients	64	7	
Staff Training				63
	New staff receive appropriate breastfeeding education	0	45	
	Current staff receive appropriate breastfeeding education	9	36	
	Staff received breastfeeding education in the past year	50	17	
	Assessment of staff competency in breastfeeding management & support is at least annual	69	5	
Structural & Organizational Aspects of Care Delivery				56
	Breastfeeding policy includes all 10 model policy elements	15	17	
	Breastfeeding policy is effectively communicated	50	51	
	Facility documents infant feeding rates in patient population	36	52	
	Facility provides breastfeeding support to employees	7	52	
	Facility does not receive infant formula free of charge	7	25	
	Breastfeeding is included in prenatal patient education	64	52	
	Facility has a designated staff member responsible for coordination of lactation care	64	33	

* 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.