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Breastfeeding-Related Maternity Practices at Hospitals and Birth Centers — United States, 2007

Breastfeeding provides optimal nutrition for infants and is associated with decreased risk for infant and maternal morbidity and mortality (); however, only four states (Alaska, Montana, Oregon, and Washington) have met all five () targets for breastfeeding ().* Maternity practices in hospitals and birth centers throughout the intrapartum period, such as ensuring mother-newborn skin-to-skin contact, keeping mother and newborn together, and not giving supplemental feedings to breastfed newborns unless medically indicated, can influence breastfeeding behaviors during a period critical to successful establishment of lactation (). In 2007, to characterize maternity practices related to breastfeeding, CDC conducted the first national Maternity Practices in Infant Nutrition and Care (mPINC) Survey. This report summarizes results of that survey, which indicated that 1) a substantial proportion of facilities used maternity practices that are not evidence-based and are known to interfere with breastfeeding and 2) states in the southern United States generally had lower mPINC scores, including certain states previously determined to have the lowest 6-month breastfeeding rates.† These results highlight the need for U.S. hospitals and birth centers to implement changes in maternity practices that support breastfeeding.

In 2007, in collaboration with Battelle Centers for Public Health Research and Evaluation, CDC conducted the mPINC survey to characterize intrapartum practices in hospitals and

birth centers in all states, the District of Columbia, and three U.S. territories. The survey was mailed to 3,143 hospitals and 138 birth centers with registered maternity beds, with the request that the survey be completed by the person most knowledgeable of the facility's infant feeding and maternity practices.

Questions regarding maternity practices were grouped into seven categories that served as subscales in the analyses: 1) labor and delivery, 2) breastfeeding assistance, 3) mother-new-and mat

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TABLE 1. Mean total and subscale maternity practice scores, by state — Maternity Practices in Infant Nutrition and Care Survey, United States, 2007

State†	No. of respondent facilities§	% responding	Mean total score¶	Standard error of the mean total score	Mean subscale scores*						
					Labor and delivery	Breast-feeding assistance	Mother-newborn contact	Newborn feeding practices	Breast-feeding support after discharge	Nurse/birth attendant breastfeeding training and education	Structural and organizational factors related to breastfeeding
United States	2,687	82	63	0.3	60	80	70	77	40	51	66
Alabama	47	87	55	1.9	45	71	55	69	27	53	63
Alaska	24	100	73	3.1	79	81	90	86	69	34	60
Arizona	36	71	62	1.9	58	80	75	76	34	52	62
Arkansas	27	60	48	2.3	43	67	57	62	24	29	53
California	201	80	69	1.1	63	82	77	77	49	61	70
Colorado	42	86	66	1.9	65	80	77	84	33	53	70
Connecticut	23	77	70	2.1	73	84	72	92	31	66	74
Delaware	7	100	63	7.0	47	81	77	86	34	39	72
District of Columbia	4	57	76	8.5	89	90	73	80	53	71	80
Florida	95	75	68	1.5	64	84	76	79	44	56	70
Georgia	70	81	56	1.3	48	75	64	71	25	50	63
Hawaii	9	75	62	1.4	79	76	83	80	14	38	60
Idaho	26	81	65	3.0	68	83	80	78	35	46	69
Illinois	109	59	60	1.2	48	78	64	74	35	54	67
Indiana	84	88	62	1.4	60	81	69	77	31	49	66
Iowa	74	91	61	1.2	50	78	66	76	44	44	64
Kansas	68	90	59	1.6	57	74	75	78	35	38	54
Kentucky	43	78	57	1.9	52	76	59	69	28	53	63
Louisiana	45	82	54	2.0	44	75	51	59	33	54	61
Maine	30	91	77	2.3	78	89	79	85	69	66	78
Maryland	29	81	61	2.3	55	79	69	77	26	48	69
Massachusetts	36	77	75	1.5	72	86	72	87	61	72	79
Michigan	76	79	64	1.6	63	81	74	79	33	47	68
Minnesota	85	84	65	1.4	62	82	71	76	54	41	65
Mississippi	38	84	50	2.1	42	69	48	63	28	43	55
Missouri	58	81	63	1.4	61	79	70	79	32	55	66
Montana	30	88	63	3.0	65	77	74	75	41	46	59
Nebraska	48	80	57	1.9	60	74	74	73	32	30	53
Nevada	13	65	57	4.4	52	75	69	74	29	42	59
New Hampshire	23	92	81	1.7	82	90	85	89	72	63	83
New Jersey	46	77	60	1.5	47	82	57	72	25	62	72
New Mexico	20	67	64	3.9	54	81	76	76	48	49	60
New York	110	75	67	1.1	61	84	66	77	48	57	76
North Carolina	71	84	61	1.4	54	81	66	76	31	53	68
North Dakota	17	94	59	3.2	59	80	64	72	31	47	62
Ohio	103	89	67	1.1	59	83	68	80	48	55	75
Oklahoma	49	82	57	1.7	57	74	70	71	21	47	58
Oregon	53	95	74	1.9	76	86	85	88	57	49	71
Pennsylvania	101	87	61	1.3	54	80	62	78	37	50	68
Rhode Island	5	71	77	7.1	64	93	72	86	75	68	85
South Carolina	37	86	57	2.7	47	74	55	66	41	48	62
South Dakota	19	83	61	2.5	56	79	68	78	36	45	67
Tennessee	64	88	57	1.7	53	74	61	73	26	47	62
Texas	190	75	58	1.2	52	73	64	69	35	52	59
Utah	31	79	61	1.8	67	77	66	79	26	48	64
Vermont	11	92	81	2.3	89	95	81	92	72	63	74
Virginia	49	82	61	2.0	53	78	61	79	32	58	67
Washington	65	88	72	1.5	77	86	89	85	53	43	64
West Virginia	27	84	55	2.5	53	76	58	71	25	44	58
Wisconsin	93	90	69	1.3	68	85	71	82	51	51	74
Wyoming	15	83	68	2.7	78	80	76	83	46	48	62
Puerto Rico	11	36	55	3.2	41	74	61	48	42	58	53

*Maximum possible mean score is 100. Subscale definitions: *Labor and delivery* = mother-newborn skin-to-skin contact and early breastfeeding initiation. *Breastfeeding assistance* = assessment, recording, and instruction provided on infant feeding; not giving pacifiers to breastfed newborns. *Mother-newborn contact* = avoidance of separation during postpartum facility stay. *Newborn feeding practices* = what and how breastfed infants are fed during facility stay. *Breastfeeding support after discharge* = types of support provided after mothers and babies are discharged. *Nurse/birth attendant breastfeeding training and education* = quantity of training and education that nurses and birth attendants receive. *Structural and organizational factors related to breastfeeding* = 1) facility breastfeeding policies and how they are communicated to staff, 2) support for breastfeeding employees, 3) facility not receiving free infant formula, 4) prenatal breastfeeding education, and 5) coordination of lactation care. Additional information regarding survey questions and scoring is available at <http://www.cdc.gov/mpinc>.

†In describing the results of this study, the District of Columbia/TT3 1vey quy qu†

ing a telephone number for mothers to call for breastfeeding consultation after leaving the birth facility, 56% of facilities reported initiating follow-up calls to mothers. Facility-based postpartum follow-up visits were offered by 42% of facilities, and postpartum home visits were reported by 22% of facilities.

For newborn feeding, 24% of facilities reported giving supplements (and not breast milk exclusively) as a general practice with more than half of all healthy, full-term breastfed newborns, a practice that is not supportive of breastfeeding (). When asked whether healthy, full-term breastfed infants who receive supplements are given glucose water or water, 30% of facilities reported giving feedings of glucose water and 15% reported giving water, practices that are not supportive of breastfeeding. In addition, 17% of facilities reported they gave something other than breast milk as a first feeding to more than half the healthy, full-term, breastfed newborns born in uncomplicated cesarean births.

maternity practices known to influence breastfeeding in the early postpartum period and after discharge.

The findings indicate substantial prevalences of maternity practices that are not evidence-based and are known to interfere with breastfeeding. For example, 24% of birth facilities reported supplementing more than half of healthy, full-term, breastfed newborns with something other than breast milk during the postpartum stay, a practice shown to be unnecessary and detrimental to breastfeeding (). In addition, 70% of facilities reported giving breastfeeding mothers gift bags containing infant formula samples. Facilities should consider discontinuing these practices to provide more positive influences on both breastfeeding initiation and duration ().

The findings demonstrate that birth centers had higher mean total scores, compared with hospitals. Facility size (based on annual number of births) was not related to differences in scores. Further research is needed to better understand the difference in scores for birth centers and hospitals. Previous research has indicated that the more breastfeeding-supportive maternity practices that are in place, the stronger the positive effect on breastfeeding (). Comparison of the findings of this report with state breastfeeding rates also suggests a correlation between maternity practice scores and prevalence of breastfeeding. For example, in the 2006 National Immunization Survey, seven states (Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, and West Virginia) had the lowest percentages (<30%) of children breastfed for 6 months. The same seven states were among those with the lowest mean

E : This report summarizes results from 2,687 hospitals and birth centers in the first survey of breastfeeding-related maternity practices conducted in the United States. These results provide information regarding maternity practices and policies in birthing facilities and can serve as a baseline with which to compare future survey findings. Individual facilities and states can use this information to improve

ing that the survey be completed by the person most knowledgeable about the facility's maternity practices, in consulta-
