

Breastfeeding

The American Academy of Pediatrics (AAP) describes human milk as “uniquely superior for infant feedings,”¹ and the AAP and American Academy of Family Physicians recommend that, with rare exception, infants should be exclusively breastfed for the first six months of life, with continuation of breastfeeding for at least one year or as long as mutually desired by mother and infant.^{1,2} Not only does breast milk provide the optimal source of nutrition¹ for almost all infants, but breastfeeding also has been shown to confer multiple benefits to infants, mothers, and the community (Table 1).^{3,4}

Table 1. Benefits of Breastfeeding to Infants, Mothers, and Communities^{3,4}

Infants

Decreased Risk of the Following:

- Middle ear and respiratory tract infections
- Necrotizing enterocolitis
- Gastrointestinal infection
- Celiac disease
- Inflammatory bowel disease
- Sudden infant death syndrome (SIDS)
- Atopic dermatitis and asthma
- Childhood leukemia (AML, ALL)
- Obesity
- Type 1 and Type 2 diabetes mellitus

Mothers

Decreased Risk of the Following:

- Postpartum blood loss
- Postpartum depression
- Type 2 diabetes mellitus
- Rheumatoid arthritis
- Cardiovascular disease
- Breast and ovarian cancer

Communities

- Decreased healthcare/hospital costs
- Decreased parental absenteeism from work
- Reduced environmental burden
(No packaging or transportation required)

who do not achieve the recommended breastfeeding goals, it is important to be aware of barriers that can be addressed.

A sample of Wisconsin mothers received the PRAMS survey two to three months after their baby was born and were asked a variety of questions, including questions regarding breastfeeding. Although many factors play a role in determining both breastfeeding initiation and duration, this survey of new mothers provides valuable information on breastfeeding practices in our state.

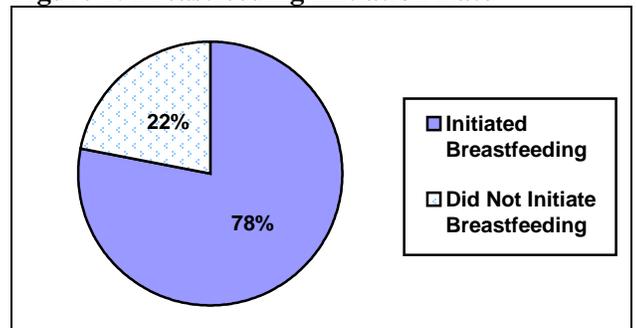
Breastfeeding practices

1) Did you ever breastfeed or pump breast milk to feed your new baby after delivery?

Mothers who had a live birth and were living with their infant were asked in the 2007–2008 Wisconsin PRAMS survey about breastfeeding initiation. Ever having provided breast milk, through breastfeeding or by pumping and providing the expressed breast milk to feed the baby, was considered breastfeeding initiation.

One of the Healthy People 2020 targets related to breastfeeding is that 82% of all infants will initially breastfeed.⁵ Results from the 2007–2008 Wisconsin PRAMS data indicated that 78% of new mothers ever breastfed or used expressed breast milk to feed their infant. Thus, 22% of Wisconsin new mothers never initiated breastfeeding (Figure 1).

Figure 1: Breastfeeding Initiation Rate



Source: 2007-2008 Wisconsin PRAMS, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

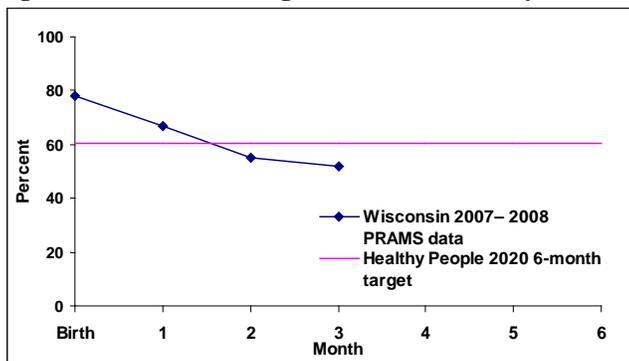
Given these recommendations and benefits of breastfeeding, it is important to understand what proportion of mothers in Wisconsin are initiating breastfeeding and how long they are continuing to breastfeed their children. Furthermore, among mothers

2) Are you still breastfeeding or feeding pumped milk to your new baby? How many weeks or months did you breastfeed or pump milk to feed your baby?

The Wisconsin PRAMS survey asked mothers who initiated breastfeeding if they were still breastfeeding / feeding pumped milk to their new baby; if not, the survey asked how long a mother breastfed or pumped. Since mothers received the survey two to three months after their babies were born, breastfeeding duration was examined to a maximum of three months.

Healthy People 2020 targets for breastfeeding duration include 61% of infants breastfed for \geq six months.⁵ Among new mothers in Wisconsin, the 2007–2008 Wisconsin PRAMS data showed that 67% breastfed for \geq one month; however by two months, only 55% were breastfeeding and by three months, only 52% were breastfeeding (Figure 2).

Figure 2: Breastfeeding Duration (Rates by Month)



Source: 2007-2008 Wisconsin PRAMS, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services; and U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, Healthy People 2020, Washington, DC, Maternal, Infant, and Child Health Objective 21.

3) How old was your baby the first time you fed him or her anything besides breast milk?

By determining when a breastfed infant was first fed any food or liquid other than breast milk, the Wisconsin PRAMS survey is able to determine the prevalence of exclusive breastfeeding for \geq three months.

The Healthy People 2020 target for exclusive breastfeeding for \geq three months is 46%.⁵ The 2007–2008 Wisconsin PRAMS data showed that that 39% of Wisconsin new mothers breastfed exclusively for \geq three months.

Breastfeeding and Maternal Characteristics

In addition to providing an overview of breastfeeding practices across our state, Wisconsin PRAMS data can highlight variations in breastfeeding practices associated with certain maternal characteristics (Table 2). Recognizing these variations can help inform efforts for breastfeeding education, promotion, and support.

Breastfeeding initiation and duration rates increased with age, and mothers with a high school level of education or less had lower rates of initiation and duration compared with some college/college graduate level education. Non-Hispanic black mothers had lower initiation and duration rates than did non-Hispanic white and Hispanic mothers.

Breastfeeding initiation and duration rates increased with income level and were lower for those on Medicaid, compared with those with private or employer insurance and those who were uninsured. Similarly, lower rates of breastfeeding initiation and duration were reported by mothers with no prenatal care or who started seeing a provider after the first trimester, were not married, had unintended pregnancies, followed safe sleep practices, were on WIC during pregnancy, did not receive prenatal breastfeeding information or help, or reported symptoms of postpartum depression.

Barriers to Breastfeeding

4) What were the reasons for not breastfeeding your baby?

To promote and support breastfeeding, it is also important to understand the reasons women choose not to breastfeed. The 2007–2008 Wisconsin PRAMS survey asked new mothers who did not initiate why they did not. The survey listed the following possible answers: maternal illness, infant illness, other children to care for, too many household duties, did not like breastfeeding, did not want to be tied down, embarrassed to breastfeed, returning to school or work, and wanting her body back to herself. In addition to choosing one or more of these reasons, a new mother could also choose “other” and specify her response.

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Table 2. Breastfeeding Practices by Selected Maternal Characteristics, Wisconsin PRAMS, 2007-2008

Maternal Characteristic	Initiation		Duration ≥ 3 months	
	Percent	C.I. \pm	Percent	C.I. \pm
Total All Mothers	78	± 2	52	± 3
Maternal Age^{†‡}				
Under 20 years*	60	± 8	17	± 8
20-24 years	72	± 5	37	± 6
25-34 years	81	± 3	59	± 4
35+ years	83	± 5	68	± 8
Maternal Education^{†‡}				
Less than high school	69	± 5	41	± 7
High school	65	± 5	32	± 6
Some college or college graduate	87	± 2	66	± 4
Maternal Race/ethnicity^{†‡}				
White, non-Hispanic	80	± 3	57	± 4
Black, non-Hispanic	58	± 5	23	± 4
Hispanic	87	± 3	58	± 6
Other, non-Hispanic*	73	± 6	40	± 7
Income^{†‡}				
Less than \$10,000	68	± 5	24	± 5
\$10,000 – \$49,999	75	± 3	50	± 5
\$50,000 or more	85	± 3	67	± 5
Prenatal Care (PNC)^{†‡}				
Began in first trimester	81	± 2	56	± 3
Began after first trimester or no PNC	66	± 5	38	± 6
Health Insurance at Delivery^{†‡}				
Private or Employer Insurance	82	± 3	61	± 4
Medicaid	72	± 4	38	± 5
Uninsured (personal income)*	97	± 6	78	± 18
Marital Status^{†‡}				
Married	84	± 2	64	± 4
Not married	66	± 4	30	± 5
Pregnancy Intention^{†‡}				
Intended	81	± 3	58	± 4
Unintended	71	± 4	40	± 5
Abuse by Partner[†]				
Abuse before or during pregnancy*	75	± 8	38	± 11
No abuse	78	± 2	53	± 3
Safe Sleep Practice^{†‡}				
Bed-sharing (always/often/sometimes)	82	± 3	58	± 5
No bed-sharing (rarely/never)	75	± 3	49	± 4
WIC During Pregnancy^{†‡}				
Received WIC	69	± 4	34	± 4
Did not receive WIC	84	± 3	64	± 4
Prenatal Breastfeeding Services^{†‡}				
Received information or help	94	± 2	60	± 5
Did not receive information or help	68	± 3	47	± 4
Postpartum Depressive Symptoms^{†‡}				
Reported depressive symptoms	70	± 6	38	± 8
No reported depressive symptoms	79	± 2	55	± 3
Smoke exposure[†]				
Smoking in the house*	70	± 11	31	± 14
No smoking in the house	78	± 2	53	± 3

Source: 2007-2008 PRAMS, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

*Indicates caution against over-interpretation because less than 10% of Wisconsin births have this characteristic.

†Chi-square test $p < 0.05$ for initiation; ‡Chi-square test $p < 0.05$ for duration.

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After grouping these “other” responses together with listed reasons for not initiating, major themes emerged (Table 3). Roughly half (52%) of mothers who did not breastfeed reported not initiating because they did not want to/did not like it. One-quarter (25%) noted they were too busy with other responsibilities or tired, and nearly one-quarter (23%) reported return to work or school as a reason.

Table 3. Reasons for Not Initiating Breastfeeding[†]

Reasons	%	C.I. ±
Didn't want to/didn't like or personal choice*	52	+5
Too many household duties/caring for other children/too busy or too tired*	25	+5
Returning to work or school/other work duties*	23	+5
Felt tied down	14	+4
Mother or infant sick/previous breast surgery or other medical concerns*	13	+3
Wanted body back to herself/breast appearance*	11	+3
Embarrassed	6	+2

*Denotes responses that were grouped together from “Other” category rather than a specific category noted in the survey.

[†]Only asked of women who did not initiate breastfeeding.

Source: 2007-2008 Wisconsin PRAMS, Office of Health Informatics, Division of Public Health, Wisconsin Department of Health Services.

Ways to promote and support breastfeeding^{3,4}

- Ensure pregnant women and their families (including grandmothers and significant others) are informed about the benefits of breastfeeding and have access to educational materials and classes about breastfeeding.
- Speak with parents about room-sharing, rather than bed-sharing, to foster breastfeeding, as well as to follow safe sleep practices.
- Strengthen “baby-friendly” practices to promote breastfeeding in Wisconsin hospitals, such as having a hospital-wide breastfeeding policy in which all health care staff are trained (see Resources).
- Ensure providers connect women to community resources (such as WIC, lactation consultants or breastfeeding support groups) to assist with lactation concerns and to help continue breastfeeding when returning to work/school (see Resources).
- Promote workplace support of breastfeeding by providing an appropriate place and sufficient break time to express breast milk (see Resources).
- Inform communities of the benefits of breastfeeding, promote it as the norm, and foster a sense of community support for breastfeeding.

Comments from Wisconsin mothers

- “Breastfeeding gets tiring but it pays off.”
- “I believe that more women should breastfeed their babies. Breastfeeding is the best and safest food for babies.”

About Wisconsin PRAMS: <http://dhs.wisconsin.gov/births/prams/>

Prepared in the Division of Public Health, Wisconsin Department of Health Services. Wisconsin PRAMS is a statewide survey conducted by mail with telephone follow-up. It is designed to monitor the health and experiences of women before, during, and just after pregnancy. Every year, almost 1,900 women who delivered a live infant are randomly selected to participate. The 2007-2008 combined data file includes 2,059 mothers who responded to the surveys. The combined response rate was 55%.

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Resources:

1. Wisconsin Department of Health Services: Breastfeeding. <http://www.dhs.wisconsin.gov/health/nutrition/breastfeeding/index.htm>
2. American Academy of Pediatrics: Breastfeeding Initiatives <http://www2.aap.org/breastfeeding/index.html>
3. American Academy of Pediatric: Sample Hospital Breastfeeding Policy for Newborn http://www2.aap.org/breastfeeding/curriculum/documents/pdf/Hospital%20Breastfeeding%20Policy_FINAL.pdf
4. Baby-Friendly USA, Inc: Baby-Friendly Hospital Initiatives in the U.S. <http://www.babyfriendlyusa.org/eng/10steps.html>
5. Academy of Breastfeeding Medicine Model Hospital Policy (#7) <http://www.bfmed.org/Resources/Protocols.aspx>
6. U.S. Department of Health and Human Services Office on Women's Health: Business Case for Breastfeeding: <http://www.womenshealth.gov/breastfeeding/government-in-action/business-case-for-breastfeeding/>

References:

1. American Academy of Pediatrics Section on Breastfeeding. *Breastfeeding and the use of human milk*. *Pediatrics*, 2005;115:496–506. Available at: <http://pediatrics.aappublications.org/content/115/2/496.full.pdf>. Accessed June 10, 2012.
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4. U.S. Department of Health and Human Services. *The Surgeon General's Call to Action to Support Breastfeeding*. Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General; 2011. Available at <http://www.surgeongeneral.gov/library/calls/breastfeeding/calltoactiontosupportbreastfeeding.pdf>. Accessed June 10, 2012.
5. U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. *Healthy People 2020*. Washington, DC. Maternal, Infant, and Child Health Objective 21. Available at: <http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=26>. Accessed June 10, 2012.

