

Milk Medicine: How to Provide Breastfeeding Support in 2019

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Is Breastfeeding/Human Milk Beneficial?

IMAGES IN CLINICAL MEDICINE: PNEUMATOSIS INTESTINALIS



Figure. Intra-operative view of extensive pneumatosis intestinalis.

J Peds 143: 543; 2003



Cassatt

Significant Risk Adjustments for Term Infants

Ever Breastfeeding

23% ↓ Otitis media

31% ↓ Inflammatory bowel disease

40% ↓ Type 2 diabetes mellitus

64% ↓ Gastrointestinal infections

72% ↓ Lower respiratory infections

>1 month Breastfeeding

36% ↓ SIDS

>2 months Breastfeeding

52% ↓ Celiac disease

>3 months Breastfeeding

26% ↓ Asthma w/o family hx

40% ↓ Asthma with family hx

>4 months Breastfeeding

74% ↓ RSV bronchiolitis

Early Cessation: Breastfeeding 4-6 months versus Breastfeeding ≥ 6 months

1.95X ↑ Recurrent otitis media

4.27X ↑ Lower respiratory tract infection



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Breastfeeding

Published: January 29, 2016

Executive Summary

With a substantial development of research and findings for breastfeeding over the past three decades, we are now able to expand on the health benefits for both women and children across the globe. The two papers in this Series will describe past and current global trends of breastfeeding, its short and long-term health consequences for the mother and child, the impact of investment in breastfeeding, and the determinants of breastfeeding and the effectiveness of promotion interventions.



Podcast

Editorial

Breastfeeding: achieving the new normal

The Lancet

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Comments

Spotlight on infant formula: coordinated global action needed

Alison McFadden, Frances Mason, Jean Baker, France Begin, Fiona Dykes, Laurence Grummer-Strawn, Natalie Kenney-Muir, Heather Whitford, Elizabeth Zehner, Mary J Renfrew

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Breastfeeding: a smart investment in people and in economies

Keith Hansen

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Series Papers

Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect

Cesar G Victora, Rajiv Bahl, Aluisio J D Barros, Giovanni V A França, Susan Horton, Julia Krusevec, Simon Murch, Mari Jeeva Sankar, Neff Walker, Nigel C Rollins for The Lancet *Breastfeeding Series Group*

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Why invest, and what it will take to improve breastfeeding practices?

Nigel C Rollins, Nita Bhandari, Nemat Hajeebhoy, Susan Horton, Chessa K Lutter, Jose C Martines, Ellen G Piwoz, Linda M Richter, Cesar G Victora on behalf of The Lancet *Breastfeeding Series Group*

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Breastfeeding is Natural



Picasso 1905

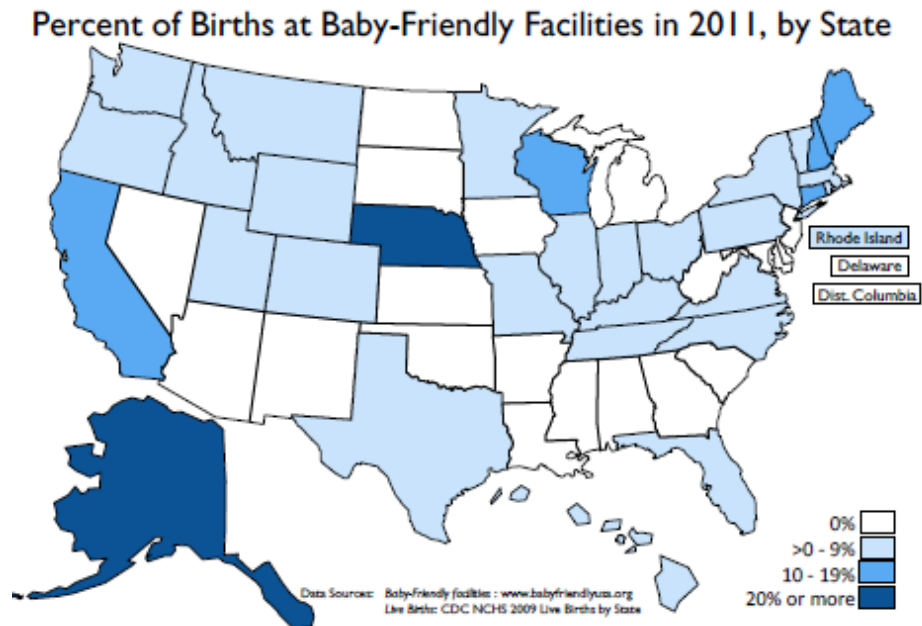
Breastfeeding is Natural



Picasso 1905

But Not in Our Unnatural World

2011 Breastfeeding in South Carolina



Percent	SC	USA
Breastfeeding initiation	62.5	74.6
Breastfeeding 6 months	26.5	44.3
Exclusive breastfeeding 6 months	7.1	14.8

Education

	Early initiation of breastfeeding (within 1 h of birth)	Exclusive breastfeeding for 0-5 months	Continued breastfeeding for 12-23 months	Any breastfeeding up to 6 months
Health systems and services				
Overall	29 studies: RR 1.11 (1.06-1.16)	51 studies: RR 1.46 (1.37-1.56)	Eight studies: RR 1.18 (1.03-1.35)	47 studies: RR 1.40 (1.30-1.52)
Baby-friendly support	Ten studies: RR 1.20 (1.11-1.28)	15 studies: RR 1.49 (1.33-1.68)	Three studies: RR 1.26 (0.96-1.64)	13 studies: RR 1.66 (1.34-2.07)
Counselling* or education	Ten studies: RR 1.12 (1.05-1.19)	28 studies: RR 1.66 (1.43-1.92)	Five studies: RR 1.15 (0.99-1.35)	24 studies: RR 1.47 (1.29-1.68)
Special training of health staff	Three studies: RR 1.09 (1.01-1.18)	Five studies: RR 1.36 (1.14-1.63)	No studies	Five studies: RR 1.33 (1.07-1.67)
Family and community				
Home and family	Five studies: RR 1.74 (0.97-3.12)	43 studies: RR 1.48 (1.32-1.66)	One study: RR 1.22 (1.01-1.47)	No studies
Counselling* or education	Five studies: RR 1.74 (0.97-3.12)	38 studies: RR 1.58 (1.39-1.80)	One study: RR 1.22 (1.01-1.47)	No studies
Family or social support	No studies	Five studies: RR 0.95 (0.87-1.02)	One study: RR 1.69 (0.95-2.9)	No studies
Community	Five studies: RR 1.86 (1.33-2.59)	Six studies: RR 1.20 (1.03-1.39); one study: OR 1.10 (0.60-1.80)	No studies	No studies
Group counselling* or education	Four studies: RR 1.65 (1.38-1.97)	One study: RR 1.61 (0.95-2.71); one study: OR 1.10 (0.60-1.80)	No studies	No studies
Integrated mass media, counselling and community mobilisation approach	One study: RR 5.33 (2.33-12.19)	Five studies: RR 1.17 (1.0-1.36)	No studies	No studies
Work environment				
Work environment	No studies	Four studies: RR 1.28 (0.98-1.69)	One study: RR 3.33 (1.43-10.0)	No studies
Maternal leave policy	No studies	Two studies: RR 1.52 (1.03-2.23)	No studies	No studies
Workplace support	No studies	Two studies: RR 1.08 (0.74-1.60)	No studies	No studies
Employment status	No studies	No studies	One study: RR 3.33 (1.43-10.0)	Two studies: RR 1.49 (1.12-1.98)
Combination of settings				
Combination of settings	Ten studies: RR 1.57 (1.24-1.97)	26 studies: RR 1.79 (1.45-2.21)	Seven studies: RR 1.97 (1.74-2.24)	30 studies: RR 1.30 (1.06-1.61)
Health systems and services and home and family	Six studies: RR 1.36 (1.07-1.73)	16 studies: RR 1.63 (1.27-2.10)	RR 1.34 (1.01-1.81)	21 studies: RR 1.23 (1.08-1.40); two studies: OR 2.08 (1.32-3.28)
Home and family and community	Three studies: RR 1.85 (1.08-3.17)	Three studies: RR 1.42 (1.21-1.66)	No studies	Three studies: RR 1.00 (0.89-1.12)
Health systems and services and community	One study: RR 2.09 (1.64-2.67)	Seven studies: RR 2.52 (1.39-4.59)	One study: RR 10.2 (7.66-13.74)	Six studies: RR 1.74 (0.84-3.39)

Data are risk ratio (RR, 95% CI) or odds ratio (OR, 95% CI). All estimates of effect and methods are provided in Sinha and colleagues⁴⁴ *Antenatal counselling focused on infant feeding decision making and preparation for breastfeeding; periodic postnatal home and family encounters focused on establishing exclusive breastfeeding, managing problems and challenges, and continued breastfeeding.

Table 1: Effects of interventions on breastfeeding outcome measures, by setting

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Baby Friendly Hospital Initiative

- 10 Steps
- Prenatal, Perinatal, Postnatal interventions
- BF USA offers designation
 - Benefit of audits
 - Benefit of marketing





SC Birth Outcomes Initiative “Race to Date” Initiative

- Provided **\$1 million** in state money as incentive to encourage SC birthing hospitals to become Baby-Friendly USA designated within a 9-month time frame
- **Zero** hospitals at launch on 12/18/2012
- By 09/30/2013, **4** hospitals earned designation, each receiving **\$200,000**
- Now total of 14 Baby-Friendly USA hospitals, 47% of all births, and 45% of Medicaid-funded births in these hospitals

Breastfeeding in SC

- U.S. CDC Breastfeeding Report Card
 - In 2011: 45th of 50 states
 - In 2014: 37th in 50 states
- Breastfeeding initiation rate rose by 10.6% compared to national average of 4.6%
- In 2016, no increase in initiation rate but...

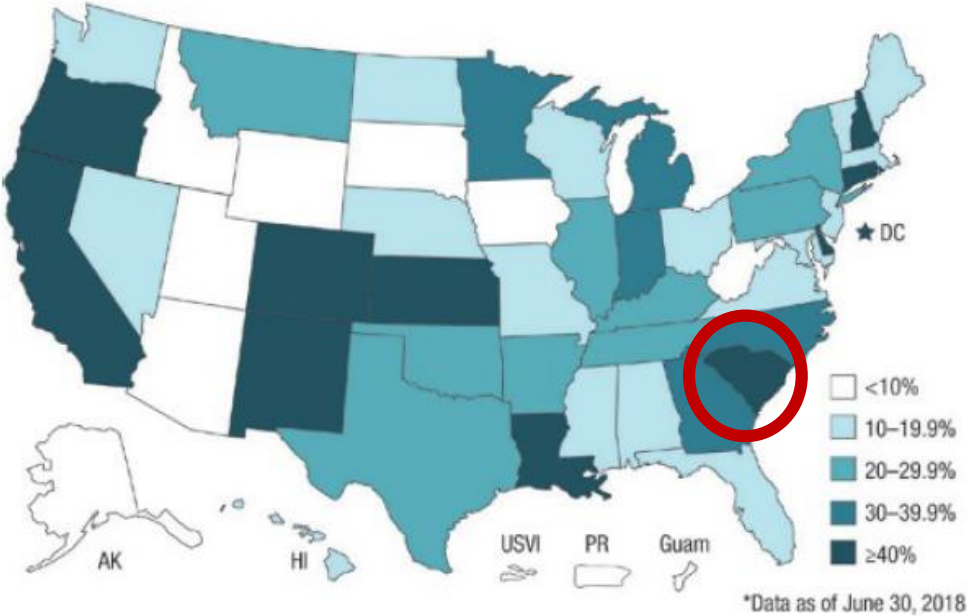
Significant improvement through first year

Year	Ever	6 months	12 months	Exclusive 3 months	Exclusive 6 months
2011	62.5	26.5	14.5	23	7.1
2014	73.4	37.4	14	32	13.4
2016	71.4	44	27.2	40.8	22.8*****

*****Above the U.S. average of 22.3

South Carolina Breastfeeding: Making Strides

Percentage of Live Births at Baby-Friendly Facilities, 2018*



48% of South Carolina infants are born in Baby Friendly Designated hospitals

Percent	2011	2018
Breastfeeding initiation	62%	76%
Breastfeeding 6 months	27%	45%
Exclusive breastfeeding 6 months	7%	24%

Why Do We Want Baby Friendly Hospitals?

- Demonstrates a real investment (mostly time) in mother and infant outcomes
- Provides consistent care universally
- Promotes sustainment because following and responding to data
- Evidence-based method

Despite Improvements, Disparities Persist

South Carolina Urban, Academic Hospital

Despite a 27% increase in African-American mother breastfeeding initiation, African American mothers were still 2.4 times more likely to stop breastfeeding during birth hospitalization

Rural Regional Medical Center

With option to choose Baby Friendly Practices, African American mothers were 1.8 times less likely to participate in >5 practices

In multivariate regression model, Maternal Race, Rurality, and Education level were independently associated with choice of Baby Friendly Practices

Lack of breastfeeding education and lack of access to breastfeeding support were identified as barriers to breastfeeding in focused interviews specifically in the African American, rural, and lower educated mothers



Hemingway S 2018
unpublished



Munn et al 2017

Baby Friendly Work Group

- Meet at monthly BOI meeting for ~ 1 hour
- Measureable goals

- Priorities
 - All SC hospitals moving forward to Baby Friendly Designation
 - Address QI needs identified along the BF Pathway
 - Human milk for very low birth weight infants



All Hospitals Moving Forward Towards Baby Friendly

- At monthly meetings
 - Open invitation ALWAYS and introductions
 - Hospital questions regarding Baby Friendly prioritized
- Dissemination of information
 - Programs such as Best Fed Beginnings and EMPOWER
 - Low cost staff education opportunities- \$45/nurse statewide
 - Incorporation of Safe Sleep into Baby Friendly education
- 2017 All Baby Friendly USA Designated Hospitals must also have policy to support employees/students

Who is Consistently at the Table?

- 5-7 hospitals represented by physician, nursing, lactation consultant, and/or administration
- SC DHEC
- SC WIC
- Nurse-Family Partners
- Others intermittently
 - La Leche League
 - PASOs (service for a healthy Latino community)
 - Industry



First Steps as a Pediatric Care Provider

- Create a breastfeeding friendly environment
 - Place for breastfeeding in the office
 - Educate staff
- Educate families (and staff)
 - Share a few facts
 - Consistency in education
- Check on breastfeeding mothers
 - Postnatal day 4 to day 14 is a difficult time to sustain
- Know community breastfeeding resources



SC Infant Deaths

Transportation, Drowning, Poisons
0-5/year

Cause of Infant Death (ICD-10 Codes)	Total	Under 1 Day	1-6 Days	7-27 Days	Neonatal (<28 days)	Post-Neonatal (28-364 days)
Total Infant Deaths	401	136	53	64	253	148
Congenital malformations, deformations, etc. (Q00-Q99)	85	26	10	13	49	36
Disorders related to short gestation and low birthweight, NEC (P07)	57	47	4	4	55	2
Accidents (V01-X59, Y85-Y86)	39	-	-	5	5	34
Sudden infant death syndrome (R95)	27	-	-	3	3	24
Fetus and newborn affected by maternal complications of pregnancy (P01)	20	19	-	1	20	-
Bacterial sepsis of newborn (P36)	16	2	3	10	15	1
Newborn affected by complication of placenta, etc. (P02)	14	12	2	-	14	-
Respiratory distress of newborn (P22)	13	2	6	5	13	-
Diseases of circulatory system (I00-I99)	9	3	-	1	4	5
Assault (homicide) (X85-Y09, Y87.1)	8	-	1	1	2	6
All other causes	113	25	27	21	73	40

	2010	2011	2012	2013	2014	2015	2016	Total (2010-2016)
Accidental suffocation and strangulation in bed (W75, W84)	25	21	39	21	31	35	33	205
Sudden Infant Death Syndrome (R95)	49	45	33	35	31	28	27	248
Hanging, strangulation, and suffocation, undetermined Intent (Y20)	4	2	1	9	4	4	1	25
Other ill-defined and unspecified causes of mortality (R99)	8	10	12	6	11	11	10	68
Total	86	78	85	71	77	78	71	546

What Do We Do?

- Pediatric healthcare providers did this for car safety
- By 2000, for infants
 - Appropriately positioned car seats used for >90%
 - Reduced risk of fatal injury in a crash by 71%
 - In SC, now 13 deaths 2009-2015
 - Compared to 194 strangulation or suffocation in bed and 265 SIDS

National Highway & Traffic Safety

SC DHEC report, October 2016

- Time to Do the Same for Safe Sleep
- Educate
 - Prenatal or earlier
 - Universal and every visit
 - Audit to ensure
 - Focus specifically on middle of the night/exhausted decisions

Why is Safe Sleep important?

Because even one death is too many.

Safe Sleep

Safe Sleep focuses on actions you and others can take to help your baby sleep safely and to reduce your baby's risk of dying while sleeping, which is called Sudden Unexpected Infant Death Syndrome (SUIDS).

The term "SUIDS" may sound scary, and the death of a baby is always heartbreaking. But there are a number of ways you can lower his or her risk while giving your baby the best care possible.

Learning about SUIDS and safe sleep for babies is important for all caregivers, not just for parents. Grandparents, aunts, uncles, babysitters, childcare providers and anyone else who might care for a baby also need to know about safe sleep.

The mission of the South Carolina Birth Outcomes Initiatives (SCBOI) Safe Sleep Initiative is to eliminate sleep-related infant deaths by providing prevention education and consistent messaging and support to healthcare providers, parents, caregivers and the community.

Simple, consistent actions can make a big difference in keeping your baby safe.

Can this really happen to me or someone I know?

The truth is in the numbers.

- South Carolina's State Child Fatality Committee found 80 cases of infant deaths reviewed in 2017 were due to unsafe sleep.
- In these deaths, 65% of the babies who died were sleeping in an adult bed, couch or chair.
- For a South Carolina infant, a sleep-related death is 18 times more likely to occur than a motor vehicle-related death.
- According to the South Carolina Department of Health and Environmental Control (DHEC), SUIDs is the third leading cause of infant death in South Carolina.
- Putting a baby to sleep in the parents' room, but on a separate surface, reduces the risk of sudden infant death syndrome by up to 50%.

Contact Information

For more information on the South Carolina Birth Outcomes Initiative, email scboi@scdhhs.gov or visit scdhhs.gov/boi.

South Carolina Birth Outcomes Initiative

www.scdhhs.gov/boi
P.O. Box 8206, Columbia, SC 29202

11/17

Safe Sleep, Every Sleep



Six infants die each month
in South Carolina from
unsafe sleep.

Safe Sleep Initiative

South Carolina Birth Outcomes Initiative

Know and Share the ABCs of Safe Sleep

Babies are at risk of sleep-related deaths until they are a year old, and most deaths occur when babies are between 1 month and 4 months of age. However if you follow these safety tips based on the American Academy of Pediatrics (AAP) recommendations, you can help prevent infant deaths due to unsafe sleep practices. Even one is just too many.



Alone

Babies should sleep alone in their own safe sleep space such as a crib, bassinet or playard with a firm, flat mattress. Sleeping alone means no other people, pets or objects are in the same sleep area.

This means all toys, soft objects, bumper pads, blankets and pillows need to be removed from a baby's crib. These items are choking and suffocation hazards. Also, never lay a baby down on adult beds, chairs, sofas, waterbeds, air mattresses, pillows or cushions.

Back

Always put your baby to sleep on his back, both for naps and at night. Placing babies on their backs to sleep is one of the most important ways to prevent sudden unexpected infant death (SUID). Often a baby is put to sleep safely at first, but then is moved to an unsafe sleep position after awakening in the night.

Crib

A crib, bassinet or playard is safer than having a baby sleep next to you in bed. But what's just as important is making sure the crib or bassinet is safety approved by the Consumer Products Safety Commission and that the crib is bare.

Additional Safety Tips

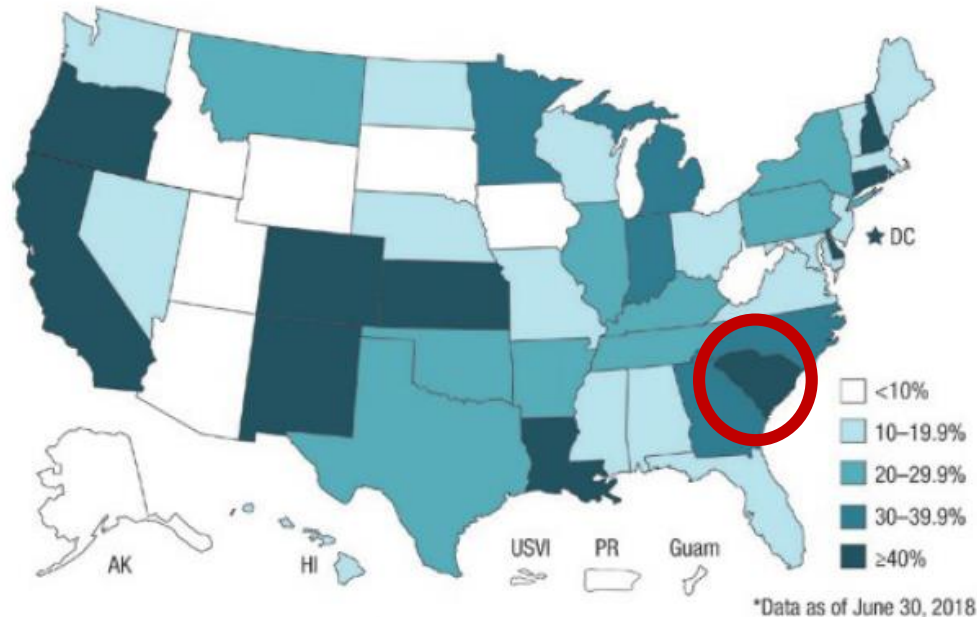
Here are some safety tips to remember.

- **Do not use cribs made before 2011.** Older cribs may not meet current safety standards.
- **Do not use altered cribs.** Cribs that are broken or modified, or that have gaps larger than two fingers between the sides of the crib and the mattress can be dangerous.
- **Use a firm mattress.** Make sure the sleep surface, such as a mattress, of the crib or bassinet is firm.
- **Share a room, not a bed.** A crib or bassinet near your bed can make it easy to reach your baby so you can easily breastfeed and bond with the baby. This is safer than risking falling asleep with a baby in bed with you.
- **Keep sleeping space away from cords.** Do not place a crib or bassinet near a window with blinds, curtain cords or baby monitor cords, as babies can strangle on these items.
- **Set a timer.** When feeding your baby, set an alarm or timer on your phone to ensure you stay awake.
- **No objects in sleeping space.** Remove all bumper pads, blankets, toys, pillows and other objects from the baby's crib or bassinet.



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