

Breastfeeding Support (Lactation Consultation)



Goals

There is ample evidence of the importance of breastfeeding for healthy child development. In acknowledgement of the importance of the practice, the World Health Organization recommends exclusive breastfeeding for up to 6 months and ongoing breastfeeding, along with appropriate foods, up to 2 years of age. A woman's early experience with breastfeeding can affect whether and how long she continues to breastfeed. Breastfeeding support though lactation consultation seeks to increase the use and duration of breastfeeding among general and targeted populations. Breastfeeding support can result in more mothers being willing to start and continue breastfeeding for at least six months.

Program Features

Breastfeeding support works by providing education, counseling, and encouragement to pre- and post-natal mothers as well as fathers and other important family members. Support includes interventions to improve breastfeeding outcomes such as helping the mother and baby with latch and positioning, helping with lactation crisis, counseling mothers on returning to work or school as well as addressing other concerns of the mother and their family. Support can be provided by healthcare professionals such as doctors, nurses or lactation consultants through medical and community venues, and individually or in group settings. Health care professionals should be adequately trained (i.e. certified by the International Board of Lactation Consultant Examiners) and experienced in providing breastfeeding support. The advice and support provided should be consistent and evidenced based.

Breastfeeding support programs often have to acknowledge and respond to social, cultural, and biological challenges to breastfeeding. A review of studies suggests that providing support in a combination of settings is effective at improving the rate and duration of breastfeeding. Programs may follow a specific curriculum or model or may be developed to meet the specific needs and cultural expectation of a target

Breastfeeding Support (Lactation Consultation) Snapshot

- **EC Profile Indicator:** H60 – Percent of low income children age 2-4 who are at a healthy weight
- **Clearinghouse Rating:** None
- **Research supports** use with children from birth
- **Related Smart Start outcomes:**
 - Increase in child practice of healthy behaviors
- **Training required:** Yes
- **Staff qualifications:** Certification through International Board Certified Lactation Consultants, Certified Lactation Counselors, or Lactation counselors.
- **Suggested Measure:** Number and percentage who 1) Initiated breastfeeding 2) Exclusively breastfed for first 6 months of age
- **Implementation Guidance:** <https://iblce.org/>

population.

Target Audience

Open to all mothers; targeted at prenatal and new mothers

Documented Outcomes

Type of Study		Parent Outcome			
		Breastfeeding initiation	Breastfeeding duration	Breastfeeding rates	Maternal health
Patel and Patel (2016) ⁱ	Meta-analysis	✓	✓	✓	✓
Dumphy et.al. (2016) ⁱⁱ	Non-experimental; comparison of pre- and post-implementation groups	✓	✓	✓	

This table contains outcomes found to be associated with the program or approach. Individual studies may contain additional outcomes that were tested and not found to be associated with the program or approach.

Research Evidence for Breastfeeding Support (Lactation Consultation)

- There are two types of certification included in reporting: International Board Certified Lactation Consultants and Certified Lactation Counselors.
- An additional staff type may be Lactation Counselors.
- Lactation consultants and counselors are associated with positive breastfeeding outcomes.

Review of Experimental and Quasi-Experimental Studies

See Meta-Analyses

Review of Meta-Analyses

Citation	Patel, S. and Patel, S. (2016). The Effectiveness of Lactation Consultants and Lactation Counselors on Breastfeeding Outcomes. Journal of Human Lactation 2016, Vol. 32(3) 530–541	
Population and Sample	This meta-analysis examined 16 studies, 8 of which were conducted in the United States, in both urban and rural settings.	
Methodology	Meta-analysis with examination of risk bias for each study	
Purpose	This study included randomized trials that involved lactation consultants or counselors, who provided antenatal education, postpartum support, or both antenatal education and postpartum support. The study examined breastfeeding initiation, duration, and rates.	
Measures & Assessments	The studies included randomized trials that involved lactation consultants. The studies involved several different interventions:	
	Bonuck 2005	Study lactation consultants attempted 2 prenatal meetings, a postpartum hospital visit, and/or home visits and telephone

	calls. Control subjects received the standard of care.
Bonuck 2006	Study lactation consultants attempted 2 prenatal meetings, 1 postpartum hospital and/or home visit, and telephone calls as needed. Controls received the standard of care.
Bonuck 2014	The Provider Approaches to Improved Rates of Infant Nutrition & Growth Study (PAIRINGS) had 2 arms: usual care versus pre- and postnatal visits with a lactation consultant (LC) and electronically prompted guidance from prenatal care providers (EP). The Best Infant Nutrition for Good Outcomes (BINGO) study had 4 arms: usual care, LC alone, EP alone, or LC+EP.
Brent 1995	This program consisted of individual prenatal lactation consultation, daily rounds by the lactation consultant on the postpartum unit, and outpatient follow-up at 48 hours after discharge, at the time that the infant was 1 week of age, and at all future health supervision visits for infants up to 1 year of age.
Carlsen 2013	The women were randomly assigned to 6 mo of breastfeeding support or standard care controls. At 6 mo, there were 207 dyads in the study; 105 dyads received support, and 102 dyads were control subjects. One International Board Certified Lactation Consultant carried out the intervention, which was based on structured interviews and consisted of encouraging telephone calls.
Duffy 1997	70 primiparae who intended to breast feed their baby were recruited from the antenatal clinic of the study hospital at 36 weeks' gestation. Intervention: antenatal group sessions on position and attachment of the baby on the breast were conducted by a lactation consultant.
Lavender 2005	Women who expressed a desire to breastfeed at the start of their pregnancy. Women were allocated to either routine antenatal education or an additional single educational group session supervised by a lactation specialist and attended by midwives from their locality.
Mattar 2007	A random sample of eligible low-risk antenatal patients was recruited from clinics in the National University Hospital, Singapore. Group A received breastfeeding educational material and individual coaching from a lactation counselor. Group B received breastfeeding educational material with no counseling. Group C received routine antenatal care only.
McKeever 2002	In a randomized controlled trial with prognostic stratification for gestational age, 101 term and 37 near-term (35–37 weeks' gestational age) mother-newborn pairs were randomized to either a standard care group (standard care and standard length of hospitalization) or an experimental group (standard hospital care with early discharge and home support from nurses who were certified lactation consultants).
Petrova 2009	This randomized clinical trial included 52 women in the intervention group who received one-to-one pre- and postnatal breastfeeding education and support from a lactation consultant. Women (n = 52) randomized to controls received standard breastfeeding services.
Pinelli 2001	The SSBC (supplementary structured breastfeeding counseling) consisted of viewing a video on breastfeeding for preterm infants; individual counseling by the research lactation consultant; weekly personal contact in the hospital; and frequent postdischarge contact through the infants' first year or until breastfeeding was discontinued. The CHBS (conventional hospital breastfeeding support) group had standard breastfeeding support from regular staff members confined to

	the period of hospitalization in the NICU.
Rasmussen 2011	In Bassett Improving Breastfeeding Study (BIBS) 1, 40 women received targeted breastfeeding support in the hospital and via telephone or usual care. Information regarding breastfeeding was collected via telephone for 7 days after delivery and at 30 and 90 days postpartum. In BIBS 2, 34 obese mothers received a manual or electric breast pump to use for 10-14 days or no pump; data collection was similar.
Serafino-Cross 1992	Fifty-two volunteers of lower socio-economic status were recruited for this study from four obstetrical clinics and were randomly assigned to an intervention or a comparison group. Both groups received the standard clinic and in-hospital breastfeeding teaching and were given breastfeeding instruction in the hospital by the researcher. The women in the intervention group received, in addition, an average of seven home breastfeeding support contacts by the researcher over two months postpartum, and were provided with the researcher's phone number. Women in the comparison group did not receive home visits but had access to the clinic nutritionist if any questions or problems arose.
Su 2007 Singapore	<p>Women were randomized into three groups. Group 1 was the control group and women received routine antenatal, intrapartum, and postnatal obstetric care with no special intervention applied. At our hospital, this included optional antenatal classes, which did address infant feeding, and postnatal visits by a lactation consultant should any problems with breast feeding arise.</p> <p>Women randomized to group 2 received one session of antenatal breastfeeding education in which they were shown a 16 minute educational video entitled "14 Steps to Better Breastfeeding" (InJoy Videos, Boulder, CO), which introduced the benefits of breastfeeding, demonstrated correct positioning, latch on, and breast care, and discussed common concerns. They were also given printed guides on breast feeding^{13 14} and an opportunity to talk to a lactation counsellor for about 15 minutes. They subsequently received routine intrapartum and postnatal obstetric care.</p> <p>Women randomized to group 3 were placed in a two session postnatal lactation support programme. They were visited by a lactation consultant within the first three postnatal days before discharge from hospital. They also received the same printed guides on breast feeding^{13 14} during this visit. A second support session was provided during their first routine postnatal visit one to two weeks after delivery. During these two encounters, the women received hands-on instructions in latching on, proper positioning, and other techniques to avoid common complications. Each encounter lasted about 30 minutes.</p>
Tahir 2013	Mothers were followed up for 6 months. The intervention group (n=179) received lactation counselling via telephone twice monthly by certified lactation counsellors in addition to receiving the current conventional care of postnatal breastfeeding support. The control group (n=178) received the current conventional care of postnatal breastfeeding support. Definitions of breastfeeding practices were according to World Health Organization (WHO) definitions.
Wambach 2011	An International Board of Lactation Consultants Examiners—certified lactation consultant (also a registered nurse) and a trained peer counselor (who had been a breastfeeding teen mother) provided the

	<p>experimental intervention, composed of prenatal, in-hospital, and postnatal education and support, through 4 weeks postpartum. Two prenatal classes (1.5 and 2 hr in length) provided content from the Breastfeeding Educated and Supported Teen Club (BEST) curriculum that was tested and found effective in raising teenage breastfeeding initiation in a Florida high school teen parent program (Volpe & Bear, 2000). Classes, cotaught by the lactation consultant and peer counselor, focused on the benefits of breastfeeding for mother and baby, decision making, and the “how to” of breastfeeding as well as managing breastfeeding after return to work and/or school. Participants were encouraged to bring a support person of their choice to the classes to enhance social network support for breastfeeding decision making and breastfeeding initiation and continuation. Participants were required to attend at least one class, or they were dropped from the study. Peer counselor telephone calls occurred before and after Class 1 and following Class 2 to provide ongoing decision-making support and information.</p> <p>The in-hospital experimental intervention was a face-to-face visit from the peer counselor who provided encouragement and support for early breastfeeding efforts. Those teens choosing to breastfeed, or leaning toward doing so, also received a lactation consultant visit. Postpartum telephone contact with the lactation consultant and/or peer counselor occurred at 4, 7, 11, and 18 days and 4 weeks for those experimental participants who initiated breastfeeding, unless they ceased breastfeeding before 4 weeks. These calls provided ongoing support and advice to address barriers to continued breastfeeding (e.g., breastfeeding problems, milk supply concerns, preparation for return to school). Experimental group participants received a double-set-up electric breast pump at no charge on an as-needed basis (e.g., return to school or work). An advanced-practice nurse and trained peer counselor team provided the attention control intervention components. Attention control interventions paralleled the experimental group interventions in the amount of content and timing and included two prenatal education classes on healthy pregnancy behaviors and birth preparation. The attention control intervention did not focus on breastfeeding. As with the experimental group, attention control participants were required to attend at least one class or they were dropped from the study. They also received peer counselor prenatal telephone support and an in-hospital peer counselor visit. This visit focused on postpartum maternal physical recovery and maternal role adjustment. Postdischarge, only those who breastfed received postpartum telephone interventions by peer counselors to promote and support maternal transition and postpartum adaptation. Like the attention control prenatal intervention classes, these calls were intended to mimic the breastfeeding intervention, in order to control for attention and other nonspecific effects. Usual care participants received standard prenatal and postpartum care at their respective clinic with varying provider types and birth settings. No controls were placed on level or content of care, or on educational or social support services for usual care group participants.</p>
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Study Implementation	N/A
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Staff Qualifications	Lactation consultants typically are International Board Certified Lactation Consultants, Certified Lactation Counselors, or Lactation counselors.
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Key Findings	<p>Breastfeeding Initiation</p> <ul style="list-style-type: none"> The study authors found a treatment effect for interventions that involved lactation consultants and counselors such that the odds ratio for “any initiation” versus “not initiating”
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of breastfeeding was 1.35 (95% confidence interval of 1.10 to 1.67).

Breastfeeding Duration

- The study authors reported that interventions that involved lactation consultants and counselors were aligned with beneficial effects, as measured by median and mean duration of breastfeeding.
- The studies involved in the meta-analysis measured duration in different ways. As reported by the study authors: “Five studies reported median duration for any breastfeeding. Two studies reported median duration for exclusive breastfeeding. Three studies reported mean duration for any breastfeeding and 1 study reported mean duration for exclusive breastfeeding.”

Breastfeeding Rates

- The study authors reported that interventions that involved lactation consultants and counselors were aligned with beneficial effects on breastfeeding rates, wherein breastfeeding at up to 1 month, between 1 month and up to 3 months, and between 3 months and up to 6 months were assessed.
- As regards breastfeeding rates up to 1 month, the interventions were associated with an odds ratio of 1.49 (95% confidence interval of 1.09 to 2.04) for any breastfeeding versus not breastfeeding. The authors noted “substantial heterogeneity” on this measure and that the “true effect size could vary depending on the setting.”
- As regards breastfeeding between 1 month and up to 3 months, the interventions were associated with an odds ratio of 1.76 (95% confidence interval of 1.20 to 2.57) for any breastfeeding versus not breastfeeding. The authors noted “substantial heterogeneity” on this measure.
- As regards breastfeeding between 3 months and up to 6 months, the interventions were associated with an odds ratio of 1.29 (95% confidence interval of 1.05 to 1.58) for any breastfeeding versus not breastfeeding.

Exclusive Breastfeeding Rates

- As regards exclusive breastfeeding up to 1 month, the interventions were associated with an odds ratio of 1.71 (95% confidence interval of 1.2 to 2.44) for exclusive breastfeeding versus not exclusive breastfeeding. The authors noted “substantial heterogeneity” on this measure.
- As regards exclusive breastfeeding between 1 month and up to 3 months, the interventions were associated with an odds ratio of 1.80 (95% confidence interval or 1.14 to 2.83), for exclusive breastfeeding versus not exclusive breastfeeding. The authors noted “substantial heterogeneity” on this measure.
- As regards breastfeeding between 3 months and up to 6 months, the interventions were associated with an odds ratio of 1.17 (95% confidence interval of .82 to 1.67), for exclusive breastfeeding versus not exclusive breastfeeding. The study authors did not find a statistical effect on the number of women engaging in breastfeeding.

Infant Health Outcomes

- As regards infant health outcomes, the study team reported that the interventions involving lactation consultants and counselors did not have a statistical association with reducing sick outpatient or emergency room visits for: otitis media, respiratory tract illness, and gastrointestinal illness.

Maternal Health Outcomes

- As regards maternal health outcomes, the study team reported that interventions involving lactation consultants reported statistically significant improvements in LATCH scores, nipple pain, and nipple trauma, as compared to usual care. The authors also reported that the interventions were not associated with a decrease in the incidence of mastitis.

Review of Descriptive Studies

Citation	Dumphy, D., Thompson, J., and Clark, M. (2016). A Breastfeeding Quality Improvement Project in Rural Primary Care. <i>Journal of Human Lactation</i> 2016, Vol. 32(4) 633–641
Population and Sample	The study incorporated healthy, full-term, infants who ranged in age from newborn to 4 months old. Families completed at least two of four routine pediatric visits in a rural, northern Georgia,

	<p>pediatric practice. The study’s authors described the setting as a “high-risk, low socioeconomic setting.”</p> <p>There were two phases of the study: pre-implementation and post-implementation. For pre-implementation, the study used a convenience sample that consisted of: the first 43 healthy newborns presenting for their initial newborn visit from November 2013 through the 4-month visit of the final enrolled infant, which occurred in June 2014. For post-implementation, the study used a convenience sample that consisted of: the first 45 healthy newborns presenting for their initial newborn visit from July 2014 through the 4-month visit of the final enrolled infant, which occurred in February 2015. The study excluded: (a) infants discharged from the neonatal intensive care unit; (b) premature infants; and (c) infants who did not complete at least two well-child visits.</p> <p>There were not statistically significant differences between pre- and post-implementation groups with regard to: maternal parity, delivery type, newborn birth weight, newborn gender, previous breastfeeding experience, insured status, and WIC participation. There also were no statistically significant differences in pre- and post-implementation groups with regard to previous breastfeeding experience. In both the pre- and post-implementation groups, more than 50% of the sample participated in WIC and more than 60% of the sample were publicly insured.</p> <p>On average, maternal age in the post-implementation group was higher (p=.02).</p>
Methodology	Non-experimental
Purpose	The study was described as a quality-improvement project, designed to increase breastfeeding rates with a specific focus on increasing: breastfeeding initiation (as measured at the newborn visit) and continuation rates (as measured at the 1-month, 2-month, and 4-month well-child visits) of exclusive, partial (breastfeeding couplets also supplementing with formula), and any breastfeeding by at least 10%.
Measures & Assessments	<ul style="list-style-type: none"> Electronic medical records (EMR) were used to capture data on routine newborn, 1-month, 2-month, and 4-month well-child visits. The study collected pre-implementation data from November 2013 to June 2014. The study collected post-implementation data from July 2014 to February 2015.
Study Implementation	<ul style="list-style-type: none"> The project was informed by 19 clinical recommendations, which included: <ol style="list-style-type: none"> 1. Establish a written breastfeeding-friendly office policy. 2. Culturally and ethnically competent care. 3. Antenatal encouragement of breastfeeding. 4. Support in the postpartum inpatient setting. 5. In the newborn period, encourage exclusive breastfeeding. 6. First follow-up visit 48-72 hours from discharge; IBCLC available. 7. Parental education resources. 8. Encourage breastfeeding in the office. 9. Maintain a breastfeeding-friendly office 10. Have protocols in place for telephone triage and follow-up calls. 11. Commend breastfeeding with every visit. 12. Encourage exclusive breastfeeding. 13. A work-site lactation policy. 14. Community resources. 15. Advocate for health policy for breastfeeding support in primary care. 16. Provide workplace breastfeeding support. 17. Train all staff/providers; have a resource person on staff. 18. Precept medical students and residents. 19. Track breastfeeding rates. Staff received training on implementation of breastfeeding-friendly office policy and worksite policy. All staff and providers received lactation-specific education. The in-office IBCLC provided general training and follow-up. There were complimentary community breastfeeding classes that also were offered. The practice purchased an upgrade to the EMR to facilitate tracking of breastfeeding rates, along with training to office staff and providers.

	<ul style="list-style-type: none"> Other materials and resources included: community breastfeeding class flyers and supplies, community resources (recommendation #14), breastfeeding positional support pillows, breastfeeding-friendly office signs, and custom EMR breastfeeding report upgrades.
Staff Qualifications	<ul style="list-style-type: none"> Project implementation was led by a staff person who was dually certified NP/IBCLC. As reported by study authors: All staff and providers received lactation-specific education through the American Academy of Pediatrics (AAP) Education Physician in Their Communities (EPIC) breastfeeding program, conducted by a contracted pediatrician and IBCLC within the AAP local chapter.
Key Findings	<p>Mothers with Previous Breastfeeding Experience</p> <ul style="list-style-type: none"> The study found that mothers with prior experience were associated with a higher percentage of infants with any or exclusive breastfeeding, when compared to mothers with no prior experience (81.8% versus 36.4%, respectively). <p>Pre-Implementation Two-Month Visit</p> <ul style="list-style-type: none"> Mothers with prior breastfeeding experience were associated with a higher percentage of infants with any or exclusive breastfeeding, compared to mothers with no prior experience (60% versus 23.8%, respectively). <p>Post-Implementation Two-Month Visit</p> <ul style="list-style-type: none"> All mothers with prior breastfeeding experience (n=19) were associated with any or exclusive breastfeeding, compared to 62.5% of mothers without prior experience (n=15, p<.05). This was measured at the newborn visit. The study's authors did not find additional significant differences in breastfeeding rates, at other time points included in the study. <p>Change in Breastfeeding Rates</p> <ul style="list-style-type: none"> The study authors reported that breastfeeding rates increased from pre-implementation to post-implementation for all four time points: newborn, 1-month, 2-months, and 4-months. In the post-implementation group, exclusive breastfeeding rates increased at the 1-month, 2-month, and 4-month visits. The study authors found a positive relationship between the breastfeeding friendly office-protocol and increased breastfeeding rates, over time. Of the 45 post-implementation mothers, 16 were reported to continue breastfeeding at 4 months, compared to 10 in the pre-implementation group. Of the 16 post-implementation mothers, 13 were reported to be exclusively breastfeeding, compared to 5 mothers in the pre-implementation group. Study authors also reported a decrease in partial breastfeeding rates.

End Notes

ⁱ Patel, S. and Patel, S. (2016). The effectiveness of lactation consultants and lactation counselors on breastfeeding outcomes. *Journal of Human Lactation* 2016, Vol. 32(3) 530–541.

ⁱⁱ Dumphy, D., Thompson, J., and Clark, M. (2016). A breastfeeding quality improvement project in rural primary care. *Journal of Human Lactation* 2016, Vol. 32(4) 633–641.

Note: Research summaries could include verbiage directly reproduced from the research literature. Quotes and italics may be used to show a direct quote but not always.

Published: July 2018