

# Hi-Tech Breastfeeding Tools: Meeting the Needs of Today's Parents

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***Abstract: Our understanding of breastfeeding has changed in the last 30 years. Alternatives to traditional breastfeeding instruction are emerging. Most nursing mothers today turn to breastfeeding smartphone applications for help. Tracking apps can be helpful during the first week or two of breastfeeding. The digital breastfeeding world allows mothers to connect with others who have been there done that. To stay relevant to today's parents, we must move forward.***

**Keywords:** breastfeeding, smartphones, mobile apps, millennials, patient education

Our understanding of breastfeeding has undergone radical changes in the last 30 years. During that time, some of our basic assumptions about breastfeeding have been proven wrong. Major shifts have also taken place in how parents in both developed and developing countries access breastfeeding information. Only a small percentage of expectant mothers attend breastfeeding classes or mother-support groups and fewer parents are reading books. Many families begin breastfeeding with very little basic information. This is no doubt one reason a U.S. study found that more than two thirds of American mothers who planned to exclusively breastfeed for three months did not reach their goal (Perrine, Scanlon, Li, Odom, & Grummer-Strawn, 2012). Even in countries like Australia, where more than 95% of mothers initiate breastfeeding, many women stop much sooner than planned, often during the early weeks (Meedya, Fahy, Yoxall, & Parratt, 2014).

## New Options in Prenatal Breastfeeding Education

Thankfully, modern alternatives to traditional breastfeeding instruction are emerging. What if instead of going to a class, a meeting, or reading a book, expectant parents could get quality prenatal breastfeeding education on a tablet at

their health care provider's office? What if they could download it onto their own tablet, phone, or home computer?

A 2015 U.S. study examined the effects on breastfeeding rates of a tablet-based prenatal breastfeeding education program provided in an obstetrical practice's office (Pitts, Faucher, & Spencer, 2015). After the mothers completed the program, which involved three modules delivered at their 32-, 34-, and 36-week prenatal visits, the researchers tested their breastfeeding knowledge and found that the women learned new things and retained this information. After birth, 95% of the women who completed the course initiated breastfeeding. The state average where this study took place was 88%. These mothers also breastfed longer and more exclusively than state averages and spoke highly of their experience. An amazing 95% said they preferred it to group-based education, which is consistent with other research on educational options (Hannula, Kaumonen, & Tarkka, 2008). Clearly, we need to carefully consider not just what we teach but how we deliver information to Millennial parents.

The tablet-based program used in this study is not available for general use, but another one is. The author developed (with Chicago-area obstetrician Dr. Theresa Nesbitt) a tablet-based prenatal education program called Natural Breastfeeding: For an Easier Start, which can be downloaded at [www.NaturalBreastfeeding.com](http://www.NaturalBreastfeeding.com).

This home-study course features six modules and more than 60 short videos and can be viewed on a tablet, computer, or smartphone. Expectant parents can complete the program at home at their own pace. Some of the basic videos from the Natural Breastfeeding program are freely available to view and share on my YouTube channel at [www.YouTube.com/NancyMohrbacher](http://www.YouTube.com/NancyMohrbacher) and childbirth educators are encouraged by the author to access and use them.

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## Phone-Based Breastfeeding Support

There are now more than one billion smartphone users worldwide (Bicheno, 2012). And because today's smartphones do so much more than old-fashioned phones, mothers spend much more time on them than in the past. The Listening to Mothers III study (2013) found that as many as 64% of pregnant women use their smartphones to gain access to pregnancy and birth information (as cited by Fleming, Vandermause, & Shaw, 2014).

The U.S. Text4baby program uses a high-tech breastfeeding support strategy and sends health and breastfeeding messages via text to postpartum mothers with low health literacy ([www.text4baby.org](http://www.text4baby.org)). The basic telephone function of smartphones can also serve as an effective breastfeeding support tool. One study found that more low-income adolescent mothers in New York state breastfed exclusively when breastfeeding peer counselors from their public health department called them on their phones on Day 2, 3, 4, and 7 and in Week 2, 3, 4, and 5 (Di Meglio, McDermott, & Klein, 2010).

Even in the developing world, mobile phones are being used successfully to improve breastfeeding outcomes. In Nigeria, where less-than-optimal breastfeeding practices are linked to higher infant mortality rates, researchers provided one mobile phone to groups of mothers who met weekly for other reasons (Flax, Negeric, Ibrahim, Leatherman, Daza, & Bentley, 2014). The mothers randomized to the phone groups received messages reinforcing best breastfeeding practices via text and (for low-literacy mothers) pre-recorded voice-mails, which they discussed at their weekly meetings. At three and six months after birth, more mothers in the phone groups were exclusively breastfeeding compared with the mothers in the control groups who also met weekly, but did not get the breastfeeding messages.

A program in Cameroon used cell phones to give mothers (who traditionally do not leave their homes for the first six weeks after birth) access to breastfeeding counselors, which also improved breastfeeding outcomes (Achanyi-Fontiarn, 2013).

## Breastfeeding Tracking Apps

Most nursing mothers today – including low-income mothers – turn for help to breastfeeding smartphone applications known as “apps” (Bensley, Hovis, Horton, Loyo, Bensley, Phillips, & Desmangles, 2014). In early 2013, before developing the Breastfeeding Solutions app, I searched “breastfeeding” in Apple’s App Store to see what kinds of breastfeeding apps were available. At that time, the purpose of nearly every breastfeeding app I found was to track feeding and diaper



data. They were all about the numbers: number of breastfeeds, number of minutes babies spent nursing at each breast, number of wet and poopy diapers, number of ounces of milk pumped, number of bottles and ounces fed.

As of August 1, 2015, little had changed. The App Store’s top ten breastfeeding apps were tracking apps, which the lone exception of the LatchMe app, whose purpose is to help families find local breastfeeding assistance.

Tracking apps can be helpful during the first week or two of breastfeeding. They are a high-tech alternative to paper and pen for recording essential information, such as the number of breastfeeds per day (ideally at least eight) and baby’s diaper output. They can be a useful reference when feeding problems occur or when health care providers ask for this information at appointments. But tracking apps also have downsides:

They collect data but do not explain what the data mean.

- They may overwhelm and confuse new parents, many of whom are unaware that much of the data they’re compiling is nonessential.
- If used too long, they waste precious time on useless data entry.

The numbers parents collect with breastfeeding tracking apps are meaningless without context. Most apps don’t explain what the numbers mean or guide parents on what to do if the numbers are outside the desired range. This is also true of pregnancy apps. A study on smartphone apps that tracked pregnancy weight gain found that when women gained more weight than recommended, no specific advice was provided to achieve ideal weight (Kraschnewski, Chuang, Poole, Payton, Blubaugh, Feher, & Reddy, 2014). Many first-time parents, may not know when to stop tracking feedings and diapers and spend significant time on data entry that would be much better spent enjoying their baby.

The American Academy of Pediatrics recommends that parents breastfeed their babies on cue (American Academy of Pediatrics, 2012). This means following baby’s lead on when and how long to breastfeed using early feeding cues

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(like rooting and hand-to-mouth) as a guide, rather than going by the clock. At baby's two-week checkup, if baby is at birthweight or above, this is a sign of effective feeding. Once baby's health and feeding efficiency are confirmed, there's no benefit to continuing to track feedings and diapers. In some cases, continuing to track meaningless feeding details (such as number of minutes per breast) may confuse and overwhelm parents and lead to an unhealthy focus on the clock. Newborns have no sense of time and intervals between feeds and feeding lengths normally vary tremendously, especially during the first six weeks. If parents try to read too much into these details or expect their newborns to follow a regular feeding pattern too early, their concerns may convince them to start supplementing with formula or pumping and feeding expressed milk by bottle.

The most common reason mothers give for weaning sooner than planned is worries about milk production (Odom, Li, Scanlon, Perrine, & Grummer-Strawn, 2014). These worries are often rooted in misunderstandings about normal infant breastfeeding patterns. Rather than following the wise advice to "watch the baby, not the clock," for some parents, tracking apps can lead to an over-focus on the wrong things.

Other breastfeeding apps parents should consider with caution are those distributed by infant-formula companies. In 2013 there was a post in the International Lactation Consultant Association's blog, *Lactation Matters* (Escobar, 2013). This post described how formula companies use social media to market their brand, paying "mommy bloggers" to promote their products and developing free apps that send mothers with breastfeeding questions to the companies' own "lactation consultants" at their toll-free phone numbers. A 2015 story in Bloomberg Business online reported that Similac acquired the contact information of more than 250,000 mothers in New York City alone from its Strong Moms app, which promoted its product by offering app users formula coupons and free home delivery of Similac infant formula (Smythe, 2015).

## Breastfeeding Apps That Inform

The huge prevalence of breastfeeding tracking apps and the realization that countless mothers were downloading Similac's free Strong Moms app ("Add a little predictability to your life") motivated the development of an industry-free alternative, the Breastfeeding Solutions app.

Available since late 2013 for Android and iPhone, Breastfeeding Solutions is not a tracking app. It explains ba-

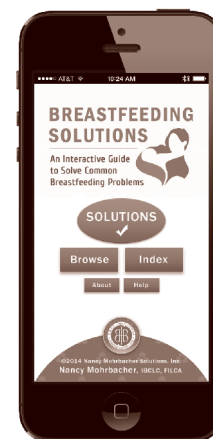
sic breastfeeding dynamics and provides the context parents need to help them reach their breastfeeding goals.

Breastfeeding Solutions' home page offers three pathways a mother can use to access its 100+ topics.

- If she is confused or unsure of her issue's cause, she can touch the Solutions button and answer a few simple questions, which take her to a screen that identifies her issue and provides the most up-to-date recommendations.
- If she already knows what she's looking for, she can touch the Index button on the home page and then the first letter of her topic.
- To learn about areas of interest, she can touch Browse and decide where to go next.

To see Breastfeeding Solutions in action, view its two-minute video demo on YouTube. This app can also be used by breastfeeding supporters as a reference when responding to mothers' questions away from home or office. Other breastfeeding apps also provide much more than tracking. Mentioned previously the LatchMe app helps parents find local breastfeeding help. Another valuable breastfeeding app for both parents and professionals is LactMed, a free, reliable resource on drugs and breastfeeding. Endorsed by the American Academy of Pediatrics, LactMed provides its users with the most current information on a wide variety of drugs, including the drugs' effects on the breastfeeding baby and on milk production.

Breastfeeding Management 2 is another helpful app developed by the Massachusetts Breastfeeding Coalition. Created primarily for professionals, its main focus is on the first two weeks of life and it provides a weight loss calculator, premie calorie calculator, metric conversions, and much more



*Most mothers today rely on online breastfeeding support.*

## Modern Mothers Meet Online

Where does face-to-face breastfeeding support fit in today? Mother-to-mother groups like La Leche League International are still active. Breastfeeding USA is another up-and-coming national breastfeeding organization for parents. However, one thing has remained unchanged during the last 30 plus years: relatively few mothers attend in-person support-group meetings.

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Most mothers today rely instead on online breastfeeding support. In 2011, Chicago-area mother Katrina Pavlik saw a need and started the website and Facebook group Breastfeed Chicago (<https://breastfeedchicago.wordpress.com>). It quickly grew to include more than 15,000 participants. On its Facebook page, mothers post messages at 3 am and receive immediate responses from other mothers, providing the instant gratification Millennial mothers crave. It has grown so fast that it is currently closed to the public and its moderators struggle to keep up with the demand.

What draws mothers to online breastfeeding support? Author Lara Audelo interviewed mothers about their online experiences for her 2013 book *The Virtual Breastfeeding Culture* and many reported feeling closer to their online friends than the local mothers in their community. As Jennifer Gray described in her survey of mothers:

*“They may participate in hyperpersonal communication online, building relationships and finding support that they could not receive face to face, particularly those who are isolated in the early period after a birth, feeding an infant at home every two or three hours” (Gray, 2013).*

The digital breastfeeding world also allows mothers in unusual situations to connect with others who have been there and done that. In Audelo's book, she describes a variety of specialized virtual support communities consisting of mothers:

- with a history of breast reduction surgery,
- who have physical issues that prevent them from producing a full milk supply,
- who have suffered a neonatal loss,
- who are exclusively pumping,
- whose babies are highly allergic,
- whose babies are hospitalized in a special-care nursery,
- and many, many more.

## Summary

The breastfeeding landscape has undergone radical changes, and there is no turning back. To stay relevant to today's parents, we must move forward into our brave new high-tech world. Modern parents don't just want reliable sources of information. They want sources that incorporate the platforms they are most comfortable using. As always, we need to meet new parents where they are. And today, where new parents are is on their tablets and smartphones.

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