

Impact of the *Lactation Advice Through Texting Can Help (LATCH)* Trial on Time to First Contact and Exclusive Breastfeeding among WIC Participants

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ABSTRACT

Objective: Determine the impact of a 2-way text messaging intervention on time to contact between participants and their breastfeeding peer counselors (BFPCs) and on exclusive breastfeeding (EBF) status at 2 weeks and 3 months postpartum.

Design: Multisite, single-blind, randomized, controlled trial.

Setting: *Special Supplemental Nutrition Program for Women, Infants, and Children* (WIC) BFPC program.

Participants: Low-income women (n = 174) participating in the WIC BFPC program.

Intervention: The control group received the standard of care WIC *Loving Support* BFPC program. The intervention group received standard of care plus the text messaging intervention.

Main Outcome Measures: Time to contact with BFPC and EBF status.

Analysis: The 2-sample *t* test or χ^2 test assessed whether an association existed between study variables and each outcome. Multivariable ordinal and binary logistic regression assessed the impact of the intervention on time to contact and EBF status.

Results: *Lactation Advice Through Texting Can Help* had a significant impact on early contact between participants and BFPCs (odds ratio = 2.93; 95% confidence interval, 1.35–6.37) but did not have a significant impact on EBF (odds ratio = 1.26; 95% confidence interval, 0.54–2.66).

Conclusions and Implications: *Lactation Advice Through Texting Can Help* has the potential to facilitate the work of BFPCs by shortening the time-to-first-contact with clients after giving birth. Research is needed to identify the level of breastfeeding support staff coverage that WIC clinics must have to meet the demand for services created by *Lactation Advice Through Texting Can Help*.

Key Words: exclusive breastfeeding, breastfeeding, WIC, mobile health, text messaging (*J Nutr Educ Behav.* 2018;50:33–42.)

Accepted September 2, 2017.

INTRODUCTION

Breastfeeding (BF) is the globally accepted reference standard for infant

feeding because it confers an array of short- and long-term health benefits to infants and mothers.^{1,2} The *Special Supplemental Nutrition Program for*

Women, Infants, and Children (WIC) is the largest maternal-child public health nutrition program in the US, reaching over half of all infants nationwide.³ Breastfeeding protection, promotion, and support is an integral part of the WIC mandate to improve the nutritional status of infants and is grounded in the evidence-based *Loving Support Makes Breastfeeding Work (Loving Support)* program that includes BF peer counselors (BFPCs).⁴ Breastfeeding peer counselors are paraprofessional mothers who have personal experience with BF and are trained with *Loving Support* to provide basic BF information and support to other mothers with whom they share various characteristics, such as language, race/ethnicity, and socioeconomic status.⁴ They reinforce BF

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Conflict of Interest Disclosure: The authors' conflict of interest disclosures can be found online with this article on www.jneb.org.

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<https://doi.org/10.1016/j.jneb.2017.09.001>

recommendations in a socially and culturally appropriate context and promote BF as an important element in the health of mothers and babies.⁴ They are recruited and hired from WIC's target population of low-income women.⁵ International Board Certified Lactation Consultants (IBCLCs) provide on-site supervision and support to the BFPCs. The BFPCs' most important tasks are to bridge the continuum of BF care gap with support and encouragement, and to yield to an IBCLC if issues arise between a baby's birth and his or her mother's first postpartum WIC appointment.⁴ The time between the baby's birth and the first WIC appointment after the baby is born (the continuum of BF care gap) is when the issue of formula supplementation is most likely to arise and it is also when BFPCs can have their greatest impact.⁴ Innovative tools and resources are needed to facilitate the work of BFPCs; text messaging interventions are one such approach.

Evidence-Based Text Messaging Interventions

Text messaging, also referred to as short message service (SMS), allows messages up to 160 characters to be exchanged between mobile devices including cell phones. Two-way mobile phone text messaging is the most popular modality within the mobile health family. Mobile health is defined as "medical and public health practice supported by mobile devices such as mobile phones, patient monitoring devices, personal digital assistants, and other wireless devices."⁶ In the US, an estimated 90.0% of all adults own a cell phone and 64.0% own a smartphone. Cell phone penetration is lowest among those who are of low income (<\$30,000/y), are less educated (have a high school education or less), and are aged ≤54 years.^{7,8}

Evidence from systematic reviews and meta-analyses suggested moderate to strong positive effects of SMS interventions on disease prevention behaviors, particularly smoking cessation, physical activity, and weight loss⁹⁻¹²; however, little evidence exists as to the effect of SMS interventions on BF behavior. Only 2 studies were published to date¹³⁻¹⁵ and although

both found positive effects of the intervention on EBF duration, there is a lack of high-quality, randomized, controlled trial (RCT) evidence testing the effectiveness of SMS interventions on BF behavior. The *Lactation Advice Through Texting Can Help (LATCH)* study was designed to address this gap.

LATCH Objectives

The LATCH study was a multisite, single-blind RCT built upon a pilot study.¹⁶ It was designed to test the effectiveness of a 2-way text messaging intervention encouraging exclusive BF among women enrolled in WIC, combining in-person prenatal and postpartum BF education and support (BF peer counseling) with mobile health technology (text messaging). The effectiveness of BFPCs was clearly established in the literature¹⁷⁻²¹; thus, the text messaging intervention was designed to facilitate the BFPCs' work, not replace it. The objectives of this study were to determine: (1) whether a 2-way interactive SMS intervention shortened time to contact between participants and their BF peer counselors in the immediate postpartum period; (2) whether the intervention affected exclusive BF status at 2 weeks and 3 months postpartum; and (3) whether exclusive BF results differed by key effect modifiers.

METHODS

Study Design

The LATCH study was approved by the Yale University Human Subjects Investigation Committee. It was conducted from August, 2014 to January, 2016 and was registered at clinicaltrials.gov (Protocol No. 1206010472) before the start of recruitment.

Study population. Pregnant women aged ≥18 years who attended the BFPC program at 1 of the 4 study sites were eligible to participate in LATCH. Women also had to be ≤28 weeks gestation, have conceived a singleton, have unlimited text messaging on their mobile phone, and have expressed the intention to breastfeed. Women were excluded from the study if they withdrew from the BFPC program, were carrying multiple

fetuses, gave birth prematurely (<37 weeks gestation), or had had a miscarriage. Participants were excluded once the baby was born if medication given to the mother or baby precluded BF, or if the baby spent >3 days in the neonatal intensive care unit or weighed <5 lb.

Study sites and staff. Four WIC BFPC sites in Connecticut participated in the study, representing a federally qualified health center, 2 community-based agencies, and a teaching hospital, all serving low-income and minority women. A total of 3 IBCLCs and 7 BFPCs agreed to participate and took part in a half-day training on the LATCH study protocol in May, 2014. Booster trainings were provided as needed afterward. One IBCLC worked part time at 2 different study sites and 4 of the 7 BFPCs were also part-time employees.

Text messaging platform and text messages. Messages were sent to intervention participants through the Mobile Commons (MC), Health Insurance Portability and Accountability Act of 1996 (HIPAA)-compliant, 2-way text messaging platform that allowed prenatal and postpartum messages to be sent automatically according to a predetermined schedule. The Web-based platform recorded when the messages were sent, whether they were received by the participant, and all message exchanges between participants and their BFPCs. Prenatal and peripartum text messages were developed in English and Spanish during the pilot study,¹⁶ refined and expanded upon with feedback from BFPCs and IBCLCs to cover up to 3 months postpartum for the current study, and sent to participants in their language of preference. Fully consistent with the *Loving Support* program, message content covered the benefits of BF for mothers and children, showed examples of proper positioning, explained how to tell whether the baby was getting enough milk, debunked BF myths, and reinforced the BFPC's supportive role. The theoretical basis of the text messaging intervention was the Health Action Process Approach to behavior change.²²⁻²⁴ Message content was designed to address specific social

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