

90-Day Testing Cycle to Drive Quality Improvement in Breastfeeding Supports for Families Participating in Evidence-Based Home Visiting Services

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Improving breastfeeding rates is an important strategy to address disparities in health outcomes. During 2013–2018, in partnership with the Health Resources and Services Administration (HRSA), Education Development Center's Home Visiting Collaborative Innovation and Improvement Network developed and tested a theory of change (TOC) to improve the capacity of Maternal, Infant, and Early Childhood Home Visiting programs to deliver timely, community-based breastfeeding supports. A 90-day quality improvement testing cycle was implemented in 2019 to refine the TOC and to test key drivers and change ideas to support a national scale-up effort.

Intervention

Breastfeeding is highly effective as a preventive and protective measure for mothers and infants. However, breastfeeding rates among women enrolled in evidence-based home visiting (EBHV) falls significantly below the national average of 83.2%.¹ Among mothers enrolled in Maternal, Infant, and Early Childhood Home Visiting (MIECHV) programs prenatally, only 42.7% of infants are breastfed any amount at six months.² Significant variation persists in rates of breastfeeding initiation, continuation, and exclusivity across geographic, racial, ethnic, and socioeconomic groups.

EBHV programs enroll women during pregnancy or soon after birth and provide frequent services during a critical period when families make important decisions about infant feeding. Home visitors build a long-term, trusting relationship with families, which is essential for supporting breastfeeding mothers.

MIECHV—a legislatively mandated and funded nationwide program—offers an important opportunity to scale breastfeeding supports through home visiting programs, especially for families from vulnerable populations with the lowest breastfeeding rates.



During 2014–2018, the [Home Visiting Collaborative Innovation and Improvement Network](#) (HV CoIIN) tested and refined a theory and interventions through quality improvement (QI) learning collaboratives with seven states and territories and 16 local implementing agencies (LIAs), with the intention of scaling the most effective interventions nationally. Interventions targeted five system drivers: (1) policies and protocols, (2) a competent and skilled workforce to support breastfeeding, (3) strong community linkages to breastfeeding support systems, (4) effective, meaningful family engagement, and (5) data systems to track breastfeeding outcomes and supports. Results were strong, yet further testing was needed to learn more about how home visitors could identify and support women in accessing timely, community-based lactation supports. In 2019–2020, HV CoIIN instituted a 90-day testing cycle to answer this question: **If we build home visitor capacity to use the Breastfeeding Self-Efficacy Scale Short Form (BSES-SF)³ with families and build LIA capacity to develop strong community linkages with breastfeeding supports, will it result in more women receiving support when they have a need?** The intervention had three specific objectives: (1) Train home visitors to administer the BSES-SF at critical time points and use the results to enhance real-time discussions with pregnant and postpartum women on infant feeding, (2) build relationships with community-based partners to establish referral protocols for women in need of timely and appropriate lactation supports, and (3) engage women with historically low breastfeeding rates (i.e., Black and Hispanic women, teens, first-time mothers) as part of our rapid-cycle testing to learn how to further adapt breastfeeding supports to successfully meet infant feeding goals.



Participants

Three participating states (Florida, Michigan, Rhode Island) identified five LIAs to participate in the June–August 2019 testing cycle: Calhoun County Nurse-Family Partnership (NFP) (MI), Hurley Medical Center NFP (MI), Meeting Street Healthy Families America (RI), and Northeast Florida Health Start Coalition with two sites: University of Florida Health and Department of Health Duval NFP.

The 90-day testing cycle engaged participants at three levels: state, local, and family. State MIECHV program representatives participated as sponsors for local teams. LIAs assembled QI teams, comprising a program manager, supervisor, data manager, and home visitors. Each home visitor engaged two to five families from their caseload where the client was 29–34 weeks gestation in June 2019, with a focus on clients who were Black, Hispanic, teens, and/or first-time mothers. Table 1 provides demographic information for the 31 participants. Most were under age 25, and 90% were experiencing their first pregnancy. Nearly half the sample (48%) were Black women. Sixty-five percent (N = 20) delivered during the 90-day period.

Table 1. 90-Day Testing Group Demographics

	N	Percentage
Age (Years)		
≤ 17	1	3.2
18–19	3	9.7
20–21	7	22.6
22–24	6	19.4
25–29	7	22.6
30–34	5	16.1
35–44	2	6.5
Race or Ethnicity		
White	10	32.3
Black or African American	15	48.4
Hispanic	4	12.9
American Indian or Alaska Native	1	3.2
More than one race	1	3.2
Pregnancy		
First pregnancy	28	90.3
Subsequent pregnancy	3	9.7

Purpose

HV CollIN's aim was that among MIECHV clients, 30% of infants will be fed breastmilk exclusively to three months, and 15% of infants will be fed breastmilk exclusively to six months. Post-intervention results included improvement in rates of breastfeeding intention, initiation, and exclusivity and an increase in the percentage of home visitors trained in infant feeding and lactation.⁴ A 90-day testing cycle was identified as the appropriate intervention to target breastfeeding-related QI efforts on change ideas leading to reliable and efficient results.

Implementation

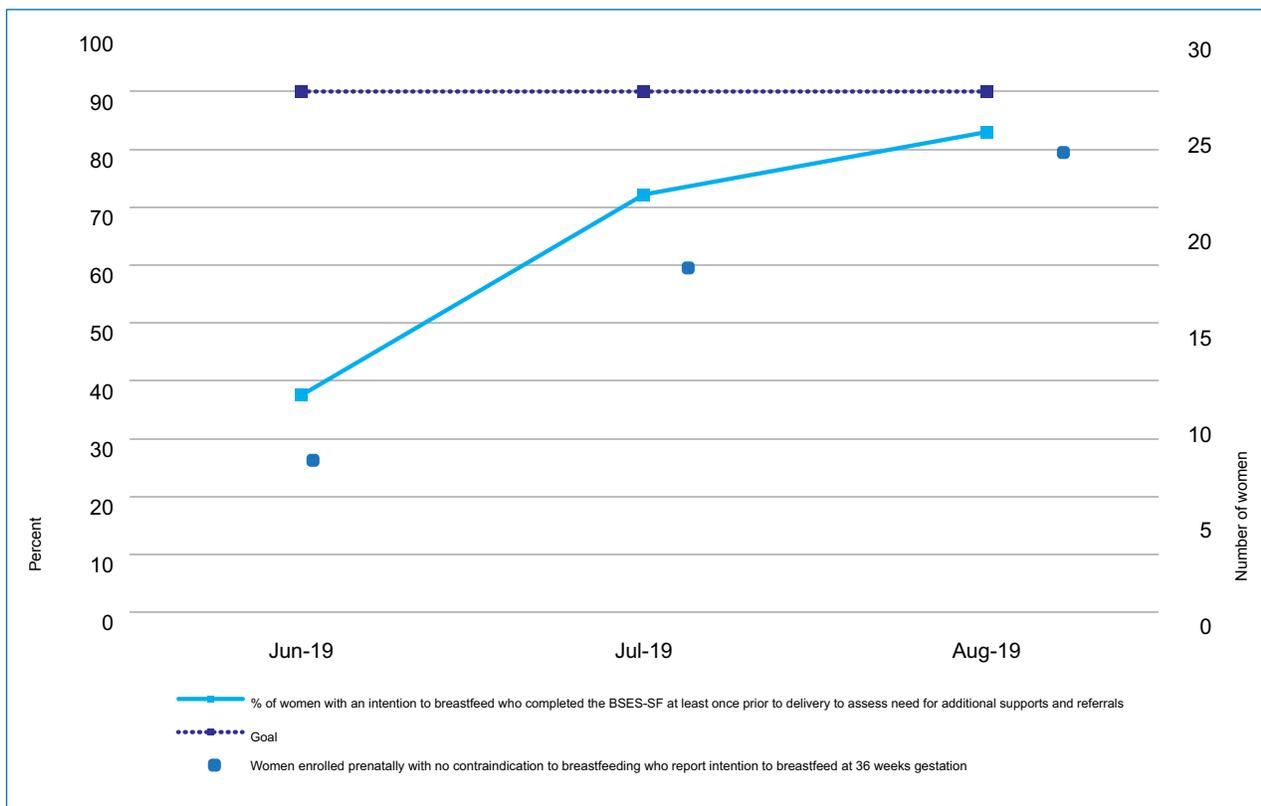
Building on these learnings, we refined set of measures and change ideas for the 90-day testing cycle. Local QI teams tested change ideas, laid out sequentially. Supports included site-specific coaching calls, monthly peer calls, resources to build breastfeeding and QI knowledge, Plan-Do-Study-Act (PDSA) cycles sites tailored to local contexts, a process map integrating an Infant Feeding Plan into home visits, BSES-SF,

engagement of community partners in the delivery of breastfeeding supports, and a breastfeeding registry to report monthly data.

Evaluation

During the testing period, 95% of home visitors were trained to use the BSES-SF. Use of this instrument during the prenatal period increased, from 38% in June to 83% in August (Figure 1). Among participating women, 96% indicated an intention to breastfeed prenatally and among the 20 women who delivered by August, 85% initiated breastfeeding as intended. While the 90-day period was too short to assess teams' three-month and six-month exclusive breastfeeding goals, the results confirmed our theory that using the BSES-SF and building strong community linkages together have the potential to increase breastfeeding rates. Teams reported that BSES-SF results were useful in identifying areas of need for women when used prenatally and postpartum; home visitors were able to respond in real time with additional education, supports, and referrals to lactation services.

Figure 1. Women with intention to breastfeed who complete BSES-SF at least once prior to delivery to assess need for additional support.



Adverse Effects

The challenge with any 90-day testing project is the time constraint: The testing period ended just as momentum was ramping up. LIAs shared mixed emotions at the intervention's conclusion; eagerness to continue testing but also challenged by competing demands.

Sustainability

HV CoIIN 2.0 (2019–2022) aims to build the capacity of all federal home visiting programs for ongoing testing that improves maternal and child health outcomes. Learnings harvested through HV CoIIN and the 90-day testing cycle have been summarized into a Breastfeeding Playbook, including charter, PDSAs, measurement strategy, and other tools. HV CoIIN 2.0 offers MIECHV programs the opportunity to scale the refined TOC and improve breastfeeding outcomes.

Public Health Significance

All 50 states, the District of Columbia, and five U.S. territories receive federal funds to implement EBHV and are required to use QI to improve 19 performance measures, including breastfeeding. The 90-day testing cycle is an effective and efficient approach to focus testing in a specific area; the knowledge and evidence gathered can then be integrated into the TOC, strengthening the degree of belief that the intervention will lead to improvement. This approach can be replicated within EBHV to explore other topic areas and to improve breastfeeding outcomes through community-based programs, including perinatal health workers, Healthy Start, WIC, Early Head Start, and school-based health clinics.

- 1 Centers for Disease Control and Prevention. Results: Breastfeeding Rates. National Immunization Survey (NIS). https://www.cdc.gov/breastfeeding/data/nis_data/results.html. Accessed August 17, 2020.
- 2 Maternal, Infant, and Early Childhood Home Visiting Program. MIECHV Demonstration of Improvement in Benchmark Areas: National Threshold Values. Health Resources & Services Administration, Maternal and Child Health Bureau. <https://mchb.hrsa.gov/sites/default/files/mchb/MaternalChildHealthInitiatives/HomeVisiting/performanceresources/doi-2020-national-thresholds.pdf>. Accessed August 17, 2020.
- 3 Dennis C-L. The Breastfeeding Self-Efficacy Scale: Psychometric Assessment of the Short Form. *J Obstet Gynecol Neonatal Nurs*. 2003;32(6):734–744.
- 4 Arbour MC, Mackrain M, Fitzgerald E, Atwood S. National Quality Improvement Initiative in Home Visiting Services Improves Breastfeeding Initiation and Duration. *Acad Pediatr*. 2019;19(2):236–244. doi.org/10.1016/j.acap.2018.11.005.

For More Information: <http://hv-coiin.edc.org> or email us at hvcoiin2.0@edc.org to learn more

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