

Improving Breastfeeding Outcomes: HV CoIN's Journey from Small Tests of Change to Large-Scale Improvement

Imagine a woman, perhaps young, perhaps under-resourced and lacking a support system, who is about to have her first baby. In one scenario, the mother is provided with some information about the importance of breastfeeding but has many questions that remain unanswered. In another scenario, the mother is provided with the same information and is also invited to complete an infant feeding plan. She is supported in reflecting on her worries and fears as a new mother. As a result of building up her confidence and offering reinforcements in the form of community resources, she feels more able to overcome any breastfeeding challenges that arise.

You might **guess** that the mother in the second scenario will fare better in initiating and sustaining breastfeeding for at least six months—the minimum time recommended by the American Academy of Pediatrics¹ that an infant be fed only breast milk.

But how do you **know** that those strategies, used either in isolation or together as part of a systemic approach, actually improve breastfeeding rates? The Home Visiting Collaborative Improvement and Innovation Network (HV CoIN) is a promising approach toward measuring improvement, reporting on change, and identifying practical strategies that work.

HV CoIN is the first national initiative to use a quality improvement collaborative approach to improve breastfeeding initiation and duration in home visiting programs. The collaborative made large gains in the following:

- The number of **women who initiated breastfeeding**
- The number of **women who developed infant feeding plans**
- The percent of **home visitors trained in lactation and breastfeeding**
- **Consistent use of data** among home visiting programs



These achievements demonstrate the promise of continuous quality improvement (CQI) methods—the Institute for Healthcare Improvement’s (IHI’s) [Breakthrough Series](#) framework in particular—to improve home visiting services in ways that advance national public health priorities and improve population health outcomes.

Why Home Visiting?

Home visiting is uniquely poised to work with mothers from before delivery up to a child’s fifth birthday, which makes focusing on increasing the national breastfeeding rate an area ripe for improvement. Through HRSA’s Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program, states, territories, and tribal communities work with local home visiting programs to engage with families intensively and consistently during the critical period when families make important decisions about infant feeding. This engagement is personalized, strengths-based, and predicated on a trusting relationship that the home visitor and client build together over time, all of which are essential for behavioral change.^{2,3}

Research shows that Black women, Latinas, teens, and low-income women of all backgrounds have lower rates of breastfeeding.⁴ Furthermore, a majority of MIECHV enrollees represent populations who have the lowest rates of breastfeeding: The initiation rate among MIECHV participants was 71%, compared to 81% nationally.⁵

Home visiting programs can improve breastfeeding initiation and duration in populations with historically low rates of this proven health benefit for both babies and mothers—but to make this level of support sustainable, a broad, coordinated, systemwide approach is essential. Engaging home visitors, mothers, family members, and community partners to be part of the process—from small tests of change to evaluating and communicating results—strengthens spread and scale-up efforts.

Breastfeeding practices should be culturally informed, and HV CoIIN’s efforts apply an explicit lens of cultural sensitivity to effectively address the complex cultural nuances and barriers that may inhibit breastfeeding. In addition, barriers identified in HV CoIIN 1.0 have

subsequently been addressed by modifying the supports, systems, and strategies in place for HV CoIIN 2.0.

Applying Continuous Quality Improvement to Home Visiting Programs

HV CoIIN ran its first collaborative ([HV CoIIN 1.0](#)) from September 2013 to August 2017, in partnership with the Health Resources and Services Administration (HRSA).

Following IHI’s Breakthrough Series, HV CoIIN 1.0 implemented the [Model for Improvement](#), with consistent, collaborative learning via Learning Sessions and monthly peer-to-peer calls.⁶

The collaborative convened a cadre of experts and stakeholders (e.g., breastfeeding experts, home visiting model developers, state home visiting leaders, home visitors) to develop a shared theory of change that includes four key components:

- **Collaborative aim** (What are we trying to accomplish?)
- **Primary drivers** (What elements are needed to accomplish the aim?)
- **Evidence-based interventions** (What actions are required to support these elements?)
- **Standardized outcome and process measures** (How will we track our progress?)

HV CoIIN Breastfeeding Aim

30% of infants will be fed breastmilk exclusively to 3 months of age, and **15%** of infants will be fed breastmilk exclusively to 6 months of age.

Breastfeeding expert and lead faculty Dr. Elaine Fitzgerald Lewis highlights the potential impacts of focused efforts to achieve this aim, stating, “The earlier a woman makes the intention to breastfeed, the more likely she will be to initiate the practice. A lot goes into a mother and infant’s ability to be successful at breastfeeding.”⁷

HV CoIIN 1.0: Testing Change Ideas

During HV CoIIN 1.0, awardees and local agencies sought to address the five system drivers shown by research to improve both initiation and retention of breastfeeding practices:

1. Reliable and effective policies for breastfeeding
2. A competent and skilled workforce to support breastfeeding
3. Strong community linkages to breastfeeding support systems
4. Active family involvement in infant feeding practices
5. A comprehensive system for tracking breastfeeding data

Teams tested changes to address gaps in these drivers while simultaneously addressing disparities in breastfeeding, including restrictive work policies, a lack of social support for new mothers, and the absence of [Baby-Friendly®](#) hospitals in historically marginalized communities. Other gaps included staff turnover, lack of training for new home visitors, and buy-in for specific populations, such as teen mothers.

Despite these obstacles, HV CoIIN 1.0 achieved the following gains at the end of the two-year testing period:

- **Improvement in breastfeeding intention rates, from 50% to 63%**
- **Improvement in breastfeeding initiation rates, from 47% to 61%**
- **Improvement in the overall aim of 3-month exclusive breastfeeding rates, from 10% to 13.5%**
- **Improvement of home visitors trained in infant feeding and lactation, from 50% to 95%**

Additionally, at the outset of HV CoIIN 1.0, none of the participating home visiting programs reported regularly using data to drive change—but by the end of the collaborative, teams looked at data regularly and frequently, using data to identify, for example, clients who were approaching critical windows for breastfeeding decision-making, and clients currently breastfeeding who could benefit from time-sensitive lactation support. HV CoIIN 1.0 reported that 90%

of team members (supervisors, home visitors, administrative support staff, and volunteer family members) across all participating agencies were engaged in reviewing data to inform change efforts.

HV CoIIN 2.0: Advancing from Testing to Scaling

Building on the success of HV CoIIN 1.0, [Education Development Center](#) embarked on another five-year effort (September 2017–August 2022) to engage more programs in improving breastfeeding efforts.

To intensify the impact of the Breastfeeding collaborative, three participating states identified five local programs to participate in a 90-day rapid-testing cycle (June–August 2019) to further refine the theory of change and measurement system. This rapid-cycle test, along with feedback and lessons from HV CoIIN 1.0, created a lean package of well-tested interventions for states and agencies to implement.

Scaling a Change

Scaling a change is getting what we know works to everyone who could benefit from it. This involves overcoming infrastructure issues that arise as successful changes are spread for results at the systems level.⁸

The rapid-testing cycle had three specific objectives:

1. Train home visitors to administer the Breastfeeding Self-Efficacy Scale Short Form (BSES-SF), a validated tool used at critical time points to facilitate real-time discussions on infant feeding with pregnant and postpartum women.
2. Build relationships with community-based partners to establish referral protocols for women in need of timely and appropriate lactation supports.

- Engage women with historically low breastfeeding rates (Black, Latina, teen, and/or first-time mothers) to learn how breastfeeding supports can be adapted to successfully meet their infant feeding goals.

Following the 90-day testing cycle, one local agency reported new invigoration and focus when they honed in on the infant feeding plan. One participant said, “Yes, breastfeeding is something we always focus on within home visiting. But HV CoIIN brought it to the forefront again and gave us new ideas to try that helped us better engage mothers.”

By the end of the testing period, 80% of new moms had an infant feeding plan in place before their child’s birth, as compared with just 50% at the beginning of the period.

Additionally, 92% of pregnant mothers completed the BSES-SF at least once before delivery. This validated tool allowed home visitors to quickly assess and explore mothers’ breastfeeding concerns during a visit, which enabled them to build mothers’ knowledge and strengthen their confidence in real time, thus helping mothers meet their infant feeding goals.

Paving the Way for Future Improvements

Learnings harvested through the first phase of HV CoIIN and the 90-day testing cycle have resulted in

a Breastfeeding Playbook that includes a charter, exemplar Plan-Do-Study-Act cycles with aligned tools and resources, a measurement strategy, and individualized training and support to scale these breastfeeding efforts.

HV CoIIN’s effectiveness in improving breastfeeding outcomes demonstrates how learning collaboratives offer a highly effective CQI strategy for home visiting programs and can promote and rapidly spread the effective use of evidence-based practices. The lessons learned through these collaboratives show the great potential to improve home visiting services—and ultimately outcomes—in a variety of public health issues.

“ If you look at the communities, it’s what’s happening inside the house that’s going to make a huge difference for kids. Breastfeeding is a first step in developing the relationship between mother and child. This is about the domino effect and how we can successfully improve the lives of families and future families!”

—Puerto Rico HV CoIIN 2.0 Awardee

¹ American Academy of Pediatrics, Section on Breastfeeding. (2012, March). Policy Statement: Breastfeeding and the Use of Human Milk. *Pediatrics*, 129(3), e827–e841. 10.1542/peds.2011-3552

² Centers for Disease Control and Prevention. (2018, May). *Breastfeeding Rates: National Immunization Survey (NIS)*. https://www.cdc.gov/breastfeeding/data/nis_data/#modaldString_CDCTable_0

³ McGinnis, S., Lee, E., Kirkland, K., Miranda-Julian, C., & Greene, R. (2017, August). Let’s Talk About Breastfeeding: The Importance of Delivering a Message in a Home Visiting Program. *American Journal of Health Promotion*, 32(4), 989–996. 10.1177/0890117117723802

⁴ Health Resources and Services Administration, & Administration for Children and Families. (2016, March). *Demonstrating Improvement in the Maternal, Infant, and Early Childhood Home Visiting Program: A Report to Congress*. <https://mchb.hrsa.gov/sites/default/files/mchb/MaternalChildHealthInitiatives/HomeVisiting/pdf/reportcongress-homevisiting.pdf>

⁵ Hadley, B., Rudolph, K. E., Mogul, M., & Perry, D. F. (2014, November). Providing Home Visiting to High-Risk Pregnant and Postpartum Families: The Development and Evaluation of the MOMobile® Program. *Zero to Three*, 35(2), 40–48. <https://eric.ed.gov/?id=EJ1125268>

⁶ Institute for Healthcare Improvement. (2003). *The Breakthrough Series: IHI’s Collaborative Model for Achieving Breakthrough Improvement*. IHI Innovation Series white paper. <http://www.ihio.org/resources/Pages/IHIWhitePapers/TheBreakthroughSeriesIHI’sCollaborativeModelforAchievingBreakthroughImprovement.aspx>

⁷ Education Development Center, Inc. (2019, March 27). Home Visiting Supports Mothers, Infants [Blog post]. <https://www.edc.org/home-visiting-supports-mothers-infants>

⁸ Education Development Center, Inc. (2020, January). Home Visiting Collaborative Improvement and Innovation Network 2.0: Scaling Tested Improvement [Fact Sheet]. <https://hv-coiin.edc.org/sites/hv-coiin.edc.org/files/Scale%20Fact%20Sheet%201.2020.pdf>

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

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number UF4MC26525, Home Visiting Collaborative Improvement and Innovation Network (HV CoIIN). This information or content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.



EDC 43 Foundry Avenue Waltham, MA 02453
E-mail: hvcoiin2.0@edc.org
Web: hv-coiin.edc.org
Phone: 857-233-3038
Boston | Chicago | New York | Washington, D.C.

