INTERVENTION
Connecticut Breastfeeding Initiative
Baby-Friendly Hospitals
Connecticut Department of Public Health with the
Connecticut Breastfeeding Coalition
Hartford, CT

INTENT OF THE INTERVENTION

The Connecticut Breastfeeding Initiative (CBI), a practice-tested intervention, was designed to promote practices in maternity facilities that support the initiation and continuation of breastfeeding. The Ten Steps to Successful Breastfeeding provide the foundation of the Baby-Friendly Hospital Initiative (BFHI). The Steps focus on breastfeeding initiation, exclusive breastfeeding, skin-to-skin contact, and rooming in, among other elements. By providing a state-level support system of training, technical assistance, and financial assistance, the CBI assisted multiple hospitals in progressing down the 4-D Pathway with the intention of becoming Baby-Friendly designated. The cornerstone of the CBI is the implementation of the Baby-Friendly Hospital Initiative (BFHI) at the hospital level. Please refer to the template completed for the Boston Medical Center’s implementation of BFHI for a complete description of the Initiative as implemented in one hospital in an urban area: http://centertrt.org/?p=intervention&id=1094.

The CBI is a public health approach that targets the organizational level of the socio-ecological model. The CBI seeks to promote breastfeeding policies and maternity care staff practices that encourage and support new and expectant mothers to breastfeed their babies. The targeted long-term outcomes for mothers (and babies) are initiation, exclusivity, and duration of breastfeeding.

OVERVIEW

In July 2010, the Connecticut Department of Public Health (DPH) and the Connecticut Breastfeeding Coalition (CBC) collaboratively developed the CBI with funding from Communities Putting Prevention to Work (CPPW), a program of the American Recovery and Reinvestment Act (ARRA) of 2009. The CBI team developed a selection process to enroll ten hospitals in the project. Once the hospitals were selected, the CBI provided the maternity staff at each with training and technical and financial assistance toward achieving Baby-Friendly Hospital designation.

Five of the Ten Steps to Successful Breastfeeding were pre-selected as the focus of the CBI based on: level of importance, need for external assistance, perceived difficulty, likelihood of being achieved within a 2-year timeframe, purposes of project evaluation, and CDC recommendation. Shortly after project implementation began, Baby-Friendly USA, the organization that confers Baby-Friendly designation in the United States, transitioned from a Certificate of Intent process to the 4-D Pathway (Discovery, Development, Dissemination, and Designation). Project activities were adjusted to incorporate these changes.

The goal of the CBI was to provide state-level support for multiple hospitals to achieve Baby-Friendly designation. The CBI hired a consultant with expertise in the Baby-Friendly Hospital Initiative to assist with initiative-level planning, to consult with personnel at participating hospitals and to train maternity care staff.

The CBI’s core activities included:

- Offering each participating hospital up to 40 hours of consultation time,
• Providing the 15-lesson training (as identified by Baby-Friendly USA) for maternity staff and offering guidance to participating hospitals on the five competency hours (clinical experience),
• Recommending appropriate strategies for completing the three Continuing Medical Education (CMEs) hours for MDs,
• Contributing $750 per hospital to disseminate patient and staff education materials,
• Providing financial support for Baby-Friendly USA maternity hospital fees ($4,000 per CBI hospital), and
• Coordinating monthly conference calls and bi-monthly in-person workshops for key hospital contacts for purposes of collaboration and peer support.

**Intended population:** The CBI’s primary audience is maternity care staff (nurses and lactation consultants); the secondary audience is new/expectant mothers at participating hospitals.

**Setting:** Hospitals (can also be implemented in free-standing birth centers but was not in this case)

**Characteristics of CBI hospitals:** Additional characteristics of the hospitals participating in the CBI are provided below:
• Six of the ten participating hospitals were teaching hospitals.
• Each participating hospital had between 130-896 beds.
• Each participating hospital had a range of 14-112 bassinets.

**How long intervention has been in the field:** The project period was July 2010 through January 2012. Developers are pursuing sustainability options, but the original funding source, CPPW, is over.

### HEALTH EQUITY CONSIDERATIONS

The CBI’s reach to multiple subgroups was comparable to that reported by all hospitals in Connecticut. The table below shows the statewide proportions on several child/mother health indicators as compared to those for the ten CBI hospitals. Public pay birth (Medicaid-paid delivery) proportions, as an indicator of promoting equitable access to BFHI resources among low-income women, are also included. Of the ten CBI hospitals, seven reach a primarily urban population and three reach a primarily rural population.

<table>
<thead>
<tr>
<th></th>
<th>% Statewide (of all births in the State*)</th>
<th>% among CBI hospitals (n=10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicaid-paid delivery</td>
<td>76.6%</td>
<td>78.6%</td>
</tr>
<tr>
<td>Birthweight (very Low or low)</td>
<td>8.6%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Prematurity (&lt;37 weeks)</td>
<td>10.5%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Maternal age &lt;20 years</td>
<td>16.0%</td>
<td>16.1%</td>
</tr>
<tr>
<td>Births by race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>34.4%</td>
<td>32.6%</td>
</tr>
<tr>
<td>Black</td>
<td>22.8%</td>
<td>24.9%</td>
</tr>
<tr>
<td>White</td>
<td>37.8%</td>
<td>37.9%</td>
</tr>
</tbody>
</table>

*Includes births that occurred at 29 acute care hospitals, one birthing center, and at home.
CORE ELEMENTS

This section outlines the aspects of an intervention that are central to its theory and logic and that are thought to be responsible for the intervention’s effectiveness. Core elements are critical features of the intervention’s intent and design and should be kept intact when the intervention is implemented or adapted.

To learn about how these core elements were implemented by the CBI, please see the implementation section below.

1. Engage a Baby-Friendly Hospitals expert (either an existing staff person or a consultant).
2. Explain the initiative and dispel myths by conducting a hospital information session about the Baby-Friendly designation process and Steps. Encourage attendance of multidisciplinary groups, including administrators, managers and direct care providers.
3. Develop and implement a selection process to ensure that enrolled facilities meet baseline criteria, including readiness. CBI criteria included:
   a. Demonstrated buy-in by top administrators (e.g., CEOs).
   b. A functioning multidisciplinary breastfeeding committee.
   c. Hospital completion of an initial assessment or application that identifies readiness to incorporate evidence-based maternity care practices.
   d. Records of relevant public pay options and statistics by hospital.
4. Once facilities are selected, provide the Baby-Friendly USA Self-Appraisal Tool to all participating facilities for completion. This assessment tool will assist the Baby-Friendly expert consultant in determining the most helpful and appropriate next steps in working with each participating facility.
5. Deliver or support the delivery of the 15 lessons, which meet Step 2 of the Ten Steps outlined by the World Health Organization (WHO) and UNICEF.
6. Provide technical assistance, consulting time, and peer learning opportunities.
7. Provide financial assistance for the designation process and for disseminating educational materials for staff and patients.
8. Conduct a mock survey at the end of the technical assistance/training period to assess practice changes adopted and implemented, as well as informing the individual hospital of its readiness for review by Baby-Friendly USA.

RESOURCES REQUIRED

The total CBI budget was $163,181 for working with 10 hospitals to assist them in moving towards Baby-Friendly Designation. This number includes costs for: the evaluation conducted by PDA; the training space; salaries for the Baby-Friendly expert consultant/trainer and administrative assistant; and the standardized fees the CBI paid to Baby-Friendly USA per hospital to enter the Baby-Friendly process.

Staff: Staffing for the CBI included the roles below, which are listed along with the annual estimate of each position’s time devoted towards the CBI expressed as FTEs. No new DPH staff were hired to support the project. However, some current staff members’ time was considered in-kind (paid by a source other than CPPW). Time contributed by the CBC was also in-kind as the coalition has no paid staff beyond the consultant/trainer and administrative assistant hired specifically for this project. The connections across projects and funding sources contributed to the strength of the CBI and other breastfeeding projects at the Dept. of Public Health.

- State level project coordinator (DPH), .25 FTE (in-kind)
- State level project support: community/WIC liaison (DPH), .05 FTE (in-kind)
- Contracting organization project oversight (CBC), 1.0 FTE (in-kind contribution by multiple CBC members)
• Baby-Friendly expert consultant, .1 FTE (paid thru CPPW)
• Baby-Friendly trainer, .06 FTE (paid thru CPPW); 
• Administrative Assistant, .13 FTE (paid thru CPPW)

The consultant and the trainer were the same person for the CBI; however, this structure may not work for or be applicable to other states or cities. Department of Public Health staff time listed above was leveraged from other existing positions. As mentioned above, this cross-project coordination was a strength of the CBI structure. Because Step #10 (community support) plays an important role in the success of the BFHI, DPH’s involvement not only in the management of the grant and CBC contract, but also involved to understand how the CBI would impact other DPH programs (such as WIC or child care), was a critical step in building DPH institutional knowledge for what has traditionally been a hospital-based program and to increase the project’s reach and sustainability.

Note: This may not be a comprehensive list of all resources and time dedicated to the project.

Materials:
• Training curriculum for in-person training or access to other training options, such as train-the-trainer or online options. Some of these training options are free, and some cost money. The CBI consultant compiled a list of training options, which is available in the Intervention Materials section of this template.
• Educational materials for staff and patients.
• Training materials that were printed for attendees (maternity staff).
• Project materials, such as computer and projector, for conducting training.

Cost of 4-D Pathway and Baby-Friendly Designation for hospitals (fees differ slightly for free-standing birth centers):
The CBI allocated $40,000 ($4000 per hospital) to pay for the designation process, and $7500 ($750 per hospital) for dissemination of educational materials to staff and patients/families. To stay on the 4-D Pathway with Baby-Friendly USA, the facility must pay a yearly fee. Facilities have one year to complete each phase and move to the next phase, or the facility must pay the fee again to continue in the process. The current costs are as follows (at the time the CBI was initiated the costs were different):
• Cost of Discovery: $0
• Cost of Development: $3000
• Cost of Dissemination: $3000
• Cost of Designation: $3000
• Annual maintenance fee for facilities: $1000/year

The current fee schedule is available here: http://www.babyfriendlyusa.org/get-started/4d-fee-schedule.

IMPLEMENTATION

The Connecticut Department of Public Health administered the project, provided financial oversight, purchased materials used in the project, and reported to the project funder (CDC). The Connecticut Breastfeeding Coalition (CBC) conceived of and developed the project proposal for the CBI. The CBC’s role throughout the project was to contract with and provide oversight for the Baby-Friendly consultant and for an administrative assistant who implemented the day-to-day activities of the CBI, including: creating a hospital toolkit, conducting needs assessments, planning trainings, and providing technical assistance to hospitals.
The CBI's approach to planning and implementing a state-level system to support the adoption of the Baby-Friendly Hospitals intervention is outlined below.

Planning and Preparing

- Engage partners with varying strengths to share the project workload, including administration/oversight, day-to-day activities, and marketing. Create a comprehensive Communication Plan to clearly define expectations for all stakeholders about project implementation, dissemination and sustainability.
- Hire or work with a Baby-Friendly expert to plan the delivery of training. To meet the needs of various organizations, consider multiple training formats and allow hospitals to send staff to train at multiple locations on multiple dates. This flexibility makes it possible for facilities to maintain staffing levels within the facility while other staff participate in training. Some facilities found that training key staff to subsequently train coworkers (train-the-trainer model) or using online modules fit their needs better. Also consider hiring an administrative assistant to schedule and take care of training logistics.
- Hire a Baby-Friendly expert to provide technical assistance. Consider the different types of consulting hours needed, such as for individuals and groups, rather than individual hospital consulting hours alone. Communicate quarterly the allotment of consultation hours that hospitals have used and have remaining.
- Create Frequently Asked Question sheets (FAQs) for hospitals wanting to participate in the project informing them about the Baby-Friendly Hospital Initiative, promoting project resources and limitations, and setting clear expectations.
- To drive clear expectations, timely progress, and/or recognition of the need for additional support, create a timeline and identify benchmarks for all stakeholders and participating hospitals.
- Plan CBI training content. Ensure coverage of the 15 lessons required for Step 2 of the Ten Steps to Successful Breastfeeding. Incorporate adult learning theory and strategies to manage change, both of which help build staff commitment to the initiative and empower champions to drive cultural change in their organizations. Provide participating hospitals anticipatory guidance for answering questions and addressing issues related to time, staffing and financial implications of the training component of the project.
- Create a toolkit of resources for participating hospitals. Resources can include Baby-Friendly USA tools and sample documents from a maternity care facility that achieved Baby-Friendly designation. Note: Many of the Baby-Friendly tools are proprietary and only available to hospitals that have paid the fees and are progressing down the 4-D pathway. Because of this, hospitals not pursuing designation may need to use, develop, and share other tools from a different source.
- Foster relationships among participating hospitals by creating opportunities for peer support. Offer conference calls and in-person workshops to brainstorm solutions to challenges and to share best practices, resources and successes.
- Engage Baby-Friendly USA as an active partner by 1) establishing open communication and 2) encouraging participating hospitals to partner and communicate with Baby-Friendly USA after the project has ended.
- Plan for evaluation from the beginning of the project. The CBI recommends incorporating pre-testing of hospital staff, including perceptions, attitudes, and beliefs about Baby-Friendly practices, and pre/post measurement of didactic training.
- Incorporate sustainability planning from the beginning of the project. Consider a sustainability plan as a living document that will drive quality improvement throughout project implementation and dissemination.
- Brand all project materials and resources.
Hospital Recruitment and Selection Process

- Host a presentation to explain the project, dispel myths about the Baby-Friendly Hospital Initiative, and generate interest in participation among hospitals. (CBC hosted a dinner presentation.)
- Create and distribute a short assessment form to maternity hospitals in the state. The form should ask about the level of buy-in and support from hospital administration for the project. Other questions should indicate the hospital’s commitment to the process, for example: “Has your facility considered a Baby-Friendly designation in the past? Please describe your obstacles.”
- Out of the hospitals that complete the form, use the answers to the assessment questions and data on public pay births to select participating hospitals. Integrating data on public pay births into the selection process increases the likelihood that the project will reach women at greatest risk of not breastfeeding.

Training and Technical Assistance

Engage a staff person or a consultant with expertise in the Baby-Friendly Hospital Initiative. For the CBI, this person played a key role in the delivery of training and technical assistance and the development of some materials disseminated to participating hospitals. This person’s prior experience with the Baby-Friendly model, as the team leader in a hospital recently designated as Baby-Friendly, proved beneficial to the participating hospitals.

Technical assistance:

- Allot consulting hours to each hospital. CBI initially allotted 40 hours per hospital for one-on-one coaching, trouble-shooting, etc. With Baby-Friendly USA’s transition from the Certificate of Intent process to the 4-D Pathway, it was discovered that a significant portion of the consultant’s time focused on tasks benefitting all participating hospitals equally. Additionally, bringing hospitals together under the direction of the consultant resulted in both support and friendly competition among peers. The most effective uses of the consultant’s time were standing telephone calls/meetings with all the hospitals, scheduled visits, and telephone and e-mail contact as needed.
- Once hospitals were accepted into the project, they received a welcome letter from the consultant outlining project components. Additionally, key contacts from the 10 project hospitals received a toolkit with materials to assist in self-assessment. To determine where an institution stood on implementation of each of the Ten Steps, completing the Self-Assessment from the Discovery Phase of the 4-D Pathway was required. The consultant tailored technical assistance to each hospital based on the Self-Assessment results.
- Conduct a mock survey with each hospital to simulate the Baby-Friendly USA assessment process and assess the hospitals’ progress in achieving each of the Ten Steps. The CBI consultant used the Baby-Friendly USA audit tools from the Dissemination phase to develop the mock survey.
- Coordinate and conduct a sustainability conference for hospitals to identify and address barriers to sustainability and plan for how to continue on the Baby-Friendly pathway. The CBI sustainability conference identified approaches to a variety of sustainability domains; those most frequently identified as needing attention and coordinated planning were financial stability, partnerships and communication.
- Coordinate and conduct a lessons learned teleconference for project participants, as well as for other facilities/organizations considering BFHI either at the facility level or as a public health initiative.

Training:

- Work with the Baby-Friendly expert to coordinate in-person training to participating hospitals. Among CBI participating hospitals, not all staff were able to attend, and some
staff/hospitals opted to meet the training requirement in other ways, through a train-the-trainer model or using online training. The consultant was key in identifying other training options.

Note: Hospitals and other maternity facilities may meet the training requirement in a variety of ways. Two documents regarding training options are provided in the intervention materials section.

Financial assistance
The cost to a hospital of going through the 4-D Pathway and applying for designation can be a barrier. The financial assistance component of the CBI removed the cost barrier and provided an incentive to work towards designation. The assistance was a crucial part of the CBI’s success and was extremely valuable to participating hospitals. The CBI provided the following financial assistance to each hospital:

- $750 for dissemination of staff and patient education materials
- $2000 for Baby-Friendly USA maternity hospital fees to enter the Dissemination Phase of the 4-D Pathway. As there is no cost for the Discovery Phase of the Pathway, CBI required participating hospitals to pay the fee to enter the Development Phase, thus demonstrating commitment from hospital administration prior to receiving CBI financial support.
- $2000 for any additional fees as hospitals progress through the 4-D Pathway and beyond: Designation Phase includes fees for onsite assessment by Baby-Friendly USA or maintenance fees after official designation (these funds were unexpected and added at the end of the grant period).

Monitoring and evaluation
The CBI staff found it valuable to conduct an externally-led evaluation to collect qualitative and quantitative data from the participating hospitals to drive program improvement and identify promising practices for future initiatives. The CBI used a database to collect significant process evaluation data, and contracted with an outside evaluation firm to analyze the data, conduct interviews with multidisciplinary hospital breastfeeding committees, and assess effectiveness of the training via an online maternity staff survey.

- The database was used to collect:
  - Number of hours the consultant worked with each hospital
  - Additional consultant activities, and
  - Hospitals’ progress in the 4-D pathway.
- Interviews were conducted with the multidisciplinary breastfeeding committee to: 1) identify the strategies specific to the CBI that facilities were successful/unsuccessful in implementing; 2) identify strengths and areas in need of improvement for the CBI’s technical assistance (particularly the use of the consultation hours); and 3) to collect lessons learned and success stories.
- A one-time retrospective survey was distributed electronically to maternity staff to assess changes to practice after the training, changes in knowledge and beliefs about Baby-Friendly practices, and successes experienced as a result of implementing the Steps. (See the Evidence Summary for more detail on the results and methods.) Note: The CBI recommends to others working on similar projects the use of a pre/post survey in place of a one-time retrospective survey.

The evaluation report completed by the contractor documents results and lessons learned that may be useful if this systems approach to Baby-Friendly Hospitals is continued, expanded, or adopted elsewhere. The CBI staff placed a high value on collecting the lessons learned from the project in order to improve this work in the future.
Keys to Success:
- Hospital administration support of the policy changes and financial commitment necessary to implement the Ten Steps to Successful Breastfeeding (the reverse could be a barrier).
- Ensuring the involvement of staff or a consultant who has BFHI expertise.
- Providing opportunities for hospitals to learn from each other.
- The existence of administrative capacity and engagement around breastfeeding at the state level (such as within the State Department of Public Health and State Breastfeeding Coalition).
- Using existing Baby-Friendly materials. (A hospital that is not working towards designation but still attempting to implement some of the Steps may not be able to use Baby-Friendly USA materials as most are proprietary.)
- Integrating evaluation and monitoring into the implementation of the CBI.
- Strengthening existing partnerships and building new ones to ensure capacity to address each component of the project design.

Barriers to Implementation:
- Hospital policy changes are often needed to allow adoption of maternity care practices in keeping with the Ten Steps to Successful Breastfeeding (such as rooming-in, skin-to-skin, avoidance of pacifiers and formula supplementation without medical need). These policy changes have financial implications, as well as implications for staff practice.
- Preconceived views of the Baby-Friendly approach and/or resistance to the approach by maternity staff and/or hospital administration.
- Process and perception of cost of purchasing infant formula.
- Advertising capacity of formula companies and misunderstanding by both maternity staff and patients about the true impact of free gifts from formula companies on breastfeeding success.
- Staff training (including ongoing training over time) can be a logistical challenge for hospitals.

EVIDENCE REVIEW SUMMARY

Underlying Theory: The CBI’s training and technical assistance program operates on the organizational and policy-levels of the Social Ecological Model. The BFHI is guided by Social Cognitive Theory and addresses maternity staff and mothers’ breastfeeding-related expectations, self-efficacy, and behaviors.

Strategies Used:
- **Education for mothers about breastfeeding during prenatal and intrapartum periods:** This is achieved through one-on-one interactions between maternity nursing staff and new or expectant mothers wherein nursing staff teach skills and knowledge about breastfeeding and influence attitudes through the support and information provided. The BFHI includes several steps that seek to educate mothers about breastfeeding, including: Step 3, inform women about benefits of breastfeeding; Step 4, help mothers initiate breastfeeding; and Step 5, show mothers how to breastfeed.
- **Maternity care practices in the hospital setting:** Such practices promote early breastfeeding initiation immediately following birth, prevent separation of mother and infant, restrict the availability of supplements and pacifiers, provide rooms that accommodate mothers and babies, and ensure follow-up after discharge for breastfeeding mothers. The BFHI strategies promote changes in maternity care practices.
- **Professional support for breastfeeding by health professionals:** Maternity staff at Baby-Friendly hospitals provide support to breastfeeding mothers in multiple ways, including providing: 1) hands-on lactation support at the bedside; 2) encouragement and
education to mothers about giving babies breast milk only, practicing rooming in, encouraging breastfeeding on demand, and avoiding pacifiers and artificial nipples; and 3) breastfeeding education to families.

Evaluation Outcomes:

The evidence summary provided below is based on the evaluation report compiled by Professional Data Analysts. The tables included below are from this same evaluation report.

**Methods and data sources:** There were three data sources for the evaluation: (1) A database was maintained to track consultant activities, training attendance and hospitals' progress on the Ten Steps; (2) Interviews were conducted with representatives from each hospital regarding their experiences implementing the steps, successes, and lessons learned; and (3) A survey was administered to assess maternity staff's self-reported assessment of changes in knowledge, attitudes, self-efficacy, and behaviors. The retrospective survey asked maternity staff to report on their Baby-Friendly practices prior to training and after receiving the training. Data from 230 maternity staff (out of a total of 583 trained maternity staff) were included in the analysis.

**Results:** Practice changes at the hospital level and training outcomes for maternity staff are reported in this section.

**Hospital Level 4-D Pathway and Practice changes:** All 10 hospitals achieved Steps 1, 5, 6, 9 and 10 of the Ten Steps of the Baby-Friendly process, and all were working on achieving the remaining steps. At baseline, one hospital had begun the BFHI journey through the Certificate of Intent process (this process was not associated with any Phases, just completion of the Ten Steps and fair market purchasing of infant formula). The remaining nine hospitals were not yet on the BFHI journey, but entered Discovery (the first Phase of the 4-D Pathway) as part of CBI. At the conclusion of the CBI project, the Certificate of Intent hospital had achieved Baby-Friendly designation. At the end of the project period, one of the remaining nine hospitals was in the Development Phase, seven of the nine were in the Dissemination Phase, and one was in the Designation Phase.

**Maternity staff training outcomes:**

- Hospitals reported that 583 individuals had been trained in some way (either by the CBI consultant, a person at his/her hospital, or online) and were eligible to complete the maternity staff survey.
- Of those individuals who received training, 230 completed the survey and were included in the analysis.
- These respondents received all 15 lessons through one method or a mix of methods.

The retrospective, one-time survey asked respondents about the extent to which they performed the Baby-Friendly practices before and after the Baby-Friendly training. Practice changes among survey respondents are reported in Figure 1, and confidence levels in Baby-Friendly practices among survey respondents are reported in Figure 2.

**Figure 1** below shows the percentage point increase in respondents who strongly agree or agree that they perform the Baby-Friendly practices, as reported after the 15-hour training. The percentages of maternity staff reporting strong agreement or agreement on the practice before and
after are reported in parentheses, while the percentage point increase is shown by the bar on the right.

**Figure 2** below shows the percentage of trained maternity staff who are reported being somewhat or very confident in their ability to perform the Baby-Friendly practice. As shown in figure 2, at the conclusion of the initiative, nearly all respondents were somewhat or very confident that they could explain the advantages of breastfeeding for mother and baby and educate a mother on the relationship between skin to skin and breastfeeding initiation, and that they understood the role of the hospital lactation consultant.

**Figure 1.** Percentage point increase in respondents who strongly agree or agree that they performed Baby-Friendly practices before as compared to after the 15-hour training.

<table>
<thead>
<tr>
<th>Baby-Friendly practice (% before, % after)</th>
<th>Change in percentage points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitate skin to skin within 5 min (67.7, 95.0)</td>
<td>27.3</td>
</tr>
<tr>
<td>Routinely refer to breastfeeding support groups (71.4, 92.3)</td>
<td>20.9</td>
</tr>
<tr>
<td>Know what to say if asked to put baby in nursery (80.2, 98.9)</td>
<td>18.7</td>
</tr>
<tr>
<td>Willing to conduct procedures at bedside (79.2, 95.3)</td>
<td>16.1</td>
</tr>
<tr>
<td>Explain why not to give pacifiers (79.2, 95.0)</td>
<td>15.8</td>
</tr>
<tr>
<td>Encourage rooming-in (82.0, 97.2)</td>
<td>15.2</td>
</tr>
<tr>
<td>Provide resources to families (84.3, 98.3)</td>
<td>14.0</td>
</tr>
<tr>
<td>Don’t restrict frequency/length of feeding (85.7, 97.8)</td>
<td>12.1</td>
</tr>
<tr>
<td>Only promote breast milk (87.9, 98.3)</td>
<td>10.4</td>
</tr>
<tr>
<td>Teach how to latch &amp; position (91.6, 99.5)</td>
<td>7.9</td>
</tr>
<tr>
<td>Can access and refer to breastfeeding policy (90.1, 97.8)</td>
<td>7.7</td>
</tr>
<tr>
<td>Help breastfeeding initiation within 1 hr (89.3, 94.8)</td>
<td>5.5</td>
</tr>
<tr>
<td>Advise to breastfeed when baby is hungry (93.6, 98.9)</td>
<td>5.3</td>
</tr>
<tr>
<td>Educate on feeding cues (97.4, 99.5)</td>
<td>2.1</td>
</tr>
<tr>
<td>Offer breastfeeding assistance within 6 hrs (97.1, 98.2)</td>
<td>1.1</td>
</tr>
</tbody>
</table>
| Provide info about breastfeeding benefits (98.5, 99.5) | 1.0 | Data source: Maternity staff survey
**Figure 2.** Percent of trained maternity staff that are very or somewhat confident in their ability to perform the Baby-Friendly practice.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very confident</th>
<th>Somewhat confident</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can explain the advantages of breastfeeding for both mother and baby</td>
<td>87.9%</td>
<td>12.1%</td>
</tr>
<tr>
<td>I can educate a mother on the relationship between skin to skin and breastfeeding initiation.</td>
<td>87.8%</td>
<td>12.2%</td>
</tr>
<tr>
<td>I understand the role of our hospital’s LC</td>
<td>83.3%</td>
<td>14.4%</td>
</tr>
<tr>
<td>I have a clear understanding of the few medical reasons for prescribing food or drink other than breast milk for babies.</td>
<td>82.6%</td>
<td>16.9%</td>
</tr>
<tr>
<td>I can provide reasons for not using breast milk substitutes, artificial nipples, and pacifiers.</td>
<td>81.9%</td>
<td>17.5%</td>
</tr>
<tr>
<td>I can educate a patient on the relationship between rooming-in and breastfeeding exclusivity.</td>
<td>80.2%</td>
<td>19.8%</td>
</tr>
<tr>
<td>I can help a family calm their baby without the use of a pacifier.</td>
<td>78.0%</td>
<td>21.4%</td>
</tr>
<tr>
<td>I can discuss my hospital’s policy to protect, promote, and support breastfeeding.</td>
<td>77.9%</td>
<td>19.8%</td>
</tr>
<tr>
<td>I can quickly respond to a mother’s request to send her baby to the nursery by discussing the benefits of...</td>
<td>75.9%</td>
<td>22.4%</td>
</tr>
<tr>
<td>I can help a frustrated mother with early breast problems such as sore/cracked nipples and engorgement.</td>
<td>73.7%</td>
<td>22.8%</td>
</tr>
</tbody>
</table>

**Date source: Maternity staff survey**

Hospitals do collect data on breastfeeding initiation and exclusivity; however, these data were not part of the evaluation report that was reviewed.

**POTENTIAL PUBLIC HEALTH IMPACT**

**Reach:** The intervention had broad reach to maternity staff and therefore to mothers and babies. The potential reach is high, as this intervention influences hospital policies, which have the potential to reach all staff and patients. **Maternity staff:** A total of 583 staff were trained either by the CBI consultant or through other training programs suggested by the CBI. Overall, the various training approaches reached 82% of staff. **Births:** In 2009, the most recent year for which data are available, 16,948 births occurred in the ten CBI hospitals. It is estimated that, after the CBI, 58.5% of Connecticut births will occur at maternity facilities that are already Baby-Friendly designated or working towards designation as part of the CBI. Within the ten hospitals reached by the CBI, 6,659 public pay births occurred, 49.6% of the state’s public pay births. After the CBI, it is estimated that 65% of births paid for by public sources will happen in facilities already designated or working towards designation as part of the CBI. The CBI intervention provides staff training to

---

1 Hospitals self-reported the percentage of staff trained at their hospital, which in turn was used to calculate this estimate of the percentage of staff trained across CBI hospitals.
help women initiate and continue breastfeeding, and overcome barriers to breastfeeding. Breastfeeding rates increased as a result of the Boston BFHI (a similar intervention at one hospital), and increased in particular among black women, suggesting that there is representative reach of the BFHI into populations facing disparate health risks. Also, the CBI hospitals were selected for participation based upon the number of public pay births, which increases reach to at-risk mothers and their babies.

**Effectiveness:** The potential effectiveness of the intervention in moving multiple hospitals along the 4-D Pathway and changing hospital level policies and practices in participating hospitals is also high. The ten hospitals made progress on the 4-D Pathway and achieved at least five of the ten required Steps. The intervention had a positive impact on maternity staff self-reported breastfeeding practices, their attitudes towards breastfeeding, and their confidence to provide breastfeeding-related care. Data were not provided on changes in mothers’ breastfeeding practice but we know from prior research that implementing BFHI is associated with increased initiation and exclusivity of breastfeeding.

**Adoption:** Of 26 eligible hospitals (those not already BFHI designated), thirteen applied to participate in the CBI. Ten were selected and all ten participated.²

**Implementation:** The potential for implementation is strong. All ten hospitals implemented at least five of the Ten Steps and were working towards the remaining as of the conclusion of the project. Hospitals found it difficult to find funding to cover staff members while they attended trainings. It was also difficult to get physicians to buy into the program and to get trained. The extent to which participating hospitals used the allotted 40 consultant hours varied. Most hospitals used between 18 and 26 hours of the one-on-one consultant time. Six months into the project, the hospitals requested an in-person meeting every month. This was implemented and well-received, with an average of eight CBI hospitals present for these meetings. Counting all consultation hours (group and individual), all hospitals received or exceeded the allotted 40 hours.

**Maintenance:** The potential for maintenance of Baby-Friendly practices is moderate to high, and depends on a hospital's ongoing adherence to Baby-Friendly practices. Completing the 4-D Pathway is resource and time intensive, but is a value-add to hospitals so it is worth maintaining. Therefore, becoming designated is a strong incentive for maintaining designation. On the other hand, financial and other costs involved in maintaining designation (such as training new staff and paying fees) are important considerations. Breastfeeding is a focus of the Joint Commission and the National Quality Forum, creating further incentives for hospitals to maintain their focus in these areas. In 2012, The Joint Commission recently began requiring perinatal core measures, including exclusive breastfeeding, for hospitals with over 1,100 births per year. Baby-Friendly Designation is also of great value in the profitable healthcare area of maternity care. Maintenance is further promoted by the public demanding Baby-Friendly services and practices in order to be able to choose from a variety of providers who offer the services desired.

### INTERVENTION MATERIALS

Tools available to help in implementation can be found on the Center TRT website:

- **Toolkit cover letter.** Provides guidance on what to include in a toolkit at the beginning of an initiative like the CBI. (The content of the toolkit is not available as it contains proprietary information.)
- **CBI Hospital Assessment Form.** This is the assessment form the CBI used to select hospitals for participation in the Baby-Friendly project.

² Several other states and some cities have adopted and implemented similar systems-wide approaches to promote the Baby-Friendly approach. The CBI did not play a role in the work being undertaken elsewhere.
• **Training for Ten Steps Projects.** This document was compiled by the CBI consultant and provides several training options (online and in-person, with a range of pricing) for fulfilling the training required as part of the Baby-Friendly process.

• **Baby-Friendly USA Training Document.** This guidance document is from Baby-Friendly USA and discusses the training component required in the BFHI. Available here (click on “What are my options to train my staff as required by step 2?”): [http://prod-bfusa.herokuapp.com/get-started/faqs](http://prod-bfusa.herokuapp.com/get-started/faqs)

• **Program sustainability materials (Coming Soon!).** Provides guidance on planning for program sustainability. Please refer to the “Sustainability” section of the Center TRT website for documents to help in planning for sustainability.


**EVALUATION MATERIALS**

**Center TRT Developed Evaluation Materials:**
For new adopters wishing to implement an approach similar to the CBI, the Center TRT has developed an evaluation logic model and an evaluation plan reflecting the structure of the CBI. These tools are based on the CBI work, but can be adapted. The evaluation is structured around the RE-AIM framework. The evaluation plan includes evaluation questions, types and sources of data, and suggestions for data collection.

**Tools developed by Professional Data Analysts (PDA, Inc.) available to help in evaluation:**
The CBI project created several materials for its evaluation that are also available for your use. Some of these tools have been incorporated into the evaluation plan that Center TRT developed. These documents can be found on the Center TRT website. Please provide credit to the Connecticut Department of Public Health and the Connecticut Breastfeeding Coalition, when reproducing materials in the original, or adapted, form.

Please note that Center TRT has not reviewed these tools:

- **Document 1: CBI Hospital Breastfeeding Committee Face Sheet** - Describes the methods, protocol, and rationale for interviews with each hospital’s breastfeeding committee or representatives.

- **Document 2: CBI Hospital Breastfeeding Committee Interview Questions** – Provides the script and interview guide for interviews with the hospitals’ breastfeeding committees.

- **Document 3: CBI Maternity Staff Web Survey** – Provides the rationale for and introduction to the survey, along with the survey questions.

**TRAINING AND TECHNICAL ASSISTANCE**

Please contact Caroline Smith Cooke or Marilyn Lonczak for further information on training and technical assistance.

Lessons learned teleconference available here: [http://www.breastfeedingct.org/index.php/component/content/article/68](http://www.breastfeedingct.org/index.php/component/content/article/68)

In addition, a Center TRT archived webinar presentation is available on the implementation of the Connecticut Breastfeeding Initiative, which includes an overview of the intervention, its core elements, summary of evidence and potential for public health impact. You can access the archived webinar [here](http://www.breastfeedingct.org/index.php/component/content/article/68).
ADDITIONAL INFORMATION

Program Contact(s):

**Marilyn Lonczak or Caroline Smith Cooke**, Breastfeeding Co-Coordinators
Department of Public Health
Connecticut WIC Program
Phone: 860.509.8084
marilyn.lonczak@ct.gov
caroline.cooke@ct.gov

**Michele Griswold**, Chairperson
Connecticut Breastfeeding Coalition
(860) 510-2599
mgriswold@breastfeedingct.org

**Jennifer Matranga**, BSN, RN, CCE, IBCLC
Past Chair, Board Member and Liaison to Healthcare Committee
Consultant for CBI
jmatranga@breastfeedingct.org