A substantial body of scientific evidence indicates that breast milk is the optimal source of nutrition for infants. The use of infant formula as a substitute for breast milk has been shown to increase an infant’s risk for numerous health complications, while the early cessation of lactation has been linked with poor health outcomes for mothers. A virtual consensus exists amongst governmental, academic, and health professional organizations that increasing rates of breastfeeding in the United States could boost maternal and infant health.¹,²,³,⁴,⁵ The Institute of Medicine recommends breastfeeding “exclusively for the first six months and then with complementary food until the child is at least one year old.”⁶

It has been increasingly recognized in recent decades that clinical birth settings have a significant impact on the likelihood of successfully meeting breastfeeding recommendations. In 1991, the World Health Organization and the United Nations Children’s Fund developed a set of ten best practices that hospitals and other clinical birth settings can adopt to foster and support breastfeeding.⁷ These “Ten Steps to Successful Breastfeeding” became the core of the Baby-Friendly Hospital Initiative (BFHI), a global program meant to ensure that all hospitals and birthing centers are “centers of breastfeeding support.” More than 20,000 perinatal facilities in over 150 countries have since been certified Baby-Friendly.⁸ In the United States, 158 facilities in 37 states are certified Baby-Friendly.⁹ BFHI practices have been endorsed by the Department of Health and Human Services’ Healthy People 2020,² the Surgeon General,¹⁰ and the Institute of Medicine.⁶
The Ten Steps to Successful Breastfeeding

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in the skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within one hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation, even if they are separated from their infants.
6. Give infants no food or drink other than breastmilk, unless medically indicated.
7. Practice rooming in - allow mothers and infants to remain together 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no pacifiers or artificial nipples to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them discharge from the hospital or birth center.

Substituting infant formula for breast milk has been shown to increase the risk of:

INFANT
- Necrotizing enterocolitis
- Lower respiratory infections
- Asthma
- Obesity
- Type 2 diabetes
- SIDS

MOTHER
- Type 2 diabetes
- Breast cancer
- Ovarian cancer
- Postpartum depression
- Missed days at work due to sick children

Breastfeeding rates in the United States, while on the rise, remain significantly lower than optimal. Disparities are found by race, socioeconomic status, and geography, with the most vulnerable populations often suffering the lowest rates.

The most recent data for U.S. population rates of breastfeeding at infant age intervals and the corresponding Healthy People 2020 objectives.

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>HP2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever</td>
<td>77%</td>
<td>82%</td>
</tr>
<tr>
<td>At 6 months</td>
<td>47%</td>
<td>61%</td>
</tr>
<tr>
<td>At 12 months*</td>
<td>26%</td>
<td>34%</td>
</tr>
<tr>
<td>Exclusively</td>
<td>36%</td>
<td>46%</td>
</tr>
<tr>
<td>through 3 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusively</td>
<td>16%</td>
<td>26%</td>
</tr>
<tr>
<td>through 6 months*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*IOM recommendations

Fig. 1 The Institute of Medicine recommends that infants be breastfed for at least the first 12 months of life. Breastfeeding rates vary significantly by race, with particularly low rates amongst African-Americans.
Since its inception, BFHI has been studied, evaluated, and compared to competing hospital breastfeeding policies, or lack thereof. A solid evidence base, including several systematic reviews, exists to support the efficacy of the program, though important research questions remain.

Firstly, the evidence is quite clear that the clinical birth setting is a key intervention point. An analysis of American mothers who planned to exclusively breastfeed their infants found that only 60% were exclusively breastfeeding at discharge from the hospital. A systematic review of randomized controlled trials evaluating BFHI found consensus that giving birth in a BFHI facility significantly increases the likelihood of breastfeeding at discharge.

“Researchers in California have found that disparities in in-hospital rates of exclusive breastfeeding are not found in hospitals that have implemented the policies and practices of the Baby-Friendly Hospital Initiative, while the opposite is true in hospitals that are in the same geographic region but are not designated as Baby-Friendly.”


Studies have also examined the impact that the individual practices described in the “Ten Steps to Successful Breastfeeding” have on breastfeeding rates, as well as the synergistic effects of some or all of the combined steps. Most analyses measure these based upon the six steps that mothers can report being exposed to during their hospital stay. These analyses serve to inform which discrete steps are most valuable, as well as help establish a dose-response effect for the BFHI.

“Mothers experiencing no BFHI practices are eight times more likely to stop breastfeeding than mothers who experienced five BFHI practices.”

A body of research directly links infant exposure to BFHI with improved health outcomes. An analysis of 16 articles published as part of the PROBIT (Promotion of Breastfeeding Intervention Trial) research findings found a direct link between BFHI and infant health.\(^{19}\)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Impact of BFHI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gastrointestinal tract infection at 12 months</td>
<td>0.60 aOR</td>
</tr>
<tr>
<td>Any rash at 12 months</td>
<td>0.56 aOR</td>
</tr>
<tr>
<td>Atopic eczema at 12 months</td>
<td>0.54 aOR</td>
</tr>
<tr>
<td>Weight gain 3 months</td>
<td>+106 g</td>
</tr>
<tr>
<td>Weight gain 6 months</td>
<td>+89 g</td>
</tr>
<tr>
<td>Length of infant 3 months</td>
<td>+0.50 cm</td>
</tr>
<tr>
<td>Length of infant 6 months</td>
<td>+0.46 cm</td>
</tr>
</tbody>
</table>

While substantial evidence exists supporting the efficacy of BFHI, some research challenges remain. The lack of consistent outcome measures make comparisons across research difficult and meta-analyses unfeasible. Many of the most rigorous evaluations of BFHI have been conducted outside the United States, which introduces questions of applicability to U.S. policy. More research in these specific areas would benefit the scientific case for BFHI in the U.S.

“The effectiveness of the various methods in the interventions are difficult to calculate, because most interventions were a combination of many methods used.”


A holistic interpretation of the published evidence finds that the Baby-Friendly Hospital Initiative remains the gold standard for hospital breastfeeding policies. The United States could boost breastfeeding rates and the overall maternal and child health of its population by introducing more Baby-Friendly best practices into its perinatal birth facilities.

“More hospitals can incorporate the recommendations of UNICEF/WHO’s Baby-Friendly Hospital Initiative.”

REFERENCES


