Closing the Quality Gap: Promoting Evidence-Based Breastfeeding Care in the Hospital
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Closing the Quality Gap: Promoting Evidence-Based Breastfeeding Care in the Hospital

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Evidence shows that hospital-based practices affect breastfeeding duration and exclusivity throughout the first year of life. However, a 2007 CDC survey of US maternity facilities documented poor adherence with evidence-based practice. Of a possible score of 100 points, the average hospital scored only 63 with great regional disparities. Inappropriate provision and promotion of infant formula were common, despite evidence that such practices reduce breastfeeding success. Twenty-four percent of facilities reported regularly giving non–breast milk supplements to more than half of all healthy, full-term infants. Metrics available for measuring quality of breastfeeding care, range from comprehensive Baby-Friendly Hospital Certification to compliance with individual steps such as the rate of in-hospital exclusive breastfeeding.

Other approaches to improving quality of breastfeeding care include (1) education of hospital decision-makers (eg, through publications, seminars, professional organization statements, benchmark reports to hospitals, and national grassroots campaigns), (2) recognition of excellence, such as through Baby-Friendly hospital designation, (3) oversight by accrediting organizations such as the Joint Commission or state hospital authorities, (4) public reporting of indicators of the quality of breastfeeding care, (5) pay-for-performance incentives, in which Medicaid or other third-party payers provide additional financial compensation to individual hospitals that meet certain quality standards, and (6) regional collaboratives, in which staff from different hospitals work together to learn from each other and meet quality improvement goals at their home institutions. Such efforts, as well as strong central leadership, could affect both initiation and duration of breastfeeding, with substantial, lasting benefits for maternal and child health.

Breastfeeding significantly predicts health outcomes for both mothers and children. In 2007, the Agency for Healthcare Research and Quality published a summary of systematic reviews and meta-analyses on breastfeeding and health outcomes in developed countries and determined that early cessation of breastfeeding increases infants’ risks for childhood obesity, gastroenteritis, necrotizing enterocolitis, leukemia, otitis media, severe lower respiratory infections, sudden infant death syndrome, and types 1 and 2 diabetes. Early cessation of breastfeeding is linked with higher rates of maternal disease: breast and ovarian cancers, type 2 diabetes, and postpartum depression. Infants who are not breastfed incur up to $475 more health costs in the first year compared with those who are exclusively breastfed for 3 months ($871 in 2008 dollars). Because many effects of breastfeeding are dose-
dependent, increasing breastfeeding duration can have a substantial impact on public health.

Evidence shows that hospital practices affect breastfeeding duration and exclusivity throughout the first year of life, yet quality of breastfeeding care in the United States is poor. In a 2007 Centers for Disease Control and Prevention (CDC) survey of >80% of US maternity facilities, the mean score for implementation of evidence-based breastfeeding care was 63 of 100 possible points. The 10 evidence-based steps of the Baby-Friendly Hospital Initiative (BFHI) are known to increase duration and exclusivity of breastfeeding when implemented, yet fewer than 3% of US hospitals are designated as such. In some countries, all hospitals are Baby-Friendly, and these countries have strong government support, centralized leadership, and support from the medical profession. The paucity of US Baby-Friendly hospitals reflects an endemic problem throughout American health care: there is a significant gap between evidence-based recommendations and actual practice, as detailed in the Institute of Medicine’s 2001 report, Crossing the Quality Chasm. Closing this quality gap will empower mothers to meet breastfeeding recommendations.

All major medical organizations, including the American Academy of Pediatrics (AAP) and the World Health Organization (WHO), recommend 6 months of exclusive breastfeeding and continued breastfeeding with appropriate complementary foods for at least the first 1 to 2 years; however, only ~12% of US infants are breastfed exclusively for 6 months, and only ~21% are breastfed for 12 months. Rates of any and exclusive breastfeeding drop precipitously in the first 2 weeks of life despite families’ frequent contact with the health care system.

The WHO/United Nations Children’s Fund (UNICEF) Global Strategy for Infant and Young Child Feeding and the American Public Health Association urge immediate steps to improve breastfeeding rates. The American Public Health Association notes the wide gap in the United States between evidence-based care recommendations and current typical care. In this article, we review data on quality of breastfeeding care in US hospitals, and we outline approaches to speeding adoption of best practices. We used a PubMed search from January 1997 through April 2009 to identify English-language research done using the term “breastfeed*” with the following search terms: quality improvement, quality management, performance incentives, and pay for performance (P4P).

**THE QUALITY GAP**

Created in 1991, the BFHI is currently the gold standard for evidence-based breastfeeding care in hospitals (Table 1). Data continue to accumulate showing that adherence to the Ten Steps predicts breastfeeding duration and exclusivity, long after hospital discharge. Breastfeeding within the first hour of life, exclusive breastfeeding in the hospital, and having a written breastfeeding policy are the steps generally found to have a the greatest influence on success. The more steps that are practiced, the higher duration and exclusivity of breastfeeding at 2 months. DiGironimo et al showed that breastfeeding women who did not experience any of the Ten Steps were 8 times more likely to fail at breastfeeding by 6 weeks compared with those who experienced at least 6 of the steps. Individual steps also affect outcomes. For example, 1 hospital-based intervention to reduce formula supplementation of breastfed newborns found that breastfeeding at 6 months increased to 87%, versus 66% beforehand.

Despite strong evidence for the Ten Steps, hospital compliance in the United States is poor. The 2007 CDC survey Maternity Practices in Infant Feeding and Care (mPINC) sought to survey all US maternity units, with standardized questions based on their implementation of the evidence-based steps described in the BFHI. The CDC survey addressed these issues from the Ten Steps: (1) breastfeeding within the first hour of life, (2) breastfeeding on demand, (3) showing mothers how to breastfeed, (4) prenatal education, (5) absence of pacifiers, (6) rooming in day and night, (7) absence of formula supplementation without a medical indication, (8) training of staff, (9) breastfeeding support at discharge, and (10) having a written breastfeeding policy that is conveyed to all staff.

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**TABLE 1 WHO/UNICEF Ten Steps to Successful Breastfeeding**

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

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*The hospital or birthing site must pay fair-market price for all formula and infant feeding supplies that it uses and cannot accept free or heavily discounted formula and supplies.*
On the basis of a standard script, 1 respondent from each maternity center answered the survey. To encourage candid responses, respondents were assured that their data would not be publicly reported. Instead, each facility was given a report comparing its results with benchmarks for other hospitals of similar size nationally and with other hospitals in the same state. Of a possible score of 100 points, the average hospital scored only 63, with the mean total scores ranging from 48 (Arkansas) to 81 (New Hampshire and Vermont). Great regional disparities were found, with the southern states performing worse than the northeastern and western regions. Although 88% of facilities reported that they taught most mothers techniques of breastfeeding, practices that are known to be detrimental to breastfeeding were common. For example, 65% of facilities advised women to limit the duration of suckling at each breastfeeding, and 45% reported giving pacifiers to healthy term infants.

Inappropriate provision and promotion of infant formula were common, despite evidence that such practices reduce breastfeeding success.\textsuperscript{4-6,23} Twenty-four percent of facilities reported regularly giving non–breast milk supplements to more than half of all healthy, term infants. These results are consistent data from the Infant Feeding Practices Study II, which found that 41% of breastfed infants are supplemented with infant formula in the hospital.\textsuperscript{15,24,25} Inappropriate supplementation has been associated with shorter duration of breastfeeding in multiple studies.\textsuperscript{7,20,26,27} and it also incurs health risks that are associated with nonexclusive breastfeeding.\textsuperscript{1,28} Moreover, the majority of facilities reported that they participate in formula company marketing programs. Multiple studies have shown that formula marketing packs reduce duration of exclusive breastfeeding.\textsuperscript{22,26,30} Nonetheless, fully 70% of facilities reported giving commercial discharge packs that contain infant formula to breastfeeding mothers. A separate study found that 93% of hospitals give out any commercial discharge packs to at least some mothers.\textsuperscript{31} The mPINC study results provide the first national, systematically collected data on the substantial gap between best practices and routinely provided maternity care. Underuse of these evidence-based practices leads to premature weaning, with adverse consequences for maternal and infant health.

**BARRIERS TO QUALITY IMPROVEMENT**

**Changes to Clinical Routine**

Optimizing breastfeeding support will require cultural changes in patterns of care in hospitals. For example, on a busy postpartum unit, it is much easier to offer a bottle than to diagnose and resolve breastfeeding problems. Similarly, removing the infant from the mother’s room to perform a variety of procedures (eg, photographs, newborn screening, examinations) may be convenient for a busy hospital, but this practice interferes with the mother’s ability to breastfeed on demand. These issues are substantial barriers to implementing Baby-Friendly practices, as a national survey showed: hospitals reported that the most difficult steps to implement were steps 6 (no supplements), 2 (staff training), and 7 (rooming in).

**Formula Marketing**

Doing away with hospital-based marketing of infant formula and paying fair market value for formula have posed a particular barrier to implementing evidence-based care.\textsuperscript{19} Typically, most US hospitals receive their well-infant formulas free of charge from brand-name manufacturers and in return are expected to distribute commercial discharge packs that market that brand, thereby implying endorsement from the hospital. In Baby-Friendly hospitals, the cost of purchasing formula is passed on in the room and board charge, the same way food for other patients is handled. Safety-net hospitals such as Boston Medical Center and San Francisco General Hospital have been able to achieve Baby-Friendly status and pay for formula. Implementing BFHI also decreases costs of unused products such as pacifiers, nipples, and discharge packs and saves on labor costs and storage space required for discharge packs.\textsuperscript{32} Formula companies have been known to overestimate vastly the amount of formula that a hospital requires, grossly inflating projected costs.\textsuperscript{32} If hospitals wait to pay for formula until they have implemented the other steps, then the need for purchased formula is reduced.\textsuperscript{32,33} It may be helpful for hospital leaders to know that severing ties from the formula industry is consistent with recent recommendations that the health professions distance themselves from industry to avoid conflicts of interest that could compromise patient care.\textsuperscript{34,35}

**Attitudes and Beliefs**

To implement elements of the BFHI, supporters must negotiate varying attitudes and beliefs about breastfeeding. Norms for infant feeding have changed dramatically in the past 3 decades. Some senior staff members, many of whom have formula-fed their own children, firmly believe that formula feeding is substantially equivalent to breastfeeding.\textsuperscript{36} A recent study found that 45% of pediatricians surveyed agreed with the statement that breastfeeding and formula feeding are equally acceptable methods for feed-
ing infants. Other view infant feeding as a consumer choice, not a modifiable health behavior, and they are reluctant to “push” mothers to breastfeed. Efforts to change breastfeeding practices will have to address this tension between reinforcing medical recommendations and respecting patient autonomy. Moreover, many providers argue that maternity care has little or no impact on breastfeeding success, and they will need to be convinced that practice changes matter. Finally, providers may lack the skills to address basic breastfeeding needs, because breastfeeding training in medical and nursing education is limited, at best. Achieving 18 to 21 hours of training for perinatal nurses has been described as a significant barrier to achieving Baby-Friendly certification, although this is the minimum recommendation. This results in clinicians’ leaving simple breastfeeding problems unresolved or relegating them to lactation consultants, whose expertise is better used for more complex issues.

METRICS FOR QUALITY ASSESSMENT

Several metrics are available for measuring quality of breastfeeding care, ranging from comprehensive BFHI certification to compliance with individual steps, such as paying market value for infant formula. Other metrics include the distribution of formula company discharge packs, mPINC scores, presence of an evidence-based written breastfeeding policy, and the rate of in-hospital exclusive breastfeeding among breastfeeding infants. Each metric has its advantages and disadvantages (Table 2).

The rate of in-hospital exclusive breastfeeding among breastfed infants is especially promising for several reasons. First, it can be measured as part of existing infrastructure for collecting neonatal data, via genetic screening surveys or by modifying and implementing the US Standard Certificate of Live Birth to collect this information. Second, to score high on exclusive breastfeeding, a hospital would need to have successfully implemented many of the other Ten Steps that are known to decrease the use of supplementation and improve breastfeeding success, such as rooming in, breastfeeding in the first hour of life, and curtailment of formula marketing. Finally, in-hospital exclusivity is patient centered, because its association with improved breastfeeding duration helps women meet their own breastfeeding goals. The National Quality Forum (NQF) recently endorsed the rate of in-hospital exclusive breastfeeding as a consensus standard for perinatal care.

APPROACHES TO IMPROVING QUALITY OF CARE

To date, there have been few published reports on approaches to improving quality of care around breastfeeding. Potential approaches include education of hospital decision-makers, recognition of excellence, oversight by accrediting organizations, public reporting, P4P incentives, and regional collaboratives.

Education of Hospital Decision-Makers

There are a variety of opportunities to educate and motivate key hospital decision-makers to adopt evidence-based practices. Lactation consultants and nongovernmental organizations are often contracted by hospitals to assist with quality improvement around breastfeeding. Regional meetings or a summit of key leaders could help to educate stakeholders and improve networking opportunities and buy-in, and these sessions could include training on implementation of best practices. Sharing peer-reviewed publications about the evidence for the Ten Steps and about implementing them can be influential, as can Web-based resources. Often, an individual who already works in the hospital leads this type of educational effort, with the regional effort from an outside organization.

The mPINC survey was explicitly designed to educate decision-makers and stimulate hospitals to implement evidence-based best practices. The CDC shared survey results with all 2690 participating hospitals and birth centers, assigning each facility a set of scores that compared their own practices with evidence-based practices, highlighting those that are most problematic. The individualized reports compared each hospital’s scores with those in other facilities across their state and the country and with those of a similar size. These “benchmark reports” included references to the scientific literature explaining how each practice affects breastfeeding success. The CDC plans to repeat the survey every 2 years so that hospitals can engage in continuous quality improvement.

Grassroots movements can also serve as a catalyst to draw the attention of decision-makers around a specific hospital practice. A growing body of evidence shows that commercial discharge packs are associated with decreased exclusive breastfeeding. The Ban the Bags campaign (http://banthebags.org) has drawn attention to the risks of hospital-based formula promotion, attracting national press coverage and encouraging hospitals to reevaluate this practice. In addition, state breastfeeding coalitions and departments of public health have awarded certificates to “bag-free” hospitals, helping incentivize efforts to improve quality of care.

Strong statements from professional organizations can also encourage hospitals to adopt specific practices. The
<table>
<thead>
<tr>
<th>Facility Metric (Measure)</th>
<th>Method</th>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfed infants who receive only breast milk during the maternity stay (proportion of breastfed infants)</td>
<td>1. Feeding status as indicated in newborn genetic screening or birth certificate documentation 1. Rates of EBF in hospital predict overall breastfeeding duration 2. Infant formula dispensed from Pyxis system 3. Prevalence determined from chart audit/review</td>
<td>1. Feasibility of data collection varies across states 2. High EBF rates reflect presence of many of the Ten Steps 3. Generally appropriately excludes those for whom breastfeeding is contraindicated (eg, HIV positive, dependent on drugs of abuse), allowing for comparability across facilities and patient populations 4. Status is widely regarded and recognized</td>
<td>1. The NQF has endorsed using EBF in the hospital as a quality measure in part on the basis of success in California of using this metric 2. In states without current data collection infrastructure, adoption would require either amendments to the birth certificate or genetic screening forms or periodic chart audit/review</td>
<td>2. This metric could easily be assessed and adopted by HEDIS and was recently adopted by Joint Commission</td>
</tr>
<tr>
<td>Baby-Friendly status (yes/no)</td>
<td>Facility designation by Baby-Friendly USA</td>
<td>1. Requires no new assessment infrastructure 2. Specifically identifies compliance with evidence-based practice and care process measures 3. Ensures standardized compliance with the Ten Steps 4. Status is widely regarded and recognized</td>
<td>1. Less than 3% of US hospitals are currently designated Baby-Friendly, so it is not considered a normative standard yet 2. Designation does not recognize partial implementation</td>
<td>Federal oversight and/or a system for recognizing partial implementation of the Ten Steps may be necessary for hospitals to be able to pursue financial incentives to implementing the Ten Steps</td>
</tr>
<tr>
<td>mPINC survey score (score out of 100)</td>
<td>Facility score based on responses to CDC survey</td>
<td>Provides a national, standard measure of hospital practices and care processes included in the Ten Steps</td>
<td>1. Because individual facility scores are confidential, disclosure would be voluntary 2. Disclosure could affect accuracy of future survey results 3. Scores are based on 1 individual's report of typical practices and care processes at each hospital and have not been externally validated</td>
<td>Facilities' mPINC scores could provide a baseline for regional collaboratives to use to assess progress by using quality improvement strategies</td>
</tr>
<tr>
<td>Written breastfeeding policy including core evidence-based breastfeeding practices (yes/no)</td>
<td>Facility documentation of written policy</td>
<td>Assessment is straightforward via either inquiry to facility or use of existing mPINC data</td>
<td>Written policies may not reflect actual practice; there may be issues with accurate reporting</td>
<td>The Academy of Breastfeeding Medicine has a freely available model policy and provides a template for hospitals to implement evidence-based practices</td>
</tr>
<tr>
<td>Distributes formula company discharge packs (yes/no)</td>
<td>Facility self-report</td>
<td>1. Assessment is straightforward via inquiry to facility 2. Reflects base level of commitment to supporting breastfeeding 3. Reflects independence from inappropriate marketing to patients</td>
<td>Addresses only 1 of the important barriers to breastfeeding</td>
<td>Facilities that have received awards for becoming &quot;Bag-Free Hospitals&quot; have improved visibility and recognition of the adverse effects of direct formula marketing to patients</td>
</tr>
<tr>
<td>Price paid for infant formula (price per unit purchased relative to fair-market price or 0 [received free of charge from manufacturer])</td>
<td>Facility self-report</td>
<td>1. Assessment is straightforward via review of purchase contracts 2. Reflects a commitment to supporting breastfeeding 3. Reflects reduced influence from infant formula manufacturers</td>
<td>Definition of &quot;fair-market price&quot; may be difficult to establish</td>
<td>Growing awareness of the impact of &quot;free&quot; or discounted brand-name pharmaceuticals has drawn attention to ethical concerns about hospital marketing of branded products</td>
</tr>
</tbody>
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EBF indicates exclusive breastfeeding.
AAP policy statement on breastfeeding12 outlines appropriate peripartum procedures to facilitate the initiation of breastfeeding, as does the statement from the American Academy of Family Physicians (AAFP).12 The Academy of Breastfeeding Medicine has developed a model hospital policy to guide hospitals.43

Recognition of Excellence
Several recognition programs honor hospitals that practice evidence-based breastfeeding care. The oldest and most rigorous form of recognition is Baby-Friendly designation. To qualify as Baby-Friendly, a facility must apply for a certificate of intent, implement the Ten Steps, and undergo a site visit. Baby-Friendly remains the gold standard because of its strong evidence base and its origins from WHO and UNICEF. Baby-Friendly status is highly regarded by health professionals but is largely unknown to the general public.

Hospitals often are able to achieve the Ten Steps by using standard quality management techniques, such as the “plan-do-check-act” model.44 Implementing certain practices, such as skin-to-skin contact immediately after birth, and increased staff training may allow other steps to fall into place more readily.

In addition to BFHI, several states have developed recognition programs for excellence in breastfeeding care. The Texas Department of State Health Services has its own recognition program, the “Texas Ten Step.” This program is based on the BFHI, but compliance is self-reported, and the program does not require hospitals to purchase formula at fair-market value. The program offers staff training and encourages hospitals ultimately to obtain the BFHI designation. As of April 2009, 68 of 190 hospitals had the Texas Ten Step certification,45 but only 2 Texas hospitals are designated as Baby-Friendly6 and only 6 have reported eliminating commercial discharge packs.46 Other state departments of health, such as Oregon’s, have publicly recognized hospitals that have eliminated commercial discharge bags, and Massachusetts is now following suit by recognizing bag-free hospitals and other improvements in breastfeeding outcomes.

Oversight by Accrediting Organizations
Accrediting organizations have considerable leverage in modifying hospital practices. The Joint Commission, which accredits most US hospitals, has set quality measures in many areas, with many more expected to follow. All of these metrics are publicly reported and the subject of considerable attention by hospital administrators nationwide. Until recently, no quality metric related to breastfeeding was available from the Joint Commission. However, on July 20, 2009, the Joint Commission announced that it was adding ‘exclusive breast milk feeding’ as a new hospital Core Measure for perinatal care, effective April 2010.47 It is likely that this new Core Measure could have a tremendous impact on hospital practice and breastfeeding outcomes. It is likely that adding a breastfeeding metric, such as the exclusivity rate, to the Joint Commission Core Measures could have a tremendous impact on hospital practice and breastfeeding outcomes.

State regulations, promulgated by state health departments, also represent an opportunity to improve breastfeeding practices; however, often states do not have the resources or the political power to implement strong regulations or enforce compliance with them. For example, in 2005, the Massachusetts Department of Public Health approved sweeping new perinatal regulations that included a first-in-the-nation requirement to discontinue hospital distribution of commercial discharge packs, but before the regulation could be implemented, it was retracted by the governor.

Public Reporting
Public reporting of quality metrics also encourages hospitals to practice evidence-based care, because patients are attracted to hospitals that consistently show better performance. The California WIC Association together with the University of California Davis Human Lactation Center have successfully used public reporting to drive quality improvement.48 They publicly reported the “gap” between any and exclusive breastfeeding for each of the state’s maternity hospitals. These data were collected at the time of genetic screening, and chart review suggests that it is accurate (M.J. Heinig, written communication, April 2009). In some maternity centers, >99% of breastfed infants were receiving formula, clearly far more than is medically indicated. After the first public report, 12 hospitals were able to increase their exclusive breastfeeding rates by at least 50%, and 5 more than doubled their rates.49 Some hospitals now handle infant formula the same way as medications: available only with a provider order and locked in a medication machine and strictly accounted for. Other hospitals require parents to sign a consent form before giving the infant formula for nonmedical reasons, indicating that the parent understands the risk to breastfeeding and the risk to the infant’s health. This approach documents that the parent was educated and made an informed decision. California’s success suggests that public reporting of breastfeeding metrics in general and the exclusivity gap in particular can drive quality improvement in breastfeeding care.
Health Plan Employer Data and Information Set

Health Plan Employer Data and Information Set (HEDIS) is another venue for public reporting of breastfeeding care quality. This data set is used by >80% of America’s health plans to measure performance on important dimensions of care and service.49 Many health plans report HEDIS data to employers or use their results to make improvements in their quality of care and service. Thus far, HEDIS has not included breastfeeding measures. A breastfeeding metric included as a HEDIS measure may be helpful to initiate, track, and measure ongoing efforts to improve lactation care and services.

Pay for Performance

P4P plans offer additional financial compensation to individual providers, groups, or hospitals for meeting certain quality standards. Premier, Inc, and the federal Centers for Medicaid and Medicare Services recently completed a demonstration project of P4P to hospitals and found that those that received extra payment did modestly better than those that were subjected to public reporting alone.50

Although there have been some rare insurance initiatives that reward mothers who breastfeed, to our knowledge, there have been no public or private insurance initiatives in the United States to reward hospitals or doctors who have higher breastfeeding rates among their patients. Incentives can take the form of bonuses or withholdings and can be either outcome measures (eg, hospital rates of exclusive breastfeeding) or process measures (eg, implementation of BFHI). In northern Italy, hospitals successfully increased in breastfeeding rates after an initiative of withholding 0.5% of payment for all diagnosis-related groups for failure to meet some specific breastfeeding process objectives set by the local health authorities.51 Breastfeeding was 1 of several quality objectives, and failure to meet the other objectives resulted in additional diagnosis-related group withholdings.

Although P4P has been widely implemented in internal medicine, the literature on its effectiveness is mixed. Many organizations have published guidelines in response to criticisms, including the AAP,52 the AAFP, the American Medical Association,53 and the Joint Commission.54 The AAP recommends that measures be scientifically valid and linked to evidence-based best practices. Moreover, they should be feasible so that data collection does not cause undue burden on the clinician, patients, and families. They concur with AAFP recommendations to offer positive physician incentives and support the physician–patient relationship. The American Medical Association recommends 4 principles in determining proper metrics for P4P: (1) metrics should ensure quality of care; (2) they should foster the relationship between patient and provider; (3) they should use accurate and fair data reporting; and (4) they should provide fair and equitable program incentives.55

Breastfeeding best practices may be particularly well-suited to a P4P approach, as compared with some other quality indicators. Insurers could offer incentives for outcomes, such as the exclusivity rate, or for structure and process measures, such as BFHI certification. Hospitals could use P4P revenue to fund implementation of some practices, such as ensuring adequate staff training and paying fair-market value for infant formula, and could help move more hospitals to Baby-Friendly status.

P4P incentives for breastfeeding support are likely to save money for insurers, especially in the long-term. Infants who are formula fed have higher health expenditures for certain acute illness.2,3 Chronic pediatric diseases are very costly, as are maternal malignancies and diabetes. Financial incentives may draw enough hospitals to apply for certification that a tipping point will be reached, in which BFHI status becomes competitive and achievable. Because training in breastfeeding is not uniform and because research shows that many providers feel uncomfortable managing breastfeeding problems,28 another quality metric may consist of documenting continuing education for physicians and office nurses specifically in breastfeeding.

Regional Collaboratives

In a regional collaborative, staff from different hospitals work together to learn from each other and meet common quality improvement goals at their home institutions. Typically, key stakeholders and “champions” learn what their peers elsewhere are doing and seek guidance about implementing change. Two studies have shown that a local collaborative approach can improve quality of care with various quality issues.56

Mercier et al56 improved newborn preventive services in Vermont maternity hospitals over 13 evidence-based parameters, including assessment of breastfeeding adequacy and risk for hyperbilirubinemia. The authors invited all maternity hospitals in the state to work together to improve their performance. During the intervention, documentation of breastfeeding assessment improved from 49% to 81%.

Statewide collaborative approaches, such as those taken in Vermont, are likely to replicate success in other states. Collaborative approaches depend on the will and funding of state departments of public health or other strong leaders to organize and spearhead them but ultimately use a “bottom up” approach to effect change...
leadership that was associated with significant increases in implementation of the Ten Steps and in duration of exclusive breastfeeding.57

CONCLUSIONS
Breastfeeding is an important public health issue. Most hospitals fall far short of implementing evidence-based best practices; as a result, current US breastfeeding rates remain well below Healthy People 2010 goals. Despite this quality gap, there are limited incentives for hospitals or providers to implement best practices. Potential approaches to quality improvement include education of hospital decision-makers, recognition of excellence, oversight by accrediting organizations, public reporting, P4P incentives, and regional collaboratives. Widespread implementation of BFHI in the United States would be most likely to occur with strong centralized leadership, as in other successful countries. Such efforts to improve quality of care could affect both initiation and duration of breastfeeding, with substantial, lasting benefits for maternal and child health.

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