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## Applying organisation theory to understand barriers and facilitators to the implementation of baby-friendly: A multisite qualitative study



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### ABSTRACT

**Objectives:** (a) to apply an organisation-level, pre-implementation theory to identify and describe factors that may impact hospitals' readiness to achieve the Ten Steps and (b) to explore whether/how these factors vary across hospitals.

**Design:** a multisite, descriptive, qualitative study of eight hospitals that used semi-structured interviews of health-care professionals. Template analyses identified factors that related to organisation-level theory. Cross-site comparative analyses explored how factors varied across hospitals.

**Setting:** thirty-four health-care professionals from eight North Carolina hospitals serving low-wealth populations. The hospitals are participating in a quality improvement project to support the implementation of the Ten Steps. This study occurred during the pre-implementation phase.

**Findings:** several factors emerged relating to collective efficacy (i.e., the shared belief that the group, as a whole, is able to implement the Steps) and collective commitment (i.e., the shared belief that the group, as a whole, is committed to implementing the Steps) to implement the Ten Steps. Factors relating to both constructs included 'staff age/experience,' 'perceptions of forcing versus supporting mothers,' 'perceptions of mothers' culture,' and 'reliance on lactation consultants.' Factors relating to commitment included 'night versus day shift,' 'management support,' 'change champions,' 'observing mothers utilize breastfeeding support.' Factors relating to efficacy included 'staffing,' 'trainings,' and 'visitors in room.' Commitment-factors were more salient than efficacy-factors among the three large hospitals. Efficacy-factors were more salient than commitment-factors among the smaller hospitals.

**Key conclusions and implications for practice:** interventions focused on implementing the Ten Step may benefit from improving collective efficacy and collective commitment. Potential approaches could include skills-based, hands-on training highlighting benefits for mothers, staff, and the hospital, and addressing context-specific misconceptions about the Steps.

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### Introduction

Breastfeeding is associated with improved maternal and child health (Ip et al., 2007; Ram et al., 2008; Stuebe et al., 2009;

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Schwarz et al., 2010a, 2010b; Stuebe et al., 2011; McClure et al., 2012). Supporting breastfeeding is an effective strategy for reducing health-care costs and disease burden (Jones et al., 2003; Bartick and Reinhold, 2010). UNICEF and the World Health Organization (WHO) developed the Baby-friendly Hospital Initiative to support implementation of maternity practices to support and protect breastfeeding: the Ten Steps to Successful Breastfeeding, herein referred to as the Ten Steps (World Health Organization and UNICEF, 1989, 2009) (Table 1). The Ten Steps

support breastfeeding initiation, exclusivity, and duration (Kramer et al., 2001; DiGirolamo et al., 2008; Abrahams and Lobbok, 2009; Nickel et al., 2013). Federal health offices and professional organisations endorse the practice of the Ten Steps (Tayloe, 2009; US Department of Health and Human Services, 2011).

The WHO recommends that clinical maternity staff receive approximately 18–20 hours of training on providing the breastfeeding-supportive care outlined in the Ten Steps (World Health Organization and UNICEF, 2009). Surveillance data suggest that 12% of new maternity nurses in the US received this level of training (Centers for Disease Control and Prevention, 2012).

Data show that fewer than 5% of hospitals within the United States practice all Ten Steps and more than 60% practice fewer than six of the Ten Steps (Centers for Disease Control and Prevention, 2012). Maternity care in the US does not, as yet, entirely reflect the evidence-based recommended maternity care outlined in the Ten Steps (Bartick et al., 2009; Centers for Disease Control and Prevention, 2012).

This suggests the need for studies that identify both barriers and facilitators to implementing the organisational changes necessary to achieve the Ten Steps in US facilities. US-based qualitative studies have largely explored individual hospitals' experiences with implementing the Ten Steps (Wright et al., 1996; Clarke and Deutsch, 1997; Merewood and Philipp, 2001; Hahn, 2005); few compare the experiences of multiple hospitals (Kovach, 2002; Bartick et al., 2010; Weddig et al., 2011; Crivelli-Kovach and Chung, 2011). Many studies were set in regions of the US with higher community-level breastfeeding rates. Their experiences may have actual and/or perceived limited generalisability to hospitals in regions with low breastfeeding rates. Although theoretical frameworks are important for guiding quality improvement efforts, few studies applied organisation-level theory to examine the implementation of the Ten Steps (Sanson-Fisher et al., 2004; Eccles et al., 2005; Grol et al., 2007; Bartick et al., 2009).

This article presents findings from a multisite, descriptive, qualitative study of barriers and facilitators to implement the Ten Steps in eight hospitals in the Southeastern US. The study's objective was to apply an organisation-level theoretical paradigm to the identification and exploration of factors that may impact Ten Step implementation efforts.

### *Theoretical framework*

Hospitals implementing the Ten Steps are engaging in a complex, multilevel organisational change (World Health Organization and UNICEF, 2009; Thomson et al., 2012) (see Table 1 for example practices). Successfully achieving such change requires high levels of organisational readiness (Lehman et al., 2002; Amatayakul, 2005; Weiner et al., 2008, 2009; Weiner, 2009). The theory of 'Organizational Readiness to Change' (ORC) is one proposed framework for identifying and targeting factors that influence an institution's readiness to execute change (Weiner et al., 2008, 2009; Weiner, 2009).

This study applied Weiner's definition of ORC (Weiner, 2009). ORC is a collective psychological state shared by organisation members across hierarchical and professional levels (i.e., hospital staff members, administration, and providers) towards implementing a specific change effort. It is a pre-implementation theory that reflects readiness prior to engaging in change efforts.

Weiner's definition raises two important points: (1) readiness is a collective state shared by organisation members and (2) readiness is specific to a given change effort. The first point highlights

(a) that significantly differing perceptions of readiness among organisation members (e.g., various hospital staff members, employees, and providers) may indicate a lack of shared-readiness and (b) that these perceptions are shared among organisation members. The second point emphasises that ORC is specific to each change effort; an organisation may have high readiness for one change effort while possessing low readiness for another.

Organisational readiness has two dimensions: collective commitment and collective efficacy (Weiner, 2009). 'Collective Commitment' refers to whether organisation members, collectively, value the change: do members perceive that the change is necessary and/or important and/or beneficial? 'Collective Efficacy' relates to organisation members' shared perceived ability to mobilise the necessary resources and cognitive abilities to execute the proposed change (Bandura, 1989; Wood and Bandura, 1989; Weiner, 2009). Barriers and facilitators in the form of task demands, resource availability, situational/contextual factors, and the interactions between these three influence organisation members' perceptions of collective commitment and collective efficacy (Weiner, 2009).

### **Methods**

#### *Study setting: Breastfeeding Friendly Healthcare Project*

This study explored factors that may influence readiness to implement the Ten Steps in eight North Carolina hospitals serving low-wealth populations participating in the Breastfeeding-Friendly Healthcare Project (BFHC). BFHC is an intervention designed to support hospitals' implementation of the Ten Steps. Eight hospitals expressed interest in implementing the Ten Steps and participated in BFHC. Each hospital formed a taskforce consisting of hospital personnel. Additional information on the BFHC is presented elsewhere (Taylor et al., 2012). This qualitative study took place during the BFHC pre-implementation phase; that is, during the baseline assessment, prior to engaging in implementation efforts. Findings from this study helped inform intervention strategies currently underway. Table 2 presents descriptive information about the eight hospitals.

#### *Study sample*

Purposeful sampling was used to ensure interviewees reflected a variety of positions responsible for providing the care outlined in the Ten Steps (i.e., primarily maternity nurses, a limited number of nurse practitioners, paediatricians, and obstetricians, and, where possible, someone from management), shifts (day and night), and attitudes towards providing hospital-based breastfeeding support (Creswell, 2007). These criteria were used to ensure that (a) the key informant had knowledge about barriers and facilitators to implementing the Ten Steps, (b) key informant interviews would reflect a wide variety of perspectives, and (c) data could be used to inform the development and implementation of intervention support.

The research team communicated these criteria to each taskforce. Each taskforce used these criteria to select interviewees. Interviewees were not informed of respondents' attitudes about breastfeeding before the interviews. Thirty-four respondents were interviewed from the eight hospitals (see Table 2). Respondents included five clinicians (paediatrician and obstetricians), three nurse practitioners, six administrators, and 20 staff nurses.

**Table 1**  
The Ten Steps to Successful Breastfeeding.

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Step 1	<p>Have a written breastfeeding policy that is routinely communicated to all health-care staff.</p> <ul style="list-style-type: none"> <li>● Hospital policy adheres to the International Code of Marketing of Breast-milk Substitutes.</li> <li>● Hospital policy vis-à-vis services provided to pregnant women, mothers, infants and/or children is compliant with all Ten Steps (below). This includes policy for labour and delivery, antenatal care, clinic/consultation rooms, post partum, and any special care baby units.</li> <li>● Summaries of hospital policy are posted in languages commonly understood by staff and mothers.</li> </ul>
Step 2	<p>Train all health-care staff in skills necessary to implement this policy.</p> <ul style="list-style-type: none"> <li>● All health-care staff who have any contact with pregnant women, mothers, and/or infants have oriented on the Ten Steps.</li> <li>● At least 80% of clinical staff who have contact with mothers and/or infants have received training that covers all Ten Steps and the Code of Marketing. Clinical staff have received at least three hours of supervised clinical experience.</li> <li>● Non-clinical staff have received training on the Ten Steps appropriate to their role, skills, and knowledge.</li> </ul>
Step 3	<p>Inform all pregnant women about the benefits and management of breast feeding.</p> <ul style="list-style-type: none"> <li>● Hospitals that have an affiliated antenatal clinic or have an in-patient antenatal ward co-ordinate with affiliated clinics to inform pregnant women about breastfeeding.</li> <li>● Antenatal care includes discussion that covers the importance of immediate and sustained skin-to-skin contact, early initiation, rooming-in on a 24-hour basis, cue-based feeding, positioning, exclusive breastfeeding for six months, risks of artificial milk feeding, that breastfeeding is important beyond six months.</li> </ul>
Step 4	<p>Help mothers initiate breastfeeding within the first hour of birth.</p> <ul style="list-style-type: none"> <li>● For vaginal births: infants are placed skin-to-skin with their mother within five minutes after birth, for at least one hour, uninterrupted and without separation-unless medically necessary.</li> <li>● For caesarean births: infants are placed skin-to-skin with mother as soon as she is alert and responsive, for at least one hour, uninterrupted and without separation-unless medically necessary.</li> <li>● Mothers are taught and encouraged to look for signs when infant is ready to breastfeed during this period.</li> <li>● Mothers are offered help with initiating breastfeeding during this period, when necessary.</li> </ul>
Step 5	<p>Show mothers how to breast feed, and how to maintain lactation even if they should be separated from their infants.</p> <ul style="list-style-type: none"> <li>● Mothers who have never breastfed or who have had previous challenges with breastfeeding receive special breastfeeding attention/support.</li> <li>● Clinical staff teach breastfeeding mothers latch and positioning.</li> <li>● Clinical staff teach breastfeeding mothers hand expression.</li> <li>● Clinical staff teach all mothers how to prepare infant feeds, safely.</li> </ul>
Step 6	<p>Give newborn infants no food or drink other than human milk, unless medically indicated.</p> <ul style="list-style-type: none"> <li>● Breastfed infants are not supplemented with human milk substitutes unless medically indicated.</li> <li>● Medical reason for supplementation is documented.</li> <li>● No materials that promote human milk substitutes (including artificial milk discharge bags, artificial milk packaging, etc.) are distributed to mothers.</li> <li>● Decisions to feed human milk substitutes are documented.</li> <li>● Documentation indicates that medical staff counsel mothers on various feeding options prior to artificial supplementation.</li> </ul>
Step 7	<p>Practice rooming-in – that is, allow mothers and infants to remain together – 24 hours a day.</p> <ul style="list-style-type: none"> <li>● Mothers and infants room together for at least 23 hour/day.</li> <li>● Infant assessments and routine procedures are conducted in the room with the mother to facilitate rooming-in, unless medically justified.</li> <li>● Reasons for separation are medically justified and documented.</li> </ul>
Step 8	<p>Encourage breast feeding on demand.</p> <ul style="list-style-type: none"> <li>● Mothers are taught how to recognise early signs of infant hunger.</li> <li>● Mothers are taught how to recognise early signs of infant satiety.</li> <li>● Mothers are counselled to feed their infants as often and for as long as the infant wants.</li> <li>● If the mother and infant are separated for medically-justified reasons, the infant is brought to the mother at first signs of hunger.</li> </ul>
Step 9	<p>Give no artificial teats or pacifiers to breastfed infants.</p> <ul style="list-style-type: none"> <li>● Mothers are taught how to supplement their infant, when necessary, without using artificial nipples.</li> <li>● Breastfed infants are not fed using bottles with artificial nipples.</li> <li>● Breastfed infants are not provided pacifiers during the hospital stay; in the case of painful procedures, pacifiers are disposed of immediately following the procedure.</li> </ul>
Step 10	<p>Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.</p> <ul style="list-style-type: none"> <li>● Hospitals co-ordinate efforts that result in the establishment and continuation of breastfeeding support groups.</li> <li>● Mothers are provided information on where they can obtain breastfeeding support.</li> <li>● Staff encourage mothers and infants to be seen by someone who can assess infant feeding within two to four days after birth and again the second week and provide support as needed.</li> </ul>

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### Data collection

A semi-structured interview guide was developed that operationalized ORCs theoretical constructs (Rubin and Rubin, 2005). The guide asked respondents to discuss factors that might influence hospital staff members' commitment and ability, as a group, to implement the Steps. All authors reviewed the guide for face validity. The first and second authors pilot tested the guide

with two respondents from a North Carolina birth centre, not participating in BFHC. The authors modified the guide based on these pilot interviews. Questions relating to the practice of the Ten Steps and ORCs constructs are presented in Table 3.

The first and second authors visited each hospital to conduct the interviews. Interviews occurred in a private room at either the facility or provider's medical practice; interviews lasted, on average, 45 minutes. The authors informed respondents that the purpose

**Table 2**

Descriptive characteristics of eight hospitals participating in the Carolina Global Breastfeeding-Friendly Healthcare Project.

Hospital	Births/Annum <sup>†</sup>	Teaching hospital	Urbanicity	IBCLC <sup>†</sup>	Per cent exclusively breastfeeding throughout hospital stay	Per cent initiating Breastfeeding <sup>*</sup>	Number interviewed
A	500–1000	Non-teaching	Suburban	1	50	90	4
B	2500–3000	Teaching	Suburban	3	30	60	4
C	500–1000	Non-teaching	Suburban	1	10	60	3
D	1000–1500	Non-teaching	Suburban	1	20	40	5
E	3500–4000	Teaching	Urban	10+	50	90	5
F	4500–5000	Teaching	Urban	1	60	70	4
G	500–1000	Non-teaching	Suburban	0	20	50	4
H	5000–5500	Teaching	Urban	3	Data not available	Data not available	5

\* Denotes that the data presented are rounded to protect hospitals' and respondents' identities.

† IBCLC: International Board Certified Lactation Consultant.

**Table 3**

Questions from the semi-structured key informant interview guide on readiness to implement the Ten Steps.

We are going to talk, specifically, about movements towards implementing the Ten Steps to Successful Breastfeeding (*hand interviewee form with the Ten Steps*)<sup>\*</sup>. Please reflect on these steps as we continue our conversation.

**1 Could you please describe the current practice of these 10 Steps in your facility (walk the respondent through each of the Ten Steps. Below are suggested questions if the conversation does not progress).**

- Does hospital policy reflect the Ten Steps? How is the policy communicated to staff? Communicated to patients? Is the policy posted?
- Who receives training for providing breastfeeding-supportive care?
- Does your facility have a antenatal class for patients? Is BF included in the antenatal class? Is there a specific breastfeeding class?
- How do staff support women to initiate BF w/in an hour? What does the staff do to help mom initiate? Are babies placed skin-to-skin? What does that look like?
- What do staff do to show women how to breastfeed? Who is mainly responsible for fulfilling this task? Do staff teach hand expression, how to pump?
- How often do breastfed infants receive something other than human milk? What about infants who stay primarily in the nursery?
- What happens at night re: rooming-in? How do moms respond to the idea of rooming-in?
- In general what do staff think 'on-demand means'? What does on-demand mean to you? What are some of the cues that staff use to know when to feed the baby? What do staff teach mothers re: when to feed their baby.
- Are pacifiers readily available for babies? If a baby is not breastfeeding well what sorts of techniques do staff use to supplement the infant (ask about cup feeding, bottle feeding, other)?
- What does the facility do to foster the establishment of support groups? How does staff refer moms to support groups? What support is available in the community that you're aware of?

**2 Could you describe the staff members' attitudes regarding the practices in each Step? (walk the respondent through each Step again. Below are suggested questions if the conversation does not progress).**

- What do you think are nurses' attitudes towards the practices in Step \_\_\_?
- The physicians?
- Administrators?

**3 Look at these 10 Steps again. Are there any characteristics about your facility that will make it easier to practice these Steps? Could you describe some of these to me?**

**4 Are there any barriers, here at your facility, that may make it more difficult to implement these 10 Steps?**

I have a few questions related to your perceptions of the maternity center staff as a whole. We are interested in your perception of staff members' ability to work together to practice each Step and your perception of staff members' commitment to work together to practice each Step. Please refer back to the form with the Ten Steps (*direct the key informant back to the Ten Steps*).

(*After the key informant has reviewed the Ten Steps, walk through each of the Ten Steps. Ask the key informant the following questions for each Step*)

**1 Could you explain for me your perceptions of Staff ability to work together to practice Step \_\_\_?**

- What factors influence staff members' ability to work together to implement this Step?
- What factors make staff members more able to practice the Step?
- What factors make staff members less able to practice the Step?

Now, for each Step, please reflect on how committed the staff are, as a whole, to practice the Step.

(*After the key informant has reviewed the Ten Steps, walk through each of the Ten Steps. Ask the key informant the following questions for each Step*)

**2 Could you explain for me your perceptions of Staff commitment to work together to practice Step \_\_\_?**

- What factors influence staff members' commitment to work together to implement this Step?
- What factors make staff members more committed to practice the Step?
- What factors may lead staff members to be less committed to implement this Step?

Suggested, potential follow-up questions to be used to guide the conversation are presented as lettered and are not bolded. Interviewers were allowed to deviate from the suggested follow-up questions as needed.

\* Instructions to the interviewer are presented in parentheses, bolded, and italicised.

of the interview was to explore staff-identified factors that might influence ability and commitment to implement the Ten Steps. Interviews were digitally recorded; a professional transcriptionist created verbatim, typed transcripts of the recordings.

#### Research ethics

The Institutional Review Board (IRB) for the University of North Carolina at Chapel Hill and IRBs at participating hospitals,

where such IRBs existed, approved this study. Hospitals without an IRB stated the University's IRB approval was sufficient. Interviewers obtained written informed consent from respondents before conducting interviews. Respondents had the option to turn off the recorder or terminate the interview at any point; no respondent made this request. All personal-identifiers were deleted from transcripts and reports.

### Data analysis

Each respondent was provided a copy of his or her typed-transcript for member checking. Ten interviewees replied to the member checking; all reported that the transcripts reflected their views and experiences.

A codebook was developed including (1) two theoretical codes (i.e., 'collective efficacy' and 'collective commitment'), (2) ten descriptive codes to capture the practice of each Step ('Step X'), (3) two descriptive codes to capture barriers and facilitators to implementing the Steps ('barriers' and 'facilitators,' respectively), and (4) a descriptive code to capture facility contextual factors vis-à-vis the Steps ('contextual factor'). Textual units could be coded with more than one code (e.g., a textual unit could be coded as both 'barrier' and 'contextual factor').

Transcripts were coded in ATLAS.ti (Muh, 2009). Memos were attached to coded textual units and interview transcripts. The first author assigned codes and memos based on the codebook's decision rules. The second author used the codebook to independently code and memo a random selection of 50% of the transcripts. The two authors reviewed this sample of transcripts. They discussed and reconciled the few discrepancies from this sample. They then discussed the full selection of coded transcripts achieving consensual validation (Creswell, 2007; Forman et al., 2008).

Reports were generated in ATLAS.ti that pulled all textual units and memos associated with each code. Salient factors emerged in the reports of the pulled textual units and memos. Saliency was determined when either (a) more than half of the respondents from two or more hospitals discussed the factor or (b) more than two respondents across four or more hospitals discussed the factor. Factors were organised according to whether their supporting textual units were coded as collective efficacy, collective commitment, or both.

The findings were summarised on an aggregate-level and by hospital. Cross-site analyses explored factors by hospital. The authors reviewed the summaries, factors, and supporting textual units. The first and second authors presented hospital-specific summaries back to the breastfeeding taskforce at each hospital as a second form of member checking to validate results (Creswell, 2007; Forman et al., 2008). The breastfeeding taskforce at each hospital confirmed that the findings reflected their respective hospital's experiences.

### Findings

Table 3 presents identified salient factors staff reported would impact readiness to implement the Steps arranged by ORC constructs and hospitals.

#### Factors related to both collective commitment and collective efficacy

*Staff age/experience:* Staff members' attitudes, beliefs, and experiences relating to breastfeeding and breastfeeding support varied by age and experience. This variation across age/experience influenced both collective commitment and collective efficacy.

Most respondents reported that younger/less experienced staff had higher commitment towards implementing the Ten Steps

than older/more experienced staff. A nurse with 15+ years-experience said, 'The newer ones are ready to learn and they're ready to go. It's the older ones that are just kind of stuck in their own little-it's like they're happy where they're at, they're content.' Respondents with less than 10 years-experience expressed commitment to the Steps because 'they're beneficial for patients and staff.' In contrast, staff with more experience were less committed; as one nurse said, 'what we're doing works.'

In hospitals where older nursing staff members held influence, respondents reported decreased ability to implement the Steps. In order for everyone to feel able to do the Steps, several respondents said that these older nurses would have to be 'brought on board' and become committed to implementing the Steps.

Nurses and clinicians said that the older clinicians may lack commitment to practice the Steps. They reported older clinicians see little if any additional benefit from breastfeeding compared with artificial milk feeding. Respondents said that these clinicians will write standing orders for supplemental artificial feedings which impacts nurses' ability to practice the Steps. One nurse said that her hospital could not practice some of the Steps because '...older physicians will tell the mom, 'it doesn't matter if you bottle feed your baby'' and would then '...leave standing orders to formula feed the [breastfed] baby.' Many nurses also noted they could not 'do rooming-in' because older paediatricians opposed going into the mothers' rooms for newborn assessments.

*Perception of forcing versus support:* The belief that the Steps require staff to 'force breast feeding' was related to commitment and efficacy. Respondents explained that either they themselves and/or other staff members perceived no benefit in forcing mothers to breastfeed. Respondents explained that their commitment was for respecting a mother's choice and not forcing breastfeeding. A nurse manager said, 'I think you have to adjust to the patient's needs and not force the patient to adjust to our [needs]-what we're wanting to do.' Respondents also demonstrated that they were uncommitted to educating mothers who had not made a decision regarding breastfeeding. One nurse stated, 'If mom hasn't considered breastfeeding, I won't push it.' Interviews revealed a lack of collective efficacy to 'force breastfeeding.' Most respondents said they were limited in their ability to 'get women to breastfeed' since mothers made their feeding decisions before admission. One paediatrician said his hospital could never practice the Steps because '[moms] have, prior to delivery, they've made the decision [to breastfeed] or they've not.'

Conversely, some held the view that rather than 'forcing breastfeeding' the Steps 'support mom's feeding decisions.' A limited number of respondents expressed this belief. These respondents said they felt both able and committed to practice the Steps. They explained that an important aspect of their job is to support the patient.

*Perceptions of mothers' cultural beliefs:* When respondents perceived that the Steps required all mothers to exclusively breastfeed, they concluded that it would interfere with mothers' cultural practices, specifically Latina culture. Respondents reported that Latina culture would prevent them from achieving 'the baby-friendly practice that all patients must exclusively breastfeed,' demonstrating decreased collective efficacy. One nurse elaborated, 'Hispanic patients do breast milk and bottle feeding just because they really don't think that their milk has come in--no matter what you say to them.'

Perceptions of culture also influenced collective commitment; respondents said hospital staff respected Latina culture and would not try to force Latina mothers to 'go against their culture.' For these respondents, the benefits associated with respecting what they perceived to be the mother's cultural preferences outweighed the benefits of the Steps and 'forcing' Latinas to breastfeed.

*Reliance on lactation consultants:* Reliance on the Internationally Board Certified Lactation Consultants (IBCLCs) influenced both collective commitment and collective efficacy for implementing the Ten Steps. Collective commitment varied by staff members' perception of the role of the IBCLC. Respondents reported higher staff commitment in hospitals where the IBCLC serves as a resource for exceptionally difficult cases; respondents noted nurses knew that they were personally responsible for providing breastfeeding support to the typical mother–infant dyad. Respondents reported low staff commitment for the Steps in hospitals where the IBCLC is the sole provider of breastfeeding support.

Reliance on the IBCLC as the sole provider of breastfeeding support also influenced collective efficacy. Respondents often said their hospitals had too few IBCLCs to practice the Ten Steps. One nurse said staff could not achieve the Ten Steps because '...we need more [IBCLCs].' Respondents reported that even when staff are capable of providing breastfeeding support, patients refuse their assistance; one respondent explained, 'patients aren't receptive to you because you don't have the title 'Lactation Consultant,' they only want to see her.' The lactation consultant isn't always here. It'll be hard to do Baby-friendly.' IBCLCs and management reported nurses needed to take more responsibility for breastfeeding support.

#### *Factors related to collective commitment*

*Night versus day shift:* Attitudes, beliefs, and practices varied across day and night shifts. This variation reflected variation in collective commitment. Respondents from both day and night shifts said day staff members were more committed to providing the support outlined in the Ten Steps than night staff. A nurse explained, 'On day shift, you can work and work and work with the mamma and not give it any formula and really work and she's breastfed all day. You give a report and you come in the next morning and they've had a bottle or formula during the night.' A night nurse said, 'Night staff just don't want to take the time to help [moms].' Respondents reported night staff will suggest the idea of taking the infant to the nursery; once in the nursery, the night staff then often feed the infant artificial milk even when the mother indicated that she wanted to exclusively breastfeed. A second night nurse explained that, '[t]he night shift just loves to give the babies a bottle.'

Three reasons emerged from the data explaining why night staff did not provide breastfeeding support: (1) night staff perceived that providing the mother an opportunity to rest (by removing baby) benefits her more than supporting her breastfeeding; (2) the night staff perceived few if any negative consequences associated with supplemental artificial feeds; and (3) night staff associated few additional benefits with exclusive breastfeeding during the hospital stay.

*Management support:* Respondents reported that management has an influence on collective commitment to implement the Steps. Commitment is a function of 'management support.' Support, respondents noted, is expressed in many ways: managers following up on nurses by inquiring about patients' experiences with breastfeeding support; requiring staff to participate in hands-on training at least once a year; and including breastfeeding support in staff members' annual performance reviews. One nurse said that staff will implement the Steps because, 'my medical director communicated that this was what we want to do and so what we need to do.' She went on to explain that the staff, as a result, are committed because they 'have to be committed.' A nurse noted a recent change resulting from enforced trainings, 'The mandatory staff training was not enforced with our staff as far as breastfeeding competency and assessment skills. And since

our new patient manager has come (sic) on board, during their yearly evaluations those trainings were required and skills were assessed and on their competency assessments; they were evaluated on those.' She followed this up by explaining that since this change, staff have attended the required trainings.

*Change champions:* Respondents noted that change champions impacted collective commitment. Influential staff members who support the Steps can act as champions for change. To illustrate, one nurse said, 'we work really hard—especially X—she went around and talked about breastfeeding and the benefits and that we need to provide this support. She went to docs, administration, everyone.' These champions obtained commitment from both upper administrators and clinical staff by highlighting the benefits of practicing the Ten Steps. With administrators, champions pointed to facility-level benefits the hospital would receive such as the Steps' contribution to magnet status (recognition that the facility provides excellent care and innovative nursing practice); with clinicians, advocates identified the benefits associated with these Steps for both patients and clinicians such as patient-supported decision making, patient satisfaction, and job satisfaction.

*Observing mothers utilising breastfeeding support:* Respondents reported that when staff saw mothers utilise breastfeeding support, staff commitment to the Ten Steps increased. Seeing mothers return for additional assistance demonstrated to nurses that breastfeeding is important to new mothers. Respondents said nurses want to provide the best care. However, nurses do not always associate breastfeeding support with best care; seeing mothers return for lactation services helps staff make this connection. One nurse explained, '...when the staff sees these moms coming in and they say, 'oh you get those people coming back all the time?' then they see well it does make a difference.'

#### *Factors related to collective efficacy*

*Staffing:* Respondents reported staffing practices influence collective efficacy to implement the Ten Steps. Many respondents reported staff felt unable to practice the Steps due to inadequate staffing; shifts required more staff. An administrator explained, 'I'm just saying the staff nurses are busy. They have more than [breastfeeding]. I don't want to say they don't have time [to support breastfeeding], but they sometimes don't have time. We just need more nurses to do this.' A nurse practitioner said, 'Yes we are a small facility but we do a lot of deliveries and we do a lot of things too so we juggle a lot. So I can understand the nurses' frustrations with this. They need more help to do some of this'

*Training:* Perceived ability varied by the mode of training staff receives for providing breastfeeding support. Reported ability to provide breastfeeding support depended on whether their training included hands-on instruction; i.e., staff have the opportunity to physically practice the support outlined in the Steps. One nurse said, 'The hands-on I think is really, really important because you can read it a million times but if you haven't seen it done or done it yourself, I mean it makes it hard.' A second nurse explained that because of hands-on training staff 'feel comfortable going, and at least trying to help the mom with this before they pick up the phone and call the lactation consultant.'

*Visitors in room:* The presence of visitors in the room is a situational factor that influenced collective ability to implement the Ten Steps. Respondents said that the presence of visitors often prevented mothers from both initiating breastfeeding within the first hour and from breastfeeding throughout their hospital stays. Respondents reported being unable to facilitate skin-to-skin because mothers and visitors 'insist on passing the baby around the room.' Nurses reported mothers do not breastfeed around visitors for fear of looking inadequate. One nurse said, 'moms

think they'll look like a bad mom if they can't get the baby to breastfeed.' Respondents also said older visitors such as the infant's grandparents often encourage the mother to supplement with artificial milk.

#### Factors by hospital

Comparative analyses suggested that factors varied by hospital characteristics; see Tables 2 and 4. Seven factors were common to large and small hospitals, alike: 'night versus day,' 'staff age/experience,' and 'staffing,' 'pressure versus support,' 'mothers' cultural beliefs,' 'observing mothers utilising breastfeeding support,' and 'reliance on lactation consultants.' Two factors related to collective efficacy were more salient in small hospitals than in large hospitals: 'visitors in room' and 'training.' Two factors related to collective commitment were more salient in large hospitals than in small ones: 'management support' and 'change champions.'

Respondents from the three larger hospitals (E, F, and H) focused on factors relating to commitment. When respondents from the larger hospitals (E, F, and H) discussed efficacy-related factors, they focused on facilitators to implementation. Respondents from the smaller hospitals (A, D, and G) focused on factors relating to efficacy. When respondents from the smaller hospitals discussed commitment, they focused on commitment to the Steps being low (i.e., commitment as a barrier).

## Discussion

This study was unique in that it (a) applied an organisation-level theory to explore barriers and facilitators to implementing the Steps, (b) studied hospitals in the Southeastern US, a region with few Baby-friendly hospitals and low breastfeeding rates, and (c) studied multiple hospitals to explore how factors may differ by hospital characteristics.

#### ORC as a pre-implementation theory for the Ten Steps

This study demonstrated that ORC's dimensions help to understand barriers and facilitators to implementing the Ten Steps. Although the two dimensions, collective efficacy and collective commitment, are conceptually distinct, Weiner suggests the two are empirically related; that is, commitment influences efficacy and efficacy influences commitment (Weiner, 2009). The results reflect the connection between collective efficacy and collective

commitment in that the two dimensions shared some common but not completely overlapping factors.

The identified factors suggest readiness to implement the Steps is a collective construct. It is not enough that some individual staff members are 'ready'; the data suggest that change will require co-operation among many staff members. The data also suggest that staff may adjust their own commitment/efficacy based on other staff members' commitment/efficacy; for example, staff may be more committed if they perceive others are committed or they may feel able to implement changes because others appear able to do so.

Weiner proposes that contextual factors may amplify or dampen ORC to implement a specific innovation (Weiner, 2009). These results suggest the factors relating to implementation vary across hospitals as context varies; understanding these variations may allow more targeted and, in principle, more successful interventions. For example, smaller hospitals may find it beneficial to focus increasing perceived collective efficacy to implement the Steps whereas larger hospitals may benefit from capitalising on factors relating to collective commitment.

#### Contextualising the findings

The findings presented here complement previous studies focusing on the implementation of the Steps. Several factors that emerged from the data have been noted in other contexts. For example, several other studies also found that limited human resources and staffing (Reddin et al., 2007; Taylor et al., 2011; Schmied et al., 2011; Semenic et al., 2012; Thomson et al., 2012), mothers' cultural norms regarding infant feeding (Thomson and Dykes, 2011; Semenic et al., 2012), administration support (Schmied et al., 2011; Semenic et al., 2012), and training (Weddig et al., 2011; Semenic et al., 2012) as important factors for successful implementation of the Steps. The findings presented herein expand on the previous literature and suggest that in addition to identifying the factors, the collective perception of these factors may also be important.

Unlike previous studies, the respondents in this study did not identify artificial milk marketing, specifically, as a factor impacting readiness to implement the Steps (Merewood and Philipp, 2000; Semenic et al., 2012). This may be because hospitals had not, yet, actively considered specific policies such as those outlined in Step 6 (no breast milk substitutes).

Several studies identified commitment among various stakeholders as important to implementing the Steps (Merewood and Philipp, 2001; Schmied et al., 2011; Semenic et al., 2012; Thomson et al., 2012); however, unlike previous work, this study

**Table 4**  
Perceived factors key informants identified that influence their hospital's readiness to implement the Ten Steps arranged by the two dimensions of ORC: Collective Efficacy and Collective Commitment.

Factors	Hospital A	Hospital B	Hospital C	Hospital D	Hospital E	Hospital F	Hospital G	Hospital H
<i>Collective efficacy and collective commitment</i>								
Staff age/experience	◆	◆		◆	◆	◆	◆	◆
Perceptions of forcing versus supporting mothers	◆	◆		◆		◆	◆	◆
Perceptions of mothers' culture		◆	◆	◆		◆	◆	◆
Reliance on lactation consultants (IBCLCs)	◆		◆	◆		◆	◆	◆
<i>Collective commitment</i>								
Night versus day shift	◆	◆	◆	◆	◆	◆	◆	
Management support					◆	◆	◆	
Change champions	◆				◆	◆	◆	◆
Observing mothers utilising breastfeeding support	◆			◆	◆	◆		
<i>Collective efficacy</i>								
Staffing	◆	◆	◆	◆		◆	◆	
Training	◆			◆		◆	◆	
Visitors in hospital room	◆			◆			◆	

◆ Identifies factor identified by key informants at the specific hospital.

demonstrated how factors may positively and/or negatively impact commitment. Similarly, previous work suggests the idea that these factors may impact staff members' ability to practice the Step. Applying the theoretical framework of ORC allowed for an exploration and understanding of how these factors may serve to amplify or dampen collective efficacy and collective commitment for pursuing the Steps.

#### Study strengths and limitations

This study has the strength of using a multisite approach to studying the theory of ORC as it relates to implementing the Ten Steps. The study design allows for comparisons across hospitals with differing characteristics.

There are also limitations with this study. First, having only eight hospitals is a limitation on the ability to generalise these findings to other settings. The research team attempted to address this limitation by selecting a variety of hospitals representing various demographics. Second, those interviewed knew that the research team was part of an effort to implement the Ten Steps. Thus the data might have been subject to social desirability bias in that respondents may have provided information they perceived the interviewers would want to hear. Third, the hospitals involved had already considered Ten Step implementation to a greater or lesser degree; the findings may not be generalisable to hospitals not so engaged. Finally, while other hospitals may identify similar factors, their experiences may not be identical.

#### Conclusions and implications

Practicing the Ten Steps requires collaboration among hospital staff members across multiple disciplines in various units and administrative levels; nurse midwives can serve as integral and influential members in this collaboration and lead efforts to implement evidence-based maternity care. Hospitals seeking to implement the Steps may benefit from conducting a context-specific baseline assessment of organisational-level factors impacting collective efficacy and/or collective commitment to achieving the Steps. The factors identified herein may serve as a starting point; however, factors may vary across contexts. After factors are identified, multilevel, context-specific strategies can be developed that target the hospital's specific factors to increase commitment and efficacy. Interview data suggested that such strategies could include, among other things, (a) skills-based, hands-on training highlighting benefits for mothers, staff, and the hospital, and (b) addressing context-specific misconceptions about the Steps. However, strategies that may be successful in one context may not transfer elsewhere. Future research is needed to identify strategies that are successful at increasing collective commitment and collective efficacy across a variety of contexts. As leaders and potential change agents, nurse midwives can play a vital role both in assessments to identify factors and in the development of context-specific strategies to address identified factors.

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#### References

- Abrahams, S.W., Lobbok, M.H., 2009. Exploring the impact of the baby-friendly hospital initiative on trends in exclusive breastfeeding. *International Breastfeeding Journal* 4, 1–6, <http://dx.doi.org/10.1186/1746-4358-4-11>.
- Amatayakul, M., 2005. EHR? Assess readiness first. *Healthcare Financial Management* 59, 112–113.
- Bandura, A., 1989. Human agency in social cognitive theory. *American Psychologist* 44, 1175–1184.
- Bartick, M., Edwards, R.A., Walker, M., Jenkins, L., 2010. The Massachusetts baby-friendly collaborative: lessons learned from an innovation to foster implementation of best practices. *Journal of Human Lactation* 26, 405–411.
- Bartick, M., Reinhold, A., 2010. The burden of suboptimal breastfeeding in the United States: a pediatric cost analysis. *Pediatrics* 125, E1048–E1056.
- Bartick, M., Stuebe, A., Shealy, K.R., Walker, M., Grummer-Strawn, L.M., 2009. Closing the quality gap: promoting evidence-based breastfeeding care in the hospital. *Pediatrics* 124, E793–E802, <http://dx.doi.org/10.1542/peds.2009-0430>.
- Centers for Disease Control and Prevention, 2012. Breastfeeding: Data and Statistics: mpinc results|dnpc|cdc. <<http://www.cdc.gov/breastfeeding/data/mpinc/results.htm>> (last accessed 11 July 2012).
- Clarke, L.L., Deutsch, M.J., 1997. Becoming baby-friendly. One hospital's journey to total quality care. *AWHONN Lifelines* 1, 30–37, <http://dx.doi.org/10.1111/j.1552-6356.1997.tb01400.x>.
- Creswell, J.W., 2007. *Qualitative Inquiry and Research Design: Choosing among Five Approaches*, 2nd edn. Sage Publications, Inc, Thousand Oaks, CA, US.
- Crivelli-Kovach, A., Chung, E.K., 2011. An evaluation of hospital breastfeeding policies in the Philadelphia metropolitan area 1994–2009: a comparison with the baby-friendly hospital initiative Ten Steps. *Breastfeeding Medicine* 6, 77–84.
- DiGirolamo, A.M., Grummer-Strawn, L.M., Fein, S.B., 2008. Effect of maternity-care practices on breastfeeding. *Pediatrics* 122, S43–S49, <http://dx.doi.org/10.1542/peds.2008-1315e>.
- Eccles, M., Grimshaw, J., Walker, A., Johnston, M., Pitts, N., 2005. Changing the behavior of healthcare professionals: the use of theory in promoting the uptake of research findings. *Journal of Clinical Epidemiology* 58, 107–112.
- Forman, J., Creswell, J.W., Damschroder, L., Kowalski, C.P., Krein, S.L., 2008. Qualitative research methods: key features and insights gained from use in infection prevention research. *American Journal of Infection Control* 36, 764–771, <http://dx.doi.org/10.1016/j.ajic.2008.03.010>.
- Grol, R.P.T.M., Bosch, M.C., Hulscher, M.E.J.L., Eccles, M.P., Wensing, M., 2007. Planning and studying improvement in patient care: the use of theoretical perspectives. *Milbank Quarterly* 85, 93–138, <http://dx.doi.org/10.1111/j.1468-0009.2007.00478.x>.
- Hahn, J., 2005. Building a breastfeeding center of excellence: a community hospital's experience with baby-friendly. *AWHONN Lifelines* 9, 306–311, <http://dx.doi.org/10.1177/1091592305280915>.
- Ip, S., Chung, M., Raman, G., et al., 2007. Breastfeeding and Maternal and Infant Health Outcomes in Developed Countries. AHRQ Publication No. 07-E007 1-186, <<http://www.ncbi.nlm.nih.gov/books/NBK38337/>> (last accessed 11 July 2012).
- Jones, G., Steketee, R.W., Black, R.E., Bhutta, Z.A., Morris, S.S., 2003. How many child deaths can we prevent this year? *Lancet* 362, 65–71, [http://dx.doi.org/10.1016/S0140-6736\(03\)13811-1](http://dx.doi.org/10.1016/S0140-6736(03)13811-1).
- Kovach, A.C., 2002. A 5-year follow-up study of hospital breastfeeding policies in the Philadelphia area: a comparison with the ten steps. *Journal of Human Lactation* 18, 144–154.
- Kramer, M.S., Chalmers, B., Hodnett, E.D., et al., 2001. Promotion of breastfeeding intervention trial (PROBIT)—a randomized trial in the Republic of Belarus. *Journal of the American Medical Association* 285, 413–420, <http://dx.doi.org/10.1001/jama.285.4.413>.
- Lehman, W.E.K., Greener, J.M., Simpson, D.D., 2002. Assessing organizational readiness for change. *Journal of Substance Abuse Treatment* 22, 197–209, [http://dx.doi.org/10.1016/S0740-5472\(02\)00233-7](http://dx.doi.org/10.1016/S0740-5472(02)00233-7).
- McClure, C.K., Catov, J., Ness, R., Schwarz, E.B., 2012. Maternal visceral adiposity by consistency of lactation. *Maternal and Child Health Journal* 16, 316–321, <http://dx.doi.org/10.1007/s10995-011-0758-0>.
- Merewood, A., Philipp, B.L., 2000. Becoming baby-friendly: overcoming the issue of accepting free formula. *Journal of Human Lactation* 16, 279–282, <http://dx.doi.org/10.1177/089033440001600402>.
- Merewood, A., Philipp, B.L., 2001. Implementing change: becoming baby-friendly in an inner city hospital. *Birth-Issues in Perinatal Care* 28, 36–40, <http://dx.doi.org/10.1046/j.1523-536x.2001.00036.x>.
- Muhr, T., 2009. atlas.ti: the knowledge workbench. 6.0.23.
- Nickel, N.C., Lobbok, M.H., Hudgens, M., Daniels, J., 2013. The extent that noncompliance with the Ten Steps to successful breastfeeding impacts breastfeeding duration. *Journal of Human Lactation* 29, 60–71, <http://dx.doi.org/10.1177/0890334412464695>.

- Ram, K.T., Bobby, P., Hailpern, S.M., et al., 2008. Duration of lactation is associated with lower prevalence of the metabolic syndrome in midlife—SWAN, the study of women's health across the nation. *American Journal of Obstetrics and Gynecology* 198, 268.e1–268.e6, <http://dx.doi.org/10.1016/j.ajog.2007.11.044>.
- Reddin, E., Pincombe, J., Darbyshire, P., 2007. Passive resistance: early experiences of midwifery students/graduates and the baby friendly health initiative 10 steps to successful breastfeeding. *Women Birth* 20, 71–76.
- Rubin, H.J., Rubin, I.S., 2005. *Qualitative Interviewing: The Art of Hearing Data*. Sage Publications, Inc., Thousand Oaks (CA).
- Sanson-Fisher, R.W., Grimshaw, J.M., Eccles, M.P., 2004. The science of changing providers' behaviour: the missing link in evidence-based practice. *Medical Journal of Australia* 180, 205–206.
- Schmied V., Gribble K., Sheehan A., Taylor, C., Dykes F.C., 2011. Ten steps or climbing a mountain: a study of Australian health professionals' perceptions of implementing the baby friendly health initiative to protect, promote and support breastfeeding 11, 208–218, <http://dx.doi.org/10.1186/1472-6963-11-208>.
- Schwarz, E.B., Brown, J.S., Creasman, J.M., et al., 2008a. Lactation and maternal risk of type 2 diabetes: a population-based study. *American Journal of Medicine* 123, 863.e1–863.e6, <http://dx.doi.org/10.1016/j.amjmed.2010.03.016>.
- Schwarz, E.B., McClure, C.K., Tepper, P.G., et al., 2010b. Lactation and maternal measures of subclinical cardiovascular disease. *Obstetrics and Gynecology* 115, 41–48, <http://dx.doi.org/10.1097/AOG.0b013e3181c5512a>.
- Semenic, S., Childerhose, J.E., Lauziere, J., Groleau, D., 2012. Barriers, facilitators, and recommendations related to implementing the baby-friendly initiative (BFI). *Journal of Human Lactation* 28, 317–334, <http://dx.doi.org/10.1177/0890334412445195>.
- Stuebe, A.M., Schwarz, E.B., Grewen, K., et al., 2011. Duration of lactation and incidence of maternal hypertension: a longitudinal cohort study. *American Journal of Epidemiology* 174, 1147–1158, <http://dx.doi.org/10.1093/aje/kwr227>.
- Stuebe, A.M., Willett, W.C., Xue, F., Michels, K.B., 2009. Lactation and incidence of premenopausal breast cancer a longitudinal study. *Archives of Internal Medicine* 169, 1364–1371, <http://dx.doi.org/10.1001/archinternmed.2009.231>.
- Taylor, D.T., 2009. aap endorses who/unicef ten steps to successful breastfeeding. <http://www.aap.org/breastfeeding/files/pdf/TenStepsWosig.pdf> (last accessed 11 July 2012).
- Taylor, C., Gribble, K., Sheehan, A., Schmied, V., Dykes, F., 2011. Staff perceptions and experiences of implementing the baby friendly initiative in neonatal intensive care units in Australia. *JOGNN—Journal of Obstetric Gynecologic and Neonatal Nursing* 40, 25–34.
- Taylor, E.C., Nickel, N.C., Lobbok, M.H., 2012. Implementing the ten steps for successful breastfeeding in hospitals serving low-wealth patients. *American Journal of Public Health*, <http://dx.doi.org/10.2105/AJPH.2012.300769>.
- Thomson, G., Bilson, A., Dykes, F., 2012. Implementing the WHO/UNICEF baby friendly initiative in the community: a 'hearts and minds' approach. *Midwifery* 28, 258–264.
- Thomson, G., Dykes, F., 2011. Women's sense of coherence related to their infant feeding experiences. *Maternal and Child Nutrition* 7, 160–174.
- US Department of Health and Human Services, 2011. The Surgeon General's Call To Action To Support Breastfeeding. a-89, <http://www.surgeongeneral.gov/topics/breastfeeding/calltoactiontosupportbreastfeeding.pdf> (last accessed 11 July 2011).
- Weddig, J., Baker, S.S., Auld, G., 2011. Perspectives of hospital-based nurses on breastfeeding initiation best practices. *Journal of Obstetric Gynecologic and Neonatal Nursing* 40, 166–178, <http://dx.doi.org/10.1111/j.1552-6909.2011.01232.x>.
- Weiner, B.J., 2009. A theory of organizational readiness for change. *Implementation Science*, 4, <http://dx.doi.org/10.1186/1748-5908-4-67>.
- Weiner, B.J., Amick, H., Lee, S.Y.D., 2008. Conceptualization and measurement of organizational readiness for change—a review of the literature in health services research and other fields. *Medical Care Research and Review* 65, 379–436, <http://dx.doi.org/10.1177/1077558708317802>.
- Weiner, B.J., Lewis, M.A., Linnan, L.A., 2009. Using organization theory to understand the determinants of effective implementation of worksite health promotion programs. *Health Education Research* 24, 292–305, <http://dx.doi.org/10.1093/her/cyn019>.
- Wood, R., Bandura, A., 1989. Social cognitive theory of organizational management. *Academy of Management Review* 14, 361–384, <http://dx.doi.org/10.5465/AMR.1989.4279067>.
- World Health Organization and UNICEF, 1989. Protecting, Promoting and Supporting Breast-feeding: The Special Role of Maternity Services: A Joint WHO/UNICEF Statement. 32. <http://whqlibdoc.who.int/publications/9241561300.pdf>.
- World Health Organization and UNICEF, 2009. Baby-Friendly Hospital Initiative: Revised, Updated and Expanded For Integrated Care. <http://www.who.int/nutrition/publications/infantfeeding/9789241594950/en/index.html> (last accessed 11 July 2012).
- Wright, A., Rice, S., Wells, S., 1996. Changing hospital practices to increase the duration of breastfeeding. *Pediatrics* 97, 669–675.