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Creating Environments to Support Breastfeeding: The Challenges and Facilitators of Policy Development in Hospitals, Clinics, Early Care and Education, and Worksites

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Abstract *Objectives* Supportive organizational breastfeeding policies can establish enabling environments for breastfeeding. In this qualitative study we identify facilitators and barriers to the development, adoption, and implementation of supportive breastfeeding policies and practices in four influential sectors for breastfeeding women: hospitals, clinics, early care and education settings, and worksites. *Methods* We interviewed 125 individuals representing 110 organizations in Washington State about their breastfeeding policy development and implementation process between August 2014 and February 2015. Greenhalgh's diffusion of innovations framework guided the interviews and qualitative analysis. *Results* Breastfeeding policy facilitators across the sectors include national and state laws and regulations, performance tracking requirements, and an increasingly supportive sociopolitical climate; barriers include limited resources and appreciation about the need for breastfeeding policies, and certain organizational characteristics such as workforce age. Despite broad support for breastfeeding, organizations differed on perceptions about the usefulness of written breastfeeding policies. Personal breastfeeding experiences of policy makers and staff affect organizational breastfeeding policies and practices. *Conclusions for Practice* Supportive organizational systems and environments are built through effective policy development processes; public health can support breastfeeding policy development and assure a coordinated continuum of care by leveraging federal health care policy requirements, building networks to support training and collaboration, and disseminating strategies that reflect the personal nature of breastfeeding.

Keywords Breastfeeding policy · Written policy development · Implementation · Maternal health · Qualitative

Significance

What is already known about the topic? Exclusive breastfeeding rates are suboptimal, and many families face environmental barriers. Supportive organizational policies can establish an enabling environment for breastfeeding.

What this study adds? Little is known about the facilitators and barriers to breastfeeding policies, especially in non-healthcare settings. This study suggests that leveraging existing national policies, building networks to support training and collaboration, and disseminating strategies that reflect the personal nature of breastfeeding can help facilitate supportive breastfeeding environments in hospitals, clinics, early care and education settings, and worksites.

Objectives

National and international agencies have identified breastfeeding as a public health priority that can positively affect health outcomes and benefit infants, women, families, and communities (U.S. Dept of Health and Human Services [HHS] 2011; World Health Organization [WHO] &

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UNICEF 2003; American Public Health Association 2013; American Academy of Pediatrics 2012). According to the Academy of Pediatrics, infants who are exclusively breastfed for the first 6 months of life have significantly lower rates of disease and death (2013). In addition, recent analyses estimate that if 90% of infants were breastfed according to medical recommendations, 3340 infant and maternal annual deaths could be prevented and more than $3.0 billion in annual medical care costs saved each year (Bartick et al. 2016). Nonetheless, only 22.3% of mothers in the US are exclusively breastfeeding at 6 months (Centers for Disease Control and Prevention 2016). Many women face barriers to breastfeeding; poor breastfeeding environments where women work, live, and obtain health care are among the biggest barriers.

Supportive breastfeeding policies in a new mother's organizational settings—including, hospitals, clinics, early care and education (ECE) settings, and worksites—can help address environmental barriers to breastfeeding initiation and exclusive breastfeeding in the first 6 months of life (Rollins et al. 2016). Hospital policies, such as free formula samples (Thurston et al. 2013) and mother-infant separation (Righard and Alade 1990), can negatively influence breastfeeding at crucial moments early in life. Community health clinics and services can play a key role in ensuring breastfeeding success after hospital discharge (Chung et al. 2008). Once a woman returns to work, ECE (Batan et al. 2013) and worksite policies, such as providing lactation rooms and breaks for pumping (Dabritz et al. 2009), increase the likelihood of continued breastfeeding. However, little is known about how these policies can best be developed, adopted, and implemented.

The purpose of the study was to identify the facilitators and barriers to the development, adoption, and implementation of supportive breastfeeding policies and practices in four sectors breastfeeding women interact with in Washington State: hospitals, clinics, ECE settings, and worksites. Study findings can inform the actions taken by public health agencies and practitioners who seek to increase breastfeeding rates through supportive breastfeeding policies and practices in organizations.

Methods

The Washington State Department of Health (WA DOH) breastfeeding workgroup and key stakeholders from each sector advised our research team, reviewing the study design and interview guide, facilitating recruitment of study participants, and providing reactions to key study findings. The consolidated criteria for reporting qualitative research (COREQ; Tong et al. 2007) and Greenhalgh's diffusion of innovations framework (Greenhalgh et al. 2004) informed our study design. Greenhalgh's framework is based on a systematic literature review to identify influences of diffusion, dissemination, and implementation of innovations in health service delivery organizations.

Data Collection

We conducted semi-structured interviews from August 2014 through January 2015. The baby-friendly hospital initiative's (BFHI) *Ten Steps to Successful Breastfeeding* (WHO & UNICEF 1992), and the WA DOH's ten steps for worksites (U.S. HHS 2008), ECE settings (American Academy of Pediatrics 2014), and clinics (Schwartz et al. 2015) informed the interview guide. We asked interviewees about key influences from Greenhalgh's framework to explore factors that helped and hindered breastfeeding policy adoption and implementation (Moullin et al. 2015).

We recruited participants through purposive sampling, targeting individuals who are knowledgeable about breastfeeding policies in their respective sectors and organizations (Miles et al. 2014). Potential participants included hospital birth unit directors, community clinic breastfeeding coordinators, worksite human resource managers, ECE program directors, owners, or staff, state agency staff, and breastfeeding coalition members. Inclusion criteria included representing at least one of our four target sectors (hospitals, clinics, ECE settings, or worksites), or participating in a breastfeeding coalition that worked with one of the four sectors. Study advisory group members disseminated a call for potential participants within their respective sectors via email; interested participants contacted the research team to schedule an interview. We continued participant recruitment until reaching our target of 130 interviewees (20–30 per sector), which we anticipated would provide data saturation based on previous work (Freney et al. 2016; Johnson et al. 2015). Trained interviewers (V.B., L.S., K.F.) conducted phone interviews, obtaining verbal consent prior to each interview. Interviews lasted 45 min; we offered participants a $35 gift card for participation. Post data collection we excluded five state agency interviewees who did not address one of the four sectors; our final sample includes 125 participants. The University of Washington IRB determined this study exempt (May 2014).

Data Analysis

Interviews were recorded with permission and professionally transcribed verbatim (Proof Positive Transcriptions, Garland, TX). We used qualitative data analysis software (Atlas.ti Scientific Software Development GmbH) to support coding and analysis. From a sample of 16 transcripts, research team members (V.B., L.S., L.P.W., D.J., J.O.) used

thematic analysis to develop deductive codes based on the Greenhalgh framework (Hsieh and Shannon 2005). Two or more independent coders used the initial code list to pilot-code 10% of the interviews across sectors, reconcile codes, revise the code list, and create the final coding guide. We used recommendations by Campbell et al. (2013) to improve our coding guide's discriminant capability. Using the final coding guide, we double-coded transcripts until we reached an acceptable level of intercoder agreement - which requires that at least two coders reconcile through discussion any coding discrepancies that arise for the same unit of text. After double-coding one-third of transcripts, we single coded the remaining transcripts and continued to discuss any coding questions until consensus was reached.

Researchers read and summarized coded text to identify themes, facilitators, and barriers to breastfeeding policy adoption and implementation. We used our findings summaries to create sector-specific diagrams of key themes based on the Greenhalgh framework, and identify facilitators and barriers. We shared overarching themes with interviewees to confirm findings.

Results

Our sample included 125 interviewees that represented 110 different organizations across hospitals, clinics, ECE settings, worksites, state agencies, and breastfeeding coalitions. Participants were predominately white and female—representative of individuals doing breastfeeding work in Washington State. The majority of Washington's population is in the North Western Region; our sample has strong geographic statewide representation. See Table 1 for participant characteristics. Additionally, interviewees reported that their organizations serve a variety of populations regarding ethnicity and socio-economic status.

Table 1 Study participant and organization characteristics, breastfeeding policy development interviews, Washington State

Category	# (%)
Participant characteristics (n = 125)	
Sector	
Worksites	34 (27)
ECE settings	30 (24)
Child care centers	16 (13)
Family home child cares	14 (11)
Hospitals	20 (16)
Community clinics	19 (15)
Breastfeeding coalitions	22 (18)
Position years	
<1	9 (7)
1–5	52 (42)
6–10	29 (23)
11–20	25 (20)
21+	10 (8)
Age[a]	
20–35	21 (17)
36–45	29 (23)
46–55	35 (28)
56+	39 (31)
Gender	
M	11 (9)
F	114 (91)
Race/ethnicity[b]	
White	108 (86)
Non-white	17 (14)
Hispanic	7 (6)
Organization characteristics (n = 110)	
Urban/rural	
Urban	66 (60)
Rural	44 (40)
WA State Department of Social and Health Services Region	
Eastern (region 1)	25 (23)
North Western (region 2)	51 (46)
South Western (region 3)	32 (29)

[a] One participant elected not to report their age

[b] Categories are not mutually exclusive

Ten Steps for Successful Breastfeeding

We asked interviewees from the four sectors whether or not their organization met each of ten steps for successful breastfeeding applicable in their setting. Figure 1 outlines all steps, and the percentage of organizations in our sample reporting meeting each step (note that breastfeeding coalition and state agency interviewees did not provide organizational ten step data). These data show wide variance in implementation. While most hospitals in our sample reported having written policies, hospitals reported different levels of implementation of certain evidence-based best practices (e.g., providing pacifiers, training staff to implement written policies) as evidenced in Fig. 1. Fewer worksites and clinics reported formal written policies, but many reported implementing less formal supportive practices. Interviewees commented that some steps had not occurred to them as something they could do to support breastfeeding, such as providing a list of community breastfeeding resources.

Facilitators and Barriers to Breastfeeding Policy Adoption and Implementation

In our analysis we identified several perceived facilitators and barriers that influence breastfeeding policy

Fig. 1 Percentages of sample organizations self-reporting meeting ten steps for successful breastfeeding (BF) by sector, Washington State. *Questions were only applicable to Child Care Centers. These charts display the ten steps for each of the sectors and the percentage of organizations from our sample in Washington State that reported meeting them. The ten steps come from the baby friendly hospital initiative's (BFHI) *Ten steps to successful breastfeeding* (WHO & UNICEF 1992), and the WA DOH's ten steps for worksites (U.S. HHS 2008), ECE settings (American Academy of Pediatrics 2014), and clinics (Schwartz et al. 2015). The charts illustrate inconsistent implementation across the ten steps and between sectors. Interviewees from breastfeeding coalitions and state agencies did not provide implementation data on the ten steps and are not included in this figure

development, adoption, and implementation. This paper presents the influencing factors that cut across all sectors: hospitals, clinics, ECE settings, and worksites. The five Greenhalgh framework influences (Greenhalgh et al. 2004) that most affect the implementation of supportive breastfeeding policies include outer context, system antecedents, readiness, the innovation itself, and characteristics of the adopter. Figure 2 provides definitions of these influences; Table 2 provides illustrative quotes.

Outer Context

Federal and state laws, policies, and performance measures are strong incentives for developing and implementing supportive breastfeeding policies. Participants said that legislation, such as the Affordable Care Act, brings awareness and motivates action, especially in non-health related worksites. Similarly, state licensing requirements for ECE settings directly affect practices. Interviewees commented that required or incentivized performance-tracking by organizations, like The Joint Commission for hospitals, positively influenced practices and priorities. Organizational leadership and administrators are particularly motivated by laws and policies, while staff are motivated by tracking performance and seeing themselves excel.

Participants perceived the sociopolitical climate and national culture shifting to more fully support breastfeeding. Many interviewees have noticed a more supportive climate for breastfeeding than in the past, both in society overall and within the four sectors. Awareness, acceptance, and motivation to promote breastfeeding in communities, workplaces, and families has increased.

System Antecedents for Innovation

Training and education about evidenced-based breastfeeding practices and policies is needed. Staff and managers expressed a desire for training and education to develop skills and confidence to implement current and future breastfeeding policies and increase the number of staff capable of effectively supporting breastfeeding

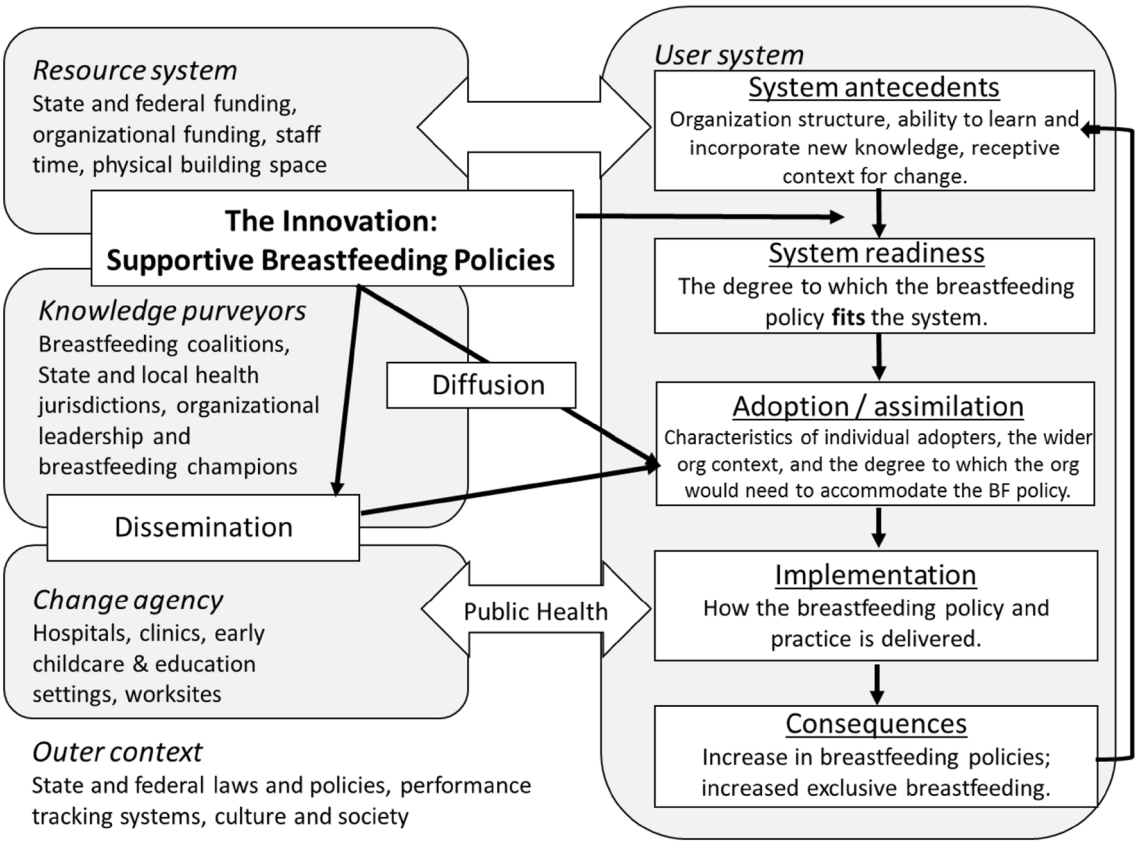

Fig. 2 Breastfeeding policy adoption and implementation process, adapted from Greenhalgh diffusion of innovations framework. This figure defines the influences outlined in Greenhalgh et al.'s diffusion of innovations framework (2004) in the context of breastfeeding policy adoption. This figure can be used to help understand how different influences may relate to each other

women. Interviewees felt that many people were not familiar with breastfeeding best-practices, and identified a need for system-wide education for leadership, administrators, and staff. This theme was especially strong for hospitals and clinics, though all sectors felt that informing and educating all staff about the benefits of breastfeeding and the skills to implement policies, was necessary. Barriers included lack of time and funding. Trainings that provided continuing education credits incentivized staff participation.

Organizations have limited financial resources to dedicate towards the development and implementation of supportive breastfeeding policies. Interviewees reported that a lack of resources leads to the de-prioritization of breastfeeding policies and practices. Interviewees described the need for resources to adequately train staff, meet with families (breastfeeding support often takes time), develop policies, and provide space for expressing breast milk; some organizations made substantial progress in implementing breastfeeding policies with new or dedicated funding. Funding allowed hospitals to better coordinate baby-friendly certification efforts, clinic staff to attend breastfeeding workshops, and advocates to promote breastfeeding friendly worksites.

Organizational structure strongly affects the ability to develop and implement supportive breastfeeding policies. Participants described how an organization's size, structure, and mission affects its priorities and allocation of resources to support breastfeeding. In our sample, health-related organizations described greater networking and exchange of evidence-based information than non-health related organizations. Larger organizations and organizations with many young staff were more likely to have developed and implemented supportive practices when compared to smaller organizations, or organizations with a workforce predominately older than childbearing age. Association with a larger network, such as a corporate child care system, a hospital system, or county public health system, increased access to breastfeeding training, funding, and support. Organizational structure also influenced the players and process of developing breastfeeding policies; for example, in ECE settings not only were owners or directors highly involved, but parents played a significant role in influencing policy development.

Table 2 Participant quotes on factors influencing implementation of breastfeeding policies and practices at hospitals, clinics, ECE settings, and worksites, Washington State

Influencing factor	Quotes
Outer context	
Participants perceived federal and state laws, policies, and performance measures as strong incentives for developing and implementing supportive breastfeeding policies	"I think that every JCAHO measure is at the very top of the department, the relevant departments' priority list and probably everything else falls under that. I think that will be what it takes for everyone to feel like breastfeeding is super important." -Clinic "Before [breastfeeding policies] became part of the Affordable Care Act, it wasn't even a ping on the radar." -Worksite "That law went into effect in March of 2010 for worksite support and we hadn't had anything. There was more buy-in with that… you just had to put in what the law said." -Clinic
Participants perceived the sociopolitical climate and national culture shifting to more fully support breastfeeding	"I think that [breastfeeding]'s just becoming more accepted… it's becoming more popular with the more convenient it is and the easier it is to do." -Worksite "I think that we're seeing more people now wanting like the natural way…" -Clinic
System antecedents for innovation	
Participants said that organizations have limited financial resources to dedicate towards the development and implementation of supportive breastfeeding policies	"Money ... Honestly, I think that was the most helpful thing, because it creates a person to help take charge of this particular project [applying to be Baby-Friendly]. It's a large project and it involved staff training, which costs money … I think that is the biggest barrier for a lot of hospitals is to train the nurses, to pay for them…" -Hospital "Yes, if we had a lot more money, we could certainly set up a private and well set up lactation room in every site. That's just an example of what the extra funding would do." -Clinic "Unless you have the education dollars given to get the staff off for training, you aren't going to get much training done." -Hospital
Participants identified a need for training and education staff about evidenced-based breastfeeding practices and policies	"I think one of the biggest challenges that we have is that our staff is just not well trained in this area. That has resulted in everybody saying different things to the patients. That's the biggest complaint that I get is every nurse that comes in here tells me to do something different. I'm trying to work with my managers to come up with some kind of a training option that will help get people on the same page in regards to that." -Hospital "I think that it would be fair to say that when people aren't provided the appropriate education to support the policies that you might consider their, for lack of a better word, ignorance on the topic…I don't think that they're not onboard because they don't have the value for breastfeeding. I think they're not onboard because they haven't received the appropriate training." -Hospital "We are still in a situation where a majority of our physicians and nurses and administrative people and what not in their formal education there has been very, very little about breastfeeding and about how to manage all of this stuff—very, very little education." -Hospital
Participants described how organizational structure strongly affected their ability to develop and implement supportive breastfeeding policies	"We do have, I mean, as far as our workforce, we've got over 2000 employees here scattered around Eastern Washington. A good portion of that 2000 are females who are of childbearing and breastfeeding age, and so we have to be cognizant and aware that that's part of the population that we need to make sure that we are on a positive side with, because they help our organization to prosper and to succeed." -Worksite "Again, like having just done [breastfeeding policies] at the hospital, my guess is that we are under the umbrella of the hospital's policy." -Clinic "[County WIC Nutrition Coordinators] will bring new policies. Basically, they get their directions from state WIC down in Olympia. They get their directions from the federal WIC, and so there is not a lot that you can muck around with. But when the policies actually get put out…we can do a few things to tweak it to work with our clinic." -Clinic

Table 2 (continued)

Influencing factor	Quotes
Readiness and innovation	
Participants from all sectors expressed broad support for breastfeeding practices and a desire to support breastfeeding women; participants expressed less stated support for breastfeeding policies	"Well, we have a large organization. It's definitely got a lot of opinions. Overall, the attitude towards [breastfeeding practices], from what I've seen, has been positive and accepting and encouraging." -Worksite "I think that [breastfeeding policies] are critical, again because it validates the importance of breastfeeding as a choice for families. Just like we have choices with other policies at work about what we wear, you know, they have dress code policies and where you park your car policies, but this is something that is a lifelong impact on families… I think it's critical to have one." -Coalition member (in reference to a hospital) "Policies I don't think are good; guidelines I think are probably more useful, because policies say that you have to do it. As long as healthcare is an art as well as a science base, then you need to have the flexibility to meet each child's needs. But in order to go away from a policy, you have to be prepared to spend time defending it. You can have protocols." -Clinic
Adopter	
Participants felt that breastfeeding is a personal, emotional issue for many people	"I breastfed [my son] for a year just because it was such an important thing for him… I think that had a huge—my personal journey with breastfeeding—it had a huge impact on my comfort level with breastfeeding as well as supporting that process." -Child Care Center "I do tours in our center. Anybody I know that's having a baby, I definitely would encourage them to [breastfeed] and give them the benefits of it. I know that with my daughter, it's been a great bonding time and everything. I share my experience to encourage them." -Child Care Center
Ensuring that families have a choice regarding infant feeding is important to participants in all sectors	"…Mothers in general live in a world full of guilt. We have a lot of guilt about whether or not we're making the best choice for our children… The last thing that we want to do is guilt our moms into feeling like they have no other choice but to breastfeed, or they're a failure as a mother. I think that it's important to be careful how far you push it… I'm supportive of supporting the mom's choice after giving her all of the information and education to make an informed decision." -Hospital "I don't want any mom to feel bad for using formula." -Clinic "Oh, I think if [breastfeeding] is what the mom chooses to do, it's wonderful. It's the best thing for the baby, and we encourage breastfeeding… but it is the mother's decision. That's something that we try to establish antepartum… If they choose to bottle-feed, we don't push breastfeeding. I mean, we try to tell them, you know, breastfeeding is good, but they have their choices. If they choose to bottle-feed, we don't force breastfeeding on anybody." -Hospital

Readiness and Innovation

Participants from all sectors expressed broad support for breastfeeding practices and a desire to support breastfeeding women; participants expressed less stated support for breastfeeding policies. Nearly all interviewees said they would support women to breastfeed. Some drew a distinction between supporting women to breastfeed and creating written policies for their organization. Some interviewees from ECE family homes, worksites, and clinics felt their organization could have strong breastfeeding practices without formal written policies. While many interviewees felt policies provided clear expectations and guidelines for organizations, they acknowledged that having a breastfeeding policy did not necessarily mean that best-practices would be implemented. Perceived usefulness of written breastfeeding policies varied by sector; hospitals and clinics were the most likely to perceive a positive benefit of written policies.

Adopter

Breastfeeding is a personal, emotional issue for many people. Participants in all sectors and roles described how

staff and clients' personal experiences with breastfeeding influenced their acceptance of, and readiness to develop and implement supportive breastfeeding policies and practices. Across all four sectors, interviewees shared their own personal experience with breastfeeding and how it affected their comfort level and support for breastfeeding policies. Individuals with positive personal experiences were often champions for and facilitated supportive policies and practices.

Participants in all sectors felt that families should have a choice regarding infant feeding. Interviewees did not want to put undue pressure on women to breastfeed, but rather inform and enable women to have the choice to breastfeed. Interviewees expressed concern for practices or policies that did not allow flexibility for individual situations. Interviewees realized that feeding is a decision made by each family, but influenced by environmental and systems level factors. Many interviewees talked about the challenge to balance influencing a woman's choice to breastfeed while supporting all women's infant feeding choices.

Conclusions for Practice

Grimshaw et al. (2004) outlined a shift from focusing on the diffusion and dissemination of an innovation (i.e. breastfeeding policies) as reliant on individuals, to recognizing the organizational and systems level changes required to support the innovation. State and local public health departments have also experienced a shift from an individual to a policy and systems approach (Leeman et al. 2015). Supporting effective organizational breastfeeding policies falls within state and local health departments' scope of work and the ten essential public health services (Center for Disease Control and Prevention 2014).

Public health practitioners can apply Greenhalgh's framework (Fig. 1; Greenhalgh et al. 2004) to conceptualize the barriers and facilitators most likely to influence the development of breastfeeding and other nutrition policies. Specifically, the framework outlines what factors need to be in place to move organizations to policy implementation and routinization. For example, if external laws and policies mandate that hospitals, clinics, ECE settings, and worksites develop and implement supportive policies, they will likely be motivated to do so. Sectors will not be able to successfully implement policies without first providing staff with the practical training needed to carry out the practices, funding for training and staff time, or access to information about model breastfeeding policies. In addition, policy changes need to be made in concert with efforts to support increased readiness among staff (e.g., demonstrating the evidence-base of breastfeeding policies, incentivizing skills trainings with continuing education credits, creating open and communicative relationships across administration and staff, dedicating resources towards policy adoption).

Breastfeeding policies are unique. Organizations must acknowledge the personal nature of breastfeeding to effectively frame organizational breastfeeding policies and ensure staff and supervisors feel comfortable working with women around infant feeding choices. Health organizations can provide staff training on how to promote breastfeeding while maintaining family autonomy using counseling methods such as motivational interviewing. Additionally, ensuring the system antecedents are in place for implementing supportive breastfeeding policies requires understanding the demographics of an organization and how the innovation will affect staff; organizations with younger staff members will likely experience greater readiness, as will organizations that are health-oriented, have established breastfeeding knowledge-sharing networks, or have a mission grounded in evidence-based science. Given a thorough understanding of the system antecedents, public health practitioners can determine how to best frame the innovation in order to highlight its relative advantage and ensure organizational compatibility.

Health departments can use these findings as they apply the ten essential public health services (Center for Disease Control and Prevention 2014) to build a coordinated continuum of breastfeeding care across hospitals, clinics, ECE settings, and worksites. The ten services are part of the National Public Health Performance standards and describe the public health activities that health departments, public health systems, and communities should undertake. The services include: monitoring health status; informing, educating, and empowering people about health issues; mobilizing community partnerships; developing policies; linking people to and providing personal health care; assuring competent workforce; and evaluating services among others. Surveillance and monitoring of breastfeeding rates and breastfeeding policies motivates health care settings to improve their policies and practices. Education and empowerment about breastfeeding and the importance of breastfeeding policy facilitates effective policy development and supportive breastfeeding practices in institutions. Positive personal experiences with breastfeeding practices, especially for leaders and policy makers, help facilitate more supportive policies so that they, in turn, will create better environments for women. Furthermore, policies delivered in combination across sectors have the largest positive effect on breastfeeding rates, and subsequently health outcomes; working in concert, health system and community interventions have shown a 2.5 times increase in exclusive breastfeeding (Rollins et al. 2016). Public health can play an important role in connecting and mobilizing community partners; public health can serve as a link, connecting the resource system, knowledge purveyors, change agencies,

and outer context to the user system to develop supportive breastfeeding policies (see Fig. 2). Our recommendations echo previous calls for improved staff education to improve ten step implementation in hospitals and bridge hospital, family and community support, increase resources and training for ECE providers, and state policies and regulations to support breastfeeding (Whalen et al. 2015; Johnson et al. 2016; Benjamin-Neelon et al. 2015; Calloway et al. 2016). Table 3 summarizes recommendations.

Other studies have identified similar facilitators and barriers to implementing breastfeeding policies. Dennison et al. (2016) and Lennon & Willis (2017) both suggest that external laws and mandates for breastfeeding support facilitate organization breastfeeding policies. Using the Greenhalgh framework, Schmied et al. (2011) found that hospital staff held positive impressions of breastfeeding practices, but felt that policies could be too rigid and not account for individual needs. Similarly, Schmied et al. and this study both found variation in the implementation of policy-mandated practices, and that institutional priorities may not align with policy-mandated practices. Other Washington State studies (Schwartz et al. 2015; Johnson et al. 2015; Freney et al. 2016) also identified similar findings in health care settings that indicate a need for nurse and provider time to support new mothers, additional staff training, access to resources and technical assistance, supportive leadership, positive staff-management relationships, and data on breastfeeding outcomes. While interviewees did discuss cultural norms of specific populations served (i.e. Hispanic/Latinos) and ease of formula access through WIC, these concepts were not consistent barriers to policy implementation across all of the sectors and were not included as major themes (Ahluwalia et al. 2012). Our study is unique as it includes worksite and ECE settings, which experience some of the same facilitators and barriers as health care settings. While our study focuses on similarities between sectors, we identified that non-health related worksites and ECE settings relied more on outside mandates and laws to motivate change, had less access to evidence-based information and trainings, and may be more likely influenced by

Table 3 Steps that health departments can take to facilitate breastfeeding policy development in organizations

Outer context: support and advocate for state and federal laws; take advantage of existing laws and policies
1. Support state and federal policies that help families choose and continue breastfeeding
2. Support and participate in state and federal level monitoring and surveillance of breastfeeding supportive practices (e.g. CDC, Joint Commission, performance measures for the value-based purchasing of managed care health plans)
3. Leverage the Affordable Care Act (e.g. billable lactation services, tax-exempt hospital community health needs assessments, pump rentals, worksite lactation room mandates), Medicaid Transformation Waivers (e.g. population health improvement performance measures) and other existing mechanisms to assure access to lactation services and environments that promote breastfeeding
System antecedents: increase funding; provide trainings and education
4. Allocate federal funding (e.g., from CDC, MCHB, USDA, Medicaid Transformation Waivers, Child Care Development Block Grant, Child and Adult Care Food Program) for breastfeeding policy, systems and environment changes; empower sectors to carry out the recommended and required policies
5. Work with hospitals, clinics, and early care and education programs to assure breastfeeding support training and education for all staff and providers; dedicate funding to support education and training in these sectors
6. Coordinate with state and local breastfeeding coalitions to provide education and training, and to mobilize partnerships
Diffusion & dissemination: develop and maintain a breastfeeding policy knowledge-sharing network
7. Serve as a hub for breastfeeding policy knowledge, providing tools and resources that emphasize the benefits of strong breastfeeding policies to organizations across sectors
8. Develop communication and messages that frame successful breastfeeding as a result of supportive environments; expand messages beyond individual choice
9. Build communication and connections between health-oriented organizations and non-health organizations to share information and successes
10. Help worksites develop breastfeeding policies and connect them to other worksites who may have already developed policies
Innovation: identify and develop a continuum of care
11. Look for opportunities to develop and promote a breastfeeding continuum of care from hospitals, to clinics, to early care and educations settings, to worksites
Adopter: design strategies based on the knowledge that breastfeeding is personal but requires supportive environments
12. Acknowledge and understand the personal aspects of breastfeeding when advocating for, developing, and implementing breastfeeding policies
13. Provide staff and health care providers with tools, knowledge, and experience to comfortably and effectively communicate with families about breastfeeding (e.g. using motivational interviewing strategies)
14. Take advantage of key influencers who have had positive breastfeeding experiences; empower them to be champions of breastfeeding policies in their organizations

personal factors regarding breastfeeding support. Anderson et al. (2015) also found interpersonal dynamics and communication to either enhance or challenge breastfeeding support in worksites. Our study also identified specific opportunities for growth within each sector based on what ten steps organizations reported doing, such as worksites providing on-site child care and worksites and ECE settings providing breastfeeding community resources lists. Ongoing research is needed to understand the intended and unintended breastfeeding consequences of policy actions, and to evaluate innovative policy solutions for building communities where every family is able to breastfeed for as long as they choose.

Limitations restrict the generalizability of this study. Recruiting participants through our advisory group produced a sample of individuals already interacting within a supportive breastfeeding environment. The individuals we interviewed may have been inclined to support breastfeeding policies. The older age of our sample (with 40% <46 years of age) most likely reflects our effort to target director or manager type positions that would be knowledgeable about the policy process in their respective organizations. Additionally, there may be underestimation or selection bias among interviewees; only 170 out of 970 individuals emailed with information about the study expressed interest in participating. We interviewed 130 of the 170 interested participants due to difficulty scheduling interviews, having achieved our planned sample size, and reaching saturation; we excluded five of the 130 interviewees from this analysis as they did not meet inclusion criteria. Regarding ten step implementation, all responses were self-reported. Finally, our worksite sample did not include service industry organizations, and with the exception of hospitals and clinics, our sample does not include many shift-work worksites (e.g., restaurants, schools, manufacturing). We anticipate shift-work and service industry worksites could face different challenges than those industries included in our sample (Rea et al. 1999).

In conclusion, rates of exclusive breastfeeding are most likely to increase with the kinds of systems and supportive organizational environments that are built through effective policy development processes; knowledge about these processes can be applied across health, ECE, and work settings to facilitate adoption and implementation of policies that make it easier for all women to breastfeed.

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