POPULATIONS AT RISK ACROSS THE LIFESPAN: CASE STUDIES



A diaper bank and home visiting partnership: Initial exploration of research and policy questions

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Funding information

Edlow Family Foundation; W.K. Kellogg Foundation; Donaghue Foundation; Grossman Family Foundation; The FAR Fund; Child Welfare Fund, NIH/NICHD (RO1HD057947) and NIH/CTSA (UL1RR024139) Eileen Condon is supported by NIH/NINR (F31NR016385) Monica Ordway is supported by NIH/NINR (K23NR16277)

Abstract

Objectives: The cost of diapering an infant can place a significant financial strain on families living in poverty. Partnerships between diaper banks and home visiting programs for young families may offer an innovative solution to expanding the reach and impact of diaper banks in low-income communities. The purpose of this pilot study was to uncover preliminary information about the functions of diaper distribution through home visiting programs, and to inform future research and policy questions regarding diaper distribution to families in need.

Design and Sample: In this descriptive qualitative pilot study, semi-structured interviews were conducted with 6 home visitors from *Minding the Baby*[®] (MTB), a home visiting intervention for young parents. MTB clinicians routinely distribute diapers in partnership with The Diaper Bank in Connecticut. We used directed content analysis to code and analyze interview transcripts.

Results/Conclusion: These preliminary findings indicate that partnerships between home visiting programs and diaper banks may benefit families by improving diaper access, reducing stigma, and fostering trusting relationships with home visitors. Home visiting program benefits including engagement or re-engagement with families may need to be balanced with potential effects on clinical and therapeutic relationships. Recommendations for next steps in research and related policy questions are discussed.

KEYWORDS

diapers, home visiting, low income families

1 | INTRODUCTION

The act of diapering an infant is generally seen as one of the most basic parenting activities that mothers and fathers engage in with their young children. However, for parents living within the harsh constraints of poverty, the cost of diapers for this simple parenting task can engender additional financial stress and ultimately impact family functioning and child health (Hsu & Wickrama, 2015; Smith, Kruse, Weir, & Goldblum, 2013). For these families, diaper changing is more than just a simple task. The annual average cost of diapers ranges between \$945 and \$1,500, and this financial burden increases as children age due to higher costs of larger sized diapers. As public income assistance or nutritional support programs do not cover the cost of diapers, families may be forced to choose between purchasing diapers

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and spending scarce resources on food, clothing, medications, child care costs, or rent (Porter & Steefel, 2015; Smith et al., 2013).

Diaper need is defined as the gap that exists when the amount of diapers needed to keep infants comfortable and dry is more than the family's ability to afford them without resorting to cutbacks on other essentials (Porter & Steefel, 2015). In a cross-sectional study with low-income families in an urban setting, Smith et al. (2013) found that 30% of mothers reported diaper need, and these mothers were more likely to be Hispanic, older (e.g., grandmothers caring for infants), or have mental health needs (Smith et al., 2013). Given the prevalence of diaper need and its implications for family and child wellbeing, exploring opportunities to address diaper need is an important direction for public health research and policy development.

2 | BACKGROUND

2.1 | Implications of diaper need

Families with significant diaper need may provide fewer diaper changes to maximize their supply of diapers, resulting in a myriad of implications for families and young children (Porter & Steefel, 2015; Smith et al., 2013). Without regular diaper changes, parents are unable to monitor their infant's health since 6-8 wet diapers per day are the minimum number indicating that infants are hydrated. Children are also more susceptible to diaper dermatitis, skin breakdown, infection, urinary tract infections, and pain due to wet and soiled diapers (Porter & Steefel, 2015; Sugimura et al., 2009). When young children are in pain from these conditions, they are more likely to be irritable, and parents may feel increasing pressure to begin toilet training early, also to avoid having to spend money on diapers. Families who are unable to purchase necessary diapers may experience social and emotional consequences including maternal guilt, frustration, embarrassment, child neglect, and poor parent-infant interactions (Porter & Steefel, 2015). Diaper need may even limit parents' ability to work if young children cannot be enrolled in child care centers due to the need for parents to supply diapers each day (Smith et al., 2013).

2.1.1 | Potential approaches to diaper need: Diaper banks and home visiting programs

Diaper banks are not-for-profit charitable organizations that collect or purchase diapers for distribution free of charge to families in need, most often through social service partner agencies such as food pantries, homeless shelters, and family resource centers. Like other not-for-profit organizations, diaper banks raise funds and receive inkind donations of diapers from a variety of sources such as individual donors, community foundations, and corporate donors. The National Diaper Bank Network is a network of more than 300 diaper banks, which distributed more than 52 million diapers across 46 states in 2016. The National Diaper Bank Network provides technical support to new and existing diaper banks and distributes donated diapers and funds through its network of diaper banks. The National Diaper Bank Network also works to raise awareness of diaper need through

research in collaboration with academic partners and through advocacy for policy changes that increase the availability of diapers and other basic needs for struggling families (A. Weir, personal communication, October 6, 2016). In an evaluation of a state-wide diaper bank, researchers conducted a mixed method study including interviews (n = 9) and surveys (n = 42) of community based organization (CBO) staff members who were in partnership with a state-wide diaper bank (Massengale, Erausquin, & Old, 2017a). The findings indicated that benefits of diaper distribution with diaper bank resources allowed for the CBOs (direct service organizations providing a variety of health and social services to families in need) to re-allocate scarce funds for other family needs, and assisted with their direct work with families including communication, program retention, teaching problem solving skills, and connecting families to additional resources. In a related study, the same research group surveyed (n = 150) and interviewed (n = 15) families regarding their experiences and outcomes related to receiving diapers from the diaper bank (Massengale, Erausquin, & Old, 2017b). They found that many of the low-income and working class families in their sample had difficulties paying bills and had daily needs that were unmet in addition to their diaper needs. Families reported many positive tangible and emotional outcomes that they linked with the receipt of supplemental diapers from the diaper bank.

2.2 | Home visiting programs for young families

There are multiple models of home visiting for vulnerable young families, including those that focus on health, mental health, parent education, case management, and/or child maltreatment prevention. Some programs supply tangible items for families (emergency food, books, or diapers), while other programs connect families with existing community resources but do not supply any tangible resources. Depending on the model, home visitors may be parent educators, trained lay community members, nurses, social workers, or peer parents (Avellar et al., 2016). Home visiting programs-most of which serve families with complex social, financial, trauma, health, and mental health needs-can involve up to several years of regular visits. The many benefits of home visitation with young vulnerable families have been well documented in terms of maternal, family, and child health and life course outcomes (Avellar et al., 2016). Garner (2013) proposes that home visiting programs are uniquely suited to support young parents in preventing children's exposure to many toxic stressors that accompany being raised in a low-income environment.

Home visiting programs that are able to partner with diaper bank services appear to provide one solution to the problem of diaper need among economically stressed families. Within such partnerships, diapers are provided to the family in the home during scheduled home visits. However, to our knowledge, there are no published studies examining the processes or outcomes of these partnerships. To begin to more fully understand the partnerships between home visiting and diaper bank services, we undertook a small exploratory qualitative study, interviewing a cohort of home visitors in the *Minding the Baby* (MTB) home visiting program (Sadler, Slade, & Mayes, 2006) who had experience with providing diapers to families who needed and wanted them. In exit

interviews with families who participated in the MTB program, mothers have indicated how important the provision of diapers was to them, and how much they appreciated the monthly supplements. These responses stimulated more questions about the potential costs and benefits of this diaper bank-home visiting partnership. Therefore, the primary aim of this initial exploratory study was to examine and describe how the provision of diapers from a local diaper bank may both function as a resource for families and play a role in family engagement in-home visiting from the perspective of home visitors. An additional aim was to explore whether there were any negative or unexpected outcomes from the provision of diapers during home visits. The ultimate goal of this pilot study was to generate additional research questions and approaches to study these partnerships. A related goal was to begin to generate program and policy questions regarding diaper distribution to families in need within the frameworks and philosophies of home visiting programs.

3 | METHODS

3.1 | Design

This small descriptive qualitative study included interviews conducted with home visitors from one home visiting program for young first-time parents, *Minding the Baby*[®] (MTB). Interviews were analyzed with a directed content analysis approach (Hsieh & Shannon, 2005).

3.2 | Sample and setting

Six MTB home visitors (two nurses and four social workers) were included in the study. MTB provides weekly and biweekly home visits to first-time young parents beginning in pregnancy and extending until the child's second birthday. A social worker and nurse team visits families and provides a variety of health, mental health, and parenting services to help parents become more reflective about their own and their children's feelings, needs, and intentions [for a complete description of MTB see Sadler et al. (2006, 2013)]. The interview focused on a time period during which there were two part-time MTB home visiting teams in New Haven, Connecticut serving an average of 30 families per year.

Since 2004, MTB has partnered with The Diaper Bank based in New Haven. This organization is a member of the National Diaper Bank Network, and all families served are low income, meeting the criteria of below 200% of the federal poverty level. Since The Diaper Bank first opened in 2004, it has distributed over 20 million diapers to low-income children in Connecticut. As one of the more established and successful diaper programs, The Diaper Bank serves as a model for like-minded organizations across the country.

3.3 | Procedures

Home visitors were invited to participate in semi-structured interviews about their experiences integrating The Diaper Bank diapers into home visits with young families. Interviews were conducted by phone or face-to-face in private office settings, lasting approximately 30 min.

The study had institutional review board approval, and all home visitors who were invited to participate agreed and signed consent forms. The interviews were conducted by a trained research assistant who typed the participant responses verbatim on a laptop computer. All transcripts were de-identified, with the exception of the participant's discipline (nursing or social work), which was noted on the transcript.

3.3.1 | Interview questions

The semi-structured interview questions were derived from clinical experience, consultation with diaper bank experts, and existing literature. The interview questions are displayed in Table 1.

3.3.2 | Analysis and attention to rigor

The descriptive content analysis was performed by a team of three researchers who all read and re-read the de-identified interview transcripts. The team followed the *directed content analysis* approach described by Hsieh and Shannon (2005). Categories of information were examined based upon the interview questions, resulting in several general codes. Direct information from the participants' responses were grouped into general codes, based upon *within case* and *across case* responses for each question, and these codes and underlying quotations were discussed by the research group to achieve consensus. Examples of categories and codes arising from several of the interview questions are displayed in Table 2. Unanticipated responses and narrative content offered by participants (not in direct response to questions) were categorized and described. The entire research team reviewed categorized responses and narratives in draft format.

After content analysis was complete, the summarized findings were shown to one nurse and one social worker home visitor for member checking. Both concurred with the findings as drafted. Issues of rigor in the analyses and the reporting of study findings were addressed with the following criteria (Lincoln & Guba, 1985; Morse, 2015). Credibility, or internal validity, was addressed by member checking with home visitors to validate findings. Dependability, or reliability of the findings, was addressed with careful documentation of an audit trail of study procedures, activities, and analytic decisions. Confirmability of the analysis process was accomplished by the three-member research team, who coded transcripts and used a consensus model to arrive at findings, along with verifying findings with original transcripts and quotations.

4 | RESULTS

4.1 | Sample description

Two masters-prepared nurses with pediatric experience and four masters-prepared social workers participated in the interviews. The home visitors' experience in the MTB home visiting program ranged from 3 to 14 years. Two interviewees were currently employed with MTB at the time of data collection, while the remainder had previous experience with the program. Prior to the availability of diapers

TABLE 1 Interview questions for home visitors interviews

Question	Probes*	
1. Tell me about how you provide diapers during your home visits.	How often do you provide them? Have you always provided diapers?	
2. How do families respond when you arrive with diapers?		
3. Do you feel that the diapers may help with family engagement in the home visiting program?	How so? How not?	
4. What other tangible basic needs do you provide during home visits?	How do families respond to those items?	
5. How are diapers incorporated into any of the activities provided during home visits?	Can you describe which ones?	
6. You work with teen parents. How do they approach diapering?	Is it seen as a chore, or a pleasurable play time? Is there anything that surprised you about how teens approach diapering?	
7. Can you describe any support you offer with toilet training?	Do you provide families with any guidance or resources?	
8. When would you say most families begin toilet training?	What are the barriers, if any, to toilet training for families?	
9. Can you please share any stories related to diaper provision for the families with whom you work?		
10. Do you have any suggestions for the ways in which diapers are made available to young families?	Any suggestions for home visitors? Any suggestions for The Diaper Bank? Any suggestions for other community agencies working with The Diaper Bank and young families?	

^{*}Probes were added as follow-up questions when participants did not include these areas in their initial responses.

TABLE 2 Sample categories and codes derived from responses to interview questions

Interview question	Categories	Codes
How do families respond when you arrive with diapers?	Family Responses to Diaper Provision	Pleased/grateful
		Only a supplement?
		Preferences for specific brands
Do you feel that the diapers may help with family engagement in the home visiting program? Can you share any stories related to diaper provision?	Diapers and Family Engagement	"We are thinking of you"
		Respectful approach essential
		lce-breaker
		Need to guard against one-sided relationship
		Guard against coercion
		Engagement and re-engagement
You work with teen parents. How do they approach diapering?	Teen Parents and Diapering	Mixed feelings
		A task-a chore
		A power struggle
		Time for bonding
		Fathers' roles and diapers

from The Diaper Bank, home visitors reported that diapers were only provided in the case of emergency, and were funded by program resources. After The Diaper Bank's establishment in the local area, however, diapers were consistently provided to all families, about 50 diapers monthly according to The Diaper Bank guidelines.

Families participating in the MTB program were primarily Latina (62%) and Black (28%), with a minority of participants reporting mixed racial and ethnic backgrounds (10%). Maternal age ranged from 15 to 25 years, with a mean age of 19.6, and the mean maternal education level was grade 11.4. Most mothers who participated in the program were never married/single (83.8%). All families qualified for federal Women's, Infants' and Children's (WIC) nutritional program supplements.

4.2 | Key findings

There were seven categories resulting from the content analysis. These included family response to diapers, diapers and family engagement, other tangible needs provided to families, diapers incorporated into home visiting activities, teen parents and diapering, support with toilet training, and suggestions for future diaper distribution approaches.

4.2.1 | Family responses to diapers

When describing family responses to receiving diapers, home visitors reported reactions ranging from appreciative to matter of fact. Home

visitors explained that diapers would be provided as part of the program, but emphasized that this was intended only to supplement the family's diaper supply. Introducing this diaper supplement was seen as an opportunity to educate families regarding the cost and volume of diapers needed. One home visitor stated, "families are always very shocked by how expensive [diapers] are and how many there are. A newborn goes through 70 diapers a week ... so they are very appreciative." Others noted that the appreciation of the diaper supplement extended beyond the newborn period, explaining "for most of our moms, they have a nice baby shower before the baby is born, and there a huge number of diapers given to them ... it's not until they turn size 1 that they start regularly asking for diapers [from us]." When families graduate from the program at age 2, home visitors make an effort to connect families with The Diaper Bank, since many of the children are not yet toilet trained.

4.2.2 | Diapers and family engagement

All home visitors agreed that providing diapers played an important role in family engagement. One home visitor noted, "it is a great way to demonstrate that we deliver when we say we're going to deliver, in a very concrete way. And [that trust] is very important..." The ability to provide diapers was also a practical way for home visitors to re-engage and reschedule visits with families. As one home visitor described, "I think it opens even a conversation. So if we're starting to schedule a visit, I might say, 'what size diapers would you need?' I'm trying to find what diapers are needed, to open up a conversation and find a time to meet."

The availability of diapers also provided an opportunity for mothers to reach out to home visitors and often open the door for more difficult conversations. One home visitor recalled.

Often [mothers] used to ask for diapers because they couldn't go out to buy them. It helped build up a lot of trust. And if they called us it was because they needed something or if they were having a problem. And if we brought diapers, we could go over to talk about the problem.

Home visitors also noted that diapers might represent a tool used to engage with the babies, however subtly. One home visitor noted,

Babies think its great fun to climb all over the package, and it becomes like an activity. It becomes an obstacle course: can I sit on it, crawl over it, and stand on it? It's kind of nice for them to feel like I brought them something even though they may not fully understand the intricacies of it.

Alternatively, one home visitor noted that the provision of diapers may create a barrier to engaging in the deeper aspects of the program. She noted that diapers may provide a catalyst for the relationship, but efforts were required to make sure the relationship did not become one-sided or that diapers were not seen as coercive. She noted, "it introduced a different element to the work. There were times when moms were really looking to us for what could we

do for them—what services, goods could we get for them. That's all they wanted. They didn't want to think about parenting, didn't want to think about those things."

Finally, home visitors added that diapers played an important role in the parent-child relationship, as well as in the home visitor's relationship with the family. Noting the essential role of diapers in enhancing the parent-child relationship, one home visitor said,

I have been so impressed and grateful with The Diaper Bank. I've been working with people in the population for about 17 years ... I remember going into homes that children would be in dirty diapers for a really long time, but it wasn't until The Diaper Bank came into existence ... that I began understanding that this matters. It matters in terms of the child being comfortable, is this going to be a fussy baby, are they uncomfortable, is it going to agitate the parent? And the parent knows they can't provide. And what does that do for attachment? There is a study that shows more fussy babies are more likely to be abused.

4.2.3 | Other tangible basic needs provided to families

The home visitors also described providing other tangible items in addition to diapers, including clothes, cleaning supplies, child safety items, and baby thermometers. Although these items were not provided on a regular basis, home visitors noted that, along with diapers, these items were necessary for families' basic survival. One home visitor described diapers and other tangible goods by stating,

When I conceptualize diapers, I think of Maslow's hierarchy of need. We're asking moms to be reflective, to think about their internal world and the baby's internal world. If they're not able to get the basic needs, to think about their basic needs for comfort, safety, food, and clothing, it will be harder for them to think about the interpersonal, higher up functioning.

The home visitors were sensitive to the need for a respectful approach, with one visitor noting, "the way we frame it is: 'these are the things that have been donated to us. If you need them, feel free to take them. And if you don't need it, feel free to give it back." In addition, home visitors recalled that many families were also interested in donating goods to others in the program. As one home visitor described, "sometimes we would bring things and other times families would actually bring us things to share with other families. It wasn't required but it was a thing families would donate to support other families."

4.2.4 | Diapers incorporated into home visiting activities

Many of the home visitors described using The Diaper Bank diapers as an opportunity for teaching. One home visitor stated, "we talk

about diaper rashes, how to avoid them, and how it has to do with the frequency of changing diapers," while another stated, "occasionally we talk about budgeting for people who have a really hard time with what little money they have. We can talk about the cost of diapers and how to manage that." Others described diaper changing as an opportunity to encourage bonding and play time between the parent and child.

As the children in MTB families reached toddlerhood, home visitors noted that the opportunity for play with diapers became even greater. As one home visitor described,

There was a little boy who had diapers 50 in a pack and 25 in a pack. And the boy was pretending he was doing very heavy work, and he wanted someone to get on the other side. First it was me, and then it was mom helping him ... He had a dump truck and was kind of doing this imitative play. It was a nice way to incorporate the mother getting her to play with the baby.

4.2.5 | Teen parents and diapering

For many adolescent parents in the program, diapering was not typically seen as an opportunity for bonding or interacting with their children. One home visitor said, "we are met with mixed reactions with most of the moms. They don't like changing diapers, and it feels more like a task that has to be done. It's more like a chore." However, home visitors recognized that this presented an opportunity to work with the family to teach and model how diaper changing could become more of an interactive game time for parent and child.

Home visitors also noted that the task of diapering often had deeper significance. This was particularly true for the role of fathers. One visitor stated, "the dads pretty much are culturally not obligated to do any diapering, and this happens almost all the way around. And young women can feel resentful of that. They have all these other feeling of what it means to be a mom." In addition, diapers may also represent support from the child's father. One home visitor noted, "we also hear a lot about, 'if there is conflict, he doesn't bring his diapers." Diapers provided by the home visiting program may serve to attenuate some of this pressure on the father and the couple.

Diaper changing was also recognized as a potential power struggle between the parent and child. One home visitor stated,

What they (moms) want, in my impression, is wanting the babies to look clean and beautiful and smell good, and they don't want to meet any resistance to getting their child to look nice. And children don't always want to be diapered ... so the resistance is less about diapering, per se, as it is about the struggle of wanting the child to be cooperative.

Another home visitor also described this resistance, but recognized it may be an opportunity for education, stating,

Diapering becomes a power struggle and a source of conflict when they get older. Then we can start to have conversations about corporal punishment and normal development, that it is normal for older toddlers and infants to not want to stop what they are doing, and how do we negotiate that.

Home visitors also noted that diapering was occasionally seen as pleasurable, expressing surprise and appreciation when diapering was noted to be a positive experience. One home visitor recalled, "I'm pleasantly surprised when I have seen a mom pick up the baby and say, 'you need a new diaper. I'm going to give you a toy' ... she's narrating what she's doing."

4.2.6 | Support with toilet training

The nurse home visitors often provided toilet training support in their health teaching with families. Most toilet training support was provided with respect to readiness and setting appropriate expectations, as most children graduate from the MTB program around age 2. One home visitor described setting expectations as an opportunity to work with and educate the family, stating,

Some parents have this expectation that their child should be potty trained by 18 months ... our job is to figure out how to work with them in that and ask, 'is it the best thing for the child and the child-parent relationship?' 'What kinds of frustrations might that create to impose that on their child?' It's really about potty training readiness.

In addition to some unrealistic expectations about readiness for toilet training, other identified barriers to toilet training included lack of time, routine, or the birth of another child in the family. Some families had misconceptions about the need for successful toilet training before their children could be accepted into child-care programs.

However, home visitors again described using these beliefs and misconceptions as an opportunity for education. As one home visitor described.

If they don't have the time, and they don't have the patience, we suggest that they maybe try it during the spring or summer when the child doesn't have a lot of clothes on ... but before that, talking about it, reading books, and speaking about it before they try ... and we spoke about not punishing a child, and that it's common that they have accidents.

4.2.7 | Suggestions for future diaper distribution approaches

The home visitors noted that although The Diaper Bank diapers might be available through other community resources, this access could be difficult for many families, especially those without transportation. In addition, diaper delivery by home visitors may reduce the stigma associated with picking up diapers from a community setting. Overall, these home visitors felt that the MTB and The Diaper Bank partnership was a win-win opportunity for both agencies and families.

5 | DISCUSSION

In this qualitative study, home visitors described many ways in which diaper provision positively influenced the families they served and also contributed to engagement in the home visiting program. Diapers helped fulfill a basic need, while creating opportunities for education (including support for healthy toilet training) and parent-child bonding. Diaper provision also allowed parents to engage in the deeper aspects of the clinical work, such as the ability to be reflective about their children and their parenting. These findings are supported by the results of the Massengale et al. (2017b) study in which families reported that receiving diapers helped to relieve financial stress, increase opportunities for work and school attendance, and improve parental mood.

In this study, there was also caution expressed about the potentially coercive or negative role that diaper provision might play in the clinical relationship, if not handled carefully within the therapeutic work. Home visitors described a symbolic role of diapers, noting that availability of diapers was sometimes indicative of support from the child's father. Other unanticipated aspects of diaper provision included contributing to a culture of giving, with families often offering to donate their belongings for the benefit of others. This finding compliments the results of qualitative studies by Cricco-Lizza (2008) and Broussard, Joseph, and Thompson (2012) who found that low-income mothers identified volunteer work and donating clothes as important sources of empowerment and self-worth.

In this study, the partnership with The Diaper Bank was seen as mutually beneficial to both programs. The partnership served to improve diaper bank accessibility by limiting barriers for parents such as lack of transportation, lack of awareness, or anticipated stigma. Diaper provision was often the first step in building a relationship of trust and respect with parents, especially for those parents who were difficult to reach. These findings are similar to the key findings that Massengale et al. (2017a) reported in their statewide study of diaper banks partnering with various health and social service CBOs. Both studies noted the value of diapers as an approach for engagement with families who are sometimes hard to reach and hard to track, as well as the opportunities that diapers provide as "ice breakers" for clinical conversations and as a valuable prop for teaching and counseling young families in need.

5.1 | Research next steps

Our preliminary study findings helped us to generate some interesting questions and areas for further research. A logical next step is to design prospective multisite, multiprogram studies that include home visitors, diaper bank staff, and families who have received services

from such partnerships. As diaper need may result in poor health, financial, and social consequences for children and families, diaper need must be recognized and investigated as a social determinant of health and potential contributor to health disparities (Porter & Steefel, 2015). Consequently, there is a need for research questions to address the relationships among diaper need, maternal mental health outcomes, child health outcomes, and family outcomes. One important set of questions includes whether diaper provision is associated with homevisited families' participation in child-care programs, allowing for more parental participation in education, training programs, and the workforce.

Smith et al. (2013) found that mothers with mental health needs were more likely to report diaper need. Diaper need may also diminish maternal sense of competence and increase stress, which may lead to negative impacts on child health and development (Porter & Steefel, 2015). Prospective studies are necessary to understand how diaper provision may affect both the parent-child relationship and the home visitor-parent relationship. More needs to be learned about the delicate balance in mediating the "one-sidedness" of the clinical relationship when diapers may be perceived as incentives by families.

The results of this study also highlight the need for further research on other social impacts of diaper need. Financial stress, childcare difficulties, or child health outcomes related to diaper need may impact relationships among parents or family members. As described by home visitors, cultural expectations surrounding diaper changes and diaper provision may also play an important role in family functioning, and thus also requires exploration, especially as related to the participation of fathers in diaper provision and daily diapering activities. Relationships among diaper need and other social factors, such as social support, stigma, and the pressing need that many young families have for other basic necessities in addition to diapers are all questions that require more study. It may be that the partnership model between diaper banks and home visiting programs provides a template for other partnerships that may provide other necessities such as personal hygiene items or cleaning products to benefit young families in need. By understanding and addressing the processes and impacts of diaper need and diaper provision partnerships, researchers will significantly contribute to improved health, social, and economic outcomes for low-income families.

5.2 | Policy implications

Although current antipoverty programs and policies have served to reduce poverty in the United States, child poverty levels remain high (Smith et al., 2013) and according to US Census Data, 21% of children under the age of five are at or below the poverty level (DeNavas-Walt & Proctor, 2014). Programs available for low-income families, such as WIC and the Supplemental Nutrition Assistance Program (SNAP), do not cover the cost of diapers. Federal antipoverty programs like Temporary Assistance for Needy Families (TANF) are often tied to work and training programs, but if families don't have diapers, they may have difficulty finding childcare and be unable to maintain employment (Massengale et al., 2017b; Porter & Steefel, 2015; Smith

et al., 2013). For working poor and families in need, public social safety net programs leave many gaps in their ability to meet basic survival needs (Massengale et al., 2017b; Weir, 2015). There is the potential for community/philanthropic approaches as well as policy decisions at local, state, and federal levels to address these and related needs that are critically important for low-income families.

The findings from this preliminary study suggest that partner-ships between diaper banks and home visiting programs may be one effective way to address diaper need in low-income families. While not all home visiting models offer tangible assistance to participants, the results of this study suggest that linking these services, where appropriate, may result in an impact that is greater than the sum of its parts. Funding for diapers through the federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program, which currently provides financial support for some evidence-based home visiting programs, could be an additional innovative funding approach.

Our preliminary study findings and those of Massengale et al. (2017a) suggest that programs similar to The Diaper Bank may also be needed to provide personal hygiene items and other basic necessities that are not covered under state or federal supplementary food or assistance programs. Many diaper banks are starting to provide hygiene-related items, including laundry soap, toothpaste, and feminine hygiene products. An alternative approach might include the development of separate programs for hygiene benefits, or increased state and/or federal level funding for diaper bank services. For example, the District of Columbia City Council considered a proposal in 2016 to provide diapers and feminine hygiene products in the city's homeless shelters (Improved Access to Diapers and Feminine Hygiene Products Act of 2016). The state of Maryland successfully passed a law to provide feminine hygiene products to homeless female public school students (MD Code, Com. Law, 2017). Local or regional philanthropic initiatives could fund the integration of some of these needs into everyday locations, such as free nights at local laundromats, free feminine hygiene products available in schools, or diapers available for reduced costs in public restrooms (J. Alfano & A. Weir, personal communication, August 25, 2017).

Policy changes that may reduce diaper need must also be explored. If one goal is to provide diapers to improve health outcomes, the diaper benefit could be linked with Medicaid or CHIP funding streams, or to state or local public health well child care and immunization programs. If another goal is to provide diapers to improve a parent's ability to go to work, diaper provision might be linked with Welfare-to-Work programs or through subsidized child-care initiatives. Providing low-income parents with more cash, through an increase in the Child Tax Credit, or creation of a Young Child Tax Credit, could also help solve the problems of diaper need, as well as basic hygiene needs of families raising children.

Cloth diapers are sometimes proposed as an alternative to disposable diapers. While some families may consider this option, for most of the families served by MTB, cloth diapers present additional barriers. In particular, cloth diapers require frequent and thorough laundering, which is often difficult for families without access to an in-home washer and dryer. Laundering cloth diapers in public laundromats is

quite expensive, since diapers must be rinsed before washing, and then dried very thoroughly, costing more than the average load of wash. In some cases, public laundromats discourage the use of their facilities in laundering diapers. For families who rely on child care, there is the additional complication that most child-care providers do not accept cloth diapers. Thus, regarding programs and policies concerning diapers and diaper need, these additional limitations must also be considered.

5.3 | Limitations

This exploratory qualitative study is limited by a small sample of informants from a single home visiting program. While the interviews were very informative, not all of the codes reached data saturation, especially regarding some of the potentially negative aspects of diaper provision. Additional interviews with home visitors and with parents are essential for future studies. Despite this limitation, the home visitors in this study provided helpful descriptions of the multifaceted impacts of diaper provision, many of which have been previously unidentified in the limited extant literature. As the goal of this pilot study was to generate additional research and policy questions, our findings provide a necessary foundation for continued study of diaper need and diaper distribution in socioeconomically disadvantaged communities.

6 | CONCLUSION

Diaper banks may play a critical role in improving outcomes for low-income families as they offer a two-generational benefit; diaper provision directly benefits the child, but also may reduce family stress related to health, financial, or child-care concerns. Linking diaper banks with home visiting programs offers an added benefit to families in need by improving access, reducing stigma, and fostering trusting relationships between families and home visitors. Further research on the causes, impacts, and consequences of diaper need will inform policy changes and bolster National Diaper Bank Network advocacy efforts to achieve optimal outcomes for children and families in need.

ACKNOWLEDGEMENTS

We wish to extend our thanks to Bennie Finch, Sarah Fitzpatrick, Dana Hoffman, Rosemary Price, Tanika Simpson, Denise Webb, and the many families who participated in our program. *Minding the Baby* (MTB) is supported by The FAR Fund, Donaghue Foundation, W.K. Kellogg Foundation, Grossman Family Foundation, Edlow Family Foundation and the Child Welfare Fund, NIH/NICHD (RO1HD057947) and NIH/CTSA (UL1RR024139). Eileen Condon is supported by NIH/NINR (F31NR016385) and Monica Ordway is supported by NIH/NINR (K23NR16277).

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REFERENCES

- Avellar, S., Paulsell, D., Sama-Miller, E., Del Grosso, P., Akers, L., & Kleinman, R. (2016). Home visiting evidence of effectiveness review: Executive summary. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.
- Broussard, C. A., Joseph, A. L., & Thompson, M. (2012). Stressors and coping strategies used by single mothers living in poverty. *Affilia*, 27, 190–204.
- Cricco-Lizza, R. (2008). Voices from the battlefield: Reports of the daily experiences of urban black mothers. Health Care for Women International, 29, 115–134.
- DeNavas-Walt, C., & Proctor, B. (2014). *Income and poverty in the United States*: 2013 (pp. 60–249). Washington, DC: U.S. Census Bureau, Current Population Reports.
- Garner, A. S. (2013). Home visiting and the biology of toxic stress:

 Opportunities to address early childhood adversity. *Pediatrics*, 132, S65-S73
- Hsieh, H., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15, 1277–1288.
- Hsu, H., & Wickrama, K. A. (2015). Linking family economic hardship to early childhood health: An investigation of mediating pathways. *Maternal and Child Health Journal*, 19, 2636–2645.
- Improved Access to Diapers and Feminine Hygiene Products Act of 2016. DC B21-0692, 21st Council, April 5, 2016.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry* (Vol. 75). Newbury Park, CA: Sage Publications Inc.
- Massengale, K. E., Erausquin, J. T., & Old, M. (2017a). Organizational and health promotion benefits of diaper bank and community-based organization partnerships. Children and Youth Services Review, 76, 112–117.
- Massengale, K. E., Erausquin, J. T., & Old, M. (2017b). Health, social, and economic outcomes experienced by families as a result of receiving assistance from a community-based diaper bank. *Maternal and Child Health Journal*, 1–10. https://doi.org/10.1007/s10995-017-2317-9

- MD Code, Com. Law. (2017). § 6-440 et seg.
- Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative inquiry. *Qualitative Health Research*, 25, 1212–1222.
- Porter, S., & Steefel, L. (2015). Diaper need: A change for better health. *Pediatric Nursing*, 41, 141–144.
- Sadler, L. S., Slade, A., Close, N., Webb, D. L., Simpson, T., Fennie, K., & Mayes, L. C. (2013). Minding the baby: Enhancing reflectiveness to improve early health and relationship outcomes in an interdisciplinary home-visiting program. *Infant Mental Health Journal*, 34, 391–405. https://doi.org/10.1002/imhj.21406
- Sadler, L. S., Slade, A., & Mayes, L. C. (2006). Minding the baby: A mentalization-based parenting program. In J. G. Allen, & P. Fonagy (Eds.), Handbook of mentalization-based treatment (pp. 271–288). Chichester, UK: Wiley.
- Smith, M. V., Kruse, A., Weir, A., & Goldblum, J. (2013). Diaper need and its impact on child health. *Pediatrics*, 132, 253–259. https://doi. org/10.1542/peds.2013-0597
- Sugimura, T., Tananari, Y., Ozaki, Y., Maeno, Y., Tanaka, S., Ito, S., & Masunaga, K. (2009). Association between the frequency of disposable diaper changing and urinary tract infection in infants. *Clinical Pediatrics*, 48, 18–20.
- Weir, A. (2015). Basic needs: Ensuring that every family has the things needed to reach their full potential. Issue Brief, National Diaper Bank Network. Retrieved from http://nationaldiaperbanknetwork.org/wp-content/uploads/2015/09/Basic-Needs-white-paper.pdf

How to cite this article: Sadler LS, Condon EM, Deng SZ, et al. A diaper bank and home visiting partnership: Initial exploration of research and policy questions. *Public Health Nurs*. 2017;00:1–9. https://doi.org/10.1111/phn.12378