

# Diaper Need: A Change for Better Health

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**D**iaper dermatitis is the most common skin disorder diagnosed during infancy (Borkowski, 2004; Scheinfeld, 2005). At least half of all infants exhibit diaper dermatitis at least once during their diapering years (Shin, 2005). Diaper-related conditions account for approximately one million pediatric outpatient visits each year for children four years of age and under (Ward, Fleischer, Feldman, & Krowchuk, 2000). Diaper-related diagnoses include diaper dermatitis, Candidiasis of unspecified location, balanitis, intertrigo, and vulvovaginitis. Diaper dermatitis necessitates quick treatment because it can progress to skin breakdown with secondary infections, such as *Candida albicans* or *Staphylococcus aureus*, and may require hospitalization (Nield & Kamat, 2007).

Although frequent diaper change is a primary means to prevention and treatment of diaper dermatitis (Adalat, Wall, & Goodyear, 2007; Borkowski, 2004; Heimall, Story, Stellar, & Davis, 2006; Nield & Kamat, 2007; Visscher, 2009), parents of the 5.7 million children under three years of age who live in poverty in the United States may struggle to provide diapers for their children (Addy & Wright, 2012). Economic constraints may force parents to make choices between the purchase of sufficient diapers and the purchase of other necessities, such as food and clothing (Raver, Letourneau, Scott, & D'Agostino, 2010). Purchasing diapers with Supplemental Nutrition Assistance Program (SNAP) funds (previously known as Food

Although diapers are essential for child health, nearly one in three American families cannot afford them (National Diaper Bank Network, 2013). A gap referred to as diaper need, the difference between the numbers of diapers infants require to stay clean and comfortable less the amount of diapers a family can afford without cutting back on other basic essentials, can have severe consequences for infants, parents, and society. Within the context of the need for and economics of diapers, these severe consequences alert pediatric nurses to the impact they can have to bridge the diaper gap, thereby helping to alleviate diaper-related conditions and providing holistic, family-centered care.

Stamps) or through the use of Special Supplemental Nutrition Program for Women, Infants and Children (WIC) vouchers is not permitted. A gap, referred to as diaper need, is created when the amount of diapers needed to keep infants comfortable and dry is more than the ability to afford them without resorting to cut backs on other basic essentials.

The potentially severe complications of diaper need to infants, parents, and society should motivate pediatric nurses to work to lessen the diaper gap and its consequences. Pediatric nurses may address the economic, causative factors with strategies that tackle diaper need, thereby helping to alleviate diaper-related conditions and providing holistic family-centered care. This article discusses the need for and economics of diapers and the impact pediatric nurses can make regarding diaper need on both the patient-family and within the pediatric system of care.

## Diaper Economics

Diapers are expensive necessities that help parents both maintain and monitor their infant's health. Newborns should be changed frequently, as often as every hour; older infants, every three to four hours (Shin, 2005). Pediatric nurses advise parents to look for six-to-eight wet diapers per day to determine that their infant is sufficiently hydrated and taking in adequate volumes of breast milk and/or formula.

This expected wet diaper guideline extrapolates to 2,555 diapers needed per year (7 diapers/365 days) with a total annual cost of approximately \$945.00 for disposable diapers, using an averaged per-unit cost as found on an Internet-based retail diaper distributor ([www.diapers.com](http://www.diapers.com)). Based on the average 6.3 diapers used per day for American infants, diaper manufacturers estimate the cost higher at \$1,500 annually (Browne, 2011; Karp, 2011; Neff, 2011). The cost of diapers may be even higher for families with low incomes. Because of economic constraints, these families often cannot buy in bulk; lack transportation to supermarkets, discount stores, and warehouses with the lowest diaper prices; have limited or no Internet access for purchasing; and must rely on local convenience stores to purchase diapers. Cloth diapers are seen by some as cost-saving because they may be reused; however, low-income families may not have adequate resources required for the purchase of sufficient amounts and facilities for daily laundering. Further, many child care centers require infants to wear disposable diapers.

Diapers are considered a basic necessity by almost all mothers (Raver et al., 2010). With 48% of infants and toddlers under three years of age in the United States living in low-income families, diapers may be a difficult-to-afford basic necessity (Addy & Wright, 2010). Families need approximately twice as much income as the federal poverty line's estimate of

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**Table 1.**  
**Potential Consequences of Diaper Need**

| Factors                      | Potential Consequences  |
|------------------------------|---|
| Physical                     | Discomfort or pain  |
|                              | Increased diaper-area breakdown   |
|                              | Urinary tract infection   |
|                              | Communicable disease  |
|                              | Poor hygiene  |
|                              | Oral-fecal contamination  |
|                              | Skin infections   |
| Behavioral/<br>developmental | Irritability  |
|                              | Crying  |
|                              | Fussiness   |
|                              | Children kept home from child care and early childhood development programs |
|                              | Negative impact on peer relationships during toddler years                  |
|                              | Reduced opportunities for enrichment  |
|                              | Parental attempts at developmentally inappropriate toilet training          |
| Economic                     | Purchase less clothing, food, or other necessities or baby care items       |
|                              | Borrow money or diapers   |
|                              | Utility bills or rent not paid  |
|                              | Medication prescriptions not filled   |
|                              | Parents miss work or school to tend to ill child                            |
|                              | Payment of child care bills delayed   |
| Social/<br>emotional         | Maternal guilt  |
|                              | Maternal frustration  |
|                              | Maternal embarrassment  |
|                              | Negative impact on mother's feelings of parenting                           |
|                              | Cause parents to stay home and miss appointments                            |
|                              | Allegations of child abuse and neglect                                      |
|                              | Family dynamics disrupted   |
|                              | Negative impact on parent-infant interaction                                |

what it takes to make ends meet just to provide basic needs, such as housing and food (Addy & Wright, 2010). Diaper need may be of significant concern to many families with infants and young children, with 27.5% of pregnant and parenting women reporting diaper need in a recent study (Smith, Kruse, Weir, & Goldblum, 2013).

### Consequences of Diaper Need

As shown in Table 1, diaper need creates economic and health issues. Norovirus, rotavirus, and other infectious agents can contaminate feces. Leaking and soiled diapers can lead to the spread of illness within the family

and community (e.g., child care, community pools). Frequent hand-to-mouth behavior by infants can exacerbate the spread of germs from soiled diapers. Less frequent disposable diaper changes increase the risk of urinary tract infection (Sugimura et al., 2009).

Without sufficient diapers, parents may elect to keep children home from child care, early childhood education, early Head Start, early intervention, and therapy appointments, thus limiting early development/early education opportunities that are especially important for low-income children (Palley, 2012). Diaper need may also cause parents to stay at home and miss work or school, further diminishing

economic resources (Raver et al., 2010).

Because diaper changes are a routine part of infant caregiving, the inability to meet an infant or toddler's need for sufficient diaper changes may negatively affect maternal feelings, such as a mother's feelings of being a good parent (Raver et al., 2010). Mothers are distressed by diaper dermatitis (Heimall et al., 2006). Mothers with infants who exhibit frequent or severe diaper dermatitis may have feelings of embarrassment, guilt, and frustration. If diaper dermatitis is severe and prolonged, allegations of child abuse and neglect may occur (Kazaks & Lane, 2000; Scheinfeld, 2005). Stress and concern related to diaper need might have a negative impact on parent-infant interaction. This is especially important because women with mental health issues report a higher diaper need than women without mental health concerns, creating potentially greater risk for negative social and emotional effects (Smith et al., 2013). In order to reduce diaper costs, mothers may attempt developmentally inappropriate toilet training.

### Implications for Pediatric Nurses

Approximately one-quarter (21% to 27.5%) of parenting women report diaper need in which they lack adequate diapers to keep their child sufficiently diapered for hygiene and comfort (Raver et al., 2010; Smith et al., 2013). This, as well as the high frequency of diaper dermatitis in very young children, and the fact almost half of infants and toddlers in the United States live in low-income families, make it likely that pediatric nurses will care for a child and family experiencing diaper need (Addy & Wright, 2012; Shin, 2005).

Diaper dermatitis is most often managed in primary care settings (Nield & Kamat, 2007) where routine diaper dermatitis management advice includes more frequent diaper changing and potential use of medications, as well as parental support and education (Gupta & Skinner, 2004). Pediatric nurses need to consider diaper need as a contributing factor or underlying cause of diaper dermatitis and include ways to ease the factors causing diaper need as part of the management plan.

**Table 2.**  
**United States Diaper Need Resources**

| Resource   | Website   |
|--|---|
| Austin Diaper Bank Austin, TX                            | <a href="http://www.austindiapers.org">www.austindiapers.org</a>                        |
| Baby2Baby, Los Angeles, CA                               | <a href="http://baby2baby.org">http://baby2baby.org</a>                                 |
| DC Diaper Bank, Washington, DC                           | <a href="http://www.dcdiaperbank.org">http://www.dcdiaperbank.org</a>                   |
| Detroit Area Diaper Bank, Metro Detroit and Southwest MI | <a href="http://www.detroitareadiaperbank.org">http://www.detroitareadiaperbank.org</a> |
| The Diaper Bank, North Haven, CT                         | <a href="http://www.thediaperbank.org">www.thediaperbank.org</a>                        |
| Diaper Bank of South Arizona, Southern Arizona           | <a href="http://www.diaperbank.org">http://www.diaperbank.org</a>                       |
| Help A Mother Out, California, Nationwide                | <a href="http://www.helpamotherout.org">http://www.helpamotherout.org</a>               |
| Infant Crisis Services, Oklahoma City, OK                | <a href="http://www.infantcrisis.org">http://www.infantcrisis.org</a>                   |
| LA Diaper Drive, Los Angeles, CA                         | <a href="http://www.diaperdrive.org">http://www.diaperdrive.org</a>                     |
| National Diaper Bank Network, Nationwide                 | <a href="http://www.diaperbanknetwork.org">http://www.diaperbanknetwork.org</a>         |
| Nestlings Diaper Bank, Holland, MI                       | <a href="http://www.nestlings.org">http://www.nestlings.org</a>                         |
| Project Undercover, Cranston, RI                         | <a href="http://www.projectundercover.net">www.projectundercover.net</a>                |
| TriCities Diaper Min, Bristol, VA                        | <a href="http://tridiaperbank.blogspot.com">http://tridiaperbank.blogspot.com</a>       |
| West Side Baby, Seattle, WA                              | <a href="http://www.westsidebaby.org">http://www.westsidebaby.org</a>                   |

A first step toward addressing diaper need is taken with the recognition of diaper need and the underlying social factors that impact child and family health. These factors may include poverty, inadequate housing, and low health literacy. To identify individual families who are experiencing diaper need, the pediatric nurse should complete a comprehensive family social history at the child's first health encounter in a particular pediatric setting. The family social history should include assessment of difficult economic circumstances (e.g., job loss, food insecurity, health insurance changes, homelessness) and of new and chronic family stressors. The family social history should be updated at each subsequent child/family health encounter. Pediatric nurses should be aware of those families who may be at special risk for diaper need, including parents with more than one child in diapers, mothers with mental health concerns, and infants with conditions that increase stooling (e.g., diarrheal illness, neonatal abstinence syndrome, and short gut syndrome) (Smith et al., 2013; Sublett, 2013).

After assessing child and family needs, pediatric nurses may access The Community Services Locator of the MCH Library of Georgetown University ([http://www.mchlibrary.info/KnowledgePaths/kp\\_community.html](http://www.mchlibrary.info/KnowledgePaths/kp_community.html)) and share relevant information with parents in a non-stigmatizing way about national, state, and

local resources available to assist with concrete needs, such as the provision of food, housing, utilities, or child care. From resource listings available at the National Diaper Bank Network (<http://www.diaperbanknetwork.org>), pediatric nurses can connect families to a local diaper bank as a resource that assists families to obtain diapers (see Table 2). The pediatric nurse may also find it helpful to keep an onsite listing of local organizations and groups that assist families.

Some families may need assistance with transportation or navigating bureaucratic barriers to obtain needed services. When providing information, pediatric nurses must consider parents' literacy level and their culture and language, and provide support and explanations where needed. Reinforcement of verbal information via brochures, bulletin boards, and websites may be helpful. Additional support and explanations may be necessary for parents who are adolescents, have a disability, or are illiterate.

Diaper need has advocacy implications for pediatric nurses. As child advocates, pediatric nurses may advocate for the elimination of health disparities and inequities by supporting policies that address social determinants of health. The conditions and systems in which people live and work that are shaped by the distribution of money, power, and resources (Centers for Disease Control and Prevention, 2013). In concert with

their practice setting, pediatric nurses may also establish a micro diaper bank at their place of practice where parents may obtain or donate diapers. Pediatric nurses may initiate a diaper drive with a local business, professional association, or pediatric conference. They may reach out to their local diaper bank to offer pediatric health expertise to further the diaper bank's efforts.

Pediatric nurses should gather stories about families experiencing diaper need, document the frequency of diaper need in their own practice setting, and inform policy makers (personal communication, Joanne Goldblum, July 7, 2012). They should also share the concept of diaper need with other health care professionals in staff meetings, grand rounds, child health listservs, and professional associations to raise awareness of diaper need and advocate for child health and well-being. Raising general community awareness about diaper need may be an important role for pediatric nurses and may be accomplished through civic group speaking engagements and letters to the editor. Pediatric nurses may also encourage the development of a mobile app to assist families in locating local diaper need resources.

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