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Child Feces Disposal in SIERRA LEONE

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Key messages:

- In 2013, 28 percent of households in Sierra Leone surveyed reported unsafe disposal of the feces of their youngest child under age three.
- Even among households with improved toilets or latrines, 19 percent reported unsafe child feces disposal behavior.
- Safe child feces disposal steadily increases with the wealth of the household: only 57 percent of the least wealthy quintile reports safe disposal compared to 83 percent of the wealthiest quintile.[1]

OVERVIEW

Safe disposal of children's feces is as essential as the safe disposal of adults' feces. This brief provides an overview of the available data on child feces disposal in Sierra Leone and concludes with ideas to strengthen safe disposal practices, based on emerging good practice.

The Joint Monitoring Programme for Water Supply and Sanitation (JMP) tracks progress toward Millennium Development Goal 7 target to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. The JMP standardized definition for an improved sanitation facility is one that hygienically separates human excreta from human contact.[2]

In the latest JMP report, only 13 percent of Sierra Leone's population had access to improved sanitation in 2012.[3] This means that 5.2 million individuals in Sierra Leone lacked improved sanitation in 2012; of these, 1.6 million practice open defecation. However, these estimates are based on the household's primary sanitation facility, and may overlook the sanitation practices of young children. In many cases, children may not be able to use an improved toilet or latrine—because of their age and stage of physical development or the safety concerns of their caregivers—even if their household has access to one.

SUMMARY OF CHILD FECES DISPOSAL DATA

In 2013, 72 percent of households surveyed in Sierra Leone reported that the feces of their youngest children under age three were safely disposed of. However, only 6 percent of households reported that their youngest children's feces were deposited into an improved sanitation facility, according to DHS 2013 (see Figure 1). This low percentage of households reporting improved child feces disposal suggests that children under age three have worse sanitation than the country's broader population, where 13 percent use improved sanitation. Sierra Leone ranked 12th best for the proportion of children whose feces are safely disposed of, out of 31 countries in Sub-Saharan Africa with available comparable Multiple Indicator Cluster Survey (MICS) or Demographic and Health Survey (DHS) data available from 2006 to 2013.

In Sierra Leone, households lacking improved sanitation, those in rural areas, and the least wealthy households—as well as households with younger children—have a higher prevalence of unsafe disposal of child feces. Between 2003 and 2013, reported safe disposal of children's feces decreased in urban areas and increased in rural areas (see Figure 2). Households in urban areas remained substantially more likely to use safe feces disposal than rural households.

Households practicing open defecation reported the highest level of unsafe child feces disposal, at 59 percent (Figure 3).

A shift in safe disposal practices is also seen as children grow: children are increasingly likely to use a toilet/latrine themselves, or have their feces put or rinsed into one. Although safe disposal increases with the age of the child, use of a toilet/latrine remains low at 2–11 percent regardless of age (see Figure 4). At these young ages, the behavior of the child's caregiver is critical to dispose of their feces safely and shape the child's toilet training.

What Is "Safe Disposal" of a Child's Feces?

The safest way to dispose of a child's feces is to help the child use a toilet or latrine or, for very young children, to put or rinse their feces into a toilet or latrine. For the purposes of this brief, these disposal methods are referred to as "safe," whereas other methods are considered "unsafe." By definition, "safe disposal" is only possible where there is access to a toilet or latrine. When a child's feces is put or rinsed into an "improved" toilet or latrine, this is termed "improved child feces disposal."

February 2015

FIGURE 1 Even though safe disposal is relatively high, the prevalence of improved disposal is much lower, at only 6 percent. *Percentage of households reporting each feces disposal practice for their youngest child under age three, 2013.*

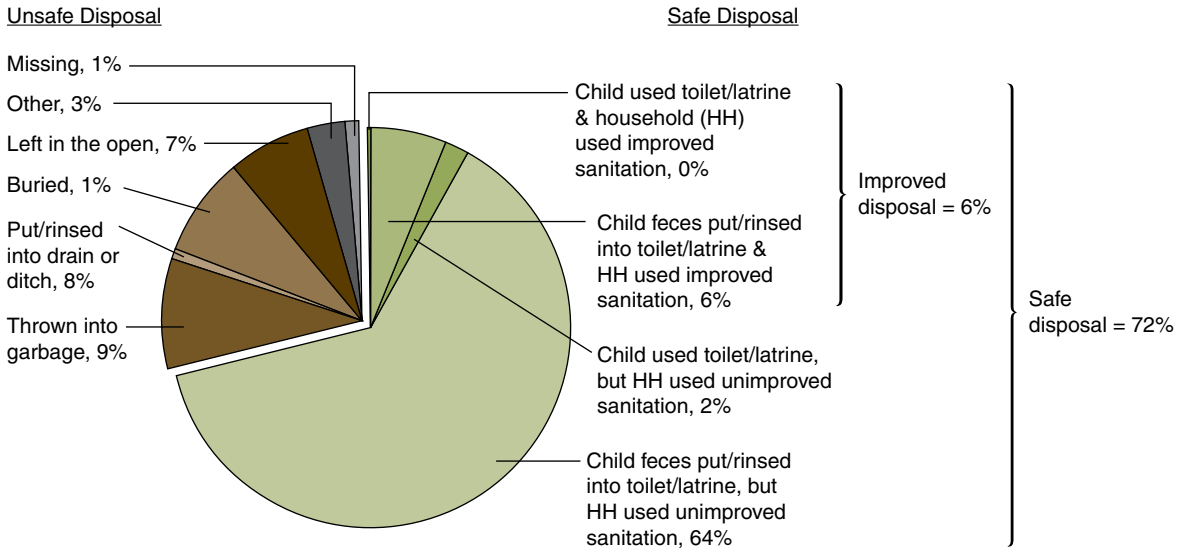


FIGURE 2 Households in urban areas remained substantially more likely to use safe feces disposal than rural households. *Percent of households reporting safe feces disposal for their youngest child under age three, by urban and rural residence, Sierra Leone, 2000 and 2013.*[4]

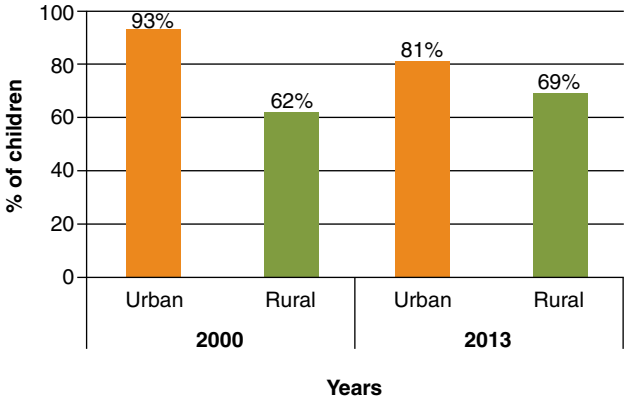
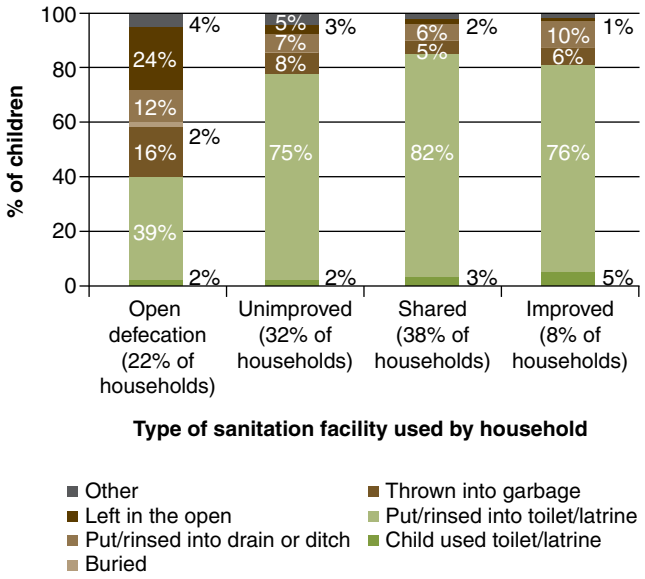


FIGURE 3 The majority (77–84 percent) of households with access to any sanitation facility (shared, unimproved, or improved) reported safe child feces disposal. *Reported feces disposal practice for households' youngest child under age three, by household sanitation facility type, Sierra Leone, 2013.*



Safe disposal differs widely across the wealth asset quintiles (see Figure 5).[5] The least wealthy 20 percent of households is substantially less likely than the wealthier households to report safe child feces disposal; only 57 percent of the least wealthy quintile reports safe disposal. Looking at overall sanitation facility coverage for households with children under age three in Sierra Leone, only 52 percent of the least wealthy households reported use of a toilet/latrine compared to 97 percent of the wealthiest quintile. This is an important factor in child feces disposal: by definition, safe disposal is only possible when there is access to a toilet/latrine.

Behind this national-level data, there is wide variation in child feces disposal practices, with a greater prevalence of unsafe practices among households without access to improved sanitation, in rural areas, and those that are least wealthy. For example, unsafe disposal in rural areas and among the least wealthy households is worse than among children overall. Although this brief only focuses on one socioeconomic indicator at a time, applying multiple lenses would show even greater extremes of disparity—with the least wealthy rural households with the youngest children and no sanitation facility likely reporting the greatest prevalence of unsafe disposal.

FIGURE 4 Although safe disposal increases with the age of the child, use of a toilet/latrine remains low at 2–11 percent regardless of age. *Reported feces disposal practice for children of different ages, Sierra Leone, 2013.*

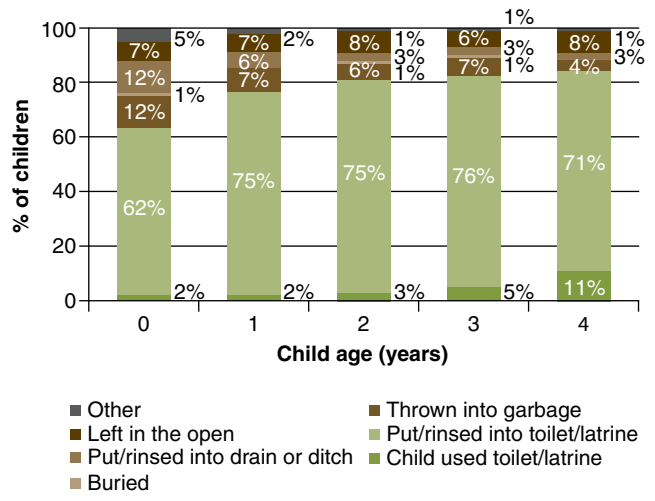
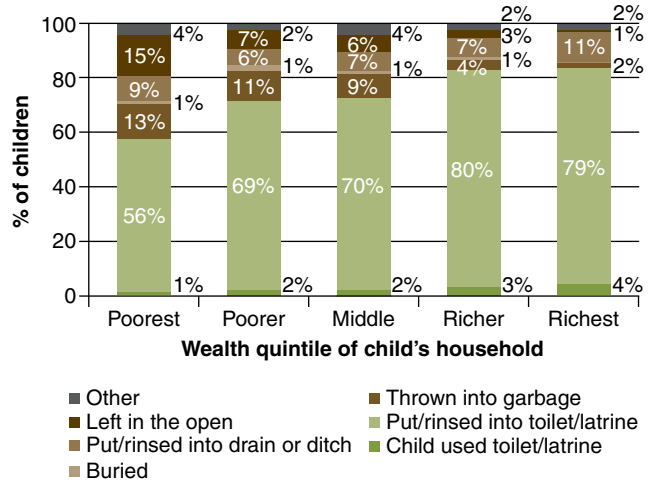


FIGURE 5 Safe child feces disposal steadily increases with increasing wealth. *Reported feces disposal practice for children aged under three years by household wealth quintile, Sierra Leone, 2013.*



IDEAS FOR CONSIDERATION

In Sierra Leone, there are few interventions aimed at the safe disposal of children's feces during the first years of life. In general, sanitation for children under age three has been a neglected area of policy and program intervention. Given the relatively few programs focusing on children's sanitation in Sierra Leone and globally, there is not a strong evidence base of effective strategies for increasing the safe disposal of child feces. Significant knowledge gaps must be filled before comprehensive, practical evidence-based policy and program guidance will be available. Nevertheless, organizations and governments interested in improving the management of children's feces could consider:

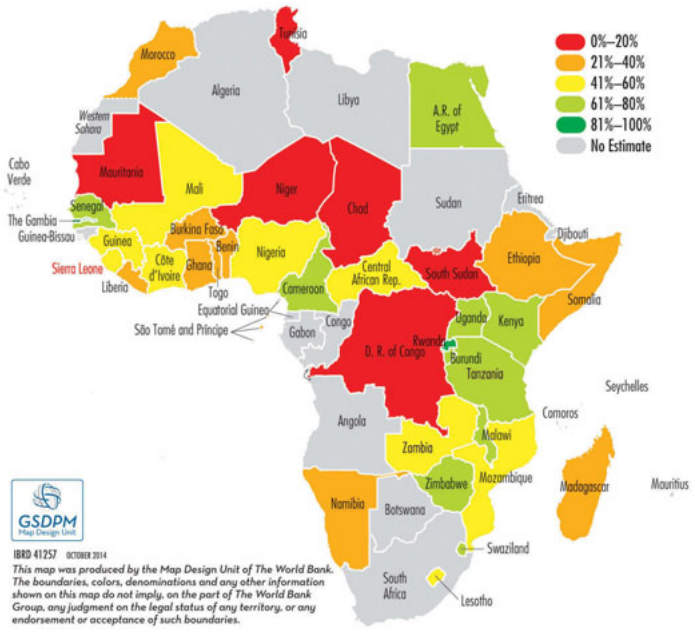
- Conducting formative research to understand the behavioral drivers and barriers to safe child feces disposal

What Is the Impact of Unsafe Disposal of Child Feces?

There is widespread belief that the feces of infants and young children are not harmful, but this is untrue. In fact, there is evidence that children's feces could be more risky than adults' feces, due to a higher prevalence of diarrhea and pathogens—such as hepatitis A, rotavirus, and *E. coli*—in children than in adults.[6] Therefore, children's feces should be treated with the same concern as adult feces, using safe disposal methods that ensure separation from human contact and household contamination.

In particular, the unsafe disposal of children's feces may be an important contaminant in household environments, posing a high risk of exposure to young infants.[7] Poor sanitation can result in substantial health impacts in children, including a higher prevalence of diarrheal disease, intestinal worms, enteropathy, malnutrition, and death. According to the World Health Organization (WHO), most diarrheal deaths in the world (88 percent) are caused by unsafe water, sanitation, or hygiene. More than 99 percent of these deaths are in developing countries, and about eight in every 10 deaths are children.[8] Diarrhea obliges households to spend significant sums on medicine, transportation, health facility fees, and more, and can mean lost work, wages, and productivity among working household members.[9] Stunting and worm infestation can reduce children's intellectual capacity, which affects productivity later in life. The WHO estimates that the average IQ loss per worm infection is around 3.75 points."[10]

FIGURE 6 Percentage of households reporting safe feces disposal for their youngest child under age three, Africa.[11]



- Strengthening efforts to change the behavior of caregivers through programs that encourage cleaning children after defecation, potty training children, and using appropriate methods to transport feces to a toilet/latrine as well as handwashing with soap after fecal contact and before preparing food or feeding a child
- Exploring opportunities to integrate child sanitation into existing interventions that target caregivers of young children, such as including key messages in antenatal/newborn care materials and infant and young child feeding guidance provided to parents, and ensuring that midwives' training, as well as early childhood development materials and preschool programs, include information on safe child feces disposal
- Partnering with the private sector to improve feces management tools, such as potties, diapers, tools for retrofitting latrines for child use, and scoopers
- Improving the enabling environment for management of children's feces by including specific child feces related criteria in open defecation free (ODF) verification protocols and in national sanitation policies, strategies, or monitoring mechanisms.

DATA SOURCES

Unless otherwise specified, all analysis in this brief is based on child feces disposal behavior self-reported by the child's mother or caregiver in the 2013 Sierra Leone DHS which is the latest MICS or DHS available for Sierra Leone that records child feces disposal behaviors.

The MICS and DHS collect data in a generally harmonized manner and hence are the basis for this country profile series. However, whereas the DHS collects data on the youngest child under age five living with the mother for each household, the MICS collects data on all children under age three who live with the respondent (mother or caretaker). To maximize comparability, we restricted all analysis to children under age three in all figures, except Figure 4. As a result of limiting the analysis to children under three only, the figures reported here differ than what is reported in the DHS.

It is likely that self-reports overestimate safe disposal.[12] In Bangladesh, for example, although 22 percent of children reportedly either used a toilet/latrine or their feces were put or rinsed into the toilet/latrine (according to MICS 2006), a structured observation of behavior conducted under UNICEF's Sanitation, Hygiene Education and Water Supply in Bangladesh (SHEWA-B) program in 2007 found only 9 percent of subjects disposed of child feces into a toilet/specific pit.[13] Regardless of this issue, self-reports are currently regarded as the most efficient method for gauging safe disposal of children's feces.

REFERENCES

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NOTES

We're interested in your thoughts. Have you found different evidence of what works through your own programming? If you have thoughts to share, or know of a program that is encouraging the safe disposal of child feces, please contact WSP at worldbankwater@worldbank.org or UNICEF at WASH@unicef.org so that we can integrate your information into future program guidance.

ACKNOWLEDGEMENTS

This brief was developed jointly by WSP and the United Nations Children's Fund (UNICEF) as part of a series of country profiles about sanitation for children under age three.