

## Key messages:

- In 2013, 47 percent of households surveyed in Nigeria reported unsafe disposal of the feces of their youngest child under age three.
- Even among households with improved toilets or latrines, 27 percent reported unsafe child feces disposal behavior.
- Unsafe child feces disposal is more prevalent among households that defecate in the open, those in rural areas, those that are poorer, and those with younger children.<sup>1</sup>

## 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 Nigeria 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 the 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.<sup>2</sup>

According to the latest JMP report, only 28 percent of Nigeria's population had access to improved sanitation in 2012.<sup>3</sup> This means that 121.9 million individuals in Nigeria lacked improved sanitation in 2012; of these, 38.8 million practice open defecation.<sup>4</sup> 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, half of households (53 percent) surveyed in Nigeria reported that the feces of their youngest child under age three were safely disposed. Only 23 percent of households in Nigeria reported that their youngest child's feces were disposed of into an improved sanitation facility, according to the 2013 Nigeria Demographic and Health Survey (DHS) (see Figure 1). This percentage of households reporting improved child feces disposal suggests that children under age three have only slightly worse sanitation than the country's broader population, where 28 percent use improved sanitation. This



provides evidence that although good disposal behavior is relatively common among those with improved facilities, a main block is access to improved sanitation facilities.

In Nigeria, households lacking improved sanitation, those in rural areas, and poorer households—as well as households with younger children—have a higher prevalence of unsafe disposal of child feces. Households practicing open defecation reported the highest level of unsafe child feces disposal, at 86 percent. For the remaining 14 percent of households practicing open defecation (i.e., they do not use a toilet or latrine), it is possible, but not probable, that they deposit their children's feces into a latrine (see Figure 3).

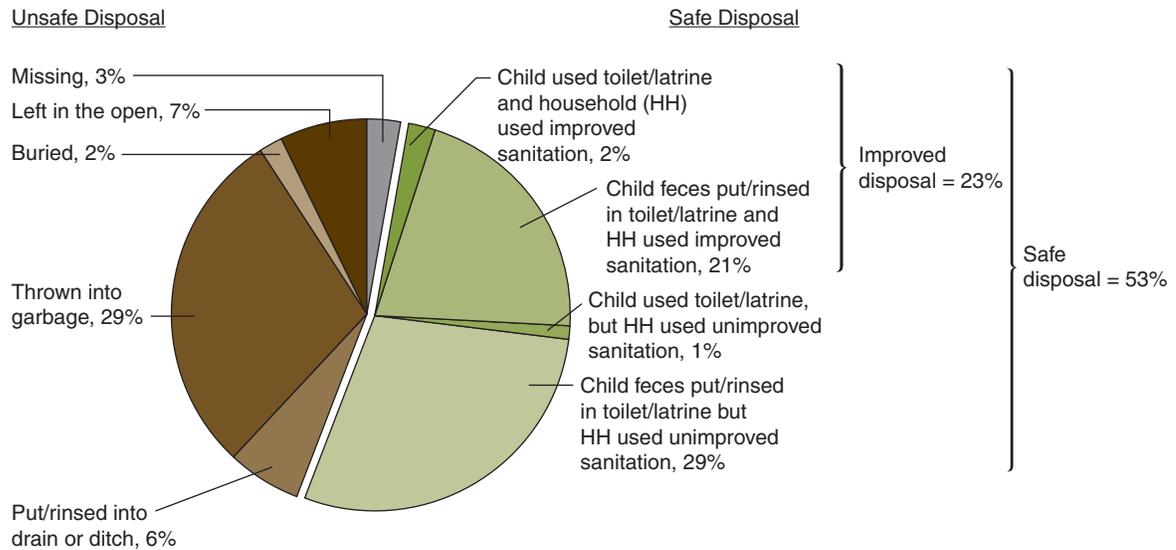
Between 2003 and 2013, reported safe disposal of children's feces decreased in both urban and rural areas (see Figure 2). Several factors could have contributed to this decrease, but more research is needed to identify the key causes. Over the decade, households in urban areas remained substantially more likely to use safe feces disposal than rural households.

The prevalence of safe feces disposal is fairly similar across age groups—staying between 46–56 percent for all but children aged four (see Figure 4). The low prevalence of safe disposal in four-year-old

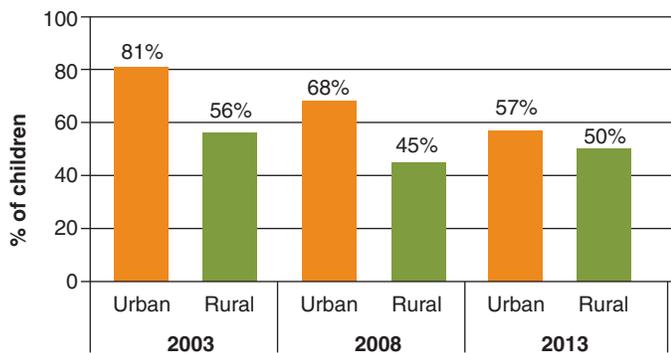
## What Is “Safe Disposal” of a Child's Feces?

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.”

**FIGURE 1 Over half of households report safe disposal, but the prevalence of improved disposal is lower, at just 23 percent.** Percentage of households reporting each feces disposal practice for their youngest child under age three, Nigeria, 2013.



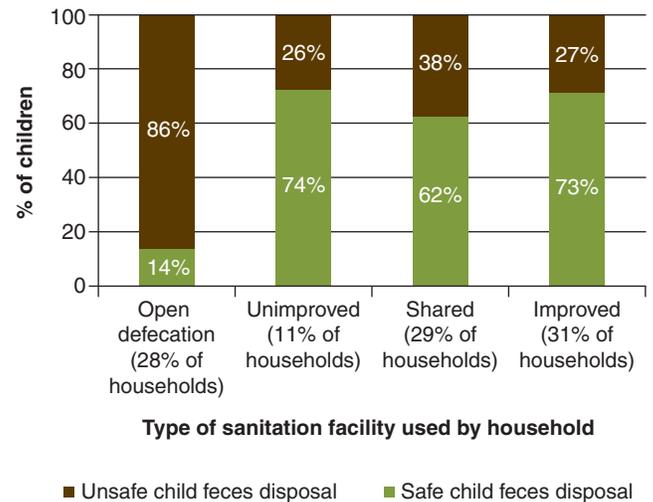
**FIGURE 2 The prevalence of safe child feces disposal has decreased over the last decade, and safe disposal is lower in rural than in urban areas.** Percentage of households reporting safe child feces disposal for their youngest child under age three, by urban and rural residence, Nigeria, 2003, 2008, and 2013.<sup>5</sup>



children is due in part to the large amount of missing data for this age category. This may simply reflect that caregivers are no longer as involved and thus unaware of where their older children defecate. 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.

Child feces disposal practices are fairly similar across wealth quintiles (see Figure 5).<sup>6</sup> Interestingly, the middle wealth quintile reported the lowest prevalence of safe feces disposal (46 percent). However, the proportion of households where children’s feces were left in the open—which is essentially open defecation—steadily decreased as wealth increased (i.e., this practice was higher in the poorest households). Looking at overall access to a sanitation facility for households with children under age three in Nigeria, only 55 percent of the poorest households reported use of any toilet/latrine compared

**FIGURE 3 The majority of households with access to a sanitation facility (whether unimproved, shared, or improved) reported safe child feces disposal.** Reported feces disposal practices for children under age three, by household sanitation facility type, Nigeria, 2013.

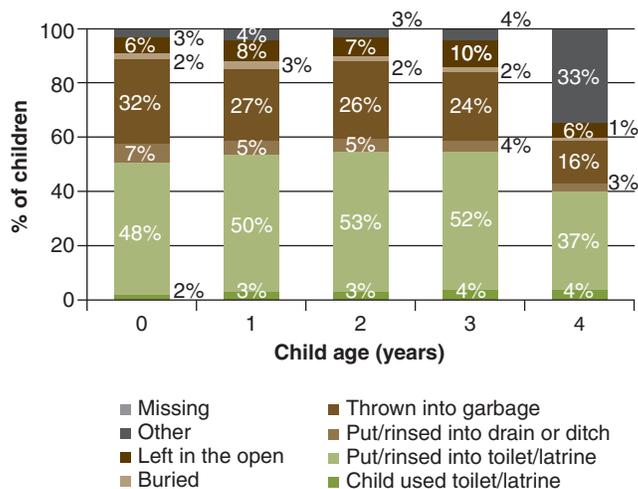


to 97 percent of the richest quintile. This is an important factor in child feces disposal: by definition, safe disposal is only possible when there is access to a toilet/latrine.

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 poorer. For example, unsafe disposal in rural areas among the poorest 20 percent 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 poorest rural households with the youngest

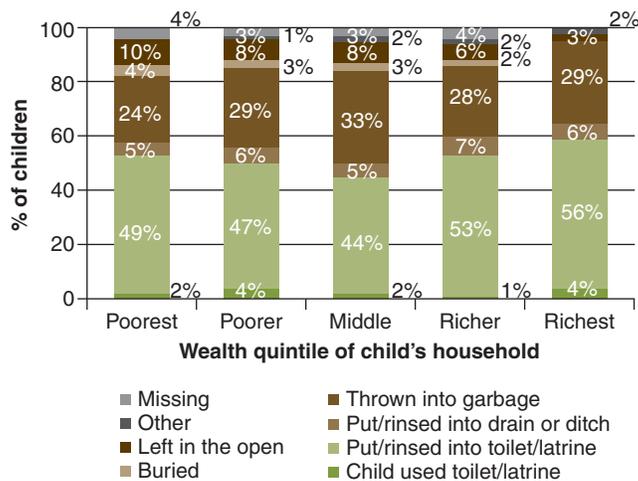
**FIGURE 4 Child feces disposal behaviors are similar across child age groups; however, reported safe disposal is lowest for children aged 48–59 months.**

*Reported feces disposal practice for children by age, Nigeria, 2013.*



**FIGURE 5 Safe child feces disposal is similar across the wealth quintiles (ranging from 46–60 percent).**

*Reported feces disposal practice for children under age three by household wealth quintile, Nigeria, 2008.*



children and no sanitation facility likely reporting the greatest prevalence of unsafe disposal.

## IDEAS FOR CONSIDERATION

In Nigeria, there are few interventions aimed at the safe disposal of children's feces during the first years of life. However, "safe disposal of child feces" is one of the messages delivered as part of Community Led Total Sanitation (CLTS) interventions in the country. In addition, the "Protocol for Certification and Verification of Open Defecation Free and Total Sanitation Communities," developed jointly by the Government of Nigeria and UNICEF, includes checklist questions on

## What Is the Impact of Unsafe Disposal of Children's 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.<sup>7</sup> Therefore, children's feces should be treated with the same concern as adults' 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.<sup>8</sup> 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 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.<sup>9</sup> 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.<sup>10</sup> 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.<sup>11</sup>

whether children's feces are properly disposed of and whether there are any feces deposited in the open anywhere in the community. Finally, disposal of children's feces has also been included as part of the "Key Family Best Practices" in the expanded WASHCOM training manual (currently being finalized).

In general, sanitation for children under age three has been a neglected area of policy and program intervention in Nigeria. Given the relatively few programs focusing on children's sanitation in Nigeria 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
- 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, 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 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 Nigeria Demographic and Health Survey (DHS), which is the latest Multiple Indicator Cluster Survey (MICS) or DHS available for Nigeria that records child feces disposal behavior.

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. Figure 2 includes data from the Nigeria DHS conducted in 2003, 2008, and 2013.

It is likely that self-reports overestimate safe disposal.<sup>12</sup> 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 that only 9 percent of subjects disposed of children's feces into a toilet/specific pit.<sup>13</sup> 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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- 2 The JMP has established a set of standardized definitions to categorize improved sanitation, which are used to track progress toward Millennium Development Goal 7. However, these definitions are not always the same

as those used by national governments. See *Progress on Drinking Water and Sanitation: Update 2014*.

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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 children's feces, please contact WSP at [worldbankwater@worldbank.org](mailto:worldbankwater@worldbank.org) or UNICEF at [WASH@unicef.org](mailto:WASH@unicef.org) so that we can integrate your information into future program guidance.

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