

Key messages:

- In 2010, 38 percent of households surveyed in Tanzania reported that the feces of their youngest child under age three were not deposited into any kind of toilet or latrine—i.e., they were unsafely disposed of.¹
- Even among households with improved toilets or latrines, 21 percent reported unsafe child feces disposal behavior.¹
- 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.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 Tanzania 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.²

In the latest JMP report, 12 percent of Tanzania's population had access to improved sanitation in 2012.³ This means that 42 million individuals in Tanzania lacked improved sanitation in 2012, of which 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

Tanzania ranked number 28 (i.e., 10th worst) for the percentage of children whose feces are safely disposed of, out of 38 African countries with available MICS or DHS data. While 38 percent of households reported safe disposal, only 8 percent of households in Tanzania reported that their youngest child's feces were disposed of into an improved sanitation facility. This low percentage of households reporting improved child feces disposal suggests that children under three have somewhat worse sanitation than the broader Tanzanian population, where 12 percent use improved sanitation. However, both rates are very low.



A young child plays with cards in Tanzania. Over one-third of households in Tanzania do not use safe disposal methods for the feces of their youngest children

Although the focus in this brief (and others in the series) is the Multiple Indicator Cluster Survey (MICS) and Demographic and Health Survey (DHS), which are comparable across each country studied (please see the "Data Sources" section), the authors have also reviewed all other relevant information they could identify. A 2011 study in Dar es Salaam recorded inappropriate toilets for use by small children.⁴ Safety concerns about children falling into pits led children to openly defecate on the family property. According to another study, conducted in Tanzania in 2012, only 2 percent of latrines in the surveyed areas were reportedly constructed with the special needs of young children in mind. Respondents without latrines disposed of child feces by burying them in the soil, throwing them in the household surroundings, leaving them to be eaten by pigs, dogs, or chickens, or throwing them in the waste pit.⁵

Having an infant in the household has been found to significantly increase the quantity of fecal indicator bacteria on mothers' hands in Dar es Salaam.⁶ In addition, a study by Tanzania's Ministry of Health and Social Welfare found that that 15 percent of households had children's feces around their compounds.⁷

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

The safest way to dispose of children's feces is to help them 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 In Tanzania in 2010, 62 percent of households reported that the feces of their youngest child under age three were safely disposed. Percentage of households reporting each feces disposal practice for their youngest child under age three, Tanzania, 2010.

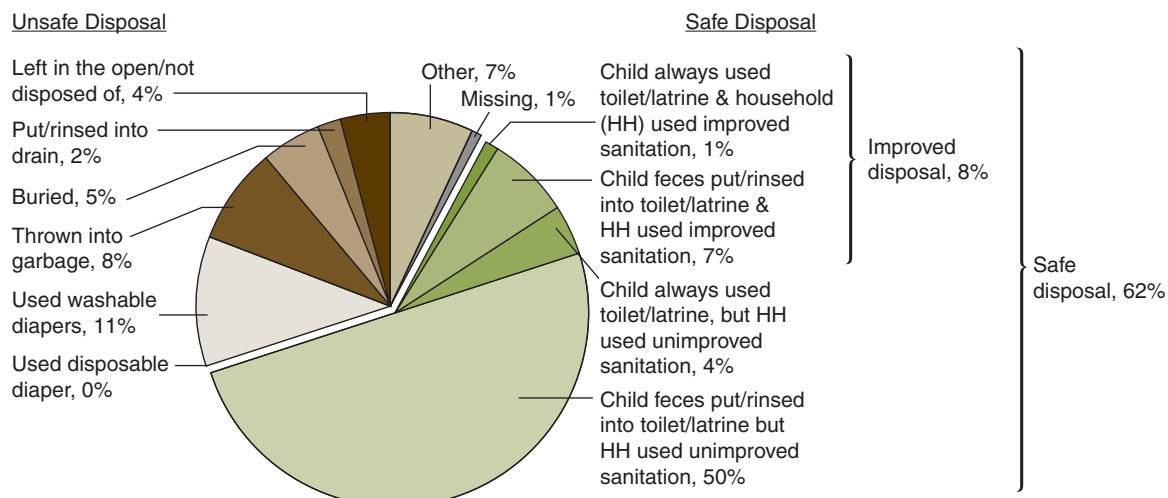
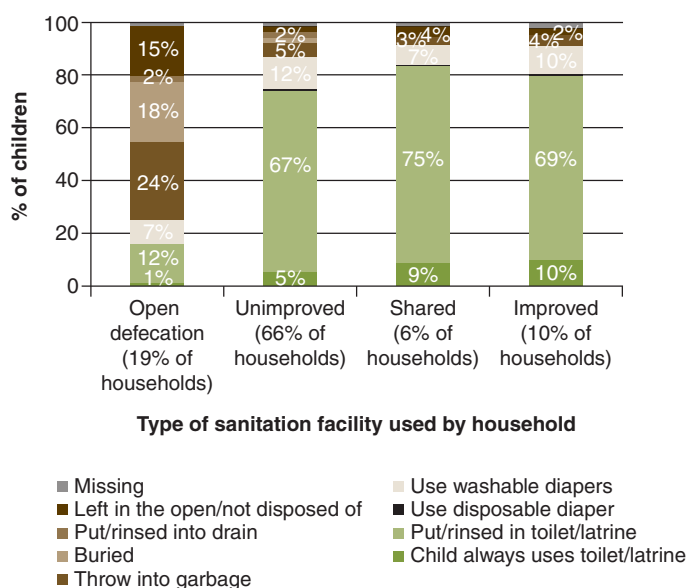


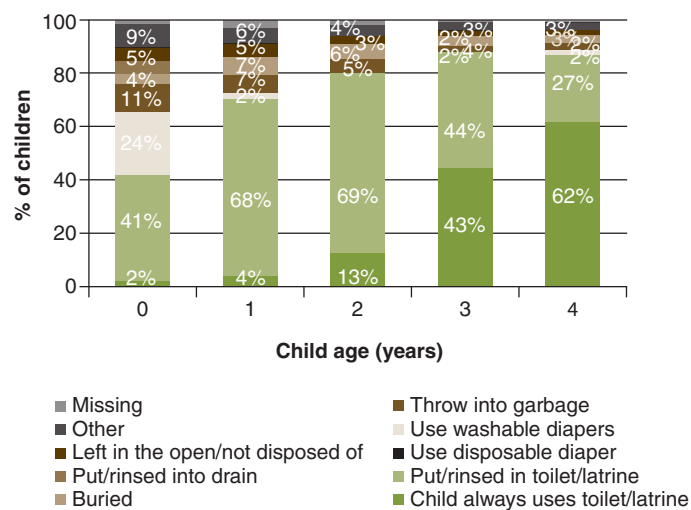
FIGURE 2 Even among households with improved sanitation, one-fifth (21 percent) did not practice safe child feces disposal. Reported feces disposal practice for households' youngest child under age three, by household sanitation facility type, Tanzania, 2010.



Households practicing open defecation reported the highest level of unsafe child feces disposal, at 87 percent. However, 13 percent of households practicing open defecation report safe child feces disposal. It is possible, but not probable, that these households that do not use a latrine themselves, deposit their children's feces into a toilet/latrine.

Households are most likely to report child feces being unsafely disposed of during the first year of life (Year 0 in Figure 3), especially through the use of washable diapers. If the washing water is poured back into the ground near the household, the family remains exposed to the pathogens it contains.

FIGURE 3 Households with younger children were generally more likely to report unsafe disposal methods. Reported feces disposal practice for children of different ages, Tanzania, 2010.



Only 48 percent of the youngest children under age three among the poorest quintile of households in Tanzania had safe disposal in 2008–2009, compared to 82 percent among the richest. In households with children under age three, 22 percent of people in the poorest quintile used a toilet/latrine of any kind, compared to 85 percent of the richest quintile.

IDEAS FOR CONSIDERATION

In Tanzania, there are two interventions that included a focus on increasing demand, improving supply, and creating an enabling environment for the safe disposal of children's feces during the first years of life. The programs were large scale and promoted handwashing with soap and improved sanitation in rural Tanzania. They involved behavior change strategies such as media campaigns

FIGURE 4 Safe disposal differs across the wealth asset quintiles,¹⁴ with the poorest quintile of households less likely than richer households to report safe child feces disposal. Reported feces disposal practice for households' youngest child under age three, by household wealth quintile, Tanzania, 2010.

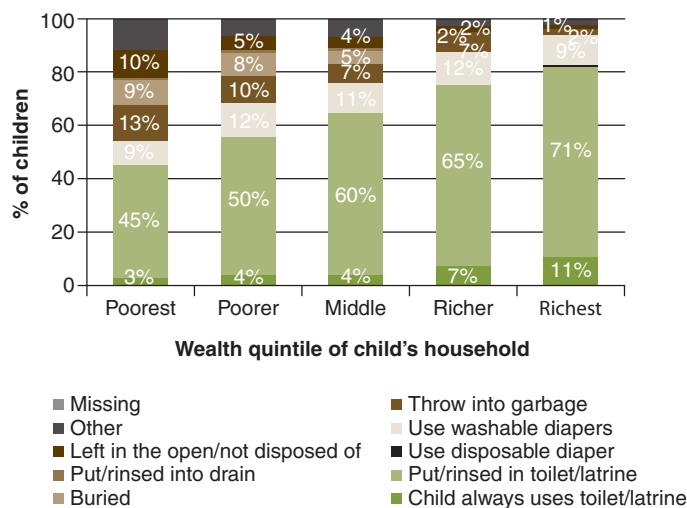
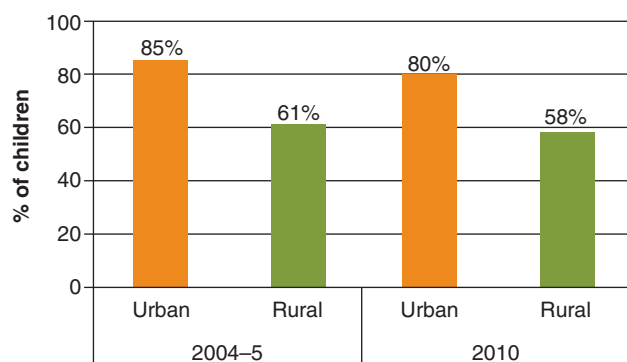


FIGURE 5 Between 2004–2005 and 2010, reported safe disposal of child feces remained lower among rural households than urban households, with little change over time. Percentage of households reporting safe feces disposal for their youngest child under age three, by urban and rural residence, Tanzania, 2010.¹⁵



and direct consumer contact, promotion of aspirational messages, training of community activists, Community-Led Total Sanitation triggering events, and strengthening of supply by training local masons. Implemented between 2009 and 2011, both interventions were part of a multicountry effort to address poor hygiene and sanitation conditions for large rural populations in the developing world, implemented through local governments with assistance from the World Bank. WSP conducted a cross-over randomized evaluation of these handwashing and sanitation promotion interventions: study location “wards” were randomly assigned to receive sanitation promotion, handwashing promotion, both interventions together, or neither. The impact evaluation found an increase in the probability of safe child feces disposal, in both sanitation treatment groups. Other than these two programs, there are few interventions in Tanzania that focus on safe child feces disposal in the first years of life.

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 adult feces, due to a higher prevalence of diarrhea and pathogens—such as hepatitis A, rotavirus, and *E. coli*—in children than adults.⁹ 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 avoid 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.¹⁰ 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.¹¹ 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.¹² 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.¹³

Given the relatively few programs focusing on children's sanitation in Tanzania and globally, there is not a strong evidence base of effective strategies for increasing the safe disposal of children's 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 of 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 midwives' training includes information on safe child feces disposal, and integrating into early childhood development materials and preschool programs
- 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 verification protocols, and national sanitation policies, strategies, or monitoring mechanisms.



A care giver smiles at a young child. Children's caregivers play a critical role in managing child feces disposal and shaping children's toilet training

DATA SOURCES

Unless otherwise specified, all analysis in this brief is based on households' self-reported behavior for disposing of child feces, as collected in the Tanzania DHS 2010, which is the latest MICS/DHS on file for Tanzania 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 but Figure 4.

It is likely that self-reports overestimate safe disposal.¹⁶ In Bangladesh, for example, although 22 percent of children reportedly either used a toilet/latrine or their feces was 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.¹⁷ Regardless of this issue, self-reports are currently regarded as the most efficient method for gauging safe disposal of children's feces.

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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 or UNICEF at WASH@unicef.org so that we can integrate your information into future program guidance.

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