Child Feces Disposal in KENYA

Key messages:

- In 2008–2009, 30 percent of households surveyed in Kenya reported unsafe disposal of the feces of their youngest child under age three–i.e., they were not deposited into a latrine or toilet.
- Even among households with improved toilets or latrines, 12 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.[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 Kenya 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, only 30 percent of Kenya's population had access to improved sanitation in 2012.[3] This means that 30 million individuals in Kenya lacked improved sanitation in 2012; of these, 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

While 70 percent of households in Kenya reported safe disposal of their youngest child's feces, less than one in six households (16 percent) reported that their youngest child's feces were disposed of into an improved sanitation facility (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 30 percent use improved sanitation. Households practicing open defecation reported the highest level of unsafe child feces disposal, at 94 percent (see Figure 2). Kenya ranked eighth best for the percentage of children whose feces are safely disposed of, among 38 African countries with available Multiple Indicator Cluster Survey (MICS) or Demographic and Health Survey (DHS) data.

A 1996 study among the Luo of western Kenya found that whether or not mothers or caregivers had access to latrines, children's feces were commonly disposed of through digging and burying. Toddlers were trained to defecate in a designated place and to inform the mother/caregiver so that they could dispose of the feces.[4] More recently, in a 2010 thesis based on research conducted in a peri-urban area in Kisumu, Kenya, caretakers report that indiscriminate defecation by children influences their ability and desire to properly dispose of feces, that dirty latrines deter disposal therein, and that they don't habitually wash their hands until they perceive them to be dirty.[5]

A shift in safe disposal practices is also seen as children grow (Figure 3). Children are increasingly likely to use a toilet/latrine themselves, or have their feces put or rinsed into one. 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. In Kenya, four years is the estimated age at which a child is old enough to use a latrine.[6]

Only 40 percent of the youngest children under three in the poorest quintile of households had safe disposal in 2008–2009, compared to 93 percent among the richest (Figure 4). Forty-nine percent of people

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 In 2008–2009, 70 percent of households in Kenya reported that the feces of their youngest children were safely disposed of. *Percentage of households reporting each feces disposal practice for their youngest child under age three, Kenya, 2008–2009.*

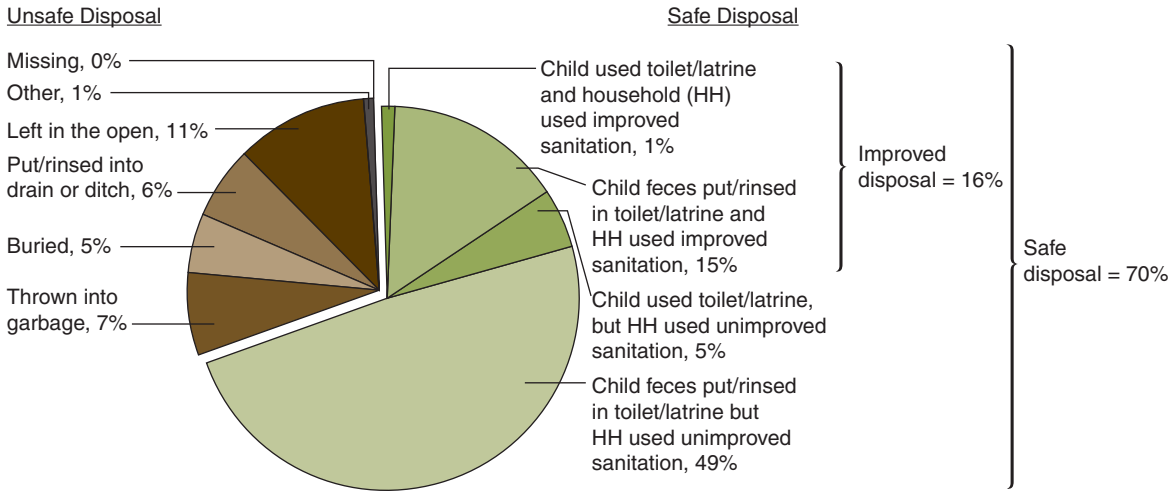
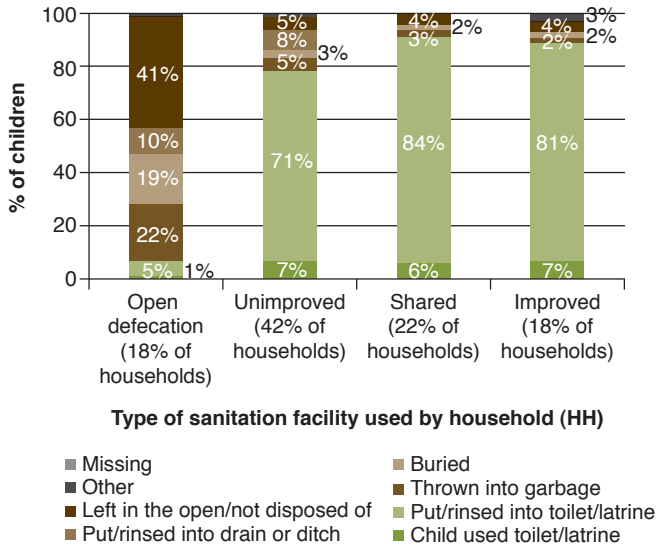


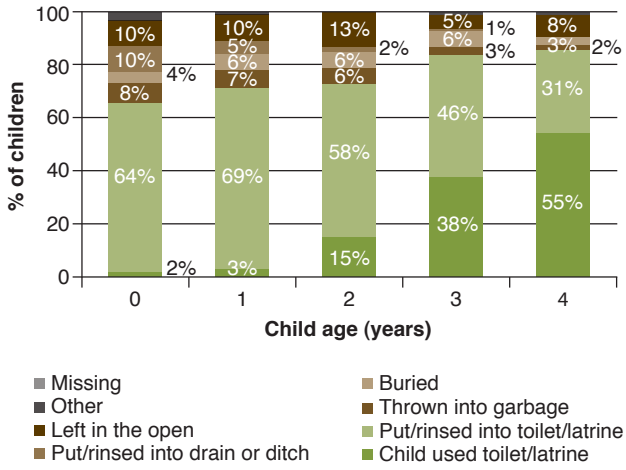
FIGURE 2 Even among households with improved sanitation, 12 percent reported unsafe child feces disposal behaviors. *Reported feces disposal practice for households' youngest child under age three, by household sanitation facility type, Kenya, 2008–2009.*



in the poorest quintile of households that have children under age three used some type of toilet/latrine, compared to 100 percent of the richest quintile. This is an important factor in child feces disposal: by definition, safe disposal is only possible where there is access to a toilet/latrine.

Between 2003 and 2008–2009, reported safe disposal of child feces increased in Kenya, from covering approximately half (47 percent) of the youngest children per household nationally in 2003 to 70 percent of them in 2008–2009. The prevalence of safe disposal is much higher in urban than in rural areas (see Figure 5). In harmony with the DHS data, a study conducted by Moi University in Kenya in 2006 found that 53 percent of children had their feces deposited into a latrine.[7]

FIGURE 3 Child feces disposal behaviors differ across age groups: the oldest children had the highest prevalence of safe disposal. *Reported feces disposal practice for children of different ages, Kenya, 2008–2009.*



A MICS was also conducted in 2011, but only for Nyanza Province. It recorded safe feces disposal for 73 percent of households' youngest children, compared to 52 percent recorded in 2003.

IDEAS FOR CONSIDERATION

In Kenya, two main efforts to increase demand, improve supply, and create an enabling environment for the safe disposal of child feces during the first years of life were identified. First, the Government of Kenya, supported by UNICEF, Kwaho, and InTouch, issued "A Practitioners Guide For ODF Certification" in 2011, including as a key certification issue that "defecation sites must of necessity not be active, and the certification team must inspect them and also household compound especially for children feces." The guide also recommended that certifiers "hold discussions with children to verify

FIGURE 4 The poorest 20 percent of households were less likely than richer households to report safe child feces disposal.[8] *Reported feces disposal practice for households' youngest child under age three, by household wealth quintile, Kenya, 2008–2009.*

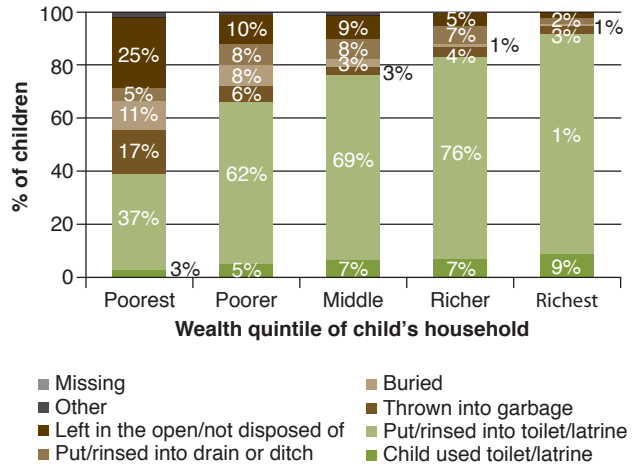
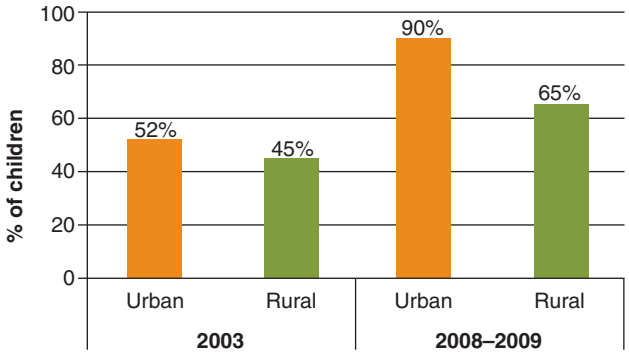


FIGURE 5 Safe disposal remains higher among urban households than rural ones, with increasing urban-rural disparity. *Percentage of households reporting safe feces disposal for their youngest child under age three, by urban and rural residence, Kenya, 2008–2009.*[9]



information provided by adults. During the certification exercise, you can randomly stop children you meet on the way and ask them where they defecate. Children tend to be more honest than adults on such matters. Their information usually corroborates what is actually taking place in the village."[10] Second, the WASH Benefits Study, funded by the Bill & Melinda Gates Foundation, is implementing a cluster-randomized controlled trial to measure the impact of water quality, sanitation, handwashing, and nutritional interventions among newborns in rural Kenya. The sanitation component includes "technologies . . . [to reduce] children's exposure to feces in the household environment and increasing latrine use: (1) a locally developed sani-scoop dedicated to the removal of child and animal feces from the compound, (2) plastic child potties for children aged 6 months and older until they use the latrine, and (3) a new or upgraded latrine for each household in the compound." Primary outcomes will be measured after two years of intervention.[17]

However, there are few other interventions in Kenya 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 in Kenya. Given the relatively few programs focusing on children's sanitation in Kenya 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 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 includes information on safe child feces disposal, and integrating child sanitation information into early childhood development materials and preschool programs

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 in adults.[11] 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.[12] A 2005 study among children under five in Mauche and Nessuit, Kenya, found that 37 percent of children ingest earth occasionally (less than a handful), and 12 percent ingest a lot (a handful or more).[13] Where open defecation is also taking place, this means ingesting feces and the accompanying pathogens. 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.[14] 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.[15] 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.[16]

- 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 in national sanitation policies, strategies, or monitoring mechanisms.

DATA SOURCES

Unless otherwise specified, all analysis in this brief is based on households' self-reported behavior for disposing of children's feces, as collected in the 2008–2009 Kenya DHS, which is the latest MICS/DHS available for Kenya that records child feces disposal behaviors nationally. 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 3.

It is likely that self-reports overestimate safe disposal.[18] 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 child feces into a toilet/specific pit.[19] Regardless of this issue, self-reports are currently regarded as the most efficient method for gauging safe disposal of children's feces.

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.

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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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