

Key messages:

- In 2005–2006, 84 percent of households surveyed in India reported unsafe disposal of the feces of their youngest child under age three.
- Even among households with improved toilets or latrines, 56 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 India 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

According to the latest JMP report, 36 percent of India's population had access to improved sanitation in 2012.³ This means that 792 million individuals in India lacked improved sanitation in 2012; of these, 597 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

Safe child feces disposal is less prevalent in India than in any other country in South Central Asia with available Multiple Indicator Cluster Survey (MICS) or Demographic and Health Survey (DHS) data.

Although 16 percent of households in India reported that their youngest child's feces were safely disposed of, only 9 percent of households 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 the feces of children under the age of three are less likely to be safely disposed of than those of the general population, where 36 percent



have access to improved sanitation. Forty percent of households with a child under age three left the child's feces in the open in 2005–2006.

Only a tenth of households in India with children in their first year of life reported safe disposal, compared to 37 percent of those with children aged four (48 to 59 months). 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 (Figure 2). 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.

As with the adult population, where access to sanitation is 3 percent among the poorest quintile, safe disposal of child feces differs across wealth quintiles. In the poorest quintile, only 2 percent of households' youngest children under age three used safe disposal methods, compared to 54 percent of the richest quintile (Figure 3). Half the children in the poorest 40 percent of the population had their feces left in the open, which is essentially open defecation. In all households with children under age three, 5 percent of the poorest households used a toilet/latrine of any kind, compared to 96 percent of households in the richest quintile. Safe disposal was much lower in rural than in urban areas in 2005–2006, with just 8 percent of rural households reporting safe disposal, compared to 38 percent of urban households.

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 India in 2005–2006, only 16 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, India, 2005–2006.

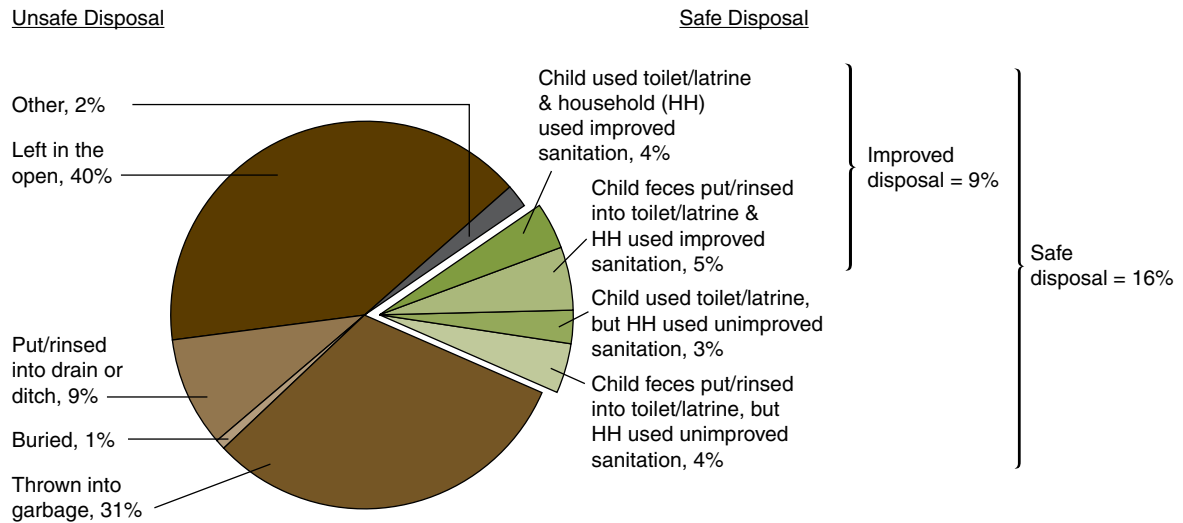


FIGURE 2 Households with younger children were generally more likely to report unsafe disposal methods. Reported feces disposal practice for children of different ages, India, 2005–2006.

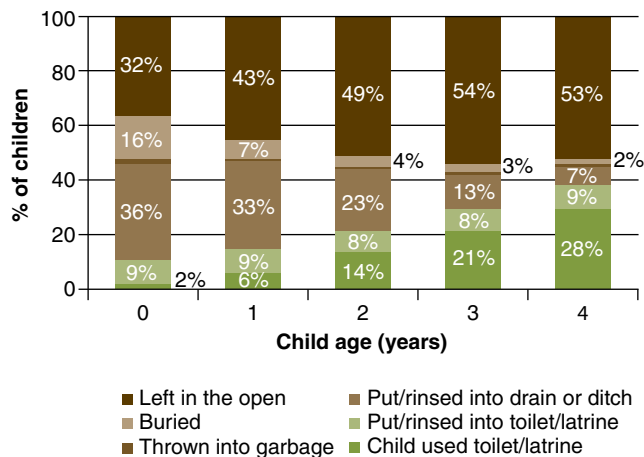
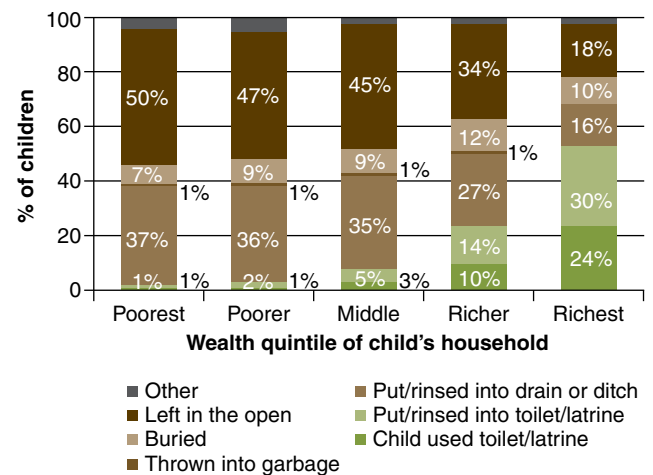


FIGURE 3 Safe disposal differs widely across the wealth asset quintiles, and is virtually nonexistent among the poorest 60 percent of households.⁵

Reported feces disposal practice for households' youngest child under age three, by household wealth quintile, India, 2005–2006.



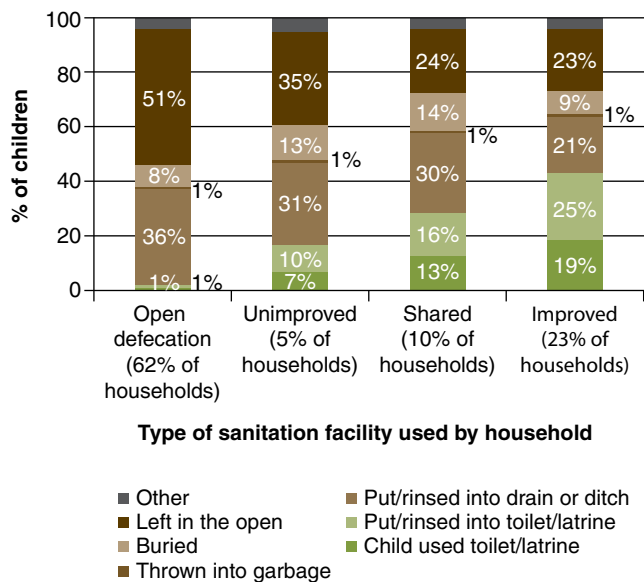
IDEAS FOR CONSIDERATION

Few interventions specifically address child feces disposal in India. India's Ministry of Drinking Water and Sanitation and UNICEF developed a National Sanitation and Hygiene Advocacy Communication Strategy (SHACS) Framework for 2012–2017. The framework includes "safe child feces disposal" and "handwashing with soap after defecation, before food, and after handling child feces" as two of the four critical sanitation and hygiene behaviors.⁴ Effective disposal of child feces is an essential indicator for open defecation free certification under the Swachh Bharat Mission, formerly Nirmal Bharat Abhiyan. In June 2014, the Secretary in the Ministry of Women and Child Development noted that all Anganwadi centers should have child-friendly toilets, handwashing facilities, and soap.

A few studies conducted in India have researched child feces disposal in certain regions of the country. While the findings cannot be

generalized across all of India, they are examples of some situations that have been found. Formative research by the World Bank's Water and Sanitation Program (WSP) in randomly selected districts of Bihar, Rajasthan, and Meghalaya in 2012 showed that very few children under age five usually defecated in a latrine (only 4 percent of households in Bihar, 3 percent in Rajasthan, and 9 percent in Meghalaya). The remainder had no designated place for defecation, used the backyard, or used unsafe disposal methods.⁶ In Rajasthan, WSP research pinpointed unsuitability for children as the major flaw in the toilets of the "Anganwadi" (early childhood) child and mother care centers sponsored by the Indian Government.⁷ In a 2012 report focusing on the same state, researchers noted that in 39 percent of households where it was reported that not all members were using

FIGURE 4 Even among households reporting improved sanitation in India, more than half (56 percent) reported unsafe child feces disposal behaviors. Households practicing open defecation reported the highest level of unsafe child feces disposal. Reported feces disposal practice for households' youngest child under age three, by household sanitation facility type, India, 2005–2006.



toilets regularly, it was because children were not using them regularly. Moreover, 69 percent of households who had their own toilet cited security for women and children as a motivation for building a new toilet and 7 percent cited children's insistence.⁸

Just as adults might have access to, but not use a toilet, research has also found a large discrepancy between household sanitation access and child usage to sanitation. In 2012, whereas 79 percent of children in a study population of rural Orissa were recorded as living in a household with a latrine, less than a quarter reportedly had their feces deposited into the latrine. Most children's feces were disposed of with other household waste.⁹ According to another 2012 study, 54–64 percent of rural households with access to an improved latrine in Madhya Pradesh reported that children under five openly defecated daily (Figure 4).¹⁰

According to findings published in 2014 from a cross-sectional study of child feces disposal practices in sample areas of rural Orissa, India's TSC had not led to high levels of safe disposal of child feces in the areas surveyed. Respondents reported that 58 percent of prewalking children still defecated on the ground inside the household and 55 percent of walking children defecated on the ground around the compound.¹¹

WSP supported efforts in rural Madhya Pradesh and Himachal Pradesh to strengthen India's TSC implementation. A cluster-randomized impact evaluation of the program's effectiveness in the Dhar and Khargone districts of Madhya Pradesh found that safe disposal of children's feces increased by 11 percentage points in the intervention group, compared to just a 4 percentage point increase in a control group, which did not receive the program until after the evaluation.¹²

What Is the Impact of Unsafe Disposal of Child Feces?

While there is widespread belief that the feces of infants and young children are not harmful, children's feces could be more risky than adults' feces, due to a higher prevalence of pathogens.¹³ 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 infants.¹⁴ Poor sanitation can result in substantial health impacts in children, including a higher prevalence of diarrheal disease, intestinal worms, enteropathy, malnutrition, stunting, and death. Stunting rates among children under age three in India are as high as 45 percent,¹⁵ occurring in children with poor nutrition and sanitation, causing not only irreversible impaired height but also cognitive ability. New research coming out of India increasingly recognizes poor sanitation as the explanation for the longstanding enigma that Indian children are more stunted (shorter) than relatively poorer children in Sub-Saharan Africa, suggesting that feces circulating in the environment from open defecation is a major explanatory factor.¹⁶

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.¹⁷ 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.¹⁸ 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.¹⁹

Despite these interventions, there is still 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 the SHACS further, to change the behavior of caregivers through programs that encourage cleaning children after defecation, potty training children, using appropriate methods to transport feces into a toilet/latrine, and 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 with Ministry of Women and Child Development, Ministry of

Health and Family Welfare, Ministry of Drinking Water Supply and Sanitation, including Anganwadi Workers, Accredited Social Health Activists, and Auxiliary Nurse Midwives.

- Partnering with the private sector to improve feces management tools, such as potties, diapers, tools for retrofitting latrines for children's use, and scoopers.

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 India DHS 2005–2006 (also called India National Family Health Survey or NFHS 2005–2006), which is the latest MICS/DHS available for India 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 3.

It is likely that self-reports overestimate safe disposal.²⁰ 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.²¹ 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 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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