Key messages:

- In 2010–2011, one-third (35 percent) of households surveyed in Senegal reported unsafe disposal of the feces of their youngest child under age three.
- Even among households with “improved” toilets or latrines, 22 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.

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 Senegal 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.

In the latest JMP report, only 52 percent of Senegal’s population had access to improved sanitation in 2012. This means that 6.6 million individuals in Senegal lacked improved sanitation in 2012; of these, 2.3 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

Although 65 percent of households surveyed in Senegal in 2010–2011 reported safe disposal of the feces of their youngest child under age three, only 42 percent of households in Senegal reported that their youngest child's feces were disposed of into an improved sanitation facility. This stricter definition of disposal is called improved disposal in Figure 1. This low percentage of households using improved child feces disposal methods suggests that children under age three have worse sanitation than the broader Senegalese population, where 52 percent use improved sanitation. However, Senegal ranked ninth among 38 African countries with available Multiple Indicator Cluster Survey (MICS) or Demographic and Health Survey (DHS) data.

Households practicing open defecation reported the highest level of unsafe child feces disposal, at 87 percent (Figure 2). However, 13 percent of households practicing open defecation report using safe child feces disposal; it is possible, but not probable, that households who do not use improved sanitation themselves deposit their children's feces into a toilet/latrine.

In addition, households with younger children were more likely to report unsafe disposal methods (see Figure 3). Specifically, among households with children in their first year of life, only 59 percent reported safe disposal, compared to 78 percent of households 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. 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.

Among those in the poorest 20 percent of households, the feces of only 33 percent of the youngest children were safely disposed of, compared to 82 percent among the richest (Figure 4). Moreover,

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 Senegal in 2010–2011, two-thirds (65 percent) of households reported that the feces of their youngest child under three were safely disposed of. Percentage of households reporting each feces disposal practice for their youngest child under age three, Senegal, 2010–2011.

Safe disposal = 65%
Improved disposal = 42%
Unsafe disposal = 22%

FIGURE 2 Even among households with improved sanitation, 22 percent reported unsafe child feces disposal behaviors. Reported feces disposal practice for households’ youngest child under age three, by household sanitation facility type, Senegal, 2010–2011.

FIGURE 3 Households with younger children were more likely to report unsafe disposal methods. Reported feces disposal practice for children of different ages, Senegal, 2010–2011.

in these poorest households with children under age three, only 45 percent reported using a toilet/latrine of any kind, compared to 100 percent of the richest quintile. This is an important factor in child feces disposal, as safe disposal is only possible where there is access to a toilet/latrine.

Safe disposal of child feces increased in Senegal between the MICS and DHS surveys of 2000 and 2010–2011, from covering 43 percent of the youngest children per household nationally in 2000 to 65 percent of them a decade later.

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 and among the poorest 40 percent of households is worse
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. 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. 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. 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. 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.

IDEAS FOR CONSIDERATION

In Senegal, 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 Senegal and globally, there is not a strong evidence base of effective strategies for increasing the

What Is the Impact of Unsafe Disposal of Children’s Feces?

The percentages in Figure 4 show that for both urban and rural residences, poor wealth quintiles report the lowest prevalence of safe feces disposal for children under age three, by household wealth quintile, Senegal, 2010–2011. Among the poorest in wealth quintiles, 2% used child toilets, 8% put/filled the feces into a garbage, 31% left them in the open, and 43% buried, missing, or put them in drain or ditch. The lowest percentage of urban children used toilets compared to rural children. A larger percentage of children in urban households used drains or ditches compared to rural households. The percentage of rural households using toilets was 2% compared to 57% for urban. A higher percentage of rural household used garbage disposal methods compared to urban. 2% among urban reported they used toilet disposal methods compared to 34% among rural children. A higher percentage of rural children used drains compared to urban children. A higher percentage of urban children used garbage compared to rural children (43% urban, 9% rural). Proper disposal of feces is crucial to reduce the risk of transmission of diarrheal illnesses and other communicable diseases that 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. 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. 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.

The percentages in Figure 5 show that for both urban and rural residences, poor wealth quintiles report the lowest prevalence of safe feces disposal for children under age three, by urban and rural residence, Senegal, 2000 and 2010–2011. Among the poorest in wealth quintiles, 2% used child toilets, 8% put/filled the feces into a garbage, 31% left them in the open, and 43% buried, missing, or put them in drain or ditch. The lowest percentage of urban children used toilets compared to rural children. A larger percentage of children in urban households used drains or ditches compared to rural children. A higher percentage of rural household used garbage disposal methods compared to urban children. 2% among urban reported they used toilet disposal methods compared to 34% among rural children. A higher percentage of rural children used drains compared to urban children. A higher percentage of urban children used garbage compared to rural children (43% urban, 9% rural).
most efficient method for gauging safe disposal of children’s feces. Regardless of this issue, self-reports are currently regarded as the standard procedure for data collection. The MICS and DHS collect 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. 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 (SHEW A-B) program in 2011 found that 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


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.


4 These asset indices used to classify households into wealth quintiles have not been adjusted to remove drinking water or sanitation variables.

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 2010–2011 Senegal DHS, which is the MICS/DHS available for Senegal 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.

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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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