

Key messages:

- In 2012, four in five households (81 percent) surveyed in Niger reported unsafe disposal of the feces of their youngest child under age three.
- Even among households with improved toilets or latrines, 23 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, and those that are poorer.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 Niger 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 9 percent of Niger's population had access to improved sanitation in 2012.³ This means that 16 million individuals in Niger lacked improved sanitation in 2012, of which 13 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 19 percent of households in Niger reported safe disposal of their youngest child's feces, only 7 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 children under age three have slightly worse sanitation than the country's broader population, where 9 percent use improved sanitation. Virtually all households (98 percent) practicing open defecation reported unsafe child feces disposal (Figure 2). Niger ranked fifth worst (number 34) for the proportion of children whose feces are safely disposed, out of 38 African countries with available Multiple Indicator Cluster Survey (MICS) or Demographic and Health Survey (DHS) data.



Among households with children in their first year of life, 19 percent reported safe disposal, compared to 23 percent of those with children aged four (48 to 59 months). A small shift is seen as children grow (Figure 3): children are increasingly likely to have their feces left in the open or not disposed of. Once children reach four years of age, children are slightly more 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. The main shift by age in Niger, however, is for an increase in the percentage of youngest children whose feces are left in the open—which essentially is open defecation.

In the poorest quintile in Niger, only 2 percent of households reported safe feces disposal for their youngest children under age three, compared to three quarters (74 percent) of the richest households (Figure 4). Widening the perspective to all individuals living in households with children under age three, 0 percent of members in the poorest quintile used a toilet/latrine of any kind, compared to 88 percent in the richest quintile.

Between 2006 and 2012, reported safe disposal of child feces increased in Niger, from covering 14 percent of the youngest children per household nationally in 2006, to 20 percent of them in 2012. However, the prevalence of safe disposal in rural areas remained eight times lower than in urban areas (see Figure 5).

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 2012, only one-fifth (19 percent) of households in Niger 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, Niger, 2012

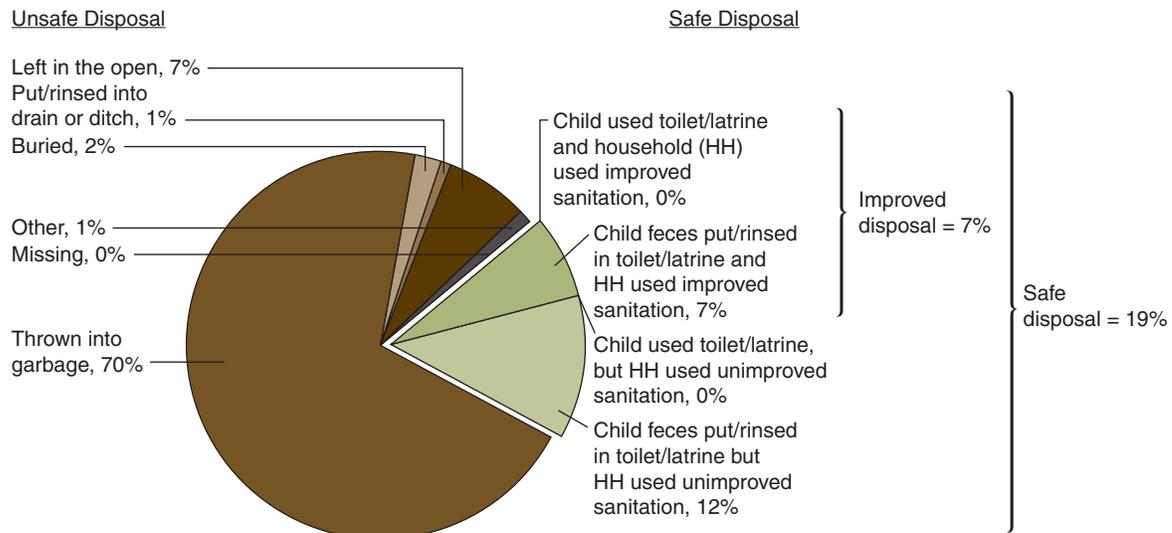


FIGURE 2 Even among households with improved sanitation, 23 percent reported unsafe child feces disposal behaviors. Reported feces disposal practice for households' youngest child under age 3, by household sanitation facility type, Niger, 2012.

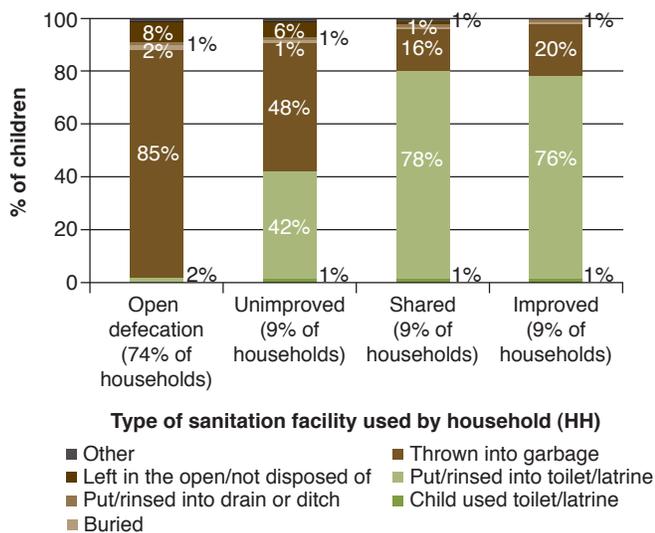
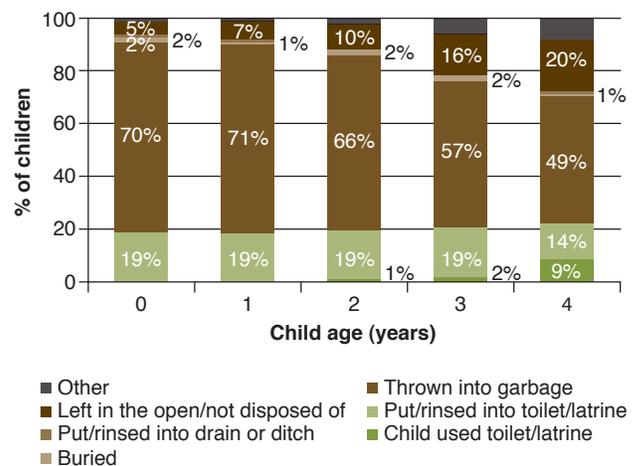


FIGURE 3 Child feces disposal behaviors differ across child age groups. Reported feces disposal practice for children of different ages, Niger, 2012.



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 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 reporting the greatest prevalence of unsafe disposal.

IDEAS FOR CONSIDERATION

In Niger, UNICEF has promoted safe disposal of children's feces since 2012, particularly in cholera-affected areas.⁴ However, there are few other interventions in Niger aimed at the safe disposal of children's feces during the first years of life. The national evaluation criteria and forms used for verification of open defecation free (ODF) villages in Niger do not explicitly consider sanitation for children.⁵ The major known barrier to safe child feces disposal in Niger is household access to a toilet/latrine, which is a prerequisite of safe child feces disposal. Only 9 percent of the population uses improved sanitation, so it is imperative that household and child sanitation be addressed simultaneously. In general, sanitation for children under age three has been a neglected area of policy and program intervention in Niger.

FIGURE 4 Safe disposal differs across the wealth asset quintiles: safe disposal is almost nonexistent among the poorest 60 percent of households, but reported by 74 percent of the richest households.⁶

Reported feces disposal practice for households' youngest child under age 3, by household wealth quintile, Niger, 2012.

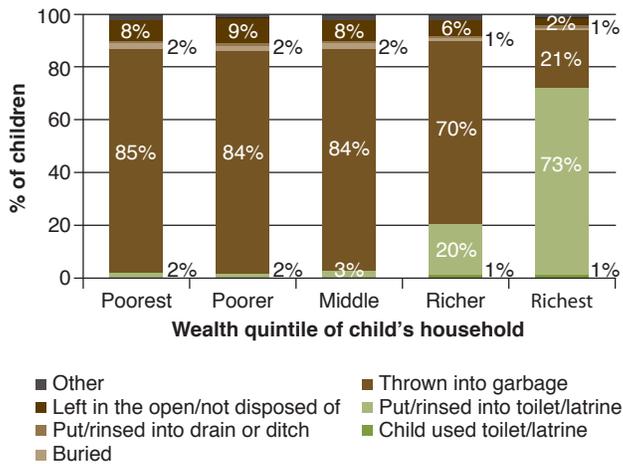
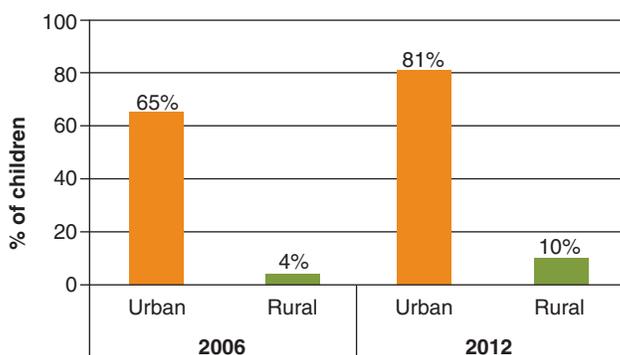


FIGURE 5 Safe disposal remains lower among rural households than urban households. Percentage of households reporting safe feces disposal for their youngest child under age three, by urban and rural residence, Niger, 2012⁷



Given the relatively few programs focusing on children's sanitation in Niger 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

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.⁸ 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.⁹ Poor sanitation can result in substantial health impacts in children, including a higher prevalence of diarrheal disease, intestinal worms, enteropathy, malnutrition, and death. The Niger 2012 directory of health statistics reported that 1.3 million Nigeriens suffer from diarrheal disease, of which 1.1 million are children under age four.¹⁰ 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.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

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

- 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 ODF 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 child feces, as collected in the 2012 Niger DHS, which is the latest MICS/DHS available for Niger 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.¹⁴ 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.¹⁵ Regardless of this issue, self-reports are currently regarded as the most efficient method for gauging safe disposal of children's feces.

REFERENCES

- 1 Institut National de la Statistique (INS) and ICF International. 2013. *Enquête Démographique et de Santé et à Indicateurs Multiples du Niger 2012*. Niger: INS, and Calverton, Maryland: ICF International. Please see the "Data Sources" section.
- 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*.
- 3 WHO/UNICEF Joint Monitoring Programme, 2014. *Progress on Drinking Water and Sanitation: Update 2014*. Geneva: World Health Organization.
- 4 Maiga, Taibou Adamou. 2014. Email correspondence.
- 5 Critères d'évaluation des performances et de certification des villages ATPC(Niger).n.d.<http://www.communityledtotalsanitation.org/resource/national-protocols-and-guidelines-verification-and-certification>. (Downloaded July 20, 2014.)
- 6 These asset indices used to classify households into wealth quintiles have not been adjusted to remove drinking water or sanitation variables.
- 7 Institut National de la Statistique (INS) and ICF International. 2013. *Enquête Démographique et de Santé et à Indicateurs Multiples du Niger 2012*. Niger: INS, and Calverton, Maryland: ICF International; and Institut National de la Statistique (INS) and Macro International Inc. 2007. *Enquête Démographique et de Santé et à Indicateurs Multiples du Niger 2006*. Niger: INS, and Calverton, Maryland: Macro International Inc.
- 8 Feachem, R., D. Bradley, H. Garelick, et al. 1983. *Sanitation and Disease: Health Aspects of Excreta and Wastewater Management*. World Bank Studies in Water Supply and Sanitation 3. Chichester, UK: John Wiley & Sons.
- 9 Gil, A., C. Lanata, E. Kleinau, and M. Penny. 2004. *Children's Feces Disposal Practices in Developing Countries and Interventions to Prevent Diarrheal Diseases: A Literature Review*. Strategic Report 11. Peru: Environmental Health Project (EHP).
- 10 Niger Ministry of Health. 2012. *Annuaire des Statistiques Sanitaires du Niger: 2012*. Niger: Niger MOH.
- 11 WHO. 2009. *Global Health Risks: Mortality and Burden of Disease Attributable to Selected Major Risks*. Geneva: World Health Organization, 23.
- 12 Favin, M., Naimoli, G., and Sherburne, L. 2004. *Improving Health Through Behavior Change: A Process Guide on Hygiene Promotion*. Joint Publication 7. Washington, DC: Environmental Health Project (EHP).
- 13 WHO. 2005. *Report of the Third Global Meeting of the Partners for Parasite Control: Deworming for Health and Development*. Geneva: World Health Organization, 15.
- 14 Stanton, B., J. Clemens, K. Azis, and M. Rahamanr. 1987. "Twenty-Four-Hour Recall, Knowledge-Attitude-Practice Questionnaires and Direct Observations of Sanitary Practices: A Comparative Study." *Bulletin of the World Health Organization*. Geneva: World Health Organization.
- 15 Akhtaruzzaman, M. N, and S. N. Islam. 2011. *Nutrition, Health and Demographic Survey of Bangladesh—2011: A Preliminary Report*. Bangladesh: University of Dhaka, 19.

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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