

## Key messages:

- In 2010, 21 percent of households surveyed in Malawi reported unsafe disposal of the feces of their youngest child under age three.
- Among households with improved toilets or latrines, 14 percent reported unsafe child feces disposal behavior.
- Safe child feces disposal steadily increases with the wealth of the household: 69 percent of the poorest quintile reports safe disposal compared to 89 percent of the richest quintile.<sup>1</sup>

## 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 Malawi 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.<sup>2</sup>

According to the latest JMP report, only 10 percent of Malawi's population had access to improved sanitation in 2012.<sup>3</sup> This means that 14.3 million individuals in Malawi lacked improved sanitation in 2012; of these, 1.1 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

In 2009, over three-quarters of households (79 percent) surveyed in Malawi reported that the feces of their youngest child under age three were safely disposed of. Only 7 percent of households in Malawi reported that their youngest child's feces were deposited into an improved sanitation facility, according to the 2010 Malawi DHS (see Figure 1). This low percentage of households reporting improved child feces disposal is slightly lower than the overall percentage of households using improved sanitation (10 percent). This provides evidence that although good disposal behavior is relatively common, a main block is access to improved sanitation facilities.



In Malawi, households lacking improved sanitation, those in rural areas, and poorer households—as well as households with younger children—have a higher prevalence of unsafe child feces disposal. Households practicing open defecation reported the highest prevalence of unsafe child feces disposal at 64 percent (see Figure 3). For the remaining 36 percent of households practicing open defecation (i.e., they do not use a latrine), it is possible, but not probable, that they deposit their children's feces into a latrine (see notes on self-reported data in the “Data Sources” section).

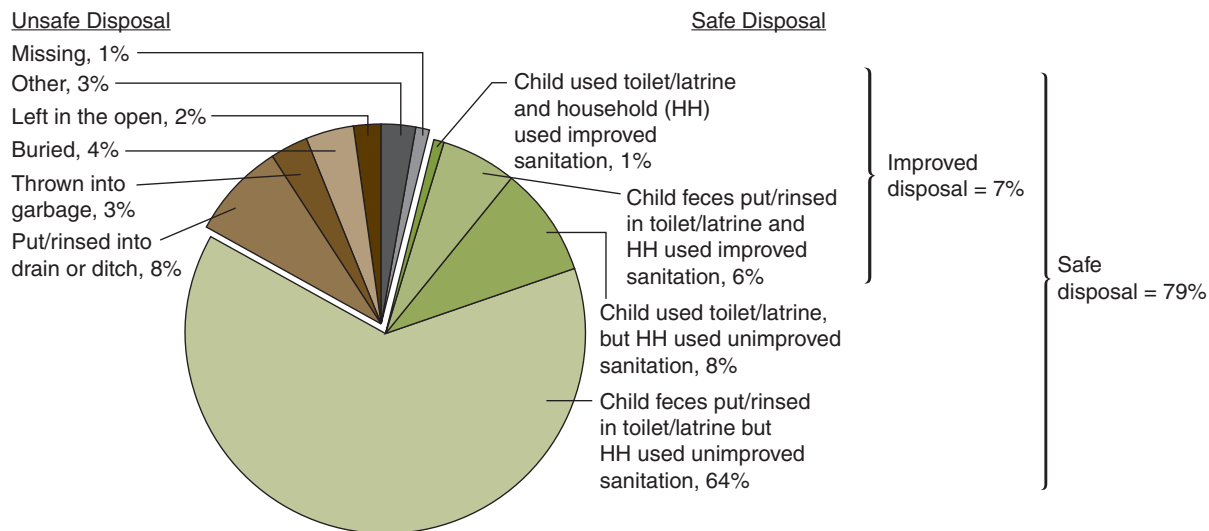
A shift in safe disposal practices is also seen as children grow: children are increasingly likely to use a toilet/latrine themselves, or have their feces put or rinsed into one. At these young ages, the behavior of the child's caregiver is critical to dispose of the feces safely and shape the child's toilet training (see Figure 4).

Safe disposal is fairly high across all wealth asset quintiles.<sup>4</sup> The poorest quintile of households is slightly less likely than the richer and richest households to report safe child feces disposal: 70 percent of the poorest quintile reports safe disposal (see Figure 5). Looking at overall sanitation facility coverage for households with children under age three in Malawi, only 74 percent of the poorest households reported use of any toilet/latrine, improved or unimproved, compared

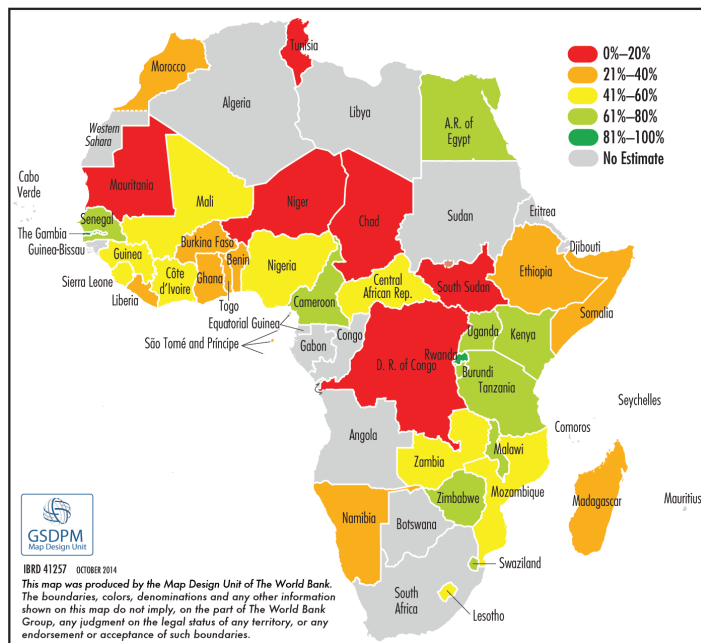
### What Is “Safe Disposal” of a Child's Feces?

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 Safe disposal prevalence is relatively high, but the prevalence of improved disposal is negligible.** Percentage of households reporting each feces disposal practice for their youngest child under age three, Malawi, 2010.



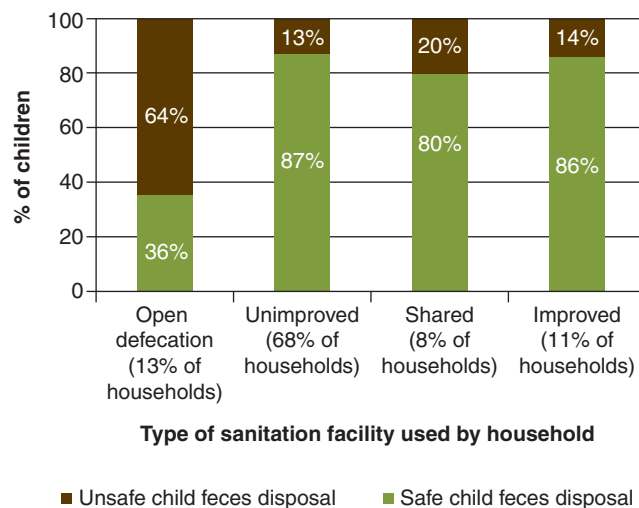
**FIGURE 2 Malawi ranked second best for the percentage of children whose feces are safely disposed of, out of 31 countries in Sub-Saharan Africa with available MICS or DHS data.** Percentage of households reporting safe feces disposal for their youngest child under age three, sub-Saharan Africa.<sup>5</sup>



to 99 percent of the richest quintile. This is an important factor in child feces disposal: by definition, safe disposal is only possible when there is access to a toilet/latrine.

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

**FIGURE 3 Over 80 percent of households with access to any sanitation facility (shared, unimproved, or improved) reported safe child feces disposal.** Reported feces disposal practice for household's youngest child under age three, by household sanitation facility type, Malawi, 2010.

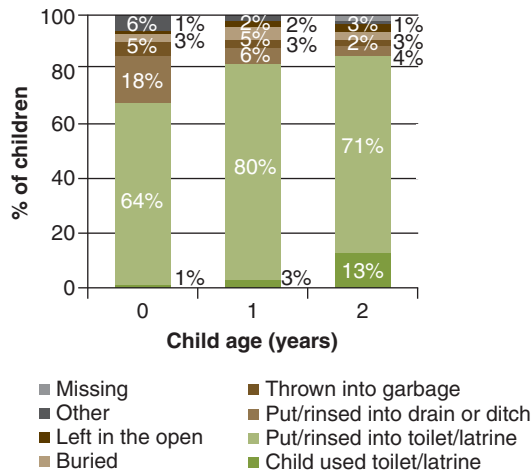


areas, and those that are poorer. Although this brief only focuses on one socioeconomic indicator at a time, applying multiple lenses would show even greater extremes of disparity—with the poorest rural households reporting the greatest prevalence of unsafe disposal.

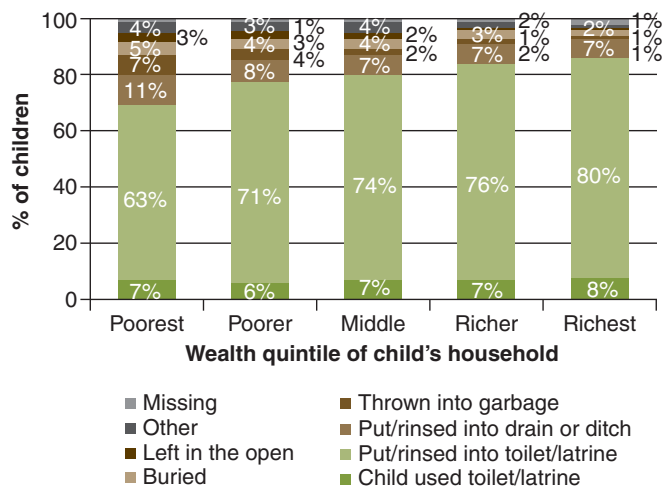
## IDEAS FOR CONSIDERATION

In Malawi, few interventions have focused on improving 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 Malawi and globally, there is

**FIGURE 4 Safe child feces disposal steadily increases with children's age.** *Reported feces disposal practice for children of different ages, Malawi, 2010.*



**FIGURE 5 Safe child feces disposal increases steadily with increasing wealth.** *Reported feces disposal practice for household's youngest child under age three, by household wealth quintile, Malawi, 2010.*



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 inclusion of safe child feces disposal into Community Led Total Sanitation (CLTS) programs and other hygiene promotion activities to 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

## 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 adults' feces, due to a higher prevalence of diarrhea and pathogens—such as hepatitis A, rotavirus, and *E. coli*—in children than in adults.<sup>6</sup> Therefore, children's feces should be treated with the same concern as adults' 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.<sup>7</sup> 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.<sup>8</sup> 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.<sup>9</sup> 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.<sup>10</sup>

- 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, as well as early childhood development materials and preschool programs, include information on safe child feces disposal
- 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 (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 children's feces, as collected in the 2010 Malawi Demographic Health Survey (DHS), which is the latest DHS or Multiple Indicator Cluster Survey (MICS) available for Malawi 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 lives with the respondent (mother or caretaker).





However, the fact that the MICS data are for all children in the age group and the DHS data are only for the youngest per household means that some limitations to the comparability of the MICS and DHS data presented in Figure 2 remain. Figure 2 presents MICS data for the following countries: Central African Republic, Chad, the Democratic Republic of Congo (DRC), Gambia, Ghana, Malawi, Mauritania, Nigeria, Sierra Leone, Somalia, South Sudan, Swaziland, Togo, and Tunisia. Figure 2 presents DHS data for the following countries: Benin, Burkina Faso, Burundi, Cameroon, Cote D'Ivoire, Egypt, Ethiopia, Guinea, Kenya, Lesotho, Liberia, Madagascar, Mali, Mauritania, Morocco, Mozambique, Namibia, Niger, Rwanda, Sao tome and Principe, Senegal, Tanzania, Uganda, Zambia, and Zimbabwe.

It is likely that self-reports overestimate safe disposal.<sup>11</sup> 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.<sup>12</sup> Regardless of this issue, self-reports are currently regarded as the most efficient method for gauging safe disposal of children's feces.

## REFERENCES

- <sup>1</sup> National Statistical Office and ICF Macro. 2011. *Malawi Demographic and Health Survey 2010*. Zomba, Malawi and Calverton, MD. Please see the "Data Sources" section.
- <sup>2</sup> 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*.

- <sup>3</sup> WHO/UNICEF Joint Monitoring Programme, 2014. *Progress on Drinking Water and Sanitation: Update 2014*. Geneva: World Health Organization.
- <sup>4</sup> The wealth indices used to classify households into wealth quintiles include drinking water and sanitation variables.
- <sup>5</sup> The latest available MICS/DHS survey with data for each country, as of March 2014. Survey years range from 2006–2012. Please see the data notes at the end of the brief.
- <sup>6</sup> 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.
- <sup>7</sup> 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).
- <sup>8</sup> WHO. 2009. *Global Health Risks: Mortality and Burden of Disease Attributable to Selected Major Risks*. Geneva: World Health Organization, 23.
- <sup>9</sup> Favin, M., G. Naimoli, and L. Sherburne. 2004. *Improving Health Through Behavior Change: A Process Guide on Hygiene Promotion*. Joint Publication 7. Washington, DC: Environmental Health Project (EHP).
- <sup>10</sup> WHO. 2005. *Report of the Third Global Meeting of the Partners for Parasite Control: Deworming for Health and Development*. Geneva: World Health Organization, 15.
- <sup>11</sup> 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.
- <sup>12</sup> 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](mailto:worldbankwater@worldbank.org) or UNICEF at [WASH@unicef.org](mailto:WASH@unicef.org) so that we can integrate your information into future program guidance.

## ACKNOWLEDGEMENTS

This brief was developed jointly by WSP and the United Nations Children's Fund (UNICEF) as part of a series of country profiles about sanitation for children under age three.

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