**Management of excreta from on-site sanitation systems - Requests for Revisions to the DHS Model Questionnaire for DHS-8 (2018-2023)**

**Section I. Information about the requesting party**

**1. Is this request being submitted on behalf of a group? If so, please provide the name of the group and the participating parties.**

The modifications proposed below were developed with input and/or endorsement from representatives of 15 organizations involved in the sector and express the views of individuals involved in the discussions.  In alphabetical order, the organizations involved are:

1. Bill & Melinda Gates Foundation, Water, Sanitation and Hygiene Strategy
2. Catholic Relief Services (CRS)
3. The Center for Water Security and Cooperation
4. Centre of Excellence in Water and Sanitation Mzuzu University (Malawi)
5. Global Communities
6. The Hunger Project
7. Mortenson Center in Global Engineering, University of Colorado Boulder
8. Save the Children
9. UNICEF WASH Programme Division
10. USAID Bureau for Global Health Environmental Health Team
11. USAID Bureau for Economic Growth, Education and Environment Office of Water
12. WaterAid
13. Water Supply and Sanitation Collaborative Council (WSSCC)
14. WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)
15. Women Deliver

**Section II. Indicator definition and rationale**

**2. Please define the indicator or indicators you are requesting The DHS Program to incorporate. *Multiple indicators derived from a single set of questions should be included in the same submission.* (Response required)**

Indicator: Proportion of population with an improved sanitation facility that does not flush to a sewer ever emptied (component of SDG indicator 6.2.1)

Indicator: Proportion of population with an improved sanitation facility that does not flush to a sewer and with waste disposed in situ or removed for treatment (component of SDG indicator 6.2.1)

**3. What is the rationale for measuring this indicator (each of these indicators) in DHS surveys? (Response required)**

Information on the treatment and disposal of excreta from sewered and non-sewered sanitation systems is essential for assessing the proportion of the population using safely managed sanitation services (SDG indicator 6.2.1).

The WHO Guidelines on Sanitation and Health (2018) define sanitation as access to and use of facilities and services for the safe disposal of human urine and faeces. They further define a **safe sanitation system** as a system designed and used to separate human excreta from human contact at all steps of the sanitation service chain from toilet capture and containment through emptying, transport, treatment (in-situ or offsite) and final disposal or end use. Safe sanitation systems must meet these requirements in a manner consistent with human rights, while also addressing co-disposal of greywater, associated hygiene practices and essential services required for the functioning of technologies. This implies that people not only have a right to an adequate latrine or toilet but also have a right not to be negatively impacted by unmanaged faecal waste and that states have the corresponding obligation to protect people. This is all the more relevant because poor and marginalized groups tend to be disproportionately affected by unmanaged faecal sludge and sewage. A human rights approach to sanitation therefore demands that inequality in exposure to faecal waste is also progressively reduced.

The current DHS household questionnaire includes a question on the type of sanitation facility which household members mainly use (Q109), and a second question asking whether these facilities are shared with other households (Q111). Together, these questions allow the determination of the proportion of the population using improved and not-shared sanitation, rebranded for the SDGs as “basic sanitation services”. However the use of improved sanitation facilities (MDG indicator), i.e. facilities designed to hygienically separate excreta from human contact, is necessary but not sufficient for safe management of excreta and the “safely managed sanitation services” indicator used to track SDG target 6.2. The WHO/UNICEF JMP identifies three main ways in which excreta from improved sanitation facilities can be classified as safely managed:

1. Excreta remain stored in on-site storage systems (e.g. septic tanks and latrine pits) that provide in situ treatment and disposal
2. Excreta are emptied from on-site storage systems (e.g. septic tanks and latrine pits), removed and treated off-site at facilities designed for faecal sludge;
3. Excreta are transported with wastewater through sewer lines and treated off-site at sewage treatment plants

In order to determine the proportion of the population falling into each of the above categories it is necessary to firstly collect information from households on whether they have a sewer connection or an on-site sanitation facility (such as a septic tank, pit latrine or other improved type). Secondly it is necessary to ask households using on-site sanitation systems whether they have ever been emptied. Thirdly, if so, survey respondents can indicate whether excreta were safely or unsafely disposed in situ or removed off-site for treatment. However, survey respondents are not able to reliably report what happens to excreta that is removed off-site. Accordingly, information from household surveys needs to be combined with information from local authorities on arrangements for off-site treatment of faecal sludge and wastewater in order to estimate the proportion of the population using safely managed sanitation services.

**Without nationally-representative household data on emptying and disposal of excreta from on-site sanitation systems, countries cannot report on SDG indicator 6.2.1 “Proportion of population using safely managed sanitation services”**

**Section III. Proposed additions/revisions to the questionnaires or biomarkers**

**4. Please describe the requested addition or revision.**

***If the requested change is the addition of new questions to the DHS questionnaires or modules, complete questions 4.1 and 4.1.1. If the requested change is a revision to existing questions, complete question 4.2. If the change relates to anthropometry or a biomarker, please complete question 4.3.***

Safely managed sanitation services are defined as “use of improved sanitation facilities that are not shared with other households and where excreta are safely disposed of in-situ or transported and treated off-site”.

The current DHS household questionnaire includes questions on the type of sanitation facility households mainly use (109) and whether or not it is shared with other households (111). These questions are sufficient to calculate the proportion of the population using a basic sanitation service (i.e. use of improved sanitation facilities that are not shared with other households). However additional questions are required in order to estimate the proportion of households using improved facilities where excreta are safely disposed in situ or removed off-site for treatment.

**4.1. For additions: If you have developed a question or set of questions to measure the indicator(s), please provide them in the space below or in a separate file attached with your submission.**

For the purposes of SDG monitoring the WHO/UNICEF JMP recommends adding the following core questions[[1]](#footnote-1) to household surveys:

|  |  |
| --- | --- |
| **S4. Emptying of on-site sanitation facilities** | |
| Has your (pit latrine or septic tank) ever been emptied? | Yes, emptied…………………………………………………………………1    No, never emptied………………………………………………………..2    Don’t know………………………………………………………………….98 |
| **S5. Disposal of excreta from onsite sanitation facilities** | |
| The last time it was emptied, where were the contents emptied to?  *Was it removed by a service provider?* | **Removed by service provider**  to a treatment plant 1  buried in a covered pit 2  to don’t know where 3  **Emptied by household**  buried in a covered pit 4  to uncovered pit, open ground, water body or elsewhere..5  Other (*specify*) 6  Don’t know 98 |

**4.1.1 If requesting multiple questions, please specify the relative priority of each new question.**

N/A

**4.2. For revisions to existing questions: Please specify the DHS-7 question number, the proposed revision to the question, and the rationale.**

4.3**. For anthropometry and biomarkers: Please describe the measurement procedures or specimen collection procedures, point-of-care or laboratory testing procedures (as relevant), and any recommendations for return of results.**

**5. Can any related questions be deleted from the questionnaire to make room for the proposed new content? If so please specify which questions using the DHS-7 question numbers.**

Question 111 on the number of households sharing sanitation facilities is critical to governments and programs where shared sanitation is common. This is the case in Sub-Saharan Africa (especially in urban areas).

However Question 111 is not among the WHO/UNICEF JMP recommended core questions on water, sanitation and hygiene for household surveys and is not necessary for calculating either the basic or safely managed services indicator. This question could potentially be deleted in order to make room for the proposed additional questions on disposal of excreta from on-site sanitation systems. However, it should also be noted that it is already being skipped for many respondents who don’t use a shared sanitation facility.

**6. What are the implications of these requested changes on measurement of trends using DHS data?**

If Question 111 were removed from the household survey, it would impact some trend data since the question was added in DHS Round 5 (2003). It is used in policy to distinguish if households are using shared latrines (with less than 10 households) or truly public latrines (used by more than 10 households). However, the question is not included in tabulations or critical indicators reported by the DHS.

**Section IV. Indicator calculation**

**7. Indicate how to calculate the indicator(s). Include detailed definitions of the numerator and denominator of each individual indicator. If you have developed a tabulation plan for the indicator(s), please attach a file including the suggested table(s) with your submission.**

For further information on how to calculate the two indicators please see the tabulation plan developed for MICS6 <http://mics.unicef.org/files?job=W1siZiIsIjIwMTgvMTIvMTIvMjMvNTQvMjQvNzI2L01JQ1M2X1RhYnVsYXRpb25fUGxhbl8yMDE4MTExOS56aXAiXV0&sha=7517eb820880454a>

**8. Is the indicator useful when measured at the national level, or is it useful only when disaggregated to specific subnational areas, such as endemicity zones or project intervention regions?**

The indicators would be most often used at the national, urban and rural levels.

*For each indicator, select one of the three options by clicking in the appropriate box.*

|  |  |  |  |
| --- | --- | --- | --- |
| Indicator | Useful only for subnational endemicity zones or project intervention regions. A single estimate at the national level is not meaningful. | Useful at both national and subnational regions, as sample size allows. | Useful only at the national level. Subnational estimates are not needed. |
| Proportion of population with an improved sanitation facility that does not flush to a sewer ever emptied (component of SDG indicator 6.2.1) | ☐ | ☐ | ☐ |
| Proportion of population with an improved sanitation facility that does not flush to a sewer and with waste disposed in situ or removed for treatment (component of SDG indicator 6.2.1) | ☐ | ☐ | ☐ |

**Section V. Prior testing of the proposed question(s)**

**9. Have the proposed questions undergone any formal validation; i.e., have the questions been tested against a “gold standard” to assess their accuracy? If yes, please describe how well or poorly the questions performed and/or provide a publication or report of the validation exercise (or a link).**

The proposed new questions have been widely used in MICS-6 and has performed well.

The questions were first piloted by MICS in 2015 in Belize and have since been included in national population-based surveys in Afghanistan, Democratic People’s Republic of Korea, Ecuador, Ghana, Lao PDR, Nepal, Nigeria, Paraguay, Sierra Leone and are currently being implemented in a further 20 nationally-representative household surveys with technical and financial support from the WHO/UNICEF JMP.

**10. Have the questions undergone any other kind of testing; e.g., cognitive testing, pilot testing. If so, please describe the results of the testing and/or provide a publication or report of the findings (or a link).**

Extensive testing in over 15 countries has shown high levels of acceptability.

**Section VI. Other considerations**

**11. Please provide information relevant to the kinds of questions below, and/or anything else you wish to share with us about this indicator (these indicators).**

* **Describe how the data for this indicator are being used (or will be used).** 
  + **Are the data produced by this indicator actionable?**
  + **Who will use the data?**
  + **What kinds of decisions will be made using these data?**
* **For what kinds of countries would the indicator(s) be most useful?**
* **Does the DHS survey offer any particular advantage over other available data sources for measuring this indicator? If so, what?**

Improvements in sanitation are widely recognized to be an essential foundation for better nutrition and health. Poor sanitation alone is estimated to cause 280,000 deaths each year from diarrhoeal disease. Moving from unimproved to improved sanitation is expected to reduce this burden by roughly 15-30%, while moving to higher levels of service could result in even larger health gains.

Research indicates that community-wide sanitation coverage is just as important for reducing disease as improving individual household practices. Even when people use well-designed and maintained sanitation facilities themselves, their health remains at risk if they live in communities where poor sanitation is prevalent and excreta and pathogens are released into the environment. There is growing evidence that chronic exposure to enteric pathogens damages the digestive system (“environmental enteropathy”, or “environmental enteric dysfunction”). The damaged tissue is unable to absorb nutrients effectively, leading to malnutrition, and increased susceptibility to infectious diseases, such as diarrhoea.

The JMP 2017 update revealed that equal shares of the global population with improved sanitation facilities use sewer connections and non sewered systems such as septic tanks and pit latrines and that on-site sanitation systems are much more widespread in low and middle income countries. Monitoring safe disposal of excreta from on-site sanitation systems is therefore a top priority in order to better understand exposures to faecal pathogens and to report on progress towards the global SDG target for safely managed sanitation services. However, national authorities often have very little information on the extent to which people are using on-site sanitation systems, or how excreta in these systems are managed. The additional questions proposed for the DHS can help to fill this data gap and allow national authorities to better protect public health, as well as reporting towards SDG indicator 6.2.1.

1. JMP 2018 Core Questions Accessible at: <https://washdata.org/report/jmp-2018-core-questions-household-surveys-0> [↑](#footnote-ref-1)