

**Template for Requests for Revisions to the DHS Model  
Questionnaires, Optional Modules, and Biomarkers 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.

This submission is co-lead by Harvard Medical School's Program in Global Surgery and Social Change (PGSSC), Lund University WHO Collaborating Center for Surgery and Public Health and the German Global Surgery Association. The proposal is further supported by a number of international collaborators (please see Appendix A for full collaborating list).

## **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)

### 1) Surgical Volume

- a) Percentage of Women 15-49 and Men 15-59 who have undergone a surgical operation in the past 5 years
- b) Percent distribution of Women 15-49 and Men 15-59 who have undergone a surgical operation in the past 5 years by type of operation

### 2) Surgical Need

- a) Percentage of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation

### 3) Surgical Unmet Need

- a) Percentage of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need an operation and were not able to access it?
- b) Percent distribution of Women 15-49 and Men 15-59 who were not able to access an operation by reason for no access

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

*Rationale for indicators 1 (Surgical volume)*

Indicator 1 will be used to determine surgical volume for a country. The Lancet Commission on Global Surgery recommends that minimum of 5,000 surgical procedures per 100,000 people is necessary to provide basic surgical care for the populace ([Meara et al](#)). There is a correlation between surgical volume (over 5000) and survival outcomes in diseases and conditions requiring surgical care. Currently, information on surgical volume is limited. The indicators will also report on the proportion of respondents who underwent surgery (stratified by type of surgery). These data will be used to provide an overview of care utilization and distribution of treated surgical burden of disease. It will illustrate distribution of types of surgical disease by sociodemographic variables, such as the respondent's wealth, religion, urbanicity, age group, sex, ethnicity, education, and literacy. These data, combined with estimates for the prevalence of surgical disease in the corresponding region, are actionable in informing appropriate interventions to increase utilization of surgical services. The indicator will also help determine surgical volume by type of operation and the association between burden of surgical disease to surgical service provided. This will also show us the distribution of surgical procedures performed.

*Rationale for indicators 2 and 3:*

In our expertise in developing [23 national surgical plans](#) with ministries of health, determining the national need for surgical services is a basic pre-requirement to implementing surgical health policy and support the financing and development of surgical services as an essential component of Universal Health Coverage (Sustainable Development Goal 3.8). Unmet surgical need demonstrates the barriers to equitable access to care and will enable nation states to adapt service delivery to local needs. These data inputs are likely to result in under-estimates of need and unmet need as there will be a proportion of the population that has not had the opportunity to seek healthcare review and thereby their surgical need is unknown. The data collected, however, will be a useful approximation and help guide essential national surgical planning.

## **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.*

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.

1. Have you undergone a surgical operation in the past 5 years? (Yes/No)
2. What type of surgical operation was the most recent one?
  - a. Hernia Operation
  - b. Caesarean section (Women's survey ONLY)
  - c. Testicular operation (Men's survey ONLY)
  - d. Laparotomy
  - e. Lump removal
  - f. Abscess drainage
  - g. Wound Closure
  - h. Open Fracture
  - i. Other
3. In the last 5 years has a doctor or another healthcare worker told you that you might need (another) operation? (Yes/No)
4. Were you able to access it? (Yes/No)
5. Why did you not access it?
  - A- There was no surgeon or anesthetist
  - B- I could not afford the operation
  - C- I could not afford to get to hospital
  - D- I could not afford time off work
  - E- It was too far to get to the hospital
  - F- I did not trust the hospital would make me better
  - G- Fear of care
  - H- Out of shame
  - I- My spouse or family would not let me go

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

High priority to Low Priority:

- [Surgical Volume \(questions 1+ 2\)](#)
- [Surgical Unmet Need \(questions 3, 4 and 5\)](#)

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

DHS-7 question number	DHS-7 question text	Proposed new question	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.

N/A

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.

We have no suggestions for deletion.

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

N/A

## 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.

Indicator	Denominator	Numerator	Comments
1a. Percentage of Women 15-49 and Men 15-59 who have undergone a surgical operation in the past 5 years	Number of Women 15-49 and Men 15-59	Number of Women 15-49 and Men 15-59 who have undergone a surgical operation in the past 5 years	Suggested question 1110A (women) 817A (men)
1b. Percentage of Women 15-49 and Men 15-59 who have undergone a surgical operation in the past 5 years by type of operation	Number of Women 15-49 and Men 15-59	Number of Women 15-49 and Men 15-59 who have undergone a surgical operation in the past 5 years by type of operation	Suggested question 1110B (women) 817B (men)

2. Percentage of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation	Number of Women 15-49 and Men 15-59	Number of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation	Suggested question 1110C (women) 817C (men)
3a. Percentage of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation and were not able to access it?	Number of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation	Number of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation and were not able to access it	Suggested question 1110D (women) 817D (men)
3b. Percent distribution of Women 15-49 and Men 15-59 who were not able to access an (another) operation by reason for no access	Number of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation and they did not have access	Number of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation by reason for no access	Suggested question 1110E (women) 817E (men)

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?

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

Indicator	Useful <u>only</u> for subnational endemicity zones or project intervention regions. A single estimate at the national level is <u>not</u> meaningful.	Useful at both national and subnational regions, as sample size allows.	Useful only at the national level. Subnational estimates are not needed.
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1. Percentage of maternal deaths that occurred in a hospital or health center	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Percentage of maternal deaths that occurred during or after receiving a caesarean section	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3a. Percentage of Women 15-49 and Men 15-59 who have undergone any surgery in the past 5 years	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3b. Percent distribution of Women 15-49 and Men 15-59 who have undergone surgery in the past 5 years by type of operation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Percentage of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Percentage of Women 15-49 and Men 15-59 who have been told by a doctor or another healthcare worker in the last 5 years that they might need (another) operation and were not able to access it?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5b. Percent distribution of Women 15-49 and Men 15-59 who were not able to access an (another) operation by reason for no access	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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## 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 suggested questions were included in the 2018 DHS pilot in Zambia.

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).

No.

## 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?

Data will inform decisions regarding health care policy to monitor the met and unmet need for surgical care, and thereby direct interventions designed to achieve universal health care. This data will be presented by the World Bank’s World Development Indicators (WDI) and

towards the process of data collection for the National Surgical, Obstetrics and Anesthesia Policy Plans (NSOAPs), currently being adopted in 23 LMIC nations. These data will facilitate the scaling up of surgical care within health care systems by ministries of health.

- **For what kinds of countries would the indicator(s) be most useful?**

These indicators are most useful in low- and middle-income countries, where we know the largest amount of unmet surgical disease persists.

- **Does the DHS survey offer any particular advantage over other available data sources for measuring this indicator? If so, what?**

The DHS survey uniquely produces a large data set for each country. This will allow inter-country comparisons, as well as intra-country regional descriptions. Most importantly, it will provide data on the respondents' demographic characteristics, allowing for an understanding of who is (or not) able to utilize surgical services.