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-led by Harvard Medical School's Program in Global Surgery and Social Change, 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)

Primary Indicator:

- Out-of-pocket expenditure for surgical care (a component of catastrophic and impoverishing expenditure)

Secondary Indicators:

- Out-of-pocket direct medical expenditure for surgical care
- Out-of-pocket total direct (medical and non-medical) expenditure for healthcare
- Out-of-pocket total direct (medical and non-medical) expenditure for surgical care

Please note: Catastrophic health expenditure, defined as medical and non-medical out-of-pocket costs that, in total, are greater than 10% of the total household expenditure. Impoverishing health expenditure, as defined as medical and non-medical out-of-pocket costs that, in total, are greater than the difference between household expenditure and the extreme poverty threshold at $1.90 per person per day.

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

It has been estimated that a total of 33 million people worldwide face catastrophic expenditure each year as a result of direct medical costs related to seeking surgical care, and a further 49 million people face catastrophic expenditure when direct non-medical costs such as transportation and lodging are included [Shrime 2015, TLGH, Catastrophic expenditure to pay for surgery worldwide: a modelling study]. These estimates are derived from scarce data on the costs to patients for surgery; this proposed revision would allow for increased quality primary data.

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.

   We suggest adding two questions to out-of-pocket healthcare expenditure questionnaire:

   1. After questions 206, 210 and 214: During this overnight stay, did (NAME) have surgery?
   2. After questions 207, 211 and 215: What was the total amount of money spent on transportation, lodging and food that was necessary for (NAME) to receive care?

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

   They are equally important in order to enable calculation of surgical out of pocket expenditure (without one the other is incomplete).

Priority as above (question 1 most preferable)

   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
n/a			
n/a			

   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?

Since we are not suggesting any changes to the current structure, the addition of our questions will not impact the measurement of trend of previous DHS data.

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
1. Per capita direct medical expenditure for inpatient surgical services	Population	Total direct medical expenditure for inpatient visits during which a surgical procedure was received	
2. Per capita total expenditure for inpatient healthcare services	Population	Total direct medical and non-medical expenditure for inpatient visits	
3. Per capita total expenditure for inpatient surgical services	Population	Total direct medical and non-medical expenditure for inpatient visits during which a surgical procedure was received	

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 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.
1 Per capita direct medical expenditure for inpatient surgical services	☐	☒	☐
2 Per capita total expenditure for inpatient healthcare services	☐	☒	☐
3 Per capita total expenditure for inpatient surgical services	☐	☒	☐

	☐	☐	☐

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).

Non-medical cost questions have been piloted in a multitude of studies (Anderson et al., 2017).

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).

The information gathered with the proposed questions would allow not only calculation of the indicators as outlined in section IV, but would also allow:

1. Calculation of the distribution of cost associated with receiving surgical care
2. Much improved estimation of the risk and incidence of catastrophic expenditure and impoverishing expenditure related to surgical care. If total household expenditure were to be collected *(please see revisions to household survey submitted)*, this would allow for the direct measurement of these indicators, both for surgical and non-surgical care.

- 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?

The data gathered by the proposed questions would help inform policy on the financial risk protection aspect of universal health care.

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

Low- and middle-income countries (LMICs)

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

The advantage of DHS survey are the following:

1. There are currently no available systematic and nationally representative figures for the out-of-pocket costs for surgical care

2. Other health related questions in DHS surveys allow for multivariate analysis, especially as it relates to household wealth and/or expenditure