Template for Requests for Revisions to the DHS Model Questionnaires, Optional Modules, and Biomarkers for DHS-8 (2018-2023)

**Maternal Health Content – Multiple Indicators**

# **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 submitted on behalf of the WHO MoNITOR Technical Advisory Group. The recommendations were developed as part of two expert technical consultations led by the WHO MoNITOR expert advisory group (November 2018) and USAID’s Maternal and Child Survival Program (MCSP) (January 2019).

This submission incorporates feedback and recommendations from both consultations. Experts from the following organizations or committees participated in at least one of the two technical consultations: Bill and Melinda Gates Foundation; ENAP/EPMM Metrics working groups; Harvard T. H. Chan School of Public Health; Johns Hopkins University; London School of Hygiene and Tropical Medicine; MCSP; Population Council; Save the Children; UNICEF; University of Melbourne School of Population and Global Health; and USAID. A list of the members of the MoNITOR TAG and the experts participating in the two technical consultations is available upon request.

# **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)

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| **New / Revised Indicator** | **Definition** |
| **CORE DHS QUESTIONNAIRE** | |
| 1. Women who received eight antenatal care visits (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years who had eight or more antenatal care visits. |
| 1. Baby’s heart beat listened to at least once during antenatal care (move from supplement to core) | Proportion of women 15-49 years with a live birth in the preceding 2 years whose baby’s heart beat was listened to at least once during antenatal care. |
| 1. Family planning counseling at least once during antenatal care (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years told about family planning at least once during antenatal care. |
| 1. Maternal nutrition counseling at least once during antenatal care (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years told about which foods to eat while pregnant at least once during antenatal care. |
| 1. Woman weighed at least once during antenatal care (move from supplement to core) | Proportion of women 15-49 years with a live birth in the preceding 2 years who were weighed at least once during antenatal care. |
| 1. Woman told about pregnancy danger signs during antenatal care (move from supplement to core) | Proportion of women 15-49 years with a live birth in the preceding 2 years told about pregnancy danger signs during antenatal care. |
| 1. Woman told during antenatal care where to go if she experienced pregnancy danger signs (move from supplement to core) | Proportion of women 15-49 years with a live birth in the preceding 2 years told during antenatal care where to go if they experience pregnancy danger signs. |
| 1. Family planning counseling during first two days after birth (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years who received counseling on family planning during the first 2 days postpartum |
| 1. Postpartum family planning initiated in first 2 days after birth (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years who started using a family planning method during the first 2 days postpartum |
| 1. Specific Postpartum family planning method selected in first 2 days after birth (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years who started a [specific] postpartum family planning method during the first 2 days postpartum |
| 1. Woman counseled on postnatal danger signs for herself in first 2 days after birth (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years who received counseling on maternal danger signs during the first 2 days postpartum |
| 1. Blood pressure measured during first 2 days after birth (move from supplement to core) | Proportion of women 15-49 years with a live birth in the preceding 2 years who had a blood pressure measured during the first 2 days postpartum |
| **SUPPLEMENTAL MODULE MATERNAL HEALTH CARE** | |
| 1. Urine sample collected at least once during antenatal care (move from core to maternal module) | Proportion of women 15-49 years with a live birth in the preceding 2 years who gave a urine sample at least once during antenatal care. |
| 1. Woman counseled on healthy timing and spacing of pregnancy during postnatal care (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years who received counseling on healthy timing and spacing of pregnancy during the first 2 days postpartum |
| 1. Woman told how soon after delivery a woman can get pregnant in first 2 days after birth (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years told how soon after delivery a woman can get pregnant during the first 2 days postpartum |
| 1. Woman told about the advantages and disadvantages of the family planning method she received during first 2 days after birth (NEW) | Proportion of women 15-49 years with a live birth in the preceding 2 years told about the advantages and disadvantages of the family planning method she received during the first 2 days postpartum. |
| 1. Woman asked about vaginal bleeding during first 2 days after birth (Revised Indicator/question) | Proportion of women 15-49 years with a live birth in the preceding 2 years asked about vaginal bleeding during the first 2 days postpartum |

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

*1.* **Eight antenatal care visits** – Current WHO ANC recommendations published in 2016 recommend eight antenatal care contacts.

2. **Baby’s heart beat listened to at least once during antenatal care** – This indicator is currently captured in the Supplemental Module Maternal Health Care. The recommendation to move to the core questionnaire is due to: 1) its importance for assessing the clinical status of the fetus; 2) the absence of any other indicator of fetal well-being in the Core questionnaire; 3) strong positive validation data from Cambodia, Kenya and Bangladesh (AUC range 0.65-0.89] presented by Population Council at MCSP meeting in January 2019. N.B. these data are from secondary data analyses conduced for the purpose of the January technical consultation, but not yet published. Population Council can provide data if needed.

3. **Family planning counseling at least once during antenatal care** – Positive validation data for question on family planning counseling in the postnatal period from Kenya (AUC 0.73; IF 1.6) and Bangladesh (AUC 0.89; IF 0.83) [Population Council, unpublished secondary analysis data presented at January 2019 technical consultation.] We expect the question to perform equally well when asked during the antenatal period. Repeat family planning counseling (i.e. antepartum, postpartum) can increase postpartum family planning uptake and is essential for provision of immediate postpartum family planning such as an Intrauterine Device. Information about family planning counseling in the antepartum period cannot be obtained from other sources (e.g. HMIS).

4. **Maternal nutrition counseling at least once during antenatal care** – The DHS7 core woman’s module does not include any indicators on nutritional counseling received during antenatal care. Nutrition counseling is included as a recommendation in the WHO 2016 ANC guidelines and improves gestational weight gain, reduces risk of anemia in late pregnancy, increases birthweight, and lowers the risk of preterm delivery.[[1]](#footnote-1) Validation data from Bangladesh supports the validity of the recommended / indicator/question (AUC 0.81; IF 1.07) [Population Council, unpublished secondary analysis data presented at MCSP meeting in January 2019]. DataDENT is also recommending the addition of an indicator on antenatal nutrition counseling; we have discussed with DataDENT and recommend aligning the wording of the question with their recommendation.

5. **Maternal weight measured at least once during antenatal care** – There is no indicator on maternal weight measurement in the Core DHS7 woman’s questionnaire. Weight monitoring during pregnancy is important for prevention of low birth weight (LBW), birth complications, and excess weight gain during pregnancy.

6. **Mother told about pregnancy danger signs during antenatal care** -- This indicator is currently captured in the Supplemental Maternal Module (Question MH1). Recall of counseling on pregnancy danger signs during postnatal care was validated in Kenya (AUC 0.75; IF 0.79) [McCarthy et al, 2016]. It is expected that recall of being told about pregnancy danger signs during antenatal care would be similarly high.

7. **Mother told where to go if she experienced pregnancy danger signs** -- This indicator is currently captured in the Supplemental Maternal Module (Question MH2). Recall of counseling on pregnancy danger signs during postnatal care was validated in Kenya (AUC 0.75; IF 0.79) [McCarthy et al, 2016]. This additional question captures key antenatal care content information directly related to indicator # 6 above– both indicators #6 and #7 are important and should be captured in the same questionnaire (i.e. Core DHS as recommended by our expert group).

8, 9, 10. **Postpartum family planning counseling, initiation & method choice** – Validation evidence from Swaziland demonstrated that women can accurately report whether they received a family planning method during exit interviews [McCarthy et al, 2016]. This information is programmatically very important to capture.

11. **Maternal danger signs counseling during PNC** - Recall of counseling on pregnancy danger signs during postnatal care was validated in Kenya (AUC 0.75; IF 0.79) [McCarthy et al, 2016].

12. **Blood pressure measured during PNC** – There are currently no content of care postpartum indicators in the DHS7 core woman’s module. Measurement of blood pressure during postpartum care is a best practice that is very important for assessing women’s clinical status after birth (including diagnosing or monitoring hypertensive disorders during pregnancy.) Despite mixed validation evidence on BP during PNC across studies (AUC range of 0.52 – 0.84; McCarthy et al.,2016) this indicator is recommended due to its clinical importance and positive validation evidence in some settings.

***SUPPLEMENTAL MODULE MATERNAL HEALTH CARE***

**13. Urine sample at least once during antenatal care** – Testing a urine sample during ANC is not universally indicated for all pregnant women in the absence of a clinical indication (e.g. high blood pressure or other signs of pre-eclampsia.) We recommend moving this indicator from the core woman’s module to the supplemental maternal module since cheaper urine tests that provide more useful clinical information may be available in the near future.

Furthermore, validation data for this question is mixed across settings with high accuracy of recall in Kenya (AUC 0.76) [McCarthy et al, 2018], but 99% sensitivity, 2% specificity and AUC 0.50 in China [Liu et al. 2013].

**14 - 16. Postpartum family planning counseling content** – McCarthy et al (2016) validated a question regarding counseling on benefits of birth spacing in Kenya and Swaziland (IF criteria met in both countries, AUC>0.7 only in Kenya). The same study validated women’s responses during exit interviews to the question “for the method(s) you received today, did the provider explain the advantages and disadvantages of the method?” (AUC 0.62) [McCarthy et al. 2016]. Women’s recall for being told how soon after delivery a woman can get pregnant was validated in the same study, meeting only IF, but not AUC criteria for accuracy.

1. **Asked about vaginal bleeding during postnatal care** – Postnatal care interventions that improve early diagnosis of vaginal bleeding are important. The current DHS7 maternal supplemental module includes the question MH 20 a): “During the first 2 days after birth did any health provider….examine or ask you about vaginal bleeding”? This is a composite indicator that does not measure a clear construct (“examined” versus “asked about” bleeding.) McCarthy et al. (2016) demonstrated mixed validity results for a question asking about “excessive vaginal bleeding” in a study in Kenya and Swaziland (met both AUC and IF criteria in Kenya; only met IF criteria in Swaziland). We recommend revising and simplifying the current indicator in the DHS7 supplemental maternal module to include only “asked about vaginal bleeding”. Per communication with the researcher who conducted these studies, it is possible that the concept of “excessive” or “abnormal” bleeding may not have been clear to respondents in the validation studies. This indicator is clinically relevant for the postnatal period.

# **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.

**New / Moved Questions for the Core Women’s Questionnaire –**

**Indicator 2 -** Baby’s heart listened to at least once during antenatal care - move from supplement to core module (see revised #413 in Section 4.2 below)

**Question:** As part of your antenatal care during this pregnancy, were any of the following done at least once: Was your baby’s heart beat listened to?

SHOW PICTURES

YES NO DK

**Indicator 3 –** Family planning counseling during ANC – Add NEW item to current question 413 (see revised #413 in Section 4.2 below)

**Question:** As part of your antenatal care during this pregnancy, were any of the following done at least once: Did a health care provider discuss family planning with you?

YES NO DK

**Indicator 4 –** Maternal Nutrition Counseling during ANC -- Add NEW item to current question 413 (see revised #413 in Section 4.2 below)

**Question:** As part of your antenatal care during this pregnancy, were any of the following done at least once: Did a health care provider talk with you about which foods to eat while pregnant?

YES NO DK

**Indicator 5 –** Woman weighed during ANC - move from supplement to core; add to current #413 in the Core DHS questionnaire (see revised #413 in Section 4.2 below)

**Question:** As part of your antenatal care during this pregnancy, were any of the following done at least once: Did a health care provider weigh you?

YES NO DK

**Indicator 6 –** Danger signs counseling during ANC – Move from Supplemental Module Maternal Health Care (MH1) to Core DHS questionnaire

**Question:** During (any of) your antenatal care visit(s), were you told by a health worker about danger signs that might indicate problems with the pregnancy?

YES NO DK

**Indicator 7 –** Told where to go if she experienced danger signs - Move from Supplemental Module Maternal Health Care (MH2) to Core DHS questionnaire

**Question:** Were you told by a health worker where to go if you experienced danger signs or serious health problems during the pregnancy?

YES NO DK

**Indicators 8-10 –** FP Counseling, Initiation, and method choice during PNC (NEW)

**Questions:**

* During the first two days after (NAME)’s birth, did any health care provider discuss family planning with you? YES NO DK
* Did you receive [or start] a family planning method? YES NO DK
* If yes, which method did you receive [or start]? LIST OF METHODS, INCLUDING LAM.

**New / Moved Questions for the Supplemental Maternal Module –**

**Indicator 13 –** Urine sample during ANC -- Move from question 413 in the Core DHS questionnaire into the supplemental module

**Question:** As part of your antenatal care during this pregnancy, were any of the following done at least once:Did you give a urine sample?

YES NO DK

**Indicators 14 – 16 -** PPFP Counseling during PNC – (NEW)

**Questions:**

As part of your antenatal care during this pregnancy, did a provider

* Talk to you about family planning?

YES NO DK

* Talk to you about the importance of waiting for some time before getting pregnant again?

YES NO DK

* Tell you how soon after delivery a woman can get pregnant?

YES NO DK

* Explain the advantages and disadvantages of the family planning method you received? (if applicable)

YES NO DK

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

*The authors of this submission did not conduct a prioritization exercise. Each of the proposed additions/revisions will help to strengthen the DHS and to enhance the data available to ministries of health and program implementers.*

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/REVISION**  (changes shown in bold) | **Rationale** (please also see Section 3 above for additional rationale / justification) |
| --- | --- | --- | --- |
| Core 411 | How many months pregnant were you when you first received antenatal care for this pregnancy?  Months \_\_  DK | Revision recommended to the tabulation plan (Table 9.2) to capture timing in relation to pregnancy trimester rather than specific month of pregnancy as shown in the Appendix. | Women have difficulty estimating and, by implication, reporting gestational age accurately. Recommended tabulation plan revision addresses this limitation to some extent. |
| Core  412 | How many times did you receive antenatal care during this pregnancy?  Number of times \_\_  Don’t know | Recommendation to ask this question after current question 408 and before current question 409 in the core questionnaire.  Also, revision needed to the tabulation plan (Table 9.2) to capture 8+ visits as shown in the Appendix. | Improve the flow of the interview.  Capture 8+ visits in line with current WHO ANC recommendation. |
| Core 430 | Where did you give birth to (NAME)?  PROBE TO IDENTIFY THE TYPE OF SOURCE.  IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE.  (NAME OF PLACE) | Where did you give birth to NAME?  PROBE TO IDENTIFY THE TYPE OF SOURCE.  **~~IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR,~~** WRITE THE NAME OF THE PLACE.  (NAME OF PLACE) | Consultation participants suggested that the categorization of facilities would be improved by asking and recording the name of the facility for all respondents who give birth in a facility. However, there was also concern expressed during a webinar with MoNITOR members that the analysis of non-standardized data (e.g. name of facility) can be very challenging to analyze in a large survey. |
| ANC Content – clinical and counseling  Core 413  -----------------  Maternal Health Care Module | As part of your antenatal care during this pregnancy, were any of the following done at least once:   1. Was your blood pressure measured? YES NO DK 2. Did you give a urine sample? YES NO DK 3. Did you give a blood sample? YES NO DK   ---------------------------------------   1. Was your weight measured? YES NO DK 2. Was baby’s heart beat listened to? SHOW PICTURES YES NO DK 3. Did you discuss with a health provider when the baby is due or will arrive? YES NO DK 4. Did a health provider ask you if you had vaginal bleeding? YES NO DK 5. Were you told to pay attention to the baby’s movements? YES NO DK | As part of your antenatal care during this pregnancy, were any of the following done at least once:   1. Was your blood pressure measured? YES NO DK 2. Did you give a blood sample? YES NO DK 3. **Did a health care provider weigh you? YES NO DK** 4. **Was baby’s heart beat listened to? SHOW PICTURES YES NO DK** 5. **Did a health care provider discuss family planning with you? YES NO DK** 6. **Did a health care provider talk with you about which foods to eat while pregnant? YES NO DK**   -------------------------------------------   1. **Did you give a urine sample? YES NO DK** 2. Did you discuss with a health provider when the baby is due or will arrive? YES NO DK 3. **Did a health provider ask you if you had vaginal bleeding**? YES NO DK 4. Were you told to pay attention to the baby’s movements? YES NO DK | d) Recommendation to move to core questionnaire due to clinical relevance, absence of any other indicator of fetal well-being, and strong validation data from Cambodia, Kenya and Bangladesh (AUC range 0.65-0.89] presented by Population Council at MCSP meeting in January 2019. N.b. these data are from secondary data analyses conduced for the purpose of the MCSP meeting, but not published.  f) Evidence of low accuracy recall in China study, with sensitivity 98%, specificity 0% and AUC 0.49 [Liu et al. 2013]. Revised question aiming to improve specificity and to align with DataDENT recommendation.  g) Mixed validation data with high accuracy recall in Kenya (AUC 0.76) [McCarthy et al, 2018], but 99% sensitivity, 2% specificity, and AUC 0.50 in China [Liu et al. 2013]. And, urine sample is not universally indicated for all pregnant women in the absence of a clinical indication. |
| ANC Content – BP/CR  Maternal Health Module MH4 | During (any of) your antenatal care visit(s), did you discuss with a health provider any of the following preparations for giving birth:   1. Where you plan to deliver your baby? YES NO DK 2. If you wanted to have a relative, friend or neighbor with you during labor or delivery? YES NO DK 3. Transportation to where the baby would be born? YES NO DK 4. What funds or finances you would use for the delivery? YES NO DK 5. Ask someone to be a blood donor if you need blood? YES NO DK 6. Finding a healthcare professional to deliver your child? YES NO DK | During (any of) your antenatal care visit(s), did you discuss with a health provider any of the following preparations for giving birth:   1. Where you plan to deliver your baby? YES NO DK 2. **~~If you wanted to have a relative, friend or neighbor with you during labor or delivery? YES NO DK~~ DELETE** 3. Transportation to where the baby would be born? YES NO DK 4. **~~What funds or finances you would use for the delivery? YES NO DK~~ DELETE** 5. Ask someone to be a blood donor if you need blood? YES NO DK 6. **~~Finding a healthcare professional to deliver your child? YES NO DK~~ DELETE** | b, d, f include unclear language, likely leading to inaccurate responses. |
| PNC Content (Core)  Core 457 | During the first two days after (NAME)’s birth, did any health care provider do the following:   1. a) Examine the cord?   YES NO DK   1. b) Measure (NAME)’s temperature?   YES NO DK   1. c) Counsel you on danger signs for newborns?   YES NO DK   1. d) Counsel you on breastfeeding?   YES NO DK   1. e) Observe (NAME) breastfeeding?   YES NO DK | During the first two days after (NAME)’s birth, did any health care provider do the following:   1. a) Examine the cord?   YES NO DK   1. b) Measure (NAME)’s temperature?   YES NO DK   1. c) **~~Counsel~~ Talk with you about danger signs ~~for newborns~~ that suggest that your baby is unwell and needs urgent care?**   YES NO DK   1. d) **Talk with you about danger signs for yourself?** 2. **YES NO DK** 3. e) **Measure your blood pressure**? 4. **YES NO DK** 5. **f) Ask you about vaginal bleeding?** 6. **YES NO DK** 7. **d) Counsel you on breastfeeding?**   **YES NO DK**   1. **e) Observe (NAME) breastfeeding?**   **YES NO DK** | Consider combining maternal and newborn postnatal care content into one question, if not too long from a survey methodology standpoint.  c), d) - Change in wording regarding danger signs to differentiate between maternal and newborn danger signs, and [MICS wording] or [McCarthy validated questions].  Items e-f are from Supplemental Module Maternal Health Care (MH20) and have high clinical relevance in the postpartum period. |
| PNC Content (Supplement)  Maternal Health Care Module  MH20 | During the first two days after (NAME's) birth, did any health care provider do the following:  a)  Examine for or ask you about vaginal bleeding?  YES NO DK  b)  Measure your blood pressure?  YES NO DK  c)  Ask if you are having any problems with urination, such as not being able to urinate or not being able to control your urination?  YES NO DK  d)  Ask you if you had any pain?  YES NO DK  e)  Counsel you about methods to prevent pregnancy?  YES NO DK  f) Ask if you feel sad or depressed?  YES NO DK | During the first two days after (NAME's) birth, did any health care provider do the following:  ~~a)~~**~~Examine for or~~****~~Did anyone ask you about vaginal bleeding?~~**  **~~YES NO DK~~**  **MOVE ITEM TO CORE QUESTIONNAIRE Q457, as noted above**  ~~b)~~**~~Measure your blood pressure?~~**  **~~YES NO DK~~**  **MOVE ITEM TO CORE QUESTIONNAIRE Q457, as noted above**  c)  Ask if you are having any problems with urination, such as not being able to urinate or not being able to control your urination?  YES NO DK  d)  Ask you if you had any pain?  YES NO DK  **~~e)  Counsel you about methods to prevent pregnancy?~~**  **~~YES NO DK~~**  f) Ask if you feel sad or depressed?  YES NO DK | a) McCarthy et al (2018) validated "ask about excessive bleeding" - met both accuracy criteria (AUC 0.74; IF 1.18) in Kenya, but not in 3 other countries. Although validation evidence is mixed (possibly due to use of the word “excessive” in the validation studies), given the clinical importance of the item, we suggest moving the item to the core DHS questionnaire question 457.  b) Recall of blood pressure measurement was reasonably accurate in four separate studies led by Population Council, with AUC ranging from 0.52 – 0.84 [ McCarthy et al, 2016 and unpublished data].  e) Item taken out as it is recommended as a standalone question in the Core DHS questionnaire. |
| OVERARCHING RECOMMENDATION | | | |
| All indicators from Core DHS and Supplemental Module Maternal Health Care | n/a | Data are currently collected for all live births occurring in the previous 5 years, but for a majority of MNCH indicators, denominators include only births in the 2 years. The Expert group recommends that data collection be limited to births occurring in the previous 2 years. | This proposed revision does not only reduce the data collection burden and ensure consistency in reporting for all DHS indicators, but also aligns with corresponding MICS data collection and indicator reporting. |

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.

*Not applicable.*

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.

*Three questions identified for deletion are noted in the accompanying deletion template.*

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

*Wording changes and recommendations to move several validated items from the Supplemental Module to the Core DHS will only allow examination of corresponding indicator trends moving forward.*

# **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.

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| **Indicators** | **Calculation** |
| **CORE DHS QUESTIONNAIRE** | |
| 1. Eight antenatal care visits | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who had eight or more antenatal care visits.  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received antenatal care. |
| 2. Baby’s heart listened to at least once during antenatal care | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years whose baby’s heart was listened to at least once during antenatal care.  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received antenatal care. |
| 3. Woman received family planning counseling at least once during antenatal care | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who were counseled on family planning at least once during antenatal care.  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received antenatal care. |
| 4. Maternal nutrition counseling at least once during antenatal care | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years told about which foods to eat while pregnant at least once during antenatal care.  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received antenatal care. |
| 5. Woman weighed at least once during antenatal care | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who were weighed at least once during antenatal care.  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received antenatal care. |
| 6. Mother told about pregnancy danger signs during antenatal care | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years told about pregnancy danger signs during antenatal care.  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received antenatal care. |
| 7. Mother told during antenatal care where to go if she experienced pregnancy danger signs | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years told during antenatal care where to go if they experience pregnancy danger signs.  Denominator: Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received antenatal care. |
| 8. Family planning counseling during first 2 days postpartum | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who received counseling on family planning during the first 2 days postpartum  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care within the first 2 days postpartum |
| 9. Postpartum family planning initiation initiated in first 2 days postpartum | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who started using a family planning method during the first 2 days postpartum  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care within the first 2 days postpartum |
| 10. Specific Postpartum family planning method selected in first 2 days postpartum | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years using [specific] family planning method during the first 2 days postpartum  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care during the first 2 days postpartum |
| 11. Woman counseled on postnatal danger signs for herself during first 2 days postpartum | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who were counseled on maternal danger signs during the first 2 days postpartum  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care during the first 2 days postpartum |
| 12. Woman’s Blood pressure measured during first 2 days postpartum | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who had blood pressure measured during the first 2 days postpartum  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care during the first 2 days postpartum |
| **SUPPLEMENTAL MODULE MATERNAL HEALTH CARE** | |
| 13. Urine sample collected at least once during antenatal care | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who gave a urine sample at least once during antenatal care.  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received antenatal care. |
| 14. Mother counseled on healthy timing and spacing of pregnancy in first 2 days after birth | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who received counseling on healthy timing and spacing of pregnancy during the first 2 days postpartum  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care during the first 2 days postpartum |
| 15. Mother told how soon after delivery a woman can get pregnant in first 2 days after birth | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years told how soon after delivery a woman can get pregnant during the first 2 days postpartum  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care during the first 2 days postpartum |
| 16. Mother told about the advantages and disadvantages of the family planning method she received in first 2 days after birth | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years told about the advantages and disadvantages of the family planning method received in first 2 days after birth.  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care during the first 2 days postpartum |
| 1. Woman asked about vaginal bleeding during first 2 days after birth | Numerator: Number of women 15-49 years with a live birth in the preceding 2 years who were asked about vaginal bleeding during the first 2 days postpartum  Denominator: Number of women 15-49 years with a live birth in the preceding 2 years who received postnatal care during the first 2 days postpartum |

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. |
| ***All proposed*** |  |  |  |

# **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).

***This submission is informed by multiple the publications from the recent Journal of Global Health Collection on*** [***Improving Coverage Measurement:***](http://www.jogh.org/col-coverage-measurement.htm)

* Validation studies for population-based intervention coverage indicators: design, analysis, and interpretation. Melinda K Munos, et al. for the Improving Coverage Measurement Group; JOGH 2018
* Can surveys of women accurately track indicators of maternal and newborn care? A validity and reliability study in Kenya. Katharine J McCarthy et. al. JOGH 2016
* Women’s recall of maternal and newborn interventions received in the postnatal period: a validity study in Kenya and Swaziland. Katharine J McCarthy, et. al; JOGH 2018

***For the CORE DHS QUESTIONNAIRE:***

*Family planning counseling at least once during antenatal care –* Validation data exist for question on family planning counseling in the postpartum period from Kenya (AUC 0.73; IF 1.6) and Bangladesh (AUC 0.89; IF 0.83) [Population Council, unpublished secondary analysis data presented at MCSP meeting in January 2019]. We expect the question to perform equally well when asked in relation to the antenatal period.

*Maternal nutrition counseling at least once during antenatal care –* Validation data from Bangladesh supports inclusion of the proposed indicator (AUC 0.81; IF 1.07) [Population Council, unpublished secondary analysis data presented at MCSP meeting in January 2019].

*Postpartum family planning initiation* – Validation study in Swaziland demonstrated that during exit interviews women can accurately report whether they received a family planning method [McCarthy et al, 2016].

*Postpartum family planning method choice* – Validation study in Swaziland demonstrated that during exit interviews women can accurately report whether they received a family planning method [McCarthy et al, 2016].

***For the SUPPLEMENTAL MODULE MATERNAL HEALTH CARE***:

*Postpartum family planning counseling content –* McCarthy et al (2016) validated a question regarding counseling on benefits of birth spacing in Kenya and Swaziland (IF criteria met in both countries, AUC>0.7 only in Kenya). The same study validated women’s responses to question “for the method(s) you received today, did the provider explain the advantages and disadvantages of the method?” during exit interviews women can report on the (AUC 0.62) [McCarthy et al. 2016]. Question about how soon after delivery a woman can get pregnant was validated in the same study, meeting only IF, but not AUC criteria for accuracy.

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).

*Changes proposed for questions Q457 item (c), [add] align with MICS-5 wording and represents changes made following cognitive interviewing for MICS-5.*

# **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?

*We consider that data produced by the newly proposed indicators will be actionable given close alignment with current WHO ANC recommendations (e.g. ANC 8+ visits indicator) and/or clinical relevance for pregnancy, intrapartum and postnatal outcomes for women (e.g. ANC and PNC content indicators).*

* + Who will use the data?

*Ministries of Health, UN agencies monitoring progress towards SDGs, implementing partners*

* + What kinds of decisions will be made using these data?

*Identification of areas in need of improvement either clinically or from program management or public health perspectives.*

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

*All proposed changes and additional recommended indicators are considered useful to all countries where DHSs are conducted.*

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

*All proposed indicators and changes are highly relevant indicators for tracking coverage and content of care for women during pregnancy, intrapartum and postnatal period to inform maternal program and public health planning. Recommended indicators are not, for the most part, available in routine HMIS.*

**Appendix – tabulation plan change recommendations [shown in red and bolded]**

**Table 9.2 Number of antenatal care visits and timing of first visit**

Percent distribution of women age 15-49 who had a live birth in the **2** years preceding the survey by number of antenatal care (ANC) visits for the most recent live birth, and by the timing of the first visit; and among women with ANC, median months pregnant at first visit, according to residence, [Country Survey Year]

Number of ANC visits and timing of first visit Residence Total  
Urban Rural

**Number of ANC visits**

None  
1  
2-3  
**4-7**

**8+**  
Don't know/missing

Total 100.0 100.0 100.0

**Number of months pregnant at time of first ANC visit**

No antenatal care

**1-3**  
**4-6  
7-9**

Don't know/missing

Total 100.0 100.0 100.0  
Number of women

Median months pregnant at first visit (for those with ANC)  
Number of women with ANC

1. [Girard AW, Olude O. Nutrition education and counselling provided during pregnancy: effects on maternal, neonatal and child health outcomes. Paediatric and perinatal epidemiology. 2012 Jul;26:191-204.](https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-3016.2012.01278.x) [↑](#footnote-ref-1)