

**Maternal and Newborn Health:
Antenatal Care Coverage and Components,
and Delivery and Postnatal Care Module**

Rationale

Women need access to skilled care during pregnancy and childbirth to ensure prevention, detection and management of complications. The maternal and newborn health (MNH) indicators are service-related indicators that provide information on the extent to which women receive basic health interventions during pregnancy, delivery and postpartum periods. The quality of the services is indicated by ascertaining the timeliness of access to trained health personnel and to services that are delivered using basic equipment.

The antenatal care indicators relate to Millennium Development Goal 5: improve maternal health. In particular, the percentage of births delivered by skilled health personnel is an important indicator for reducing the maternal mortality ratio (target 5A), and coverage of antenatal services is an important element in achieving universal access to reproductive health (target 5B). Several MNH indicators are also included in the Countdown to 2015 mandate that tracks coverage levels for Maternal, Newborn and Child Survival in 75 countries accounting for more the 95% of all maternal, newborn and child deaths.¹ Similarly, the Accountability for Women's and Children's Health tracks several MNH indicators in 49 of the poorest countries.²

The MNH health service indicators in this module are population-based indicators published in the international survey databases including USAID DHS indicators,³ WHO Global Health Observatory (GHO) indicators,^{4,5} and UNICEF MICS Statistics⁶ databases. The nine indicators in the Global Reference List (GRL) of Core Indicators (draft for partner review, 12 August 2014) that can be measured by surveys were also taken into account. The definitions from the sources largely harmonized, except for the reference period that varies between 2, 3 and 5 years. The EC Eurostat⁷ and the OECD.StatExtracts⁸ databases do not include MNH health service indicators among the ones they regularly track.

Experience and evidence

Experience

Population-based household surveys are the primary method to monitor MNH indicators and provide a rich bank of historical, comparable data:

- DHS Phase 1, starting in 1984, core woman's questionnaire included questions on prenatal care and assistance at delivery, tetanus toxoid, and breastfeeding for births in

¹ <http://www.countdown2015mnch.org/>

² http://www.who.int/woman_child_accountability/about/en/

³ <http://dhsprogram.com/data/DHS-Survey-Indicators-Maternal-and-Child-Health.cfm>

⁴ WHO Global Health Observatory <http://apps.who.int/gho/data/node.main.531?lang=en>

⁵ WHO World Health Statistics

http://www.who.int/gho/publications/world_health_statistics/EN_WHS2014_Part3.pdf?ua=1

⁶ <http://data.unicef.org/maternal-health/antenatal-care>

⁷ http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database

⁸ <http://stats.oecd.org/>

the five years preceding the survey. These questions have been elaborated over the subsequent DHS phases but are still largely comparable. DHS surveys are conducted approximately every five years in many countries in South America, Africa and Asia.

- The first round of UNICEF MICS was conducted in 1995 and the individual woman's questionnaires included a module for Maternal and Newborn Health that was largely if not exactly harmonized with the DHS questionnaire. Starting with MICS4 round in 2009, UNICEF offers assistance to countries to conduct the surveys every three years instead of five, as previously. Each MICS round includes surveys in approximately 50-65 countries.

Evidence

The evidence base for MNH indicators is strong because population-based household surveys have ensured consistent and standardized data collection methods for three decades, across many if not most low- and middle-income countries. Nevertheless, there have been recent research endeavours to more deeply explore issues around measurements using household surveys, their interpretation and use for global monitoring.⁹

Among the major issues discussed in the Collection of research articles are:

- Some indicators may not be fully reliable or accurate due to recall bias, for example, for the total number of ANC visits or the contents of care. The sensitivity, specificity and accuracy of respondents' reports varies according to indicator ([Bryce et al. 2013](#), [Stanton et al. 2013](#))
- A better understanding of systematic (non-random) error and sampling (random) error will help to improve data quality and correctly interpret and use the results ([Bryce et al. 2013](#), [Eisele et al. 2013](#))
- "The overall validity of self-reported coverage was moderate across selected MNCH indicators. However, at the population level, self-reported coverage appears to have small to moderate degree of bias. Accuracy of the coverage was particularly high for indicators with high recorded coverage or low recorded coverage but high specificity." ([Liu et al. 2013](#))
- Measurement gaps result in technical working groups (TWG), such as the Newborn Indicators TWG, calling for additional indicators to monitor MNH. These should be considered in light of already time-consuming household survey questionnaires administered ([Moran et al. 2013](#))
- Reconciliation of differences in the populations covered and the reference periods used between DHS and MICS surveys ([Hancioglu and Arnold 2013](#))
- Global monitoring, global database development and selection of global coverage indicators need strong and continuous support in order to effectively measure, avoid duplication of efforts, and promote accountability for improving MNH ([Requejo 2013](#))

Additional measurement issues that may compromise the accuracy of estimates include:

- Women's lack of knowledge regarding the exact duration of pregnancy
- Difficulty in recalling the timing of the first ANC visit

⁹ Child Health Epidemiology Reference Group (CHERG). 2013. Measuring Coverage in Maternal, Newborn, and Child Health. PLOS Collections Medicine. <http://www.ploscollections.org/downloads/MeasuringCoverage.pdf>

- Lack of knowledge regarding the credentials of the service provider

Trend analyses based on standard reported figures need to take into account that reference periods may differ. This is only a problem if coverage rates change rapidly and substantially. DHS usually presents data for five and sometimes three-year periods, WHO is typically two, three or five years, MICS is typically two years, and the GRL simply indicates within a specified time period.

Finally, an indicator on delivery complications is included in some questionnaires but is not included in the current core questionnaires because research done by Cindy Stanton and results of earlier surveys concluded that the information on self-reported complications during delivery is not valid/reliable (personal communication with ICF Macro, 16 September 2014).

Survey data for the indicators on coverage and quality of care during the maternal and neonatal period are based on recall of the respondent, usually the mother.

In general, the reliability and validity of the indicator are best the simpler and the clearer the intervention is. For instance, the recall of a visit to the clinic is better than the recall of a visit and a specific action of the health worker, which may in turn be better than the recall of a specific treatment given which requires accurate transfer of information by the health worker to the respondent and recall of the mother of that specific treatment to the interviewer (e.g. type of medicine).

Indicators and core modules

The MNH indicator groups include antenatal care, and delivery and postnatal care. The indicators below are from the DHS, WHO and/or MICS websites; the GRL (v4 3 Oct. 2014) includes Antenatal care coverage, Skilled birth attendance, and Postpartum care coverage for mothers and infants.

Core indicators & short module

Information collected on indicators # 1, 3 and 4 pertain to the *last live birth* in the three or five years prior to the survey, regardless of survival status at the time of the interview.

Information collected on indicators # 2 and 5 pertain to *all live births* in the three or five years prior to the survey, regardless of survival status at the time of the interview.

There are five core indicators, all related to the basic coverage of the interventions:

1. Antenatal care coverage	Percentage of pregnant women 15-49 years who have made at least 4 antenatal care visits (any provider)
2. Skilled birth attendance	Percentage of live births attended by skilled health personnel
Postpartum care coverage	Percentage of mothers and babies who received postpartum care within two days of childbirth (regardless of place of delivery)
3. Postpartum care coverage for mothers	Percentage of mothers who received postpartum care within two days of childbirth (regardless of place of delivery)

Comment [fg1]: Suggest to delete and make this two indicators (added below), since both content is different as well as the denominator

Comment [fg2]: Added new.

4. Postpartum check-up for infants	Percentage of infants who received a postnatal check-up within two days of childbirth (regardless of place of delivery)
5. Incidence of low birth-weight among new-borns	Percentage of live births that weigh less than 2,500 g out of the total of live births during the same time period

Comment [fg3]: Added new. Postpartum check-up can be part of other postnatal care e.g., wrapping, bathing newborn (see the proposed in the Additional indicators section below).

The questions for these five indicators, as well as related information as described below (e.g., type of provider, number of visits, place of delivery, place of antenatal care visit, timing of first visit, and type of provider of postpartum care) constitute the short module.

Comment [fg4]: I left these original questions in the short module also

Data for the commonly used indicator of at least one antenatal visit, defined as percentage of women with birth in the last five (three) years preceding the survey who received antenatal care from a skilled provider, are also obtained with this short module. The median number of visits for live births in a specified number of years before the survey can also be obtained.

A key limitation of maternal and newborn health care indicators is assessing the quality of care, specifically the lack of reliable data on whether care comes from skilled health personnel.

By definition, **antenatal care from a skilled provider** refers to “workers/attendants who are accredited health professionals — such as a midwife, doctor or nurse — and who have been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborns. Depending on the setting, health-care providers referred to as something other than “doctor, nurse, midwife, or auxiliary midwife” may qualify as a skilled attendant (WHO 2011, p.26).”¹⁰

While the Commission for Information and Accountability for Women’s and Children’s Health recommends specifically antenatal care from a skilled provider, reliable data on the type of provider for each visit is not practical to collect. The Countdown 2015 indicator therefore refers to visits with any antenatal care provider. This is the indicator adopted in this module, although the question set also captures type of provider to be classified as skilled or unskilled.

Standardization of the definition of skilled health personnel for providing antenatal care, while taking into account variations in training of health personnel in different countries, would improve measurement of this indicator. It is not practical, however, to collect this information for each visit; the type of provider at the last visit should be indicative of the quality received.

The definition for a **skilled attendant at birth** differs slightly in the skillset: it refers to “personnel who have the required skills to provide *life-saving obstetric care*, including giving the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period; conduct deliveries on their own; and care for newborns. Traditional birth attendants, even if they receive a short training course, are not included (WHO 2011, p.25).”

For both indicators, standardization of the definition of skilled health personnel is a challenge because of differences in training of health personnel across countries. Although efforts have

¹⁰ World Health Organization. 2011. Monitoring maternal, newborn and child health: understanding key progress indicators. A joint publication by Countdown to 2015, Health Metrics Network, UNICEF and WHO.

been made to standardize the definitions of doctors, nurses, midwives and auxiliary midwives used in most household surveys, it is probable that many skilled attendants' ability to provide appropriate care under normal conditions and in an emergency depends on the environment in which they work.

Early and universal **postpartum care for mothers and infants**, regardless of place of delivery, is an important intervention to reduce maternal mortality and neonatal mortality.^{11,12}

Postpartum haemorrhage is one of the main causes of maternal mortality. The DHS Program has collected comparable information on the intervention at least since 1999, by asking women four questions pertaining to their most recent birth in the last five years:

Question: After (NAME) was born, did a health professional or a traditional birth attendant (TBA) check on your health?

Question: How many days or weeks after the delivery did the first checkup take place?

Question: Who checked on your health at that time?

Question: Where did the first check take place?

Likewise, infants should receive at least one early postpartum care check-up regardless of place of birth, preferably at a health institution or, if at home, by a health care professional. The DHS Program has added four related questions to numerous surveys also:

Question: In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on his/her health?

Question: How many hours, days or weeks after the birth of (NAME) did the first check take place?

Question: Who checked on (NAME)'s health at that time?

Question: Where did this first check of (NAME) take place?

A single question on the place of delivery of live births can be included in the core module. It provides data on the additional indicator of institutional delivery rates, and can be used as a quality control for skilled birth attendance rates, as the two should be highly correlated.

Data on the incidence of **low birth weight** can be collected from health facility data, if institutional delivery rates are very high, and from recall of the mother of birth weight and relative size of the baby. The latter has been shown to provide a reliable approximation of the prevalence of low birthweight.¹³

MNH questions comprise a large share of questions in DHS and MICS standard modules. Shown below is the minimal set of questions needed for computing the core indicators. The questions are extracted from the most recent standard DHS Woman's Questionnaire (DHS6), Section 4,

¹¹ Fort A, Kothari M and Abderrahim N. 2006. Postpartum care: Levels and determinants in developing countries. DHS Comparative Reports 15. Calverton, Maryland, USA: Macro International Inc.

¹²
¹³ Blanc A. and Wardlaw T. 2005. Monitoring low birth weight: an evaluation of international estimates and an updated estimation procedure. Bulletin of the World Health Organization, 83: 178-185. http://apps.who.int/iris/bitstream/10665/72928/1/bulletin_2005_83%283%29_178-185.pdf?ua=1

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Pregnancy and Postnatal Care¹⁴ and are almost the same as those in the UNICEF Woman's Questionnaire (MICS5), sections Maternal and Newborn Health (MN) and Postnatal Health Checks (PN).¹⁵

Note: 1) shaded areas are questions that are not pertinent to the core indicators, but are recommended to include in order to enhance or to corroborate core information. The shaded questions in red text are similarly retained from the DHS core module (author's insertion). 2) the question on caesarean birth was retained because it may control for a bias in postpartum check-up of the mother. 3) The original numbering in the DHS6 questionnaire was retained in the left column, but the section number and the skips have been adjusted to reflect the new module. Some questions refer to information in previous sections of the questionnaire, these were left as-is, for easy reference back to the original questionnaire sections. Note that there may be gaps in the sequential numbering, this may indicate omitted questions that are not necessary for computing the indicators.

¹⁴ <http://dhsprogram.com/publications/publication-dhsq6-dhs-questionnaires-and-manuals.cfm>

¹⁵ http://www.childinfo.org/mics5_questionnaire.html

SECTION X. PREGNANCY AND POSTNATAL CARE				
X01	CHECK 224:	ONE OR MORE BIRTHS IN 2005 (1) OR LATER <input type="checkbox"/>	NO BIRTHS IN 2005 (1) OR LATER <input type="checkbox"/>	Next section
X02	<p>CHECK 215: ENTER IN THE TABLE THE BIRTH HISTORY NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRT IN 2005 (1) OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES).</p> <p>Now I would like to ask some questions about your children born in the last five years. (We will talk about each separately.)</p>			
X03	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	LAST BIRTH BIRTH HISTORY NUMBER <input type="text"/>	NEXT-TO-LAST BIRTH HISTORY NUMBER <input type="text"/>	SECOND-FROM-LAST BIRTH HISTORY NUMBER <input type="text"/>
X04	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
X08	Did you see anyone for antenatal care for this pregnancy?	YES 1 NO 2 (SKIP TO X30) ←		
X09	Whom did you see? (2) Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE C OTHER PERSON TRADITIONAL BIRTH ATTENDANT D COMMUNITY/ VILLAGE HEALTH WORKER E OTHER X (SPECIFY)		
X10	Where did you receive antenatal care for this pregnancy? (2) Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. (NAME OF PLACE(S))	HOME YOUR HOME A OTHER HOV B PUBLIC SECTOR GOVT. HOSPITAL C GOVT. HEALTH CENTER D GOVT. HEALTH POST E OTHER PUBLIC SECTOR F (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC G OTHER PRIVATE MED. SECTOR H (SPECIFY) OTHER X (SPECIFY)		

X04	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
X11	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS ... <input type="text"/> <input type="text"/> DONT KNOW 98		
X12	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES <input type="text"/> <input type="text"/> DONT KNOW 98		
X30	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8
X31	Was (NAME) weighed at birth?	YES 1 NO 2 (SKIP TO X33) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO X33) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO X33) ← DONT KNOW 8
X32	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> KG FROM RECALL 2 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> DONT KNOW 99998	KG FROM CARD 1 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> KG FROM RECALL 2 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> DONT KNOW 99998	KG FROM CARD 1 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> KG FROM RECALL 2 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> DONT KNOW 99998
X33	Who assisted with the delivery of (NAME)? (2) Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE ... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .. D RELATIVE/FRIEND . E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE ... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .. D RELATIVE/FRIEND . E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE ... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .. D RELATIVE/FRIEND . E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y

X04	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>						
X34	Where did you give birth to (NAME)? (2) 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)	HOME YOUR HOME ... 11 (SKIP TO X38) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ... 22 GOVT. HEALTH POST ... 23 OTHER PUBLIC SECTOR _____ (SPECIFY) 26 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC ... 31 OTHER PRIVATE MED. SECTOR _____ (SPECIFY) 36 OTHER 36 (SPECIFY) 36 (SKIP TO X38) ←	HOME YOUR HOME ... 11 (SKIP TO END) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ... 22 GOVT. HEALTH POST ... 23 OTHER PUBLIC SECTOR _____ (SPECIFY) 26 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC ... 31 OTHER PRIVATE MED. SECTOR _____ (SPECIFY) 36 OTHER 36 (SPECIFY) 36 (SKIP TO END) ←	HOME YOUR HOME ... 11 (SKIP TO END) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ... 22 GOVT. HEALTH POST ... 23 OTHER PUBLIC SECTOR _____ (SPECIFY) 26 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC ... 31 OTHER PRIVATE MED. SECTOR _____ (SPECIFY) 36 OTHER 36 (SPECIFY) 36 (SKIP TO END) ←						
X34A	How long after (NAME) was delivered did you stay there? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 <table border="1"><tr><td></td><td></td></tr></table> DAYS 2 <table border="1"><tr><td></td><td></td></tr></table> WEEKS 3 <table border="1"><tr><td></td><td></td></tr></table> DONT KNOW ... 998								
X35	Was (NAME) delivered by caesarean, that is, did they cut your belly open to take the baby	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2						
X36	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health while you were still in the facility?	YES 1 (SKIP TO X39) ← NO 2								
X37	Did anyone check on your health after you left the facility?	YES 1 (SKIP TO X39) ← NO 2 (SKIP TO X42) ←								
X38	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health	YES 1 NO 2 (SKIP TO X42) ←								

X04	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
X39	Who checked on your health at that time? (2) PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR 1 NURSE/MIDWIFE 2 AUXILIARY MIDWIFE 3 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY/ VILLAGE HEALTH WORKER ... 22 OTHER 56 (SPECIFY)		
X40	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 <input type="checkbox"/> <input type="checkbox"/> DAYS 2 <input type="checkbox"/> <input type="checkbox"/> WEEKS 3 <input type="checkbox"/> <input type="checkbox"/> DONT KNOW ... 998		
X42	In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on his/her health?	YES 1 NO 2 (SKIP TO X61) ← DONT KNOW 8		
X43	How many hours, days or weeks after the birth of (NAME) did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HRS AFTER BIRTH .. 1 <input type="checkbox"/> <input type="checkbox"/> DAYS AFTER BIRTH .. 2 <input type="checkbox"/> <input type="checkbox"/> WKS AFTER BIRTH .. 3 <input type="checkbox"/> <input type="checkbox"/> DONT KNOW ... 998		
X44	Who checked on (NAME)'s health at that time? (2) PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR 1 NURSE/MIDWIFE 2 AUXILIARY MIDWIFE 3 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY/ VILLAGE HEALTH WORKER ... 22 OTHER 56 (SPECIFY)		

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X04	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
X45	Where did this first check of (NAME) take place? (2) PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE)	HOME YOUR HOME ... 11 OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER 22 GOVT. HEALTH POST 23 OTHER PUBLIC _____ 26 (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC 31 OTHER PRIVATE MED. _____ 36 (SPECIFY) OTHER _____ 96 (SPECIFY)		
X61		GO BACK TO X08 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO X08 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO 501.	GO BACK TO X30 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO NEXT SECTION.

(1) Year of fieldwork is assumed to be 2010. For fieldwork beginning in 2014 or 2015, the year should be 2009 or 2010, respectively.
(2) Coding categories to be developed locally and revised based on the pretest; however, the broad categories must be maintained.

Additional indicators & full module

Antenatal care

Timing of first visit: Percentage of women with a birth (in a specified time period) with first ANC visit in the first trimester (before 16 weeks) (Additional indicator in GRL) *Note, this question was left in the core module, above.*

This requires accurate recall of the mother of the timing of the first visit, which introduces more uncertainty because women may not know the duration.

Antenatal care content: Percentage of women with a live birth in the five (three) years preceding the survey who received antenatal care for the most recent birth, by content of antenatal care (weight, height, blood pressure, urine sample, blood sample, information on breastfeeding) (DHS definition).

This set of questions aims to obtain information on the contents of ANC, and is considered a measure of the quality of care.

- Blood pressure measured: Proportion of women who had blood pressure measured at the last antenatal visit ([Additional indicator in GRL](#))

Tested for syphilis: Proportion of women attending antenatal care (ANC) services who were tested for syphilis ([Additional indicator in GRL](#)).

TPHA/RPR test in ANC clinics is general policy in most countries. *Note, no standard questions in standard DHS or MICS questionnaires.*

Iron tablets or syrup/anti-malarial drugs: Percentage of women with a live birth in the five (three) years preceding the survey who received iron tablets or syrup or anti-malarial drugs for the most recent birth ([DHS indicator, not in GRL](#)).

Tetanus toxoid vaccination: Percent distribution of last live births in the last five (three) years preceding the survey by number of tetanus toxoid injections given to the mother during pregnancy ([DHS definition](#)).

- Percentage of mothers whose last live birth was protected against neonatal tetanus. (Includes mothers with two injections during the pregnancy of her last birth, or two or more injections (the last within 3 years of the last live birth), or three or more injections (the last within 5 years of the last birth), or four or more injections (the last within ten years of the last live birth), or five or more injections prior to the last birth.) ([DHS indicator, not in GRL](#)).

- Percentage of neonates protected at birth against neonatal tetanus ([WHO indicator published in the World Health Statistics, is derived from this indicator, based on a mathematical model.](#)¹⁶

- At least 2 doses of tetanus toxoid: Among mothers age 15-49 with a live birth in the five years preceding the survey, the percentage receiving two or more tetanus toxoid injections (TTI) during the pregnancy for the last live birth ([DHS indicator, not in GRL](#))

Delivery care and postnatal care

Place of birth: Proportion of live births that occurred in a health institution ([MICS](#), [Additional indicator in GRL](#)). *Note, this question was left in the core module, above.*

Characteristics of delivery: Percent distribution of live births in the last five (three) years preceding the survey by whether the delivery was by caesarian section, and by birth weight and the mother's estimate of baby's size at birth ([DHS definition](#)).

¹⁶ Proportion of neonates protected at birth against neonatal tetanus through maternal immunization with tetanus toxoid is based on a mathematical model taking into account the mother's immunization in infancy, during pregnancy and in tetanus campaigns. WHO World Health Statistics 2014, p.114.

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- Caesarean births: The percentage of births by caesarean section is an indicator of access to and use of health care during childbirth (DSH, WHO, and MICS indicator, not in GRL). *Note, this question was left in the core module, above.*

Prevention of postpartum haemorrhage in health facilities: Percentage of women receiving oxytocin immediately after birth of the baby (within 1 minute of delivery), before the birth of the placenta, irrespective of mode of delivery (GRL additional indicator) *Note, no standard questions in standard DHS or MICS questionnaires.*

Initial breastfeeding: Percentage of children born in the five (three) years preceding the survey who were breastfed within 1 hour after birth (DHS, MICS and GRL indicator)

- Percentage of children born in the five (three) years preceding the survey who were breastfed within 1 day after birth (DHS and MICS indicator)

- Percentage of children born in the five (three) years preceding the survey who received a prelacteal feed (given something other than breast milk during the first three days of life before the mother started breastfeeding regularly) (DHS and MICS indicator)

New-borns receiving essential newborn care: Percentage of new-borns who received all four elements of essential newborn care:

- immediate and thorough drying
- immediate skin-to-skin contact
- delayed cord clamping
- initiation of breastfeeding in the first hour

This is an indicator proposed by maternal and newborn health experts. *Note, no standard question set is in standard DHS or MICS questionnaires.*

Full module

The full module, containing questions for both the core and the additional indicators, are presented below in the most recent standard DHS Woman's Questionnaire (DHS6), Section 4, Pregnancy and Postnatal Care.¹⁷ As in the core module, these questions are almost the same as those in the UNICEF Woman's Questionnaire (MICS5), sections Maternal and Newborn Health (MN) and Postnatal Health Checks (PN).¹⁸ Note that the module does not include questions for three additional indicators:

- 1) Tested for syphilis
- 2) Prevention of postpartum haemorrhage in health facilities
- 3) New-borns receiving four elements of essential newborn care

¹⁷ <http://dhsprogram.com/publications/publication-dhsq6-dhs-questionnaires-and-manuals.cfm>

¹⁸ http://www.childinfo.org/mics5_questionnaire.html

SECTION X. PREGNANCY AND POSTNATAL CARE			
X01	CHECK 224; ONE OR MORE BIRTHS IN 2005 (1) OR LATER <input type="checkbox"/> NO BIRTHS IN 2005 (1) OR LATER <input type="checkbox"/>	NEXT SECTION	
X02	CHECK 215; ENTER IN THE TABLE THE BIRTH HISTORY NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH IN 2005 (1) OR LATER. ASK THE QUESTIONS ABOUT ALL OF THESE BIRTHS. BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 3 BIRTHS, USE LAST 2 COLUMNS OF ADDITIONAL QUESTIONNAIRES). Now I would like to ask some questions about your children born in the last five years. (We will talk about each separately.)		
X03	BIRTH HISTORY NUMBER FROM 212 IN BIRTH HISTORY	LAST BIRTH BIRTH HISTORY NUMBER <input type="text"/>	NEXT-TO-LAST BIRTH BIRTH HISTORY NUMBER <input type="text"/>
X0X	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
X05	When you got pregnant with (NAME), did you want to get pregnant at that time?	YES 1 NO 2 (SKIP TO X08) ←	YES 1 NO 2 (SKIP TO X30) ←
X06	Did you want to have a baby later on, or did you not want any (more) children?	LATER 1 NO MORE 2 (SKIP TO X08) ←	LATER 1 NO MORE 2 (SKIP TO X30) ←
X07	How much longer did you want to wait?	MONTHS ..1 <input type="text"/> YEARS ..2 <input type="text"/> DONT KNOW ... 998	MONTHS ..1 <input type="text"/> YEARS ..2 <input type="text"/> DONT KNOW ... 998
X08	Did you see anyone for antenatal care for this pregnancy?	YES 1 NO 2 (SKIP TO X15) ←	
X09	Whom did you see? (2) Anyone else? PROBE TO IDENTIFY EACH TYPE OF PERSON AND RECORD ALL MENTIONED.	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE C OTHER PERSON TRADITIONAL BIRTH ATTENDANT D COMMUNITY/ VILLAGE HEALTH WORKER ... E OTHER _____ X (SPECIFY)	

404	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>												
X10	Where did you receive antenatal care for this pregnancy? (2) Anywhere else? PROBE TO IDENTIFY EACH TYPE OF SOURCE. IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE. _____ (NAME OF PLACE(S))	HOME YOUR HOME ... A OTHER HOME ... B PUBLIC SECTOR GOVT. HOSPITAL C GOVT. HEALTH CENTER D GOVT. HEALTH POST E OTHER PUBLIC SECTOR _____ F (SPECIFY) PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC G OTHER PRIVATE MED. SECTOR _____ H (SPECIFY) OTHER _____ X (SPECIFY)														
X11	How many months pregnant were you when you first received antenatal care for this pregnancy?	MONTHS <input type="text"/> <input type="text"/> DONT KNOW 8														
X12	How many times did you receive antenatal care during this pregnancy?	NUMBER OF TIMES <input type="text"/> <input type="text"/> DONT KNOW 8														
X13	As part of your antenatal care during this pregnancy, were any of the following done at least once: Was your blood pressure measured? Did you give a urine sample? Did you give a blood sample?	<table border="0"> <tr> <td></td> <td>YES</td> <td>NO</td> </tr> <tr> <td>BP</td> <td>1</td> <td>2</td> </tr> <tr> <td>URINE</td> <td>1</td> <td>2</td> </tr> <tr> <td>BLOOD ...</td> <td>1</td> <td>2</td> </tr> </table>				YES	NO	BP	1	2	URINE	1	2	BLOOD ...	1	2
	YES	NO														
BP	1	2														
URINE	1	2														
BLOOD ...	1	2														
X14	During (any of) your antenatal care visit(s), were you told about things to look out for that might suggest problems with the	YES 1 NO 2 DONT KNOW 8														
X15	During this pregnancy, were you given an injection in the arm to prevent the baby from getting tetanus, that is, convulsions after birth? (3)	YES 1 NO 2 (SKIP TO X18) ← DONT KNOW 8														
X16	During this pregnancy, how many times did you get a tetanus injection?	TIMES <input type="text"/> DONT KNOW 8														

Page 2

404	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
X17	CHECK 416:	2 OR MORE TIMES <input type="checkbox"/> (SKIP TO X21)	OTHER <input type="checkbox"/>	
X18	At any time before this pregnancy, did you receive any tetanus injections?	YES 1 NO 2 (SKIP TO X21) ← DONT KNOW ... 8		
X19	Before this pregnancy, how many times did you receive a tetanus injection? IF 7 OR MORE TIMES, RECORD '7'.	TIMES <input type="text"/> DONT KNOW 8		
X20	How many years ago did you receive the last tetanus injection before this pregnancy?	YEARS AGO <input type="text"/>		
X21	During this pregnancy, were you given or did you buy any iron tablets or iron syrup? (4) SHOW TABLETS/SYRUP. (4)	YES 1 NO 2 (SKIP TO X23) ← DONT KNOW 8		
X22	During the whole pregnancy, for how many days did you take the tablets or syrup? (4,5) IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.	DAYS <input type="text"/> DONT KNOW ... 8		
X23	During this pregnancy, did you take any drug for intestinal worms?	YES 1 NO 2 DONT KNOW 8		
X24 (6)	During this pregnancy, did you take any drugs to keep you from getting malaria?	YES 1 NO 2 (SKIP TO X30) ← DONT KNOW 8		
X25 (6)	What drugs did you take? RECORD ALL MENTIONED. IF TYPE OF DRUG IS NOT DETERMINED, SHOW TYPICAL ANTIMALARIAL DRUGS TO RESPONDENT.	SP/FANSIDAR A CHLOROQUINE ... B OTHER _____ X (SPECIFY) DONT KNOW Z		
X26 (6)	CHECK X25: SP/FANSIDAR TAKEN FOR MALARIA PREVENTION.	CODE 'A' CIRCLED <input type="checkbox"/> A' NOT CIRCLED <input type="checkbox"/> (SKIP TO X30) ←		

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404	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
X27 (6)	How many times did you take (SP/Fansidar) during this pregnancy?	TIMES <input type="text"/> <input type="text"/>		
X28 (6)	CHECK X09: ANTENATAL CARE FROM HEALTH PERSONNEL DURING THIS PREGNANCY	CODE 'A', OTHER <input type="checkbox"/> 'B' OR 'C' CIRCLED <input type="checkbox"/> (SKIP TO X30) ←		
X29 (6)	Did you get the (SP/Fansidar) during any antenatal care visit, during another visit to a health facility or from another source?	ANTENATAL VISIT .. 1 ANOTHER FACILITY VISIT 2 OTHER SOURCE 6		
X30	When (NAME) was born, was he/she very large, larger than average, average, smaller than average, or very small?	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8	VERY LARGE 1 LARGER THAN AVERAGE 2 AVERAGE 3 SMALLER THAN AVERAGE 4 VERY SMALL 5 DONT KNOW 8
X31	Was (NAME) weighed at birth?	YES 1 NO 2 (SKIP TO X33) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO X33) ← DONT KNOW 8	YES 1 NO 2 (SKIP TO X33) ← DONT KNOW 8
X32	How much did (NAME) weigh? RECORD WEIGHT IN KILOGRAMS FROM HEALTH CARD, IF AVAILABLE.	KG FROM CARD 1 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> KG FROM RECALL 2 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> DONT KNOW 99998	KG FROM CARD 1 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> KG FROM RECALL 2 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> DONT KNOW 99998	KG FROM CARD 1 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> KG FROM RECALL 2 <input type="text"/> <input type="text"/> . <input type="text"/> <input type="text"/> DONT KNOW 99998
X33	Who assisted with the delivery of (NAME)? (2) Anyone else? PROBE FOR THE TYPE(S) OF PERSON(S) AND RECORD ALL MENTIONED. IF RESPONDENT SAYS NO ONE ASSISTED, PROBE TO DETERMINE WHETHER ANY ADULTS WERE PRESENT AT THE DELIVERY.	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE ... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .. D RELATIVE/FRIEND . E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE ... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .. D RELATIVE/FRIEND . E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y	HEALTH PERSONNEL DOCTOR A NURSE/MIDWIFE B AUXILIARY MIDWIFE ... C OTHER PERSON TRADITIONAL BIRTH ATTENDANT .. D RELATIVE/FRIEND . E OTHER _____ X (SPECIFY) NO ONE ASSISTED Y

404	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>								
X34	Where did you give birth to (NAME)? (2) 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)	HOME YOUR HOME ... 11 (SKIP TO 438) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ... 22 GOVT. HEALTH POST ... 23 OTHER PUBLIC SECTOR _____ (SPECIFY) 26 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC ... 31 OTHER PRIVATE MED. SECTOR _____ (SPECIFY) 36 OTHER 36 (SPECIFY) ← (SKIP TO 438)	HOME YOUR HOME ... 11 (SKIP TO 448) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ... 22 GOVT. HEALTH POST ... 23 OTHER PUBLIC SECTOR _____ (SPECIFY) 26 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC ... 31 OTHER PRIVATE MED. SECTOR _____ (SPECIFY) 36 OTHER 36 (SPECIFY) ← (SKIP TO 448)	HOME YOUR HOME ... 11 (SKIP TO 448) ← OTHER HOME ... 12 PUBLIC SECTOR GOVT. HOSPITAL 21 GOVT. HEALTH CENTER ... 22 GOVT. HEALTH POST ... 23 OTHER PUBLIC SECTOR _____ (SPECIFY) 26 PRIVATE MED. SECTOR PVT. HOSPITAL/ CLINIC ... 31 OTHER PRIVATE MED. SECTOR _____ (SPECIFY) 36 OTHER 36 (SPECIFY) ← (SKIP TO 448)								
X34A	How long after (NAME) was delivered did you stay there? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	<div style="text-align: center; font-size: 2em; opacity: 0.5;">Page 5</div> <table border="1" style="margin: auto;"> <tr> <td>HOURS 1</td> <td></td> </tr> <tr> <td>DAYS 2</td> <td></td> </tr> <tr> <td>WEEKS 3</td> <td></td> </tr> <tr> <td>DONT KNOW ... 998</td> <td></td> </tr> </table>			HOURS 1		DAYS 2		WEEKS 3		DONT KNOW ... 998	
HOURS 1												
DAYS 2												
WEEKS 3												
DONT KNOW ... 998												
X35	Was (NAME) delivered by caesarean, that is, did they cut your belly open to take the baby?	YES 1 NO 2	YES 1 NO 2	YES 1 NO 2								
X36	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health while you were still in the facility?	YES 1 (SKIP TO X39) ← NO 2										
X37	Did anyone check on your health after you left the facility?	YES 1 (SKIP TO X39) ← NO 2 (SKIP TO X42) ←										
X38	I would like to talk to you about checks on your health after delivery, for example, someone asking you questions about your health or examining you. Did anyone check on your health after you gave birth to (NAME)?	YES 1 NO 2 (SKIP TO X42) ←										

404	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>						
X39	Who checked on your health at that time? (2) PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR 11 NURSE/MIDWIFE 12 AUXILIARY MIDWIFE 13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY/ VILLAGE HEALTH WORKER ... 22 OTHER _____ 96 (SPECIFY)								
X40	How long after delivery did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HOURS 1 <table border="1"><tr><td></td><td></td></tr></table> DAYS 2 <table border="1"><tr><td></td><td></td></tr></table> WEEKS 3 <table border="1"><tr><td></td><td></td></tr></table> DONT KNOW ... 998								
X42	In the two months after (NAME) was born, did any health care provider or a traditional birth attendant check on his/her health?	YES 1 NO 2 (SKIP TO X46) 1 DONT KNOW ... 8								
X43	How many hours, days or weeks after the birth of (NAME) did the first check take place? IF LESS THAN ONE DAY, RECORD HOURS. IF LESS THAN ONE WEEK, RECORD DAYS.	HRS AFTER BRTH .. 1 <table border="1"><tr><td></td><td></td></tr></table> DAYS AFTER BRTH .. 2 <table border="1"><tr><td></td><td></td></tr></table> WKS AFTER BRTH .. 3 <table border="1"><tr><td></td><td></td></tr></table> DONT KNOW ... 998								
X44	Who checked on (NAME)'s health at that time? (2) PROBE FOR MOST QUALIFIED PERSON.	HEALTH PERSONNEL DOCTOR 11 NURSE/MIDWIFE 12 AUXILIARY MIDWIFE 13 OTHER PERSON TRADITIONAL BIRTH ATTENDANT 21 COMMUNITY/ VILLAGE HEALTH WORKER ... 22 OTHER _____ 96 (SPECIFY)								

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404	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>				
X45	<p>Where did this first check of (NAME) take place? (2)</p> <p>PROBE TO IDENTIFY THE TYPE OF SOURCE AND CIRCLE THE APPROPRIATE CODE.</p> <p>IF UNABLE TO DETERMINE IF PUBLIC OR PRIVATE SECTOR, WRITE THE NAME OF THE PLACE.</p> <p>_____ (NAME OF PLACE)</p>	<p>HOME</p> <p>YOUR HOME ... 11</p> <p>OTHER HOME ... 12</p> <p>PUBLIC SECTOR</p> <p>GOVT. HOSPITAL 21</p> <p>GOVT. HEALTH CENTER 22</p> <p>GOVT. HEALTH POST 23</p> <p>OTHER PUBLIC _____ 26 (SPECIFY)</p> <p>PRIVATE MED. SECTOR</p> <p>PVT. HOSPITAL/ CLINIC 31</p> <p>OTHER PRIVATE MED. _____ 36 (SPECIFY)</p> <p>OTHER _____ 96 (SPECIFY)</p>						
X46	<p>In the first two months after delivery, did you receive a vitamin A dose like (this/any of these)?</p> <p>SHOW COMMON TYPES OF AMPULES/CAPSULES/SYRUPS.</p>	<p>YES 1</p> <p>NO 2</p> <p>DON'T KNOW 8</p>						
X53	Did you ever breastfeed (NAME)?	<p>YES () 1 (SKIP TO X55)</p> <p>NO 2</p>	<p>YES 1</p> <p>NO 2</p>	<p>YES 1</p> <p>NO 2</p>				
X5X	CHECK X04: IS CHILD LIVING?	<p>LIVING <input type="checkbox"/> DEAD <input type="checkbox"/></p> <p>(SKIP TO X60) (GO BACK TO X05 IN NEXT COLUMN; OR IF NO MORE BIRTHS, GO TO NEXT SECTION)</p>						
X55	<p>How long after birth did you first put (NAME) to the breast?</p> <p>IF LESS THAN 1 HOUR, RECORD '00' HOURS. IF LESS THAN 24 HOURS, RECORD HOURS. OTHERWISE, RECORD DAYS.</p>	<p>IMMEDIATELY ... 000</p> <p>HOURS 1 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table></p> <p>DAYS 2 <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table></p>						

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404	FROM 212 AND 216	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>	NAME _____ LIVING <input type="checkbox"/> DEAD <input type="checkbox"/>
X56	In the first three days after delivery, was (NAME) given anything to drink other than breast milk?	YES 1 NO 2 (SKIP TO 458) ←		
X57	What was (NAME) given to drink? Anything else? RECORD ALL LIQUIDS MENTIONED.	MILK (OTHER THAN BREAST MILK) A PLAIN WATER ... B SUGAR OR GLUCOSE WATER ... C GRPE WATER ... D SUGAR-SALT-WATER SOLUTION E FRUIT JUICE F INFANT FORMULA G TEA/INFUSIONS ... H COFFEE I HONEY J OTHER _____ X (SPECIFY)		
X58	CHECK 404: IS CHILD LIVING?	LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO NEXT SECTION)	LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> GO BACK TO 405 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO NEXT SECTION)	LIVING <input type="checkbox"/> DEAD <input type="checkbox"/> (GO BACK TO 405 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO NEXT SECTION)
X59	Are you still breastfeeding (NAME)?	YES 1 NO 2		
X60	Did (NAME) drink anything from a bottle with a nipple yesterday or last night?	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8	YES 1 NO 2 DONT KNOW 8
X61		GO BACK TO X05 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO NEXT SECTION.	GO BACK TO X05 IN NEXT COLUMN; OR, IF NO MORE BIRTHS, GO TO NEXT SECTION.	GO BACK TO X05 IN NEXT-TO-LAST COLUMN OF NEW QUESTIONNAIRE; OR, IF NO MORE BIRTHS, GO TO NEXT SECTION.

- (1) Year of fieldwork is assumed to be 2010. For fieldwork beginning in 2014 or 2015, the year should be 2009 or 2010, respectively.
- (2) Coding categories to be developed locally and revised based on the pretest; however, the broad categories must be maintained.
- (3) Vaccination practices may vary; this question should specify where the injection is given, e.g. arm or shoulder
- (X) Syrup should be deleted in countries where syrup is not used.
- (5) In countries where it is important to know the number of iron tablets taken per day, an appropriate question may be added.
- (6) The question should be deleted in surveys in countries where there is no program for intermittent preventive treatment against malaria during pregnancy.

Indicator definitions

Main indicators

Information from the following sources was used to specify the indicators: DHS Guide to Statistics (2006)¹⁹, WHO Indicator and Measurement Registry (version 1.7.0)²⁰, and UNICEF MICS4 women's questionnaire. The differences in reference periods are reflected in the indicators specifications: the reference period for DHS relates to women with births in the last five or sometimes three years preceding the survey, the MICS period is the last two years, and WHO GHO period is the last two, three and five years, depending on the indicator.

A. ANC coverage

Name	<i>ANC provider source</i>
Definition	- Percentage of women with a birth in the last five (two, three) years, distributed by highest type of provider of antenatal care - Percentage of women with a birth in the last five (two, three) years who received ANC by a skilled provider †
Numerator	- Number of women who were attended for antenatal care for their last birth, distributed according to the type of provider with the highest level of qualification - Number of women who were attended for antenatal care for their last birth by a skilled provider †
Denominator	Number of women who had a live birth in the five (two, three) years preceding the survey
Reference period/pop base	Women with one or more births in the last five (two, three) years
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 100

† A skilled provider includes doctor, nurse, or midwife

Standard response categories for provider types include Doctor, Nurse/midwife, Community health worker, Traditional birth attendant, Other and No one.

- The category "Nurse/midwife" includes only medically trained and licensed personnel. Traditional birth attendants are not included, whether trained or untrained.
- The category "Traditional birth attendant/other" includes auxiliary health personnel and cases where the respondent did not know the level of qualification.

Name	<i>Number of antenatal care visits and timing of first visit</i>
Definition	- Percentage of women with a birth in the last five (two, three) years, with at least one/at least four antenatal visits

¹⁹ <http://dhsprogram.com/publications/publication-dhsg1-dhs-questions-and-manuals.cfm>

²⁰ http://apps.who.int/gho/indicatorregistry/App_Main/browse_indicators.aspx

	- Number of months pregnant at time of first antenatal visit - Median number of months pregnant at time of first antenatal care visit ‡
Numerator	- Numbers of women who received antenatal care for their last birth, according to grouped number of visits (none, 2-3, 4+) - Numbers of women who were attended for antenatal care for their last birth, according to grouped number of months they were pregnant at time of first visit - Numbers of women who were attended for antenatal care for their last birth according to the single number of months they were pregnant at time of first visit
Denominator	- Number of women who had a birth in the five (two, three) years preceding the survey - Number of women with a birth in the last five (two, three) years who received antenatal care for their last birth
Reference period/pop base	Number of women with one or more births in the last five (two, three) years
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 101

‡ To compute the median number of antenatal care visits for live births in the five (two, three) years preceding the survey, and median number of months of pregnancy at the time of the first visit, first calculate percentages of single months pregnant at first visit by:

1. Dividing the numerator (number of women with a birth in the reference period) by the denominator (number of women with a birth in the reference period who received ANC for their last birth);
2. Cumulate the percentages by single months starting with the lowest value;
3. Linearly interpolate between the number of months immediately before and after where the cumulated distribution exceeds 50 percent to determine the median (DHS 2006, p 104).

B. ANC components

Name	<i>Antenatal care content</i>
Definition	- Percentage of women who received key components of ANC: Informed of signs of pregnancy complications; Weight measured, Height measured, Blood pressure measured, Urine sample taken, Blood sample taken. - Percentage of women who took iron supplements - Percentage of women who took anti-malarial drugs - Percentage of women who took deworming medicine
Numerator	- Number of women who received antenatal care for their last birth and who received key components of ANC - Number of women who took iron tablets or syrup - Number of women who took anti-malaria drugs - Number of women who took deworming medicine
Denominator	- Number of women who had a birth in the five (three) years preceding the survey - Number of women with a birth in the last five (three) years who received antenatal care for their last birth

Reference period/pop base	Number of women with one or more births in the last five (three) years
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 103

Name	<i>Prenatal tetanus toxoid injections</i>
Definition	Percentage of women with a birth in the last five (two, for MICS 4) years, distributed by number of tetanus toxoid injections received during the pregnancy of the most recent birth
Numerator	Numbers of women distributed, according to the number of tetanus toxoid injections received during the pregnancy of the most recent birth
Denominator	Number of women with a birth in the last five (two) years
Reference period/pop base	Number of women with one or more births in the last five (two) years
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 104

C. Delivery care and postnatal care

Name	<i>Place of delivery</i>
Definition	Percent distribution of live births in the last five (two, three) years preceding the survey, by place of delivery
Numerator	Numbers of live births distributed according to whether the delivery took place in a public health facility, private health facility, at home, or in another place
Denominator	Number of live births in the last five (two, three) years
Reference period/pop base	Live births to interviewed women who had one or more births in the five (two, three) years preceding the survey
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 105

Name	<i>Assistance during delivery</i>
Definition	Percent distribution of live births in the last five (two) years preceding the survey, by type of assistance during delivery
Numerator	Numbers of live births distributed according to type of person providing delivery assistance: doctor, nurse/midwife/auxiliary, traditional birth attendant, relative/other, no one
Denominator	Number of live births in the last five (two) years
Reference period/pop base	Live births to interviewed women who had one or more births in the five (two) years preceding the survey
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 106

Name	<i>Characteristics of delivery</i>
Definition	Percent distribution of live births in the last five (two, three) years preceding the survey by whether the delivery was by caesarean

	section, and by birth weight and the mother's estimate of baby's size at birth
Numerator	- Number of live births delivered by caesarean section - Numbers of live births distributed according to birth weight and whether weighed at birth ± - Numbers of live births distributed according to mother's estimate of baby's size at time of birth
Denominator	Number of live births in the last five (two, three) years
Reference period/pop base	Live births to interviewed women who have had one or more births in the five (two, three) years preceding the survey
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 107

± The category "Not weighed" is no longer included in the distribution of birth weight.

Name	<i>Postnatal care visit (for mother) within 2 days</i>
Definition(s)	- Percent Distribution of Women, by Time Since Delivery at First Postnatal Checkup - Percentage of mothers who received postnatal care within two days of childbirth (WHO definition).
Numerator	Number of women with a delivery outside of a health facility*, distributed by the number of days since delivery at time of first postnatal checkup
Denominator	Number of women with a live birth in the last five years, which was not delivered in a health facility*
Reference period/pop base	Women who had a live birth outside of a health facility in the five years preceding the survey*
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 108

* The WHO definition is corresponds all women who age 15-49 with a live birth [some number of years] prior to the survey, *regardless of place of delivery*. This differs from the DHS definition that only takes into account women who delivered outside of a facility. Either indicator can be produced using the questions in the core module

Definitions for additional indicators:

Name	<i>Postpartum vitamin A supplement</i>
Definition(s)	Percentage of women took worm medicine during the last pregnancy
Numerator	See above, Antenatal Care Content
Denominator	
Reference period/pop base	
Data sources	

Name	<i>Mother's estimate of baby's size at birth and birth weight in kilograms</i>
Definition(s)	See above, Characteristics of Delivery

Numerator	
Denominator	
Reference period/pop base	
Data sources	

Name	<i>Timing of the first postnatal care visit (for newborn)</i>
Definition(s)	Percentage of live births in the last five years preceding the survey that had a postnatal checkup
Numerator	Number of live births distributed according to the number of hours or days since birth that a postnatal check was received
Denominator	Number of live births in the last five (three) years
Reference period/pop base	Live births to interviewed women who have had one or more births in the five (three) years preceding the survey
Data sources	Population-based household survey: woman respondent age 15-49

Note: Indicator specification not published elsewhere, Guinea DHS 2012 results were used as a model

Name	<i>Vitamin A supplement after delivery</i>
Definition(s)	- Percentage of Women who received at least one dose of vitamin A within two months after the last delivery
Numerator	Number of women who received vitamin A, in any form, within two months of the last delivery
Denominator	Number of women with a live birth in the last five years
Reference period/pop base	Women who had a live birth in the five years preceding the survey
Data sources	Population-based household survey: woman respondent age 15-49

Note: Indicator specification not published elsewhere, Guinea DHS 2012 results were used as a model

Name	<i>Initial breastfeeding</i>
Definition(s)	- Percentage of children ever breastfed - Percentage of children who started breastfeeding within one hour and one day of birth - Percentage of children who received a prelacteal feeding.
Numerator	- Number of children ever breastfed - Numbers of children who started breastfeeding within one hour of birth and within one day of birth. - Number of children given something other than breast milk during the first three days of life before they started breastfeeding regularly.
Denominator	- Number of children born in the five years preceding the survey to interviewed women. - Number of children born in the five years preceding who were ever breastfed.
Reference period/pop base	- Children born in the five years preceding the survey, surviving and dead. - Children born in the five years preceding the survey, surviving and

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	dead, who were ever breastfed.
Data sources	Population-based household survey: woman respondent age 15-49

Source: DHS Guide to Statistics (2006) p. 121