

IDHS exercise: Data on maternal health care (women as the unit of analysis)

IDHS Data analysis on maternal health care (women as unit of analysis)

We will be looking at various indicators of maternal health care. The IDHS/DHS data on women include all (or all ever-married) women of childbearing age, while the maternal health indicators in IDHS relate only to women whose last birth (_01) occurred in the last 3-5 years. The Stata code written below will exclude "not in universe" cases, such as childless women and women whose last birth occurred more 5 years before the survey.

Whether you make your own extract or use a pre-made file, you will need to log in using an email and password approved by The Demographic and Health Surveys Program to access data from Benin and India. For an MPC workshop, we will supply a temporary user name and password.

If you make your own data extract (assuming you have a statistical package and software to unzip a file on your computer), follow the directions below. If you use a premade data file, just note the variables included; go directly to page 6 of this hand-out to begin work on the exercises. Answers are at the end of the handout.

Making your own extract: Selecting Data

Once you have logged in, click on "Select Data" in the blue bar at toward the top of the IDHS homepage. For this exercise, choose Women as the unit of analysis.

Click on the "Select Samples" box and check the following boxes:

- Benin 2006
- India 2005

Then click on "Submit sample selections." Note that your Data Cart will show that you have chosen 2 samples, and the variable display shows only the samples you selected.

From the drop-down box under Topics, choose Maternal and Infant health, Maternal antenatal care, and click on the yellow circle to the left of the following variables to add them to your Data Cart:

- ANCARENONE_01** (Received no prenatal care, last birth)
- ANVISMO_01** (Timing of first antenatal visit for the pregnancy: Months, last birth)
- ANCAREBLD_01** (Antenatal care received: Blood sample taken, last birth)
- ANTETNUSNO_01** (Number of tetanus injections before birth, last birth)
- ANNITE_01** (Had difficulty with night blindness during pregnancy, last birth)
- ANCARECOM_01** (Told about pregnancy complications, last birth)

From the Topics drop down box, choose “Maternal and infant health,” then “Maternal delivery care,” and add the following variables to your data cart:

DELNONE_01 (No one gave delivery care, last birth)
DELREL_01 (Relative friend gave delivery care, last birth)

Your Data Cart should show 8 variables and 2 samples. If you use a ready-made data file, these 2 samples and variables are included in it.

Click the green VIEW CART button under your Data Cart.

You will see that other variables have been automatically added to your cart. The data extract system automatically supplies variables that indicate the sample (SAMPLE), are needed for variance estimation (PSU, STRATA), allow you to link to other DHS files (CASEID, HHNUM, DISTRICT), and are used for weighting the variables (PERWEIGHT, DVWEIGHT).

For Data format, to match the commands listed below, choose STATA. At an MPC workshop, a Stata file and an ASCII file will be made available to you.

To create a dataset for analysis, click on the green CREATE DATA EXTRACT button.

This brings up a page that summarizes the data extract and allows us to go back and modify the specifications (for example, to add a variable that we forgot). It's always a good idea to provide a description of your data extract; when we are sharing a common e-mail account for an MPC workshop, include your name in the sample description.

The email account used to log in is sent a message when the account is created. To access the page to download the data, go to the Home Page and click on "My Data Extracts."

Getting the Data onto Your Computer for Analysis (if you make your own extract)

Step 1: Download the data

- Go to the Home page and click on "My Data Extracts"
- Right click on the STATA link under Formatted Data next to the extract you created (the one with your name in the description)
- Chose "Save Link As ..." (or "Save Target As ...")
- Save into "Documents" (that should pop up as the default location)

Step 2: Decompress the data

- Find the "Documents" folder under the Start menu
- Right click on the ".dta.gz" file
- Use decompression software to unzip the compressed file (if using 7-zip, choose Extract to "idhs_0001.dta\")

Step 3: Read in the Data

- Open the "\\idhs_0001.dta" folder
- Double click on the file to open it in Stata

Data Analysis

We'll be comparing India 2005 and Benin 2006 on various aspects of antenatal care, limiting the sample to women who gave birth in the 5 years before the survey, adding survey weights, and excluding missing and unknown cases.

Note that the weight PERWEIGHT supplies numbers equal to the total number of women surveyed, not the total number of women in the population. (Ignore the numbers after the decimal point in the weighted results.)

1. What percent of women who gave birth in the past 5 years had no antenatal care, for Benin 2006 and India 2005?

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tab ANCARENONE_01 sample [aw=perweight] if ANCARENONE_01 < 7, col
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2. How early in the pregnancy antenatal care begins is an important dimension of maternal healthcare. For women who received at least some antenatal care, what percent had their first antenatal care in month 4 or later in their pregnancy, in the two samples?

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tab ANVISMO_01 sample [aw=perweight] if ANVISMO_01 < 10, col
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3. The thoroughness of monitoring the pregnant woman's health during antenatal care is another dimension of maternal healthcare. Two possible actions would be drawing a blood sample (to check for gestational diabetes, anemia, and/or malarial parasites, for example) and administering Tetanus Toxoid vaccine (at least 2 doses in most settings).

What percent of women in the two countries a) had a blood sample taken during antenatal care and b) had at least 1, and at least 2, tetanus shots before birth?

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tab ANCAREBLD_01 sample [aw=perweight] if ANCAREBLD_01 < 7, col
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tab ANTETNUSNO_01 sample [aw=perweight] if ANTETNUSNO_01 < 8, col
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Note that the universe for ANTETNUSNO_01 is not limited to women who had other antenatal care, only to women who recently gave birth.

4. Informing pregnant women of the signs of pregnancy complications so they can seek timely treatment is another important dimension of antenatal care. To what extent did the women who recently gave birth in Benin 2006 and India 2005 receive such counseling as part of antenatal care?

tab ANCARECOM_01 sample [aw=perweight] if ANCARECOM_01 < 7, col

5. Nutritional deficiencies are a threat to pregnant women and their infants in many poor countries. Maternal night blindness suggests Vitamin A deficiency and has been associated with low birthweight and higher morbidity (diarrheal and respiratory disease) in newborns. What proportion of women who recently gave birth in Benin 2006 and India 2005 reported difficulty seeing at night during their last pregnancy?

tab ANNITE_01 sample [aw=perweight] if ANNITE_01 < 7, col

6a. Whether a trained health care practitioner is present at the birth is an important issue for the health of the woman and her child, while the absence of such delivery assistance increases the risk of maternal mortality. Let's see what proportion of women who recently gave birth had either no one or a relative/friend assisting during delivery.

tab DELNONE_01 sample [aw=perweight] if DELNONE_01 < 7, col

tab DELREL_01 sample [aw=perweight] if DELREL_01 < 7, col

6b. How good is this last measure? Look at the variable description for DELREL_01 and check the question wording for this variable for the two samples. Does DELREL_01 indicate that **only** friends or relatives gave help during delivery? If not, what other variables should you examine to determine whether women received help from a trained medical practitioner during their most recent delivery?

Answers to maternal health data analysis exercise:

1. Percent of women with no antenatal care: Eleven percent of women who recently gave birth in Benin 2006 had no antenatal care, while 23 percent of their counterparts in India 2005 had no antenatal care.

2. Timing of first antenatal visit: Fifty-three percent of women in Benin 2006 who recently gave birth and had antenatal care had their first antenatal care in their fourth month of pregnancy or later, compared to 43 percent in India 2005.

3. Drawing blood sample and administering tetanus vaccine: Forty percent of Benin women had blood drawn as part of their antenatal care, compared to 60 percent of Indian women. Twenty-three percent of women in Benin 2006 had no antenatal tetanus shot and 43 percent did not receive the recommended two shots; the corresponding percentages for India were 16 percent and 23 percent.

4. Informing of signs of pregnancy complications during antenatal care: Thirty-nine percent of Benin women were told about pregnancy complications, as part of their antenatal care, compared to 25 percent of Indian women.

5. Prevalence of maternal night blindness: Thirteen percent of the Benin sample reported difficulty seeing at night during their pregnancy, compared to 9 percent of the Indian sample.

6a. Help from no one and from relatives during delivery: Four percent of Benin 2006 women had no help during delivery, compared to less than 1 percent of 2005 Indian women. Twenty-three percent of Benin women who recently gave birth reported assistance from a friend or relative, while 41 percent of Indian women did so.

6b. The question about help during delivery asks the woman to report **all types of persons** present during the birth. A more thorough investigation would determine whether women who mentioned relatives were also helped by a doctor, midwife, nurse, or traditional birth attendant.