Module 2
Census Questionnaire Design, Training, and Tabulation

Module 2 Goals

- Know the recommended mortality and fertility questions needed to measure pregnancy-related and maternal mortality from census data.

- Understand best practices for questionnaire design when including pregnancy-related mortality questions.

- Identify common errors in census mortality and fertility data and how to avoid them.

- Understand what tabulations are required to estimate pregnancy-related and maternal mortality from census data.

Module 2 Episodes

- Episode 1: Census Questions for Pregnancy-Related and Maternal Mortality Estimation.

- Episode 2: Common Data Collection Problems for Pregnancy-Related and Maternal Mortality Indicators.

- Episode 3: Required Tabulations for Estimating Pregnancy-Related and Maternal Mortality.

Episode 1: Census Questions for Pregnancy-Related and Maternal Mortality Estimation

Why Ask about Pregnancy-Related or Maternal Deaths in a Census?

- Only requires minimal addition to the Core Topic questions recommended in the *United Nations Principles and Recommendations for Population and Housing Censuses.*

  - Questions on Recent Household Deaths are already recommended for countries lacking complete civil registration and vital statistics (CRVS) system.

  - Requires adding 3 questions to capture pregnancy-related or 4 questions for maternal deaths.

Why Ask about Pregnancy-Related or Maternal Deaths in a Census?

- Large numbers (with no sampling unlike surveys).

- Calculate MMR directly.

- Subnational estimates are possible.

- Can be followed with post-enumeration verbal autopsy survey for detailed cause of death.

Census Questions on Pregnancy-Related and Maternal Mortality

1. Has any usual member of the household died within the last 12 months?						○ Yes ○ No		
If yes, record the following information about each deceased person:								
	2. Name	3. Sex	4. Age at death (in completed years)	5. Month and year of death	6. Was the death due to an accident, violence, homicide, or suicide?	7. If the deceased was female age 15-49, at the time of death, was she		
						a. Pregnant?	b. Giving birth?	c. Within 6 weeks of the end of a pregnancy or childbirth?
1		○ Male ○ Female	☐☐☐	☐☐/☐☐	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
2		○ Male ○ Female	☐☐☐	☐☐/☐☐	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No

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1		○ Male ○ Female	▭▭▭	▭▭/▭▭	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No
2		○ Male ○ Female	▭▭▭	▭▭/▭▭	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No	○ Yes ○ No

Best Practices for Census Mortality Questionnaire Design

DO

- Ask the three pregnancy-related questions separately to identify the timing of death of a woman between the ages of 15–49.

- Keep the household deaths questions in a self-contained box in a prominent position of the census questionnaire.

DON'T

- Don't use a separate sheet for deaths questions.

- Don't ask if the death was due to pregnancy-related/maternal causes. This will <u>not</u> capture all pregnancy-related or maternal deaths based on the WHO definition and is not recommended.

- Don't ask for the complete cause of death information in the census questionnaire. Rather, it is better to conduct a follow-up verbal autopsy survey for a sample of household deaths.

For Additional Information

Measuring Maternal Mortality

Select Topics in International Censuses[1]

Released December 2015

INTRODUCTION

Maternal mortality is an important global health issue. The fifth (UN) Millennium Development Goals (MDG5) sought to reduce maternal mortality by three quarters between 1990 and 2015 and achieve universal access to reproductive health. To continue the tremendous achievements in reducing maternal mortality made by many countries toward meeting the MDG5 target, the third Sustainable Development Goal aims to further reduce the global maternal mortality ratio to less than 70 per 100,000 live births by 2030.

The census provides a cost-effective opportunity to measure maternal mortality in countries without a comprehensive vital registration system. Household deaths in the past 12 months is a core topic in the United Nations' *Principles and Recommendations for Population and Housing Censuses*. Maternal mortality can be measured directly by adding two follow-up questions to the household mortality questions in the census questionnaire. The census is also one of the few ways to obtain subnational measures of maternal mortality.
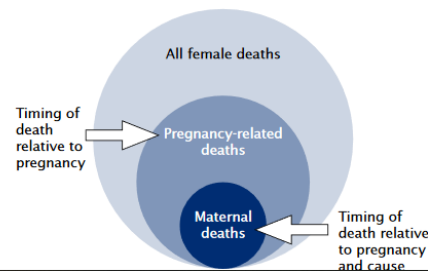
DEFINITIONS

The International Classification of Diseases (ICD), Revision 10 (WHO, 1992) contains two definitions related to maternal mortality: maternal and pregnancy-related deaths. The box to the right contains the definitions.

ICD-10 Definitions

Maternal death: The death of a woman while pregnant or within 42 days of the termination of pregnancy, irrespective of the duration and the site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management, but not from accidental or incidental causes.

Pregnancy-related death: The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of cause.

Figure 1.
Difference Between Maternal and Pregnancy-Related Death

All female deaths

Timing of death relative to pregnancy

Pregnancy-related deaths

Maternal deaths

Timing of death relative to pregnancy and cause

https://www.census.gov/library/working-papers/2015/demo/maternal-mortality.html

Knowledge Check

Let's look at some examples of questions on pregnancy-related and maternal mortality.

Does this Question Capture Maternal Deaths?

- No

Pregnancy-related death is defined as <u>the death of a woman while pregnant or within 42 days of termination of pregnancy.</u>

This question does not capture the timing of death relative to pregnancy.

What was the cause of death for [NAME]? Enter cause from the code list.

Codes for col. 6 Cause of Death		
ILLNESS	**ACCIDENT**	**NOT KNOWN**
01: Fever	12: Land mine	16: Don't know
02: Diarrhoea	13: Road Accident	
03: Tuberculosis	14: Drowning	
04: Heart disease	15: Other accident	
05: Dengue fever		
06: Malaria		
07: Tetanus		
08: HIV/AIDS		
09: Pregnancy complication		
10: Delivery complication		
11: Other illness		

Does this Question Capture Maternal Deaths?

- No

Maternal death is defined as the death of a woman

- while pregnant or within 42 days of termination of pregnancy.
- irrespective of the duration and the site of the pregnancy.
- from any cause related to or aggravated by the pregnancy or its management.
- but <u>not</u> from incidental or accidental causes.

What was the cause of death for [NAME]? Enter cause from the code list.

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Does this Question Capture Maternal Deaths?

- Pregnancy-related deaths
  - Yes, but not in the recommended way.
  - It is better to ask the question as 3 separate questions to obtain a more complete answer.
- Maternal deaths
  - No, it does not ask about accidental or incidental deaths.

ONLY FOR WOMEN WHO DIED BETWEEN AGE 12-49

5. Did (NAME) die during pregnancy, childbirth or within 2 months after childbirth?

Does this Question Capture Pregnancy-Related Deaths or Maternal Deaths?

- No, neither
  - Deceased woman's age at death was not asked.
  - Only asks the pregnancy related deaths questions of those whose cause of death is marked as "pregnancy related."

CAUSE OF DEATH

D2. How many of the deaths occurred due to:

	Male	Female
Motor Accident	☐☐	☐☐
Violence	☐☐	☐☐
Pregnancy Related		☐☐
If Deaths due to Pregnancy related causes also complete D3 below		
HIV/AIDS	☐☐	☐☐
Other Causes	☐☐	☐☐
Don't know	☐☐	☐☐

PREGNANCY RELATED DEATHS

D3. Of the deaths due to pregnancy related causes, how many died during

Pregnancy	☐☐
Delivery	☐☐
Six weeks after delivery	☐☐
Not sure	☐☐

Does this Question Capture Pregnancy-Related Deaths or Maternal Deaths?

- Yes

Do These Questions Capture Pregnancy-Related Deaths or Maternal Deaths?

- Yes

Census Questions on Fertility

- Lifetime fertility
  - Children ever born and children surviving.

- Recent fertility
  - Date of birth of last child born alive.

Children Ever Born and Children Surviving (All Women 15 Years and Older)

1. Total number of sons ever born alive during the lifetime of the woman.

2. Total number of sons living (surviving) at the time of the census.

3. Total number of sons born alive who have died before the census date.

4. Total number of daughters ever born alive during the lifetime of the woman.

5. Total number of daughters living (surviving) at the time of the census.

6. Total number of daughters born alive who have died before the census date.

Children Ever Born and Children Surviving

- Ask all women age 15 and over regardless of their marital status.

- Include all children who were born alive to a woman during her entire lifetime up to the census date.

- Include any child who showed any sign of life at birth even for a very short time regardless of whether the child
  - Was alive or dead at the time of the census.
  - Was born in or out of marriage or in the present or prior marriage.
  - Lives with the mother, the age of the child, or the marital status of the child.

Children Ever Born and Children Surviving (Con.)

- Do <u>not</u> include:
  - Stillbirths or other fetal deaths.
  - Adopted children.
  - Stepchildren.
- In the case of multiple births (like twins), each child should be counted as a separate birth.

Date of Birth of Last Child Born Alive (All Women 15-49 Years)

	Date of last live birth (day/month/year)	Sex of last live birth	Is the child still alive?
1	☐☐/☐☐/☐☐☐☐	○ Male ○ Female	○ Yes ○ No
2	☐☐/☐☐/☐☐☐☐	○ Male ○ Female	○ Yes ○ No
3	☐☐/☐☐/☐☐☐☐	○ Male ○ Female	○ Yes ○ No

United States Census Bureau

USAID FROM THE AMERICAN PEOPLE

For Additional Information

Measuring Fertility From a Census

Select Topics in International Censuses[1]

Released February 2019

INTRODUCTION

Fertility is a primary engine of population growth. Knowledge of fertility levels and trends can help us formulate and evaluate policies related to population change. Furthermore, analysis of fertility trends helps to predict needs for public services, such as health facilities and schools.

While civil registration and vital statistics systems are the preferred ways to collect data on fertility, a census can provide valuable information on fertility, particularly in countries where birth registration is incomplete. Unlike household surveys, fertility data from a census can provide estimates at desired sub-national levels. In addition, even in countries where birth registration is complete, census data on fertility can serve as a basis for evaluating the registration data. Furthermore, censuses provide information on fertility and other associated indicators that may not be available through the registration system. This document introduces the information required to estimate fertility from censuses that are in line with the United Nations' *Principles and Recommendations for Population and Housing Censuses, Version 3*. It will also provide an overview of data evaluation and the methods to calculate common fertility measures from census data.

RECOMMENDED QUESTIONS ON FERTILITY

The *Principles and Recommendations* advise two sets of core questions about fertility in a census. The

https://www.census.gov/library/working-papers/2019/demo/measuring-fertility.html

Summary

- Asking the right questions is the first step to collecting census data on pregnancy-related and maternal deaths.
- Census-based estimates are pregnancy-related mortality unless accidental and incidental deaths have been excluded from the estimates.
- Cost effective for national and subnational estimates.
- Census data are subject to biases and misreporting.
- Avoid common data collection errors. Follow best practices to avoid common data collection errors.
- Need to evaluate census data carefully.

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