



MORTALITY DATA COLLECTION AND ESTIMATION IN MALAWI

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Outline

- Introduction
- Census Undertaking
- Household Surveys
- CRVS
- Future Plans

Introduction

- For countries or any geographic domain of interest population change in a given period is linked or is dependent of Births, Deaths and Migration.
- These phenomenon have been widely documented to vary. Their magnitudes have different interpretations and impacts on the population of interest.
 - Mortality within a population is linked or associated with a country's socio-economic development and quality of life.
 - Incidence of deaths provide insights on populations' standard of living, health care and overall development of the country.
 - Probability of dying during a given time period is linked to many factors including age and sex
- Dependency mortality measurement on data quality and level of detail. Direct vs Indirect approaches.

Census Undertaking in Malawi

Censuses

- Malawi relies on the Population and Housing Censuses (PHC) as a major source of data. The extensive censuses include the 1966, 1977, 1987, 1998, 2008 and 2018 PHC.
- They provide key input for planning, monitoring and evaluation of its national and international development initiatives
 - Malawi Growth and Development Strategy III (MGDS III)
 - Sustainable Development Goals (SDGs), etc.
- Extra effort is made to ensure that census data facilitated intra and international comparisons of indicators over time and space.

Census Undertaking – cont'd

- UN Principles and Recommendations for conducting a Population and Housing Census, highlights the essential features of individual enumeration, universality within a defined territory, simultaneity, defined periodicity and small area statistics.
- Census undertaking by NSO strives to achieve and adhered to these attributes.
- The censuses have not been perfect – content and coverage errors.
 - Omission or duplication errors of the population and events
 - Deficiencies from incorrect reporting, recording and tabulation.

Census Undertaking – cont'd

- Censuses collect data on deaths that occurred in the household in the 12-month period prior to the census enumeration date.
- The census collects a number of attributes including sex, age, place of birth and residence, household amenities and assets, housing conditions, business ownership, disability, emigrants, albinism and deaths,.
- Censuses have included questions on the survival of children, parents, and other recent household members.
 - Information includes number of deaths, age, sex and place of residence.

Census Data Processing and Analysis

- Responsive data processing
 - great effort is taken to minimize and possibly get rid of observed errors.
 - preparation of data for calculation of direct measures of mortality
- Capacity building of technical team (Demographers/Statisticians)
 - International and local short term trainings
 - collaboration with experts (University of Malawi, US Census Bureau, UNICEF, etc)
- Knowledge and skills enhancement
 - Literature review/desk research is regularly conducted to inform approaches and inputs for mortality estimation.
- Various indirect techniques are employed to estimate levels and trends of mortality in the country.

Household Surveys

Household Surveys

- Household surveys during the intercensal period are also meant to provide complement census data points.
- The number of surveys commissioned and implemented have been greatly affected by the COVID19 pandemic – travel restrictions, social distancing, etc
- Telephone surveys have been conducted – focus on welfare of Households. By their nature, sensitive topics (deaths) not included
- Face-to-face household surveys have been implemented, including Demographic and Health Survey (DHS) and Multiple Indicator Survey (MICS)
 - Collect data on some key areas of the census and the level of detail is even higher.
 - Fertility, Mortality and other statistics estimation and trend analysis

HH Surveys – Technical implementation

- Internationally acceptable/standard mortality modules are employed during implementation of the studies.
 - allows comparison of results and analysis replication
- Consultative meetings on the questions and proposed data modules is conducted prior to implementation of the surveys.
 - User needs assessment (general public, researchers, academia and other key stakeholders).
- The final version of the questionnaire is pre-tested and finalized for main data collection

Questions used - Surveys

SECTION 2. REPRODUCTION

<p>211 Now I would like to record the names of all your births, whether still alive or not, starting with the first one you had. RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE ROWS. IF THERE ARE MORE THAN 10 BIRTHS, USE AN ADDITIONAL QUESTIONNAIRE, STARTING WITH THE SECOND ROW.</p>									
<p>212</p> <p>What name was given to your (first/next) baby?</p> <p>RECORD NAME.</p> <p>BIRTH HISTORY NUMBER.</p>	<p>213</p> <p>Is (NAME) a boy or a girl?</p>	<p>214</p> <p>Were any of these births twins?</p>	<p>215</p> <p>On what day, month, and year was (NAME) born?</p>	<p>216</p> <p>Is (NAME) still alive?</p>	<p>217 IF ALIVE:</p> <p>How old was (NAME) at (NAME)'s last birthday?</p> <p>RECORD AGE IN COMPLETED YEARS.</p>	<p>218 IF ALIVE:</p> <p>Is (NAME) living with you?</p>	<p>219 IF ALIVE:</p> <p>RECORD HOUSEHOLD LINE NUMBER OF CHILD. RECORD '00' IF CHILD NOT LISTED IN HOUSEHOLD.</p>	<p>220 IF DEAD:</p> <p>How old was (NAME) when (he/she) died?</p> <p>IF '12 MONTHS' OR '1 YR', ASK: Did (NAME) have (his/her) first birthday?</p> <p>THEN ASK: Exactly how many months old was (NAME) when (he/she) died?</p> <p>RECORD DAYS IF LESS THAN 1 MONTH; MONTHS IF LESS THAN TWO YEARS; OR YEARS.</p>	<p>221</p> <p>Were there any other live births between (NAME OF PREVIOUS BIRTH) and (NAME), including any children who died after birth?</p>
01	<p>BOY 1</p> <p>GIRL 2</p>	<p>SING 1</p> <p>MULT 2</p>	<p>DAY <input type="text"/> <input type="text"/></p> <p>MONTH <input type="text"/> <input type="text"/></p> <p><input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>YEAR</p>	<p>YES 1</p> <p>NO 2</p> <p>↓</p> <p>(SKIP TO 220)</p>	<p>AGE IN YEARS</p> <p><input type="text"/> <input type="text"/></p>	<p>YES 1</p> <p>NO 2</p>	<p>HOUSEHOLD LINE NUMBER</p> <p><input type="text"/> <input type="text"/></p> <p>↓</p> <p>(NEXT BIRTH)</p>	<p>DAYS 1 <input type="text"/> <input type="text"/></p> <p>MONTHS 2 <input type="text"/> <input type="text"/></p> <p>YEARS 3 <input type="text"/> <input type="text"/></p>	

Questions used - Surveys

1209	How old was (NAME) when (he/she) died? IF DON'T KNOW, PROBE AND ASK ADDITIONAL QUESTIONS TO GET AN ESTIMATE.	<input type="text"/> <input type="text"/> IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO 1214	<input type="text"/> <input type="text"/> IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO 1214	<input type="text"/> <input type="text"/> IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO 1214	<input type="text"/> <input type="text"/> IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO 1214	<input type="text"/> <input type="text"/> IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO 1214	<input type="text"/> <input type="text"/> IF MALE OR DIED BEFORE 12 YEARS OF AGE GO TO 1214
1210	Was (NAME) pregnant when she died?	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2
1211	Did (NAME) die during childbirth?	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2	YES 1 GO TO 1214 ← NO 2
1212	Did (NAME) die within two months after the end of a pregnancy or childbirth?	YES 1 NO 2 GO TO 1214 ←	YES 1 NO 2 GO TO 1214 ←	YES 1 NO 2 GO TO 1214 ←	YES 1 NO 2 GO TO 1214 ←	YES 1 NO 2 GO TO 1214 ←	YES 1 NO 2 GO TO 1214 ←
1213	How many days after the end of the pregnancy did (NAME) die?	<input type="text"/> <input type="text"/>					
1214	Was (NAME)'s death due to an act of violence?	YES 1 GO TO (2) ← NO 2	YES 1 GO TO (3) ← NO 2	YES 1 GO TO (4) ← NO 2	YES 1 GO TO (5) ← NO 2	YES 1 GO TO (6) ← NO 2	YES 1 GO TO (7) ← NO 2
1215	Was (NAME)'s death due to an accident?	YES 1 NO 2 GO TO (2)	YES 1 NO 2 GO TO (3)	YES 1 NO 2 GO TO (4)	YES 1 NO 2 GO TO (5)	YES 1 NO 2 GO TO (6)	YES 1 NO 2 GO TO (7)

Civil Registration System in Malawi

CRVS in Malawi

- In most developing countries including Malawi, the Civil Registration and Vital Statistics (CRVS) system is not full-fledged.
 - The system is still in its infancy
 - the data is not reliable and complete
 - full coverage of the areas of the country has not been achieved
- Comprehensive data for mortality analysis and estimation is not available
- These limitations have necessitated reliance of large-scale surveys and censuses to estimate mortality levels and trends in Malawi for quite some time

Data from CRVS

- In 2017, the National Registration Bureau (NRB) initiated registration of deaths and cause of deaths.
 - Utilizes medical certification of cause of death
- The data collection and compilation is only taking place in health facilities of 17 districts out of 32 districts .
- Community registration of deaths has also commenced to supplement and validate data from the hospitals.
 - Currently in 14 out of 32 districts
- The sharing of data between NSO and NRB for data analysis and mortality estimation has not started
 - Low confidence - representative and coverage issues
 - Data sharing and analysis is planned to start in future - at least 80 percent of the districts

Future Plans – Data Validation

- Conduct validation of mortality data and estimates
 - Capture the magnitude of mortality underestimation in the census and surveys
 - Assess variation by age group and sex
- Link individual records to evaluate the quality of ages and their impact on mortality estimates
- Conduct more detailed comparison when CRVS is fully functional (national coverage)
 - Mortality data from NRB as the reference
 - evaluate the reliability of mortality indicators derived from the national census of 2028 and Health and Demographic Survey and Population and Housing Censuses



THANK

YOU