Get every one in the picture

Death registration completeness

Data analysis and Report writing workshop for Civil registration and vital statistics data.

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Why do we care about death registration completeness?

- Measuring completeness is done to evaluate:
  - Overall performance of the CRVS system
  - Robustness of vital statistics for analysis and if there is a need for potential correction to the data
- Without complete death registration we cannot know who is dying, where they are dying, and what they are dying from.

Death registration completeness has become a key reporting indicator

- SDG Target 17.19
  - Indicator 17.19.2: Proportion of countries that (a) have conducted at least one population and housing census in the last 10 years; and (b) have achieved 100 per cent birth registration and **80 per cent death registration**
- Indicator 3.2.1: Under-five mortality rate
- Indicator 3.2.2: Neonatal mortality rate
- 17 SDG indicators will require cause-specific mortality data best generated from CRVS systems
- ESCAP Regional Action Framework Goal 1: Universal civil registration of births, deaths and other vital events

Methods of measurement

- Direct calculation with a deaths “gold standard” – a source that is considered to be “true”

$$\text{Completeness of death registration (\%)} = \frac{\text{Number of registered deaths}}{\text{Actual number of deaths}} * 100$$

- Direct calculation using questions on a census or survey of registration completeness
- Indirect demographic methods to estimate deaths (Brass Growth Balance, Bennett–Horiuchi, Preston-Coale)
- Capture re-capture methods

Goal 1D: % deaths registered

$$\text{Completeness of death registration (\%)} = \frac{\text{Number of registered deaths in a year}}{\text{Actual number of deaths in a year}} * 100$$

- Numerator: from civil registration data
  - Number of deaths registered that calendar year
- Denominator (# of deaths that year) should come from the “best” source:
  - Census data
  - Estimates derived from census data
  - Estimates derived from surveys or sample registration systems
  - Estimates derived from indirect demographic methods
  - Global Burden of Disease Estimates
  - If no other data, use crude death rate from Census or UN Statistical yearbook

Using the crude death rate to estimate deaths

- This method is used for countries that do not have good current data on deaths, and where indirect methods may not be possible
- Sources for the CDR may include a national census or UN Demographic Yearbook

$$\text{Completeness of death registration (\%)} = \frac{\text{Number of registered deaths in a year}}{\text{Actual number of deaths in a year}} * 100$$

- Crude death rate * population = number of deaths

- Potential problems:
  - The time period for the CDR estimate may not be the same as the period being examined. It is often older and may be not reflect current mortality patterns.

Disaggregation

- If possible, completeness of death registration should be disaggregated by:
- a) Sex – differences in registration of men vs. women may point to gender issues that require targeted education or services.
- b) Location – geographic location, are remote areas underserved?
- c) Decedent's age – deaths of infants and elderly may be less likely to be registered. This will greatly affect infant and child mortality rates as well as overall mortality rates.
- Disaggregation as per SDG 17.19.2:
  - Sex, age, income, place of residence, geographic location

Death registration by age group

	Registered deaths	Completeness	From Estimated total deaths
Deaths (Total)	50,000	57%	87,342
Child deaths (Age 0-4)	2,500	40%	6,250
Deaths (Age 5-24)	7,000	58%	12,069
Deaths (Age 25-74)	25,000	62%	40,323
Deaths (Age 75+)	15,500	54%	28,704
Life Expectancy	**73.2**		**62.5**

Checking completeness of death data by age

- If a census has the projected number or percent distribution of deaths by age and sex, assess how your registration data compares to the distribution of the census.
- If you see large variation in one or more age groups between the two data sources, talk to your facilitators to determine the most appropriate course of action.

Exercise

- Using test data, determine completeness of death registration for:
  - Children aged 0-4
  - Persons aged 5-24
  - Persons aged 25-74
  - Persons aged 75+
  - Disaggregate these results by sex
  - Should you use adjusted or unadjusted data by age for these calculations?
- Determine the best source of death data and population data for your country
- If you have the data, calculate death registration completeness for your country