Lecture 2
Assessing the Completeness of Civil registration of Vital Events
Introduction

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Why is civil registration important?

- Classic source of information for producing mortality and fertility estimates
- Fertility: Total Fertility Rate (TFR), age-specific fertility rates
- Mortality:
  - Infant Mortality, Under-five mortality
  - Adult mortality
  - Life expectancy
  - Causes of death
- Important for estimating population size between censuses
- Other benefits of civil registration:
  - Gives individuals an administrative existence
  - Makes it easier for individuals and their families to access various rights (schooling, pension, inheritance, etc.)

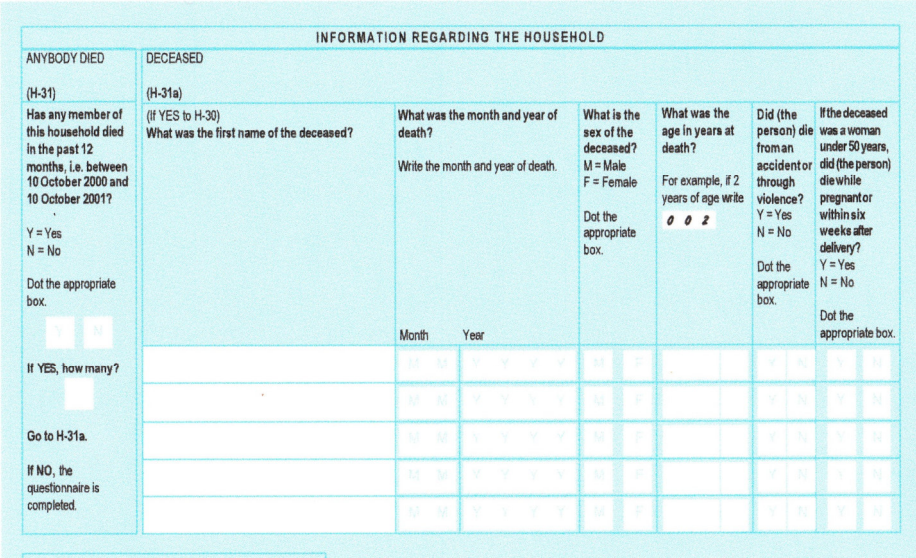
Renewed interest in Civil Registration and Vital Statistics

- Since the 1970s, emphasis was on sample surveys as a source of demographic estimates (WFS, DHS, PAPFAM, etc.)
- Surveys useful in the short term but important limitations
  - Not useful for estimating adult/old age mortality, life tables, life expectancies
  - Does not help establishing administrative rights for individuals
  - Does not help building well-functioning CRVS systems
- International investments in sample surveys came at the expense of capacity building in CRVS area
- Recently, renewed interest in CRVS given limitations of sample surveys and benefits of CRVS

Outline

- Introduction – what is completeness? (This lecture)
- Methods for evaluating birth registration (Lecture 3)
- Methods for evaluating death registration (Lectures 4-6)
  - Also useful for evaluating the completeness of deaths reported in censuses

Census Questions on Household Deaths



INFORMATION REGARDING THE HOUSEHOLD

ANYBODY DIED (H-31)	DECEASED (H-31a)						
Has any member of this household died in the past 12 months, i.e. between 10 October 2000 and 10 October 2001? Y = Yes N = No Dot the appropriate box.	(If YES to H-30) What was the first name of the deceased?	What was the month and year of death? Write the month and year of death. Month Year	What is the sex of the deceased? M = Male F = Female Dot the appropriate box.	What was the age in years at death? For example, if 2 years of age write 0 0 2	Did (the person) die from an accident or through violence? Y = Yes N = No Dot the appropriate box.	If the deceased was a woman under 50 years, did (the person) die while pregnant or within six weeks after delivery? Y = Yes N = No Dot the appropriate box.
If YES, how many?						
Go to H-31a.						
If NO, the questionnaire is completed.						

Source: South Africa census questionnaire 2001

Coverage vs. completeness

- Coverage = proportion of the population that is served by the government agency responsible for civil registration

$$\text{Coverage (\%)} = \frac{\text{Population in administrative areas served by the CRVS}}{\text{Total population}} \cdot 100$$

- Completeness = proportion of true events that are registered by CRVS

$$\text{Completeness (\%)} = \frac{\text{Civil registration events}}{\text{Estimated 'true' number of events}} \cdot 100$$

Coverage vs. completeness

- Completeness can be calculated specifically for the served areas or, more commonly, at the national level
- When calculated at the national level, completeness is affected by both coverage and completeness of the covered areas

Basic facts about completeness

$$\text{Completeness (\%)} = \frac{\text{Civil registration events}}{\text{Estimated 'true' number of events}} \cdot 100$$

- Completeness is defined over a given geographic area during a given time period
- Further disaggregation can be performed by lower-level administrative boundaries, age and sex
- Numerator comes from civil registration data
- Denominator comes from other sources and methods
- The boundaries of the numerator and denominator must match (same geographic area, time period, age, sex, etc…)

Delayed registration

- Events that occured in year t but are registered in year t+1 or later are « delayed »
- Mechanical delayed registration = delayed events for which registration took place within the statutorily-mandated period of registration (e.g., event that occured on December 31, 2021 and was registered on January 2, 2022)
- 'Real' delayed registration = delayed events for which registration took place after the statutorily-mandated period of registration
- Numerators of completeness estimates should alaways include events with mecanical delayed registration.

Year 0 vs. ultimate completeness

- Year 0 completeness = completeness estimates for a given year based on vital events registered in that calendar year (after adjusting for mechanical delayed registration
- Ultimate completeness = completeness calculated once all late registrations have been registered (which may be several years into the future)
- Year 0 completeness more commonly estimated than ultimate completeness
- Ideally, both types of completeness should be estimated

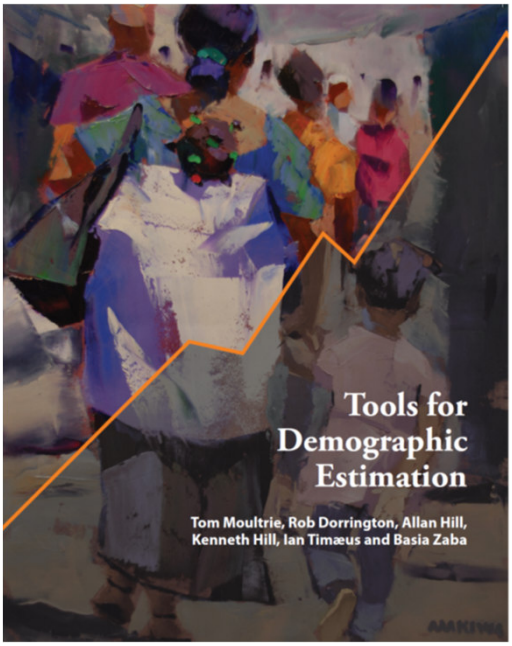
Estimating the denominator of the completeness ratio

$$\text{Completeness (\%)} = \frac{\text{Civil registration events}}{\text{Estimated 'true' number of events}} \cdot 100$$

- The numerator is usually « fixed », not subject to uncertainty
- The denominator is much less certain, affected by choice of data source and method – this is the critical part of estimating the level of completeness of a CRVS system

Manual available at:

https://www.unescap.org/kp/2022/guidelines-estimating-completeness-civil-registration-vital-events



Manual available at:

http://demographicestimation.iussp.org/