Estimating completeness of birth and death registration

Aim of the course

The aim of the course is to improve participants' ability to utilise a range of methods to estimate the completeness of birth and death registration, as a means of generating reliable fertility and mortality measures from the CRVS system.

Intended audience

The intended audience are practitioners (eg demographers, statisticians, epidemiologists) who have routine responsibility for generating fertility and mortality estimates from the CRVS system. Such people may be employed by the National Statistics Office, universities (eg from population or health programs who could incorporate some of this course into their programs), the Ministry of Health or the institution responsible for CRVS (eg Ministry of Internal Affairs).

The participation of people with routine responsibility for generating estimates of completeness is vital to ensure that countries are appropriately employing appropriate methods. Post-training follow-up and supervision will be provided to enable the incorporation of methods into countries' monitoring and evaluation of their CRVS systems.

At a minimum, participants should be familiar with basic fertility and mortality measures (eg have used life tables), be proficient with Excel and ideally a statistics program such as Stata or SPSS. Some participants may have experience using indirect methods to estimate fertility and mortality. Materials can be provided to students to read prior to the commencement of the course.

Curriculum

The proposed structure and content of the curriculum (see next page) will vary depending on the existing capacity and available data sources in each country. For example, some countries may need specific assistance in using direct or capture-recapture methods because there are data sources available for matching to registration data (eg HDSS data). This proposed curriculum is quite comprehensive, and potentially not all sessions will be relevant for each country.

Method of delivery

The generic course is four days in length, but this varies dependent on each country's existing capacity, available data sources and needs. The course comprises a combination of lectures, practical exercises and discussion.

The training is conducted for country staff with routine responsibility for generating estimates of completeness or as regional training with one to two participants from each country. Significant course time is devoted to applying the methods to each country's data, and post-training follow-up and supervision is provided to as support for their longer-term incorporation into countries' monitoring of their CRVS systems.

A course manual is provided. Participants would be required to bring their own laptop. A USB stick of course materials (readings, exercises) will be provided to participants.

Expected learning outcomes

Participants should be able to estimate the completeness of death registration from a range of methods and report their findings with regard to assumptions and limitations of their calculations. They should be able to select the most appropriate method to utilise for their country (and sub-nationally where appropriate) given its demographic characteristics and available data, and to use the completeness estimate to adjust death registration data and generate summary mortality measures. Importantly, participants should be able to interpret resultant mortality and fertility measures while appreciating the uncertainty of the completeness estimates used to calculate them (eg these are not precise measures).

A further outcome will be for participants to utilise the expected number of annual deaths or births in their population to monitor and evaluate completeness of registration, including at the sub-national level.

SESSION	TOPICS
Day 1	
Introductions	Participant introductions and expectations
1: Introduction	The need for reliable fertility and mortality measures; key data sources; using completeness for monitoring purposes
2: Sources of mortality data	CRVS systems; household surveys; censuses; HDSS; health facility data
3: Summary mortality measures and life tables	Mortality measures; life tables; practical exercise
Day 2	
4: Direct measurement of death registration completeness	Overview; data sources and linking; methodology; practical exercise
5: Indirect estimation of death registration completeness	Overview; types of indirect methods – detailed description; assessment of indirect methods
Day 3	
5: Indirect estimation of death registration completeness (continued)	Practical exercises
6: Estimating total deaths from a range of data sources	Early age mortality rates; adult mortality rate; modelling trends in the under-five mortality rate and adult mortality rate; model life tables
7: Empirical method to estimate death registration	Background; completeness and registered CDR; data inputs; method performance; method application; practical exercises
8: Estimating completeness of birth registration	Sources of fertility data; measures of fertility; estimation of fertility rates from less-detailed birth data
Day 4	
8: Estimating completeness of birth registration (continued)	
9: Group work exercise using country data	Estimate completeness of birth and death registration; generate fertility and mortality statistics; group presentations
Conclusion and wrap-up	

The program partners on this initiative include: The University of Melbourne, Australia; CDC Foundation, USA; Vital Strategies, USA; Johns Hopkins Bloomberg School of Public Health, USA; World Health Organization, Switzerland.

Civil Registration and Vital Statistics partners:

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