

Chapter

08

Production of Vital Statistics

Why it is important: Vital statistics inform governments and their external partners, as well as the public, about the patterns and trends of diseases, mortality, fertility, and migration in a given country's population. The collection, analysis, and dissemination of vital statistics are essential for informed public policy and decision-making to improve health and socioeconomic outcomes.

Introduction

Vital statistics constitute the collection of statistics on vital events in a lifetime of a person as well as relevant characteristics of the events themselves and of the person and persons concerned.¹ These vital events include, at a minimum, birth, death, foetal death (or stillbirth), marriage, and divorce; and may also include other vital events such as adoption, recognition, legitimation, annulment and judicial separation (depending on the concepts recognized in a country's legal system). Vital statistics provide a timely and current measure of the occurrence of these vital events to members of the country's population during a specified period.² Vital statistics provide critical information on the population and should be used by policymakers and the public to make informed policy decisions, in conjunction with other demographic and social statistics. Because civil registration is continuous, permanent, compulsory and universal, information collected from a well-functioning civil registration system is the ideal source for generating vital statistics.

1. Agency responsible for vital statistics

Best Practice: Vital statistics constitute the collection of statistics on vital events in a lifetime of a person as well as relevant characteristics of the events themselves and of the person and persons concerned.³ Clear authority and responsibility for the production and dissemination of vital statistics should improve availability of information to decision-makers. In most countries, there is a national agency - e.g., the national statistics agency - responsible for compiling national data and establishing uniform national standards and guidelines.⁴ Some countries designate specific government agencies or departments to carry out different vital statistics functions related to their respective areas of work. For example, the health service agency might collect and process data on births, deaths, foetal deaths, and cause of death, while the general statistical service or the court system might compile marriage and divorce statistics.⁵ However, even in this case, there should be a central agency that sets uniform national standards.

Guidance: Describe whether the law assigns authority and responsibility for the production and dissemination of vital statistics. If so, describe which entity is required to produce and publish vital statistics, how frequently, and where. If more than one entity is responsible for the production of vital statistics, state whether and what entity is responsible for setting national standards. In the comments section, describe whether the law aligns with best practice and note any recommendations for regulatory reform.

a. Entity(s) responsible for compiling and producing vital statistics:

Citation:

Comments:

¹ *Principles and Recommendations for a Vital Statistics System, Revision 3*, United Nations Publication, Sales No.E.13.XVII.10, United Nations, 2014, paragraph 1.

² *Principles and Recommendations for a Vital Statistics System, Revision 3*, United Nations Publication, Sales No.E.13.XVII.10, United Nations, 2014, paragraph 281.

³ United Nations, *Principles and Recommendations for a Vital Statistics System, Revision 3*, New York, 2014, Para. 1.

⁴ United Nations, *Principles and Recommendations for a Vital Statistics System, Revision 3*, New York, 2014, Para. 42.

⁵ United Nations, *Guidelines for the Legislative Framework for Civil Registration, Vital Statistics and Identity Management Systems*, New York, 2019, Para. 241.

b. Entity responsible for setting national standards:

Citation:

Comments:

2. Vital statistics derived from civil registration system

Best Practice: Vital statistics provide crucial information on the population of a country,⁶ which is a prerequisite to socioeconomic planning and informed decision-making. A well-functioning civil registration system is the ideal source from which to derive accurate, complete, timely and continuous information on vital events, including at the national and sub-national levels. Therefore vital statistics should be derived from civil registration data. Complementary data sources, such as population censuses and in-depth household surveys, may be used to evaluate and enrich civil registration data and to gather information on demographic and epidemiological processes that complements the information obtained through civil registration.^{7,8}

Guidance: Indicate whether there is a requirement to derive vital statistics from civil registration records and whether other data sources are considered valid sources for vital statistics compilation. In the comments section, describe whether the law aligns with best practice and note any recommendations for regulatory reform.

a. Vital statistics derived from civil registration?

Citation:

Comments:

b. Vital statistics supplemented from population censuses, household sample surveys, health records, or other demographic estimates?

Citation:

Comments:

3. Information Sharing

⁶ United Nations, Principles and Recommendations for a Vital Statistics System, Revision 3, New York, 2014. Para. 1.

⁷ United Nations, Principles and Recommendations for a Vital Statistics System, Revision 3, New York, 2014. Para. 28.

⁸ United Nations, Guidelines for the Legislative Framework for Civil Registration, Vital Statistics and Identity Management Systems, New York, 2019, Para. 484-487.

Best practice: The civil registration agency must submit information collected during registration to the national statistics authority in order for the statistics authority to compile and publish vital statistics based on civil registration records. Sharing of data should be regular and timely. For example, if the systems are computerized and integrated, submission may be automated and happen continuously, or daily, weekly, or monthly. In paper-based systems, submission might be less frequent, such as monthly or quarterly.

The privacy of individuals must be sufficiently protected when data is shared, while not causing excessive barriers to data linkage and research activities in the public interest. Generally, vital event information should be submitted from the civil registration authority to the statistics authority with identifying information removed. However, in some countries, all identifying data is removed except for a unique identification number. This allows for data linking and verification, while still maintaining personal privacy (if certain procedures are followed). (See Chapter 10 for more on data privacy).

Guidance: Describe the procedure for sharing of information between the civil registration authority and the statistics authority, including frequency of data sharing and procedures for personal privacy protection. In the comments section, describe whether the law aligns with best practice and note any recommendations for regulatory reform.

a. Procedure and timeframe for information sharing between civil registrar and national statistics authority:

Citation:

Comments:

b. Procedures for privacy protection:

Citation:

Comments:

4. Compilation: geographic area/subdivisions required, uniformity, validation, frequency of compilation

Best practice: The compilation of vital statistics data is the process of condensing and summarizing information on vital events by classifying and tabulating the data within categories or groups in order to produce vital statistics according to a predetermined tabulation programme. Vital statistics should be compiled for the total geographical area of the country, for each of the major or minor civil divisions, and for each principal town and city. Vital statistics should distinguish between urban and rural for at least the country as a whole and for each major or other civil division.⁹ National vital statistics should be compiled uniformly for the country, using common definitions, classifications, coding, querying, data entry and editing procedures throughout. During compilation, the statistics agency should conduct an internal review to validate the data and ensure there is no missing, duplicative, improbable or erroneous data.¹⁰

⁹ United Nations, Principles and Recommendations for a Vital Statistics System, Revision 3, New York, 2014, paragraph 213.

¹⁰ United Nations, Guidelines for the Legislative Framework for Civil Registration, Vital Statistics and Identity Management Systems, New York, 2019, Para. 490-492.

Guidance: Describe how vital statistics are compiled, including: 1) geographic coverage and subdivisions; 2) whether compiled centrally or sub-nationally; 3) if sub-nationally, whether compiled uniformly across the country; 4) whether internal validation reviews are conducted. In the comments section, describe whether the law aligns with best practice and note any recommendations for regulatory reform.

a. Geographic coverage of vital statistic (for: entire country? major and minor subdivisions? principle cities? disaggregated by urban/rural?)

Citation:

Comments:

b. Compiled centrally? If sub-nationally, compiled uniformly?

Citation:

Comments:

c. Internal validation conducted?

Citation:

Comments:

5. Regular publication of recent data

Best practice: It is important that vital statistics are current when published, to ensure up-to-date information is available for decision-making. Detailed annual tabulations of each type of vital event, cross-classified by its demographic and socioeconomic characteristics, should be published at least annually.¹¹ Total monthly or quarterly summary counts of vital events should be made available on a time schedule prompt enough to provide information for decision-making.¹² Even if registration is not complete, tabulations are to be prepared and users should be provided with the information available and the level of completeness of registration.¹³ Although important, timeliness should not supersede completeness and accuracy.¹⁴

Guidance: Describe any mandate that birth, death, and cause of death data be published on a schedule, including the mandated frequency and/or the specification of a maximum time lag of data being published. In the comments section, describe whether the law aligns with good practice and note any recommendations for regulatory reform.

¹¹ United Nations, Handbook of Vital Statistics Systems and Methods Volume I: Legal, Organizational, and Technical Aspects, New York, 1991. P. 46, para. 333.

¹² United Nations, Principles and Recommendations for a Vital Statistics System, Revision 3, New York, 2014. Para. 38.

¹³ United Nations, Principles and Recommendations for a Vital Statistics System, Revision 3, New York, 2014. Para. 240.

¹⁴ United Nations, Principles and Recommendations for a Vital Statistics System, Revision 3, New York, 2014. Para. 576.

a. Frequency of vital statistics publication (yearly, quarterly, monthly etc):

Citation:

Comments:

b. Timeliness of data in reports:

Citation:

Comments:

6. Minimum list of tabulations

Best practice: Countries should publish, at least annually, a series of tabulations calculated from vital event data in a format recommended by the UN.¹⁵ The minimum tabulations require a nuanced disaggregation.

Guidance: Describe any law defining the format for reporting vital statistics data, including any requirement to publish the tabulations in a format recommended by the UN. The tables on the following page can assist with determining whether the minimum tabulations are being produced. In the comments section, describe whether the law aligns with good practice and note any recommendations for regulatory reform.

Describe requirements for reporting on:

a. Live birth data:

b. Death data:

c. Cause of death data:

d. Infant death data:

e. Foetal death data:

f. Summary Tables

Citation:

Comments:

Minimum list of tabulations:

Live births by...	
	place of occurrence & sex of child
	place of occurrence & place of usual residence of mother

¹⁵ United Nations, Principles and Recommendations for a Vital Statistics System, Revision 3, New York, 2014. Pp. 157-159.

place of registration, month of occurrence, & month of registration
month, place of occurrence & place of usual residence of mother
age, place of usual residence, & marital status of mother
age of father
place of usual residence, age, & educational attainment of mother
educational attainment & age of mother & live-birth order
place of usual residence & age of mother, sex of child & live-birth order
live-birth order & interval between last & previous live births to mother
place of birth, place of usual residence, & age of mother
place of usual residence & age of mother & legitimacy status
place of occurrence, site of delivery, & attendant at birth
site of delivery, attendant at birth, & birth weight
birth weight & place of usual residence & educational attainment of mother
gestational age, place of usual residence of mother & birth weight
birth weight, place of usual residence of mother & month in which prenatal care began
age & place of usual residence of mother & month in which prenatal care began
live-birth order, place of usual residence of mother, & month in which prenatal care began
place of usual residence of mother & duration of residence at the current usual residence

Deaths by...
place of usual residence & sex of decedent
place of occurrence & place of usual residence & sex of decedent
month & place of occurrence & place of usual residence of decedent
place of registration, month of occurrence, & month of registration
place of occurrence & site of occurrence
place of usual residence, age & sex of decedent
age, sex, place of usual residence & marital status of decedent
place of usual residence, age, sex, & educational attainment of decedent
sex, cause of death, place of usual residence, & age of decedent
month of occurrence & cause of death
Place of occurrence, sex of decedent, & type of certification
age & type of usual activity of decedent
Maternal deaths by cause of death & age of woman

Cause of Death by...
sex (standard is to list at least 10 leading causes of death)
age group (standard is to list at least 10 leading causes of death)
communicable disease, non-communicable disease or external cause (presented by age group and sex)
manner of death: disease, accident, intentional self-harm, assault, legal intervention, war, pending investigation, unknown or manner undetermined (presented by age group and sex)

Infant deaths by...
place of occurrence & place of usual residence of mother
month of occurrence & sex & age of child

	place of usual residence of mother & age & sex of child
	cause of death, place of usual residence of mother & sex & age of child

Live births & foetal deaths	
	Confinements by type of birth & status of issue (live-born or born dead)
	Confinements by birth order & birth weight, for each type of birth
	Confinements by type of birth & age of mother, for each sex

Foetal deaths by...	
	age & place of usual residence of mother & sex of foetus
	sex & legitimacy status of foetus
	age of mother & legitimacy status & sex of foetus
	place of usual residence of mother, sex, & birth weight
	place of usual residence of the mother & gestational age & birth weight
	age & place of usual residence of mother & birth weight
	sex & gestational age
	age of the mother & total birth order (live births plus foetal deaths)
	month of pregnancy in which prenatal care began & number of visits & place of usual residence of the mother
	place of occurrence & type of certification

Summary Tables	
	Live births, deaths, infant deaths, foetal deaths, marriages, & divorces by place of usual residence
	Crude birth rate, crude death rate, infant mortality rate by sex, foetal mortality rate, crude marriage rate, & crude divorce rate, by place of usual residence
	Time series of live births by place of usual residence of mother (past 10 years)
	Time series of deaths by place of usual residence of decedent (past 10 years)
	Time series of infant deaths by place of usual residence of mother (past 10 years)
	Time series of foetal deaths by place of usual residence of mother (past 10 years)
	Time series of vital events in the country (past 10 years)