



The American College of
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WOMEN'S HEALTH CARE PHYSICIANS

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Committee on Health Care for Underserved Women

INTERIM UPDATE: This Committee Opinion has been updated as highlighted to correct an outdated website address and to clarify standardization and specificity for induced abortion reporting.

The Importance of Vital Records and Statistics for the Obstetrician–Gynecologist

ABSTRACT: Information from vital records is critical to identify and quantify health-related issues and to measure progress toward quality improvement and public health goals. In particular, maternal and infant mortality serve as important indicators of the nation's health, thereby influencing policy development, funding of programs and research, and measures of health care quality. Accurate and timely documentation of births and deaths is essential to high-quality vital statistics. This Committee Opinion describes the process by which births, maternal deaths, and fetal deaths are registered; the challenges faced with a decentralized reporting system; and the important role for obstetrician–gynecologists in improving the accuracy, reliability, and timeliness of vital records.

Recommendations

Obstetrician–gynecologists play an essential role in ensuring accurate representation of pregnancy-related and pregnancy-associated deaths and other vital statistics for policy makers, public health institutions, and researchers. The American College of Obstetricians and Gynecologists (the College) recommends that obstetrician–gynecologists

- become well-informed of state and local regulations regarding medical certifications for deaths and registration of births.
- ensure prompt documentation of vital events (ie, births and maternal and fetal deaths) in the medical record by appropriate personnel, using definitions from the College and the U.S. Centers for Disease Control and Prevention (CDC).
- advocate for sufficient funding to modernize and standardize the vital statistics system in the United States.
- advocate widespread adoption of the 2003 revised U.S. Standard Certificate of Death, the U.S. Standard Report of Fetal Death, and the National Center for Health Statistics' (NCHS) standardized reporting guidelines, definitions, and worksheets.
- support inclusion of “intended place of birth” on birth certificates to better assess extramural birth outcomes.
- support training for everyone involved in vital records collection (eg, birth attendants, birth clerks, hospital administrators).

Background

Vital statistics provide continuous data on births and maternal and fetal deaths collected at the local level, compiled by states, and transmitted to the CDC's NCHS (1, 2). Two essential indicators of the nation's health obtained from vital records—maternal and infant mortality—are critical to understanding quality, access to medical care, and racial, ethnic, and socioeconomic disparities in maternal and infant health care. Terminology and reporting requirements for reproductive health statistics are provided in Guidelines for Perinatal Care (3).

The National Vital Statistics System

The National Vital Statistics System is one of the oldest and most successful examples of intergovernmental data sharing in public health. It is a complex system that incorporates entities at the local, state, and federal level, each with its own role. Data for vital statistics are provided through contracts between the CDC's NCHS

and state- and locally-operated vital registration systems that are legally responsible for the registration of vital events: births, deaths, marriages, divorces, and fetal deaths. The federal government's role is to compile these vital statistics and identify trends at the local, state, and national levels.

In addition to data synthesis and analysis, the federal government—through the CDC and NCHS—develops uniform standards used to gather information on vital events and recommends that states adopt these standards. In 2003, the NCHS revised the standard forms for birth and death certificates and the fetal death report to reduce variability and to improve the accuracy, completeness, and reliability of data collected from state to state (see Resources).

Birth Registration

Birth certificates contain a wealth of data that are important for national surveillance, research, and directing public health prevention and intervention strategies. The NCHS Standard Certificate of Live Birth collects information on the use of prenatal care, maternal socio-demographic and behavioral data, place of birth, information pertaining to medical and obstetric complications of pregnancy, and Apgar scores. By law, the registration of births is the direct responsibility of the professional birth attendant, generally a physician or midwife, and must be reported promptly (1, 4). All states require the reporting of a live birth regardless of length of gestation or weight, although there is some variation across states in the definition of what constitutes a live birth (see the CDC's "State Definitions and Reporting Requirements," available at www.cdc.gov/nchs/data/misc/itop97.pdf and the NCHS's "Model State Vital Statistics Act and Model State Vital Statistics Regulations," available at https://naphsis-my.sharepoint.com/personal/cldmn_naphsis_onmicrosoft_com/_layouts/15/guestaccess.aspx?docid=10b8761e4cf2f4be696928c26a39ab531&authkey=AYZvuQ7OzMpuqrjMKhO80UE) (5, 6). It is important for birth attendants to be aware of the statutes within their state and act accordingly. The actual process of hospital documentation of births varies widely in regards to the individual completing the certificate—whether a clerk, nurse, or birth attendant—and in the use of multiple data sources to complete the document. Data are often incomplete, with underreporting of midwife-attended deliveries and misclassification of women's intended place of delivery, particularly for intended home births. These inaccuracies can affect the analysis of risk factors related to maternal mortality.

Death Registration

Every state is required to report all maternal deaths. Mortality statistics compiled from death certificates are used to measure health quality, set public health goals and policy, and to direct research and resources. The death certificate provides important information about

the decedent, the circumstances of death, and the cause of death. In particular, maternal deaths are identified when the cause of death is coded according to the World Health Organization's International Classification of Diseases (ICD) for deaths due to complications of pregnancy, childbirth, and the puerperium (7). The ICD, Tenth Revision (ICD-10), expanded these coding guidelines in 1999 to be more inclusive of maternal deaths, particularly those from indirect causes. The physician's principal responsibility in death registration is to complete the medical portion of the death certificate, including cause of death, according to the *Physicians' Handbook on Medical Certification of Death* (available at www.cdc.gov/nchs/data/misc/hb_cod.pdf) (8).

Reports have indicated a 39–93% rate of underreporting of maternal deaths and an overall variability of data quality that can be attributed to a lack of standardized reporting by states and a lack of training among birth attendants in accurately documenting cause of death (9, 10). The revised U.S. standard certificates of live birth and death from 2003 are expected to be adopted in all states by 2016. The set of questions that help identify a deceased woman's pregnancy status at the time of death includes a checkbox to designate a pregnancy within 42 days before death or within 43–365 days before death. A lack of consistency in the use of the pregnancy checkbox categories limits the comparability of the data on a national scale, and for this reason, NCHS has not published a national mortality rate since 2010.

The national Pregnancy Mortality Surveillance System, a collaborative effort of the College, the CDC, and others, developed definitions that differentiate between the immediate and underlying causes of maternal death, associated obstetric and medical conditions or complications, and the outcome of pregnancy to allow better analysis of the chain of events that led up to the death. The group further expanded upon ICD-10 by defining pregnancy-associated death and pregnancy-related death to account for the complexity of the continuum of maternal morbidity and mortality (7, 11). This type of mortality data can influence funding to support research to improve clinical practice and health outcomes.

Fetal Death Reports

In the U.S. vital records system, reports of fetal deaths are completed separately from certificates of birth and death. Most states report fetal deaths that occur after 20 weeks of gestation or in which the birth weight is at least 350 g, which is another area of variability by state without standard definitions and uniform requirements. The College recommends that all state fetal death reports include birth weight and gestational age. The fetal death report also contains questions on the cause and conditions of the death, demographic and health information of the woman who gave birth, a record of previous prenatal care, and risk factors involved in the pregnancy (12). Completion of the fetal death report is the

responsibility of the birth attendant. Importantly, several states require completion of a fetal death report for induced abortions after the fetus reaches a specific gestational age (generally 20 weeks or 24 weeks) (5). To improve consistency and accuracy of records, terminology should be consistent nationally. If reporting is mandated, these cases should be reported in only the more specific category of induced abortion and not reported as both a fetal death and induced abortion.

Use of Vital Records for Health Care Quality Improvement

An integral part of quality improvement efforts is having baseline measurements of current quality of care and an ongoing data collection system that allows continuous measurement of the effect of these interventions. Vital records can be an excellent source of population-based data for assessing risks and quality of perinatal outcomes.

However, a lack of timeliness and inaccurate or incomplete data can be challenges to the use of vital records for quality analysis. Although NCHS provides some written guidance on documentation, clinicians receive very little, if any, training, especially in understanding and reporting cause of death. By becoming actively involved in ensuring uniformity in definitions, accuracy, and completeness of vital records, obstetrician-gynecologists can play an important role in perinatal quality improvement.

Efforts to Improve the Vital Records System

The vital records system faces many challenges, including its decentralized nature, a lack of standardization of terms and procedures, and slow transitions to electronic systems. There are several efforts underway to improve data quality, including the development of training for hospital staff on completing vital records. It is crucial that obstetrician-gynecologists understand their important advocacy role in making this system work efficiently (see Resources).

Resources

The following resources are for information purposes only. Referral to these sources and web sites does not imply the endorsement of the American College of Obstetricians and Gynecologists. These resources are not meant to be comprehensive. The exclusion of a source or web site does not reflect the quality of that source or web site. Please note that web sites are subject to change without notice.

American Congress of Obstetricians and Gynecologists. Improving pregnancy outcomes: maternal mortality reviews and standardized reporting. ACOG State Legislative Toolkit [after login]. Washington, DC: ACOG; 2011. Available at: http://www.acog.org/~media/Departments/Members-Only/State-Legislative-Activities/2011_Improving_PregnancyOutcomes.pdf?dmc=1.

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