

Cause-of-death Data From the Fetal Death File, 2018–2020

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Abstract

Objectives—This report presents data on fetal cause of death by maternal age, maternal race and Hispanic origin, fetal sex, period of gestation, birthweight, and plurality.

Methods—Descriptive tabulations of data collected on the 2003 U.S. Standard Report of Fetal Death are presented for fetal deaths occurring at 20 weeks of gestation or more for 2018–2020 in a reporting area of 41 states and the District of Columbia, in which less than 50% of deaths were attributed to Fetal death of unspecified cause (P95). Cause-of-death reporting in this area was based on the 2003 fetal death report revision and represents 72% of fetal deaths occurring in the United States during this time. Causes of death are processed according to the *International Classification of Diseases, 10th Revision*.

Results—Five selected causes account for 89.8% of fetal deaths in the reporting area: Fetal death of unspecified cause; Fetus affected by complications of placenta, cord and membranes; Fetus affected by maternal complications of pregnancy; Fetus affected by maternal conditions that may be unrelated to present pregnancy; and Congenital malformations, deformations and chromosomal abnormalities.

Conclusions—Cause-of-fetal-death data reported on vital records enable comparisons of fetal characteristics and provide information for a large proportion of fetal deaths in the United States. While limited variation was observed in the ranking of the causes of death across the maternal and fetal characteristics examined, variation was seen in the proportion of deaths attributable to certain causes, particularly by race and Hispanic origin and gestational age.

Keywords: fetal mortality • initiating cause of death • selected cause of death • National Vital Statistics System

Introduction

Fetal deaths, which are involuntary losses of fetuses during pregnancy, outnumber infant deaths (deaths under age 1 year) (1). The risk of fetal loss differs by both maternal and fetal characteristics, and cause of fetal death can provide additional insight into why fetuses die, which may lead to opportunities for prevention. This report on the cause of fetal death is the third released from the National Vital Statistics System (NVSS) and includes 3 years of cause-of-fetal-death data (2–7).

A cause-of-fetal-death item has been included on the form used to obtain details on fetal deaths, known as the fetal death report, since 1939, because it is considered critical information. However, the data had never been released on public-use files or published, partly due to resource constraints and data quality concerns, until 2014. Concerns included uncertainty over whether coding was being done in a standardized fashion, and how much of the unknown cause might reflect lack of care in completing the fetal death report rather than appropriate reporting that the cause was unknown.

Internal and external developments have resulted in more committed resources and changes to improve quality. For example, the cause-of-death item on the fetal death report was redesigned for the 2003 U.S. Standard Report of Fetal Death that is produced as a model for the vital statistics jurisdictions (7). The goal of the redesign was to improve the quality and specificity of information reported for cause of death. It was designed to be consistent with instructions in the World Health Organization's *International Classification of Diseases (ICD) (8)*, while providing more guidance on desired information and retaining flexibility to report any cause.

A national fetal death file that includes cause of death is now routinely released. Although the data are of sufficient quality to report, work will need to continue to focus on how to improve data quality (for example, increase number of areas submitting the information, increase reporting of specified information, and improve the multiple-cause data fields). Releasing the data



opens access and gives researchers the opportunity to not only use the data but also to explore opportunities to improve it.

The subject of this report is cause of fetal deaths occurring at 20 weeks of gestation or more. The reporting area includes areas reporting cause of death based on the 2003 revision where less than 50% of an area's cause data were attributed to the Fetal death of unspecified cause (unspecified cause [P95]) for each of the data years 2018, 2019, and 2020.

Methods

As of January 1, 2018, all 50 states, the District of Columbia (D.C.), and New York City had implemented the 2003 U.S. Standard Report of Fetal Death. However, this report includes 2018–2020 data for the 42 areas (41 states: Alabama, Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin, and Wyoming; and D.C.) that met the reporting requirement of having less than 50% of records assigned to unspecified cause (P95) for all 3 years 2018, 2019, and 2020. This reporting area represented 72% of all 2018–2020 fetal deaths at 20 weeks of gestation or more in the United States. Statistics based on a subnational area may not be generalizable to the entire United States, particularly if characteristics differ by geographic area (see Technical Notes). The fetal mortality rate by residence for the reporting area (566.1 fetal deaths per 100,000 live births and fetal deaths) is lower than the rate for the United States (577.6).

As with other deaths, the intent is for an attending physician, medical examiner, or coroner to report cause of death (8). The cause-of-fetal-death item requests a medical opinion from this person on the conditions and diseases resulting in or contributing to death, and also asks the medical certifier to report the initiating cause separately (Item 18a) from all other causes (Item 18b) reported on the fetal death report form. As with other deaths, the certifier may form this medical opinion based on various medical tests, investigations, and examinations. However, the term “initiating cause” used to refer to the one cause reported separately is unique to fetal deaths because of differences in the format of the cause item and how the initiating cause is determined for fetal deaths compared with the “underlying cause” term used with other deaths.

The National Center for Health Statistics (NCHS) codes the cause of fetal death reported by the certifier using the *International Classification of Diseases, 10th Revision* (ICD–10) (8). Coding is done through a combination of automated and manual processes following the guidelines laid out in “Instruction Manual, Part 2k, Instructions for the Automated Classification of the Initiating and Multiple Causes of Fetal Deaths, 2018” (9). Literal text stated on the fetal death report form is assigned ICD–10 codes, and a single cause of death—the initiating cause of death—is selected from the conditions entered by the medical certifier in the cause-of-death section of the fetal death report

form. The single condition that the medical certifier identified as initiating or triggering the events that resulted in the death of the fetus (Item 18a) is anticipated to be the initiating cause of death. However, if more than one cause or condition is entered in Item 18a by the medical certifier, the initiating cause is determined by the placement of the condition on the fetal death report form, provisions of ICD, and associated selection rules and modifications. A second section of the fetal death report form (Item 18b) is for the medical certifier to state any other conditions or causes believed to have played a role in causing the fetal death. Because more medical information may be reported on the fetal death report form than is directly reflected in the initiating cause of death, this additional information is captured in multiple cause-of-fetal-death data.

In this report, causes of death are tabulated by the List of 124 Selected Causes of Fetal Death (fetal cause list) and by five selected causes drawn from a subset of the fetal cause list (10). The selected causes are in descending order according to the number of deaths assigned to each cause. The 45 causes from the fetal cause list (including unspecified cause) from which the selected causes were drawn are defined in the fetal cause list in Instruction manual, part 9 (10).

This report presents numbers and percentages of fetal deaths at 20 weeks of gestation or more for the selected causes of death by selected maternal and fetal characteristics. Tabulations of cause-of-fetal-death statistics are based solely on the initiating cause of death. Fetal mortality rates are expressed as the number of fetal deaths per 100,000 total live births and fetal deaths to women in the specified group. Birth data used in this report to calculate rates are based on 100% of the birth certificates registered in the reporting area. The rates provide a measure of the risk of having a fetal death for reported pregnancies (that is, pregnancies ending in a live birth or fetal death at 20 or more weeks of gestation). Autopsy information is available in the data but was not included in this report (see reference 2 for more information about autopsy data).

Reporting requirements and completeness of reporting for fetal death data vary across areas, and these variations have implications for data quality and completeness. Most areas require reporting of fetal deaths at 20 weeks of gestation or more, or for birthweights of 350 grams or more (roughly equivalent to 20 weeks gestation), or some combination of the two. However, several areas require reporting of fetal deaths at all periods of gestation, two require reporting beginning at 12 weeks, and one requires reporting beginning at 16 weeks. At the other end of the spectrum, one area requires reporting of fetal deaths with birthweights of 500 grams or more (roughly equivalent to 22 weeks) (4). Reporting requirements and completeness may account in part for differences in fetal and perinatal mortality rates across states.

Research studies find that cause of fetal death is often unknown (11–17). In the 42 reporting areas that met the reporting criteria for 2018–2020, the percentage of fetal deaths at 20 weeks of gestation or more with unknown cause ranged from 17.7% to 48.0%, with an average of 31.5% and a median of 30.3%.

Results

In 2018–2020, a total of 46,876 fetal deaths at 20 weeks of gestation or more occurred in the 42 areas included in this report. The fetal mortality rate was 566.1 fetal deaths per 100,000 live births and fetal deaths (Table A). Fetal mortality rates for the individual years are also shown in Table A. The rate for 2018 was significantly greater than the rate for 2019 or 2020.

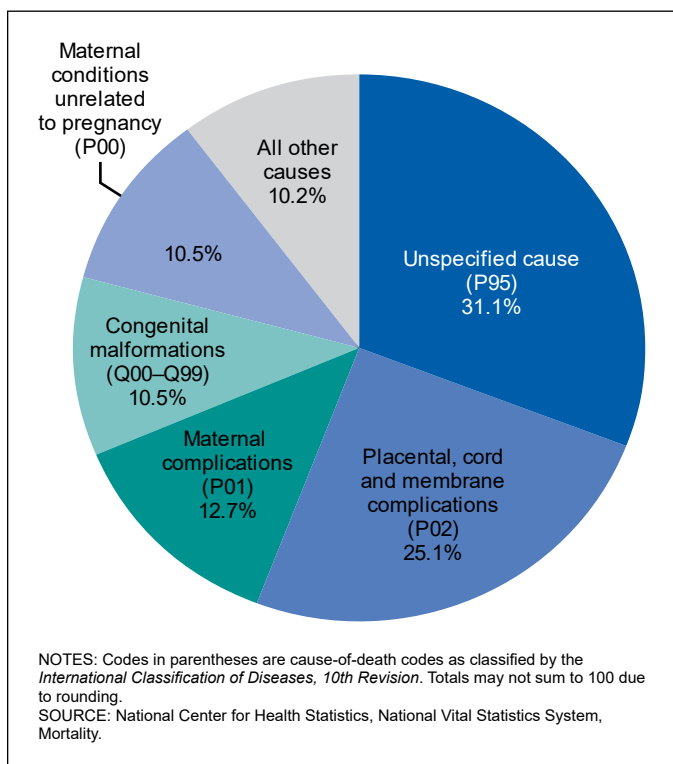
Table A. Number of fetal deaths and fetal mortality rates: 42 areas, 2018–2020

Year	Number	Rate ¹
2018–2020	46,876	566.1
2018	16,289	579.9
2019	15,581	560.6
2020	15,006	557.3

¹Number of fetal deaths per 100,000 live births and fetal deaths.
SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Table 1 shows cause in detail; five selected causes of fetal death accounted for 89.8% of fetal deaths in the reporting area (Tables 1 and 2; Figure 1). By order of frequency, these were: Fetal death of unspecified cause (unspecified cause) (31.1%); Fetus affected by complications of placenta, cord and membranes (placental, cord, and membrane complications) (25.1%); Fetus affected by maternal complications of pregnancy (maternal complications) (12.7%); Fetus affected by maternal conditions that may be unrelated to present pregnancy (maternal conditions unrelated to pregnancy) (10.5%); and Congenital malformations, deformations and chromosomal abnormalities (congenital malformations) (10.5%).

Figure 1. Fetal death, by selected causes: 42 areas, 2018–2020



conditions unrelated to pregnancy) (10.5%); and Congenital malformations, deformations and chromosomal abnormalities (congenital malformations) (10.5%).

These same five selected causes were generally the most common when examining fetal causes by various maternal and fetal characteristics, although the relative order sometimes differed and the percentage of deaths for a particular cause often varied.

Race and Hispanic origin

The five most common selected causes of fetal death and the top two causes were the same by race and Hispanic origin, while the ranking of the other three causes differed (Table 2). Unspecified cause and placental, cord, and membrane complications were the two most common of the selected causes for all groups (Figure 2). Congenital malformations was the third most common for non-Hispanic White fetal deaths, followed by maternal complications and maternal conditions unrelated to pregnancy. For non-Hispanic Black fetal deaths, maternal complications was the third most common, maternal conditions unrelated to pregnancy was fourth, and congenital malformations was fifth. For Hispanic fetal deaths, maternal complications was the third most common, congenital malformations was fourth, and maternal conditions unrelated to pregnancy was fifth.

Maternal age

The two most frequent selected causes (unspecified cause; placental, cord, and membrane complications) were the same for women of all age groups (Table 3). For women under 20 and those aged 20–39, the third most common was maternal complications, but the order of congenital malformations and maternal conditions unrelated to pregnancy was reversed (fourth and fifth, respectively, for those under 20; fifth and fourth for those aged 20–39). For women aged 40 and over, congenital malformations was third; maternal conditions unrelated to pregnancy was fourth; and maternal complications was fifth.

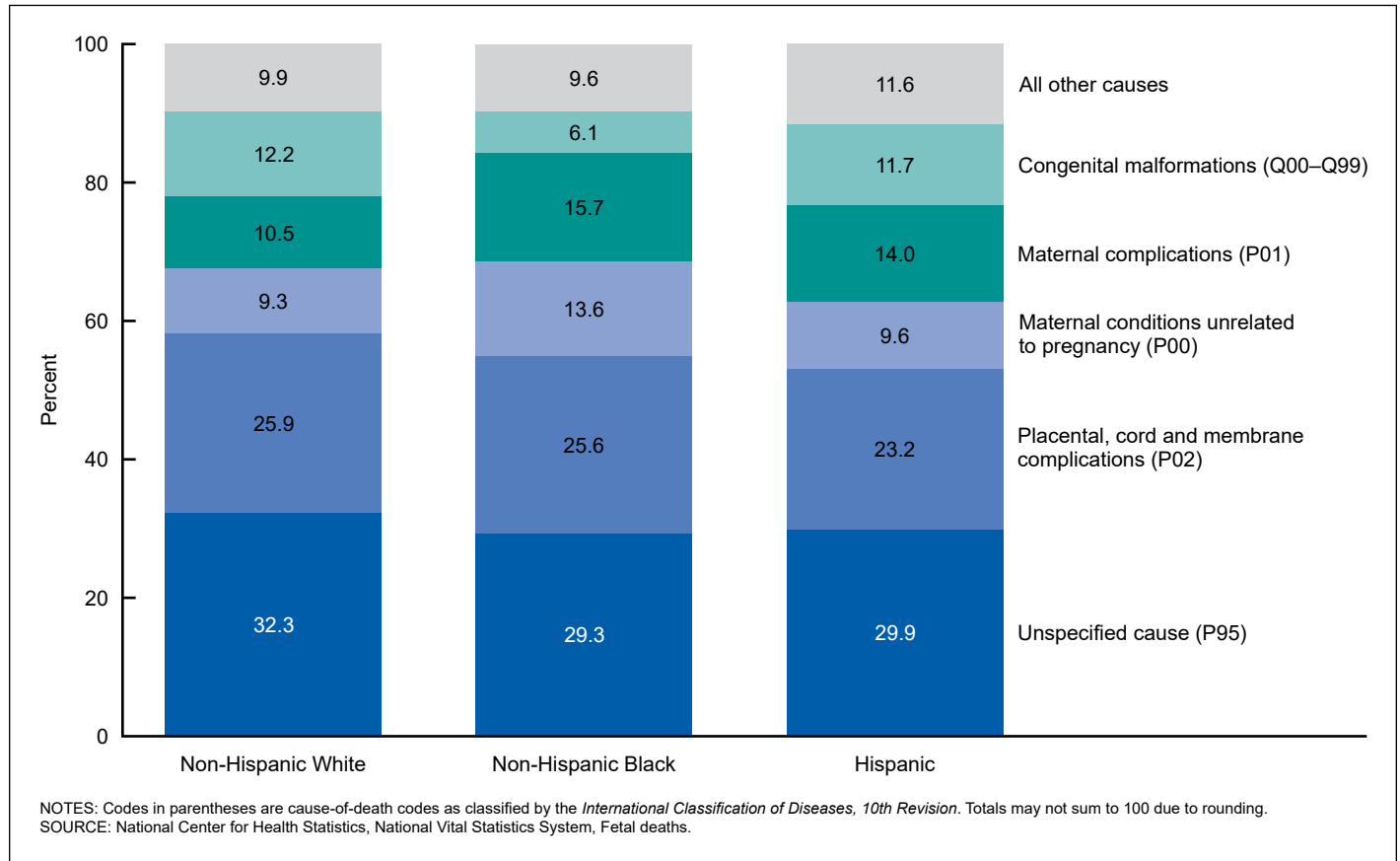
Sex of fetus

The three most common selected causes and the order were the same for male and female fetal deaths (Table 4). These were: unspecified cause; placental, cord, and membrane complications; and maternal complications. For males, maternal conditions unrelated to pregnancy was fourth and congenital malformations was fifth, while for females, congenital malformations was fourth and maternal conditions unrelated to pregnancy was fifth.

Period of gestation

Four causes (unspecified cause; placental, cord, and membrane complications; congenital malformations; and maternal conditions unrelated to pregnancy) were among the five most common selected causes for all of the gestational age groups shown, although the order often differed (Table 5). Maternal complications was the second most common selected cause at 20–23 weeks of gestation, fifth most common at 24–27,

Figure 2. Distribution of five selected causes, by race and Hispanic origin: 42 areas, 2018–2020



28–31, 32–33, and 41 weeks, and third most common at 42 weeks or more, but it was not among the five most common causes at 34–36, 37–38, and 39–40 weeks of gestation. Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (diabetes mellitus) was the fifth most common cause at gestational ages 34–36, 37–38, and 39–40 weeks or more (Figure 3).

Birthweight

The most common selected causes of fetal death varied by birthweight (Table 6). Unspecified cause; placental, cord, and membrane complications; and maternal conditions unrelated to pregnancy were among the most common selected causes for all the weight categories, although the order was not consistent. Maternal complications was the third and fifth most common of the selected causes for fetuses with birthweight less than 1,500 grams and 1,500–2,499 grams, respectively, and was not among the most common selected causes for fetuses of higher birthweights. Diabetes mellitus was not among the most common selected causes at the lower birthweights but was the fourth most common cause for fetuses with birthweights of 2,500–3,999 grams and the most common cause for those weighing 4,000 grams or more. Diabetes accounted for 6.2% of fetal deaths with birthweights of 2,500–3,999 grams and 30.2% of fetal deaths weighing 4,000 grams or more.

Plurality

Certain causes of fetal death were specific to multiple deliveries, and, accordingly, the order of the most common selected causes of death differed by plurality (Table 7). Maternal complications accounted for 36.8% of deaths in multiple deliveries compared with 10.8% in single deliveries; this can be attributed to the subcategory of maternal complications, Fetus and newborn affected by multiple pregnancy (P01.5), which is often reported as a cause for multiple deliveries.

COVID-19

The COVID-19 pandemic began during the last year covered by this report (2020). Most of the 139 fetal death records that mentioned COVID-19 (64.7%) had, as the initiating cause, maternal conditions unrelated to pregnancy and, more specifically, the subcategory Fetus affected by maternal infectious and parasitic diseases (maternal infectious and parasitic diseases). The percentage of all fetal deaths attributed to the maternal infectious and parasitic diseases subcategory was 0.9% for the entire 2018–2020 period but increased from 0.7% for 2018 and 2019 to 1.4% for 2020 (Table B). Ninety of the 208 records with maternal infectious and parasitic diseases as the initiating cause in 2020 specified COVID-19 as the specific maternal infectious and parasitic disease.

Figure 3. Distribution of five selected causes, by period of gestation: 42 areas, 2018–2020

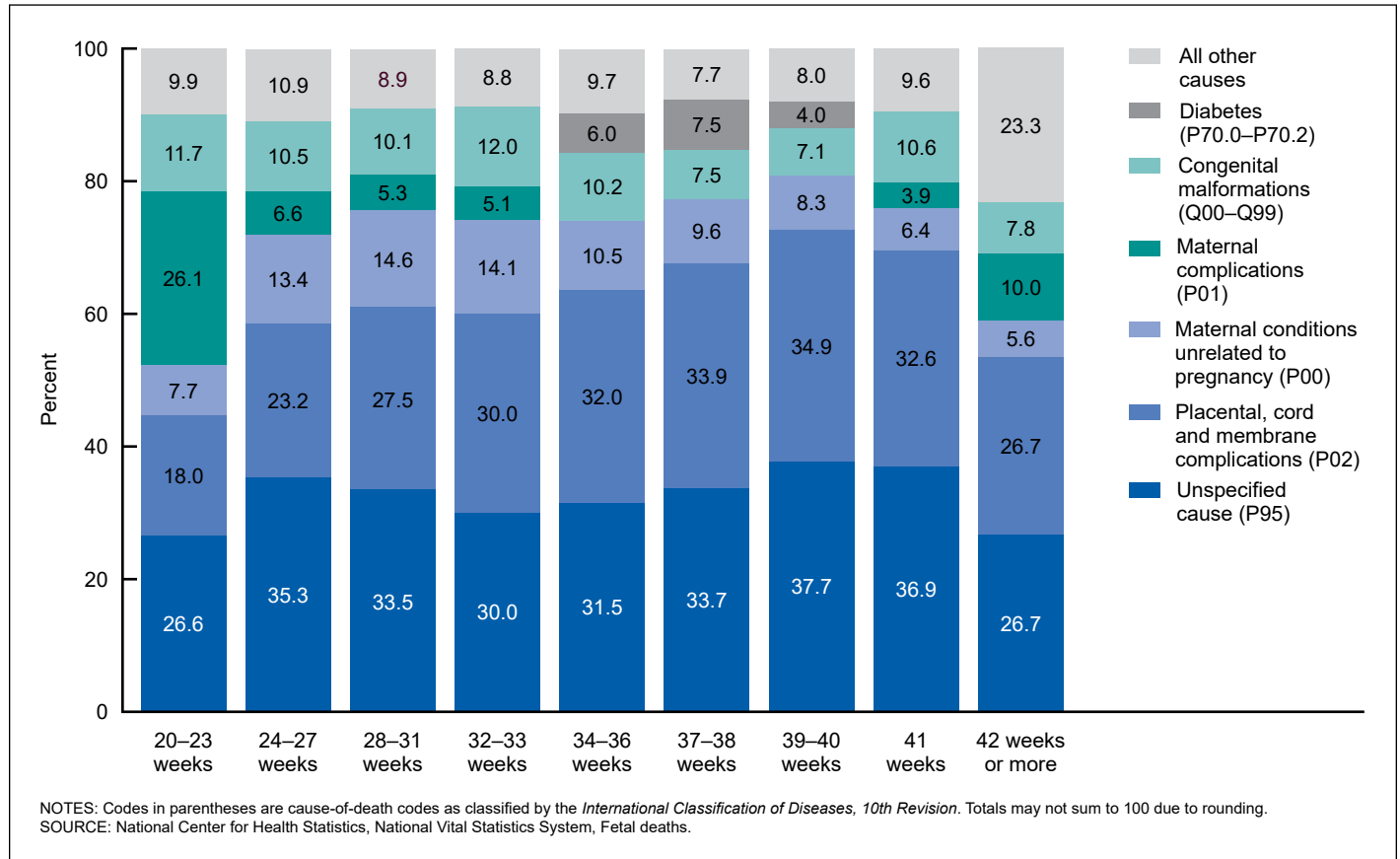


Table B. Number and percentage of fetal mortality for maternal conditions unrelated to pregnancy: 42 areas, 2018–2020

Year	Number	Percent
Maternal conditions unrelated to pregnancy (P00)		
2018–2020	4,904	10.5
2018	1,640	10.1
2019	1,605	10.3
2020	1,659	11.1
Maternal infectious and parasitic diseases (P00.2)		
2018–2020	436	0.9
2018	116	0.7
2019	112	0.7
2020	208	1.4

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Discussion

The fetal mortality rate was 566.1 fetal deaths per 100,000 live births and fetal deaths in 2018–2020 for the 42 areas considered in this publication. This reporting area accounts for 72% of the fetal deaths in the United States, but the fetal mortality rate is significantly lower than that for the entire United States

during these 3 years (577.6 per 100,000 live births and fetal deaths). Non-Hispanic White fetal deaths were overrepresented in the reporting area, while Hispanic and non-Hispanic Black fetal deaths were underrepresented compared with the total United States. The distributions of fetal deaths for women by age group were similar to the total United States (see Methods section).

Five selected causes accounted for 89.8% of all fetal deaths. With so many deaths concentrated in a few broad causes, including unspecified, these same five causes are among the selected causes for most of the characteristics studied (that is, maternal age, race and Hispanic origin, sex of fetus, and plurality). Some differences in order and percentage of deaths were seen across the different characteristics. The variables for which the five causes differed most were gestational age and birthweight. Diabetes mellitus, which combines types of diabetes, including pre-existing and gestational diabetes, emerged as a selected cause, and maternal complications dropped below the top five selected causes for fetuses with gestations of 34–36, 37–38, and 39–40 weeks and heavier delivery weights of 2,500–3,999 grams and 4,000 grams or more.

Even without large variation among the most common selected causes, the variations observed are consistent with known medical relationships. For instance, diabetes during pregnancy is associated with larger fetuses and fetal death (15,18,19), so the increase in the relative frequency of diabetes with concurrent increases in birthweight is consistent. The larger

proportion of congenital malformations from Edwards and Down syndrome among women aged 40 and over is consistent with the increasing risk of these malformations as maternal age increases (20,21). Edwards syndrome, a chromosomal abnormality, usually results in death before birth (21,22). Research is mixed on the impact of COVID-19 on fetal mortality, with findings of increased risk (23–25) or no risk (26–27).

Possible data limitations

Attention on reproductive loss has historically concentrated on infant mortality, in part due to the less robust knowledge about the incidence, etiology, and prevention strategies for fetal mortality. There have been longstanding concerns about fetal death data quality and completeness (14,15), and fewer resources committed and less priority given to fetal death data collection and research (15,28). Some studies (29,30) have singled out perceptions of importance and work burden as factors affecting the quality of information entered in fetal death vital records and concluded that a broad educational effort is needed to improve the quality of vital statistics cause-of-fetal-death data.

A relatively high level of unknown cause is a typical finding in research efforts (11–16,21). A study in New York City (29) identified level of physician engagement as a factor in whether ill-defined cause of fetal death is reported in vital statistics. Although the vital statistics data (2) do not clearly reflect this, others have found that the ability to identify cause is improved when additional workup has been done. Miller et al. (16) found that a cause of death could be identified based on clinical and laboratory information alone in 24% of cases, 61% if the examination also included placental pathologic examination, and 74% if an autopsy was done in addition to the other types of assessment. Improvement in diagnostic capability over time also may lead to reductions in the level of unknown cause reported (31). Specialized studies on cause of fetal death can ensure that comprehensive, standardized examination protocols are followed to maximize the information available (14,32). Vital statistics data encompass events occurring in more variable situations with different levels of examination (2).

Efforts to improve reporting

The redesign of the cause-of-death section on the 2003 standard report reflects the efforts of a group of stakeholders to improve fetal cause-of-death data. Some research notes decreases in reporting of ill-defined causes with the new form (33). Another study recommended reducing the amount of information collected (29), and many items were dropped from the national fetal death file in 2014 in the hope of reducing reporting burden and improving the quality of the remaining items, including cause of death (34). The need for more education and awareness efforts targeted to clinicians and information management staff reporting information on fetal deaths is a common call to action (29,30,33). Variability between facilities and discrepancies between medical records and fetal death reports point to areas where reporting could be improved (35). NCHS has developed online training for birth and fetal death data that includes a

special section on reporting fetal cause of death (<https://www.cdc.gov/nchs/training/BirthCertificateElearning/>). Specific areas addressed in this training expand visibility, reinforce importance, and target some reporting issues.

NCHS also revised instructions on coding fetal cause of death in 2012, developed a system for processing cause, and took on responsibility for coding fetal cause of death in 2010. In addition, a new system that includes reduced manual interventions was introduced for use beginning with 2015 data to improve how cause data flows through NCHS' system as coding is occurring.

Interest in fetal mortality is increasing. Several additional initiatives are examining the etiology and prevention of fetal death, such as the Stillbirth Collaborative Research Network, CDC's active fetal death surveillance program, and PRAMS Stillbirth project SOARS (11,36). Causes of fetal death vary in studies because of limitations with cause-of-death information, variations in methodology, and use of multiple classifications. Yet, cause-of-death analyses are important for identifying preventable risks. Management, obstetric care, and diagnostic methods have contributed to shifting patterns over time (30). Further improvements in diagnostic methods provide the opportunity to better identify cause, and the resulting knowledge can potentially influence clinical management and development of new prevention strategies (14–17,35).

As research continues using smaller studies with more tightly controlled study protocols, the sustained surveillance of fetal mortality levels and trends through NVSS will remain critical. NVSS has a unique advantage in measuring the national scale of fetal mortality. The addition of cause of death to the public-use data in 2014 was an important enhancement to these data. The number of areas with the revised format for cause is almost complete, and although the number of areas with less than 50% of records assigned to unspecified cause has increased over time, not having the entire United States as the reporting area remains a limitation. Increasing access to the data should increase the utility and visibility of these data. New efforts to improve data quality should further enhance the usefulness of these data.

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Table 1. Deaths according to 124 selected causes of fetal death: 42 areas, 2018–2020[By place of residence. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision (ICD–10)*]

Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
All causes	46,876	100.0
Certain infectious and parasitic diseases (A00–B99)	2	0.0
Congenital syphilis (A50)	1	0.0
Human immunodeficiency virus (HIV) disease (B20–B24)	–	0.0
Other viral diseases (A80–B19,B25–B34)	1	0.0
Other and unspecified infectious and parasitic diseases (A00–A49,A51–A79,B35–B99)	–	0.0
Malignant neoplasms (C00–C97)	1	0.0
In situ neoplasms, benign neoplasms and neoplasms of uncertain or unknown behavior (D00–D48)	287	0.6
Anemias (D50–D64)	11	0.0
Endocrine, nutritional and metabolic diseases (E00–E88)	8	0.0
Short stature, not elsewhere classified (E34.3)	1	0.0
Cystic fibrosis (E84)	1	0.0
Other endocrine, nutritional and metabolic diseases (E00–E32,E34.0–E34.2,E34.4–E34.9,E40–E83,E85–E88)	6	0.0
Meningitis (G00,G03)	–	0.0
Other diseases of nervous system and sense organs (G04–H93)	13	0.0
Umbilical hernia (K42)	2	0.0
Other hernia (K40–K41,K43–K46)	–	0.0
Other and unspecified diseases of digestive system (K00–K38,K50–K92)	2	0.0
All other diseases, excluding perinatal conditions, congenital anomalies, and symptoms, signs and ill-defined conditions (D65–D89,I00–J98,L00–N98,U04)	29	0.1
Certain conditions originating in the perinatal period (P00–P96)	41,547	88.6
Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,904	10.5
Fetus affected by maternal hypertensive disorders (P00.0)	2,687	5.7
Fetus affected by maternal renal and urinary tract diseases (P00.1)	71	0.2
Fetus affected by maternal infectious and parasitic diseases (P00.2)	436	0.9
Fetus affected by other maternal circulatory and respiratory diseases (P00.3)	203	0.4
Fetus affected by maternal nutritional disorders (P00.4)	7	0.0
Fetus affected by maternal injury (P00.5)	193	0.4
Fetus affected by surgical procedure on mother (P00.6)	13	0.0
Fetus affected by other medical procedures and maternal conditions (P00.7–P00.8)	1,258	2.7
Fetus affected by unspecified maternal condition (P00.9)	36	0.1
Fetus affected by maternal complications of pregnancy (P01)	5,933	12.7
Fetus affected by incompetent cervix (P01.0)	850	1.8
Fetus affected by premature rupture of membranes (P01.1)	3,823	8.2
Fetus affected by oligohydramnios (P01.2)	247	0.5
Fetus affected by polyhydramnios (P01.3)	133	0.3
Fetus affected by ectopic pregnancy (P01.4)	10	0.0
Fetus affected by multiple pregnancy (P01.5)	679	1.4
Fetus affected by maternal death (P01.6)	49	0.1
Fetus affected by malpresentation before labor (P01.7)	19	0.0
Fetus affected by other and unspecified maternal complications of pregnancy (P01.8–P01.9)	123	0.3
Fetus affected by complications of placenta, cord and membranes (P02)	11,786	25.1
Fetus affected by placenta previa (P02.0)	81	0.2
Fetus affected by other forms of placental separation and hemorrhage (P02.1)	3,919	8.4
Fetus affected by other and unspecified morphological and functional abnormalities of placenta (P02.2)	2,108	4.5
Fetus affected by placental transfusion syndromes (P02.3)	342	0.7
Fetus affected by prolapsed cord (P02.4)	292	0.6
Fetus affected by other compression of umbilical cord (P02.5)	2,762	5.9
Fetus affected by other and unspecified conditions of umbilical cord (P02.6)	999	2.1
Fetus affected by chorioamnionitis (P02.7)	1,253	2.7
Fetus affected by other and unspecified abnormalities of membranes (P02.8–P02.9)	30	0.1
Fetus affected by other complications of labor and delivery (P03)	393	0.8
Fetus affected by breech delivery and extraction (P03.0)	23	0.0
Fetus affected by other malpresentation, malposition and disproportion during labor and delivery (P03.1)	20	0.0
Fetus affected by forceps delivery (P03.2)	–	0.0
Fetus affected by delivery by vacuum extractor (ventouse) (P03.3)	–	0.0
Fetus affected by cesarean delivery (P03.4)	3	0.0
Fetus affected by precipitate delivery (P03.5)	2	0.0
Fetus affected by abnormal uterine contractions (P03.6)	6	0.0
Fetus affected by other and unspecified complications of labor and delivery (P03.8–P03.9)	339	0.7
Fetus affected by noxious influences transmitted via placenta (P04)	493	1.1
Slow fetal growth and fetal malnutrition (P05)	497	1.1

Table 1. Deaths according to 124 selected causes of fetal death: 42 areas, 2018–2020—Con.[By place of residence. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision (ICD–10)*]

Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
Disorders related to short gestation and low birth weight, not elsewhere classified (P07)	812	1.7
Extremely low birth weight or extreme immaturity (P07.0,P07.2)	430	0.9
Other low birth weight and preterm (P07.1,P07.3)	382	0.8
Disorders related to long gestation and high birth weight (P08)	10	0.0
Exceptionally large size and other heavy for gestational age fetus (P08.0–P08.1)	2	0.0
Post-term, not heavy for gestational age fetus (P08.2)	8	0.0
Birth trauma (P10–P15)	4	0.0
Intracranial laceration and hemorrhage due to birth injury and other injuries to central nervous system (P10–P11)	1	0.0
Other birth trauma (P12–P15)	3	0.0
Intrauterine hypoxia and birth asphyxia (P20–P21)	28	0.1
Intrauterine hypoxia first noted before onset of labor (P20.0)	–	0.0
Intrauterine hypoxia first noted during labor and delivery (P20.1)	–	0.0
Intrauterine hypoxia, unspecified (P20.9)	27	0.1
Birth asphyxia (P21)	1	0.0
Other respiratory conditions originating in the perinatal period (P22.8–P22.9,P23–P28)	22	0.0
Congenital pneumonia (P23)	2	0.0
Aspiration syndromes (P24)	7	0.0
Interstitial emphysema and related conditions originating in the perinatal period (P25)	–	0.0
Atelectasis (P28.0–P28.1)	1	0.0
Other respiratory system disorders (P22.8–P22.9,P26–P27,P28.2–P28.9)	12	0.0
Infections specific to the perinatal period (P35–P39)	39	0.1
Congenital rubella syndrome (P35.0)	1	0.0
Congenital cytomegalovirus infection (P35.1)	11	0.0
Congenital herpesviral (herpes simplex) infection (P35.2)	3	0.0
Congenital viral hepatitis (P35.3)	–	0.0
Bacterial sepsis (P36)	1	0.0
Congenital tuberculosis (P37.0)	–	0.0
Congenital toxoplasmosis (P37.1)	3	0.0
Other infections specific to the perinatal period (P35.8–P35.9,P37.2–P37.9,P38–P39)	20	0.0
Fetal hemorrhage (P50–P54)	61	0.1
Hemolytic disease of fetus (P55–P56)	30	0.1
Rh isoimmunization of fetus (P55.0)	20	0.0
ABO isoimmunization of fetus (P55.1)	1	0.0
Other hemolytic disease of fetus (P55.8–P55.9)	9	0.0
Hydrops fetalis due to hemolytic disease (P56)	–	0.0
Perinatal jaundice (P57–P59)	2	0.0
Hematological disorders (P60–P61)	11	0.0
Transitory endocrine and metabolic disorders specific to fetus (P70–P74)	1,277	2.7
Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2)	1,271	2.7
Other transitory endocrine and metabolic disorders specific to fetus (P70.3–P70.9,P71–P74)	6	0.0
Digestive system disorders of fetus (P76–P78)	4	0.0
Other conditions originating in the perinatal period (P29,P80–P96)	15,241	32.5
Hydrops fetalis not due to hemolytic disease (P83.2)	559	1.2
Fetal death of unspecified cause (P95)	14,574	31.1
Withdrawal symptoms from maternal use of drugs of addiction (P96.1)	–	0.0
Termination of pregnancy (P96.4)	–	0.0
Complications of intrauterine procedures, not elsewhere classified (P96.5)	–	0.0
All other specified conditions originating in the perinatal period (P29,P83.0–P83.1,P83.3–P83.9, P91,P94,P96.0,P96.3,P96.8)	108	0.2
Condition originating in the perinatal period, unspecified (P96.9)	–	0.0
Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,899	10.5
Congenital malformations of nervous system (Q00–Q07)	919	2.0
Anencephaly and similar malformations (Q00)	420	0.9
Encephalocele (Q01)	39	0.1
Microcephaly (Q02)	10	0.0
Congenital hydrocephalus (Q03)	160	0.3
Reduction deformities of brain (Q04.0–Q04.3)	135	0.3
Other congenital malformations of brain (Q04.4–Q04.9)	60	0.1
Spina bifida (Q05)	51	0.1
Other congenital malformations of spinal cord and nervous system (Q06–Q07)	44	0.1
Congenital malformations of eye, ear, face and neck (Q10–Q18)	17	0.0
Congenital malformations of heart (Q20–Q24)	570	1.2
Other congenital malformations of circulatory system (Q25–Q28)	168	0.4

Table 1. Deaths according to 124 selected causes of fetal death: 42 areas, 2018–2020—Con.

[By place of residence. An asterisk (*) preceding a cause-of-death code indicates that the code is not included in the *International Classification of Diseases, 10th Revision (ICD–10)*]

Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
Congenital malformations of lung. (Q33)	23	0.0
Other congenital malformations of respiratory system. (Q30–Q32,Q34)	27	0.1
Congenital malformations of digestive system. (Q35–Q45)	87	0.2
Congenital malformations of genital organs. (Q50–Q56)	24	0.1
Congenital malformations of urinary system (Q60–Q64)	359	0.8
Renal agenesis and other reduction defects of kidney (Q60)	179	0.4
Cystic kidney disease (Q61)	93	0.2
Other congenital malformations of urinary system (Q62–Q64)	87	0.2
Congenital malformations and deformations of musculoskeletal system, limbs and integument. (Q65–Q85)	556	1.2
Other congenital malformations (Q86–Q89)	367	0.8
Conjoined twins (Q89.4)	12	0.0
Multiple congenital malformations, not elsewhere classified (Q89.7)	144	0.3
All other congenital malformations (Q86–Q87,Q89.0–Q89.3,Q89.8–Q89.9)	211	0.5
Chromosomal abnormalities, not elsewhere classified. (Q90–Q99)	1,782	3.8
Down's syndrome (Q90)	371	0.8
Edward's syndrome. (Q91.0–Q91.3)	648	1.4
Patau's syndrome (Q91.4–Q91.7)	190	0.4
Other chromosomal abnormalities, not elsewhere classified (Q92–Q99)	573	1.2
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (R00–R99)	35	0.1
External causes of mortality. (*U01,V01–Y84)	40	0.1
Accidents (unintentional injuries). (V01–X59)	40	0.1
Assault (homicide) (*U01,X85–Y09)	–	0.0
Complications of medical and surgical care (Y40–Y84)	–	0.0
Other external causes (Y10–Y36)	–	0.0

– Quantity zero.

0.0 Quantity more than zero but less than 0.05.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Table 2. Fetal deaths and percentage of total deaths for the five selected causes, by race and ethnicity: 42 areas, 2018–2020
[By place of residence]

Rank	Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
All races and ethnicities ¹			
...	All causes	46,876	100.0
1	Fetal death of unspecified cause (P95)	14,574	31.1
2	Fetus affected by complications of placenta, cord and membranes (P02)	11,786	25.1
3	Fetus affected by maternal complications of pregnancy (P01)	5,933	12.7
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,904	10.5
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,899	10.5
...	All other causes (residual)	4,780	10.2
Non-Hispanic White			
...	All causes	21,965	100.0
1	Fetal death of unspecified cause (P95)	7,091	32.3
2	Fetus affected by complications of placenta, cord and membranes (P02)	5,681	25.9
3	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2,673	12.2
4	Fetus affected by maternal complications of pregnancy (P01)	2,301	10.5
5	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	2,049	9.3
...	All other causes (residual)	2,170	9.9
Non-Hispanic Black			
...	All causes	12,032	100.0
1	Fetal death of unspecified cause (P95)	3,531	29.3
2	Fetus affected by complications of placenta, cord and membranes (P02)	3,083	25.6
3	Fetus affected by maternal complications of pregnancy (P01)	1,884	15.7
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	1,640	13.6
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	738	6.1
...	All other causes (residual)	1,156	9.6
Hispanic			
...	All causes	8,465	100.0
1	Fetal death of unspecified cause (P95)	2,533	29.9
2	Fetus affected by complications of placenta, cord and membranes (P02)	1,961	23.2
3	Fetus affected by maternal complications of pregnancy (P01)	1,185	14.0
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	992	11.7
5	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	815	9.6
...	All other causes (residual)	979	11.6

... Category not applicable.

¹Includes other races not shown and origin not stated.

NOTE: Totals may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Table 3. Fetal deaths and percentage of total deaths for the five selected causes, by maternal age: 42 areas, 2018–2020

[By place of residence]

Rank	Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
All ages			
...	All causes	46,876	100.0
1	Fetal death of unspecified cause (P95)	14,574	31.1
2	Fetus affected by complications of placenta, cord and membranes (P02)	11,786	25.1
3	Fetus affected by maternal complications of pregnancy (P01)	5,933	12.7
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,904	10.5
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,899	10.5
...	All other causes (residual)	4,780	10.2
Under 20			
...	All causes	2,707	100.0
1	Fetal death of unspecified cause (P95)	905	33.4
2	Fetus affected by complications of placenta, cord and membranes (P02)	674	24.9
3	Fetus affected by maternal complications of pregnancy (P01)	360	13.3
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	263	9.7
5	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	250	9.2
...	All other causes (residual)	255	9.4
20–39			
...	All causes	41,696	100.0
1	Fetal death of unspecified cause (P95)	12,963	31.1
2	Fetus affected by complications of placenta, cord and membranes (P02)	10,615	25.5
3	Fetus affected by maternal complications of pregnancy (P01)	5,323	12.8
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,350	10.4
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,177	10.0
...	All other causes (residual)	4,268	10.2
40 and over			
...	All causes	2,473	100.0
1	Fetal death of unspecified cause (P95)	706	28.5
2	Fetus affected by complications of placenta, cord and membranes (P02)	497	20.1
3	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	459	18.6
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	304	12.3
5	Fetus affected by maternal complications of pregnancy (P01)	250	10.1
...	All other causes (residual)	257	10.4

... Category not applicable.

NOTE: Totals may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Table 4. Fetal deaths and percentage of total deaths for the five selected causes, by sex: 42 areas, 2018–2020

[By place of residence]

Rank	Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
Both sexes			
...	All causes	46,876	100.0
1	Fetal death of unspecified cause (P95)	14,574	31.1
2	Fetus affected by complications of placenta, cord and membranes (P02)	11,786	25.1
3	Fetus affected by maternal complications of pregnancy (P01)	5,933	12.7
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,904	10.5
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,899	10.5
...	All other causes (residual)	4,780	10.2
Male			
...	All causes	24,570	100.0
1	Fetal death of unspecified cause (P95)	7,679	31.3
2	Fetus affected by complications of placenta, cord and membranes (P02)	6,193	25.2
3	Fetus affected by maternal complications of pregnancy (P01)	3,223	13.1
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	2,548	10.4
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2,412	9.8
...	All other causes (residual)	2,515	10.2
Female			
...	All causes	22,306	100.0
1	Fetal death of unspecified cause (P95)	6,895	30.9
2	Fetus affected by complications of placenta, cord and membranes (P02)	5,593	25.1
3	Fetus affected by maternal complications of pregnancy (P01)	2,710	12.1
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	2,487	11.1
5	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	2,356	10.6
...	All other causes (residual)	2,265	10.2

... Category not applicable.

NOTE: Totals may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Table 5. Fetal deaths and percentage of total deaths for the five selected causes, by gestational age: 42 areas, 2018–2020

[By place of residence]

Rank	Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
Total, 20 weeks or more ¹			
...	All causes	46,876	100.0
1	Fetal death of unspecified cause (P95)	14,574	31.1
2	Fetus affected by complications of placenta, cord and membranes (P02)	11,786	25.1
3	Fetus affected by maternal complications of pregnancy (P01)	5,933	12.7
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,904	10.5
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,899	10.5
...	All other causes (residual)	4,780	10.2
20–23 weeks			
...	All causes	16,964	100.0
1	Fetal death of unspecified cause (P95)	4,504	26.6
2	Fetus affected by maternal complications of pregnancy (P01)	4,424	26.1
3	Fetus affected by complications of placenta, cord and membranes (P02)	3,056	18.0
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	1,987	11.7
5	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	1,308	7.7
...	All other causes (residual)	1,685	9.9
24–27 weeks			
...	All causes	7,317	100.0
1	Fetal death of unspecified cause (P95)	2,583	35.3
2	Fetus affected by complications of placenta, cord and membranes (P02)	1,699	23.2
3	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	983	13.4
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	768	10.5
5	Fetus affected by maternal complications of pregnancy (P01)	484	6.6
...	All other causes (residual)	800	10.9
28–31 weeks			
...	All causes	5,676	100.0
1	Fetal death of unspecified cause (P95)	1,904	33.5
2	Fetus affected by complications of placenta, cord and membranes (P02)	1,561	27.5
3	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	827	14.6
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	574	10.1
5	Fetus affected by maternal complications of pregnancy (P01)	303	5.3
...	All other causes (residual)	507	8.9
32–33 weeks			
...	All causes	3,258	100.0
1	Fetal death of unspecified cause (P95)	978	30.0
1	Fetus affected by complications of placenta, cord and membranes (P02)	978	30.0
3	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	458	14.1
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	391	12.0
5	Fetus affected by maternal complications of pregnancy (P01)	166	5.1
...	All other causes (residual)	287	8.8
34–36 weeks			
...	All causes	5,854	100.0
1	Fetus affected by complications of placenta, cord and membranes (P02)	1,875	32.0
2	Fetal death of unspecified cause (P95)	1,844	31.5
3	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	614	10.5
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	600	10.2
5	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2)	351	6.0
...	All other causes (residual)	570	9.7

Table 5. Fetal deaths and percentage of total deaths for the five selected causes, by gestational age: 42 areas, 2018–2020—Con.
[By place of residence]

Rank	Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
37–38 weeks			
...	All causes	4,393	100.0
1	Fetus affected by complications of placenta, cord and membranes..... (P02)	1,490	33.9
2	Fetal death of unspecified cause	1,482	33.7
3	Fetus affected by maternal conditions that may be unrelated to present pregnancy	422	9.6
4	Congenital malformations, deformations and chromosomal abnormalities..... (Q00–Q99)	331	7.5
5	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus	329	7.5
...	All other causes	339	7.7
39–40 weeks			
...	All causes	2,778	100.0
1	Fetal death of unspecified cause	1,047	37.7
2	Fetus affected by complications of placenta, cord and membranes..... (P02)	970	34.9
3	Fetus affected by maternal conditions that may be unrelated to present pregnancy	231	8.3
4	Congenital malformations, deformations and chromosomal abnormalities..... (Q00–Q99)	198	7.1
5	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus	110	4.0
...	All other causes	222	8.0
41 weeks			
...	All causes	282	100.0
1	Fetal death of unspecified cause	104	36.9
2	Fetus affected by complications of placenta, cord and membranes..... (P02)	92	32.6
3	Congenital malformations, deformations and chromosomal abnormalities..... (Q00–Q99)	30	10.6
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy	18	6.4
5	Fetus affected by maternal complications of pregnancy..... (P01)	11	3.9
...	All other causes	27	9.6
42 weeks and over			
...	All causes	90	100.0
1	Fetus affected by complications of placenta, cord and membranes..... (P02)	24	26.7
1	Fetal death of unspecified cause	24	26.7
3	Fetus affected by maternal complications of pregnancy..... (P01)	9	10.0
4	Congenital malformations, deformations and chromosomal abnormalities..... (Q00–Q99)	7	7.8
5	Fetus affected by maternal conditions that may be unrelated to present pregnancy	5	5.6
...	All other causes	21	23.3

... Category not applicable.

¹Includes gestation not stated.

NOTE: Totals may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Table 6. Fetal deaths and percentage of total deaths for the five selected causes, by birthweight: 42 areas: 2018–2020

[By place of residence]

Rank	Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
All birthweights ¹			
...	All causes	46,876	100.0
1	Fetal death of unspecified cause (P95)	14,574	31.1
2	Fetus affected by complications of placenta, cord and membranes (P02)	11,786	25.1
3	Fetus affected by maternal complications of pregnancy (P01)	5,933	12.7
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,904	10.5
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,899	10.5
...	All other causes (residual)	4,780	10.2
1,499 grams or less			
...	All causes	28,232	100.0
1	Fetal death of unspecified cause (P95)	8,422	29.8
2	Fetus affected by complications of placenta, cord and membranes (P02)	5,964	21.1
3	Fetus affected by maternal complications of pregnancy (P01)	4,939	17.5
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	3,188	11.3
5	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	2,996	10.6
...	All other causes (residual)	2,723	9.6
1,500–2,499 grams			
...	All causes	7,530	100.0
1	Fetus affected by complications of placenta, cord and membranes (P02)	2,489	33.1
2	Fetal death of unspecified cause (P95)	2,338	31.0
3	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	874	11.6
4	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	856	11.4
5	Fetus affected by maternal complications of pregnancy (P01)	326	4.3
...	All other causes (residual)	647	8.6
2,500–3,999 grams			
...	All causes	7,270	100.0
1	Fetus affected by complications of placenta, cord and membranes (P02)	2,622	36.1
2	Fetal death of unspecified cause (P95)	2,593	35.7
3	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	670	9.2
4	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2)	449	6.2
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	345	4.7
...	All other causes (residual)	591	8.1
4,000 grams or more			
...	All causes	733	100.0
1	Syndrome of infant of a diabetic mother and neonatal diabetes mellitus (P70.0–P70.2)	221	30.2
2	Fetal death of unspecified cause (P95)	218	29.7
3	Fetus affected by complications of placenta, cord and membranes (P02)	144	19.6
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	65	8.9
5	Fetus affected by other complications of labor and delivery (P03)	30	4.1
...	All other causes (residual)	55	7.5

... Category not applicable.

¹Includes birthweight not stated.

NOTE: Totals may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Table 7. Fetal deaths and percentage of total deaths for the five selected causes, by plurality: 42 areas, 2018–2020

[By place of residence]

Rank	Cause of death (based on the <i>International Classification of Diseases, 10th Revision</i>)	Number	Percent
All pluralities ¹			
...	All causes	46,876	100.0
1	Fetal death of unspecified cause (P95)	14,574	31.1
2	Fetus affected by complications of placenta, cord and membranes (P02)	11,786	25.1
3	Fetus affected by maternal complications of pregnancy (P01)	5,933	12.7
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,904	10.5
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,899	10.5
...	All other causes (residual)	4,780	10.2
Single delivery			
...	All causes	43,487	100.0
1	Fetal death of unspecified cause (P95)	13,900	32.0
2	Fetus affected by complications of placenta, cord and membranes (P02)	10,921	25.1
3	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	4,720	10.9
4	Fetus affected by maternal complications of pregnancy (P01)	4,687	10.8
5	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	4,668	10.7
...	All other causes (residual)	4,591	10.6
Multiple delivery			
...	All causes	3,389	100.0
1	Fetus affected by maternal complications of pregnancy (P01)	1,246	36.8
2	Fetus affected by complications of placenta, cord and membranes (P02)	865	25.5
3	Fetal death of unspecified cause (P95)	674	19.9
4	Fetus affected by maternal conditions that may be unrelated to present pregnancy (P00)	236	7.0
5	Congenital malformations, deformations and chromosomal abnormalities (Q00–Q99)	179	5.3
...	All other causes (residual)	189	5.6

... Category not applicable.

¹Includes plurality not stated.

NOTE: Totals may not add to 100 because of rounding.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

Technical Notes

The National Vital Statistics System encompasses several databases of statistical information on vital events such as fetal deaths, births, and deaths. These data sources allow the federal government, the research community, and the public at large to be aware of and monitor basic trends occurring within the population. Data in this report are drawn from two different National Center for Health Statistics (NCHS) vital statistics data files: the 2018–2020 fetal death data file and the 2018–2020 birth data file. More than 99% of births occurring in this country are registered (37). However, this report is based on a subset of the fetal data.

NCHS adopted the World Health Organization (WHO) definition of fetal death as the recommended standard for use in the early 1950s. The following inclusive definition was developed by WHO in 1950 to end confusion arising from the use of such terms as stillbirth, spontaneous abortion, and miscarriage:

Death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

The use of the term “stillbirth” has increased in recent years. In part, this responds to sensitivity concerns among people who have experienced this, as they often prefer the term stillbirth over fetal death.

The states use a consistent definition of fetal death, but the registration of a fetal death in most states is required only for those fetal deaths occurring at 20 or more weeks of gestation. National fetal death statistics are compiled from state fetal death reports received by NCHS every year and are typically tabulated for those deaths of 20 or more weeks of gestation. Statistics on induced terminations of pregnancies for live fetuses (abortions) are excluded from national fetal death statistics and are not included in this report.

Gestational age is measured by obstetric estimate of gestation at delivery. Several conventional groupings are often used for gestational age. However, in this report, the categories are generally collapsed into 3-week periods. Records with gestational age not stated are excluded from the report.

Maternal race and Hispanic origin are captured with two separate items. As of 2003, jurisdictions began collecting multiple-race data. Data by race in this report are based on the revised standards issued by the Office of Management and Budget in 1997 (38), which allow for the reporting of a minimum of five race categories either by single race (reported alone) or in combination (more than one race or multiple races). 2018 was the first year for which all 50 states and the District of Columbia (D.C.) reported race data according to these revised standards. The race and Hispanic-origin groups shown in this report are non-Hispanic single-race White, non-Hispanic single-race Black, and Hispanic. For brevity, text references to non-Hispanic White or non-Hispanic Black women omit the term “single race.” Other groups are not shown separately due to small numbers.

The number of fetal deaths and live births reported for an area represent complete counts of such events. As such, they are not subject to sampling error, although they are subject to nonsampling error in the registration process. Because fetal deaths in the reporting area are not a random sample of all fetal deaths, the findings are not generalizable to the entire United States. Note that the race and Hispanic-origin distributions of fetal deaths for the 41 states and D.C. are somewhat different from those for the entire United States (Table). In the reporting areas included in this report, non-Hispanic White women were overrepresented, while Hispanic and non-Hispanic Black women were underrepresented when compared with the total United States. In this table, unknown responses are excluded from the computation of percent distributions. The distributions for the age groups were similar to that for the total United States.

Table. Characteristics of the 42 reporting areas and of all fetal deaths, by selected demographic characteristics: United States, 2018–2020

[By place of residence]

Maternal characteristic	42 reporting areas		U.S. total	
	Number	Percent	Number	Percent
Race and Hispanic origin				
All ¹	46,876	100.0	64,791	100.0
Non-Hispanic White ²	21,965	48.3	27,441	†43.9
Non-Hispanic Black ²	12,032	26.5	17,240	†27.6
Hispanic ³	8,465	18.6	13,005	†20.8
Age group				
All ages	46,876	100.0	64,791	100.0
Under 20	2,707	5.8	3,708	5.7
20–24	8,979	19.2	12,334	19.0
25–29	12,611	26.9	17,297	26.7
30–34	12,258	26.1	16,931	26.1
35–39	7,848	16.7	10,950	16.9
40 and over	2,473	5.3	3,571	5.5

† Difference significant at $p < 0.05$.

¹Includes other races not shown and origin not stated.

²Race and Hispanic origin are reported separately on the fetal death report. Race categories are consistent with the 1997 Office of Management and Budget standards.

³Includes all people of Hispanic origin of any race.

SOURCE: National Center for Health Statistics, National Vital Statistics System, Fetal deaths.

This is the third separate report on fetal cause of death (2,3). The reporting areas have differed for each report as data has become available for a larger area over time. As a consequence, the findings have been presented as discrete measures rather than as part of a trend. In the 31 areas for which cause-of-fetal-death data has been available since 2014, the percentage with unspecified cause has ranged between 28.0% and 29.6% between 2014 and 2020.

For additional information on measurement of data items shown in this report and statistical methods, see the “User Guide to the 2020 fetal death public use file” (4).

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