

Report to Congress

An Assessment of Sepsis in the United States and its Burden on Hospital Care

Required by the Fiscal Year 2023 Omnibus Spending Bill

Appendices

Prepared by:

U.S. DEPARTMENT OF HEALTH AND
HUMAN SERVICES

Agency for Healthcare Research and Quality

5600 Fishers Lane

Rockville, MD 20857

www.ahrq.gov

NORC at the University of Chicago, under Contract No. 75Q80123D00001

AHRQ Publication No. 24-0087

September 2024



Contents

- Appendix A. HCUP Data Partners and HCUP Databases 1
 - HCUP Data Partners 1
 - HCUP Databases 3
 - HCUP National Inpatient Sample (NIS) 3
 - HCUP Nationwide Emergency Department Sample (NEDS) 3
 - HCUP State Inpatient Databases (SID) 3
 - HCUP State Emergency Department Databases (SEDD) 4

- Appendix B. Additional Data Sources 5
 - American Hospital Association 5
 - Census Bureau 5
 - Centers for Disease Control and Prevention 5
 - Claritas 5
 - Compendium of U.S. Health Systems 5
 - Federal Office of Rural Health Policy 5
 - Health Resources and Services Administration 5
 - National Center for Health Statistics 6
 - Trauma Information Exchange Program 6

- Appendix C. Clinical Coding for Sepsis 7

- Appendix D. Background on Measures, Characteristics, and Calculations 95
 - Definitions of Measures Based on a Principal/First-Listed Diagnosis of Sepsis 95
 - Principal/first-listed diagnoses 95
 - Aggregate hospital costs 95
 - Average length of stay 95
 - Average total hospital cost 95
 - In-hospital mortality rate 96
 - Percentage of inpatient stays that were for sepsis 96
 - Percentage of sepsis inpatient stays for which the patient was discharged to another type of health facility or to home health care 96
 - Percentage of total inpatient days that were for sepsis inpatient stays 96
 - Rate of sepsis inpatient stays with a readmission occurring for any cause 96
 - Rate of sepsis inpatient stays with a subsequent ED visit that did not result in an admission to the same hospital 97

Definitions of Measures Based on Any Diagnosis of Sepsis	98
Any-listed diagnoses	98
Population rates of sepsis-related inpatient stays	98
Percentage of inpatient stays that are sepsis related	98
Percentage of sepsis-related inpatient stays with intensive care unit services	99
Percentage of sepsis-related inpatient stays that were admitted through the ED	99
Percentage of sepsis-related inpatient stays that were discharged to a post-acute care setting ..	99
Percentage of all ED visits that were sepsis related	99
Percentage of all sepsis-related ED visits that did not result in admission to the same hospital ..	99
Percentage of sepsis-related ED visits in which the patient was transferred to a different hospital	100
Percentage of inpatient stays admitted through the ED that resulted in a transfer to an inpatient setting at a different acute care hospital	100
Definitions of Patient Characteristics	100
Expected payer	100
Location of patients' residence (urban/rural designation)	101
Location of patients' residence (social vulnerability designation)	101
Patient race and ethnicity	101
Definitions of Hospital Characteristics	102
Non-Federal acute care hospitals	102
Critical access hospital	102
Hospital bed size	102
Hospital intensive care unit bed size	103
Hospital in medically underserved area	103
Hospital ownership	103
Hospital social vulnerability designation	103
Hospital system affiliation	104
Hospital trauma level	104
Minority-serving hospital	104
Safety-net hospital	105
Teaching hospital	105
Urban-rural location of hospital	105
Calculations	105
Average annual percentage change	105
Percentage differences	105

Imputation of missing charges and costs 105

Relative standard error 106

Significance testing..... 106

Suppressed cases 106

Appendix E. Supporting Documentation 107

Appendix E.1. Supporting Documentation for Chapter 1 107

Appendix E.2. Supporting Documentation for Chapter 2 108

Appendix E.2.1. Definitions of Sepsis..... 108

Appendix E.2.2. Machine Learning (ML)-based Models for Early Recognition of Sepsis 109

Appendix E.2.3. Additional Considerations for the Management and Treatment of Sepsis..... 110

Appendix E.2.4. Treatment Considerations for Patient Subpopulations 110

Appendix E.4. Supporting Documentation for Chapter 4 112

Appendix Table E.4.1. Overview of Inpatient Stays Involving Sepsis, 2016–2021 112

Appendix Table E.4.2. Overview of Emergency Department Utilization During Sepsis-Related Hospital Encounters, 2016–2021 113

Appendix Table E.4.3. Post-Acute Care Transitions Following Sepsis-Related Inpatient Stays and All Inpatient Stays, 2021 114

Appendix Table E.4.4. Post-Acute Care Transitions Following Sepsis-Related Inpatient Stays by Patient Population, 2021 115

Appendix Table E.4.5. Hospital Readmissions for Sepsis Inpatient Stays, 2021 116

Appendix Table E.4.6. Overview of Hospital Costs and In-Hospital Mortality for Sepsis Hospital Encounters, 2016–2021 117

Appendix Table E.4.7. Overview of Hospital Costs, In-Hospital Mortality, and Length of Stay for Hospital Encounters Involving Sepsis by Patient Population, 2016–2021 118

Appendix Table E.4.8. Hospital Utilization, Hospital Costs, In-Hospital Mortality, and Length of Stay for Hospital Encounters Involving Sepsis by COVID-19 Diagnosis, 2021 119

Appendix E.5. Supporting Documentation for Chapter 5 120

Appendix Table E.5.1. Percentage of All Inpatient Stays Related to Sepsis by Patient Characteristics, 2016, 2019, and 2021 120

Appendix Table E.5.2. Rehospitalizations for Sepsis Inpatient Stays by Patient Characteristics, 2021 121

Appendix Table E.5.3. Outcomes for Sepsis Hospital Encounters by Patient Characteristics, 2021 122

Appendix Table E.5.4. In-Hospital Mortality per 1,000 Nonmaternal Adult Sepsis Hospital Encounters by Patient Characteristics, 2021 123

Appendix Table E.5.5. Average Total Hospital Cost for Nonmaternal Adult Sepsis Inpatient Stays by Patient Characteristics, 2021 124

Appendix Table E.5.6. Average Length of Stay for Nonmaternal Adult Sepsis Inpatient Stays by Patient Characteristics, 2021.....	125
Appendix Table E.5.7. Outcomes for Maternal Sepsis Hospital Encounters by Patient Characteristics, 2021.....	126
Appendix Table E.5.8. Outcomes for Pediatric Sepsis Hospital Encounters by Patient Characteristics, 2021.....	127
Appendix Table E.5.9. Outcomes for Neonatal Sepsis Hospital Encounters by Patient Characteristics, 2021.....	128
Appendix E.6. Supporting Documentation for Chapter 6.....	129
Appendix Table E.6.1. Overview of Hospital Encounters Involving Sepsis, 2019 and 2021.....	129
Appendix Table E.6.2. Overview of Hospital Encounters Involving Sepsis at Urban and Rural Hospitals, 2019 and 2021.....	130
Appendix Table E.6.3. Hospital Variation in Percentage of Sepsis-Related Inpatient Stays, 2021.....	131
Appendix Table E.6.4. Hospital Variation in the Percentage of Adult Sepsis-Related Inpatient Stays Involving ICU Utilization, 2021.....	132
Appendix Table E.6.5. Variation in the Percentage of Inter-Hospital Transfers for Sepsis-Related Inpatient Stays Among Rural Hospitals, 2021.....	133
Appendix Table E.6.6. Overview of Outcomes Associated with Hospital Encounters for Sepsis, 2019 and 2021.....	134
Appendix Table E.6.7. Overview of Outcomes Associated with Hospital Encounters for Sepsis at Urban and Rural Hospitals, 2019 and 2021.....	135
Appendix Table E.6.8. Variation in In-Hospital Mortality Rate per 1,000 Hospital Encounters at Urban and Rural Hospitals, 2021.....	136
Appendix Table E.6.9. Variation in Average Total Hospital Cost for Sepsis Inpatient Stays at Urban and Rural Hospitals, 2021.....	137
Appendix Table E.6.10. Variation in Average Length of Stay (Days) for Sepsis Inpatient Stays at Urban and Rural Hospitals, 2021.....	138
Appendix E.7. Supporting Documentation for Chapter 7.....	139
Appendix Table E.7.1. Population Rate of Sepsis-Related Inpatient Stays per 100,000 Population by State, 2019 and 2021.....	139
Appendix Table E.7.2. State Population, 2019 and 2021.....	141
Appendix Table E.7.3. State Variation in Percentage of Sepsis-Related Inpatient Stays, 2019 and 2021.....	143
Appendix Table E.7.4. State Variation in Percentage of Sepsis-Related Inpatient Stays by Patient Population, 2021.....	145
Appendix Table E.7.5. State Variation in Percentage of Sepsis-Related Inpatient Stays Involving COVID-19, 2021.....	147

Appendix Table E.7.6. State Variation in Percentage of Aggregate Hospital Costs Attributable to Sepsis Inpatient Stays, 2019 and 2021	149
Appendix Table E.7.7. State Variation in Percentage of Aggregate Hospital Costs Attributable to Sepsis Inpatient Stays by Patient Population, 2021	151
Appendix Table E.7.8. State Variation in In-Hospital Mortality per 1,000 Sepsis Hospital Encounters, 2019 and 2021	153
Appendix Table E.7.9. State Variation in In-Hospital Mortality per 1,000 Sepsis Hospital Encounters by Patient Population, 2021	155
Appendix E.8. Supporting Documentation for Chapter 8	157
Appendix Table E.8.1. State-Level Activities and Resources Related to Sepsis	157

Appendix A. HCUP Data Partners and HCUP Databases

Appendix A provides a list of partner organizations providing data to HCUP and a description of the HCUP databases used for the analyses presented in this report.

HCUP Data Partners

Alaska Department of Health
Alaska Hospital and Healthcare Association
Arizona Department of Health Services
Arkansas Department of Health
California Department of Health Care Access and Information
Colorado Hospital Association
Connecticut Hospital Association
Delaware Division of Public Health
District of Columbia Hospital Association
Florida Agency for Health Care Administration
Georgia Hospital Association
Hawaii Laulima Data Alliance
Hawaii University of Hawaii at Hilo
Illinois Department of Public Health
Indiana Hospital Association
Iowa Hospital Association
Kansas Hospital Association
Kentucky Cabinet for Health and Family Services
Louisiana Department of Health
Maine Health Data Organization
Maryland Health Services Cost Review Commission
Massachusetts Center for Health Information and Analysis
Michigan Health & Hospital Association
Minnesota Hospital Association
Mississippi State Department of Health
Missouri Hospital Industry Data Institute
Montana Hospital Association
Nebraska Hospital Association
Nevada Department of Health and Human Services
New Hampshire Department of Health & Human Services
New Jersey Department of Health
New Mexico Department of Health
New York State Department of Health
North Carolina Department of Health and Human Services
North Dakota (data provided by the Minnesota Hospital Association)
Ohio Hospital Association
Oklahoma State Department of Health
Oregon Association of Hospitals and Health Systems
Oregon Health Authority
Pennsylvania Health Care Cost Containment Council
Rhode Island Department of Health

South Carolina Revenue and Fiscal Affairs Office
South Dakota Association of Healthcare Organizations
Tennessee Hospital Association
Texas Department of State Health Services
Utah Department of Health
Vermont Association of Hospitals and Health Systems
Virginia Health Information
Washington State Department of Health
West Virginia Department of Health and Human Resources
Wisconsin Department of Health Services
Wyoming Hospital Association

HCUP Databases

HCUP National Inpatient Sample (NIS)

The National Inpatient Sample (NIS) is designed to produce national and regional estimates of inpatient utilization, access, cost, quality, and outcomes. The NIS is a stratified weighted sample drawn from U.S. community hospitals¹ included in the HCUP State Inpatient Databases (SID) which together encompass more than 95 percent of all U.S. inpatient stays. Its large sample size enables analyses of rare conditions, uncommon treatments, and special populations.

The NIS contain a core set of clinical and nonclinical information on all inpatient stays, regardless of the expected payer including, but not limited to, Medicare, Medicaid, private insurance, self-pay, or those billed as 'no charge'. The number of States participating in the NIS has grown from 8 in the first year (1988) to 48, plus the District of Columbia. In addition, the sampling design for the NIS was modified in 1998 and 2012 to improve the accuracy of the national estimates. Unweighted, the NIS contains around 7 million hospital stays each year. Weighted, it estimates around 35 million hospitalizations nationally.

HCUP Nationwide Emergency Department Sample (NEDS)

The HCUP Nationwide Emergency Department Sample (NEDS) is designed to produce national and regional estimates of emergency department utilization patterns and support public health professionals, administrators, policymakers, and clinicians in their decision making regarding this critical source of care. The NEDS is a 20 percent weighted sample of hospital-owned emergency departments (EDs) from the State Emergency Department Databases (SEDD) and State Inpatient Databases (SID).

The SEDD contain information on ED visits that do not result in an admission to the same hospital (i.e., encounters for patients who are treated in the ED and then discharged home, transferred to another hospital, left against medical advice, or died receiving treatment in the ED). The SID contain information on ED visits for which patients initially seen in the ED are then admitted to the same hospital. The NEDS contain a core set of clinical and nonclinical information on ED visits, regardless of the expected payer including, but not limited to, Medicare, Medicaid, private insurance, self-pay, or those billed as 'no charge'. Over time, the number of States participating in the NEDS has grown from 24 in the first year to 40, plus the District of Columbia. Unweighted, the NEDS contains about 30 million ED visits. Weighted, it estimates roughly 127 million ED visits.

HCUP State Inpatient Databases (SID)

The State Inpatient Databases (SID) are a set of State-specific databases well-suited for research that requires complete enumeration of inpatient stays from hospitals and discharges within and across States and data years. The SID contain inpatient data from participating HCUP Partner organizations, and together encompass more than 95 percent of all U.S. inpatient stays.

The SID contain a core set of clinical and nonclinical information on all inpatient stays, regardless of the expected payer including, but not limited to, Medicare, Medicaid, private insurance, self-pay, or those billed as 'no charge'. In addition to the core set of data elements common to all SID, some include other information such as the patient's race and ethnicity. To facilitate multistate comparisons and analyses, data are translated into a uniform, user-friendly format.

¹ Community hospitals that are designated as rehabilitation or long-term acute care facilities are excluded.

HCUP State Emergency Department Databases (SEDD)

The State Emergency Department Databases (SEDD) are a set of State-specific databases that researchers and policymakers use to investigate questions related to current and historical trends in emergency department (ED) care within and across States. The SEDD include information from HCUP Partner organizations on ED visits that do not result in an admission (i.e., encounters for patients who are treated in the ED and then discharged home, transferred to another hospital or health facility, left against medical advice, or died while receiving ED care).

The SEDD contain a core set of clinical and nonclinical information on all ED visits that do not result in admission regardless of the expected payer including, but not limited to, Medicare, Medicaid, private insurance, self-pay, or those billed as 'no charge'. In addition to the core set of data elements common to all SEDD, some include other information such time of ED admission and discharge. To facilitate multistate comparisons and analyses, data are translated into a uniform, user-friendly format.

More information on the HCUP databases can be found on the HCUP User Support website at [HCUP Databases \(ahrq.gov\)](https://www.hcup.ahrq.gov).

Appendix B. Additional Data Sources

American Hospital Association

Most of the hospital characteristics used in this report were obtained from the American Hospital Association (AHA) Annual Survey of Hospitals, which profiles a universe of over 6,200 hospitals and 400 health care systems throughout the United States and associated areas. Data are available at the hospital and system level for research and advocacy. These data are a primary reference for government agencies, such as the Agency for Healthcare Research and Quality (AHRQ), and industry reports and policy papers (e.g., *U.S. News & World Report*, *Health Affairs*).²

Census Bureau

Population data used to develop population-based rates are from the United States Census Bureau's American Community Survey (ACS), a nationwide survey designed to provide communities a look at how they are changing. The ACS provides single-year and multiyear estimates on several important factors, such as age, sex, race, insurance status, and households. Information is available at several geographic levels, including national, regional, State, county, and census tract levels. For this report, we used the single-year ACS data at the county-level by age, sex, and race.

Centers for Disease Control and Prevention

The classification of socially vulnerable communities used the Social Vulnerability Index (SVI), which was created by the Centers for Disease Control and Prevention (CDC) to assist with emergency response planning for local communities. The SVI ranks counties in terms of vulnerability overall as well as on a variety of social factors that are consolidated into four themes—socioeconomic status, household composition and disability, minority status and language, and housing type and transportation.

Claritas

Population data used to develop population-based rates by community-level income were derived from the ZIP Code-level Demographic Update Files available from Claritas, a vendor that produces population projections based on data from the U.S. Census Bureau.

Compendium of U.S. Health Systems

Information on hospital system affiliation was obtained from the Compendium of U.S. Health Systems, which is a data resource for AHRQ's Comparative Health System Performance Initiative. It includes information on U.S. health systems such as system identification number (a unique number assigned by AHRQ), name, home office city, and State, as well as total counts of system hospitals in multiple States, acute care beds, discharges, and residents.

Federal Office of Rural Health Policy

Rural areas and hospitals were identified based on ZIP Code-level data from the Federal Office of Rural Health Policy (FORHP). FORHP has created a crosswalk of ZIP Codes identifying the set of nonmetropolitan counties and rural census tracts that comprise rural areas as defined by FORHP.

Health Resources and Services Administration

The identification of a medically underserved area (MUA) was created by the Health Resources and Services Administration (HRSA) to identify geographic areas and populations with a lack of access to

² American Hospital Association (AHA). Why AHA Data. <https://www.ahadata.com/why-aha-data>. Accessed May 23, 2024.

primary care services. These designations help establish health maintenance organizations or community health centers. MUAs have a shortage of primary care health services within geographic areas such as:

- A whole county
- A group of neighboring counties
- A group of urban census tracts
- A group of county or civil divisions.

National Center for Health Statistics

The distinction between small and large metropolitan areas was based on county-level classifications from the National Center for Health Statistics (NCHS) data available from CDC. NCHS provides county-level classifications of urban/rural location, which include gradations of metropolitan, micropolitan, and noncore counties by population size. The classification is designed for studying associations between urbanization level of residence and health.

Trauma Information Exchange Program

The identification of hospital trauma center level is based on data from the Trauma Information Exchange Program (TIEP). The TIEP data are maintained by the American Trauma Society and the Johns Hopkins Center for Injury Research and Policy, which receive funding from CDC. The annual database maintains a national inventory of trauma centers in the United States with their designated trauma level.

Appendix C. Clinical Coding for Sepsis

Sepsis is characterized by a dysregulated host immune response to infection. Historically,³ the diagnosis of sepsis has been based on SIRS (Systemic Inflammatory Response Syndrome) criteria plus infection or suspicion of infection. To meet SIRS criteria for sepsis, at least two of the following must be outside of specified ranges: (1) temperature, (2) heart rate, (3) respiratory rate, and (4) white blood cell count. Associated acute organ dysfunction is not required for the diagnosis of sepsis by this definition. This “SIRS + suspicion of infection” definition of sepsis is believed to have resulted in sepsis being overdiagnosed, since many patients have an infection (e.g., urinary tract infection) and meet two or more SIRS criteria, yet their immune response is not significantly dysregulated and there is no acute organ dysfunction.^{4,5}

Coding of sepsis generally requires at least two diagnosis codes, one for the systemic infection (i.e., sepsis), followed by a code for the underlying infection (e.g., pneumonia, cellulitis, etc.). If there is associated acute organ dysfunction, the diagnosis is known as severe sepsis in ICD-10-CM. Here, the sepsis infection code is sequenced first, followed by either R65.20 “Severe sepsis without septic shock” or R65.21 “Severe sepsis with septic shock”. The underlying infection is coded using a third code. Generally, once a sepsis code is assigned, there is no additional financial incentive for the hospital to document or code severe sepsis. This situation has resulted in overdiagnosis and overcoding of sepsis without severe sepsis, and underdiagnosis and undercoding of severe sepsis.⁶

In 2016, a new definition of sepsis known as Sepsis-3 was announced at the 45th Critical Care Congress.⁷ In this definition, acute organ dysfunction/failure associated with infection is considered integral to sepsis; without acute organ dysfunction there is no sepsis. The concept of “severe sepsis” doesn’t exist in Sepsis-3 since it is redundant, i.e., all sepsis, by definition, must have associated acute organ dysfunction, so all sepsis is “severe sepsis”. Using an organ dysfunction/failure assessment system called SOFA (Sequential Organ Failure Assessment), points are assigned for degree of organ failure, focusing on six body systems: (1) respiratory, (2) neurologic, (3) cardiovascular, (4) hepatic, (5) hematologic, and (6) renal. Sepsis criteria are met if there is an increase of two or more points due to infection.

To be consistent with current professional consensus, reflected in Sepsis-3, acute organ dysfunction is a necessary component of sepsis. Therefore, an ICD-10-CM code for sepsis, without an accompanying code for acute organ dysfunction, does not meet criteria for sepsis. We required either a code for severe sepsis (diagnosis R65.20), septic shock (diagnosis R65.21), or a code for sepsis with at least one additional code representing acute organ dysfunction, based on the six body systems used in SOFA for maternal encounters (regardless of age) and adults (aged 18 years and older; Table C.1). ICD-10-CM codes do not indicate the magnitude of dysfunction, so it is not possible to assign points for degree of dysfunction. The presence of at least one acute organ dysfunction code (without regard to

³ Levy MM, Fink MP, Marshall JC, et al. 2001 SCCM/ESICM/ACCP/ATS/SIS International Sepsis Definitions Conference. *Crit Care Med*. 2003;31(4):1250-1256. doi:10.1097/01.CCM.0000050454.01978.3B

⁴ Kaukonen KM, Bailey M, Pilcher D, Cooper DJ, Bellomo R. Systemic inflammatory response syndrome criteria in defining severe sepsis. *N Engl J Med*. 2015;372(17):1629-1638. doi:10.1056/NEJMoa1415236

⁵ Rhee C, Chiotos K, Cosgrove SE, et al. Infectious Diseases Society of America Position Paper: Recommended Revisions to the National Severe Sepsis and Septic Shock Early Management Bundle (SEP-1) Sepsis Quality Measure. *Clin Infect Dis*. 2021;72(4):541-552. doi:10.1093/cid/ciaa059

⁶ Rhee C, Murphy MV, Li L, Platt R, Klompas M; Centers for Disease Control and Prevention Epicenters Program. Comparison of trends in sepsis incidence and coding using administrative claims versus objective clinical data. *Clin Infect Dis*. 2015;60(1):88-95. doi:10.1093/cid/ciu750

⁷ Singer M, Deutschman CS, Seymour CW, et al. The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3). *JAMA*. 2016;315(8):801-810. doi:10.1001/jama.2016.0287

severity), along with a sepsis code, meets our criteria for sepsis for these two sub-populations. Consistent with current clinical practice, the criteria for neonates and children (under 18 years of age) focused on the infection in the bloodstream and did not require an indication of acute organ dysfunction when there was no reporting of severe sepsis or septic shock (Table C.1). Recommendations from the 2024 International Consensus Criteria for Pediatric Sepsis and Septic Shock⁶⁵ that recommended identifying sepsis by potentially life-threatening organ dysfunction in children with suspected or confirmed infection are under consideration in the medical community and were not adopted for this report.

Table C.1. Clinical Coding Criteria for Identifying Hospital Encounters Involving Sepsis for Mutually Exclusive Sepsis Patient Populations

Population	Maternal	Age Criteria	Sepsis Criteria
Maternal	Yes – Any DX indicating a maternal condition as identified by the AHRQ Quality Indicators (setname MDC14PRINDX)*	Any age	Any ICD-10-CM diagnosis of the following: <ul style="list-style-type: none"> • Septic shock** • Severe sepsis*** • Any other diagnosis indicating sepsis <i>with</i> at least one diagnosis indicating organ dysfunction (including maternal “O” organ dysfunction codes)
Adult	No	18 years and older****	Any ICD-10-CM diagnosis of the following: <ul style="list-style-type: none"> • Septic shock** • Severe sepsis*** • Any other diagnosis indicating sepsis <i>with</i> at least one diagnosis indicating organ dysfunction
Pediatric	No	Age 0 with age in days > 27 days <i>or</i> age 1-17 years	Any ICD-10-CM diagnosis of the following: <ul style="list-style-type: none"> • Septic shock** • Severe sepsis*** • Any other diagnosis indicating sepsis (no requirement to have indication of organ dysfunction)
Neonatal	No	Age in days of 0-27	Any ICD-10-CM diagnosis of the following: <ul style="list-style-type: none"> • Septic shock** • Severe sepsis*** • Any other diagnosis indicating sepsis (no requirement to have indication of organ dysfunction)

*AHRQ Prevention Quality Indicator (PQI), Appendix F: MDC 14 and MDC 15 Principal Diagnosis Codes, v2023 (https://qualityindicators.ahrq.gov/Downloads/Modules/PQI/V2023/TechSpecs/PQI_Appendix_F.pdf). Accessed November 10, 2023.

** Septic shock identified by ICD-10-CM diagnoses R6521 and T8112XA.

*** Severe sepsis identified by ICD-10-CM diagnosis R6520.

**** The adult group (and in particular those aged 65 years and older) included a small percentage of records (less than 0.02 percent) of sepsis-related inpatient stays missing patient age information. Records missing patient age information were included in this group because it was the largest of the sepsis patient populations.

The ICD-10-CM diagnosis codes used to identify sepsis are included in Table C.2. The ICD-10-CM diagnosis codes used to identify organ dysfunction are included in Table C.3. The ICD-10-CM/PCS codes used to identify maternal encounters are included in Table C.4. The ICD-10-CM diagnosis codes used to identify COVID-19 are included in Table C.5.

Table C.2. ICD-10-CM Diagnosis Codes Indicating Sepsis

ICD-10-CM Code Indicating Sepsis	ICD-10-CM Code Description
Septic Shock	
R6521	Severe sepsis with septic shock
T8112XA	Postprocedural septic shock, initial encounter
Severe Sepsis	
R6520	Severe sepsis without septic shock
Other Sepsis	
A021	Salmonella sepsis
A207	Septicemic plague
A227	Anthrax sepsis
A267	Erysipelothrix sepsis
A327	Listerial sepsis
A392	Acute meningococemia
A394	Meningococemia, unspecified
A400	Sepsis due to streptococcus, group A
A401	Sepsis due to streptococcus, group B
A403	Sepsis due to Streptococcus pneumoniae
A408	Other streptococcal sepsis
A409	Streptococcal sepsis, unspecified
A4101	Sepsis due to Methicillin susceptible Staphylococcus aureus
A4102	Sepsis due to Methicillin resistant Staphylococcus aureus
A411	Sepsis due to other specified staphylococcus
A412	Sepsis due to unspecified staphylococcus
A413	Sepsis due to Hemophilus influenzae
A414	Sepsis due to anaerobes
A4150	Gram-negative sepsis, unspecified
A4151	Sepsis due to Escherichia coli [E. coli]
A4152	Sepsis due to Pseudomonas
A4153	Sepsis due to Serratia
A4154	Sepsis due to Acinetobacter baumannii
A4159	Other Gram-negative sepsis
A4181	Sepsis due to Enterococcus

ICD-10-CM Code Indicating Sepsis	ICD-10-CM Code Description
Septic Shock	
A4189	Other specified sepsis
A419	Sepsis, unspecified organism
A427	Actinomycotic sepsis
A5486	Gonococcal sepsis
B377	Candidal sepsis
O0337	Sepsis following incomplete spontaneous abortion
O0387	Sepsis following complete or unspecified spontaneous abortion
O0487	Sepsis following (induced) termination of pregnancy
O0737	Sepsis following failed attempted termination of pregnancy
O0882	Sepsis following ectopic and molar pregnancy
O85	Puerperal sepsis
O8604	Sepsis following an obstetrical procedure
P360	Sepsis of newborn due to streptococcus, group B
P3610	Sepsis of newborn due to unspecified streptococci
P3619	Sepsis of newborn due to other streptococci
P362	Sepsis of newborn due to Staphylococcus aureus
P3630	Sepsis of newborn due to unspecified staphylococci
P3639	Sepsis of newborn due to other staphylococci
P364	Sepsis of newborn due to Escherichia coli
P365	Sepsis of newborn due to anaerobes
P368	Other bacterial sepsis of newborn
P369	Bacterial sepsis of newborn, unspecified
T8144XA	Sepsis following a procedure, initial encounter

Table C.3. ICD-10-CM Codes Indicating Organ Dysfunction

ICD-10-CM Code Indicating Organ Dysfunction	ICD-10-CM Code Description
D65	Disseminated intravascular coagulation [defibrination syndrome]
D6959	Other secondary thrombocytopenia
D696	Thrombocytopenia, unspecified
F05	Delirium due to known physiological condition
G931	Anoxic brain damage, not elsewhere classified
G9340	Encephalopathy, unspecified
G9341	Metabolic encephalopathy

ICD-10-CM Code Indicating Organ Dysfunction	ICD-10-CM Code Description
G9349	Other encephalopathy
I468	Cardiac arrest due to other underlying condition
I469	Cardiac arrest, cause unspecified
I9589	Other hypotension
I959	Hypotension, unspecified
J80	Acute respiratory distress syndrome
J9600	Acute respiratory failure, unspecified whether with hypoxia or hypercapnia
J9601	Acute respiratory failure with hypoxia
J9602	Acute respiratory failure with hypercapnia
J9620	Acute and chronic respiratory failure, unspecified whether with hypoxia or hypercapnia
J9621	Acute and chronic respiratory failure with hypoxia
J9622	Acute and chronic respiratory failure with hypercapnia
J9690	Respiratory failure, unspecified, unspecified whether with hypoxia or hypercapnia
J9691	Respiratory failure, unspecified with hypoxia
J9692	Respiratory failure, unspecified with hypercapnia
K7200	Acute and subacute hepatic failure without coma
K7201	Acute and subacute hepatic failure with coma
K7290	Hepatic failure, unspecified without coma
K7291	Hepatic failure, unspecified with coma
K763	Infarction of liver
K7682	Hepatic encephalopathy
N170	Acute kidney failure with tubular necrosis
N171	Acute kidney failure with acute cortical necrosis
N172	Acute kidney failure with medullary necrosis
N178	Other acute kidney failure
N179	Acute kidney failure, unspecified
O0331	Shock following incomplete spontaneous abortion
O0332	Renal failure following incomplete spontaneous abortion
O0336	Cardiac arrest following incomplete spontaneous abortion
O0381	Shock following complete or unspecified spontaneous abortion
O0382	Renal failure following complete or unspecified spontaneous abortion
O0386	Cardiac arrest following complete or unspecified spontaneous abortion
O0481	Shock following (induced) termination of pregnancy
O0482	Renal failure following (induced) termination of pregnancy

ICD-10-CM Code Indicating Organ Dysfunction	ICD-10-CM Code Description
O0486	Cardiac arrest following (induced) termination of pregnancy
O0731	Shock following failed attempted termination of pregnancy
O0732	Renal failure following failed attempted termination of pregnancy
O0736	Cardiac arrest following failed attempted termination of pregnancy
O083	Shock following ectopic and molar pregnancy
O084	Renal failure following ectopic and molar pregnancy
O0881	Cardiac arrest following an ectopic and molar pregnancy
O2650	Maternal hypotension syndrome, unspecified trimester
O2651	Maternal hypotension syndrome, first trimester
O2652	Maternal hypotension syndrome, second trimester
O2653	Maternal hypotension syndrome, third trimester
O46001	Antepartum hemorrhage with coagulation defect, unspecified, first trimester
O46002	Antepartum hemorrhage with coagulation defect, unspecified, second trimester
O46003	Antepartum hemorrhage with coagulation defect, unspecified, third trimester
O46009	Antepartum hemorrhage with coagulation defect, unspecified, unspecified trimester
O46021	Antepartum hemorrhage with disseminated intravascular coagulation, first trimester
O46022	Antepartum hemorrhage with disseminated intravascular coagulation, second trimester
O46023	Antepartum hemorrhage with disseminated intravascular coagulation, third trimester
O46029	Antepartum hemorrhage with disseminated intravascular coagulation, unspecified trimester
O46091	Antepartum hemorrhage with other coagulation defect, first trimester
O46092	Antepartum hemorrhage with other coagulation defect, second trimester
O46093	Antepartum hemorrhage with other coagulation defect, third trimester
O46099	Antepartum hemorrhage with other coagulation defect, unspecified trimester
O670	Intrapartum hemorrhage with coagulation defect
O723	Postpartum coagulation defects
O751	Shock during or following labor and delivery
O904	Postpartum acute kidney failure
O9041	Hepatorenal syndrome following labor and delivery
O9049	Other postpartum acute kidney failure
R0603	Acute respiratory distress
R092	Respiratory arrest
R400	Somnolence

ICD-10-CM Code Indicating Organ Dysfunction	ICD-10-CM Code Description
R401	Stupor
R4020	Unspecified coma
R570	Cardiogenic shock
R571	Hypovolemic shock
R578	Other shock
R579	Shock, unspecified

Table C.4. ICD-10-CM Codes Indicating Maternal Encounters

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
A34	Obstetrical tetanus
O000	Abdominal pregnancy
O0000	Abdominal pregnancy without intrauterine pregnancy
O0001	Abdominal pregnancy with intrauterine pregnancy
O001	Tubal pregnancy
O0010	Tubal pregnancy without intrauterine pregnancy
O00101	Right tubal pregnancy without intrauterine pregnancy
O00102	Left tubal pregnancy without intrauterine pregnancy
O00109	Unspecified tubal pregnancy without intrauterine pregnancy
O0011	Tubal pregnancy with intrauterine pregnancy
O00111	Right tubal pregnancy with intrauterine pregnancy
O00112	Left tubal pregnancy with intrauterine pregnancy
O00119	Unspecified tubal pregnancy with intrauterine pregnancy
O002	Ovarian pregnancy
O0020	Ovarian pregnancy without intrauterine pregnancy
O00201	Right ovarian pregnancy without intrauterine pregnancy
O00202	Left ovarian pregnancy without intrauterine pregnancy
O00209	Unspecified ovarian pregnancy without intrauterine pregnancy
O0021	Ovarian pregnancy with intrauterine pregnancy
O00211	Right ovarian pregnancy with intrauterine pregnancy
O00212	Left ovarian pregnancy with intrauterine pregnancy
O00219	Unspecified ovarian pregnancy with intrauterine pregnancy
O008	Other ectopic pregnancy
O0080	Other ectopic pregnancy without intrauterine pregnancy
O0081	Other ectopic pregnancy with intrauterine pregnancy
O009	Ectopic pregnancy, unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O0090	Unspecified ectopic pregnancy without intrauterine pregnancy
O0091	Unspecified ectopic pregnancy with intrauterine pregnancy
O010	Classical hydatidiform mole
O011	Incomplete and partial hydatidiform mole
O019	Hydatidiform mole, unspecified
O020	Blighted ovum and nonhydatidiform mole
O021	Missed abortion
O0281	Inappropriate change in quantitative human chorionic gonadotropin (hCG) in early pregnancy
O0289	Other abnormal products of conception
O029	Abnormal product of conception, unspecified
O030	Genital tract and pelvic infection following incomplete spontaneous abortion
O031	Delayed or excessive hemorrhage following incomplete spontaneous abortion
O032	Embolism following incomplete spontaneous abortion
O0330	Unspecified complication following incomplete spontaneous abortion
O0331	Shock following incomplete spontaneous abortion
O0332	Renal failure following incomplete spontaneous abortion
O0333	Metabolic disorder following incomplete spontaneous abortion
O0334	Damage to pelvic organs following incomplete spontaneous abortion
O0335	Other venous complications following incomplete spontaneous abortion
O0336	Cardiac arrest following incomplete spontaneous abortion
O0337	Sepsis following incomplete spontaneous abortion
O0338	Urinary tract infection following incomplete spontaneous abortion
O0339	Incomplete spontaneous abortion with other complications
O034	Incomplete spontaneous abortion without complication
O035	Genital tract and pelvic infection following complete or unspecified spontaneous abortion
O036	Delayed or excessive hemorrhage following complete or unspecified spontaneous abortion
O037	Embolism following complete or unspecified spontaneous abortion
O0380	Unspecified complication following complete or unspecified spontaneous abortion
O0381	Shock following complete or unspecified spontaneous abortion
O0382	Renal failure following complete or unspecified spontaneous abortion
O0383	Metabolic disorder following complete or unspecified spontaneous abortion
O0384	Damage to pelvic organs following complete or unspecified spontaneous abortion
O0385	Other venous complications following complete or unspecified spontaneous abortion

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O0386	Cardiac arrest following complete or unspecified spontaneous abortion
O0387	Sepsis following complete or unspecified spontaneous abortion
O0388	Urinary tract infection following complete or unspecified spontaneous abortion
O0389	Complete or unspecified spontaneous abortion with other complications
O039	Complete or unspecified spontaneous abortion without complication
O045	Genital tract and pelvic infection following (induced) termination of pregnancy
O046	Delayed or excessive hemorrhage following (induced) termination of pregnancy
O047	Embolism following (induced) termination of pregnancy
O0480	(Induced) termination of pregnancy with unspecified complications
O0481	Shock following (induced) termination of pregnancy
O0482	Renal failure following (induced) termination of pregnancy
O0483	Metabolic disorder following (induced) termination of pregnancy
O0484	Damage to pelvic organs following (induced) termination of pregnancy
O0485	Other venous complications following (induced) termination of pregnancy
O0486	Cardiac arrest following (induced) termination of pregnancy
O0487	Sepsis following (induced) termination of pregnancy
O0488	Urinary tract infection following (induced) termination of pregnancy
O0489	(Induced) termination of pregnancy with other complications
O070	Genital tract and pelvic infection following failed attempted termination of pregnancy
O071	Delayed or excessive hemorrhage following failed attempted termination of pregnancy
O072	Embolism following failed attempted termination of pregnancy
O0730	Failed attempted termination of pregnancy with unspecified complications
O0731	Shock following failed attempted termination of pregnancy
O0732	Renal failure following failed attempted termination of pregnancy
O0733	Metabolic disorder following failed attempted termination of pregnancy
O0734	Damage to pelvic organs following failed attempted termination of pregnancy
O0735	Other venous complications following failed attempted termination of pregnancy
O0736	Cardiac arrest following failed attempted termination of pregnancy
O0737	Sepsis following failed attempted termination of pregnancy
O0738	Urinary tract infection following failed attempted termination of pregnancy
O0739	Failed attempted termination of pregnancy with other complications
O074	Failed attempted termination of pregnancy without complication
O080	Genital tract and pelvic infection following ectopic and molar pregnancy
O081	Delayed or excessive hemorrhage following ectopic and molar pregnancy
O082	Embolism following ectopic and molar pregnancy
O083	Shock following ectopic and molar pregnancy
O084	Renal failure following ectopic and molar pregnancy

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O085	Metabolic disorders following an ectopic and molar pregnancy
O086	Damage to pelvic organs and tissues following an ectopic and molar pregnancy
O087	Other venous complications following an ectopic and molar pregnancy
O0881	Cardiac arrest following an ectopic and molar pregnancy
O0882	Sepsis following ectopic and molar pregnancy
O0883	Urinary tract infection following an ectopic and molar pregnancy
O0889	Other complications following an ectopic and molar pregnancy
O089	Unspecified complication following an ectopic and molar pregnancy
O0900	Supervision of pregnancy with history of infertility, unspecified trimester
O0901	Supervision of pregnancy with history of infertility, first trimester
O0902	Supervision of pregnancy with history of infertility, second trimester
O0903	Supervision of pregnancy with history of infertility, third trimester
O0910	Supervision of pregnancy with history of ectopic pregnancy, unspecified trimester
O0911	Supervision of pregnancy with history of ectopic pregnancy, first trimester
O0912	Supervision of pregnancy with history of ectopic pregnancy, second trimester
O0913	Supervision of pregnancy with history of ectopic pregnancy, third trimester
O09211	Supervision of pregnancy with history of pre-term labor, first trimester
O09212	Supervision of pregnancy with history of pre-term labor, second trimester
O09213	Supervision of pregnancy with history of pre-term labor, third trimester
O09219	Supervision of pregnancy with history of pre-term labor, unspecified trimester
O09291	Supervision of pregnancy with other poor reproductive or obstetric history, first trimester
O09292	Supervision of pregnancy with other poor reproductive or obstetric history, second trimester
O09293	Supervision of pregnancy with other poor reproductive or obstetric history, third trimester
O09299	Supervision of pregnancy with other poor reproductive or obstetric history, unspecified trimester
O0930	Supervision of pregnancy with insufficient antenatal care, unspecified trimester
O0931	Supervision of pregnancy with insufficient antenatal care, first trimester
O0932	Supervision of pregnancy with insufficient antenatal care, second trimester
O0933	Supervision of pregnancy with insufficient antenatal care, third trimester
O0940	Supervision of pregnancy with grand multiparity, unspecified trimester
O0941	Supervision of pregnancy with grand multiparity, first trimester
O0942	Supervision of pregnancy with grand multiparity, second trimester
O0943	Supervision of pregnancy with grand multiparity, third trimester
O09511	Supervision of elderly primigravida, first trimester
O09512	Supervision of elderly primigravida, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O09513	Supervision of elderly primigravida, third trimester
O09519	Supervision of elderly primigravida, unspecified trimester
O09521	Supervision of elderly multigravida, first trimester
O09522	Supervision of elderly multigravida, second trimester
O09523	Supervision of elderly multigravida, third trimester
O09529	Supervision of elderly multigravida, unspecified trimester
O09611	Supervision of young primigravida, first trimester
O09612	Supervision of young primigravida, second trimester
O09613	Supervision of young primigravida, third trimester
O09619	Supervision of young primigravida, unspecified trimester
O09621	Supervision of young multigravida, first trimester
O09622	Supervision of young multigravida, second trimester
O09623	Supervision of young multigravida, third trimester
O09629	Supervision of young multigravida, unspecified trimester
O0970	Supervision of high risk pregnancy due to social problems, unspecified trimester
O0971	Supervision of high risk pregnancy due to social problems, first trimester
O0972	Supervision of high risk pregnancy due to social problems, second trimester
O0973	Supervision of high risk pregnancy due to social problems, third trimester
O09811	Supervision of pregnancy resulting from assisted reproductive technology, first trimester
O09812	Supervision of pregnancy resulting from assisted reproductive technology, second trimester
O09813	Supervision of pregnancy resulting from assisted reproductive technology, third trimester
O09819	Supervision of pregnancy resulting from assisted reproductive technology, unspecified trimester
O09821	Supervision of pregnancy with history of in utero procedure during previous pregnancy, first trimester
O09822	Supervision of pregnancy with history of in utero procedure during previous pregnancy, second trimester
O09823	Supervision of pregnancy with history of in utero procedure during previous pregnancy, third trimester
O09829	Supervision of pregnancy with history of in utero procedure during previous pregnancy, unspecified trimester
O09891	Supervision of other high risk pregnancies, first trimester
O09892	Supervision of other high risk pregnancies, second trimester
O09893	Supervision of other high risk pregnancies, third trimester
O09899	Supervision of other high risk pregnancies, unspecified trimester
O0990	Supervision of high risk pregnancy, unspecified, unspecified trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O0991	Supervision of high risk pregnancy, unspecified, first trimester
O0992	Supervision of high risk pregnancy, unspecified, second trimester
O0993	Supervision of high risk pregnancy, unspecified, third trimester
O09A0	Supervision of pregnancy with history of molar pregnancy, unspecified trimester
O09A1	Supervision of pregnancy with history of molar pregnancy, first trimester
O09A2	Supervision of pregnancy with history of molar pregnancy, second trimester
O09A3	Supervision of pregnancy with history of molar pregnancy, third trimester
O10011	Pre-existing essential hypertension complicating pregnancy, first trimester
O10012	Pre-existing essential hypertension complicating pregnancy, second trimester
O10013	Pre-existing essential hypertension complicating pregnancy, third trimester
O10019	Pre-existing essential hypertension complicating pregnancy, unspecified trimester
O1002	Pre-existing essential hypertension complicating childbirth
O1003	Pre-existing essential hypertension complicating the puerperium
O10111	Pre-existing hypertensive heart disease complicating pregnancy, first trimester
O10112	Pre-existing hypertensive heart disease complicating pregnancy, second trimester
O10113	Pre-existing hypertensive heart disease complicating pregnancy, third trimester
O10119	Pre-existing hypertensive heart disease complicating pregnancy, unspecified trimester
O1012	Pre-existing hypertensive heart disease complicating childbirth
O1013	Pre-existing hypertensive heart disease complicating the puerperium
O10211	Pre-existing hypertensive chronic kidney disease complicating pregnancy, first trimester
O10212	Pre-existing hypertensive chronic kidney disease complicating pregnancy, second trimester
O10213	Pre-existing hypertensive chronic kidney disease complicating pregnancy, third trimester
O10219	Pre-existing hypertensive chronic kidney disease complicating pregnancy, unspecified trimester
O1022	Pre-existing hypertensive chronic kidney disease complicating childbirth
O1023	Pre-existing hypertensive chronic kidney disease complicating the puerperium
O10311	Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, first trimester
O10312	Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, second trimester
O10313	Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, third trimester
O10319	Pre-existing hypertensive heart and chronic kidney disease complicating pregnancy, unspecified trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O1032	Pre-existing hypertensive heart and chronic kidney disease complicating childbirth
O1033	Pre-existing hypertensive heart and chronic kidney disease complicating the puerperium
O10411	Pre-existing secondary hypertension complicating pregnancy, first trimester
O10412	Pre-existing secondary hypertension complicating pregnancy, second trimester
O10413	Pre-existing secondary hypertension complicating pregnancy, third trimester
O10419	Pre-existing secondary hypertension complicating pregnancy, unspecified trimester
O1042	Pre-existing secondary hypertension complicating childbirth
O1043	Pre-existing secondary hypertension complicating the puerperium
O10911	Unspecified pre-existing hypertension complicating pregnancy, first trimester
O10912	Unspecified pre-existing hypertension complicating pregnancy, second trimester
O10913	Unspecified pre-existing hypertension complicating pregnancy, third trimester
O10919	Unspecified pre-existing hypertension complicating pregnancy, unspecified trimester
O1092	Unspecified pre-existing hypertension complicating childbirth
O1093	Unspecified pre-existing hypertension complicating the puerperium
O111	Pre-existing hypertension with pre-eclampsia, first trimester
O112	Pre-existing hypertension with pre-eclampsia, second trimester
O113	Pre-existing hypertension with pre-eclampsia, third trimester
O114	Pre-existing hypertension with pre-eclampsia, complicating childbirth
O115	Pre-existing hypertension with pre-eclampsia, complicating the puerperium
O119	Pre-existing hypertension with pre-eclampsia, unspecified trimester
O1200	Gestational edema, unspecified trimester
O1201	Gestational edema, first trimester
O1202	Gestational edema, second trimester
O1203	Gestational edema, third trimester
O1204	Gestational edema, complicating childbirth
O1205	Gestational edema, complicating the puerperium
O1210	Gestational proteinuria, unspecified trimester
O1211	Gestational proteinuria, first trimester
O1212	Gestational proteinuria, second trimester
O1213	Gestational proteinuria, third trimester
O1214	Gestational proteinuria, complicating childbirth
O1215	Gestational proteinuria, complicating the puerperium
O1220	Gestational edema with proteinuria, unspecified trimester
O1221	Gestational edema with proteinuria, first trimester
O1222	Gestational edema with proteinuria, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O1223	Gestational edema with proteinuria, third trimester
O1224	Gestational edema with proteinuria, complicating childbirth
O1225	Gestational edema with proteinuria, complicating the puerperium
O131	Gestational [pregnancy-induced] hypertension without significant proteinuria, first trimester
O132	Gestational [pregnancy-induced] hypertension without significant proteinuria, second trimester
O133	Gestational [pregnancy-induced] hypertension without significant proteinuria, third trimester
O134	Gestational [pregnancy-induced] hypertension without significant proteinuria, complicating childbirth
O135	Gestational [pregnancy-induced] hypertension without significant proteinuria, complicating the puerperium
O139	Gestational [pregnancy-induced] hypertension without significant proteinuria, unspecified trimester
O1400	Mild to moderate pre-eclampsia, unspecified trimester
O1402	Mild to moderate pre-eclampsia, second trimester
O1403	Mild to moderate pre-eclampsia, third trimester
O1404	Mild to moderate pre-eclampsia, complicating childbirth
O1405	Mild to moderate pre-eclampsia, complicating the puerperium
O1410	Severe pre-eclampsia, unspecified trimester
O1412	Severe pre-eclampsia, second trimester
O1413	Severe pre-eclampsia, third trimester
O1414	Severe pre-eclampsia complicating childbirth
O1415	Severe pre-eclampsia, complicating the puerperium
O1420	HELLP syndrome (HELLP), unspecified trimester
O1422	HELLP syndrome (HELLP), second trimester
O1423	HELLP syndrome (HELLP), third trimester
O1424	HELLP syndrome, complicating childbirth
O1425	HELLP syndrome, complicating the puerperium
O1490	Unspecified pre-eclampsia, unspecified trimester
O1492	Unspecified pre-eclampsia, second trimester
O1493	Unspecified pre-eclampsia, third trimester
O1494	Unspecified pre-eclampsia, complicating childbirth
O1495	Unspecified pre-eclampsia, complicating the puerperium
O1500	Eclampsia complicating pregnancy, unspecified trimester
O1502	Eclampsia complicating pregnancy, second trimester
O1503	Eclampsia complicating pregnancy, third trimester
O151	Eclampsia complicating labor

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O152	Eclampsia complicating the puerperium
O159	Eclampsia, unspecified as to time period
O161	Unspecified maternal hypertension, first trimester
O162	Unspecified maternal hypertension, second trimester
O163	Unspecified maternal hypertension, third trimester
O164	Unspecified maternal hypertension, complicating childbirth
O165	Unspecified maternal hypertension, complicating the puerperium
O169	Unspecified maternal hypertension, unspecified trimester
O200	Threatened abortion
O208	Other hemorrhage in early pregnancy
O209	Hemorrhage in early pregnancy, unspecified
O210	Mild hyperemesis gravidarum
O211	Hyperemesis gravidarum with metabolic disturbance
O212	Late vomiting of pregnancy
O218	Other vomiting complicating pregnancy
O219	Vomiting of pregnancy, unspecified
O2200	Varicose veins of lower extremity in pregnancy, unspecified trimester
O2201	Varicose veins of lower extremity in pregnancy, first trimester
O2202	Varicose veins of lower extremity in pregnancy, second trimester
O2203	Varicose veins of lower extremity in pregnancy, third trimester
O2210	Genital varices in pregnancy, unspecified trimester
O2211	Genital varices in pregnancy, first trimester
O2212	Genital varices in pregnancy, second trimester
O2213	Genital varices in pregnancy, third trimester
O2220	Superficial thrombophlebitis in pregnancy, unspecified trimester
O2221	Superficial thrombophlebitis in pregnancy, first trimester
O2222	Superficial thrombophlebitis in pregnancy, second trimester
O2223	Superficial thrombophlebitis in pregnancy, third trimester
O2230	Deep phlebothrombosis in pregnancy, unspecified trimester
O2231	Deep phlebothrombosis in pregnancy, first trimester
O2232	Deep phlebothrombosis in pregnancy, second trimester
O2233	Deep phlebothrombosis in pregnancy, third trimester
O2240	Hemorrhoids in pregnancy, unspecified trimester
O2241	Hemorrhoids in pregnancy, first trimester
O2242	Hemorrhoids in pregnancy, second trimester
O2243	Hemorrhoids in pregnancy, third trimester
O2250	Cerebral venous thrombosis in pregnancy, unspecified trimester
O2251	Cerebral venous thrombosis in pregnancy, first trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O2252	Cerebral venous thrombosis in pregnancy, second trimester
O2253	Cerebral venous thrombosis in pregnancy, third trimester
O228X1	Other venous complications in pregnancy, first trimester
O228X2	Other venous complications in pregnancy, second trimester
O228X3	Other venous complications in pregnancy, third trimester
O228X9	Other venous complications in pregnancy, unspecified trimester
O2290	Venous complication in pregnancy, unspecified, unspecified trimester
O2291	Venous complication in pregnancy, unspecified, first trimester
O2292	Venous complication in pregnancy, unspecified, second trimester
O2293	Venous complication in pregnancy, unspecified, third trimester
O2300	Infections of kidney in pregnancy, unspecified trimester
O2301	Infections of kidney in pregnancy, first trimester
O2302	Infections of kidney in pregnancy, second trimester
O2303	Infections of kidney in pregnancy, third trimester
O2310	Infections of bladder in pregnancy, unspecified trimester
O2311	Infections of bladder in pregnancy, first trimester
O2312	Infections of bladder in pregnancy, second trimester
O2313	Infections of bladder in pregnancy, third trimester
O2320	Infections of urethra in pregnancy, unspecified trimester
O2321	Infections of urethra in pregnancy, first trimester
O2322	Infections of urethra in pregnancy, second trimester
O2323	Infections of urethra in pregnancy, third trimester
O2330	Infections of other parts of urinary tract in pregnancy, unspecified trimester
O2331	Infections of other parts of urinary tract in pregnancy, first trimester
O2332	Infections of other parts of urinary tract in pregnancy, second trimester
O2333	Infections of other parts of urinary tract in pregnancy, third trimester
O2340	Unspecified infection of urinary tract in pregnancy, unspecified trimester
O2341	Unspecified infection of urinary tract in pregnancy, first trimester
O2342	Unspecified infection of urinary tract in pregnancy, second trimester
O2343	Unspecified infection of urinary tract in pregnancy, third trimester
O23511	Infections of cervix in pregnancy, first trimester
O23512	Infections of cervix in pregnancy, second trimester
O23513	Infections of cervix in pregnancy, third trimester
O23519	Infections of cervix in pregnancy, unspecified trimester
O23521	Salpingo-oophoritis in pregnancy, first trimester
O23522	Salpingo-oophoritis in pregnancy, second trimester
O23523	Salpingo-oophoritis in pregnancy, third trimester
O23529	Salpingo-oophoritis in pregnancy, unspecified trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O23591	Infection of other part of genital tract in pregnancy, first trimester
O23592	Infection of other part of genital tract in pregnancy, second trimester
O23593	Infection of other part of genital tract in pregnancy, third trimester
O23599	Infection of other part of genital tract in pregnancy, unspecified trimester
O2390	Unspecified genitourinary tract infection in pregnancy, unspecified trimester
O2391	Unspecified genitourinary tract infection in pregnancy, first trimester
O2392	Unspecified genitourinary tract infection in pregnancy, second trimester
O2393	Unspecified genitourinary tract infection in pregnancy, third trimester
O24011	Pre-existing type 1 diabetes mellitus, in pregnancy, first trimester
O24012	Pre-existing type 1 diabetes mellitus, in pregnancy, second trimester
O24013	Pre-existing type 1 diabetes mellitus, in pregnancy, third trimester
O24019	Pre-existing type 1 diabetes mellitus, in pregnancy, unspecified trimester
O2402	Pre-existing type 1 diabetes mellitus, in childbirth
O2403	Pre-existing type 1 diabetes mellitus, in the puerperium
O24111	Pre-existing type 2 diabetes mellitus, in pregnancy, first trimester
O24112	Pre-existing type 2 diabetes mellitus, in pregnancy, second trimester
O24113	Pre-existing type 2 diabetes mellitus, in pregnancy, third trimester
O24119	Pre-existing type 2 diabetes mellitus, in pregnancy, unspecified trimester
O2412	Pre-existing type 2 diabetes mellitus, in childbirth
O2413	Pre-existing type 2 diabetes mellitus, in the puerperium
O24311	Unspecified pre-existing diabetes mellitus in pregnancy, first trimester
O24312	Unspecified pre-existing diabetes mellitus in pregnancy, second trimester
O24313	Unspecified pre-existing diabetes mellitus in pregnancy, third trimester
O24319	Unspecified pre-existing diabetes mellitus in pregnancy, unspecified trimester
O2432	Unspecified pre-existing diabetes mellitus in childbirth
O2433	Unspecified pre-existing diabetes mellitus in the puerperium
O24410	Gestational diabetes mellitus in pregnancy, diet controlled
O24414	Gestational diabetes mellitus in pregnancy, insulin controlled
O24415	Gestational diabetes mellitus in pregnancy, controlled by oral hypoglycemic drugs
O24419	Gestational diabetes mellitus in pregnancy, unspecified control
O24420	Gestational diabetes mellitus in childbirth, diet controlled
O24424	Gestational diabetes mellitus in childbirth, insulin controlled
O24425	Gestational diabetes mellitus in childbirth, controlled by oral hypoglycemic drugs
O24429	Gestational diabetes mellitus in childbirth, unspecified control
O24430	Gestational diabetes mellitus in the puerperium, diet controlled
O24434	Gestational diabetes mellitus in the puerperium, insulin controlled
O24435	Gestational diabetes mellitus in puerperium, controlled by oral hypoglycemic drugs

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O24439	Gestational diabetes mellitus in the puerperium, unspecified control
O24811	Other pre-existing diabetes mellitus in pregnancy, first trimester
O24812	Other pre-existing diabetes mellitus in pregnancy, second trimester
O24813	Other pre-existing diabetes mellitus in pregnancy, third trimester
O24819	Other pre-existing diabetes mellitus in pregnancy, unspecified trimester
O2482	Other pre-existing diabetes mellitus in childbirth
O2483	Other pre-existing diabetes mellitus in the puerperium
O24911	Unspecified diabetes mellitus in pregnancy, first trimester
O24912	Unspecified diabetes mellitus in pregnancy, second trimester
O24913	Unspecified diabetes mellitus in pregnancy, third trimester
O24919	Unspecified diabetes mellitus in pregnancy, unspecified trimester
O2492	Unspecified diabetes mellitus in childbirth
O2493	Unspecified diabetes mellitus in the puerperium
O2510	Malnutrition in pregnancy, unspecified trimester
O2511	Malnutrition in pregnancy, first trimester
O2512	Malnutrition in pregnancy, second trimester
O2513	Malnutrition in pregnancy, third trimester
O252	Malnutrition in childbirth
O253	Malnutrition in the puerperium
O2600	Excessive weight gain in pregnancy, unspecified trimester
O2601	Excessive weight gain in pregnancy, first trimester
O2602	Excessive weight gain in pregnancy, second trimester
O2603	Excessive weight gain in pregnancy, third trimester
O2610	Low weight gain in pregnancy, unspecified trimester
O2611	Low weight gain in pregnancy, first trimester
O2612	Low weight gain in pregnancy, second trimester
O2613	Low weight gain in pregnancy, third trimester
O2620	Pregnancy care for patient with recurrent pregnancy loss, unspecified trimester
O2621	Pregnancy care for patient with recurrent pregnancy loss, first trimester
O2622	Pregnancy care for patient with recurrent pregnancy loss, second trimester
O2623	Pregnancy care for patient with recurrent pregnancy loss, third trimester
O2630	Retained intrauterine contraceptive device in pregnancy, unspecified trimester
O2631	Retained intrauterine contraceptive device in pregnancy, first trimester
O2632	Retained intrauterine contraceptive device in pregnancy, second trimester
O2633	Retained intrauterine contraceptive device in pregnancy, third trimester
O2640	Herpes gestationis, unspecified trimester
O2641	Herpes gestationis, first trimester
O2642	Herpes gestationis, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O2643	Herpes gestationis, third trimester
O2650	Maternal hypotension syndrome, unspecified trimester
O2651	Maternal hypotension syndrome, first trimester
O2652	Maternal hypotension syndrome, second trimester
O2653	Maternal hypotension syndrome, third trimester
O26611	Liver and biliary tract disorders in pregnancy, first trimester
O26612	Liver and biliary tract disorders in pregnancy, second trimester
O26613	Liver and biliary tract disorders in pregnancy, third trimester
O26619	Liver and biliary tract disorders in pregnancy, unspecified trimester
O2662	Liver and biliary tract disorders in childbirth
O2663	Liver and biliary tract disorders in the puerperium
O26711	Subluxation of symphysis (pubis) in pregnancy, first trimester
O26712	Subluxation of symphysis (pubis) in pregnancy, second trimester
O26713	Subluxation of symphysis (pubis) in pregnancy, third trimester
O26719	Subluxation of symphysis (pubis) in pregnancy, unspecified trimester
O2672	Subluxation of symphysis (pubis) in childbirth
O2673	Subluxation of symphysis (pubis) in the puerperium
O26811	Pregnancy related exhaustion and fatigue, first trimester
O26812	Pregnancy related exhaustion and fatigue, second trimester
O26813	Pregnancy related exhaustion and fatigue, third trimester
O26819	Pregnancy related exhaustion and fatigue, unspecified trimester
O26821	Pregnancy related peripheral neuritis, first trimester
O26822	Pregnancy related peripheral neuritis, second trimester
O26823	Pregnancy related peripheral neuritis, third trimester
O26829	Pregnancy related peripheral neuritis, unspecified trimester
O26831	Pregnancy related renal disease, first trimester
O26832	Pregnancy related renal disease, second trimester
O26833	Pregnancy related renal disease, third trimester
O26839	Pregnancy related renal disease, unspecified trimester
O26841	Uterine size-date discrepancy, first trimester
O26842	Uterine size-date discrepancy, second trimester
O26843	Uterine size-date discrepancy, third trimester
O26849	Uterine size-date discrepancy, unspecified trimester
O26851	Spotting complicating pregnancy, first trimester
O26852	Spotting complicating pregnancy, second trimester
O26853	Spotting complicating pregnancy, third trimester
O26859	Spotting complicating pregnancy, unspecified trimester
O2686	Pruritic urticarial papules and plaques of pregnancy (PUPPP)

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O26872	Cervical shortening, second trimester
O26873	Cervical shortening, third trimester
O26879	Cervical shortening, unspecified trimester
O26891	Other specified pregnancy related conditions, first trimester
O26892	Other specified pregnancy related conditions, second trimester
O26893	Other specified pregnancy related conditions, third trimester
O26899	Other specified pregnancy related conditions, unspecified trimester
O2690	Pregnancy related conditions, unspecified, unspecified trimester
O2691	Pregnancy related conditions, unspecified, first trimester
O2692	Pregnancy related conditions, unspecified, second trimester
O2693	Pregnancy related conditions, unspecified, third trimester
O280	Abnormal hematological finding on antenatal screening of mother
O281	Abnormal biochemical finding on antenatal screening of mother
O282	Abnormal cytological finding on antenatal screening of mother
O283	Abnormal ultrasonic finding on antenatal screening of mother
O284	Abnormal radiological finding on antenatal screening of mother
O285	Abnormal chromosomal and genetic finding on antenatal screening of mother
O288	Other abnormal findings on antenatal screening of mother
O289	Unspecified abnormal findings on antenatal screening of mother
O29011	Aspiration pneumonitis due to anesthesia during pregnancy, first trimester
O29012	Aspiration pneumonitis due to anesthesia during pregnancy, second trimester
O29013	Aspiration pneumonitis due to anesthesia during pregnancy, third trimester
O29019	Aspiration pneumonitis due to anesthesia during pregnancy, unspecified trimester
O29021	Pressure collapse of lung due to anesthesia during pregnancy, first trimester
O29022	Pressure collapse of lung due to anesthesia during pregnancy, second trimester
O29023	Pressure collapse of lung due to anesthesia during pregnancy, third trimester
O29029	Pressure collapse of lung due to anesthesia during pregnancy, unspecified trimester
O29091	Other pulmonary complications of anesthesia during pregnancy, first trimester
O29092	Other pulmonary complications of anesthesia during pregnancy, second trimester
O29093	Other pulmonary complications of anesthesia during pregnancy, third trimester
O29099	Other pulmonary complications of anesthesia during pregnancy, unspecified trimester
O29111	Cardiac arrest due to anesthesia during pregnancy, first trimester
O29112	Cardiac arrest due to anesthesia during pregnancy, second trimester
O29113	Cardiac arrest due to anesthesia during pregnancy, third trimester
O29119	Cardiac arrest due to anesthesia during pregnancy, unspecified trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O29121	Cardiac failure due to anesthesia during pregnancy, first trimester
O29122	Cardiac failure due to anesthesia during pregnancy, second trimester
O29123	Cardiac failure due to anesthesia during pregnancy, third trimester
O29129	Cardiac failure due to anesthesia during pregnancy, unspecified trimester
O29191	Other cardiac complications of anesthesia during pregnancy, first trimester
O29192	Other cardiac complications of anesthesia during pregnancy, second trimester
O29193	Other cardiac complications of anesthesia during pregnancy, third trimester
O29199	Other cardiac complications of anesthesia during pregnancy, unspecified trimester
O29211	Cerebral anoxia due to anesthesia during pregnancy, first trimester
O29212	Cerebral anoxia due to anesthesia during pregnancy, second trimester
O29213	Cerebral anoxia due to anesthesia during pregnancy, third trimester
O29219	Cerebral anoxia due to anesthesia during pregnancy, unspecified trimester
O29291	Other central nervous system complications of anesthesia during pregnancy, first trimester
O29292	Other central nervous system complications of anesthesia during pregnancy, second trimester
O29293	Other central nervous system complications of anesthesia during pregnancy, third trimester
O29299	Other central nervous system complications of anesthesia during pregnancy, unspecified trimester
O293X1	Toxic reaction to local anesthesia during pregnancy, first trimester
O293X2	Toxic reaction to local anesthesia during pregnancy, second trimester
O293X3	Toxic reaction to local anesthesia during pregnancy, third trimester
O293X9	Toxic reaction to local anesthesia during pregnancy, unspecified trimester
O2940	Spinal and epidural anesthesia induced headache during pregnancy, unspecified trimester
O2941	Spinal and epidural anesthesia induced headache during pregnancy, first trimester
O2942	Spinal and epidural anesthesia induced headache during pregnancy, second trimester
O2943	Spinal and epidural anesthesia induced headache during pregnancy, third trimester
O295X1	Other complications of spinal and epidural anesthesia during pregnancy, first trimester
O295X2	Other complications of spinal and epidural anesthesia during pregnancy, second trimester
O295X3	Other complications of spinal and epidural anesthesia during pregnancy, third trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O295X9	Other complications of spinal and epidural anesthesia during pregnancy, unspecified trimester
O2960	Failed or difficult intubation for anesthesia during pregnancy, unspecified trimester
O2961	Failed or difficult intubation for anesthesia during pregnancy, first trimester
O2962	Failed or difficult intubation for anesthesia during pregnancy, second trimester
O2963	Failed or difficult intubation for anesthesia during pregnancy, third trimester
O298X1	Other complications of anesthesia during pregnancy, first trimester
O298X2	Other complications of anesthesia during pregnancy, second trimester
O298X3	Other complications of anesthesia during pregnancy, third trimester
O298X9	Other complications of anesthesia during pregnancy, unspecified trimester
O2990	Unspecified complication of anesthesia during pregnancy, unspecified trimester
O2991	Unspecified complication of anesthesia during pregnancy, first trimester
O2992	Unspecified complication of anesthesia during pregnancy, second trimester
O2993	Unspecified complication of anesthesia during pregnancy, third trimester
O30001	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30002	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30003	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30009	Twin pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, unspecified trimester
O30011	Twin pregnancy, monochorionic/monoamniotic, first trimester
O30012	Twin pregnancy, monochorionic/monoamniotic, second trimester
O30013	Twin pregnancy, monochorionic/monoamniotic, third trimester
O30019	Twin pregnancy, monochorionic/monoamniotic, unspecified trimester
O30021	Conjoined twin pregnancy, first trimester
O30022	Conjoined twin pregnancy, second trimester
O30023	Conjoined twin pregnancy, third trimester
O30029	Conjoined twin pregnancy, unspecified trimester
O30031	Twin pregnancy, monochorionic/diamniotic, first trimester
O30032	Twin pregnancy, monochorionic/diamniotic, second trimester
O30033	Twin pregnancy, monochorionic/diamniotic, third trimester
O30039	Twin pregnancy, monochorionic/diamniotic, unspecified trimester
O30041	Twin pregnancy, dichorionic/diamniotic, first trimester
O30042	Twin pregnancy, dichorionic/diamniotic, second trimester
O30043	Twin pregnancy, dichorionic/diamniotic, third trimester
O30049	Twin pregnancy, dichorionic/diamniotic, unspecified trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O30091	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30092	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30093	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30099	Twin pregnancy, unable to determine number of placenta and number of amniotic sacs, unspecified trimester
O30101	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30102	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30103	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30109	Triplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, unspecified trimester
O30111	Triplet pregnancy with two or more monochorionic fetuses, first trimester
O30112	Triplet pregnancy with two or more monochorionic fetuses, second trimester
O30113	Triplet pregnancy with two or more monochorionic fetuses, third trimester
O30119	Triplet pregnancy with two or more monochorionic fetuses, unspecified trimester
O30121	Triplet pregnancy with two or more monoamniotic fetuses, first trimester
O30122	Triplet pregnancy with two or more monoamniotic fetuses, second trimester
O30123	Triplet pregnancy with two or more monoamniotic fetuses, third trimester
O30129	Triplet pregnancy with two or more monoamniotic fetuses, unspecified trimester
O30131	Triplet pregnancy, trichorionic/triamniotic, first trimester
O30132	Triplet pregnancy, trichorionic/triamniotic, second trimester
O30133	Triplet pregnancy, trichorionic/triamniotic, third trimester
O30139	Triplet pregnancy, trichorionic/triamniotic, unspecified trimester
O30191	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30192	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30193	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30199	Triplet pregnancy, unable to determine number of placenta and number of amniotic sacs, unspecified trimester
O30201	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30202	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O30203	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30209	Quadruplet pregnancy, unspecified number of placenta and unspecified number of amniotic sacs, unspecified trimester
O30211	Quadruplet pregnancy with two or more monochorionic fetuses, first trimester
O30212	Quadruplet pregnancy with two or more monochorionic fetuses, second trimester
O30213	Quadruplet pregnancy with two or more monochorionic fetuses, third trimester
O30219	Quadruplet pregnancy with two or more monochorionic fetuses, unspecified trimester
O30221	Quadruplet pregnancy with two or more monoamniotic fetuses, first trimester
O30222	Quadruplet pregnancy with two or more monoamniotic fetuses, second trimester
O30223	Quadruplet pregnancy with two or more monoamniotic fetuses, third trimester
O30229	Quadruplet pregnancy with two or more monoamniotic fetuses, unspecified trimester
O30231	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, first trimester
O30232	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, second trimester
O30233	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, third trimester
O30239	Quadruplet pregnancy, quadrachorionic/quadra-amniotic, unspecified trimester
O30291	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, first trimester
O30292	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, second trimester
O30293	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, third trimester
O30299	Quadruplet pregnancy, unable to determine number of placenta and number of amniotic sacs, unspecified trimester
O30801	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, first trimester
O30802	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, second trimester
O30803	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, third trimester
O30809	Other specified multiple gestation, unspecified number of placenta and unspecified number of amniotic sacs, unspecified trimester
O30811	Other specified multiple gestation with two or more monochorionic fetuses, first trimester
O30812	Other specified multiple gestation with two or more monochorionic fetuses, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O30813	Other specified multiple gestation with two or more monochorionic fetuses, third trimester
O30819	Other specified multiple gestation with two or more monochorionic fetuses, unspecified trimester
O30821	Other specified multiple gestation with two or more monoamniotic fetuses, first trimester
O30822	Other specified multiple gestation with two or more monoamniotic fetuses, second trimester
O30823	Other specified multiple gestation with two or more monoamniotic fetuses, third trimester
O30829	Other specified multiple gestation with two or more monoamniotic fetuses, unspecified trimester
O30831	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, first trimester
O30832	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, second trimester
O30833	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, third trimester
O30839	Other specified multiple gestation, number of chorions and amnions are both equal to the number of fetuses, unspecified trimester
O30891	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, first trimester
O30892	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, second trimester
O30893	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, third trimester
O30899	Other specified multiple gestation, unable to determine number of placenta and number of amniotic sacs, unspecified trimester
O3090	Multiple gestation, unspecified, unspecified trimester
O3091	Multiple gestation, unspecified, first trimester
O3092	Multiple gestation, unspecified, second trimester
O3093	Multiple gestation, unspecified, third trimester
O3100X0	Papyraceous fetus, unspecified trimester, not applicable or unspecified
O3100X1	Papyraceous fetus, unspecified trimester, fetus 1
O3100X2	Papyraceous fetus, unspecified trimester, fetus 2
O3100X3	Papyraceous fetus, unspecified trimester, fetus 3
O3100X4	Papyraceous fetus, unspecified trimester, fetus 4
O3100X5	Papyraceous fetus, unspecified trimester, fetus 5
O3100X9	Papyraceous fetus, unspecified trimester, other fetus
O3101X0	Papyraceous fetus, first trimester, not applicable or unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3101X1	Papyraceous fetus, first trimester, fetus 1
O3101X2	Papyraceous fetus, first trimester, fetus 2
O3101X3	Papyraceous fetus, first trimester, fetus 3
O3101X4	Papyraceous fetus, first trimester, fetus 4
O3101X5	Papyraceous fetus, first trimester, fetus 5
O3101X9	Papyraceous fetus, first trimester, other fetus
O3102X0	Papyraceous fetus, second trimester, not applicable or unspecified
O3102X1	Papyraceous fetus, second trimester, fetus 1
O3102X2	Papyraceous fetus, second trimester, fetus 2
O3102X3	Papyraceous fetus, second trimester, fetus 3
O3102X4	Papyraceous fetus, second trimester, fetus 4
O3102X5	Papyraceous fetus, second trimester, fetus 5
O3102X9	Papyraceous fetus, second trimester, other fetus
O3103X0	Papyraceous fetus, third trimester, not applicable or unspecified
O3103X1	Papyraceous fetus, third trimester, fetus 1
O3103X2	Papyraceous fetus, third trimester, fetus 2
O3103X3	Papyraceous fetus, third trimester, fetus 3
O3103X4	Papyraceous fetus, third trimester, fetus 4
O3103X5	Papyraceous fetus, third trimester, fetus 5
O3103X9	Papyraceous fetus, third trimester, other fetus
O3110X0	Continuing pregnancy after spontaneous abortion of one fetus or more, unspecified trimester, not applicable or unspecified
O3110X1	Continuing pregnancy after spontaneous abortion of one fetus or more, unspecified trimester, fetus 1
O3110X2	Continuing pregnancy after spontaneous abortion of one fetus or more, unspecified trimester, fetus 2
O3110X3	Continuing pregnancy after spontaneous abortion of one fetus or more, unspecified trimester, fetus 3
O3110X4	Continuing pregnancy after spontaneous abortion of one fetus or more, unspecified trimester, fetus 4
O3110X5	Continuing pregnancy after spontaneous abortion of one fetus or more, unspecified trimester, fetus 5
O3110X9	Continuing pregnancy after spontaneous abortion of one fetus or more, unspecified trimester, other fetus
O3111X0	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, not applicable or unspecified
O3111X1	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 1
O3111X2	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 2

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3111X3	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 3
O3111X4	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 4
O3111X5	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, fetus 5
O3111X9	Continuing pregnancy after spontaneous abortion of one fetus or more, first trimester, other fetus
O3112X0	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, not applicable or unspecified
O3112X1	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 1
O3112X2	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 2
O3112X3	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 3
O3112X4	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 4
O3112X5	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, fetus 5
O3112X9	Continuing pregnancy after spontaneous abortion of one fetus or more, second trimester, other fetus
O3113X0	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, not applicable or unspecified
O3113X1	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 1
O3113X2	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 2
O3113X3	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 3
O3113X4	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 4
O3113X5	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, fetus 5
O3113X9	Continuing pregnancy after spontaneous abortion of one fetus or more, third trimester, other fetus
O3120X0	Continuing pregnancy after intrauterine death of one fetus or more, unspecified trimester, not applicable or unspecified
O3120X1	Continuing pregnancy after intrauterine death of one fetus or more, unspecified trimester, fetus 1

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3120X2	Continuing pregnancy after intrauterine death of one fetus or more, unspecified trimester, fetus 2
O3120X3	Continuing pregnancy after intrauterine death of one fetus or more, unspecified trimester, fetus 3
O3120X4	Continuing pregnancy after intrauterine death of one fetus or more, unspecified trimester, fetus 4
O3120X5	Continuing pregnancy after intrauterine death of one fetus or more, unspecified trimester, fetus 5
O3120X9	Continuing pregnancy after intrauterine death of one fetus or more, unspecified trimester, other fetus
O3121X0	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, not applicable or unspecified
O3121X1	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 1
O3121X2	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 2
O3121X3	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 3
O3121X4	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 4
O3121X5	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, fetus 5
O3121X9	Continuing pregnancy after intrauterine death of one fetus or more, first trimester, other fetus
O3122X0	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, not applicable or unspecified
O3122X1	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 1
O3122X2	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 2
O3122X3	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 3
O3122X4	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 4
O3122X5	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, fetus 5
O3122X9	Continuing pregnancy after intrauterine death of one fetus or more, second trimester, other fetus
O3123X0	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, not applicable or unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3123X1	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 1
O3123X2	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 2
O3123X3	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 3
O3123X4	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 4
O3123X5	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, fetus 5
O3123X9	Continuing pregnancy after intrauterine death of one fetus or more, third trimester, other fetus
O3130X0	Continuing pregnancy after elective fetal reduction of one fetus or more, unspecified trimester, not applicable or unspecified
O3130X1	Continuing pregnancy after elective fetal reduction of one fetus or more, unspecified trimester, fetus 1
O3130X2	Continuing pregnancy after elective fetal reduction of one fetus or more, unspecified trimester, fetus 2
O3130X3	Continuing pregnancy after elective fetal reduction of one fetus or more, unspecified trimester, fetus 3
O3130X4	Continuing pregnancy after elective fetal reduction of one fetus or more, unspecified trimester, fetus 4
O3130X5	Continuing pregnancy after elective fetal reduction of one fetus or more, unspecified trimester, fetus 5
O3130X9	Continuing pregnancy after elective fetal reduction of one fetus or more, unspecified trimester, other fetus
O3131X0	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, not applicable or unspecified
O3131X1	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 1
O3131X2	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 2
O3131X3	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 3
O3131X4	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 4
O3131X5	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, fetus 5
O3131X9	Continuing pregnancy after elective fetal reduction of one fetus or more, first trimester, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3132X0	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, not applicable or unspecified
O3132X1	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 1
O3132X2	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 2
O3132X3	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 3
O3132X4	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 4
O3132X5	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, fetus 5
O3132X9	Continuing pregnancy after elective fetal reduction of one fetus or more, second trimester, other fetus
O3133X0	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, not applicable or unspecified
O3133X1	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 1
O3133X2	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 2
O3133X3	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 3
O3133X4	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 4
O3133X5	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, fetus 5
O3133X9	Continuing pregnancy after elective fetal reduction of one fetus or more, third trimester, other fetus
O318X10	Other complications specific to multiple gestation, first trimester, not applicable or unspecified
O318X11	Other complications specific to multiple gestation, first trimester, fetus 1
O318X12	Other complications specific to multiple gestation, first trimester, fetus 2
O318X13	Other complications specific to multiple gestation, first trimester, fetus 3
O318X14	Other complications specific to multiple gestation, first trimester, fetus 4
O318X15	Other complications specific to multiple gestation, first trimester, fetus 5
O318X19	Other complications specific to multiple gestation, first trimester, other fetus
O318X20	Other complications specific to multiple gestation, second trimester, not applicable or unspecified
O318X21	Other complications specific to multiple gestation, second trimester, fetus 1
O318X22	Other complications specific to multiple gestation, second trimester, fetus 2

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O318X23	Other complications specific to multiple gestation, second trimester, fetus 3
O318X24	Other complications specific to multiple gestation, second trimester, fetus 4
O318X25	Other complications specific to multiple gestation, second trimester, fetus 5
O318X29	Other complications specific to multiple gestation, second trimester, other fetus
O318X30	Other complications specific to multiple gestation, third trimester, not applicable or unspecified
O318X31	Other complications specific to multiple gestation, third trimester, fetus 1
O318X32	Other complications specific to multiple gestation, third trimester, fetus 2
O318X33	Other complications specific to multiple gestation, third trimester, fetus 3
O318X34	Other complications specific to multiple gestation, third trimester, fetus 4
O318X35	Other complications specific to multiple gestation, third trimester, fetus 5
O318X39	Other complications specific to multiple gestation, third trimester, other fetus
O318X90	Other complications specific to multiple gestation, unspecified trimester, not applicable or unspecified
O318X91	Other complications specific to multiple gestation, unspecified trimester, fetus 1
O318X92	Other complications specific to multiple gestation, unspecified trimester, fetus 2
O318X93	Other complications specific to multiple gestation, unspecified trimester, fetus 3
O318X94	Other complications specific to multiple gestation, unspecified trimester, fetus 4
O318X95	Other complications specific to multiple gestation, unspecified trimester, fetus 5
O318X99	Other complications specific to multiple gestation, unspecified trimester, other fetus
O320XX0	Maternal care for unstable lie, not applicable or unspecified
O320XX1	Maternal care for unstable lie, fetus 1
O320XX2	Maternal care for unstable lie, fetus 2
O320XX3	Maternal care for unstable lie, fetus 3
O320XX4	Maternal care for unstable lie, fetus 4
O320XX5	Maternal care for unstable lie, fetus 5
O320XX9	Maternal care for unstable lie, other fetus
O321XX0	Maternal care for breech presentation, not applicable or unspecified
O321XX1	Maternal care for breech presentation, fetus 1
O321XX2	Maternal care for breech presentation, fetus 2
O321XX3	Maternal care for breech presentation, fetus 3
O321XX4	Maternal care for breech presentation, fetus 4
O321XX5	Maternal care for breech presentation, fetus 5
O321XX9	Maternal care for breech presentation, other fetus
O322XX0	Maternal care for transverse and oblique lie, not applicable or unspecified
O322XX1	Maternal care for transverse and oblique lie, fetus 1
O322XX2	Maternal care for transverse and oblique lie, fetus 2
O322XX3	Maternal care for transverse and oblique lie, fetus 3

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O322XX4	Maternal care for transverse and oblique lie, fetus 4
O322XX5	Maternal care for transverse and oblique lie, fetus 5
O322XX9	Maternal care for transverse and oblique lie, other fetus
O323XX0	Maternal care for face, brow and chin presentation, not applicable or unspecified
O323XX1	Maternal care for face, brow and chin presentation, fetus 1
O323XX2	Maternal care for face, brow and chin presentation, fetus 2
O323XX3	Maternal care for face, brow and chin presentation, fetus 3
O323XX4	Maternal care for face, brow and chin presentation, fetus 4
O323XX5	Maternal care for face, brow and chin presentation, fetus 5
O323XX9	Maternal care for face, brow and chin presentation, other fetus
O324XX0	Maternal care for high head at term, not applicable or unspecified
O324XX1	Maternal care for high head at term, fetus 1
O324XX2	Maternal care for high head at term, fetus 2
O324XX3	Maternal care for high head at term, fetus 3
O324XX4	Maternal care for high head at term, fetus 4
O324XX5	Maternal care for high head at term, fetus 5
O324XX9	Maternal care for high head at term, other fetus
O326XX0	Maternal care for compound presentation, not applicable or unspecified
O326XX1	Maternal care for compound presentation, fetus 1
O326XX2	Maternal care for compound presentation, fetus 2
O326XX3	Maternal care for compound presentation, fetus 3
O326XX4	Maternal care for compound presentation, fetus 4
O326XX5	Maternal care for compound presentation, fetus 5
O326XX9	Maternal care for compound presentation, other fetus
O328XX0	Maternal care for other malpresentation of fetus, not applicable or unspecified
O328XX1	Maternal care for other malpresentation of fetus, fetus 1
O328XX2	Maternal care for other malpresentation of fetus, fetus 2
O328XX3	Maternal care for other malpresentation of fetus, fetus 3
O328XX4	Maternal care for other malpresentation of fetus, fetus 4
O328XX5	Maternal care for other malpresentation of fetus, fetus 5
O328XX9	Maternal care for other malpresentation of fetus, other fetus
O329XX0	Maternal care for malpresentation of fetus, unspecified, not applicable or unspecified
O329XX1	Maternal care for malpresentation of fetus, unspecified, fetus 1
O329XX2	Maternal care for malpresentation of fetus, unspecified, fetus 2
O329XX3	Maternal care for malpresentation of fetus, unspecified, fetus 3
O329XX4	Maternal care for malpresentation of fetus, unspecified, fetus 4
O329XX5	Maternal care for malpresentation of fetus, unspecified, fetus 5

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O329XX9	Maternal care for malpresentation of fetus, unspecified, other fetus
O330	Maternal care for disproportion due to deformity of maternal pelvic bones
O331	Maternal care for disproportion due to generally contracted pelvis
O332	Maternal care for disproportion due to inlet contraction of pelvis
O333XX0	Maternal care for disproportion due to outlet contraction of pelvis, not applicable or unspecified
O333XX1	Maternal care for disproportion due to outlet contraction of pelvis, fetus 1
O333XX2	Maternal care for disproportion due to outlet contraction of pelvis, fetus 2
O333XX3	Maternal care for disproportion due to outlet contraction of pelvis, fetus 3
O333XX4	Maternal care for disproportion due to outlet contraction of pelvis, fetus 4
O333XX5	Maternal care for disproportion due to outlet contraction of pelvis, fetus 5
O333XX9	Maternal care for disproportion due to outlet contraction of pelvis, other fetus
O334XX0	Maternal care for disproportion of mixed maternal and fetal origin, not applicable or unspecified
O334XX1	Maternal care for disproportion of mixed maternal and fetal origin, fetus 1
O334XX2	Maternal care for disproportion of mixed maternal and fetal origin, fetus 2
O334XX3	Maternal care for disproportion of mixed maternal and fetal origin, fetus 3
O334XX4	Maternal care for disproportion of mixed maternal and fetal origin, fetus 4
O334XX5	Maternal care for disproportion of mixed maternal and fetal origin, fetus 5
O334XX9	Maternal care for disproportion of mixed maternal and fetal origin, other fetus
O335XX0	Maternal care for disproportion due to unusually large fetus, not applicable or unspecified
O335XX1	Maternal care for disproportion due to unusually large fetus, fetus 1
O335XX2	Maternal care for disproportion due to unusually large fetus, fetus 2
O335XX3	Maternal care for disproportion due to unusually large fetus, fetus 3
O335XX4	Maternal care for disproportion due to unusually large fetus, fetus 4
O335XX5	Maternal care for disproportion due to unusually large fetus, fetus 5
O335XX9	Maternal care for disproportion due to unusually large fetus, other fetus
O336XX0	Maternal care for disproportion due to hydrocephalic fetus, not applicable or unspecified
O336XX1	Maternal care for disproportion due to hydrocephalic fetus, fetus 1
O336XX2	Maternal care for disproportion due to hydrocephalic fetus, fetus 2
O336XX3	Maternal care for disproportion due to hydrocephalic fetus, fetus 3
O336XX4	Maternal care for disproportion due to hydrocephalic fetus, fetus 4
O336XX5	Maternal care for disproportion due to hydrocephalic fetus, fetus 5
O336XX9	Maternal care for disproportion due to hydrocephalic fetus, other fetus
O337	Maternal care for disproportion due to other fetal deformities
O337XX0	Maternal care for disproportion due to other fetal deformities, not applicable or unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O337XX1	Maternal care for disproportion due to other fetal deformities, fetus 1
O337XX2	Maternal care for disproportion due to other fetal deformities, fetus 2
O337XX3	Maternal care for disproportion due to other fetal deformities, fetus 3
O337XX4	Maternal care for disproportion due to other fetal deformities, fetus 4
O337XX5	Maternal care for disproportion due to other fetal deformities, fetus 5
O337XX9	Maternal care for disproportion due to other fetal deformities, other fetus
O338	Maternal care for disproportion of other origin
O339	Maternal care for disproportion, unspecified
O3400	Maternal care for unspecified congenital malformation of uterus, unspecified trimester
O3401	Maternal care for unspecified congenital malformation of uterus, first trimester
O3402	Maternal care for unspecified congenital malformation of uterus, second trimester
O3403	Maternal care for unspecified congenital malformation of uterus, third trimester
O3410	Maternal care for benign tumor of corpus uteri, unspecified trimester
O3411	Maternal care for benign tumor of corpus uteri, first trimester
O3412	Maternal care for benign tumor of corpus uteri, second trimester
O3413	Maternal care for benign tumor of corpus uteri, third trimester
O3421	Maternal care for scar from previous cesarean delivery
O34211	Maternal care for low transverse scar from previous cesarean delivery
O34212	Maternal care for vertical scar from previous cesarean delivery
O34218	Maternal care for other type scar from previous cesarean delivery
O34219	Maternal care for unspecified type scar from previous cesarean delivery
O3422	Maternal care for cesarean scar defect (isthmocele)
O3429	Maternal care due to uterine scar from other previous surgery
O3430	Maternal care for cervical incompetence, unspecified trimester
O3431	Maternal care for cervical incompetence, first trimester
O3432	Maternal care for cervical incompetence, second trimester
O3433	Maternal care for cervical incompetence, third trimester
O3440	Maternal care for other abnormalities of cervix, unspecified trimester
O3441	Maternal care for other abnormalities of cervix, first trimester
O3442	Maternal care for other abnormalities of cervix, second trimester
O3443	Maternal care for other abnormalities of cervix, third trimester
O34511	Maternal care for incarceration of gravid uterus, first trimester
O34512	Maternal care for incarceration of gravid uterus, second trimester
O34513	Maternal care for incarceration of gravid uterus, third trimester
O34519	Maternal care for incarceration of gravid uterus, unspecified trimester
O34521	Maternal care for prolapse of gravid uterus, first trimester
O34522	Maternal care for prolapse of gravid uterus, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O34523	Maternal care for prolapse of gravid uterus, third trimester
O34529	Maternal care for prolapse of gravid uterus, unspecified trimester
O34531	Maternal care for retroversion of gravid uterus, first trimester
O34532	Maternal care for retroversion of gravid uterus, second trimester
O34533	Maternal care for retroversion of gravid uterus, third trimester
O34539	Maternal care for retroversion of gravid uterus, unspecified trimester
O34591	Maternal care for other abnormalities of gravid uterus, first trimester
O34592	Maternal care for other abnormalities of gravid uterus, second trimester
O34593	Maternal care for other abnormalities of gravid uterus, third trimester
O34599	Maternal care for other abnormalities of gravid uterus, unspecified trimester
O3460	Maternal care for abnormality of vagina, unspecified trimester
O3461	Maternal care for abnormality of vagina, first trimester
O3462	Maternal care for abnormality of vagina, second trimester
O3463	Maternal care for abnormality of vagina, third trimester
O3470	Maternal care for abnormality of vulva and perineum, unspecified trimester
O3471	Maternal care for abnormality of vulva and perineum, first trimester
O3472	Maternal care for abnormality of vulva and perineum, second trimester
O3473	Maternal care for abnormality of vulva and perineum, third trimester
O3480	Maternal care for other abnormalities of pelvic organs, unspecified trimester
O3481	Maternal care for other abnormalities of pelvic organs, first trimester
O3482	Maternal care for other abnormalities of pelvic organs, second trimester
O3483	Maternal care for other abnormalities of pelvic organs, third trimester
O3490	Maternal care for abnormality of pelvic organ, unspecified, unspecified trimester
O3491	Maternal care for abnormality of pelvic organ, unspecified, first trimester
O3492	Maternal care for abnormality of pelvic organ, unspecified, second trimester
O3493	Maternal care for abnormality of pelvic organ, unspecified, third trimester
O3500X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, unspecified, not applicable or unspecified
O3500X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, unspecified, fetus 1
O3500X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, unspecified, fetus 2
O3500X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, unspecified, fetus 3
O3500X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, unspecified, fetus 4
O3500X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, unspecified, fetus 5

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3500X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, unspecified, other fetus
O3501X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, agenesis of the corpus callosum, not applicable or unspecified
O3501X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, agenesis of the corpus callosum, fetus 1
O3501X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, agenesis of the corpus callosum, fetus 2
O3501X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, agenesis of the corpus callosum, fetus 3
O3501X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, agenesis of the corpus callosum, fetus 4
O3501X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, agenesis of the corpus callosum, fetus 5
O3501X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, agenesis of the corpus callosum, other fetus
O3502X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, anencephaly, not applicable or unspecified
O3502X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, anencephaly, fetus 1
O3502X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, anencephaly, fetus 2
O3502X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, anencephaly, fetus 3
O3502X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, anencephaly, fetus 4
O3502X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, anencephaly, fetus 5
O3502X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, anencephaly, other fetus
O3503X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, choroid plexus cysts, not applicable or unspecified
O3503X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, choroid plexus cysts, fetus 1
O3503X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, choroid plexus cysts, fetus 2
O3503X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, choroid plexus cysts, fetus 3
O3503X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, choroid plexus cysts, fetus 4

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3503X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, choroid plexus cysts, fetus 5
O3503X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, choroid plexus cysts, other fetus
O3504X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, encephalocele, not applicable or unspecified
O3504X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, encephalocele, fetus 1
O3504X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, encephalocele, fetus 2
O3504X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, encephalocele, fetus 3
O3504X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, encephalocele, fetus 4
O3504X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, encephalocele, fetus 5
O3504X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, encephalocele, other fetus
O3505X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, holoprosencephaly, not applicable or unspecified
O3505X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, holoprosencephaly, fetus 1
O3505X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, holoprosencephaly, fetus 2
O3505X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, holoprosencephaly, fetus 3
O3505X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, holoprosencephaly, fetus 4
O3505X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, holoprosencephaly, fetus 5
O3505X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, holoprosencephaly, other fetus
O3506X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, hydrocephaly, not applicable or unspecified
O3506X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, hydrocephaly, fetus 1
O3506X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, hydrocephaly, fetus 2
O3506X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, hydrocephaly, fetus 3

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3506X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, hydrocephaly, fetus 4
O3506X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, hydrocephaly, fetus 5
O3506X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, hydrocephaly, other fetus
O3507X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, microcephaly, not applicable or unspecified
O3507X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, microcephaly, fetus 1
O3507X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, microcephaly, fetus 2
O3507X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, microcephaly, fetus 3
O3507X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, microcephaly, fetus 4
O3507X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, microcephaly, fetus 5
O3507X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, microcephaly, other fetus
O3508X0	Maternal care for (suspected) central nervous system malformation or damage in fetus, spina bifida, not applicable or unspecified
O3508X1	Maternal care for (suspected) central nervous system malformation or damage in fetus, spina bifida, fetus 1
O3508X2	Maternal care for (suspected) central nervous system malformation or damage in fetus, spina bifida, fetus 2
O3508X3	Maternal care for (suspected) central nervous system malformation or damage in fetus, spina bifida, fetus 3
O3508X4	Maternal care for (suspected) central nervous system malformation or damage in fetus, spina bifida, fetus 4
O3508X5	Maternal care for (suspected) central nervous system malformation or damage in fetus, spina bifida, fetus 5
O3508X9	Maternal care for (suspected) central nervous system malformation or damage in fetus, spina bifida, other fetus
O3509X0	Maternal care for (suspected) other central nervous system malformation or damage in fetus, not applicable or unspecified
O3509X1	Maternal care for (suspected) other central nervous system malformation or damage in fetus, fetus 1
O3509X2	Maternal care for (suspected) other central nervous system malformation or damage in fetus, fetus 2

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3509X3	Maternal care for (suspected) other central nervous system malformation or damage in fetus, fetus 3
O3509X4	Maternal care for (suspected) other central nervous system malformation or damage in fetus, fetus 4
O3509X5	Maternal care for (suspected) other central nervous system malformation or damage in fetus, fetus 5
O3509X9	Maternal care for (suspected) other central nervous system malformation or damage in fetus, other fetus
O350XX0	Maternal care for (suspected) central nervous system malformation in fetus, not applicable or unspecified
O350XX1	Maternal care for (suspected) central nervous system malformation in fetus, fetus 1
O350XX2	Maternal care for (suspected) central nervous system malformation in fetus, fetus 2
O350XX3	Maternal care for (suspected) central nervous system malformation in fetus, fetus 3
O350XX4	Maternal care for (suspected) central nervous system malformation in fetus, fetus 4
O350XX5	Maternal care for (suspected) central nervous system malformation in fetus, fetus 5
O350XX9	Maternal care for (suspected) central nervous system malformation in fetus, other fetus
O3510X0	Maternal care for (suspected) chromosomal abnormality in fetus, unspecified, not applicable or unspecified
O3510X1	Maternal care for (suspected) chromosomal abnormality in fetus, unspecified, fetus 1
O3510X2	Maternal care for (suspected) chromosomal abnormality in fetus, unspecified, fetus 2
O3510X3	Maternal care for (suspected) chromosomal abnormality in fetus, unspecified, fetus 3
O3510X4	Maternal care for (suspected) chromosomal abnormality in fetus, unspecified, fetus 4
O3510X5	Maternal care for (suspected) chromosomal abnormality in fetus, unspecified, fetus 5
O3510X9	Maternal care for (suspected) chromosomal abnormality in fetus, unspecified, other fetus
O3511X0	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 13, not applicable or unspecified
O3511X1	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 13, fetus 1

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3511X2	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 13, fetus 2
O3511X3	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 13, fetus 3
O3511X4	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 13, fetus 4
O3511X5	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 13, fetus 5
O3511X9	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 13, other fetus
O3512X0	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 18, not applicable or unspecified
O3512X1	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 18, fetus 1
O3512X2	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 18, fetus 2
O3512X3	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 18, fetus 3
O3512X4	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 18, fetus 4
O3512X5	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 18, fetus 5
O3512X9	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 18, other fetus
O3513X0	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 21, not applicable or unspecified
O3513X1	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 21, fetus 1
O3513X2	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 21, fetus 2
O3513X3	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 21, fetus 3
O3513X4	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 21, fetus 4
O3513X5	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 21, fetus 5
O3513X9	Maternal care for (suspected) chromosomal abnormality in fetus, Trisomy 21, other fetus
O3514X0	Maternal care for (suspected) chromosomal abnormality in fetus, Turner Syndrome, not applicable or unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3514X1	Maternal care for (suspected) chromosomal abnormality in fetus, Turner Syndrome, fetus 1
O3514X2	Maternal care for (suspected) chromosomal abnormality in fetus, Turner Syndrome, fetus 2
O3514X3	Maternal care for (suspected) chromosomal abnormality in fetus, Turner Syndrome, fetus 3
O3514X4	Maternal care for (suspected) chromosomal abnormality in fetus, Turner Syndrome, fetus 4
O3514X5	Maternal care for (suspected) chromosomal abnormality in fetus, Turner Syndrome, fetus 5
O3514X9	Maternal care for (suspected) chromosomal abnormality in fetus, Turner Syndrome, other fetus
O3515X0	Maternal care for (suspected) chromosomal abnormality in fetus, sex chromosome abnormality, not applicable or unspecified
O3515X1	Maternal care for (suspected) chromosomal abnormality in fetus, sex chromosome abnormality, fetus 1
O3515X2	Maternal care for (suspected) chromosomal abnormality in fetus, sex chromosome abnormality, fetus 2
O3515X3	Maternal care for (suspected) chromosomal abnormality in fetus, sex chromosome abnormality, fetus 3
O3515X4	Maternal care for (suspected) chromosomal abnormality in fetus, sex chromosome abnormality, fetus 4
O3515X5	Maternal care for (suspected) chromosomal abnormality in fetus, sex chromosome abnormality, fetus 5
O3515X9	Maternal care for (suspected) chromosomal abnormality in fetus, sex chromosome abnormality, other fetus
O3519X0	Maternal care for (suspected) chromosomal abnormality in fetus, other chromosomal abnormality, not applicable or unspecified
O3519X1	Maternal care for (suspected) chromosomal abnormality in fetus, other chromosomal abnormality, fetus 1
O3519X2	Maternal care for (suspected) chromosomal abnormality in fetus, other chromosomal abnormality, fetus 2
O3519X3	Maternal care for (suspected) chromosomal abnormality in fetus, other chromosomal abnormality, fetus 3
O3519X4	Maternal care for (suspected) chromosomal abnormality in fetus, other chromosomal abnormality, fetus 4
O3519X5	Maternal care for (suspected) chromosomal abnormality in fetus, other chromosomal abnormality, fetus 5
O3519X9	Maternal care for (suspected) chromosomal abnormality in fetus, other chromosomal abnormality, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O351XX0	Maternal care for (suspected) chromosomal abnormality in fetus, not applicable or unspecified
O351XX1	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 1
O351XX2	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 2
O351XX3	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 3
O351XX4	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 4
O351XX5	Maternal care for (suspected) chromosomal abnormality in fetus, fetus 5
O351XX9	Maternal care for (suspected) chromosomal abnormality in fetus, other fetus
O352XX0	Maternal care for (suspected) hereditary disease in fetus, not applicable or unspecified
O352XX1	Maternal care for (suspected) hereditary disease in fetus, fetus 1
O352XX2	Maternal care for (suspected) hereditary disease in fetus, fetus 2
O352XX3	Maternal care for (suspected) hereditary disease in fetus, fetus 3
O352XX4	Maternal care for (suspected) hereditary disease in fetus, fetus 4
O352XX5	Maternal care for (suspected) hereditary disease in fetus, fetus 5
O352XX9	Maternal care for (suspected) hereditary disease in fetus, other fetus
O353XX0	Maternal care for (suspected) damage to fetus from viral disease in mother, not applicable or unspecified
O353XX1	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 1
O353XX2	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 2
O353XX3	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 3
O353XX4	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 4
O353XX5	Maternal care for (suspected) damage to fetus from viral disease in mother, fetus 5
O353XX9	Maternal care for (suspected) damage to fetus from viral disease in mother, other fetus
O354XX0	Maternal care for (suspected) damage to fetus from alcohol, not applicable or unspecified
O354XX1	Maternal care for (suspected) damage to fetus from alcohol, fetus 1
O354XX2	Maternal care for (suspected) damage to fetus from alcohol, fetus 2
O354XX3	Maternal care for (suspected) damage to fetus from alcohol, fetus 3
O354XX4	Maternal care for (suspected) damage to fetus from alcohol, fetus 4
O354XX5	Maternal care for (suspected) damage to fetus from alcohol, fetus 5
O354XX9	Maternal care for (suspected) damage to fetus from alcohol, other fetus
O355XX0	Maternal care for (suspected) damage to fetus by drugs, not applicable or unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O355XX1	Maternal care for (suspected) damage to fetus by drugs, fetus 1
O355XX2	Maternal care for (suspected) damage to fetus by drugs, fetus 2
O355XX3	Maternal care for (suspected) damage to fetus by drugs, fetus 3
O355XX4	Maternal care for (suspected) damage to fetus by drugs, fetus 4
O355XX5	Maternal care for (suspected) damage to fetus by drugs, fetus 5
O355XX9	Maternal care for (suspected) damage to fetus by drugs, other fetus
O356XX0	Maternal care for (suspected) damage to fetus by radiation, not applicable or unspecified
O356XX1	Maternal care for (suspected) damage to fetus by radiation, fetus 1
O356XX2	Maternal care for (suspected) damage to fetus by radiation, fetus 2
O356XX3	Maternal care for (suspected) damage to fetus by radiation, fetus 3
O356XX4	Maternal care for (suspected) damage to fetus by radiation, fetus 4
O356XX5	Maternal care for (suspected) damage to fetus by radiation, fetus 5
O356XX9	Maternal care for (suspected) damage to fetus by radiation, other fetus
O357XX0	Maternal care for (suspected) damage to fetus by other medical procedures, not applicable or unspecified
O357XX1	Maternal care for (suspected) damage to fetus by other medical procedures, fetus 1
O357XX2	Maternal care for (suspected) damage to fetus by other medical procedures, fetus 2
O357XX3	Maternal care for (suspected) damage to fetus by other medical procedures, fetus 3
O357XX4	Maternal care for (suspected) damage to fetus by other medical procedures, fetus 4
O357XX5	Maternal care for (suspected) damage to fetus by other medical procedures, fetus 5
O357XX9	Maternal care for (suspected) damage to fetus by other medical procedures, other fetus
O358XX0	Maternal care for other (suspected) fetal abnormality and damage, not applicable or unspecified
O358XX1	Maternal care for other (suspected) fetal abnormality and damage, fetus 1
O358XX2	Maternal care for other (suspected) fetal abnormality and damage, fetus 2
O358XX3	Maternal care for other (suspected) fetal abnormality and damage, fetus 3
O358XX4	Maternal care for other (suspected) fetal abnormality and damage, fetus 4
O358XX5	Maternal care for other (suspected) fetal abnormality and damage, fetus 5
O358XX9	Maternal care for other (suspected) fetal abnormality and damage, other fetus
O359XX0	Maternal care for (suspected) fetal abnormality and damage, unspecified, not applicable or unspecified
O359XX1	Maternal care for (suspected) fetal abnormality and damage, unspecified, fetus 1

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O359XX2	Maternal care for (suspected) fetal abnormality and damage, unspecified, fetus 2
O359XX3	Maternal care for (suspected) fetal abnormality and damage, unspecified, fetus 3
O359XX4	Maternal care for (suspected) fetal abnormality and damage, unspecified, fetus 4
O359XX5	Maternal care for (suspected) fetal abnormality and damage, unspecified, fetus 5
O359XX9	Maternal care for (suspected) fetal abnormality and damage, unspecified, other fetus
O35AXX0	Maternal care for other (suspected) fetal abnormality and damage, fetal facial anomalies, not applicable or unspecified
O35AXX1	Maternal care for other (suspected) fetal abnormality and damage, fetal facial anomalies, fetus 1
O35AXX2	Maternal care for other (suspected) fetal abnormality and damage, fetal facial anomalies, fetus 2
O35AXX3	Maternal care for other (suspected) fetal abnormality and damage, fetal facial anomalies, fetus 3
O35AXX4	Maternal care for other (suspected) fetal abnormality and damage, fetal facial anomalies, fetus 4
O35AXX5	Maternal care for other (suspected) fetal abnormality and damage, fetal facial anomalies, fetus 5
O35AXX9	Maternal care for other (suspected) fetal abnormality and damage, fetal facial anomalies, other fetus
O35BXX0	Maternal care for other (suspected) fetal abnormality and damage, fetal cardiac anomalies, not applicable or unspecified
O35BXX1	Maternal care for other (suspected) fetal abnormality and damage, fetal cardiac anomalies, fetus 1
O35BXX2	Maternal care for other (suspected) fetal abnormality and damage, fetal cardiac anomalies, fetus 2
O35BXX3	Maternal care for other (suspected) fetal abnormality and damage, fetal cardiac anomalies, fetus 3
O35BXX4	Maternal care for other (suspected) fetal abnormality and damage, fetal cardiac anomalies, fetus 4
O35BXX5	Maternal care for other (suspected) fetal abnormality and damage, fetal cardiac anomalies, fetus 5
O35BXX9	Maternal care for other (suspected) fetal abnormality and damage, fetal cardiac anomalies, other fetus
O35CXX0	Maternal care for other (suspected) fetal abnormality and damage, fetal pulmonary anomalies, not applicable or unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O35CXX1	Maternal care for other (suspected) fetal abnormality and damage, fetal pulmonary anomalies, fetus 1
O35CXX2	Maternal care for other (suspected) fetal abnormality and damage, fetal pulmonary anomalies, fetus 2
O35CXX3	Maternal care for other (suspected) fetal abnormality and damage, fetal pulmonary anomalies, fetus 3
O35CXX4	Maternal care for other (suspected) fetal abnormality and damage, fetal pulmonary anomalies, fetus 4
O35CXX5	Maternal care for other (suspected) fetal abnormality and damage, fetal pulmonary anomalies, fetus 5
O35CXX9	Maternal care for other (suspected) fetal abnormality and damage, fetal pulmonary anomalies, other fetus
O35DXX0	Maternal care for other (suspected) fetal abnormality and damage, fetal gastrointestinal anomalies, not applicable or unspecified
O35DXX1	Maternal care for other (suspected) fetal abnormality and damage, fetal gastrointestinal anomalies, fetus 1
O35DXX2	Maternal care for other (suspected) fetal abnormality and damage, fetal gastrointestinal anomalies, fetus 2
O35DXX3	Maternal care for other (suspected) fetal abnormality and damage, fetal gastrointestinal anomalies, fetus 3
O35DXX4	Maternal care for other (suspected) fetal abnormality and damage, fetal gastrointestinal anomalies, fetus 4
O35DXX5	Maternal care for other (suspected) fetal abnormality and damage, fetal gastrointestinal anomalies, fetus 5
O35DXX9	Maternal care for other (suspected) fetal abnormality and damage, fetal gastrointestinal anomalies, other fetus
O35EXX0	Maternal care for other (suspected) fetal abnormality and damage, fetal genitourinary anomalies, not applicable or unspecified
O35EXX1	Maternal care for other (suspected) fetal abnormality and damage, fetal genitourinary anomalies, fetus 1
O35EXX2	Maternal care for other (suspected) fetal abnormality and damage, fetal genitourinary anomalies, fetus 2
O35EXX3	Maternal care for other (suspected) fetal abnormality and damage, fetal genitourinary anomalies, fetus 3
O35EXX4	Maternal care for other (suspected) fetal abnormality and damage, fetal genitourinary anomalies, fetus 4
O35EXX5	Maternal care for other (suspected) fetal abnormality and damage, fetal genitourinary anomalies, fetus 5
O35EXX9	Maternal care for other (suspected) fetal abnormality and damage, fetal genitourinary anomalies, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O35FXX0	Maternal care for other (suspected) fetal abnormality and damage, fetal musculoskeletal anomalies of trunk, not applicable or unspecified
O35FXX1	Maternal care for other (suspected) fetal abnormality and damage, fetal musculoskeletal anomalies of trunk, fetus 1
O35FXX2	Maternal care for other (suspected) fetal abnormality and damage, fetal musculoskeletal anomalies of trunk, fetus 2
O35FXX3	Maternal care for other (suspected) fetal abnormality and damage, fetal musculoskeletal anomalies of trunk, fetus 3
O35FXX4	Maternal care for other (suspected) fetal abnormality and damage, fetal musculoskeletal anomalies of trunk, fetus 4
O35FXX5	Maternal care for other (suspected) fetal abnormality and damage, fetal musculoskeletal anomalies of trunk, fetus 5
O35FXX9	Maternal care for other (suspected) fetal abnormality and damage, fetal musculoskeletal anomalies of trunk, other fetus
O35GXX0	Maternal care for other (suspected) fetal abnormality and damage, fetal upper extremities anomalies, not applicable or unspecified
O35GXX1	Maternal care for other (suspected) fetal abnormality and damage, fetal upper extremities anomalies, fetus 1
O35GXX2	Maternal care for other (suspected) fetal abnormality and damage, fetal upper extremities anomalies, fetus 2
O35GXX3	Maternal care for other (suspected) fetal abnormality and damage, fetal upper extremities anomalies, fetus 3
O35GXX4	Maternal care for other (suspected) fetal abnormality and damage, fetal upper extremities anomalies, fetus 4
O35GXX5	Maternal care for other (suspected) fetal abnormality and damage, fetal upper extremities anomalies, fetus 5
O35GXX9	Maternal care for other (suspected) fetal abnormality and damage, fetal upper extremities anomalies, other fetus
O35HXX0	Maternal care for other (suspected) fetal abnormality and damage, fetal lower extremities anomalies, not applicable or unspecified
O35HXX1	Maternal care for other (suspected) fetal abnormality and damage, fetal lower extremities anomalies, fetus 1
O35HXX2	Maternal care for other (suspected) fetal abnormality and damage, fetal lower extremities anomalies, fetus 2
O35HXX3	Maternal care for other (suspected) fetal abnormality and damage, fetal lower extremities anomalies, fetus 3
O35HXX4	Maternal care for other (suspected) fetal abnormality and damage, fetal lower extremities anomalies, fetus 4
O35HXX5	Maternal care for other (suspected) fetal abnormality and damage, fetal lower extremities anomalies, fetus 5

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O35HXX9	Maternal care for other (suspected) fetal abnormality and damage, fetal lower extremities anomalies, other fetus
O360110	Maternal care for anti-D [Rh] antibodies, first trimester, not applicable or unspecified
O360111	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 1
O360112	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 2
O360113	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 3
O360114	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 4
O360115	Maternal care for anti-D [Rh] antibodies, first trimester, fetus 5
O360119	Maternal care for anti-D [Rh] antibodies, first trimester, other fetus
O360120	Maternal care for anti-D [Rh] antibodies, second trimester, not applicable or unspecified
O360121	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 1
O360122	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 2
O360123	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 3
O360124	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 4
O360125	Maternal care for anti-D [Rh] antibodies, second trimester, fetus 5
O360129	Maternal care for anti-D [Rh] antibodies, second trimester, other fetus
O360130	Maternal care for anti-D [Rh] antibodies, third trimester, not applicable or unspecified
O360131	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 1
O360132	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 2
O360133	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 3
O360134	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 4
O360135	Maternal care for anti-D [Rh] antibodies, third trimester, fetus 5
O360139	Maternal care for anti-D [Rh] antibodies, third trimester, other fetus
O360190	Maternal care for anti-D [Rh] antibodies, unspecified trimester, not applicable or unspecified
O360191	Maternal care for anti-D [Rh] antibodies, unspecified trimester, fetus 1
O360192	Maternal care for anti-D [Rh] antibodies, unspecified trimester, fetus 2
O360193	Maternal care for anti-D [Rh] antibodies, unspecified trimester, fetus 3
O360194	Maternal care for anti-D [Rh] antibodies, unspecified trimester, fetus 4
O360195	Maternal care for anti-D [Rh] antibodies, unspecified trimester, fetus 5
O360199	Maternal care for anti-D [Rh] antibodies, unspecified trimester, other fetus
O360910	Maternal care for other rhesus isoimmunization, first trimester, not applicable or unspecified
O360911	Maternal care for other rhesus isoimmunization, first trimester, fetus 1
O360912	Maternal care for other rhesus isoimmunization, first trimester, fetus 2
O360913	Maternal care for other rhesus isoimmunization, first trimester, fetus 3

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O360914	Maternal care for other rhesus isoimmunization, first trimester, fetus 4
O360915	Maternal care for other rhesus isoimmunization, first trimester, fetus 5
O360919	Maternal care for other rhesus isoimmunization, first trimester, other fetus
O360920	Maternal care for other rhesus isoimmunization, second trimester, not applicable or unspecified
O360921	Maternal care for other rhesus isoimmunization, second trimester, fetus 1
O360922	Maternal care for other rhesus isoimmunization, second trimester, fetus 2
O360923	Maternal care for other rhesus isoimmunization, second trimester, fetus 3
O360924	Maternal care for other rhesus isoimmunization, second trimester, fetus 4
O360925	Maternal care for other rhesus isoimmunization, second trimester, fetus 5
O360929	Maternal care for other rhesus isoimmunization, second trimester, other fetus
O360930	Maternal care for other rhesus isoimmunization, third trimester, not applicable or unspecified
O360931	Maternal care for other rhesus isoimmunization, third trimester, fetus 1
O360932	Maternal care for other rhesus isoimmunization, third trimester, fetus 2
O360933	Maternal care for other rhesus isoimmunization, third trimester, fetus 3
O360934	Maternal care for other rhesus isoimmunization, third trimester, fetus 4
O360935	Maternal care for other rhesus isoimmunization, third trimester, fetus 5
O360939	Maternal care for other rhesus isoimmunization, third trimester, other fetus
O360990	Maternal care for other rhesus isoimmunization, unspecified trimester, not applicable or unspecified
O360991	Maternal care for other rhesus isoimmunization, unspecified trimester, fetus 1
O360992	Maternal care for other rhesus isoimmunization, unspecified trimester, fetus 2
O360993	Maternal care for other rhesus isoimmunization, unspecified trimester, fetus 3
O360994	Maternal care for other rhesus isoimmunization, unspecified trimester, fetus 4
O360995	Maternal care for other rhesus isoimmunization, unspecified trimester, fetus 5
O360999	Maternal care for other rhesus isoimmunization, unspecified trimester, other fetus
O361110	Maternal care for Anti-A sensitization, first trimester, not applicable or unspecified
O361111	Maternal care for Anti-A sensitization, first trimester, fetus 1
O361112	Maternal care for Anti-A sensitization, first trimester, fetus 2
O361113	Maternal care for Anti-A sensitization, first trimester, fetus 3
O361114	Maternal care for Anti-A sensitization, first trimester, fetus 4
O361115	Maternal care for Anti-A sensitization, first trimester, fetus 5
O361119	Maternal care for Anti-A sensitization, first trimester, other fetus
O361120	Maternal care for Anti-A sensitization, second trimester, not applicable or unspecified
O361121	Maternal care for Anti-A sensitization, second trimester, fetus 1

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O361122	Maternal care for Anti-A sensitization, second trimester, fetus 2
O361123	Maternal care for Anti-A sensitization, second trimester, fetus 3
O361124	Maternal care for Anti-A sensitization, second trimester, fetus 4
O361125	Maternal care for Anti-A sensitization, second trimester, fetus 5
O361129	Maternal care for Anti-A sensitization, second trimester, other fetus
O361130	Maternal care for Anti-A sensitization, third trimester, not applicable or unspecified
O361131	Maternal care for Anti-A sensitization, third trimester, fetus 1
O361132	Maternal care for Anti-A sensitization, third trimester, fetus 2
O361133	Maternal care for Anti-A sensitization, third trimester, fetus 3
O361134	Maternal care for Anti-A sensitization, third trimester, fetus 4
O361135	Maternal care for Anti-A sensitization, third trimester, fetus 5
O361139	Maternal care for Anti-A sensitization, third trimester, other fetus
O361190	Maternal care for Anti-A sensitization, unspecified trimester, not applicable or unspecified
O361191	Maternal care for Anti-A sensitization, unspecified trimester, fetus 1
O361192	Maternal care for Anti-A sensitization, unspecified trimester, fetus 2
O361193	Maternal care for Anti-A sensitization, unspecified trimester, fetus 3
O361194	Maternal care for Anti-A sensitization, unspecified trimester, fetus 4
O361195	Maternal care for Anti-A sensitization, unspecified trimester, fetus 5
O361199	Maternal care for Anti-A sensitization, unspecified trimester, other fetus
O361910	Maternal care for other isoimmunization, first trimester, not applicable or unspecified
O361911	Maternal care for other isoimmunization, first trimester, fetus 1
O361912	Maternal care for other isoimmunization, first trimester, fetus 2
O361913	Maternal care for other isoimmunization, first trimester, fetus 3
O361914	Maternal care for other isoimmunization, first trimester, fetus 4
O361915	Maternal care for other isoimmunization, first trimester, fetus 5
O361919	Maternal care for other isoimmunization, first trimester, other fetus
O361920	Maternal care for other isoimmunization, second trimester, not applicable or unspecified
O361921	Maternal care for other isoimmunization, second trimester, fetus 1
O361922	Maternal care for other isoimmunization, second trimester, fetus 2
O361923	Maternal care for other isoimmunization, second trimester, fetus 3
O361924	Maternal care for other isoimmunization, second trimester, fetus 4
O361925	Maternal care for other isoimmunization, second trimester, fetus 5
O361929	Maternal care for other isoimmunization, second trimester, other fetus
O361930	Maternal care for other isoimmunization, third trimester, not applicable or unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O361931	Maternal care for other isoimmunization, third trimester, fetus 1
O361932	Maternal care for other isoimmunization, third trimester, fetus 2
O361933	Maternal care for other isoimmunization, third trimester, fetus 3
O361934	Maternal care for other isoimmunization, third trimester, fetus 4
O361935	Maternal care for other isoimmunization, third trimester, fetus 5
O361939	Maternal care for other isoimmunization, third trimester, other fetus
O361990	Maternal care for other isoimmunization, unspecified trimester, not applicable or unspecified
O361991	Maternal care for other isoimmunization, unspecified trimester, fetus 1
O361992	Maternal care for other isoimmunization, unspecified trimester, fetus 2
O361993	Maternal care for other isoimmunization, unspecified trimester, fetus 3
O361994	Maternal care for other isoimmunization, unspecified trimester, fetus 4
O361995	Maternal care for other isoimmunization, unspecified trimester, fetus 5
O361999	Maternal care for other isoimmunization, unspecified trimester, other fetus
O3620X0	Maternal care for hydrops fetalis, unspecified trimester, not applicable or unspecified
O3620X1	Maternal care for hydrops fetalis, unspecified trimester, fetus 1
O3620X2	Maternal care for hydrops fetalis, unspecified trimester, fetus 2
O3620X3	Maternal care for hydrops fetalis, unspecified trimester, fetus 3
O3620X4	Maternal care for hydrops fetalis, unspecified trimester, fetus 4
O3620X5	Maternal care for hydrops fetalis, unspecified trimester, fetus 5
O3620X9	Maternal care for hydrops fetalis, unspecified trimester, other fetus
O3621X0	Maternal care for hydrops fetalis, first trimester, not applicable or unspecified
O3621X1	Maternal care for hydrops fetalis, first trimester, fetus 1
O3621X2	Maternal care for hydrops fetalis, first trimester, fetus 2
O3621X3	Maternal care for hydrops fetalis, first trimester, fetus 3
O3621X4	Maternal care for hydrops fetalis, first trimester, fetus 4
O3621X5	Maternal care for hydrops fetalis, first trimester, fetus 5
O3621X9	Maternal care for hydrops fetalis, first trimester, other fetus
O3622X0	Maternal care for hydrops fetalis, second trimester, not applicable or unspecified
O3622X1	Maternal care for hydrops fetalis, second trimester, fetus 1
O3622X2	Maternal care for hydrops fetalis, second trimester, fetus 2
O3622X3	Maternal care for hydrops fetalis, second trimester, fetus 3
O3622X4	Maternal care for hydrops fetalis, second trimester, fetus 4
O3622X5	Maternal care for hydrops fetalis, second trimester, fetus 5
O3622X9	Maternal care for hydrops fetalis, second trimester, other fetus
O3623X0	Maternal care for hydrops fetalis, third trimester, not applicable or unspecified
O3623X1	Maternal care for hydrops fetalis, third trimester, fetus 1
O3623X2	Maternal care for hydrops fetalis, third trimester, fetus 2

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3623X3	Maternal care for hydrops fetalis, third trimester, fetus 3
O3623X4	Maternal care for hydrops fetalis, third trimester, fetus 4
O3623X5	Maternal care for hydrops fetalis, third trimester, fetus 5
O3623X9	Maternal care for hydrops fetalis, third trimester, other fetus
O364XX0	Maternal care for intrauterine death, not applicable or unspecified
O364XX1	Maternal care for intrauterine death, fetus 1
O364XX2	Maternal care for intrauterine death, fetus 2
O364XX3	Maternal care for intrauterine death, fetus 3
O364XX4	Maternal care for intrauterine death, fetus 4
O364XX5	Maternal care for intrauterine death, fetus 5
O364XX9	Maternal care for intrauterine death, other fetus
O365110	Maternal care for known or suspected placental insufficiency, first trimester, not applicable or unspecified
O365111	Maternal care for known or suspected placental insufficiency, first trimester, fetus 1
O365112	Maternal care for known or suspected placental insufficiency, first trimester, fetus 2
O365113	Maternal care for known or suspected placental insufficiency, first trimester, fetus 3
O365114	Maternal care for known or suspected placental insufficiency, first trimester, fetus 4
O365115	Maternal care for known or suspected placental insufficiency, first trimester, fetus 5
O365119	Maternal care for known or suspected placental insufficiency, first trimester, other fetus
O365120	Maternal care for known or suspected placental insufficiency, second trimester, not applicable or unspecified
O365121	Maternal care for known or suspected placental insufficiency, second trimester, fetus 1
O365122	Maternal care for known or suspected placental insufficiency, second trimester, fetus 2
O365123	Maternal care for known or suspected placental insufficiency, second trimester, fetus 3
O365124	Maternal care for known or suspected placental insufficiency, second trimester, fetus 4
O365125	Maternal care for known or suspected placental insufficiency, second trimester, fetus 5
O365129	Maternal care for known or suspected placental insufficiency, second trimester, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O365130	Maternal care for known or suspected placental insufficiency, third trimester, not applicable or unspecified
O365131	Maternal care for known or suspected placental insufficiency, third trimester, fetus 1
O365132	Maternal care for known or suspected placental insufficiency, third trimester, fetus 2
O365133	Maternal care for known or suspected placental insufficiency, third trimester, fetus 3
O365134	Maternal care for known or suspected placental insufficiency, third trimester, fetus 4
O365135	Maternal care for known or suspected placental insufficiency, third trimester, fetus 5
O365139	Maternal care for known or suspected placental insufficiency, third trimester, other fetus
O365190	Maternal care for known or suspected placental insufficiency, unspecified trimester, not applicable or unspecified
O365191	Maternal care for known or suspected placental insufficiency, unspecified trimester, fetus 1
O365192	Maternal care for known or suspected placental insufficiency, unspecified trimester, fetus 2
O365193	Maternal care for known or suspected placental insufficiency, unspecified trimester, fetus 3
O365194	Maternal care for known or suspected placental insufficiency, unspecified trimester, fetus 4
O365195	Maternal care for known or suspected placental insufficiency, unspecified trimester, fetus 5
O365199	Maternal care for known or suspected placental insufficiency, unspecified trimester, other fetus
O365910	Maternal care for other known or suspected poor fetal growth, first trimester, not applicable or unspecified
O365911	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 1
O365912	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 2
O365913	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 3
O365914	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 4
O365915	Maternal care for other known or suspected poor fetal growth, first trimester, fetus 5

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O365919	Maternal care for other known or suspected poor fetal growth, first trimester, other fetus
O365920	Maternal care for other known or suspected poor fetal growth, second trimester, not applicable or unspecified
O365921	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 1
O365922	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 2
O365923	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 3
O365924	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 4
O365925	Maternal care for other known or suspected poor fetal growth, second trimester, fetus 5
O365929	Maternal care for other known or suspected poor fetal growth, second trimester, other fetus
O365930	Maternal care for other known or suspected poor fetal growth, third trimester, not applicable or unspecified
O365931	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 1
O365932	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 2
O365933	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 3
O365934	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 4
O365935	Maternal care for other known or suspected poor fetal growth, third trimester, fetus 5
O365939	Maternal care for other known or suspected poor fetal growth, third trimester, other fetus
O365990	Maternal care for other known or suspected poor fetal growth, unspecified trimester, not applicable or unspecified
O365991	Maternal care for other known or suspected poor fetal growth, unspecified trimester, fetus 1
O365992	Maternal care for other known or suspected poor fetal growth, unspecified trimester, fetus 2
O365993	Maternal care for other known or suspected poor fetal growth, unspecified trimester, fetus 3
O365994	Maternal care for other known or suspected poor fetal growth, unspecified trimester, fetus 4

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O365995	Maternal care for other known or suspected poor fetal growth, unspecified trimester, fetus 5
O365999	Maternal care for other known or suspected poor fetal growth, unspecified trimester, other fetus
O3660X0	Maternal care for excessive fetal growth, unspecified trimester, not applicable or unspecified
O3660X1	Maternal care for excessive fetal growth, unspecified trimester, fetus 1
O3660X2	Maternal care for excessive fetal growth, unspecified trimester, fetus 2
O3660X3	Maternal care for excessive fetal growth, unspecified trimester, fetus 3
O3660X4	Maternal care for excessive fetal growth, unspecified trimester, fetus 4
O3660X5	Maternal care for excessive fetal growth, unspecified trimester, fetus 5
O3660X9	Maternal care for excessive fetal growth, unspecified trimester, other fetus
O3661X0	Maternal care for excessive fetal growth, first trimester, not applicable or unspecified
O3661X1	Maternal care for excessive fetal growth, first trimester, fetus 1
O3661X2	Maternal care for excessive fetal growth, first trimester, fetus 2
O3661X3	Maternal care for excessive fetal growth, first trimester, fetus 3
O3661X4	Maternal care for excessive fetal growth, first trimester, fetus 4
O3661X5	Maternal care for excessive fetal growth, first trimester, fetus 5
O3661X9	Maternal care for excessive fetal growth, first trimester, other fetus
O3662X0	Maternal care for excessive fetal growth, second trimester, not applicable or unspecified
O3662X1	Maternal care for excessive fetal growth, second trimester, fetus 1
O3662X2	Maternal care for excessive fetal growth, second trimester, fetus 2
O3662X3	Maternal care for excessive fetal growth, second trimester, fetus 3
O3662X4	Maternal care for excessive fetal growth, second trimester, fetus 4
O3662X5	Maternal care for excessive fetal growth, second trimester, fetus 5
O3662X9	Maternal care for excessive fetal growth, second trimester, other fetus
O3663X0	Maternal care for excessive fetal growth, third trimester, not applicable or unspecified
O3663X1	Maternal care for excessive fetal growth, third trimester, fetus 1
O3663X2	Maternal care for excessive fetal growth, third trimester, fetus 2
O3663X3	Maternal care for excessive fetal growth, third trimester, fetus 3
O3663X4	Maternal care for excessive fetal growth, third trimester, fetus 4
O3663X5	Maternal care for excessive fetal growth, third trimester, fetus 5
O3663X9	Maternal care for excessive fetal growth, third trimester, other fetus
O3670X0	Maternal care for viable fetus in abdominal pregnancy, unspecified trimester, not applicable or unspecified

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3670X1	Maternal care for viable fetus in abdominal pregnancy, unspecified trimester, fetus 1
O3670X2	Maternal care for viable fetus in abdominal pregnancy, unspecified trimester, fetus 2
O3670X3	Maternal care for viable fetus in abdominal pregnancy, unspecified trimester, fetus 3
O3670X4	Maternal care for viable fetus in abdominal pregnancy, unspecified trimester, fetus 4
O3670X5	Maternal care for viable fetus in abdominal pregnancy, unspecified trimester, fetus 5
O3670X9	Maternal care for viable fetus in abdominal pregnancy, unspecified trimester, other fetus
O3671X0	Maternal care for viable fetus in abdominal pregnancy, first trimester, not applicable or unspecified
O3671X1	Maternal care for viable fetus in abdominal pregnancy, first trimester, fetus 1
O3671X2	Maternal care for viable fetus in abdominal pregnancy, first trimester, fetus 2
O3671X3	Maternal care for viable fetus in abdominal pregnancy, first trimester, fetus 3
O3671X4	Maternal care for viable fetus in abdominal pregnancy, first trimester, fetus 4
O3671X5	Maternal care for viable fetus in abdominal pregnancy, first trimester, fetus 5
O3671X9	Maternal care for viable fetus in abdominal pregnancy, first trimester, other fetus
O3672X0	Maternal care for viable fetus in abdominal pregnancy, second trimester, not applicable or unspecified
O3672X1	Maternal care for viable fetus in abdominal pregnancy, second trimester, fetus 1
O3672X2	Maternal care for viable fetus in abdominal pregnancy, second trimester, fetus 2
O3672X3	Maternal care for viable fetus in abdominal pregnancy, second trimester, fetus 3
O3672X4	Maternal care for viable fetus in abdominal pregnancy, second trimester, fetus 4
O3672X5	Maternal care for viable fetus in abdominal pregnancy, second trimester, fetus 5
O3672X9	Maternal care for viable fetus in abdominal pregnancy, second trimester, other fetus
O3673X0	Maternal care for viable fetus in abdominal pregnancy, third trimester, not applicable or unspecified
O3673X1	Maternal care for viable fetus in abdominal pregnancy, third trimester, fetus 1
O3673X2	Maternal care for viable fetus in abdominal pregnancy, third trimester, fetus 2
O3673X3	Maternal care for viable fetus in abdominal pregnancy, third trimester, fetus 3
O3673X4	Maternal care for viable fetus in abdominal pregnancy, third trimester, fetus 4
O3673X5	Maternal care for viable fetus in abdominal pregnancy, third trimester, fetus 5
O3673X9	Maternal care for viable fetus in abdominal pregnancy, third trimester, other fetus
O3680X0	Pregnancy with inconclusive fetal viability, not applicable or unspecified
O3680X1	Pregnancy with inconclusive fetal viability, fetus 1

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3680X2	Pregnancy with inconclusive fetal viability, fetus 2
O3680X3	Pregnancy with inconclusive fetal viability, fetus 3
O3680X4	Pregnancy with inconclusive fetal viability, fetus 4
O3680X5	Pregnancy with inconclusive fetal viability, fetus 5
O3680X9	Pregnancy with inconclusive fetal viability, other fetus
O368120	Decreased fetal movements, second trimester, not applicable or unspecified
O368121	Decreased fetal movements, second trimester, fetus 1
O368122	Decreased fetal movements, second trimester, fetus 2
O368123	Decreased fetal movements, second trimester, fetus 3
O368124	Decreased fetal movements, second trimester, fetus 4
O368125	Decreased fetal movements, second trimester, fetus 5
O368129	Decreased fetal movements, second trimester, other fetus
O368130	Decreased fetal movements, third trimester, not applicable or unspecified
O368131	Decreased fetal movements, third trimester, fetus 1
O368132	Decreased fetal movements, third trimester, fetus 2
O368133	Decreased fetal movements, third trimester, fetus 3
O368134	Decreased fetal movements, third trimester, fetus 4
O368135	Decreased fetal movements, third trimester, fetus 5
O368139	Decreased fetal movements, third trimester, other fetus
O368190	Decreased fetal movements, unspecified trimester, not applicable or unspecified
O368191	Decreased fetal movements, unspecified trimester, fetus 1
O368192	Decreased fetal movements, unspecified trimester, fetus 2
O368193	Decreased fetal movements, unspecified trimester, fetus 3
O368194	Decreased fetal movements, unspecified trimester, fetus 4
O368195	Decreased fetal movements, unspecified trimester, fetus 5
O368199	Decreased fetal movements, unspecified trimester, other fetus
O368210	Fetal anemia and thrombocytopenia, first trimester, not applicable or unspecified
O368211	Fetal anemia and thrombocytopenia, first trimester, fetus 1
O368212	Fetal anemia and thrombocytopenia, first trimester, fetus 2
O368213	Fetal anemia and thrombocytopenia, first trimester, fetus 3
O368214	Fetal anemia and thrombocytopenia, first trimester, fetus 4
O368215	Fetal anemia and thrombocytopenia, first trimester, fetus 5
O368219	Fetal anemia and thrombocytopenia, first trimester, other fetus
O368220	Fetal anemia and thrombocytopenia, second trimester, not applicable or unspecified
O368221	Fetal anemia and thrombocytopenia, second trimester, fetus 1
O368222	Fetal anemia and thrombocytopenia, second trimester, fetus 2
O368223	Fetal anemia and thrombocytopenia, second trimester, fetus 3

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O368224	Fetal anemia and thrombocytopenia, second trimester, fetus 4
O368225	Fetal anemia and thrombocytopenia, second trimester, fetus 5
O368229	Fetal anemia and thrombocytopenia, second trimester, other fetus
O368230	Fetal anemia and thrombocytopenia, third trimester, not applicable or unspecified
O368231	Fetal anemia and thrombocytopenia, third trimester, fetus 1
O368232	Fetal anemia and thrombocytopenia, third trimester, fetus 2
O368233	Fetal anemia and thrombocytopenia, third trimester, fetus 3
O368234	Fetal anemia and thrombocytopenia, third trimester, fetus 4
O368235	Fetal anemia and thrombocytopenia, third trimester, fetus 5
O368239	Fetal anemia and thrombocytopenia, third trimester, other fetus
O368290	Fetal anemia and thrombocytopenia, unspecified trimester, not applicable or unspecified
O368291	Fetal anemia and thrombocytopenia, unspecified trimester, fetus 1
O368292	Fetal anemia and thrombocytopenia, unspecified trimester, fetus 2
O368293	Fetal anemia and thrombocytopenia, unspecified trimester, fetus 3
O368294	Fetal anemia and thrombocytopenia, unspecified trimester, fetus 4
O368295	Fetal anemia and thrombocytopenia, unspecified trimester, fetus 5
O368299	Fetal anemia and thrombocytopenia, unspecified trimester, other fetus
O368310	Maternal care for abnormalities of the fetal heart rate or rhythm, first trimester, not applicable or unspecified
O368311	Maternal care for abnormalities of the fetal heart rate or rhythm, first trimester, fetus 1
O368312	Maternal care for abnormalities of the fetal heart rate or rhythm, first trimester, fetus 2
O368313	Maternal care for abnormalities of the fetal heart rate or rhythm, first trimester, fetus 3
O368314	Maternal care for abnormalities of the fetal heart rate or rhythm, first trimester, fetus 4
O368315	Maternal care for abnormalities of the fetal heart rate or rhythm, first trimester, fetus 5
O368319	Maternal care for abnormalities of the fetal heart rate or rhythm, first trimester, other fetus
O368320	Maternal care for abnormalities of the fetal heart rate or rhythm, second trimester, not applicable or unspecified
O368321	Maternal care for abnormalities of the fetal heart rate or rhythm, second trimester, fetus 1
O368322	Maternal care for abnormalities of the fetal heart rate or rhythm, second trimester, fetus 2

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O368323	Maternal care for abnormalities of the fetal heart rate or rhythm, second trimester, fetus 3
O368324	Maternal care for abnormalities of the fetal heart rate or rhythm, second trimester, fetus 4
O368325	Maternal care for abnormalities of the fetal heart rate or rhythm, second trimester, fetus 5
O368329	Maternal care for abnormalities of the fetal heart rate or rhythm, second trimester, other fetus
O368330	Maternal care for abnormalities of the fetal heart rate or rhythm, third trimester, not applicable or unspecified
O368331	Maternal care for abnormalities of the fetal heart rate or rhythm, third trimester, fetus 1
O368332	Maternal care for abnormalities of the fetal heart rate or rhythm, third trimester, fetus 2
O368333	Maternal care for abnormalities of the fetal heart rate or rhythm, third trimester, fetus 3
O368334	Maternal care for abnormalities of the fetal heart rate or rhythm, third trimester, fetus 4
O368335	Maternal care for abnormalities of the fetal heart rate or rhythm, third trimester, fetus 5
O368339	Maternal care for abnormalities of the fetal heart rate or rhythm, third trimester, other fetus
O368390	Maternal care for abnormalities of the fetal heart rate or rhythm, unspecified trimester, not applicable or unspecified
O368391	Maternal care for abnormalities of the fetal heart rate or rhythm, unspecified trimester, fetus 1
O368392	Maternal care for abnormalities of the fetal heart rate or rhythm, unspecified trimester, fetus 2
O368393	Maternal care for abnormalities of the fetal heart rate or rhythm, unspecified trimester, fetus 3
O368394	Maternal care for abnormalities of the fetal heart rate or rhythm, unspecified trimester, fetus 4
O368395	Maternal care for abnormalities of the fetal heart rate or rhythm, unspecified trimester, fetus 5
O368399	Maternal care for abnormalities of the fetal heart rate or rhythm, unspecified trimester, other fetus
O368910	Maternal care for other specified fetal problems, first trimester, not applicable or unspecified
O368911	Maternal care for other specified fetal problems, first trimester, fetus 1
O368912	Maternal care for other specified fetal problems, first trimester, fetus 2
O368913	Maternal care for other specified fetal problems, first trimester, fetus 3

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O368914	Maternal care for other specified fetal problems, first trimester, fetus 4
O368915	Maternal care for other specified fetal problems, first trimester, fetus 5
O368919	Maternal care for other specified fetal problems, first trimester, other fetus
O368920	Maternal care for other specified fetal problems, second trimester, not applicable or unspecified
O368921	Maternal care for other specified fetal problems, second trimester, fetus 1
O368922	Maternal care for other specified fetal problems, second trimester, fetus 2
O368923	Maternal care for other specified fetal problems, second trimester, fetus 3
O368924	Maternal care for other specified fetal problems, second trimester, fetus 4
O368925	Maternal care for other specified fetal problems, second trimester, fetus 5
O368929	Maternal care for other specified fetal problems, second trimester, other fetus
O368930	Maternal care for other specified fetal problems, third trimester, not applicable or unspecified
O368931	Maternal care for other specified fetal problems, third trimester, fetus 1
O368932	Maternal care for other specified fetal problems, third trimester, fetus 2
O368933	Maternal care for other specified fetal problems, third trimester, fetus 3
O368934	Maternal care for other specified fetal problems, third trimester, fetus 4
O368935	Maternal care for other specified fetal problems, third trimester, fetus 5
O368939	Maternal care for other specified fetal problems, third trimester, other fetus
O368990	Maternal care for other specified fetal problems, unspecified trimester, not applicable or unspecified
O368991	Maternal care for other specified fetal problems, unspecified trimester, fetus 1
O368992	Maternal care for other specified fetal problems, unspecified trimester, fetus 2
O368993	Maternal care for other specified fetal problems, unspecified trimester, fetus 3
O368994	Maternal care for other specified fetal problems, unspecified trimester, fetus 4
O368995	Maternal care for other specified fetal problems, unspecified trimester, fetus 5
O368999	Maternal care for other specified fetal problems, unspecified trimester, other fetus
O3690X0	Maternal care for fetal problem, unspecified, unspecified trimester, not applicable or unspecified
O3690X1	Maternal care for fetal problem, unspecified, unspecified trimester, fetus 1
O3690X2	Maternal care for fetal problem, unspecified, unspecified trimester, fetus 2
O3690X3	Maternal care for fetal problem, unspecified, unspecified trimester, fetus 3
O3690X4	Maternal care for fetal problem, unspecified, unspecified trimester, fetus 4
O3690X5	Maternal care for fetal problem, unspecified, unspecified trimester, fetus 5
O3690X9	Maternal care for fetal problem, unspecified, unspecified trimester, other fetus
O3691X0	Maternal care for fetal problem, unspecified, first trimester, not applicable or unspecified
O3691X1	Maternal care for fetal problem, unspecified, first trimester, fetus 1

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O3691X2	Maternal care for fetal problem, unspecified, first trimester, fetus 2
O3691X3	Maternal care for fetal problem, unspecified, first trimester, fetus 3
O3691X4	Maternal care for fetal problem, unspecified, first trimester, fetus 4
O3691X5	Maternal care for fetal problem, unspecified, first trimester, fetus 5
O3691X9	Maternal care for fetal problem, unspecified, first trimester, other fetus
O3692X0	Maternal care for fetal problem, unspecified, second trimester, not applicable or unspecified
O3692X1	Maternal care for fetal problem, unspecified, second trimester, fetus 1
O3692X2	Maternal care for fetal problem, unspecified, second trimester, fetus 2
O3692X3	Maternal care for fetal problem, unspecified, second trimester, fetus 3
O3692X4	Maternal care for fetal problem, unspecified, second trimester, fetus 4
O3692X5	Maternal care for fetal problem, unspecified, second trimester, fetus 5
O3692X9	Maternal care for fetal problem, unspecified, second trimester, other fetus
O3693X0	Maternal care for fetal problem, unspecified, third trimester, not applicable or unspecified
O3693X1	Maternal care for fetal problem, unspecified, third trimester, fetus 1
O3693X2	Maternal care for fetal problem, unspecified, third trimester, fetus 2
O3693X3	Maternal care for fetal problem, unspecified, third trimester, fetus 3
O3693X4	Maternal care for fetal problem, unspecified, third trimester, fetus 4
O3693X5	Maternal care for fetal problem, unspecified, third trimester, fetus 5
O3693X9	Maternal care for fetal problem, unspecified, third trimester, other fetus
O401XX0	Polyhydramnios, first trimester, not applicable or unspecified
O401XX1	Polyhydramnios, first trimester, fetus 1
O401XX2	Polyhydramnios, first trimester, fetus 2
O401XX3	Polyhydramnios, first trimester, fetus 3
O401XX4	Polyhydramnios, first trimester, fetus 4
O401XX5	Polyhydramnios, first trimester, fetus 5
O401XX9	Polyhydramnios, first trimester, other fetus
O402XX0	Polyhydramnios, second trimester, not applicable or unspecified
O402XX1	Polyhydramnios, second trimester, fetus 1
O402XX2	Polyhydramnios, second trimester, fetus 2
O402XX3	Polyhydramnios, second trimester, fetus 3
O402XX4	Polyhydramnios, second trimester, fetus 4
O402XX5	Polyhydramnios, second trimester, fetus 5
O402XX9	Polyhydramnios, second trimester, other fetus
O403XX0	Polyhydramnios, third trimester, not applicable or unspecified
O403XX1	Polyhydramnios, third trimester, fetus 1
O403XX2	Polyhydramnios, third trimester, fetus 2
O403XX3	Polyhydramnios, third trimester, fetus 3

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O403XX4	Polyhydramnios, third trimester, fetus 4
O403XX5	Polyhydramnios, third trimester, fetus 5
O403XX9	Polyhydramnios, third trimester, other fetus
O409XX0	Polyhydramnios, unspecified trimester, not applicable or unspecified
O409XX1	Polyhydramnios, unspecified trimester, fetus 1
O409XX2	Polyhydramnios, unspecified trimester, fetus 2
O409XX3	Polyhydramnios, unspecified trimester, fetus 3
O409XX4	Polyhydramnios, unspecified trimester, fetus 4
O409XX5	Polyhydramnios, unspecified trimester, fetus 5
O409XX9	Polyhydramnios, unspecified trimester, other fetus
O4100X0	Oligohydramnios, unspecified trimester, not applicable or unspecified
O4100X1	Oligohydramnios, unspecified trimester, fetus 1
O4100X2	Oligohydramnios, unspecified trimester, fetus 2
O4100X3	Oligohydramnios, unspecified trimester, fetus 3
O4100X4	Oligohydramnios, unspecified trimester, fetus 4
O4100X5	Oligohydramnios, unspecified trimester, fetus 5
O4100X9	Oligohydramnios, unspecified trimester, other fetus
O4101X0	Oligohydramnios, first trimester, not applicable or unspecified
O4101X1	Oligohydramnios, first trimester, fetus 1
O4101X2	Oligohydramnios, first trimester, fetus 2
O4101X3	Oligohydramnios, first trimester, fetus 3
O4101X4	Oligohydramnios, first trimester, fetus 4
O4101X5	Oligohydramnios, first trimester, fetus 5
O4101X9	Oligohydramnios, first trimester, other fetus
O4102X0	Oligohydramnios, second trimester, not applicable or unspecified
O4102X1	Oligohydramnios, second trimester, fetus 1
O4102X2	Oligohydramnios, second trimester, fetus 2
O4102X3	Oligohydramnios, second trimester, fetus 3
O4102X4	Oligohydramnios, second trimester, fetus 4
O4102X5	Oligohydramnios, second trimester, fetus 5
O4102X9	Oligohydramnios, second trimester, other fetus
O4103X0	Oligohydramnios, third trimester, not applicable or unspecified
O4103X1	Oligohydramnios, third trimester, fetus 1
O4103X2	Oligohydramnios, third trimester, fetus 2
O4103X3	Oligohydramnios, third trimester, fetus 3
O4103X4	Oligohydramnios, third trimester, fetus 4
O4103X5	Oligohydramnios, third trimester, fetus 5
O4103X9	Oligohydramnios, third trimester, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O411010	Infection of amniotic sac and membranes, unspecified, first trimester, not applicable or unspecified
O411011	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 1
O411012	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 2
O411013	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 3
O411014	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 4
O411015	Infection of amniotic sac and membranes, unspecified, first trimester, fetus 5
O411019	Infection of amniotic sac and membranes, unspecified, first trimester, other fetus
O411020	Infection of amniotic sac and membranes, unspecified, second trimester, not applicable or unspecified
O411021	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 1
O411022	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 2
O411023	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 3
O411024	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 4
O411025	Infection of amniotic sac and membranes, unspecified, second trimester, fetus 5
O411029	Infection of amniotic sac and membranes, unspecified, second trimester, other fetus
O411030	Infection of amniotic sac and membranes, unspecified, third trimester, not applicable or unspecified
O411031	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 1
O411032	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 2
O411033	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 3
O411034	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 4
O411035	Infection of amniotic sac and membranes, unspecified, third trimester, fetus 5
O411039	Infection of amniotic sac and membranes, unspecified, third trimester, other fetus
O411090	Infection of amniotic sac and membranes, unspecified, unspecified trimester, not applicable or unspecified
O411091	Infection of amniotic sac and membranes, unspecified, unspecified trimester, fetus 1
O411092	Infection of amniotic sac and membranes, unspecified, unspecified trimester, fetus 2
O411093	Infection of amniotic sac and membranes, unspecified, unspecified trimester, fetus 3
O411094	Infection of amniotic sac and membranes, unspecified, unspecified trimester, fetus 4
O411095	Infection of amniotic sac and membranes, unspecified, unspecified trimester, fetus 5
O411099	Infection of amniotic sac and membranes, unspecified, unspecified trimester, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O411210	Chorioamnionitis, first trimester, not applicable or unspecified
O411211	Chorioamnionitis, first trimester, fetus 1
O411212	Chorioamnionitis, first trimester, fetus 2
O411213	Chorioamnionitis, first trimester, fetus 3
O411214	Chorioamnionitis, first trimester, fetus 4
O411215	Chorioamnionitis, first trimester, fetus 5
O411219	Chorioamnionitis, first trimester, other fetus
O411220	Chorioamnionitis, second trimester, not applicable or unspecified
O411221	Chorioamnionitis, second trimester, fetus 1
O411222	Chorioamnionitis, second trimester, fetus 2
O411223	Chorioamnionitis, second trimester, fetus 3
O411224	Chorioamnionitis, second trimester, fetus 4
O411225	Chorioamnionitis, second trimester, fetus 5
O411229	Chorioamnionitis, second trimester, other fetus
O411230	Chorioamnionitis, third trimester, not applicable or unspecified
O411231	Chorioamnionitis, third trimester, fetus 1
O411232	Chorioamnionitis, third trimester, fetus 2
O411233	Chorioamnionitis, third trimester, fetus 3
O411234	Chorioamnionitis, third trimester, fetus 4
O411235	Chorioamnionitis, third trimester, fetus 5
O411239	Chorioamnionitis, third trimester, other fetus
O411290	Chorioamnionitis, unspecified trimester, not applicable or unspecified
O411291	Chorioamnionitis, unspecified trimester, fetus 1
O411292	Chorioamnionitis, unspecified trimester, fetus 2
O411293	Chorioamnionitis, unspecified trimester, fetus 3
O411294	Chorioamnionitis, unspecified trimester, fetus 4
O411295	Chorioamnionitis, unspecified trimester, fetus 5
O411299	Chorioamnionitis, unspecified trimester, other fetus
O411410	Placentitis, first trimester, not applicable or unspecified
O411411	Placentitis, first trimester, fetus 1
O411412	Placentitis, first trimester, fetus 2
O411413	Placentitis, first trimester, fetus 3
O411414	Placentitis, first trimester, fetus 4
O411415	Placentitis, first trimester, fetus 5
O411419	Placentitis, first trimester, other fetus
O411420	Placentitis, second trimester, not applicable or unspecified
O411421	Placentitis, second trimester, fetus 1
O411422	Placentitis, second trimester, fetus 2

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O411423	Placentitis, second trimester, fetus 3
O411424	Placentitis, second trimester, fetus 4
O411425	Placentitis, second trimester, fetus 5
O411429	Placentitis, second trimester, other fetus
O411430	Placentitis, third trimester, not applicable or unspecified
O411431	Placentitis, third trimester, fetus 1
O411432	Placentitis, third trimester, fetus 2
O411433	Placentitis, third trimester, fetus 3
O411434	Placentitis, third trimester, fetus 4
O411435	Placentitis, third trimester, fetus 5
O411439	Placentitis, third trimester, other fetus
O411490	Placentitis, unspecified trimester, not applicable or unspecified
O411491	Placentitis, unspecified trimester, fetus 1
O411492	Placentitis, unspecified trimester, fetus 2
O411493	Placentitis, unspecified trimester, fetus 3
O411494	Placentitis, unspecified trimester, fetus 4
O411495	Placentitis, unspecified trimester, fetus 5
O411499	Placentitis, unspecified trimester, other fetus
O418X10	Other specified disorders of amniotic fluid and membranes, first trimester, not applicable or unspecified
O418X11	Other specified disorders of amniotic fluid and membranes, first trimester, fetus 1
O418X12	Other specified disorders of amniotic fluid and membranes, first trimester, fetus 2
O418X13	Other specified disorders of amniotic fluid and membranes, first trimester, fetus 3
O418X14	Other specified disorders of amniotic fluid and membranes, first trimester, fetus 4
O418X15	Other specified disorders of amniotic fluid and membranes, first trimester, fetus 5
O418X19	Other specified disorders of amniotic fluid and membranes, first trimester, other fetus
O418X20	Other specified disorders of amniotic fluid and membranes, second trimester, not applicable or unspecified
O418X21	Other specified disorders of amniotic fluid and membranes, second trimester, fetus 1
O418X22	Other specified disorders of amniotic fluid and membranes, second trimester, fetus 2
O418X23	Other specified disorders of amniotic fluid and membranes, second trimester, fetus 3

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O418X24	Other specified disorders of amniotic fluid and membranes, second trimester, fetus 4
O418X25	Other specified disorders of amniotic fluid and membranes, second trimester, fetus 5
O418X29	Other specified disorders of amniotic fluid and membranes, second trimester, other fetus
O418X30	Other specified disorders of amniotic fluid and membranes, third trimester, not applicable or unspecified
O418X31	Other specified disorders of amniotic fluid and membranes, third trimester, fetus 1
O418X32	Other specified disorders of amniotic fluid and membranes, third trimester, fetus 2
O418X33	Other specified disorders of amniotic fluid and membranes, third trimester, fetus 3
O418X34	Other specified disorders of amniotic fluid and membranes, third trimester, fetus 4
O418X35	Other specified disorders of amniotic fluid and membranes, third trimester, fetus 5
O418X39	Other specified disorders of amniotic fluid and membranes, third trimester, other fetus
O418X90	Other specified disorders of amniotic fluid and membranes, unspecified trimester, not applicable or unspecified
O418X91	Other specified disorders of amniotic fluid and membranes, unspecified trimester, fetus 1
O418X92	Other specified disorders of amniotic fluid and membranes, unspecified trimester, fetus 2
O418X93	Other specified disorders of amniotic fluid and membranes, unspecified trimester, fetus 3
O418X94	Other specified disorders of amniotic fluid and membranes, unspecified trimester, fetus 4
O418X95	Other specified disorders of amniotic fluid and membranes, unspecified trimester, fetus 5
O418X99	Other specified disorders of amniotic fluid and membranes, unspecified trimester, other fetus
O4190X0	Disorder of amniotic fluid and membranes, unspecified, unspecified trimester, not applicable or unspecified
O4190X1	Disorder of amniotic fluid and membranes, unspecified, unspecified trimester, fetus 1
O4190X2	Disorder of amniotic fluid and membranes, unspecified, unspecified trimester, fetus 2

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O4190X3	Disorder of amniotic fluid and membranes, unspecified, unspecified trimester, fetus 3
O4190X4	Disorder of amniotic fluid and membranes, unspecified, unspecified trimester, fetus 4
O4190X5	Disorder of amniotic fluid and membranes, unspecified, unspecified trimester, fetus 5
O4190X9	Disorder of amniotic fluid and membranes, unspecified, unspecified trimester, other fetus
O4191X0	Disorder of amniotic fluid and membranes, unspecified, first trimester, not applicable or unspecified
O4191X1	Disorder of amniotic fluid and membranes, unspecified, first trimester, fetus 1
O4191X2	Disorder of amniotic fluid and membranes, unspecified, first trimester, fetus 2
O4191X3	Disorder of amniotic fluid and membranes, unspecified, first trimester, fetus 3
O4191X4	Disorder of amniotic fluid and membranes, unspecified, first trimester, fetus 4
O4191X5	Disorder of amniotic fluid and membranes, unspecified, first trimester, fetus 5
O4191X9	Disorder of amniotic fluid and membranes, unspecified, first trimester, other fetus
O4192X0	Disorder of amniotic fluid and membranes, unspecified, second trimester, not applicable or unspecified
O4192X1	Disorder of amniotic fluid and membranes, unspecified, second trimester, fetus 1
O4192X2	Disorder of amniotic fluid and membranes, unspecified, second trimester, fetus 2
O4192X3	Disorder of amniotic fluid and membranes, unspecified, second trimester, fetus 3
O4192X4	Disorder of amniotic fluid and membranes, unspecified, second trimester, fetus 4
O4192X5	Disorder of amniotic fluid and membranes, unspecified, second trimester, fetus 5
O4192X9	Disorder of amniotic fluid and membranes, unspecified, second trimester, other fetus
O4193X0	Disorder of amniotic fluid and membranes, unspecified, third trimester, not applicable or unspecified
O4193X1	Disorder of amniotic fluid and membranes, unspecified, third trimester, fetus 1
O4193X2	Disorder of amniotic fluid and membranes, unspecified, third trimester, fetus 2
O4193X3	Disorder of amniotic fluid and membranes, unspecified, third trimester, fetus 3
O4193X4	Disorder of amniotic fluid and membranes, unspecified, third trimester, fetus 4
O4193X5	Disorder of amniotic fluid and membranes, unspecified, third trimester, fetus 5
O4193X9	Disorder of amniotic fluid and membranes, unspecified, third trimester, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O4200	Premature rupture of membranes, onset of labor within 24 hours of rupture, unspecified weeks of gestation
O42011	Preterm premature rupture of membranes, onset of labor within 24 hours of rupture, first trimester
O42012	Preterm premature rupture of membranes, onset of labor within 24 hours of rupture, second trimester
O42013	Preterm premature rupture of membranes, onset of labor within 24 hours of rupture, third trimester
O42019	Preterm premature rupture of membranes, onset of labor within 24 hours of rupture, unspecified trimester
O4202	Full-term premature rupture of membranes, onset of labor within 24 hours of rupture
O4210	Premature rupture of membranes, onset of labor more than 24 hours following rupture, unspecified weeks of gestation
O42111	Preterm premature rupture of membranes, onset of labor more than 24 hours following rupture, first trimester
O42112	Preterm premature rupture of membranes, onset of labor more than 24 hours following rupture, second trimester
O42113	Preterm premature rupture of membranes, onset of labor more than 24 hours following rupture, third trimester
O42119	Preterm premature rupture of membranes, onset of labor more than 24 hours following rupture, unspecified trimester
O4212	Full-term premature rupture of membranes, onset of labor more than 24 hours following rupture
O4290	Premature rupture of membranes, unspecified as to length of time between rupture and onset of labor, unspecified weeks of gestation
O42911	Preterm premature rupture of membranes, unspecified as to length of time between rupture and onset of labor, first trimester
O42912	Preterm premature rupture of membranes, unspecified as to length of time between rupture and onset of labor, second trimester
O42913	Preterm premature rupture of membranes, unspecified as to length of time between rupture and onset of labor, third trimester
O42919	Preterm premature rupture of membranes, unspecified as to length of time between rupture and onset of labor, unspecified trimester
O4292	Full-term premature rupture of membranes, unspecified as to length of time between rupture and onset of labor
O43011	Fetomaternal placental transfusion syndrome, first trimester
O43012	Fetomaternal placental transfusion syndrome, second trimester
O43013	Fetomaternal placental transfusion syndrome, third trimester
O43019	Fetomaternal placental transfusion syndrome, unspecified trimester
O43021	Fetus-to-fetus placental transfusion syndrome, first trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O43022	Fetus-to-fetus placental transfusion syndrome, second trimester
O43023	Fetus-to-fetus placental transfusion syndrome, third trimester
O43029	Fetus-to-fetus placental transfusion syndrome, unspecified trimester
O43101	Malformation of placenta, unspecified, first trimester
O43102	Malformation of placenta, unspecified, second trimester
O43103	Malformation of placenta, unspecified, third trimester
O43109	Malformation of placenta, unspecified, unspecified trimester
O43111	Circumvallate placenta, first trimester
O43112	Circumvallate placenta, second trimester
O43113	Circumvallate placenta, third trimester
O43119	Circumvallate placenta, unspecified trimester
O43121	Velamentous insertion of umbilical cord, first trimester
O43122	Velamentous insertion of umbilical cord, second trimester
O43123	Velamentous insertion of umbilical cord, third trimester
O43129	Velamentous insertion of umbilical cord, unspecified trimester
O43191	Other malformation of placenta, first trimester
O43192	Other malformation of placenta, second trimester
O43193	Other malformation of placenta, third trimester
O43199	Other malformation of placenta, unspecified trimester
O43211	Placenta accreta, first trimester
O43212	Placenta accreta, second trimester
O43213	Placenta accreta, third trimester
O43219	Placenta accreta, unspecified trimester
O43221	Placenta increta, first trimester
O43222	Placenta increta, second trimester
O43223	Placenta increta, third trimester
O43229	Placenta increta, unspecified trimester
O43231	Placenta percreta, first trimester
O43232	Placenta percreta, second trimester
O43233	Placenta percreta, third trimester
O43239	Placenta percreta, unspecified trimester
O43811	Placental infarction, first trimester
O43812	Placental infarction, second trimester
O43813	Placental infarction, third trimester
O43819	Placental infarction, unspecified trimester
O43891	Other placental disorders, first trimester
O43892	Other placental disorders, second trimester
O43893	Other placental disorders, third trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O43899	Other placental disorders, unspecified trimester
O4390	Unspecified placental disorder, unspecified trimester
O4391	Unspecified placental disorder, first trimester
O4392	Unspecified placental disorder, second trimester
O4393	Unspecified placental disorder, third trimester
O4400	Complete placenta previa NOS or without hemorrhage, unspecified trimester
O4401	Complete placenta previa NOS or without hemorrhage, first trimester
O4402	Complete placenta previa NOS or without hemorrhage, second trimester
O4403	Complete placenta previa NOS or without hemorrhage, third trimester
O4410	Complete placenta previa with hemorrhage, unspecified trimester
O4411	Complete placenta previa with hemorrhage, first trimester
O4412	Complete placenta previa with hemorrhage, second trimester
O4413	Complete placenta previa with hemorrhage, third trimester
O4420	Partial placenta previa NOS or without hemorrhage, unspecified trimester
O4421	Partial placenta previa NOS or without hemorrhage, first trimester
O4422	Partial placenta previa NOS or without hemorrhage, second trimester
O4423	Partial placenta previa NOS or without hemorrhage, third trimester
O4430	Partial placenta previa with hemorrhage, unspecified trimester
O4431	Partial placenta previa with hemorrhage, first trimester
O4432	Partial placenta previa with hemorrhage, second trimester
O4433	Partial placenta previa with hemorrhage, third trimester
O4440	Low lying placenta NOS or without hemorrhage, unspecified trimester
O4441	Low lying placenta NOS or without hemorrhage, first trimester
O4442	Low lying placenta NOS or without hemorrhage, second trimester
O4443	Low lying placenta NOS or without hemorrhage, third trimester
O4450	Low lying placenta with hemorrhage, unspecified trimester
O4451	Low lying placenta with hemorrhage, first trimester
O4452	Low lying placenta with hemorrhage, second trimester
O4453	Low lying placenta with hemorrhage, third trimester
O45001	Premature separation of placenta with coagulation defect, unspecified, first trimester
O45002	Premature separation of placenta with coagulation defect, unspecified, second trimester
O45003	Premature separation of placenta with coagulation defect, unspecified, third trimester
O45009	Premature separation of placenta with coagulation defect, unspecified, unspecified trimester
O45011	Premature separation of placenta with afibrinogenemia, first trimester
O45012	Premature separation of placenta with afibrinogenemia, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O45013	Premature separation of placenta with afibrinogenemia, third trimester
O45019	Premature separation of placenta with afibrinogenemia, unspecified trimester
O45021	Premature separation of placenta with disseminated intravascular coagulation, first trimester
O45022	Premature separation of placenta with disseminated intravascular coagulation, second trimester
O45023	Premature separation of placenta with disseminated intravascular coagulation, third trimester
O45029	Premature separation of placenta with disseminated intravascular coagulation, unspecified trimester
O45091	Premature separation of placenta with other coagulation defect, first trimester
O45092	Premature separation of placenta with other coagulation defect, second trimester
O45093	Premature separation of placenta with other coagulation defect, third trimester
O45099	Premature separation of placenta with other coagulation defect, unspecified trimester
O458X1	Other premature separation of placenta, first trimester
O458X2	Other premature separation of placenta, second trimester
O458X3	Other premature separation of placenta, third trimester
O458X9	Other premature separation of placenta, unspecified trimester
O4590	Premature separation of placenta, unspecified, unspecified trimester
O4591	Premature separation of placenta, unspecified, first trimester
O4592	Premature separation of placenta, unspecified, second trimester
O4593	Premature separation of placenta, unspecified, third trimester
O46001	Antepartum hemorrhage with coagulation defect, unspecified, first trimester
O46002	Antepartum hemorrhage with coagulation defect, unspecified, second trimester
O46003	Antepartum hemorrhage with coagulation defect, unspecified, third trimester
O46009	Antepartum hemorrhage with coagulation defect, unspecified, unspecified trimester
O46011	Antepartum hemorrhage with afibrinogenemia, first trimester
O46012	Antepartum hemorrhage with afibrinogenemia, second trimester
O46013	Antepartum hemorrhage with afibrinogenemia, third trimester
O46019	Antepartum hemorrhage with afibrinogenemia, unspecified trimester
O46021	Antepartum hemorrhage with disseminated intravascular coagulation, first trimester
O46022	Antepartum hemorrhage with disseminated intravascular coagulation, second trimester
O46023	Antepartum hemorrhage with disseminated intravascular coagulation, third trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O46029	Antepartum hemorrhage with disseminated intravascular coagulation, unspecified trimester
O46091	Antepartum hemorrhage with other coagulation defect, first trimester
O46092	Antepartum hemorrhage with other coagulation defect, second trimester
O46093	Antepartum hemorrhage with other coagulation defect, third trimester
O46099	Antepartum hemorrhage with other coagulation defect, unspecified trimester
O468X1	Other antepartum hemorrhage, first trimester
O468X2	Other antepartum hemorrhage, second trimester
O468X3	Other antepartum hemorrhage, third trimester
O468X9	Other antepartum hemorrhage, unspecified trimester
O4690	Antepartum hemorrhage, unspecified, unspecified trimester
O4691	Antepartum hemorrhage, unspecified, first trimester
O4692	Antepartum hemorrhage, unspecified, second trimester
O4693	Antepartum hemorrhage, unspecified, third trimester
O4700	False labor before 37 completed weeks of gestation, unspecified trimester
O4702	False labor before 37 completed weeks of gestation, second trimester
O4703	False labor before 37 completed weeks of gestation, third trimester
O471	False labor at or after 37 completed weeks of gestation
O479	False labor, unspecified
O480	Post-term pregnancy
O481	Prolonged pregnancy
O6000	Preterm labor without delivery, unspecified trimester
O6002	Preterm labor without delivery, second trimester
O6003	Preterm labor without delivery, third trimester
O6010X0	Preterm labor with preterm delivery, unspecified trimester, not applicable or unspecified
O6010X1	Preterm labor with preterm delivery, unspecified trimester, fetus 1
O6010X2	Preterm labor with preterm delivery, unspecified trimester, fetus 2
O6010X3	Preterm labor with preterm delivery, unspecified trimester, fetus 3
O6010X4	Preterm labor with preterm delivery, unspecified trimester, fetus 4
O6010X5	Preterm labor with preterm delivery, unspecified trimester, fetus 5
O6010X9	Preterm labor with preterm delivery, unspecified trimester, other fetus
O6012X0	Preterm labor second trimester with preterm delivery second trimester, not applicable or unspecified
O6012X1	Preterm labor second trimester with preterm delivery second trimester, fetus 1
O6012X2	Preterm labor second trimester with preterm delivery second trimester, fetus 2
O6012X3	Preterm labor second trimester with preterm delivery second trimester, fetus 3
O6012X4	Preterm labor second trimester with preterm delivery second trimester, fetus 4
O6012X5	Preterm labor second trimester with preterm delivery second trimester, fetus 5

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O6012X9	Preterm labor second trimester with preterm delivery second trimester, other fetus
O6013X0	Preterm labor second trimester with preterm delivery third trimester, not applicable or unspecified
O6013X1	Preterm labor second trimester with preterm delivery third trimester, fetus 1
O6013X2	Preterm labor second trimester with preterm delivery third trimester, fetus 2
O6013X3	Preterm labor second trimester with preterm delivery third trimester, fetus 3
O6013X4	Preterm labor second trimester with preterm delivery third trimester, fetus 4
O6013X5	Preterm labor second trimester with preterm delivery third trimester, fetus 5
O6013X9	Preterm labor second trimester with preterm delivery third trimester, other fetus
O6014X0	Preterm labor third trimester with preterm delivery third trimester, not applicable or unspecified
O6014X1	Preterm labor third trimester with preterm delivery third trimester, fetus 1
O6014X2	Preterm labor third trimester with preterm delivery third trimester, fetus 2
O6014X3	Preterm labor third trimester with preterm delivery third trimester, fetus 3
O6014X4	Preterm labor third trimester with preterm delivery third trimester, fetus 4
O6014X5	Preterm labor third trimester with preterm delivery third trimester, fetus 5
O6014X9	Preterm labor third trimester with preterm delivery third trimester, other fetus
O6020X0	Term delivery with preterm labor, unspecified trimester, not applicable or unspecified
O6020X1	Term delivery with preterm labor, unspecified trimester, fetus 1
O6020X2	Term delivery with preterm labor, unspecified trimester, fetus 2
O6020X3	Term delivery with preterm labor, unspecified trimester, fetus 3
O6020X4	Term delivery with preterm labor, unspecified trimester, fetus 4
O6020X5	Term delivery with preterm labor, unspecified trimester, fetus 5
O6020X9	Term delivery with preterm labor, unspecified trimester, other fetus
O6022X0	Term delivery with preterm labor, second trimester, not applicable or unspecified
O6022X1	Term delivery with preterm labor, second trimester, fetus 1
O6022X2	Term delivery with preterm labor, second trimester, fetus 2
O6022X3	Term delivery with preterm labor, second trimester, fetus 3
O6022X4	Term delivery with preterm labor, second trimester, fetus 4
O6022X5	Term delivery with preterm labor, second trimester, fetus 5
O6022X9	Term delivery with preterm labor, second trimester, other fetus
O6023X0	Term delivery with preterm labor, third trimester, not applicable or unspecified
O6023X1	Term delivery with preterm labor, third trimester, fetus 1
O6023X2	Term delivery with preterm labor, third trimester, fetus 2
O6023X3	Term delivery with preterm labor, third trimester, fetus 3
O6023X4	Term delivery with preterm labor, third trimester, fetus 4
O6023X5	Term delivery with preterm labor, third trimester, fetus 5

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O6023X9	Term delivery with preterm labor, third trimester, other fetus
O610	Failed medical induction of labor
O611	Failed instrumental induction of labor
O618	Other failed induction of labor
O619	Failed induction of labor, unspecified
O620	Primary inadequate contractions
O621	Secondary uterine inertia
O622	Other uterine inertia
O623	Precipitate labor
O624	Hypertonic, incoordinate, and prolonged uterine contractions
O628	Other abnormalities of forces of labor
O629	Abnormality of forces of labor, unspecified
O630	Prolonged first stage (of labor)
O631	Prolonged second stage (of labor)
O632	Delayed delivery of second twin, triplet, etc.
O639	Long labor, unspecified
O640XX0	Obstructed labor due to incomplete rotation of fetal head, not applicable or unspecified
O640XX1	Obstructed labor due to incomplete rotation of fetal head, fetus 1
O640XX2	Obstructed labor due to incomplete rotation of fetal head, fetus 2
O640XX3	Obstructed labor due to incomplete rotation of fetal head, fetus 3
O640XX4	Obstructed labor due to incomplete rotation of fetal head, fetus 4
O640XX5	Obstructed labor due to incomplete rotation of fetal head, fetus 5
O640XX9	Obstructed labor due to incomplete rotation of fetal head, other fetus
O641XX0	Obstructed labor due to breech presentation, not applicable or unspecified
O641XX1	Obstructed labor due to breech presentation, fetus 1
O641XX2	Obstructed labor due to breech presentation, fetus 2
O641XX3	Obstructed labor due to breech presentation, fetus 3
O641XX4	Obstructed labor due to breech presentation, fetus 4
O641XX5	Obstructed labor due to breech presentation, fetus 5
O641XX9	Obstructed labor due to breech presentation, other fetus
O642XX0	Obstructed labor due to face presentation, not applicable or unspecified
O642XX1	Obstructed labor due to face presentation, fetus 1
O642XX2	Obstructed labor due to face presentation, fetus 2
O642XX3	Obstructed labor due to face presentation, fetus 3
O642XX4	Obstructed labor due to face presentation, fetus 4
O642XX5	Obstructed labor due to face presentation, fetus 5
O642XX9	Obstructed labor due to face presentation, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O643XX0	Obstructed labor due to brow presentation, not applicable or unspecified
O643XX1	Obstructed labor due to brow presentation, fetus 1
O643XX2	Obstructed labor due to brow presentation, fetus 2
O643XX3	Obstructed labor due to brow presentation, fetus 3
O643XX4	Obstructed labor due to brow presentation, fetus 4
O643XX5	Obstructed labor due to brow presentation, fetus 5
O643XX9	Obstructed labor due to brow presentation, other fetus
O644XX0	Obstructed labor due to shoulder presentation, not applicable or unspecified
O644XX1	Obstructed labor due to shoulder presentation, fetus 1
O644XX2	Obstructed labor due to shoulder presentation, fetus 2
O644XX3	Obstructed labor due to shoulder presentation, fetus 3
O644XX4	Obstructed labor due to shoulder presentation, fetus 4
O644XX5	Obstructed labor due to shoulder presentation, fetus 5
O644XX9	Obstructed labor due to shoulder presentation, other fetus
O645XX0	Obstructed labor due to compound presentation, not applicable or unspecified
O645XX1	Obstructed labor due to compound presentation, fetus 1
O645XX2	Obstructed labor due to compound presentation, fetus 2
O645XX3	Obstructed labor due to compound presentation, fetus 3
O645XX4	Obstructed labor due to compound presentation, fetus 4
O645XX5	Obstructed labor due to compound presentation, fetus 5
O645XX9	Obstructed labor due to compound presentation, other fetus
O648XX0	Obstructed labor due to other malposition and malpresentation, not applicable or unspecified
O648XX1	Obstructed labor due to other malposition and malpresentation, fetus 1
O648XX2	Obstructed labor due to other malposition and malpresentation, fetus 2
O648XX3	Obstructed labor due to other malposition and malpresentation, fetus 3
O648XX4	Obstructed labor due to other malposition and malpresentation, fetus 4
O648XX5	Obstructed labor due to other malposition and malpresentation, fetus 5
O648XX9	Obstructed labor due to other malposition and malpresentation, other fetus
O649XX0	Obstructed labor due to malposition and malpresentation, unspecified, not applicable or unspecified
O649XX1	Obstructed labor due to malposition and malpresentation, unspecified, fetus 1
O649XX2	Obstructed labor due to malposition and malpresentation, unspecified, fetus 2
O649XX3	Obstructed labor due to malposition and malpresentation, unspecified, fetus 3
O649XX4	Obstructed labor due to malposition and malpresentation, unspecified, fetus 4
O649XX5	Obstructed labor due to malposition and malpresentation, unspecified, fetus 5
O649XX9	Obstructed labor due to malposition and malpresentation, unspecified, other fetus
O650	Obstructed labor due to deformed pelvis

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O651	Obstructed labor due to generally contracted pelvis
O652	Obstructed labor due to pelvic inlet contraction
O653	Obstructed labor due to pelvic outlet and mid-cavity contraction
O654	Obstructed labor due to fetopelvic disproportion, unspecified
O655	Obstructed labor due to abnormality of maternal pelvic organs
O658	Obstructed labor due to other maternal pelvic abnormalities
O659	Obstructed labor due to maternal pelvic abnormality, unspecified
O660	Obstructed labor due to shoulder dystocia
O661	Obstructed labor due to locked twins
O662	Obstructed labor due to unusually large fetus
O663	Obstructed labor due to other abnormalities of fetus
O6640	Failed trial of labor, unspecified
O6641	Failed attempted vaginal birth after previous cesarean delivery
O665	Attempted application of vacuum extractor and forceps
O666	Obstructed labor due to other multiple fetuses
O668	Other specified obstructed labor
O669	Obstructed labor, unspecified
O670	Intrapartum hemorrhage with coagulation defect
O678	Other intrapartum hemorrhage
O679	Intrapartum hemorrhage, unspecified
O68	Labor and delivery complicated by abnormality of fetal acid-base balance
O690XX0	Labor and delivery complicated by prolapse of cord, not applicable or unspecified
O690XX1	Labor and delivery complicated by prolapse of cord, fetus 1
O690XX2	Labor and delivery complicated by prolapse of cord, fetus 2
O690XX3	Labor and delivery complicated by prolapse of cord, fetus 3
O690XX4	Labor and delivery complicated by prolapse of cord, fetus 4
O690XX5	Labor and delivery complicated by prolapse of cord, fetus 5
O690XX9	Labor and delivery complicated by prolapse of cord, other fetus
O691XX0	Labor and delivery complicated by cord around neck, with compression, not applicable or unspecified
O691XX1	Labor and delivery complicated by cord around neck, with compression, fetus 1
O691XX2	Labor and delivery complicated by cord around neck, with compression, fetus 2
O691XX3	Labor and delivery complicated by cord around neck, with compression, fetus 3
O691XX4	Labor and delivery complicated by cord around neck, with compression, fetus 4
O691XX5	Labor and delivery complicated by cord around neck, with compression, fetus 5
O691XX9	Labor and delivery complicated by cord around neck, with compression, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O692XX0	Labor and delivery complicated by other cord entanglement, with compression, not applicable or unspecified
O692XX1	Labor and delivery complicated by other cord entanglement, with compression, fetus 1
O692XX2	Labor and delivery complicated by other cord entanglement, with compression, fetus 2
O692XX3	Labor and delivery complicated by other cord entanglement, with compression, fetus 3
O692XX4	Labor and delivery complicated by other cord entanglement, with compression, fetus 4
O692XX5	Labor and delivery complicated by other cord entanglement, with compression, fetus 5
O692XX9	Labor and delivery complicated by other cord entanglement, with compression, other fetus
O693XX0	Labor and delivery complicated by short cord, not applicable or unspecified
O693XX1	Labor and delivery complicated by short cord, fetus 1
O693XX2	Labor and delivery complicated by short cord, fetus 2
O693XX3	Labor and delivery complicated by short cord, fetus 3
O693XX4	Labor and delivery complicated by short cord, fetus 4
O693XX5	Labor and delivery complicated by short cord, fetus 5
O693XX9	Labor and delivery complicated by short cord, other fetus
O694XX0	Labor and delivery complicated by vasa previa, not applicable or unspecified
O694XX1	Labor and delivery complicated by vasa previa, fetus 1
O694XX2	Labor and delivery complicated by vasa previa, fetus 2
O694XX3	Labor and delivery complicated by vasa previa, fetus 3
O694XX4	Labor and delivery complicated by vasa previa, fetus 4
O694XX5	Labor and delivery complicated by vasa previa, fetus 5
O694XX9	Labor and delivery complicated by vasa previa, other fetus
O695XX0	Labor and delivery complicated by vascular lesion of cord, not applicable or unspecified
O695XX1	Labor and delivery complicated by vascular lesion of cord, fetus 1
O695XX2	Labor and delivery complicated by vascular lesion of cord, fetus 2
O695XX3	Labor and delivery complicated by vascular lesion of cord, fetus 3
O695XX4	Labor and delivery complicated by vascular lesion of cord, fetus 4
O695XX5	Labor and delivery complicated by vascular lesion of cord, fetus 5
O695XX9	Labor and delivery complicated by vascular lesion of cord, other fetus
O6981X0	Labor and delivery complicated by cord around neck, without compression, not applicable or unspecified
O6981X1	Labor and delivery complicated by cord around neck, without compression, fetus 1

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O6981X2	Labor and delivery complicated by cord around neck, without compression, fetus 2
O6981X3	Labor and delivery complicated by cord around neck, without compression, fetus 3
O6981X4	Labor and delivery complicated by cord around neck, without compression, fetus 4
O6981X5	Labor and delivery complicated by cord around neck, without compression, fetus 5
O6981X9	Labor and delivery complicated by cord around neck, without compression, other fetus
O6982X0	Labor and delivery complicated by other cord entanglement, without compression, not applicable or unspecified
O6982X1	Labor and delivery complicated by other cord entanglement, without compression, fetus 1
O6982X2	Labor and delivery complicated by other cord entanglement, without compression, fetus 2
O6982X3	Labor and delivery complicated by other cord entanglement, without compression, fetus 3
O6982X4	Labor and delivery complicated by other cord entanglement, without compression, fetus 4
O6982X5	Labor and delivery complicated by other cord entanglement, without compression, fetus 5
O6982X9	Labor and delivery complicated by other cord entanglement, without compression, other fetus
O6989X0	Labor and delivery complicated by other cord complications, not applicable or unspecified
O6989X1	Labor and delivery complicated by other cord complications, fetus 1
O6989X2	Labor and delivery complicated by other cord complications, fetus 2
O6989X3	Labor and delivery complicated by other cord complications, fetus 3
O6989X4	Labor and delivery complicated by other cord complications, fetus 4
O6989X5	Labor and delivery complicated by other cord complications, fetus 5
O6989X9	Labor and delivery complicated by other cord complications, other fetus
O699XX0	Labor and delivery complicated by cord complication, unspecified, not applicable or unspecified
O699XX1	Labor and delivery complicated by cord complication, unspecified, fetus 1
O699XX2	Labor and delivery complicated by cord complication, unspecified, fetus 2
O699XX3	Labor and delivery complicated by cord complication, unspecified, fetus 3
O699XX4	Labor and delivery complicated by cord complication, unspecified, fetus 4
O699XX5	Labor and delivery complicated by cord complication, unspecified, fetus 5
O699XX9	Labor and delivery complicated by cord complication, unspecified, other fetus

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O700	First degree perineal laceration during delivery
O701	Second degree perineal laceration during delivery
O702	Third degree perineal laceration during delivery
O7020	Third degree perineal laceration during delivery, unspecified
O7021	Third degree perineal laceration during delivery, IIIa
O7022	Third degree perineal laceration during delivery, IIIb
O7023	Third degree perineal laceration during delivery, IIIc
O703	Fourth degree perineal laceration during delivery
O704	Anal sphincter tear complicating delivery, not associated with third degree laceration
O709	Perineal laceration during delivery, unspecified
O7100	Rupture of uterus before onset of labor, unspecified trimester
O7102	Rupture of uterus before onset of labor, second trimester
O7103	Rupture of uterus before onset of labor, third trimester
O711	Rupture of uterus during labor
O712	Postpartum inversion of uterus
O713	Obstetric laceration of cervix
O714	Obstetric high vaginal laceration alone
O715	Other obstetric injury to pelvic organs
O716	Obstetric damage to pelvic joints and ligaments
O717	Obstetric hematoma of pelvis
O7181	Laceration of uterus, not elsewhere classified
O7182	Other specified trauma to perineum and vulva
O7189	Other specified obstetric trauma
O719	Obstetric trauma, unspecified
O720	Third-stage hemorrhage
O721	Other immediate postpartum hemorrhage
O722	Delayed and secondary postpartum hemorrhage
O723	Postpartum coagulation defects
O730	Retained placenta without hemorrhage
O731	Retained portions of placenta and membranes, without hemorrhage
O740	Aspiration pneumonitis due to anesthesia during labor and delivery
O741	Other pulmonary complications of anesthesia during labor and delivery
O742	Cardiac complications of anesthesia during labor and delivery
O743	Central nervous system complications of anesthesia during labor and delivery
O744	Toxic reaction to local anesthesia during labor and delivery
O745	Spinal and epidural anesthesia-induced headache during labor and delivery
O746	Other complications of spinal and epidural anesthesia during labor and delivery

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O747	Failed or difficult intubation for anesthesia during labor and delivery
O748	Other complications of anesthesia during labor and delivery
O749	Complication of anesthesia during labor and delivery, unspecified
O750	Maternal distress during labor and delivery
O751	Shock during or following labor and delivery
O752	Pyrexia during labor, not elsewhere classified
O753	Other infection during labor
O754	Other complications of obstetric surgery and procedures
O755	Delayed delivery after artificial rupture of membranes
O7581	Maternal exhaustion complicating labor and delivery
O7582	Onset (spontaneous) of labor after 37 completed weeks of gestation but before 39 completed weeks gestation, with delivery by (planned) cesarean section
O7589	Other specified complications of labor and delivery
O759	Complication of labor and delivery, unspecified
O76	Abnormality in fetal heart rate and rhythm complicating labor and delivery
O770	Labor and delivery complicated by meconium in amniotic fluid
O771	Fetal stress in labor or delivery due to drug administration
O778	Labor and delivery complicated by other evidence of fetal stress
O779	Labor and delivery complicated by fetal stress, unspecified
O80	Encounter for full-term uncomplicated delivery
O82	Encounter for cesarean delivery without indication
O85	Puerperal sepsis
O860	Infection of obstetric surgical wound
O8600	Infection of obstetric surgical wound, unspecified
O8601	Infection of obstetric surgical wound, superficial incisional site
O8602	Infection of obstetric surgical wound, deep incisional site
O8603	Infection of obstetric surgical wound, organ and space site
O8604	Sepsis following an obstetrical procedure
O8609	Infection of obstetric surgical wound, other surgical site
O8611	Cervicitis following delivery
O8612	Endometritis following delivery
O8613	Vaginitis following delivery
O8619	Other infection of genital tract following delivery
O8620	Urinary tract infection following delivery, unspecified
O8621	Infection of kidney following delivery
O8622	Infection of bladder following delivery
O8629	Other urinary tract infection following delivery
O864	Pyrexia of unknown origin following delivery

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O8681	Puerperal septic thrombophlebitis
O8689	Other specified puerperal infections
O870	Superficial thrombophlebitis in the puerperium
O871	Deep phlebothrombosis in the puerperium
O872	Hemorrhoids in the puerperium
O873	Cerebral venous thrombosis in the puerperium
O874	Varicose veins of lower extremity in the puerperium
O878	Other venous complications in the puerperium
O879	Venous complication in the puerperium, unspecified
O88011	Air embolism in pregnancy, first trimester
O88012	Air embolism in pregnancy, second trimester
O88013	Air embolism in pregnancy, third trimester
O88019	Air embolism in pregnancy, unspecified trimester
O8802	Air embolism in childbirth
O8803	Air embolism in the puerperium
O88111	Amniotic fluid embolism in pregnancy, first trimester
O88112	Amniotic fluid embolism in pregnancy, second trimester
O88113	Amniotic fluid embolism in pregnancy, third trimester
O88119	Amniotic fluid embolism in pregnancy, unspecified trimester
O8812	Amniotic fluid embolism in childbirth
O8813	Amniotic fluid embolism in the puerperium
O88211	Thromboembolism in pregnancy, first trimester
O88212	Thromboembolism in pregnancy, second trimester
O88213	Thromboembolism in pregnancy, third trimester
O88219	Thromboembolism in pregnancy, unspecified trimester
O8822	Thromboembolism in childbirth
O8823	Thromboembolism in the puerperium
O88311	Pyemic and septic embolism in pregnancy, first trimester
O88312	Pyemic and septic embolism in pregnancy, second trimester
O88313	Pyemic and septic embolism in pregnancy, third trimester
O88319	Pyemic and septic embolism in pregnancy, unspecified trimester
O8832	Pyemic and septic embolism in childbirth
O8833	Pyemic and septic embolism in the puerperium
O88811	Other embolism in pregnancy, first trimester
O88812	Other embolism in pregnancy, second trimester
O88813	Other embolism in pregnancy, third trimester
O88819	Other embolism in pregnancy, unspecified trimester
O8882	Other embolism in childbirth

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O8883	Other embolism in the puerperium
O8901	Aspiration pneumonitis due to anesthesia during the puerperium
O8909	Other pulmonary complications of anesthesia during the puerperium
O891	Cardiac complications of anesthesia during the puerperium
O892	Central nervous system complications of anesthesia during the puerperium
O893	Toxic reaction to local anesthesia during the puerperium
O894	Spinal and epidural anesthesia-induced headache during the puerperium
O895	Other complications of spinal and epidural anesthesia during the puerperium
O896	Failed or difficult intubation for anesthesia during the puerperium
O898	Other complications of anesthesia during the puerperium
O899	Complication of anesthesia during the puerperium, unspecified
O900	Disruption of cesarean delivery wound
O901	Disruption of perineal obstetric wound
O902	Hematoma of obstetric wound
O903	Peripartum cardiomyopathy
O904	Postpartum acute kidney failure
O9041	Hepatorenal syndrome following labor and delivery
O9049	Other postpartum acute kidney failure
O905	Postpartum thyroiditis
O906	Postpartum mood disturbance
O9081	Anemia of the puerperium
O9089	Other complications of the puerperium, not elsewhere classified
O909	Complication of the puerperium, unspecified
O91011	Infection of nipple associated with pregnancy, first trimester
O91012	Infection of nipple associated with pregnancy, second trimester
O91013	Infection of nipple associated with pregnancy, third trimester
O91019	Infection of nipple associated with pregnancy, unspecified trimester
O9102	Infection of nipple associated with the puerperium
O9103	Infection of nipple associated with lactation
O91111	Abscess of breast associated with pregnancy, first trimester
O91112	Abscess of breast associated with pregnancy, second trimester
O91113	Abscess of breast associated with pregnancy, third trimester
O91119	Abscess of breast associated with pregnancy, unspecified trimester
O9112	Abscess of breast associated with the puerperium
O9113	Abscess of breast associated with lactation
O91211	Nonpurulent mastitis associated with pregnancy, first trimester
O91212	Nonpurulent mastitis associated with pregnancy, second trimester
O91213	Nonpurulent mastitis associated with pregnancy, third trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O91219	Nonpurulent mastitis associated with pregnancy, unspecified trimester
O9122	Nonpurulent mastitis associated with the puerperium
O9123	Nonpurulent mastitis associated with lactation
O92011	Retracted nipple associated with pregnancy, first trimester
O92012	Retracted nipple associated with pregnancy, second trimester
O92013	Retracted nipple associated with pregnancy, third trimester
O92019	Retracted nipple associated with pregnancy, unspecified trimester
O9202	Retracted nipple associated with the puerperium
O9203	Retracted nipple associated with lactation
O92111	Cracked nipple associated with pregnancy, first trimester
O92112	Cracked nipple associated with pregnancy, second trimester
O92113	Cracked nipple associated with pregnancy, third trimester
O92119	Cracked nipple associated with pregnancy, unspecified trimester
O9212	Cracked nipple associated with the puerperium
O9213	Cracked nipple associated with lactation
O9220	Unspecified disorder of breast associated with pregnancy and the puerperium
O9229	Other disorders of breast associated with pregnancy and the puerperium
O923	Agalactia
O924	Hypogalactia
O925	Suppressed lactation
O926	Galactorrhea
O9270	Unspecified disorders of lactation
O9279	Other disorders of lactation
O94	Sequelae of complication of pregnancy, childbirth, and the puerperium
O98011	Tuberculosis complicating pregnancy, first trimester
O98012	Tuberculosis complicating pregnancy, second trimester
O98013	Tuberculosis complicating pregnancy, third trimester
O98019	Tuberculosis complicating pregnancy, unspecified trimester
O9802	Tuberculosis complicating childbirth
O9803	Tuberculosis complicating the puerperium
O98111	Syphilis complicating pregnancy, first trimester
O98112	Syphilis complicating pregnancy, second trimester
O98113	Syphilis complicating pregnancy, third trimester
O98119	Syphilis complicating pregnancy, unspecified trimester
O9812	Syphilis complicating childbirth
O9813	Syphilis complicating the puerperium
O98211	Gonorrhea complicating pregnancy, first trimester
O98212	Gonorrhea complicating pregnancy, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O98213	Gonorrhea complicating pregnancy, third trimester
O98219	Gonorrhea complicating pregnancy, unspecified trimester
O9822	Gonorrhea complicating childbirth
O9823	Gonorrhea complicating the puerperium
O98311	Other infections with a predominantly sexual mode of transmission complicating pregnancy, first trimester
O98312	Other infections with a predominantly sexual mode of transmission complicating pregnancy, second trimester
O98313	Other infections with a predominantly sexual mode of transmission complicating pregnancy, third trimester
O98319	Other infections with a predominantly sexual mode of transmission complicating pregnancy, unspecified trimester
O9832	Other infections with a predominantly sexual mode of transmission complicating childbirth
O9833	Other infections with a predominantly sexual mode of transmission complicating the puerperium
O98411	Viral hepatitis complicating pregnancy, first trimester
O98412	Viral hepatitis complicating pregnancy, second trimester
O98413	Viral hepatitis complicating pregnancy, third trimester
O98419	Viral hepatitis complicating pregnancy, unspecified trimester
O9842	Viral hepatitis complicating childbirth
O9843	Viral hepatitis complicating the puerperium
O98511	Other viral diseases complicating pregnancy, first trimester
O98512	Other viral diseases complicating pregnancy, second trimester
O98513	Other viral diseases complicating pregnancy, third trimester
O98519	Other viral diseases complicating pregnancy, unspecified trimester
O9852	Other viral diseases complicating childbirth
O9853	Other viral diseases complicating the puerperium
O98611	Protozoal diseases complicating pregnancy, first trimester
O98612	Protozoal diseases complicating pregnancy, second trimester
O98613	Protozoal diseases complicating pregnancy, third trimester
O98619	Protozoal diseases complicating pregnancy, unspecified trimester
O9862	Protozoal diseases complicating childbirth
O9863	Protozoal diseases complicating the puerperium
O98711	Human immunodeficiency virus [HIV] disease complicating pregnancy, first trimester
O98712	Human immunodeficiency virus [HIV] disease complicating pregnancy, second trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O98713	Human immunodeficiency virus [HIV] disease complicating pregnancy, third trimester
O98719	Human immunodeficiency virus [HIV] disease complicating pregnancy, unspecified trimester
O9872	Human immunodeficiency virus [HIV] disease complicating childbirth
O9873	Human immunodeficiency virus [HIV] disease complicating the puerperium
O98811	Other maternal infectious and parasitic diseases complicating pregnancy, first trimester
O98812	Other maternal infectious and parasitic diseases complicating pregnancy, second trimester
O98813	Other maternal infectious and parasitic diseases complicating pregnancy, third trimester
O98819	Other maternal infectious and parasitic diseases complicating pregnancy, unspecified trimester
O9882	Other maternal infectious and parasitic diseases complicating childbirth
O9883	Other maternal infectious and parasitic diseases complicating the puerperium
O98911	Unspecified maternal infectious and parasitic disease complicating pregnancy, first trimester
O98912	Unspecified maternal infectious and parasitic disease complicating pregnancy, second trimester
O98913	Unspecified maternal infectious and parasitic disease complicating pregnancy, third trimester
O98919	Unspecified maternal infectious and parasitic disease complicating pregnancy, unspecified trimester
O9892	Unspecified maternal infectious and parasitic disease complicating childbirth
O9893	Unspecified maternal infectious and parasitic disease complicating the puerperium
O99011	Anemia complicating pregnancy, first trimester
O99012	Anemia complicating pregnancy, second trimester
O99013	Anemia complicating pregnancy, third trimester
O99019	Anemia complicating pregnancy, unspecified trimester
O9902	Anemia complicating childbirth
O9903	Anemia complicating the puerperium
O99111	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, first trimester
O99112	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, second trimester
O99113	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, third trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O99119	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating pregnancy, unspecified trimester
O9912	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating childbirth
O9913	Other diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism complicating the puerperium
O99210	Obesity complicating pregnancy, unspecified trimester
O99211	Obesity complicating pregnancy, first trimester
O99212	Obesity complicating pregnancy, second trimester
O99213	Obesity complicating pregnancy, third trimester
O99214	Obesity complicating childbirth
O99215	Obesity complicating the puerperium
O99280	Endocrine, nutritional and metabolic diseases complicating pregnancy, unspecified trimester
O99281	Endocrine, nutritional and metabolic diseases complicating pregnancy, first trimester
O99282	Endocrine, nutritional and metabolic diseases complicating pregnancy, second trimester
O99283	Endocrine, nutritional and metabolic diseases complicating pregnancy, third trimester
O99284	Endocrine, nutritional and metabolic diseases complicating childbirth
O99285	Endocrine, nutritional and metabolic diseases complicating the puerperium
O99310	Alcohol use complicating pregnancy, unspecified trimester
O99311	Alcohol use complicating pregnancy, first trimester
O99312	Alcohol use complicating pregnancy, second trimester
O99313	Alcohol use complicating pregnancy, third trimester
O99314	Alcohol use complicating childbirth
O99315	Alcohol use complicating the puerperium
O99320	Drug use complicating pregnancy, unspecified trimester
O99321	Drug use complicating pregnancy, first trimester
O99322	Drug use complicating pregnancy, second trimester
O99323	Drug use complicating pregnancy, third trimester
O99324	Drug use complicating childbirth
O99325	Drug use complicating the puerperium
O99330	Smoking (tobacco) complicating pregnancy, unspecified trimester
O99331	Smoking (tobacco) complicating pregnancy, first trimester
O99332	Smoking (tobacco) complicating pregnancy, second trimester
O99333	Smoking (tobacco) complicating pregnancy, third trimester
O99334	Smoking (tobacco) complicating childbirth

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O99335	Smoking (tobacco) complicating the puerperium
O99340	Other mental disorders complicating pregnancy, unspecified trimester
O99341	Other mental disorders complicating pregnancy, first trimester
O99342	Other mental disorders complicating pregnancy, second trimester
O99343	Other mental disorders complicating pregnancy, third trimester
O99344	Other mental disorders complicating childbirth
O99345	Other mental disorders complicating the puerperium
O99350	Diseases of the nervous system complicating pregnancy, unspecified trimester
O99351	Diseases of the nervous system complicating pregnancy, first trimester
O99352	Diseases of the nervous system complicating pregnancy, second trimester
O99353	Diseases of the nervous system complicating pregnancy, third trimester
O99354	Diseases of the nervous system complicating childbirth
O99355	Diseases of the nervous system complicating the puerperium
O99411	Diseases of the circulatory system complicating pregnancy, first trimester
O99412	Diseases of the circulatory system complicating pregnancy, second trimester
O99413	Diseases of the circulatory system complicating pregnancy, third trimester
O99419	Diseases of the circulatory system complicating pregnancy, unspecified trimester
O9942	Diseases of the circulatory system complicating childbirth
O9943	Diseases of the circulatory system complicating the puerperium
O99511	Diseases of the respiratory system complicating pregnancy, first trimester
O99512	Diseases of the respiratory system complicating pregnancy, second trimester
O99513	Diseases of the respiratory system complicating pregnancy, third trimester
O99519	Diseases of the respiratory system complicating pregnancy, unspecified trimester
O9952	Diseases of the respiratory system complicating childbirth
O9953	Diseases of the respiratory system complicating the puerperium
O99611	Diseases of the digestive system complicating pregnancy, first trimester
O99612	Diseases of the digestive system complicating pregnancy, second trimester
O99613	Diseases of the digestive system complicating pregnancy, third trimester
O99619	Diseases of the digestive system complicating pregnancy, unspecified trimester
O9962	Diseases of the digestive system complicating childbirth
O9963	Diseases of the digestive system complicating the puerperium
O99711	Diseases of the skin and subcutaneous tissue complicating pregnancy, first trimester
O99712	Diseases of the skin and subcutaneous tissue complicating pregnancy, second trimester
O99713	Diseases of the skin and subcutaneous tissue complicating pregnancy, third trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O99719	Diseases of the skin and subcutaneous tissue complicating pregnancy, unspecified trimester
O9972	Diseases of the skin and subcutaneous tissue complicating childbirth
O9973	Diseases of the skin and subcutaneous tissue complicating the puerperium
O99810	Abnormal glucose complicating pregnancy
O99814	Abnormal glucose complicating childbirth
O99815	Abnormal glucose complicating the puerperium
O99820	Streptococcus B carrier state complicating pregnancy
O99824	Streptococcus B carrier state complicating childbirth
O99825	Streptococcus B carrier state complicating the puerperium
O99830	Other infection carrier state complicating pregnancy
O99834	Other infection carrier state complicating childbirth
O99835	Other infection carrier state complicating the puerperium
O99840	Bariatric surgery status complicating pregnancy, unspecified trimester
O99841	Bariatric surgery status complicating pregnancy, first trimester
O99842	Bariatric surgery status complicating pregnancy, second trimester
O99843	Bariatric surgery status complicating pregnancy, third trimester
O99844	Bariatric surgery status complicating childbirth
O99845	Bariatric surgery status complicating the puerperium
O9989	Other specified diseases and conditions complicating pregnancy, childbirth and the puerperium
O99891	Other specified diseases and conditions complicating pregnancy
O99892	Other specified diseases and conditions complicating childbirth
O99893	Other specified diseases and conditions complicating puerperium
O9A111	Malignant neoplasm complicating pregnancy, first trimester
O9A112	Malignant neoplasm complicating pregnancy, second trimester
O9A113	Malignant neoplasm complicating pregnancy, third trimester
O9A119	Malignant neoplasm complicating pregnancy, unspecified trimester
O9A12	Malignant neoplasm complicating childbirth
O9A13	Malignant neoplasm complicating the puerperium
O9A211	Injury, poisoning and certain other consequences of external causes complicating pregnancy, first trimester
O9A212	Injury, poisoning and certain other consequences of external causes complicating pregnancy, second trimester
O9A213	Injury, poisoning and certain other consequences of external causes complicating pregnancy, third trimester
O9A219	Injury, poisoning and certain other consequences of external causes complicating pregnancy, unspecified trimester

ICD-10-CM Code Indicating Maternal Condition	ICD-10-CM Code Description
O9A22	Injury, poisoning and certain other consequences of external causes complicating childbirth
O9A23	Injury, poisoning and certain other consequences of external causes complicating the puerperium
O9A311	Physical abuse complicating pregnancy, first trimester
O9A312	Physical abuse complicating pregnancy, second trimester
O9A313	Physical abuse complicating pregnancy, third trimester
O9A319	Physical abuse complicating pregnancy, unspecified trimester
O9A32	Physical abuse complicating childbirth
O9A33	Physical abuse complicating the puerperium
O9A411	Sexual abuse complicating pregnancy, first trimester
O9A412	Sexual abuse complicating pregnancy, second trimester
O9A413	Sexual abuse complicating pregnancy, third trimester
O9A419	Sexual abuse complicating pregnancy, unspecified trimester
O9A42	Sexual abuse complicating childbirth
O9A43	Sexual abuse complicating the puerperium
O9A511	Psychological abuse complicating pregnancy, first trimester
O9A512	Psychological abuse complicating pregnancy, second trimester
O9A513	Psychological abuse complicating pregnancy, third trimester
O9A519	Psychological abuse complicating pregnancy, unspecified trimester
O9A52	Psychological abuse complicating childbirth
O9A53	Psychological abuse complicating the puerperium
Z332	Encounter for elective termination of pregnancy
Z390	Encounter for care and examination of mother immediately after delivery
Z640	Problems related to unwanted pregnancy

Table C.5. ICD-10-CM Diagnoses Used to Identify COVID-19

ICD-10-CM Code Indicating COVID-19	ICD-10-CM Code Description
J1282	Pneumonia due to coronavirus disease 2019
U071	COVID-19
U099	Post COVID-19 condition, unspecified

Appendix D. Background on Measures, Characteristics, and Calculations

Definitions of Measures Based on a Principal/First-Listed Diagnosis of Sepsis

For these measures, sepsis was required to be the reason for the hospital encounter as indicated by the principal/first-listed diagnosis.

Principal/first-listed diagnoses

For inpatient stays, the *principal diagnosis* is that condition established after study to be chiefly responsible for the patient's admission to the hospital.

For ED visits that did not result in an admission to the same hospital, the *first-listed diagnosis* represents the condition, symptom, or problem identified in the medical record to be chiefly responsible for the ED services provided. In cases where the first-listed diagnosis is a symptom or problem, a diagnosis has not been established (confirmed) by the provider.

Aggregate hospital costs

In Chapter 4, aggregate hospital costs for sepsis hospital encounters represent the sum of total hospital costs for sepsis in the United States (i.e., the “national bill”). Total hospital costs were derived from total hospital charges using HCUP Cost-to-Charge Ratios based on hospital accounting reports from the Centers for Medicare & Medicaid Services (CMS).⁸ *Hospital costs* reflect the actual expenses incurred in the production of hospital services, such as wages, supplies, and utility costs. *Charges* represent the amount a hospital billed for the entire hospital stay and do not include professional (physician) fees. For each hospital, a hospital-wide cost-to-charge ratio is used. There are Cost-to-Charge Ratios specific to inpatient stays and to ED visits that do not result in admission to the same hospital. Further information on the Cost-to-Charge Ratios can be found at: <https://hcup-us.ahrq.gov/db/ccr/costtocharge.jsp>.

Hospital costs were inflation-adjusted using the Gross Domestic Product (GDP) Price Index from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), with 2021 as the index base.⁹ That is, all hospital costs are expressed in 2021 dollars.

Average length of stay

In Chapters 4–6, the average length of stay for sepsis inpatient stays is average across stays in the United States (Chapters 4 and 5) or within a hospital (Chapter 6). In HCUP, the length of stay is calculated as the difference of the discharge date and the admission date. A patient admitted and discharged on the same day has a length of stay of zero days.

Average total hospital cost

In Chapters 4–6, total hospital cost for sepsis inpatient stays was derived from total hospital charges using HCUP Cost-to-Charge Ratios based on hospital accounting reports from the Centers for

⁸ Agency for Healthcare Research and Quality. Cost-to-Charge Ratio Files. Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality. Updated November 2021. www.hcup-us.ahrq.gov/db/state/costtocharge.jsp. Accessed January 23, 2024.

⁹ BEA Interactive Data query tool, National Data, GDP & Personal Income, Section 1 Domestic Product and Income, Table 1.1.4. Price Indexes for Gross Domestic Product. Accessed November 15, 2023.

Medicare & Medicaid Services (CMS).¹⁰ *Hospital costs* reflect the actual expenses incurred in the production of hospital services, such as wages, supplies, and utility costs. *Charges* represent the amount a hospital billed for the entire hospital stay and do not include professional (physician) fees. For each hospital, a hospital-wide cost-to-charge ratio is used. Averages are calculated after the conversion from charges to costs. Further information on the Cost-to-Charge Ratios can be found at: <https://hcup-us.ahrq.gov/db/ccr/costtocharge.jsp>.

Hospital costs were inflation-adjusted using the Gross Domestic Product (GDP) Price Index from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA), with 2021 as the index base.¹¹ That is, all hospital costs are expressed in 2021 dollars.

In-hospital mortality rate

In Chapters 4–6, the in-hospital mortality rate for sepsis hospital encounters was defined as follows:

- Numerator of the number of sepsis inpatient stays in which the patient died in the hospital and the number of sepsis ED visits in which the patient died in the ED
- Denominator of the number of all sepsis hospital encounters and the number of sepsis ED visits in which the patient died in the ED
- Multiplier of 1,000

Percentage of inpatient stays that were for sepsis

In Chapters 6, the percentage of inpatient stays for sepsis was defined as:

- Numerator of the number of sepsis inpatient stays
- Denominator of the total number of inpatient stays, regardless of diagnosis

Percentage of sepsis inpatient stays for which the patient was discharged to another type of health facility or to home health care

In Chapter 4, the percentage of sepsis inpatient stays for which the patient was discharged to another type of health facility or to home health care was defined as:

- Numerator of the number of sepsis inpatient stays with a discharge status of transfer to another type of health facility or to home health care
- Denominator of the total number of sepsis inpatient stays

Percentage of total inpatient days that were for sepsis inpatient stays

In Chapter 4, the percentage of total inpatient days that were for sepsis inpatient stays was defined as:

- Numerator of the total number of inpatient days for sepsis inpatient stays
- Denominator of the total number of inpatient days for all inpatient stays, regardless of diagnosis

Rate of sepsis inpatient stays with a readmission occurring for any cause

In Chapters 4 and 5, the rate of sepsis inpatient stays with a readmission occurring for any cause within seven, 14, or 30 days of discharge was defined as:

¹⁰ Agency for Healthcare Research and Quality. Cost-to-Charge Ratio Files. Healthcare Cost and Utilization Project (HCUP). Agency for Healthcare Research and Quality. Updated November 2021. www.hcup-us.ahrq.gov/db/state/costtocharge.jsp. Accessed January 23, 2024.

¹¹ BEA Interactive Data query tool, National Data, GDP & Personal Income, Section 1 Domestic Product and Income, Table 1.1.4. Price Indexes for Gross Domestic Product. Accessed November 15, 2023.

- Numerator of the number of sepsis inpatient stays for which there was at least one subsequent inpatient stay for any cause within the respective time period
- Denominator of the total number of sepsis inpatient stays from January through November of the same year
- Multiplier of 1,000

A patient with a sepsis inpatient stay is followed for up to 30 days. If any readmission to the same or different hospital occurs during this time period, the sepsis inpatient stay is counted as having a readmission. No more than one readmission is counted within the time period, because the outcome measure assessed is “percentage of sepsis inpatient stays that are readmitted.” If a patient was transferred to a different hospital on the same day or was transferred within the same hospital during the sepsis inpatient stay, the two events were combined as a single stay and the second event was not counted as a readmission; that is, transfers were not considered a readmission. In the case of sepsis inpatient stays for which there was more than one readmission in the time period, the data presented reflect the characteristics and outcomes of the first readmission.

Sepsis inpatient stays were limited to the first admission for the patient in January to November of the year. Thus, a single patient is counted only once. Patients less than 1 year old were not included in the analysis because the necessary information to follow these patients across hospital encounters is very limited. In addition, a sepsis inpatient stay was disqualified for any of the following reasons: (1) the patient died in the hospital making a readmission impossible, or (2) missing information on the length of sepsis stay making the information on timing between stays unavailable.

Rate of sepsis inpatient stays with a subsequent ED visit that did not result in an admission to the same hospital

In Chapters 4 and 5, the rate of sepsis inpatient stays with a subsequent ED visit (that did not result in admission to the same hospital) occurring for any cause within seven or 14 days of discharge was defined as:

- Numerator of the number of sepsis inpatient stays for which there was at least one subsequent ED visit for any cause within the respective time period
- Denominator of the total number of sepsis inpatient stays from January through November of the same year
- Multiplier of 1,000

A patient with a sepsis inpatient stay is followed for up to 14 days. If there is an ED visit (that did not result in admission to the same hospital) to the same or different hospital during this time period, the sepsis inpatient stay is counted as having a subsequent ED visit. No more than one ED visit is counted within the time period, because the outcome measure assessed is “percentage of sepsis inpatient stays with a subsequent ED visit.” In the case of sepsis inpatient stays for which there was more than one subsequent ED visit in the time period, the data presented reflect the characteristics and outcomes of the first ED visit.

Sepsis inpatient stays were limited to the first admission for the patient in January to November of the year. Thus, a single patient is counted only once. Patients less than 1 year old were not included in the analysis because the necessary information to follow these patients across hospital encounters is very limited. In addition, a sepsis inpatient stay was disqualified for any of the following reasons: (1) the patient died in the hospital, or (2) missing information on the length of sepsis stay making the information on timing between stays unavailable.

Definitions of Measures Based on Any Diagnosis of Sepsis

For these measures, sepsis was identified using any-listed diagnoses. Sepsis was not required to be the reason for the hospital encounter.

Any-listed diagnoses

Any-listed diagnoses include the principal/first-listed diagnosis and all secondary diagnoses.

- For inpatient stays, the *principal diagnosis* is that condition established after study to be chiefly responsible for the patient's admission to the hospital. *Secondary diagnoses* are conditions that coexist at the time of admission or that develop during the inpatient stay that affect patient care in terms of requiring clinical evaluation, therapeutic treatment, diagnostic procedures, extended length of stay, or increased nursing care and/or monitoring.
- For ED visits that did not result in an inpatient stay at the same hospital, the *first-listed diagnosis* represents the condition, symptom, or problem identified in the medical record to be chiefly responsible for the ED services provided. In cases where the first-listed diagnosis is a symptom or problem, a diagnosis has not been established (confirmed) by the provider. *Secondary diagnoses* are coexisting conditions that require or affect patient care, treatment, or management.

Population rates of sepsis-related inpatient stays

In Chapters 7, State-specific population rates of sepsis-related inpatient stays, overall and by select patient characteristics, were defined as:

- Numerator of the number of sepsis-related inpatients stays
- Denominator of resident population in the United States
- Multiplier of 100,000

Denominator population counts are consistently defined with the numerator (i.e., rates for White non-Hispanic (NH) individuals use HCUP counts and population counts specific to White NH individuals). Individuals hospitalized multiple times are counted more than once in the numerator. Population data used to develop population-based rates are from the U.S. Census Bureau annual county-level resident population estimates, with one exception. The population denominators for reporting by community-level income are based on ZIP Code-level resident population estimates from Claritas (a vendor that compiles and adds values to the U.S. Census Bureau data).

Counts of inpatient stays are summarized by the patient's State of residence. In cases where the patient's State of residence is not coded and the individual is identified in the HCUP data as homeless, the patient's State is assumed to be the hospital's State.

Percentage of inpatient stays that are sepsis related

In Chapters 4–7, the percentage of inpatient stays that were sepsis related was defined as:

- Numerator of the number of sepsis-related inpatient stays
- Denominator of all inpatient stays, regardless of diagnosis

Percentages are presented at the national, State, and hospital levels.

Percentage of sepsis-related inpatient stays with intensive care unit services

In Chapter 6, the percentage of sepsis-related inpatient stays with intensive care unit (ICU) services was defined as:

- Numerator of the number of sepsis-related inpatient stays with ICU services
- Denominator of the total number of sepsis-related inpatient stays

The identification of ICU services is dependent on the reporting of revenue centers codes that identify types of intensive care services in the SID. Not all SID include these data elements. States and hospital without this information were excluded from the percentages. ICU services included intensive care, cardiac intensive care, neonatal intensive care, and pediatric intensive care.

Percentage of sepsis-related inpatient stays that were admitted through the ED

In Chapters 4 and 6, the percentage of sepsis-related inpatient stays that were admitted through the ED is defined as:

- Numerator of the number of sepsis-related inpatient stays that were admitted through the ED
- Denominator of the total number of sepsis-related inpatient stays

Inpatient stays admitted through the ED are determined based on evidence of ED services at the same hospital as the inpatient stay (e.g., ED charges).

Percentage of sepsis-related inpatient stays that were discharged to a post-acute care setting

In Chapter 4, the percentage of sepsis-related inpatient stays that were discharged to a post-acute care setting was defined as:

- Numerator of the number of sepsis-related inpatient stays with a discharge status of home or self-care setting; home with home health care services; transfer to another short-term hospital; transfer to post-acute care health facility (e.g., skilled nursing facility, intermediate care facility, rehabilitation unit); left against medical advice; or other disposition (e.g., discharged alive with destination unknown).
- Denominator of the number of sepsis-related inpatient stays that did not result in an in-hospital death

Percentage of all ED visits that were sepsis related

In Chapter 6, the percentage of all ED visits (including those that were and were not admitted through the ED to the same hospital) that were sepsis related was defined as:

- Numerator of the number of all sepsis-related ED visits, regardless of discharge disposition
- Denominator of the total number of all ED visits, regardless of diagnosis and discharge disposition

Inpatient stays admitted through the ED are determined based on evidence of ED services at the same hospital as the inpatient stay (e.g., ED charges).

Percentage of all sepsis-related ED visits that did not result in admission to the same hospital

In Chapters 6 and 7, the percentage of all ED visits (that did not result in admission to the same hospital) that were sepsis related was defined as:

- Numerator of the number of sepsis-related ED visits

- Denominator of the number of all ED visits, regardless of diagnosis

ED visits that did not result in admission to the same hospital involve patients being evaluated before transfer to another acute care hospital; being discharged to their home, a nursing home, or hospice with palliative care; leaving against medical advice; or dying in the ED before admission.

Percentage of sepsis-related ED visits in which the patient was transferred to a different hospital

In Chapter 4, the percentage of sepsis-related ED visits in which the patient was transferred to a different hospital was defined as:

- Numerator of the number of sepsis-related ED visits that in which the patient was transferred to a different hospital
- Denominator of the number of sepsis-related ED visits that did not result in admission to the same hospital

Percentage of inpatient stays admitted through the ED that resulted in a transfer to an inpatient setting at a different acute care hospital

In Chapter 6, the percentage of sepsis-related ED visits that resulted in a transfer to an inpatient setting at a different acute care hospital (i.e., inter-hospital transfers) was defined as:

- Numerator of the number of sepsis-related inpatient stays admitted through the ED that resulted in a transfer to an inpatient setting at a different hospital.
- Denominator of the number of sepsis-related inpatient stays admitted through the ED.

The denominator includes (1) ED visits that were admitted to the same hospital for inpatient care, with the data source being the SID and specifically, inpatient stays with evidence of ED services at the same hospital as the inpatient stay (e.g., ED charges) and (2) ED visits that were transferred to a different acute care hospital for inpatient care, with the data source being the SEDD and specifically, ED visits with a discharge status of transfer to another acute care hospital.

Definitions of Patient Characteristics

Expected payer

To make coding uniform across all HCUP data sources, the primary expected payer combines detailed categories into general groups:

- Medicare: includes fee-for-service and managed care Medicare
- Medicaid: includes fee-for-service and managed care Medicaid
- Private insurance: includes commercial nongovernmental payers, regardless of the type of plan (e.g., private health maintenance organizations [HMOs], preferred provider organizations [PPOs])
- Self-pay/No charge: includes self-pay, no charge, charity, and no expected payment
- Other payers: includes other Federal and local government programs (e.g., TRICARE, CHAMPVA, Indian Health Service, Black Lung, Title V) and Workers' Compensation.

In 2016, hospital stays that were expected to be billed to the State Children's Health Insurance Program (SCHIP) may be classified as Medicaid or Other, depending on the structure of the State program. Because most State data do not identify SCHIP as a separate expected payer, it is not

possible to present this information separately. Starting in 2017, hospital stays that were expected to be billed to the State Children's Health Insurance Program (SCHIP) are included under Medicaid.

Location of patients' residence (urban/rural designation)

Place of residence (urban/rural designation) is based on the Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (FORHP) definition of rurality. Rural areas were categorized based on rural ZIP Codes identified in the FORHP ZIP files. Areas not categorized as rural were defined as urban and further separated into large metropolitan and small metropolitan using the urban/rural scheme developed by the National Center for Health Statistics (NCHS) as follows:

- Large metropolitan:
 - Large Central Metropolitan: includes metropolitan areas with 1 million or more residents
 - Large Fringe Metropolitan: includes counties of metropolitan areas with 1 million or more residents
- Small metropolitan includes areas with 50,000 to 999,999 residents

Location of patients' residence (social vulnerability designation)

The Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR) Social Vulnerability Index (SVI) is a measure of a community's ability to prevent human suffering and financial loss during a disaster. U.S. Census data is used to estimate the social vulnerability of every census tract. Census tracts are subdivisions of counties for which the census collects statistical data. The SVI ranks each tract on 15 social factors, including poverty, lack of vehicle access, and crowded housing, and groups them into four related themes (socioeconomic status, household composition and disability, minority status and language, housing type and transportation). Each tract receives a separate ranking for each of the four themes, as well as an overall ranking. Detailed descriptions of the CDC/ATSDR SVI and data downloads are available at www.atsdr.cdc.gov/placeandhealth/svi/index.html.

Social vulnerability designation in this report is based on quartiles of the distribution of SVI values across U.S. Counties where the patients reside. Observations in the fourth quartile (highest values) are categorized as the most vulnerable communities. The remaining observations are categorized as less vulnerable communities.

Patient race and ethnicity

Data on Hispanic ethnicity are collected differently among the States and also can differ from the census methodology of collecting information on race (White, Black, Asian and Pacific Islander, American Indian and Alaska Native, Other [including mixed race]) separately from ethnicity (Hispanic, non-Hispanic). Most State data organizations collect Hispanic ethnicity as one of several categories that include race. Therefore, for multistate analyses, HCUP creates the combined categorization of race and ethnicity for data from States that report ethnicity separately. When a State data organization collects Hispanic ethnicity separately from race, HCUP uses Hispanic ethnicity to override any other race category to create a Hispanic category for the uniformly coded race and ethnicity data element, while also retaining the original race and ethnicity data. Chapter 5 presents results by patient race and ethnicity for the following categories: Hispanic and non-Hispanic Asian and Pacific Islander, Black, and White. Categories including non-Hispanic American Indian and Alaska Native and Other are not discussed as part of the results but are included in the chapter's accompanying Appendix E data tables.

Definitions of Hospital Characteristics

Non-Federal acute care hospitals

Non-Federal acute care hospitals are defined as “all non-Federal, short-term, general, and other specialty hospitals, excluding hospital units of institutions.” Included among non-Federal acute care hospitals are specialty hospitals such as obstetrics-gynecology, ear-nose-throat, orthopedic, and pediatric institutions. Also included are public hospitals and academic medical centers. Rehabilitation and long-term acute care hospitals were excluded. This definition aligns with the American Hospital Association (AHA) definition of community hospital.

Critical access hospital

Data on critical access hospitals (CAHs) were obtained from the American Hospital Association (AHA) Annual Survey of Hospitals. The designation of a CAH is based on information from the Centers for Medicare and Medicaid Services (CMS) and is based on the following criteria:¹²

- Be located in a State that has established a State Medicare Rural Hospital Flexibility Program;
- Be designated by the State as a CAH;
- Be located in a rural area or an area that is treated as rural;
- Be located either more than 35-miles from the nearest hospital or CAH or more than 15 miles in areas with mountainous terrain or only secondary roads; OR prior to January 1, 2006, were certified as a CAH based on State designation as a “necessary provider” of health care services to residents in the area.
- Maintain no more than 25 inpatient beds that can be used for either inpatient or swing-bed services;
- Maintain an annual average length of stay of 96 hours or less per patient for acute inpatient care (excluding swing-bed services and beds that are within distinct part units);
- Demonstrate compliance with the CAH CoPs found at 42 CFR Part 485 subpart F; and
- Furnish 24-hour emergency care services 7 days a week.

Hospital bed size

Hospital bed size categories are based on the number of hospital beds and are specific to the hospital’s location (Table C.6). Bed size assesses the number of short-term acute beds in a hospital. Hospital information was obtained from the American Hospital Association (AHA) Annual Survey of Hospitals.

Table C.6. Hospital bed size categories

Size	Rural Hospitals	Urban Hospitals
Small	1-25 beds	1-99 beds
Medium	26-99 beds	100-299 beds
Large	100 or more beds	300 or more beds

¹²Centers for Medicare and Medicaid Services. Critical Access Hospitals. <https://www.cms.gov/medicare/health-safety-standards/certification-compliance/critical-access-hospitals>. Accessed May 21, 2024.

Hospital intensive care unit bed size

Hospital intensive care unit (ICU) bed size categories are based on the total number of hospital beds for the medical-surgical ICU, cardiac ICU, neonatal ICU, and pediatric ICU and are specific to the hospital's location (Table C.7). Hospital information was obtained from the American Hospital Association (AHA) Annual Survey of Hospitals.

A non-missing ICU bed size category requires the hospital to have at least one sepsis inpatient stay with evidence of ICU services in the SID. The identification of ICU services is dependent on the reporting of revenue centers codes that identify types of intensive care services in the SID. Not all SID include these data elements. States and hospital without this information were excluded from the percentages. ICU services included intensive care, cardiac intensive care, neonatal intensive care, and pediatric intensive care. Undetermined ICU bed capacity includes hospitals that report ICU utilization in the HCUP SID but the AHA Annual Survey does not include information on the number of ICU beds for the hospital.

Table C.7 Hospital ICU bed size categories

Size	Rural Hospitals	Urban Hospitals
Undetermined	--	--
Small	1-4 beds	1-9 beds
Medium	5 or more beds	10-29 beds
Large	--	30 or more beds
Missing	--	--

Hospital in medically underserved area

The Health Services and Resources Administration (HRSA) measure of medically underserved areas (MUAs) identifies geographic areas with a lack of access to primary care services. This designation helps establish health maintenance organizations and community health centers. MUAs reflect a shortage of primary care health services within geographic areas. Detailed descriptions of HRSA's MUA measure and data downloads are available at <https://data.hrsa.gov/data/download>.

MUA designation in this report is based on the hospital's ZIP Code.

Hospital ownership

Data on hospital ownership were obtained from the American Hospital Association (AHA) Annual Survey of Hospitals. Hospital ownership/control includes categories for government non-federal (public), private not-for-profit (voluntary), and private investor-owned (proprietary).

Hospital social vulnerability designation

The Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR) Social Vulnerability Index (SVI) is a measure of a community's ability to prevent human suffering and financial loss during a disaster. The SVI uses U.S. Census data to determine the social vulnerability of every census tract. Census tracts are subdivisions of counties for which the census collects statistical data. The SVI ranks each tract on 15 social factors, including poverty, lack of

vehicle access, and crowded housing, and groups them into four related themes (socioeconomic status, household composition and disability, minority status and language, housing type and transportation). Each tract receives a separate ranking for each of the four themes, as well as an overall ranking. Detailed descriptions of the CDC/ATSDR SVI and data downloads are available at www.atsdr.cdc.gov/placeandhealth/svi/index.html.

Social vulnerability designation in this report is based on the Social Vulnerability Index (SVI). SVI is a measure of a community's ability to prevent human suffering and financial loss during a disaster. U.S. Zip Codes were categorized into quartiles based on the SVI value of the Zip Code. Hospital ZIP codes with values in the fourth quartile are categorized as being in the most vulnerable communities. Hospitals in other Zip Codes are categorized as being in less vulnerable communities.

Hospital system affiliation

Information on system affiliation of hospitals is from the Compendium of U.S. Health Systems, a data resource for AHRQ's Comparative Health System Performance Initiative. The **Compendium of U.S. Health Systems** is composed of 640 U.S. health systems, defined to include at least one hospital and at least one group of physicians providing comprehensive care, and who are connected with each other and with the hospital through common ownership or joint management.¹³

Hospital trauma level

Trauma designation for trauma centers treating adults and children were identified through the Trauma Information Exchange Program (TIEP) database, a national inventory of trauma centers in the United States.¹⁴ A trauma center is a hospital that is equipped to provide comprehensive emergency medical services 24 hours a day, 365 days per year to patients with traumatic injuries. In 1976, the American College of Surgeons Committee on Trauma (ACS/COT) defined *the following* levels of trauma centers:¹⁵

- Level I centers have comprehensive resources, are able to care for the most severely injured, and provide leadership in education and research.
- Level II centers have comprehensive resources and are able to care for the most severely injured, but do not provide leadership in education and research.
- Level III centers provide prompt assessment and resuscitation, emergency surgery, and, if needed, transfer to a level I or II center.

Minority-serving hospital

For each year of the SID, data from all non-Federal acute care hospitals, excluding rehabilitation and long-term acute care facilities, are used to determine the percentage of total inpatient stays in each hospital that had a race and ethnicity value other than White NH. Hospitals were then ranked within the State and data year by this percentage. Those hospitals falling in the top 25 percent were defined as minority-serving hospitals. The remaining hospitals were defined as nonminority serving hospitals. Hospitals not reporting race and ethnicity data are excluded.

¹³Agency for Healthcare Research and Quality (AHRQ). Compendium of U.S. Health Systems. <https://www.ahrq.gov/chsp/data-resources/compendium.html>. Accessed May 21, 2024.

¹⁴American Trauma Society. Trauma Information Exchange Program (TIEP). www.amtrauma.org/page/TIEP. Accessed March 9, 2022.

¹⁵MacKenzie EJ, Hoyt DB, Sacra JC, et al. National inventory of hospital trauma centers. *JAMA*. 2003;289:1515-1522.

Safety-net hospital

For each year of the SID, data from all non-Federal acute care hospitals, excluding rehabilitation and long-term acute care facilities, are used to determine the percentage of total inpatient stays in each hospital that an expect primary payer of Medicaid, self-pay, or no charge. Certain expected payers were recategorized from the HCUP payer category for Other (e.g., indigent care programs) to self-pay/no charge, for this purpose. Hospitals were ranked within the State and data year by this percentage. Those hospitals falling in the top 25 percent were defined as safety-net hospitals. The remaining hospitals were defined as non-safety-net hospitals. Hospitals not reporting expected payer data are excluded.

Teaching hospital

A hospital is considered a teaching hospital if it has one or more Accreditation Council for Graduate Medical Education (ACGME) approved residency programs, is a member of the Council of Teaching Hospitals (COTH) or has a ratio of full-time equivalent interns and residents to beds of 0.25 or higher.

Urban-rural location of hospital

Hospital urban-rural location is based on the Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (FORHP) definition of rurality. Rural hospitals were categorized based on ZIP Codes identified in the FORHP ZIP files as rural. Hospitals not categorized as rural were identified as urban hospitals.

Calculations

Average annual percentage change

Average annual percentage change was calculated using the following formula:

$$\text{Average annual percentage change} = \left[\left(\frac{\text{End value}}{\text{Beginning value}} \right)^{\frac{1}{\text{change in years}}} - 1 \right] \times 100$$

The average annual percentage change was based on un-rounded numbers.

Percentage differences

Percentage differences between groups were calculated using the following formula:

$$\text{Percentage difference} = \frac{(\text{Group 1 value} - \text{Group 2 value})}{\text{Group 2 value}} \times 100$$

The percentage differences were based on un-rounded numbers.

Imputation of missing charges and costs

The NIS is missing information on total hospital charges on less than two percent of records in 2016–2021. The missing charges were imputed using the average total hospital charges for the Diagnosis Related Group (DRG) calculated using the NIS or SID for the same data year. The imputation of total hospital charges occurred prior to the calculation of total hospital costs. The imputation of missing charges, the calculation of hospital costs, and the adjustment to the base year of 2021 (only for trend analyses) were performed per discharge prior to the calculation of average and aggregate hospital costs within and across years.

Records for ED visits that did not result in admission to the same hospital in the NEDS are missing information on total hospital charges on less than three percent of records in 2019–2021. Missing charges were imputed only on ED visits with a first-listed diagnosis of sepsis based on the average total charge in the NEDS by type of sepsis (i.e., septic shock, severe sepsis, and sepsis with separate reporting of organ dysfunction). The imputation of missing charges, the calculation of hospital costs, and the adjustment to the base year of 2021 (only for trend analyses) were performed per ED visit prior to the calculation of average and aggregate hospital costs within and across years.

Relative standard error

The relative standard error was calculated using the following formula:

$$\text{Relative standard error} = \frac{\text{(Standard error of the weighted estimate)}}{\text{Weighted estimate}}$$

Estimates with a relative standard error greater than 30 percent are considered unreliable and are not included as part of the results in this report.

Significance testing

Statistical significance of differences between estimates was tested using two-sample t-tests and a threshold of $P < 0.05$.

Suppressed cases

Values based on 10 or fewer discharges or for State-based statistics, fewer than 2 hospitals, are masked to protect confidentiality of patients and hospitals in Appendix E., Supporting Data Tables.

Appendix E. Supporting Documentation

Appendix E.1. Supporting Documentation for Chapter 1

Sepsis.—The Committee is concerned that sepsis continues to be a leading public health threat that is responsible for hundreds of thousands of deaths each year. Additionally, while quality improvement measures exist for the treatment of sepsis, many under-resourced hospitals, including those caring for children and long-term care providers, struggle to implement these practices. To better understand the disease burden of sepsis, the Committee includes \$750,000 and directs AHRQ to conduct a comprehensive set of studies that calculate the morbidity, readmissions, and mortality related to sepsis with respect to pediatrics, maternal sepsis, nursing home care, and rehab, and the association of pandemic-related changes in the healthcare system on the burden of sepsis. The study should also examine the annual financial costs of sepsis in the United States.¹⁶

¹⁶ S.4659 - 117th Congress (2021-2022): Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2023. (2022, July 28). <https://www.congress.gov/bill/117th-congress/senate-bill/4659>

Appendix E.2. Supporting Documentation for Chapter 2

Appendix E.2.1. Definitions of Sepsis

The current definition of *adult sepsis* (referred to as Sepsis-3)¹ is based on the Third International Consensus Definitions Task Force, which was comprised of experts and convened by the European Society of Intensive Care Medicine (ESICM) and the Society of Critical Care Medicine (SCCM). Sepsis-3 defines sepsis by 1) the presence of suspected infection and 2) organ dysfunction.¹⁷ Organ dysfunction is defined based on changes in the Sequential (sepsis-related) Organ Failure Assessment (SOFA) score, which assesses functional changes in respiratory, cardiovascular, hepatic, coagulation, renal, and neurological systems.¹⁸

The increase in viral sepsis cases attributable to COVID-19 also highlighted ongoing controversies about sepsis definitions. A 2021 meta-analysis, which included cases from early in the pandemic, estimated that 77.9 percent of COVID-19 patients in ICUs (95% CI, 75.9–79.8; $I^2 = 91\%$; 57 studies) and 33.3 percent of COVID-19 patients in general wards (95% CI, 30.3–36.4; $I^2 = 99\%$; 86 studies) met Sepsis-3 clinical criteria for sepsis.¹⁹ While it is accepted that sepsis diagnosis requires an underlying infection or at least a strong suspicion of one, there remain questions regarding the specificity and sensitivity of the clinical aspects that are used to define suspected sepsis. These aspects can differ significantly between viral or bacterial sepsis. Differences in the nature and management of bacterial versus viral sepsis intensified the debate about possible unintended consequences of rigid sepsis care bundles.²⁰ As noted in the treatment section, the SSC guideline recommendations are not universally to be applied to all sepsis types (bacterial, viral, or fungal).

Maternal Sepsis

The Sepsis-3 definition of adult sepsis does not account for the physiologic changes seen in a normal pregnancy.²¹ The identification of organ dysfunction and sepsis during pregnancy (i.e., *maternal sepsis*) should include several clinical considerations such as normal fluctuations in lactate values, blood pressure, and serum creatinine levels.^{22,23,24}

¹⁷ Singer, M., Deutschman, C. S., Seymour, C. W., Shankar-Hari, M., Annane, D., Bauer, M., Bellomo, R., Bernard, G. R., Chiche, J.-D., Coopersmith, C. M., Hotchkiss, R. S., Levy, M. M., Marshall, J. C., Martin, G. S., Opal, S. M., Rubenfeld, G. D., Van Der Poll, T., Vincent, J.-L., & Angus, D. C. (2016). The third international consensus definitions for sepsis and septic shock (Sepsis-3). *JAMA*, 315(8), 801. <https://doi.org/10.1001/jama.2016.0287>

¹⁸ Vincent, J. L., Moreno, R., Takala, J., Willatts, S., De Mendonça, A., Bruining, H., Reinhart, C. K., Suter, P. M., & Thijs, L. G. (1996). The SOFA (Sepsis-related organ failure assessment) score to describe organ dysfunction/failure. On behalf of the working group on sepsis-related problems of the European society of intensive care medicine. *Intensive Care Medicine*, 22(7), 707–710. <https://doi.org/10.1007/BF01709751>

¹⁹ Karakike E, Giamarellos-Bourboulis EJ, Kyprianou M, Fleischmann-Struzek C, Pletz MW, Netea MG, Reinhart K, Kyriazopoulou E. Coronavirus Disease 2019 as Cause of Viral Sepsis: A Systematic Review and Meta-Analysis. *Crit Care Med*. 2021 Dec 1;49(12):2042-2057. doi: 10.1097/CCM.0000000000005195. PMID: 34259663; PMCID: PMC8594513.

²⁰ Shappell C, Rhee C, Klompas M. Update on Sepsis Epidemiology in the Era of COVID-19. *Semin Respir Crit Care Med*. 2023 Feb;44(1):173-184. doi: 10.1055/s-0042-1759880. Epub 2023 Jan 16. PMID: 36646093.

²¹ Plante, L.A., Pacheco, L.D., Louis, J.M. (2019). SMFM Consult Series #47: Sepsis during pregnancy and the puerperium. *Am J Obstet Gynecol*. 220(4):B2-b10.

²² California Maternal Quality Care Collaborative (CMQCC). (2020). Appendix C. Justification for Adjustments to CMS Sepsis-1 Criteria for End Organ Injury. <https://www.cmqcc.org/content/appendix-c-justification-adjustments-cms-sepsis-1-criteria-end-organ-injury>.

²³ Iwasaki, R., Ohkuchi, A., Furuta, I., Ojima, T., Matsubara, S., Sato, I., & Minakami, H. (2002). Relationship between blood pressure level in early pregnancy and subsequent changes in blood pressure during pregnancy. *Acta Obstetrica Et Gynecologica Scandinavica*, 81(10), 918–925. <https://doi.org/10.1034/j.1600-0412.2002.811004.x>.

²⁴ Mahendru, A. A., Everett, T. R., Wilkinson, I. B., Lees, C. C., & McEniery, C. M. (2014). A longitudinal study of maternal cardiovascular function from preconception to the postpartum period. *Journal of Hypertension*, 32(4), 849–856. <https://doi.org/10.1097/HJH.000000000000090>

Pediatric Sepsis

A 2005 international consensus conference developed definitions of sepsis in pediatric patients that delineated age-specific values for vital signs and laboratory values.²⁵ However, there have been significant changes in the understanding of pediatric sepsis in the last decade, and recent studies have emphasized the use of organ dysfunction criteria instead systemic inflammatory response syndrome (SIRS).^{26,27}

SCCM convened a task force that developed the 2024 International Consensus Criteria for Pediatric Sepsis and Septic Shock, culminating from several years of research and discussion.²⁸ The task force recommended identifying sepsis using the Phoenix Sepsis Score, which indicates potentially life-threatening organ dysfunction in children with suspected or confirmed infection. The Phoenix Sepsis Score assesses organ dysfunction using some of the SOFA criteria (e.g., PaO₂/FiO₂, use of vasopressors, platelet count, Glasgow Coma Scale) as well as additional criteria (e.g., lactate levels, age-based mean arterial pressure, use of invasive mechanical ventilation).²⁹ Although the Phoenix Sepsis Score represents a significant improvement in identifying pediatric sepsis, further validation—particularly in low-resourced and varied settings—is needed before this approach can be universally adopted.³⁰ Given the timing of the Phoenix Sepsis Score publication, the definition was not widely used for defining sepsis during the timeframe of the data presented in this report.

Appendix E.2.2. Machine Learning (ML)-based Models for Early Recognition of Sepsis

Machine learning (ML)-based early warning systems have been increasingly used to support early recognition of sepsis. These algorithms use electronic health record (EHR) data such as blood pressure, heart rate, lactate level, age and comorbidities to identify patients at increased risk for developing sepsis before clinicians typically make the diagnosis.³¹ A systematic review by Islam et al (2023) identified 29 ML models used for early sepsis recognition, categorized into two types of models: (1) classical models such as logistic regressions and decision trees, and (2) deep learning models such as Long Short-Term Memory (LSTM) Networks and recurrent or convolutional neural networks. ML models demonstrated reasonable ability to predict the onset of sepsis (AUROC, 0.80 to 0.97), often forecasting sepsis emergency two to six hours earlier compared to traditional methods in identifying patients at risk of sepsis. Promising examples include a deep learning model that was implemented at two academic emergency departments, demonstrating 1.9% absolute reduction (17% relative decrease) in in-hospital sepsis mortality (95% CI, 0.3%–3.5%), and a mixture model of Cox proportional hazard models that was implemented in five hospitals, demonstrating 3.3% absolute reduction (18.7%

²⁵ Goldstein, B., Giroir, B., Randolph, A., & International Consensus Conference on Pediatric Sepsis. (2005). International pediatric sepsis consensus conference: Definitions for sepsis and organ dysfunction in pediatrics. *Pediatric Critical Care Medicine: A Journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies*, 6(1), 2–8. <https://doi.org/10.1097/01.PCC.0000149131.72248.E6>

²⁶ Sanchez-Pinto, L. N., Bembea, M. M., Farris, R. W., Hartman, M. E., Odetola, F. O., Spaeder, M. C., Watson, R. S., Zimmerman, J. J., Bennett, T. D., & Pediatric Organ Dysfunction Information Update Mandate (PODIUM) Collaborative. (2022). Patterns of organ dysfunction in critically ill children based on PODIUM criteria. *Pediatrics*, 149(1 Suppl 1), S103–S110. <https://doi.org/10.1542/peds.2021-052888P>

²⁷ Schlapbach, L. J., Weiss, S. L., Bembea, M. M., Carcillo, J. A., Leclerc, F., Leteurtre, S., Tissieres, P., Wynn, J. L., Zimmerman, J., Lacroix, J., & Pediatric Organ Dysfunction Information Update Mandate (PODIUM) Collaborative. (2022). Scoring systems for organ dysfunction and multiple organ dysfunction: The PODIUM consensus conference. *Pediatrics*, 149(1 Suppl 1), S23–S31. <https://doi.org/10.1542/peds.2021-052888D>

²⁸ Schlapbach LJ, Watson RS, Sorce LR, et al. International Consensus Criteria for Pediatric Sepsis and Septic Shock. *JAMA*. 2024;331(8):665-674. doi:10.1001/jama.2024.0179

²⁹ Sanchez-Pinto, L. N., Bennett, T. D., DeWitt, P. E., Russell, S., Rebull, M. N., Martin, B., Akech, S., Albers, D. J., Alpern, E. R., Balamuth, F., Bembea, M., Chisti, M. J., Evans, I., Horvat, C. M., Jaramillo-Bustamante, J. C., Kissoon, N., Menon, K., Scott, H. F., Weiss, S. L., Society of Critical Care Medicine Pediatric Sepsis Definition Task Force. (2024). Development and validation of the phoenix criteria for pediatric sepsis and septic shock. *JAMA*. <https://doi.org/10.1001/jama.2024.0196>

³⁰ Jabornisky R, Kuppermann N, González-Dambrauskas S. Transitioning From SIRS to Phoenix With the Updated Pediatric Sepsis Criteria—The Difficult Task of Simplifying the Complex. *JAMA*. 2024;331(8):650–651. doi:10.1001/jama.2023.27988

³¹ Islam KR, Prithula J, Kumar J, Tan TL, Reaz MBI, Sumon MSI, Chowdhury MEH. Machine Learning-Based Early Prediction of Sepsis Using Electronic Health Records: A Systematic Review. *Journal of Clinical Medicine*. 2023; 12(17):5658. <https://doi.org/10.3390/jcm12175658>

relative decrease) in adjusted mortality (95% CI, 1.7%-5.1%) among patients with sepsis who were identified by the alert and confirmed by a provider within three hours.

Appendix E.2.3. Additional Considerations for the Management and Treatment of Sepsis

The Surviving Sepsis Campaign (SSC) International Guidelines for the Management of Sepsis and Septic Shock provide guidance on the care of hospitalized adult patients with (or at risk for) sepsis.³² The guidelines are sponsored by SCCM and ESICM with methodological support from the Guidelines in Intensive Care Development and Evaluation (GUIDE) group and endorsement by 24 additional societies. The 2021 SSC Guidelines outline several recommendations based on the strength and quality of evidence, including:³³

1. **Screening for patients with sepsis and septic shock:** Hospitals and health systems should develop a standardized approach to sepsis screening of acutely ill, high-risk patients and treatment protocols and refrain from using one specific screening tool like qSOFA and others.
2. **Initial resuscitation:** Patients with septic shock or sepsis-induced hypoperfusion should receive (a) fluid resuscitation in the form of crystalloid-based intravenous fluids in at least a 30 mL/kg volume within three hours, (b) resuscitation should be guided by a combination of dynamic measures, physical exam, and serial lactate measurements, and (c) resuscitation should target a mean arterial blood pressure (MAP) of greater than 65 mmHg.
3. **Treatment:** (a) For patients in septic shock or highly suspected sepsis, administer antibiotics that are targeted to likelihood of risk for methicillin-resistance *Staphylococcus aureus* (MRSA), multi-drug resistant (MDR) organisms, and fungal infections within one hour of recognition, (b) expeditiously control the source of sepsis, if applicable (e.g., drain an abscess, control perforation of the gastrointestinal tract, aggressively debride a necrotizing soft tissue infection, or remove an infected device), (c) for patients in septic shock, use norepinephrine as the first-line agent for vasopressor support.

In addition, the guidelines outline multiple recommendations for supportive care, including regarding hemodynamic support, venous thromboembolism prophylaxis, glucose control, stress ulcer prophylaxis, and shared patient and family decision-making.

Appendix E.2.4. Treatment Considerations for Patient Subpopulations

Maternal sepsis treatment

Research has observed several issues to consider when treating maternal sepsis:

- **Antibiotic timing:** For infections such as chorioamnionitis/intraamniotic infection and endometritis, patients commonly have negative blood cultures, and antibiotics are often started without or prior to obtaining blood cultures. Blood cultures should be obtained if a patient shows signs of end-organ injury or septic shock and source directed antibiotics (or broad-spectrum antibiotics if source is unclear) should be started.

³² Evans, L., Rhodes, A., Alhazzani, W., Antonelli, M., Coopersmith, C. M., French, C., Machado, F. R., Mcintyre, L., Ostermann, M., Prescott, H. C., Schorr, C., Simpson, S., Wiersinga, W. J., Alshamsi, F., Angus, D. C., Arabi, Y., Azevedo, L., Beale, R., Beilman, G., ... Levy, M. (2021). Surviving sepsis campaign: International guidelines for management of sepsis and septic shock 2021. *Critical Care Medicine*, 49(11), e1063. <https://doi.org/10.1097/CCM.0000000000005337>.

³³ Evans, L., Rhodes, A., Alhazzani, W., Antonelli, M., Coopersmith, C. M., French, C., Machado, F. R., Mcintyre, L., Ostermann, M., Prescott, H. C., Schorr, C., Simpson, S., Wiersinga, W. J., Alshamsi, F., Angus, D. C., Arabi, Y., Azevedo, L., Beale, R., Beilman, G., ... Levy, M. (2021). Surviving sepsis campaign: International guidelines for management of sepsis and septic shock 2021. *Critical Care Medicine*, 49(11), e1063. <https://doi.org/10.1097/CCM.0000000000005337>.

- **Fluid resuscitation:** Fluid resuscitation should be initiated rapidly for patients with a blood lactate level greater than four mmol/L or mean arterial pressure (MAP) less than 65 mmHg.³⁴

Pediatric and neonatal sepsis treatment

Consensus-based recommendations for the management of septic shock and sepsis-associated organ dysfunction in children (37 weeks gestation at birth to 18 years old) were developed by SCCM and ESICM and published in 2020.³⁵ The 2020 Surviving Sepsis Campaign (SSC) International Guidelines for the Management of Septic Shock and Sepsis-Associated Organ Dysfunction in Children (37 weeks gestation at birth to 18 years old) recommendations include specific points related to general sepsis management adjusted to patient age and physiological development.

The 2020 SSC Guidelines outline several strong recommendations pertaining to treatment for pediatric sepsis, including:

1. For patients in septic shock or with highly suspected sepsis, administer antibiotics within one hour.
2. Outside of the intensive care unit (ICU) and in absence of hypotension, do not administer bolus fluids.

The 2020 SSC Guidelines excluded infants <37 weeks gestation at birth and did not address management of early-onset sepsis (EOS). The American Academy of Pediatrics Committee on Fetus and Newborn has published consensus guidelines for identifying and managing EOS, with separate recommendations for infants born ≥ 35 weeks³⁶ and <35 weeks.³⁶ Key takeaways include:

1. Risk stratification approaches based on birth factors are outlined, and it is recommended that one of these methods be used to standardize EOS evaluations.
2. A minimum of one mL of blood should be inoculated into a blood culture bottle, regardless of birth weight. Using one aerobic and one anaerobic bottle may improve detection of bacterial pathogens in EOS.
3. Ampicillin and gentamicin remain the first choice for empiric antibiotic therapy. If there is hemodynamic instability, particularly in preterm infants in locations where ampicillin-resistant *E. coli* sepsis is common, it is recommended to broaden coverage to include a cephalosporin.

³⁴ Shields, A., de Assis, V., & Halscott, T. (2021). Top 10 pearls for the recognition, evaluation, and management of maternal sepsis. *Obstetrics and Gynecology*, 138(2), 289–304. <https://doi.org/10.1097/AOG.0000000000004471>

³⁵ Weiss, S. L., Peters, M. J., Alhazzani, W., Agus, M. S. D., Flori, H. R., Inwald, D. P., Nadel, S., Schlapbach, L. J., Tasker, R. C., Argent, A. C., Brierley, J., Carcillo, J., Carrol, E. D., Carroll, C. L., Cheifetz, I. M., Choong, K., Cies, J. J., Cruz, A. T., De Luca, D., ... Tissieres, P. (2020). Surviving sepsis campaign international guidelines for the management of septic shock and sepsis-associated organ dysfunction in children. *Pediatric Critical Care Medicine: A Journal of the Society of Critical Care Medicine and the World Federation of Pediatric Intensive and Critical Care Societies*, 21(2), e52–e106. <https://doi.org/10.1097/PCC.0000000000002198>

³⁶ Puopolo KM, Benitz WE, Zaoutis TE; COMMITTEE ON FETUS AND NEWBORN; COMMITTEE ON INFECTIOUS DISEASES. Management of Neonates Born at ≥ 35 0/7 Weeks' Gestation With Suspected or Proven Early-Onset Bacterial Sepsis. *Pediatrics*. 2018 Dec;142(6):e20182894. doi: 10.1542/peds.2018-2894.

Appendix E.4. Supporting Documentation for Chapter 4

Appendix Table E.4.1. Overview of Inpatient Stays Involving Sepsis, 2016–2021

Outcome	Estimate/ Std. Err	2016	2017	2018	2019	2020	2021
Number of sepsis-related inpatient stays	Estimate	1,783,869	1,940,274	2,068,995	2,141,735	2,378,735	2,494,067
	Std. Err.	19,038	20,830	21,931	23,460	26,875	28,952
Percent of all inpatient stays related to sepsis	Estimate	5.0%	5.4%	5.8%	6.0%	7.4%	7.5%
	Std. Err.	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Number of sepsis inpatient stays	Estimate	1,245,939	1,383,509	1,491,025	1,543,065	1,743,905	1,811,043
	Std. Err.	14,130	15,558	16,305	17,202	20,552	22,319
Percent of all inpatient stays that are sepsis inpatient stays	Estimate	3.5%	3.9%	4.2%	4.4%	5.4%	5.4%
	Std. Err.	<0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Number of inpatient days for sepsis inpatient stays	Estimate	10,470,925	11,289,748	12,146,838	12,482,111	15,330,167	16,713,811
	Std. Err.	125,381	135,692	140,892	148,452	194,199	220,227
Percent of all inpatient days that are for sepsis inpatient stays	Estimate	6.4%	6.8%	7.3%	7.5%	9.6%	9.7%
	Std. Err.	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%
Average length of stay for sepsis inpatient stays	Estimate	8.4	8.2	8.1	8.1	8.8	9.2
	Std. Err.	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Abbreviations: Std. Err., Standard Error.

Note: For sepsis-related inpatient stays, sepsis was identified using all available diagnoses and not required to be the reason for the stay. For sepsis inpatient stays, sepsis was required to be the reason for the stay (principal diagnosis). See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2016–2021.

Appendix Table E.4.2. Overview of Emergency Department Utilization During Sepsis-Related Hospital Encounters, 2016–2021

Outcome	Estimate/ Std. Err.	2016	2017	2018	2019	2020	2021
Number of ED treat-and-release visits related to sepsis	Estimate	57,205	67,917	80,971	95,288	110,969	104,692
	Std. Err.	3,049	3,761	4,552	5,491	5,009	4,078
Percent of sepsis-related inpatient stays admitted through ED	Estimate	77.7%	79.7%	82.5%	83.5%	84.8%	85.6%
	Std. Err.	0.5%	0.5%	0.4%	0.3%	0.3%	0.3%
Percent of all sepsis-related ED visits transferred to an inpatient setting at a different hospital	Estimate	52.4%	49.6%	49.2%	51.3%	50.5%	49.9%
	Std. Err.	2.8%	3.0%	2.7%	2.7%	2.3%	2.0%

Abbreviations: Std. Err., Standard Error; ED, Emergency Department.

Note: For sepsis-related inpatient stays/ED visits, sepsis was identified using all available diagnoses and not required to be the reason for the stay/visit. ED treat-and-release visits are encounters that did not result in admission to the same hospital. These encounters involve patients being evaluated in the ED before being transferred to another acute care hospital; being discharged to their home, a nursing home, or hospice with palliative care; leaving against medical advice; or dying in the ED before admission. See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2016–2021; Nationwide Emergency Department Sample (NEDS), 2016–2021.

Appendix Table E.4.3. Post-Acute Care Transitions Following Sepsis-Related Inpatient Stays and All Inpatient Stays, 2021

Outcome	Discharge Destination	Estimate	Std. Err.
Sepsis-related inpatient stays (N)	Home or self care	760,219	10,380
	Post-acute care facility	662,104	8,575
	Home health care	473,789	7,169
	Short-term hospital	88,520	1,439
	Left against medical advice	39,730	907
	Other settings	1,545	186
All inpatient stays (N)	Home or self care	22,212,490	213,556
	Post-acute care facility	4,292,030	46,392
	Home health care	4,552,405	63,383
	Short-term hospital	649,198	7,304
	Left against medical advice	596,499	9,565
	Other settings	13,230	1,257

Abbreviations: Std. Err., Standard Error

Notes: For sepsis-related inpatient stays, sepsis was identified using all available diagnoses and not required to be the reason for the stay. Inpatient stays resulting in death during the stay were excluded from the analysis (sepsis-related inpatient stays, 468,160, and all inpatient stays, 1,017,869). See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2021.

Appendix Table E.4.4. Post-Acute Care Transitions Following Sepsis-Related Inpatient Stays by Patient Population, 2021

Discharge Destination	Nonmaternal, Adults Aged 65 Years and Older		Nonmaternal, Adults Aged 18–64 Years		Maternal		Nonmaternal, Pediatric		Neonatal	
	Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Home or self care	25.1%	0.4%	49.9%	0.8%	73.4%	2.5%	85.2%	6.5%	74.7%	3.0%
Home health care	28.2%	0.4%	18.7%	0.3%	9.3%	0.8%	7.7%	0.9%	4.7%	0.6%
Short-term hospital	3.5%	0.1%	4.9%	0.1%	7.5%	0.7%	4.5%	0.5%	19.2%	1.3%
Post-acute care facility	42.6%	0.6%	22.6%	0.4%	6.3%	0.7%	2.4%	0.3%	1.2%	0.2%
Left against medical advice	0.6%	<0.1%	3.8%	0.1%	3.5%	0.5%	0.2%	<0.1%	0.1%	<0.1%
Other settings	0.1%	<0.1%	0.1%	<0.1%	0.0%	0.0%	0.1%	<0.1%	0.2%	0.1%

Notes: Sepsis-related inpatient stays were identified using all available diagnoses and was not required to be the reason for the stay. Inpatient stays resulting in death during the stay were excluded from the analysis. See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2021.

Appendix Table E.4.5. Hospital Readmissions for Sepsis Inpatient Stays, 2021

Readmission Outcome	Diagnosis Category	Estimate
7-day all-cause readmissions per 1,000 sepsis inpatient stays	Overall	60
30-day all-cause readmissions per 1,000 sepsis inpatient stays	Overall	156
Top 5 reasons for readmission within 7 days of a sepsis inpatient stay (%)	Sepsis	25.9%
	COVID-19	6.4%
	Heart failure	4.7%
	Septicemia	4.2%
	Pneumonia	3.2%
Top 5 reasons for readmission within 30 days of sepsis inpatient stay (%)	Sepsis	24.4%
	Heart failure	4.8%
	Septicemia	4.6%
	COVID-19	4.0%
	Renal failure	3.3%

Abbreviations: Std. Err., Standard Error

Note: For sepsis inpatient stays, sepsis was required to be the reason for the stay (principal diagnosis). The “Septicemia” category represents records that have a principal diagnosis at the readmission of a sepsis infection, but no indication of organ dysfunction (required for the identification of sepsis for nonmaternal adult and maternal sepsis stays). See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 23 States and the District of Columbia.

Appendix Table E.4.6. Overview of Hospital Costs and In-Hospital Mortality for Sepsis Hospital Encounters, 2016–2021

Outcome	Estimate/ Std. Err.	2016	2017	2018	2019	2020	2021
Average total hospital cost for sepsis inpatient stays (\$)	Estimate	25,100	24,400	24,200	24,700	28,300	28,800
	Std. Err.	200	200	200	200	300	300
Aggregate total hospital costs for sepsis inpatient stays (\$ in millions)	Estimate	31,239	33,693	36,044	38,187	49,430	52,109
	Std. Err.	398	440	460	499	719	750
Medicare	Estimate	18,945	20,629	21,794	22,965	27,789	28,049
	Std. Err.	257	286	293	317	413	405
Medicaid	Estimate	5,387	5,811	6,315	6,806	9,150	9,922
	Std. Err.	127	143	156	163	232	229
Private insurance	Estimate	5,304	5,558	6,076	6,330	9,457	10,831
	Std. Err.	110	119	133	138	220	232
Self-pay/No charge	Estimate	879	947	1,108	1,179	1,661	1,749
	Std. Err.	38	38	44	44	69	86
Other	Estimate	688	701	714	870	1,314	1,485
	Std. Err.	38	32	36	37	53	52
Missing/invalid	Estimate	36	47	37	37	59	73
	Std. Err.	12	11	5	6	8	13
Aggregate total hospital cost for sepsis ED treat-and-release visits (\$ in millions)	Estimate	58	69	90	133	154	156
	Std. Err.	4	5	6	17	11	18
Number of sepsis inpatient stays that resulted in in-hospital death	Estimate	178,970	187,330	190,295	183,985	277,980	298,540
	Std. Err.	2,345	2,439	2,516	2,497	3,826	4,086
Number of sepsis ED treat-and-release visits that result in in-hospital death	Estimate	2,777	2,959	3,126	3,121	4,634	3,749
	Std. Err.	189	195	203	193	263	207
Number of in-hospital deaths for sepsis hospital encounters	Estimate	181,747	190,289	193,421	187,106	282,614	302,289
	Std. Err.	2,534	2,635	2,719	2,691	4,089	4,293

Abbreviations: Std. Err., Standard Error.

Note: Sepsis was required to be the reason for the encounter (principal/first-listed diagnosis). ED treat-and-release visits are encounters that did not result in admission to the same hospital. These encounters involve patients being evaluated in the ED before being transferred to another acute care hospital; being discharged to their home, a nursing home, or hospice with palliative care; leaving against medical advice; or dying in the ED before admission. The hospital cost estimates by payer are based on the expected primary payer as indicated in the hospital encounter record. The number of in-hospital deaths for sepsis hospital encounters includes deaths occurring in the inpatient and ED settings. See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2016–2021; Nationwide Emergency Department Sample (NEDS), 2016–2021.

Appendix Table E.4.7. Overview of Hospital Costs, In-Hospital Mortality, and Length of Stay for Hospital Encounters Involving Sepsis by Patient Population, 2016–2021

Outcome	Year	Nonmaternal, Adults Aged 65 Years and Older		Nonmaternal, Adults Aged 18–64 Years		Maternal		Nonmaternal, Pediatric		Neonatal	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Number of inpatient stays related to sepsis	2016	1,006,979	11,750	673,545	8,883	4,985	195	28,715	2017.2	69,645	2,422
	2019	1,250,540	14,688	803,345	10,448	6,185	225	35,385	2,812	46,280	1,604
	2021	1,392,788	16,611	1,023,514	13,744	8,020	261	33,415	2,534	36,330	1,419
Number of sepsis-related inpatient stays (per 1,000 stays)	2016	79	0.5	50	0.4	1	<0.1	20	0.9	18	0.5
	2019	93	0.5	62	0.5	2	0.1	25	1.4	12	0.4
	2021	112	0.6	84	0.7	2	0.1	28	1.3	10	0.3
Average total hospital cost for sepsis inpatient stays (\$)	2016	21,924	175	29,629	322	34,432	4,098	36,841	2,186	36,662	3,979
	2019	22,036	183	28,529	300	31,957	3,637	37,916	2,703	47,767	4,806
	2021	25,038	204	33,543	360	43,782	7,270	41,548	2,647	56,282	5,429
Aggregate total hospital costs for sepsis inpatient stays (\$ in millions)	2016	16,671	226	13,625	224	40	5	704	72	199	29
	2019	20,964	289	15,960	259	39	5	1,004	111	220	30
	2021	26,309	371	24,494	430	62	11	1,036	109	207	30
Average length of sepsis inpatient stay (days)	2016	7.7	0.0	9.5	0.1	8.8	0.7	9.1	0.3	11.8	1.0
	2019	7.5	0.0	9.0	0.1	7.8	0.6	8.6	0.4	13.8	1.0
	2021	8.5	0.0	10.3	0.1	9.7	0.9	9.1	0.4	16.2	1.2
In-hospital mortality per 1,000 sepsis hospital encounters	2016	167	1.8	117	1.6	34	12.1	32	3.6	41	6.2
	2019	138	1.6	98	1.4	16	8.2	28	3.3	43	7.6
	2021	188	1.7	140	1.6	42	11.7	25	3.0	61	9.2
Number of in-hospital deaths for sepsis hospital encounters	2016	127,000	2,076	53,956	1,029	40	14	617	80	225	37
	2019	131,473	2,208	54,686	1,045	20	10	736	106	197	38
	2021	198,403	3,081	102,337	1,855	60	17	636	91	225	38

Abbreviations: Std. Err., Standard Error.

Note: For sepsis-related inpatient stays, sepsis was identified using all available diagnoses and not required to be the reason for the stay. For sepsis inpatient stays/hospital encounters, sepsis was required to be the reason for the stay/encounter (principal/first-listed diagnosis). See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2016–2021

Appendix Table E.4.8. Hospital Utilization, Hospital Costs, In-Hospital Mortality, and Length of Stay for Hospital Encounters Involving Sepsis by COVID-19 Diagnosis, 2021

Outcome	Inpatient Stays Involving a Diagnosis of COVID-19		Inpatient Stays Not Involving a Diagnosis of COVID-19	
	Estimate	Std. Err.	Estimate	Std. Err.
Number of inpatient stays	2,468,875	25,294	30,864,845	279,107
Number of inpatient stays related to sepsis	516,119	8,611	1,977,948	21,787
Percentage of all inpatient stays that are related to sepsis	20.9%	0.3%	6.4%	<0.1%
Number of inpatient days	20,729,636	228,825	151,111,452	1,532,549
Number of inpatient days for sepsis inpatient stays	4,722,260	93,200	11,991,551	144,880
Percentage of all inpatient days that are sepsis inpatient stays	22.8%	<0.1%	7.9%	<0.1%
Average total hospital cost for sepsis inpatient stays (\$)	38,547	478	26,050	232
Aggregate total hospital cost for sepsis inpatient stays (\$ in millions)	15,211	327	36,897.91	487.47
In-hospital mortality rate per 1,000 sepsis hospital encounters	265	3.0	139	1.3
Number of in-hospital deaths for sepsis hospital encounters	105,013	2,384	197,358	2,924

Abbreviations: Std. Err., Standard Error.

Note: For sepsis-related inpatient stays, sepsis was identified using all available diagnoses and not required to be the reason for the stay. For sepsis inpatient stays/hospital encounters, sepsis was required to be the reason for the stay/encounter (principal/first-listed diagnosis). For inpatient stays involving COVID-19, COVID-19 was identified using all available diagnoses. See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2016–2021.

Appendix E.5. Supporting Documentation for Chapter 5

Appendix Table E.5.1. Percentage of All Inpatient Stays Related to Sepsis by Patient Characteristics, 2016, 2019, and 2021

Patient Characteristic	Patient Characteristic Category	2016		2019		2021	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Patient race and ethnicity	API NH	5.1	0.1	6.2	0.2	7.5	0.2
	Black NH	4.8	0.1	5.7	0.1	7.3	0.1
	Hispanic	4.1	0.1	5.2	0.1	7.0	0.1
	White NH	5.3	0.0	6.4	0.1	7.8	0.1
	Other NH	4.3	0.1	5.4	0.1	6.8	0.2
	Missing/invalid	4.2	0.1	4.3	0.2	5.6	0.2
Patient sex	Female	4.3	0.0	5.2	0.0	6.3	0.1
	Male	6.0	0.0	7.1	0.1	9.0	0.1
	Missing/invalid	3.7	0.3	2.9	0.6	5.2	0.6
Patient location (urban/rural designation)	Large metropolitan	4.9	0.1	6.0	0.1	7.4	0.1
	Small metropolitan	5.1	0.1	6.1	0.1	7.6	0.1
	Rural	5.1	0.1	6.1	0.1	7.5	0.1
	Missing/invalid	5.1	0.2	6.0	0.3	8.4	0.3
Patient location (social vulnerability designation)	Less vulnerable	4.9	0.0	5.9	0.1	7.2	0.1
	Most vulnerable	5.2	0.1	6.3	0.3	7.9	0.1
	Missing/invalid	5.5	0.2	6.4	0.1	11.0	0.5

Abbreviations: API, Asian and Pacific Islander; NH, non-Hispanic; Std. Err., Standard Error.

Note: Sepsis-related inpatient stays were identified using all available diagnoses. Sepsis was not required to be the reason for the stay. See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2016, 2019, and 2021.

Appendix Table E.5.2. Rehospitalizations for Sepsis Inpatient Stays by Patient Characteristics, 2021

Patient Characteristic	Patient Characteristic Category	30-Day All-Cause Readmissions per 1,000 Sepsis Inpatient Stays	14-Day All-Cause ED Visits per 1,000 Sepsis Inpatient Stays
Patient race and ethnicity	API NH	148	54
	Black NH	167	73
	Hispanic	148	67
	White NH	156	67
	Other NH	149	62
	Missing/invalid	138	60
Patient sex	Female	153	66
	Male	158	68
	Missing/invalid	-	-
Patient location (urban/rural designation)	Large metropolitan	157	60
	Small metropolitan	155	70
	Rural	152	82
	Missing/invalid	203	147
Patient location (social vulnerability designation)	Less vulnerable	151	68
	Most vulnerable	162	66
	Missing/invalid	158	84

Abbreviations: API, Asian and Pacific Islander; ED, emergency department; NH, non-Hispanic; Std. Err., Standard Error.

Note: For sepsis inpatient stays, sepsis was required to be the reason for the stay (principal diagnosis). See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID) and State Emergency Department Databases (SEDD) for 23 States with HCUP Revisit Variables, 2021.

Appendix Table E.5.3. Outcomes for Sepsis Hospital Encounters by Patient Characteristics, 2021

Patient Characteristic	Patient Characteristic Category	In-Hospital Mortality per 1,000 Sepsis Hospital Encounters		Average Total Hospital Cost for Sepsis Inpatient Stays (\$)		Average Length of Sepsis Inpatient Stay (Days)	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Patient race and ethnicity	API NH	180	4	37,600	900	9.7	0.1
	Black NH	169	3	31,500	400	10.6	0.1
	Hispanic	176	4	36,400	700	10.3	0.1
	White NH	161	1	25,800	200	8.6	0.0
	Other NH	185	4	35,500	1,000	10.2	0.1
	Missing/invalid	199	1	32,100	900	9.6	0.2
Patient sex	Female	160	1	26,900	200	9.6	0.0
	Male	172	1	30,500	300	8.8	0.0
	Missing/invalid	234	0	22,900	2,800	7.5	0.5
Patient location (urban/rural designation)	Large metropolitan	165	2	31,100	400	9.6	0.1
	Small metropolitan	163	2	26,000	400	9.0	0.1
	Rural	177	3	26,200	400	8.6	0.1
	Missing/invalid	149	10	42,800	1,700	12.3	0.4
Patient location (social vulnerability designation)	Less vulnerable	159	1	27,100	300	8.8	0.0
	Most vulnerable	181	2	30,900	400	9.8	0.1
	Missing/invalid	148	7	49,400	1,800	14.1	0.4

Abbreviations: API, Asian and Pacific Islander; NH, non-Hispanic; Std. Err., Standard Error.

Note: For sepsis inpatient stays/hospital encounters, sepsis was required to be the reason for the stay/encounter (principal/first-listed diagnosis). The measure of in-hospital mortality includes deaths occurring in the inpatient and ED settings. Charges were imputed to account for missing information prior to conversion to hospital costs. Average total hospital costs were rounded to the nearest hundreds. See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS) and Nationwide Emergency Department Sample (NEDS), 2021.

Appendix Table E.5.4. In-Hospital Mortality per 1,000 Nonmaternal Adult Sepsis Hospital Encounters by Patient Characteristics, 2021

Patient Characteristic	Patient Characteristic Category	Nonmaternal Adults (All Ages)		Nonmaternal Adults Aged 18–64 Years		Nonmaternal Adults Aged 65–79 Years		Nonmaternal Adults Aged 80 Years and Older	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Patient race and ethnicity	API NH	183	4	126	5	200	7	232	10
	Black NH	171	3	136	2	195	4	241	6
	Hispanic	182	4	151	4	213	5	235	5
	White NH	163	1	137	2	168	2	191	2
	Other NH	190	4	155	6	215	6	244	10
	Missing/invalid	205	0	175	4	212	3	258	14
Patient sex	Female	163	1	131	2	173	2	198	3
	Male	174	1	148	2	184	2	211	3
	Missing/invalid	234	0	160	58	297	0	222	65
Patient location (urban/rural designation)	Large metropolitan	167	2	134	2	177	2	208	3
	Small metropolitan	165	2	141	3	175	3	194	4
	Rural	179	2	156	3	188	3	208	5
	Missing/invalid	152	10	125	8	196	18	241	28
Patient location (social vulnerability designation)	Less vulnerable	161	1	131	2	170	2	194	3
	Most vulnerable	184	2	155	2	195	3	222	4
	Missing/invalid	150	8	120	7	182	13	228	18

Abbreviations: API, Asian and Pacific Islander; NH, non-Hispanic; Std. Err., Standard Error.

Note: For sepsis hospital encounters, sepsis was required to be the reason for the encounter (principal/first-listed diagnosis). The measure of in-hospital mortality includes deaths occurring in the inpatient and ED settings. Patient age information was missing for less than 0.01 percent of all nonmaternal adult sepsis-related inpatient stays in 2021. See Appendix C, Clinical Coding for Sepsis, for criteria. See Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS) and Nationwide Emergency Department Sample (NEDS), 2021.

Appendix Table E.5.5. Average Total Hospital Cost for Nonmaternal Adult Sepsis Inpatient Stays by Patient Characteristics, 2021

Patient Characteristic	Patient Characteristic Category	Nonmaternal Adults (All Ages)		Nonmaternal Adults Aged 18–64 Years		Nonmaternal Adults Aged 65–79 Years		Nonmaternal Adults Aged 80 Years and Older	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Patient race and ethnicity	API NH	37,500	900	42,900	1,400	39,200	1,200	29,000	900
	Black NH	31,000	400	32,900	500	30,900	500	24,700	400
	Hispanic	36,200	600	40,000	800	35,500	700	24,200	500
	White NH	25,700	200	30,800	300	25,400	200	18,900	200
	Other NH	35,300	900	40,300	1,300	32,400	900	26,000	900
	Missing/invalid	31,300	800	37,300	1,300	29,900	800	20,700	700
Patient sex	Female	26,600	200	30,900	300	26,600	200	19,700	200
	Male	30,300	300	35,600	400	28,800	300	21,500	200
	Missing/invalid	22,900	2,800	28,200	7,700	23,000	1,700	16,700	2,200
Patient location (urban/rural designation)	Large metropolitan	30,800	400	35,600	500	30,800	400	22,700	300
	Small metropolitan	25,800	400	30,800	500	24,700	300	18,100	300
	Rural	26,000	300	31,400	500	24,600	300	17,700	200
	Missing/invalid	43,000	1,700	43,600	1,600	44,600	3,400	33,000	4,200
Patient location (social vulnerability designation)	Less vulnerable	26,900	300	31,800	400	26,300	300	19,500	200
	Most vulnerable	30,700	400	35,500	600	29,800	400	22,100	300
	Missing/invalid	49,500	1,800	49,300	1,700	51,900	2,700	44,900	3,400

Abbreviations: API, Asian and Pacific Islander; NH, non-Hispanic; Std. Err., Standard Error.

Note: For sepsis inpatient stays, sepsis was required to be the reason for the stay (principal diagnosis). Patient age information was missing for less than 0.01 percent of all nonmaternal adult sepsis-related inpatient stays in 2021. Charges were imputed to account for missing information prior to conversion to hospital costs. Average total hospital costs were rounded to the nearest hundreds. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2021.

Appendix Table E.5.6. Average Length of Stay for Nonmaternal Adult Sepsis Inpatient Stays by Patient Characteristics, 2021

Patient Characteristic	Patient Characteristic Category	Nonmaternal Adults (All Ages)		Nonmaternal Adults Aged 18–64 Years		Nonmaternal Adults Aged 65–79 Years		Nonmaternal Adults Aged 80+ Years	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Patient race and ethnicity	API NH	9.7	0.1	10.9	0.3	9.9	0.2	7.9	0.2
	Black NH	10.5	0.1	10.7	0.1	10.7	0.1	9.4	0.1
	Hispanic	10.4	0.1	11.1	0.1	10.4	0.1	7.8	0.1
	White NH	8.6	0.0	9.8	0.1	8.6	0.0	7.1	0.0
	Other NH	10.2	0.1	11.1	0.2	9.8	0.2	8.4	0.2
	Missing/invalid	9.5	0.2	10.5	0.3	9.4	0.2	7.2	0.2
Patient sex	Female	8.8	0.0	9.7	0.1	8.9	0.0	7.2	0.0
	Male	9.6	0.0	10.7	0.1	9.3	0.0	7.7	0.1
	Missing/invalid	7.5	0.5	8.1	1.6	8.0	0.6	6.4	1.1
Patient location (urban/rural designation)	Large metropolitan	9.5	0.1	10.5	0.1	9.6	0.1	7.8	0.1
	Small metropolitan	9.0	0.1	10.1	0.1	8.8	0.1	7.3	0.1
	Rural	8.6	0.1	9.8	0.1	8.3	0.1	6.7	0.1
	Missing/invalid	12.4	0.4	12.2	0.4	13.6	0.8	10.9	1.0
Patient location (social vulnerability designation)	Less vulnerable	8.8	0.0	9.8	0.1	8.8	0.0	7.2	0.0
	Most vulnerable	9.7	0.1	10.8	0.1	9.6	0.1	7.9	0.1
	Missing/invalid	14.1	0.4	13.7	0.4	15.4	0.6	13.6	0.8

Abbreviations: API, Asian and Pacific Islander; NH, non-Hispanic; Std. Err., Standard Error.

Note: For sepsis inpatient stays, sepsis was required to be the reason for the stay (principal diagnosis). Patient age information was missing for less than 0.01 percent of all nonmaternal adult sepsis-related inpatient stays in 2021. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS), 2021.

Appendix Table E.5.7. Outcomes for Maternal Sepsis Hospital Encounters by Patient Characteristics, 2021

		In-Hospital Mortality Rate per 1,000 Sepsis Hospital Encounters		Average Total Hospital Cost for Sepsis Inpatient Stays (\$)		Average Length of Sepsis Inpatient Stay (Days)	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Patient race and ethnicity	API NH	0	0	***	***	***	***
	Black NH	83	33	37,200	5,100	9.2	1.3
	Hispanic	19	18	45,500	17,400	9.2	2.0
	White NH	31	15	48,400	13,900	9.9	1.6
	Other NH	91	87	29,000	7,900	8.7	1.8
	Missing/invalid	0	0	***	***	***	***
Patient location (urban/rural designation)	Large metropolitan	27	13	53,300	13,000	10.5	1.5
	Small metropolitan	37	21	34,800	7,900	8.9	1.2
	Rural	93	37	30,800	4,700	8.9	1.4
	Missing/invalid	0	0	-	-	-	-
Patient location (social vulnerability designation)	Less vulnerable	26	13	40,400	10,900	8.9	1.3
	Most vulnerable	61	21	47,700	9,200	10.7	1.2
	Missing/invalid	0	0	-	-	-	-

Abbreviations: API, Asian and Pacific Islander; NH, non-Hispanic; Std. Err., Standard Error.

Note: For sepsis inpatient stays/hospital encounters, sepsis was required to be the reason for the stay/encounter (principal/first-listed diagnosis). The measure of in-hospital mortality includes deaths occurring in the inpatient and ED settings. Charges were imputed to account for missing information prior to conversion to hospital costs. Average total hospital costs were rounded to the nearest hundreds. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions. “***” denotes suppressed data.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS) and Nationwide Emergency Department Sample (NEDS), 2021.

Appendix Table E.5.8. Outcomes for Pediatric Sepsis Hospital Encounters by Patient Characteristics, 2021

Patient Characteristic	Patient Characteristic Category	In-Hospital Mortality Rate per 1,000 Sepsis Hospital Encounters		Average Total Hospital Cost for Sepsis Inpatient Stays (\$)		Average Length of Sepsis Inpatient Stay (Days)	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Patient race and ethnicity	API NH	29	12	42,900	5,000	8.7	0.8
	Black NH	36	8	59,300	7,300	12.1	0.9
	Hispanic	19	4	38,100	3,900	8.1	0.6
	White NH	24	4	37,200	2,700	8.5	0.4
	Other NH	28	15	43,600	6,300	9.4	1.1
	Missing/invalid	47	18	41,200	7,500	9.8	1.7
Patient sex	Female	23	4	39,700	2,900	8.6	0.4
	Male	29	4	43,500	3,400	9.6	0.5
	Missing/invalid	0	0	-	-	-	-
Patient location (urban/rural designation)	Large metropolitan	22	4	45,800	3,600	9.4	0.5
	Small metropolitan	25	4	36,800	4,000	8.5	0.5
	Rural	39	9	37,300	3,600	8.9	0.6
	Missing/invalid	0	0	25,500	9,500	6.4	1.7
Patient location (social vulnerability designation)	Less vulnerable	27	4	41,100	3,000	8.9	0.4
	Most vulnerable	26	4	42,100	3,800	9.2	0.6
	Missing/invalid	13	13	45,100	14,600	10.7	2.9

Abbreviations: API, Asian and Pacific Islander; NH, non-Hispanic; Std. Err., Standard Error.

Note: For sepsis inpatient stays/hospital encounters, sepsis was required to be the reason for the stay/encounter (principal/first-listed diagnosis). The measure of in-hospital mortality includes deaths occurring in the inpatient and ED settings. Charges were imputed to account for missing information prior to conversion to hospital costs. Average total hospital costs were rounded to the nearest hundreds. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS) and Nationwide Emergency Department Sample (NEDS), 2021.

Appendix Table E.5.9. Outcomes for Neonatal Sepsis Hospital Encounters by Patient Characteristics, 2021

Patient Characteristic	Patient Characteristic Category	In-Hospital Mortality Rate per 1,000 Sepsis Hospital Encounters		Average Total Hospital Cost for Sepsis Inpatient Stays (\$)		Average Length of Sepsis Inpatient Stay (Days)	
		Estimate	Std. Err.	Estimate	Std. Err.	Estimate	Std. Err.
Patient race and ethnicity	API NH	45	44	30,300	6,600	7.7	1.8
	Black NH	69	24	65,600	13,000	21.3	3.6
	Hispanic	43	15	63,800	13,300	15.8	2.6
	White NH	63	15	44,900	6,000	13.7	1.4
	Other NH	36	25	50,100	11,800	14.0	2.8
	Missing/invalid	97	31	79,900	16,000	22.6	3.8
Patient sex	Female	68	15	53,600	6,200	16.2	1.6
	Male	57	12	58,100	7,100	16.2	1.5
	Missing/invalid	0	0				
Patient location (urban/rural designation)	Large metropolitan	68	13	57,700	7,700	15.4	1.6
	Small metropolitan	44	17	58,700	12,000	17.5	2.7
	Rural	67	22	50,800	8,900	16.7	2.4
	Missing/invalid	0	0	***	***	***	***
Patient location (social vulnerability designation)	Less vulnerable	61	13	53,800	7,400	15.6	1.6
	Most vulnerable	59	12	60,200	8,300	17.2	1.8
	Missing/invalid	0	0	***	***	***	***

Abbreviations: API, Asian and Pacific Islander; NH, non-Hispanic; Std. Err., Standard Error.

Note: For sepsis inpatient stays/hospital encounters, sepsis was required to be the reason for the stay/encounter (principal/first-listed diagnosis). The measure of in-hospital mortality includes deaths occurring in the inpatient and ED settings. Charges were imputed to account for missing information prior to conversion to hospital costs. Average total hospital costs were rounded to the nearest hundreds. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions. "****" denotes suppressed data.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), National Inpatient Sample (NIS) and Nationwide Emergency Department Sample (NEDS), 2021.

Appendix E.6. Supporting Documentation for Chapter 6

Appendix Table E.6.1. Overview of Hospital Encounters Involving Sepsis, 2019 and 2021

Outcome	Year	Number of Hospitals	25th Percentile	Median	75th Percentile
Sepsis-related inpatient stays (N)	2019	4,244	16	204	706
	2021	4,228	18	229	841
Sepsis-related inpatient stays (%)	2019	4,244	2.8	5.1	7.1
	2021	4,228	3.3	6.1	8.8
Sepsis inpatient stays (N)	2019	4,244	***	156	526
	2021	4,228	11	166	619
Sepsis inpatient stays (%)	2019	4,244	1.8	3.7	5.3
	2021	4,228	2.1	4.3	6.6
Percent of sepsis-related stays that are sepsis inpatient stays	2019	4,244	66.0	74.9	81.3
	2021	4,228	66.7	74.2	80.2
Sepsis-related adult inpatient stays treated in ICU (%)	2019	2,040	36.2	48.9	61.9
	2021	2,074	34.0	45.5	58.1
Sepsis-related treat-and-release ED visits (%)	2019	3,526	0.0	0.1	0.2
	2021	3,527	0.0	0.1	0.2
Sepsis-related inpatient stays admitted through ED (%)	2019	4,042	53.4	87.0	94.6
	2021	4,044	58.3	88.0	95.1
Sepsis-related ED visits resulting in transfer to an inpatient setting at a different hospital (%)	2019	3,415	0.6	3.7	48.0
	2021	3,418	0.5	3.6	44.0

Abbreviation: ED, Emergency Department; ICU, Intensive Care Unit.

Note: The counts represent the number of community hospitals in the United States. Sepsis-related inpatient stays and ED visits were identified using all available diagnoses. Sepsis was not required to be the reason for the stay. For sepsis inpatient stays, sepsis was required to be the reason for the stay (principal diagnosis). Utilization of ICU services during an inpatient stay could not be determined for 27 percent of community hospitals. Treat-and-release ED visits are those in which the patient is treated in the ED and not admitted to the same hospital for inpatient care (e.g. discharged home, transferred to a different acute care hospital, transferred to another type of health facility, left against medical advice, or died while receiving ED care). Sepsis-related inpatient stays involving inter-hospital, ED-to-inpatient transfer are sepsis-related stays that originate in an ED setting in one hospital followed by a transfer to an inpatient setting in a different hospital. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions. "****" denotes suppressed data.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia; State Emergency Department Databases (SEDD), 2019 and 2021, 38 States and the District of Columbia.

Appendix Table E.6.2. Overview of Hospital Encounters Involving Sepsis at Urban and Rural Hospitals, 2019 and 2021

Outcome	Year	Urban			Rural				
		Number of Hospitals	25th Percentile	Median	75th Percentile	Number of Hospitals	25th Percentile	Median	75th Percentile
Sepsis-related inpatient stays (%)	2019	2,235	4.2	5.8	7.5	2,009	1.8	3.8	6.2
	2021	2,225	4.9	7.1	9.6	2,003	2.3	4.4	7.5
Sepsis inpatient stays (%)	2019	2,235	2.9	4.2	5.7	2,009	1.0	2.7	4.8
	2021	2,225	3.4	5.2	7.3	2,003	1.2	3.1	5.7
Sepsis-related adult inpatient stays treated in ICU (%)	2019	1,240	38.5	49.9	62.9	800	31.0	46.7	60.6
	2021	1,264	35.7	46.3	58.9	810	30.0	43.8	56.6
Sepsis-related treat-and-release ED visits (%)	2019	1,818	0.0	0.0	0.1	1,708	0.1	0.2	0.3
	2021	1,818	0.0	0.1	0.1	1,709	0.1	0.2	0.3
Sepsis-related inpatient stays admitted through ED (%)	2019	2,139	78.3	89.4	94.8	1,903	16.7	76.4	94.1
	2021	2,130	80.4	90.7	95.3	1,914	20.0	78.3	94.7
Inter-hospital transfers for sepsis-related hospital encounters (%)	2019	1,771	0.2	0.8	2.1	1,644	9.7	43.9	85.7
	2021	1,589	0.2	0.8	2.1	1,642	9.1	41.2	83.3

Abbreviation: ED, Emergency Department; ICU, Intensive Care Unit.

Note: The counts represent the number of community hospitals. Sepsis-related inpatient stays and ED visits were identified using all available diagnoses. Sepsis was not required to be the reason for the encounter. For sepsis inpatient stays, sepsis was required to be the reason for the stay (principal diagnosis). Utilization of ICU services during an inpatient stay could not be determined for 27 percent of community hospitals. Treat-and-release ED visits are those in which the patient is treated in the ED and not admitted to the same hospital for inpatient care (e.g. discharged home, transferred to a different acute care hospital, transferred to another type of health facility, left against medical advice, or died while receiving ED care). Inter-hospital transfers for sepsis-related hospital encounters were defined as all admissions through the ED for inpatient care that result in a transfer to an inpatient setting at a different hospital. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia; State Emergency Department Databases (SEDD), 2019 and 2021, 38 States and the District of Columbia.

Appendix Table E.6.3. Hospital Variation in Percentage of Sepsis-Related Inpatient Stays, 2021

Hospital Characteristic	Hospital Characteristic Category	Urban				Rural			
		Number of Hospitals	25th Percentile	Median	75th Percentile	Number of Hospitals	25th Percentile	Median	75th Percentile
All		2,225	4.9	7.1	9.6	2,003	2.3	4.4	7.5
Medically underserved areas	Yes	235	5.6	8.2	11.0	903	2.1	4.1	7.5
	No	1,990	4.9	7.0	9.4	1,100	2.5	4.6	7.4
Minority serving hospital	Minority serving hospital	761	4.9	6.9	9.5	254	2.1	4.3	7.5
	Not a minority serving hospital	1,386	5.0	7.2	9.7	1,594	2.5	4.6	7.6
	Missing or invalid	78	4.6	6.7	10.0	155	1.4	3.2	5.7
Social Vulnerability Index (SVI)	Most vulnerable	781	4.8	7.1	10.1	511	2.3	5.0	8.2
	Less vulnerable	1,444	5.0	7.1	9.4	1,492	2.3	4.4	7.3
Ownership	Public, non-federal	192	4.7	6.3	8.1	653	1.7	3.4	5.7
	Private, not-for-profit	1,574	5.3	7.2	9.7	1,168	2.8	5.0	8.2
	Private, for-profit	459	1.8	7.2	10.2	182	3.0	6.0	9.1
Member of a multi-hospital system	Yes	1,776	5.7	7.5	10.1	1,073	3.1	5.6	8.8
	No	449	2.0	4.9	7.0	930	1.8	3.4	5.7
Inpatient bed capacity	Small	500	0.3	4.9	9.2	1,104	1.7	3.3	5.4
	Medium	1,005	5.8	7.8	10.4	658	3.2	5.7	9.0
	Large	720	5.5	7.0	8.7	241	5.6	7.3	10.1
Teaching status	Teaching	1,431	5.1	7.0	9.2	284	4.1	6.3	9.3
	Non-teaching	794	4.5	7.3	10.3	1,719	2.1	4.1	7.1
Critical Access Hospital status	Yes	53	2.4	4.2	7.0	1,174	1.6	3.2	5.3
	No	2,172	5.0	7.1	9.7	829	4.4	6.7	9.7
Trauma center level	Non-trauma	1,382	4.3	7.1	10.1	1,829	2.1	4.1	7.3
	Level 1	259	4.8	6.2	7.7	2	4.6	5.1	5.7
	Level 2	313	6.2	7.5	9.1	14	5.7	6.2	11.4
	Level 3	271	6.2	7.5	9.6	158	4.6	6.7	9.5
Safety-net status	Safety-net hospital	634	4.4	6.6	8.8	440	2.7	5.1	8.3
	Not a safety-net hospital	1,591	5.2	7.3	9.9	1,561	2.2	4.2	7.3
	Missing	78	4.6	6.7	10.0	2	5.5	6.4	7.2

Note: The counts represent the number of community hospitals. Sepsis was identified using all available diagnoses and was not required to be the reason for the stay. Hospitals located in ZIP Codes that are in the highest quartile of CDC’s Social Vulnerability Index (SVI) are categorized as being in the most vulnerable communities, and the remaining three quartiles are categorized as being in less vulnerable communities. Bed size definitions vary for rural and urban hospitals. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.6.4. Hospital Variation in the Percentage of Adult Sepsis-Related Inpatient Stays Involving ICU Utilization, 2021

Hospital Characteristic	Hospital Characteristic Category	Number of Hospitals	25th Percentile	Median	75th Percentile
Location	Rural	810	30.0	43.8	56.6
	Urban	1,264	35.7	46.3	58.9
Medically underserved areas	Yes	455	32.4	44.9	58.3
	No	1,619	34.5	45.6	58.1
Social Vulnerability Index (SVI)	Most vulnerable	635	36.7	49.5	61.3
	Less vulnerable	1,439	33.2	44.0	56.1
ICU bed capacity (rural)	1-4 beds	133	25.3	39.8	54.3
	5+ beds	350	39.5	49.5	60.2
	Undetermined ICU bed capacity	327	16.3	37.2	51.0
ICU bed capacity (urban)	1-9 Beds	126	32.1	42.0	50.9
	10-29 Beds	369	35.4	45.3	58.0
	30+ Beds	538	39.0	49.7	60.9
	Undetermined ICU bed capacity	231	31.7	44.3	56.9
Trauma center level	Non-trauma	1,403	32.1	44.9	57.1
	Level 1	176	43.6	55.2	64.7
	Level 2	203	36.2	45.6	58.0
	Level 3	292	35.7	44.2	55.1

Abbreviation: ICU, Intensive Care Unit.

Note: The counts represent the number of community hospitals. This table only includes hospitals with HCUP SID data that indicates ICU utilization and is specific to adult sepsis-related inpatient stays. Sepsis was identified using all available diagnoses and was not required to be the reason for the stay. Hospitals located in ZIP Codes that are in the highest quartile of CDC's Social Vulnerability Index (SVI) are categorized as being in the most vulnerable communities, and the remaining three quartiles are categorized as being in less vulnerable communities. Undetermined ICU bed capacity includes hospitals that report ICU utilization in the HCUP SID but the AHA Annual Survey does not include information on the number of ICU beds for the hospital. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.6.5. Variation in the Percentage of Inter-Hospital Transfers for Sepsis-Related Inpatient Stays Among Rural Hospitals, 2021

Hospital Characteristic		Number of Hospitals	25th Percentile	Median	75th Percentile
Minority serving hospital	Minority serving hospital	194	9.0	41.6	78.9
	Not a minority serving hospital	1345	9.0	38.5	80.0
	Missing or invalid	155	1.4	3.2	5.7
Social Vulnerability Index (SVI)	Most vulnerable	387	6.2	27.1	66.7
	Less vulnerable	1255	10.7	45.5	85.7
Ownership	Public, non-federal	521	21.1	60.0	90.9
	Private, not-for-profit	990	8.0	36.3	78.4
	Private, for-profit	131	4.8	13.1	33.3
System affiliation	Hospital is a member of a multi-hospital system	909	8.0	33.3	75.0
	Not a member of a multi-hospital system	733	14.3	50.0	88.9
Critical access hospital	Yes	965	47.1	75.0	100.0
	No	677	3.2	8.5	19.7
Teaching status	Teaching	198	1.5	3.1	7.1
	Non-teaching	227	2.6	7.1	28.3
Trauma center level	Non-trauma	1,493	13.7	48.1	85.2
	Level 1	***	***	***	***
	Level 2	12	0.4	0.7	1.6
	Level 3	136	2.1	4.9	13.7
Safety-net status	Safety-net hospital	367	5.9	17.2	50.0
	Not a safety-net hospital	1,272	12.1	50.0	87.5
	Missing	***	***	***	***

Note: The counts represent the number of community hospitals. Inter-hospital transfers for sepsis-related hospital encounters were defined as all admissions through the ED for inpatient care that result in a transfer to an inpatient setting at a different hospital. Sepsis was identified using all available diagnoses and was not required to be the reason for the stay. Hospitals located in ZIP Codes that are in the highest quartile of CDC’s Social Vulnerability Index (SVI) are categorized as being in the most vulnerable communities, and the remaining quartiles are categorized as being in less vulnerable communities. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions. “***” denotes suppressed data.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia; State Emergency Department Databases (SEDD), 2019 and 2021, 38 States and the District of Columbia.

Appendix Table E.6.6. Overview of Outcomes Associated with Hospital Encounters for Sepsis, 2019 and 2021

Outcome	Year	Number of hospitals	25th Percentile	Median	75th Percentile
In-hospital mortality per 1,000 hospital encounters	2019	3,927	51	100	142
	2021	3,939	83	143	197
Average length of sepsis inpatient stay (days)	2019	3,923	4.3	6.2	7.9
	2021	3,937	4.8	7.3	9.1
Average total hospital cost for sepsis inpatient stays (\$)	2019	3,900	13,700	18,150	24,200
	2021	3,950	15,800	21,700	29,100

Note: The counts represent the number of community hospitals. Sepsis was required to be the reason for the inpatient stay/hospital encounter (principal/first-listed diagnosis). The measure of In-hospital mortality for sepsis hospital encounters includes deaths in the inpatient as well as ED settings. Charges were imputed to account for missing information prior to conversion to hospital costs. Hospital costs were adjusted to the base year of 2021. Average total hospital cost was rounded to the nearest hundreds. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia; State Emergency Department Databases (SEDD), 2019 and 2021, 38 States and the District of Columbia.

Appendix Table E.6.7. Overview of Outcomes Associated with Hospital Encounters for Sepsis at Urban and Rural Hospitals, 2019 and 2021

Outcome	Year	Urban				Rural			
		Number of Hospitals	25th Percentile	Median	75th Percentile	Number of Hospitals	25th Percentile	Median	75th Percentile
In-hospital mortality per 1,000 hospital encounters	2019	2,106	82	115	146	1,821	0	70	129
	2021	2,096	121	161	201	1,843	0	111	179
Average length of sepsis inpatient stay (days)	2019	2,105	6.5	7.6	8.9	1,818	3.4	4.4	5.5
	2021	2,094	7.6	8.8	10.1	1,843	3.7	4.9	6.5
Average total hospital cost for sepsis inpatient stays (\$)	2019	2,105	17,200	21,600	28,900	1,818	11,000	14,600	18,600
	2021	2,094	20,414	25,662	34,163	1,843	12,850	17,650	22,500

Note: The counts represent the number of community hospitals. For sepsis inpatient stays/hospital encounters, sepsis was required to be the reason for the stay/encounter (principal/first-listed diagnosis). The measure of In-hospital mortality for sepsis hospital encounters includes deaths in the inpatient as well as ED settings. Charges were imputed to account for missing information prior to conversion to hospital costs. Hospital costs were adjusted to the base year of 2021. Average total hospital cost was rounded to the nearest hundreds. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia; State Emergency Department Databases (SEDD), 2019 and 2021, 38 States and the District of Columbia.

Appendix Table E.6.8. Variation in In-Hospital Mortality Rate per 1,000 Hospital Encounters at Urban and Rural Hospitals, 2021

Hospital Characteristic	Hospital Characteristic Category	Urban			Rural				
		Number of Hospitals	25th Percentile	Median	75th Percentile	Number of Hospitals	25th Percentile	Median	75th Percentile
All		2,096	121	161	201	1,843	0	111	179
Medically underserved areas	Yes	223	114	155	198	807	0	120	200
	No	1,873	121	161	202	1,036	0	105	167
Minority serving hospital	Minority serving hospital	733	131	172	213	237	0	100	178
	Not a minority serving hospital	1,289	115	155	196	1,482	0	114	179
	Missing or invalid	74	131	163	195	124	0	97	191
Social Vulnerability Index (SVI)	Most vulnerable	719	139	182	223	474	50	134	206
	Less vulnerable	1,377	113	151	189	1,369	0	101	167
Sepsis Case Volume, Tertiles	Tertile 1 (lowest)	101	0	0	167	1,020	0	53	179
	Tertile 2	678	96	144	198	730	85	125	176
	Tertile 3 (highest)	1,317	136	169	203	93	133	161	195
Ownership	Public, non-federal	187	147	189	222	574	0	94	188
	Private, not-for-profit	1,541	120	159	196	1,103	38	110	173
	Private, for-profit	368	114	157	220	166	83	143	211
Member of a multi-hospital system	Yes	1,028	40	111	176	1,719	122	161	198
	No	815	0	108	182	377	115	164	221
Inpatient bed capacity	Small	374	44	110	165	967	0	59	167
	Medium	1,002	125	160	202	638	67	121	176
	Large	720	147	176	208	238	126	166	205
Teaching status	Teaching	1,389	130	167	203	281	94	141	189
	Non-teaching	707	104	145	193	1,562	0	100	176
Critical Access Hospital status	Yes	1,025	0	59	167	44	0	48	129
	No	818	92	138	194	2,052	123	162	202
Trauma center level	Non-trauma	1,254	114	157	202	1,669	0	104	177
	Level 1	259	143	176	207	2	209	239	270
	Level 2	313	130	164	197	14	144	194	209
	Level 3	270	126	159	200	158	104	134	184
Safety-net status	Safety-net hospital	615	129	170	219	426	68	125	182
	Not a safety-net hospital	1,481	118	157	197	1,415	0	100	177
	Missing	-	-	-	-	2	167	183	200

Note: The counts represent the number of community hospitals. Sepsis was required to be the reason for the hospital encounter (principal/first-listed diagnosis). In-hospital mortality for sepsis hospital encounters includes deaths in the inpatient as well as ED settings. Hospitals located in ZIP Codes that are in the highest quartile of CDC's Social Vulnerability Index (SVI) are categorized as being in the most vulnerable communities, and the remaining three quartiles are categorized as being in less vulnerable communities. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.6.9. Variation in Average Total Hospital Cost for Sepsis Inpatient Stays at Urban and Rural Hospitals, 2021

Hospital Characteristic	Hospital Characteristic Category	Urban				Rural			
		Number of Hospitals	25th Percentile	Median	75th Percentile	Number of Hospitals	25th Percentile	Median	75th Percentile
All		2,094	20,400	25,650	34,150	1,843	12,850	17,250	22,500
Medically underserved areas	Yes	222	17,100	21,400	25,850	807	11,650	16,400	22,500
	No	1,872	21,000	26,400	35,050	1,036	13,600	17,700	22,550
Minority serving hospital	Minority serving hospital	732	22,950	30,050	40,150	237	13,650	18,300	23,550
	Not a minority serving hospital	1,288	19,050	24,150	30,900	1,482	12,700	16,850	22,000
	Missing or invalid	74	19,900	23,400	27,950	124	15,550	19,400	24,350
Social Vulnerability Index (SVI)	Most vulnerable	718	22,150	29,300	37,950	474	12,400	17,550	23,550
	Less vulnerable	1,376	19,450	24,400	31,650	1,369	12,950	17,200	22,100
Sepsis Case Volume, Tertiles	Tertile 1 (lowest)	99	9,550	14,800	24,450	1,020	10,250	14,850	20,500
	Tertile 2	678	18,600	24,600	33,150	730	15,350	19,100	23,650
	Tertile 3 (highest)	1,317	21,750	26,650	34,650	93	17,200	21,300	24,900
Ownership	Public, non-federal	187	22,600	34,500	48,450	574	11,250	16,100	21,850
	Private, not-for-profit	1,539	21,150	26,300	34,150	1,103	13,500	17,800	22,850
	Private, for-profit	368	17,600	21,800	27,900	166	12,600	16,800	21,500
Member of a multi-hospital system	Yes	1,717	20,150	25,350	32,900	1,028	13,200	17,150	22,400
	No	377	21,500	29,050	42,850	815	12,150	17,400	22,650
Inpatient bed capacity	Small	372	14,400	19,900	26,850	967	11,300	15,600	21,500
	Medium	1,002	20,400	24,700	32,200	638	13,500	17,650	22,200
	Large	720	23,750	29,900	39,600	238	17,400	21,250	24,900
Teaching status	Teaching	1,389	22,000	27,250	36,950	281	16,100	19,550	24,800
	Non-teaching	705	17,400	22,500	29,600	1,562	12,250	16,500	21,950
Critical Access Hospital status	Yes	44	11,850	16,450	23,350	1,025	11,300	15,700	21,700
	No	2,050	20,550	25,800	34,350	818	14,700	18,450	23,050
Trauma center level	Non-trauma	1,252	19,000	24,750	32,500	1,669	12,450	16,500	21,950
	Level 1	259	29,350	37,900	50,400	2	38,100	44,900	51,700
	Level 2	313	21,650	25,600	33,200	14	22,750	26,250	31,500
	Level 3	270	20,200	23,650	28,450	158	17,350	20,900	25,600
Safety-net status	Safety-net hospital	615	22,450	30,150	41,650	426	14,350	18,700	23,350
	Not a safety-net hospital	1,479	19,550	24,450	31,150	1,415	12,400	16,650	22,100
	Missing	-	-	-	-	2	5,550	8,250	10,900

Note: The counts represent the number of community hospitals. Sepsis was required to be the reason for the stay (principal diagnosis). Charges were imputed to account for missing information prior to conversion to hospital costs. Hospital costs were adjusted to the base year of 2021. Average total hospital cost was rounded to the nearest hundreds. Hospitals located in ZIP Codes that are in the highest quartile of CDC's Social Vulnerability Index (SVI) are categorized as being in the most vulnerable communities, and the remaining quartiles are categorized as being in less vulnerable communities. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.6.10. Variation in Average Length of Stay (Days) for Sepsis Inpatient Stays at Urban and Rural Hospitals, 2021

Hospital Characteristic	Hospital Characteristic Category	Urban				Rural			
		Number of Hospitals	25th Percentile	Median	75th Percentile	Number of Hospitals	25th Percentile	Median	75th Percentile
All		2,094	7.6	8.8	10.1	1,843	3.7	4.9	6.5
Medically underserved areas	Yes	222	7.2	8.3	9.5	807	3.7	5.0	6.7
	No	1,872	7.6	8.8	10.2	1,036	3.8	4.8	6.2
Minority serving hospital	Minority serving hospital	732	8.4	9.6	11.1	237	4.0	5.2	6.8
	Not a minority serving hospital	1,288	7.2	8.4	9.5	1,482	3.8	4.9	6.4
Social Vulnerability Index (SVI)	Missing or invalid	74	7.4	8.6	9.6	124	3.2	4.4	6.3
	Most vulnerable	718	8.4	9.4	10.9	474	4.3	5.8	7.5
Sepsis Case Volume, Tertiles	Less vulnerable	1,376	7.2	8.4	9.6	1,369	3.6	4.7	6.0
	Tertile 1 (lowest)	99	3.0	4.7	6.8	1,020	3.0	4.0	5.1
Ownership	Tertile 2	678	6.6	7.8	9.4	730	4.8	5.8	7.1
	Tertile 3 (highest)	1,317	8.2	9.2	10.4	93	7.1	7.9	8.9
Member of a multi-hospital system	Public, non-federal	187	8.1	9.8	11.2	574	3.3	4.5	5.8
	Private, not-for-profit	1,539	7.5	8.7	10.0	1,103	3.9	5.0	6.5
Inpatient bed capacity	Private, for-profit	368	7.6	8.9	9.9	166	4.5	5.9	7.7
	Yes	1,717	7.6	8.7	10.0	1,028	3.9	5.0	6.7
Teaching status	No	377	7.4	8.9	11.1	815	3.6	4.7	6.1
	Small	372	4.9	6.5	8.0	967	3.2	4.1	5.2
Critical Access Hospital status	Medium	1,002	7.6	8.5	9.5	638	4.3	5.5	6.6
	Large	720	8.9	10.0	11.3	238	6.5	7.5	8.6
Trauma center level	Teaching	1,389	8.1	9.2	10.6	281	4.8	6.1	7.8
	Non-teaching	705	6.5	7.8	9.0	1,562	3.6	4.7	6.1
Safety-net status	Yes	44	3.8	4.8	6.2	1,025	3.2	4.1	5.2
	No	2,050	7.7	8.8	10.1	818	4.8	6.1	7.5
Non-trauma	Non-trauma	1,252	7.2	8.4	9.6	1,669	3.6	4.8	6.2
	Level 1	259	9.8	11.1	12.7	2	10.2	11.1	12.0
Level 2	Level 2	313	8.2	9.1	10.2	14	7.7	8.8	9.3
	Level 3	270	7.6	8.4	9.4	158	5.1	6.3	7.4
Safety-net hospital	Safety-net hospital	615	8.3	9.7	11.3	426	4.3	5.5	7.1
	Not a safety-net hospital	1,479	7.3	8.5	9.6	1,415	3.6	4.7	6.2
Missing	Missing	-	-	-	-	2	2.7	3.6	4.6

Note: The counts represent the number of community hospitals. Sepsis was required to be the reason for stay (principal diagnosis). Hospitals located in zip codes that are in the highest quartile of CDC's Social Vulnerability Index (SVI) are categorized as being in the most vulnerable communities, and the remaining quartiles are categorized as being in less vulnerable communities. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix E.7. Supporting Documentation for Chapter 7

Appendix Table E.7.1. Population Rate of Sepsis-Related Inpatient Stays per 100,000 Population by State, 2019 and 2021

State	2019	2021
Alaska	498	527
Arizona	605	842
Arkansas	676	716
California	669	762
Colorado	514	628
Connecticut	739	736
Delaware	461	548
District of Columbia	620	759
Florida	715	963
Georgia	612	767
Hawaii	666	573
Illinois	656	724
Indiana	629	678
Iowa	566	583
Kansas	730	759
Kentucky	856	951
Louisiana	669	723
Maine	617	588
Maryland	588	688
Massachusetts	569	572
Michigan	755	765
Minnesota	549	584
Mississippi	764	881
Missouri	705	772
Montana	577	601
Nebraska	592	620
New Hampshire	547	530
New Jersey	586	648
New Mexico	732	752
New York	648	655
North Carolina	555	661
North Dakota	493	487
Ohio	713	801
Oklahoma	813	858
Oregon	548	568
Pennsylvania	659	742

State	2019	2021
Rhode Island	553	448
South Carolina	617	751
South Dakota	581	571
Tennessee	698	915
Texas	611	778
Utah	428	483
Vermont	470	450
Virginia	636	773
Washington	527	546
West Virginia	1002	1089
Wisconsin	530	597
Wyoming	411	433

Note: Sepsis was identified using all available diagnoses and was not required to be the reason for the stay. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.7.2. State Population, 2019 and 2021

State	2019	2021
Alaska	732,673	731,545
Arizona	7,276,316	7,278,717
Arkansas	3,025,891	3,017,804
California	39,237,836	39,512,223
Colorado	5,812,069	5,758,736
Connecticut	3,605,597	3,565,287
Delaware	1,003,384	973,764
District of Columbia	670,050	705,749
Florida	21,781,128	21,477,737
Georgia	10,799,566	10,617,423
Hawaii	1,441,553	1,415,872
Illinois	12,671,469	12,671,821
Indiana	6,805,985	6,732,219
Iowa	3,193,079	3,155,070
Kansas	2,934,582	2,913,314
Kentucky	4,509,394	4,467,673
Louisiana	4,624,047	4,648,794
Maine	1,372,247	1,344,212
Maryland	6,165,129	6,045,680
Massachusetts	6,984,723	6,892,503
Michigan	10,050,811	9,986,857
Minnesota	5,707,390	5,639,632
Mississippi	2,949,965	2,976,149
Missouri	6,168,187	6,137,428
Montana	1,104,271	1,068,778
Nebraska	1,963,692	1,934,408
New Hampshire	1,388,992	1,359,711
New Jersey	9,267,130	8,882,190
New Mexico	2,115,877	2,096,829
New York	19,835,913	19,453,561
North Carolina	10,551,162	10,488,084
North Dakota	774,948	762,062
Ohio	11,780,017	11,689,100
Oklahoma	3,986,639	3,956,971
Oregon	4,246,155	4,217,737
Pennsylvania	12,964,056	12,801,989
Rhode Island	1,095,610	1,059,361
South Carolina	5,190,705	5,148,714

State	2019	2021
South Dakota	895,376	884,659
Tennessee	6,975,218	6,829,174
Texas	29,527,941	28,995,881
Utah	3,337,975	3,205,958
Vermont	645,570	623,989
Virginia	8,642,274	8,535,519
Washington	7,738,692	7,614,893
West Virginia	1,782,959	1,792,147
Wisconsin	5,895,908	5,822,434
Wyoming	578,803	578,759

Sources: Population Division, U.S. Census Bureau, Annual Estimates of the Resident Population for the United States, Regions, States, and Puerto Rico: April 1, 2010 to July 1, 2019 (NST-EST2019-01); Annual Estimates of the Resident Population for the United States, Regions, States, District of Columbia, and Puerto Rico: April 1, 2020 to July 1, 2021 (NST-EST2021-POP).

Appendix Table E.7.3. State Variation in Percentage of Sepsis-Related Inpatient Stays, 2019 and 2021

State	2019	2021
Alaska	5.9	6.7
Arizona	6.5	9.1
Arkansas	5.2	6.0
California	7.3	8.8
Colorado	6.5	8.1
Connecticut	6.7	7.2
Delaware	3.7	4.9
District of Columbia	5.4	6.5
Florida	5.7	8.0
Georgia	6.0	8.0
Hawaii	8.4	7.9
Illinois	5.8	7.0
Indiana	5.7	6.7
Iowa	5.2	6.0
Kansas	6.6	7.5
Kentucky	7.0	8.5
Louisiana	6.0	6.8
Maine	6.0	6.6
Maryland	6.1	7.8
Massachusetts	5.0	5.5
Michigan	6.2	7.1
Minnesota	5.3	6.3
Mississippi	6.1	8.0
Missouri	5.5	6.4
Montana	6.2	7.0
Nebraska	5.9	7.0
New Hampshire	5.6	5.9
New Jersey	5.5	6.6
New Mexico	7.7	8.3
New York	5.5	6.8
North Carolina	5.3	6.6
North Dakota	5.4	6.2
Ohio	5.7	6.8
Oklahoma	6.8	8.2
Oregon	6.4	7.3
Pennsylvania	5.6	6.6
Rhode Island	4.7	4.2

State	2019	2021
South Carolina	5.7	7.2
South Dakota	5.2	5.3
Tennessee	6.4	8.6
Texas	6.2	8.3
Utah	5.2	6.3
Vermont	4.6	5.0
Virginia	6.3	8.3
Washington	6.5	7.4
West Virginia	7.2	8.4
Wisconsin	5.4	6.7
Wyoming	4.3	4.9

Note: Sepsis was identified using all available diagnoses and was not required to be the reason for the stay. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.7.4. State Variation in Percentage of Sepsis-Related Inpatient Stays by Patient Population, 2021

State	Nonmaternal, Adults Aged 65 Years and Older	Nonmaternal, Adults Aged 18–64 Years	Maternal	Nonmaternal, Pediatric	Neonatal
Alaska	10.3	8.9	0.2	2.2	1.1
Arizona	12.6	11.4	0.3	3.6	1.0
Arkansas	8.8	6.4	0.2	2.7	0.9
California	14.5	9.9	0.2	3.1	1.1
Colorado	12.4	10.4	0.2	1.9	1.1
Connecticut	11.4	7.0	0.2	1.6	0.4
Delaware	7.3	5.4	0.2	1.9	1.2
District of Columbia	11.4	7.4	0.2	2.7	2.3
Florida	10.9	8.2	0.3	3.5	1.6
Georgia	12.2	9.6	0.2	1.7	1.2
Hawaii	12.3	9.1	0.1	1.3	1.4
Illinois	10.7	7.3	0.2	2.9	0.9
Indiana	9.8	7.6	0.1	2.3	0.6
Iowa	9.1	6.8	0.1	2.9	1.4
Kansas	10.6	9.2	0.2	2.8	1.2
Kentucky	12.0	9.7	0.2	2.0	0.7
Louisiana	10.6	7.9	0.2	1.7	1.2
Maine	9.3	7.1	0.1	2.4	0.6
Maryland	12.3	8.4	0.2	2.9	1.2
Massachusetts	8.5	5.3	0.1	1.6	0.3
Michigan	10.1	7.6	0.2	3.2	1.1
Minnesota	9.9	6.8	0.2	3.0	1.4
Mississippi	11.4	9.2	0.2	2.6	1.1
Missouri	9.6	6.9	0.2	1.6	1.2
Montana	10.0	8.7	0.1	1.7	0.5
Nebraska	11.1	8.5	0.2	1.5	0.4
New Hampshire	8.4	6.3	0.1	2.2	0.3
New Jersey	10.7	6.4	0.1	2.0	0.6
New Mexico	11.6	10.6	0.2	2.6	0.8
New York	11.1	6.2	0.2	2.9	1.1
North Carolina	10.2	7.3	0.2	1.8	0.9
North Dakota	9.6	7.6	0.1	2.3	0.8
Ohio	9.7	7.6	0.2	1.9	0.6
Oklahoma	11.7	9.6	0.2	3.9	1.1
Oregon	10.8	8.8	0.2	1.9	0.4
Pennsylvania	9.4	6.8	0.2	2.3	0.7

State	Nonmaternal, Adults Aged 65 Years and Older	Nonmaternal, Adults Aged 18– 64 Years	Maternal	Nonmaternal, Pediatric	Neonatal
Rhode Island	6.7	4.1	0.1	1.1	0.2
South Carolina	10.2	8.1	0.2	1.9	0.8
South Dakota	7.9	6.1	0.2	1.2	1.9
Tennessee	12.0	10.4	0.3	3.2	1.2
Texas	12.9	10.3	0.3	4.3	1.1
Utah	12.1	8.6	0.2	2.2	1.1
Vermont	7.2	5.3	***	1.1	0.4
Virginia	12.7	9.3	0.2	2.2	1.0
Washington	11.4	9.6	0.2	3.0	0.5
West Virginia	10.6	9.5	0.3	4.0	1.2
Wisconsin	10.1	7.4	0.2	3.2	0.5
Wyoming	7.7	5.7	***	***	0.3

Note: Sepsis was identified using all available diagnoses and was not required to be the reason for the stay. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.7.5. State Variation in Percentage of Sepsis-Related Inpatient Stays Involving COVID-19, 2021

State	2021
Alaska	22.6
Arizona	27.7
Arkansas	15.5
California	20.7
Colorado	20.2
Connecticut	17.1
Delaware	17.3
District of Columbia	13.0
Florida	25.9
Georgia	25.1
Hawaii	9.5
Illinois	17.0
Indiana	17.2
Iowa	15.2
Kansas	19.2
Kentucky	19.8
Louisiana	16.1
Maine	12.7
Maryland	17.4
Massachusetts	13.8
Michigan	19.3
Minnesota	14.3
Mississippi	18.2
Missouri	19.1
Montana	18.8
Nebraska	19.4
New Hampshire	14.0
New Jersey	18.4
New Mexico	23.2
New York	19.9
North Carolina	20.8
North Dakota	15.4
Ohio	20.3
Oklahoma	20.5
Oregon	15.5
Pennsylvania	19.9
Rhode Island	13.0

State	2021
South Carolina	23.1
South Dakota	13.9
Tennessee	20.7
Texas	26.2
Utah	22.4
Vermont	6.8
Virginia	20.1
Washington	16.3
West Virginia	18.6
Wisconsin	13.4
Wyoming	16.4

Note: Sepsis was identified using all available diagnoses and was not required to be the reason for the stay. COVID-19 was identified using all available diagnoses and was not required to be the reason for the stay. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.7.6. State Variation in Percentage of Aggregate Hospital Costs Attributable to Sepsis Inpatient Stays, 2019 and 2021

State	2019	2021
Alaska	8.1	9.4
Arizona	8.3	12.8
Arkansas	6.9	7.8
California	9.6	12.4
Colorado	7.1	9.7
Connecticut	8.4	9.3
Delaware	4.8	7.0
District of Columbia	7.1	9.3
Florida	7.1	10.4
Georgia	7.8	10.7
Hawaii	11.7	11.0
Illinois	7.1	9.2
Indiana	6.8	8.2
Iowa	5.9	7.2
Kansas	7.9	9.9
Kentucky	8.8	11.4
Louisiana	6.8	8.3
Maine	6.9	8.4
Maryland	7.4	10.6
Massachusetts	5.9	6.7
Michigan	7.2	8.8
Minnesota	6.0	7.1
Mississippi	8.3	10.8
Missouri	7.3	8.5
Montana	7.0	8.0
Nebraska	7.1	9.1
New Hampshire	6.1	7.1
New Jersey	7.6	9.6
New Mexico	10.2	11.9
New York	7.4	9.5
North Carolina	6.2	8.0
North Dakota	6.8	8.3
Ohio	6.7	8.4
Oklahoma	8.8	11.2
Oregon	7.7	8.9
Pennsylvania	6.7	8.4
Rhode Island	6.4	5.1

State	2019	2021
South Carolina	6.7	9.1
South Dakota	7.2	8.2
Tennessee	7.0	10.3
Texas	7.6	11.2
Utah	6.3	8.5
Vermont	4.9	5.6
Virginia	7.2	10.2
Washington	7.4	8.7
West Virginia	9.0	10.6
Wisconsin	6.3	7.8
Wyoming	5.6	6.5

Note: Sepsis was required to be the reason for the stay (principal diagnosis). Charges were imputed to account for missing information prior to conversion to hospital costs. Hospital costs were adjusted to the base year of 2021. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia.

Appendix Table E.7.7. State Variation in Percentage of Aggregate Hospital Costs Attributable to Sepsis Inpatient Stays by Patient Population, 2021

State	Nonmaternal, Adults Aged 65 Years and Older	Nonmaternal, Adults Aged 18–64 Years	Maternal	Nonmaternal, Pediatric	Neonatal
Alaska	10.6	11.2	***	5.5	0.4
Arizona	13.3	15.4	0.2	4.0	0.5
Arkansas	9.2	8.5	0.2	4.5	1.2
California	15.4	13.1	0.2	4.3	1.2
Colorado	11.0	11.4	0.1	2.8	0.8
Connecticut	11.6	9.2	***	2.7	0.3
Delaware	8.6	8.0	***	2.2	***
District of Columbia	11.3	10.1	***	6.8	6.0
Florida	11.2	11.3	0.2	6.3	2.5
Georgia	12.6	11.6	0.3	3.3	1.7
Hawaii	13.1	12.1	***	3.5	***
Illinois	10.7	9.8	0.1	3.9	0.6
Indiana	9.3	9.1	0.1	2.9	0.4
Iowa	8.0	8.1	***	3.8	0.9
Kansas	10.5	11.5	0.4	3.0	0.2
Kentucky	12.5	12.6	0.5	5.0	0.6
Louisiana	10.1	9.1	0.1	2.8	0.8
Maine	8.6	10.1	***	3.3	0.5
Maryland	13.3	10.9	0.1	3.7	0.4
Massachusetts	8.5	6.8	0.1	1.6	0.4
Michigan	9.9	9.5	0.4	3.9	0.4
Minnesota	8.7	8.0	0.1	3.4	0.4
Mississippi	11.8	12.0	0.3	4.6	0.5
Missouri	10.0	9.8	0.1	2.5	1.6
Montana	8.1	9.9	***	3.6	***
Nebraska	10.5	10.9	***	1.7	0.2
New Hampshire	7.7	7.8	***	4.5	***
New Jersey	11.7	9.4	0.1	3.2	0.3
New Mexico	11.9	14.5	***	7.2	0.4
New York	12.4	9.0	0.1	4.2	0.4
North Carolina	9.1	8.8	0.3	2.9	0.5
North Dakota	9.3	9.7	***	3.1	***
Ohio	9.8	9.5	0.3	2.9	0.6
Oklahoma	12.3	12.8	0.2	3.7	0.8
Oregon	9.3	11.0	0.4	2.3	0.3

State	Nonmaternal, Adults Aged 65 Years and Older	Nonmaternal, Adults Aged 18–64 Years	Maternal	Nonmaternal, Pediatric	Neonatal
Pennsylvania	9.7	9.0	0.4	3.6	0.6
Rhode Island	6.7	5.3	***	2.4	***
South Carolina	10.1	10.1	0.2	4.3	0.4
South Dakota	8.3	10.4	***	2.3	0.4
Tennessee	11.5	12.2	0.3	4.6	0.7
Texas	12.9	12.7	0.3	6.6	1.9
Utah	10.9	10.7	0.1	2.9	1.6
Vermont	6.2	6.3	***	***	***
Virginia	11.9	11.2	0.1	2.7	0.5
Washington	10.1	10.6	0.2	3.3	0.9
West Virginia	10.9	11.9	0.5	8.5	1.2
Wisconsin	9.0	8.4	0.3	4.5	0.7
Wyoming	6.9	7.5	***	***	***

Note: Sepsis was required to be the reason for the stay (principal diagnosis). Charges were imputed to account for missing information prior to conversion to hospital costs. Hospital costs were adjusted to the base year of 2021. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions. “***” denotes suppressed data.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2021, 47 States and the District of Columbia.

Appendix Table E.7.8. State Variation in In-Hospital Mortality per 1,000 Sepsis Hospital Encounters, 2019 and 2021

State	2019	2021
Alaska	122	176
Arizona	101	173
Arkansas	112	167
California	136	184
Colorado	82	121
Connecticut	118	152
Delaware	126	185
District of Columbia	166	204
Florida	105	146
Georgia	97	168
Hawaii	122	156
Illinois	116	153
Indiana	117	156
Iowa	97	131
Kansas	91	126
Kentucky	125	182
Louisiana	125	173
Maine	115	148
Maryland	134	165
Massachusetts	141	167
Michigan	109	171
Minnesota	107	136
Mississippi	135	190
Missouri	129	179
Montana	93	163
Nebraska	121	152
New Hampshire	114	148
New Jersey	152	187
New Mexico	119	182
New York	162	197
North Carolina	132	184
North Dakota	139	175
Ohio	105	158
Oklahoma	129	178
Oregon	112	149
Pennsylvania	113	159
Rhode Island	133	149

State	2019	2021
South Carolina	131	171
South Dakota	100	158
Tennessee	131	181
Texas	109	159
Utah	82	116
Vermont	93	123
Virginia	122	155
Washington	119	162
West Virginia	118	180
Wisconsin	98	122
Wyoming	95	162

Note: Sepsis was required to be the reason for the hospital encounter (principal/first-listed diagnosis). The measure of in-hospital mortality for sepsis hospital encounters includes deaths in the inpatient as well as ED settings. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2019 and 2021, 47 States and the District of Columbia; State Emergency Department Databases (SEDD), 2019 and 2021, 38 States and the District of Columbia.

Appendix Table E.7.9. State Variation in In-Hospital Mortality per 1,000 Sepsis Hospital Encounters by Patient Population, 2021

State	Nonmaternal, Adults Aged 65 Years and Older	Nonmaternal, Adults Aged 18–64 Years	Maternal	Nonmaternal, Pediatric	Neonatal
Alaska	225	138	***	0	0
Arizona	196	151	***	32	***
Arkansas	180	153	***	***	***
California	208	156	***	23	50
Colorado	142	97	0	***	***
Connecticut	171	119	***	***	***
Delaware	203	161	***	***	***
District of Columbia	250	173	***	56	***
Florida	163	127	***	17	49
Georgia	193	142	***	***	***
Hawaii	177	123	***	***	***
Illinois	174	123	***	29	***
Indiana	177	128	0	33	***
Iowa	150	110	***	***	0
Kansas	144	105	***	***	0
Kentucky	208	152	***	***	***
Louisiana	191	153	***	59	***
Maine	159	133	***	***	0
Maryland	193	126	0	***	***
Massachusetts	188	126	***	***	***
Michigan	194	141	***	26	***
Minnesota	160	106	0	***	***
Mississippi	209	169	***	***	0
Missouri	201	152	***	***	***
Montana	184	138	***	***	***
Nebraska	174	122	***	***	0
New Hampshire	166	117	***	***	***
New Jersey	210	150	***	***	***
New Mexico	204	165	***	***	***
New York	234	140	***	17	***
North Carolina	207	155	***	45	***
North Dakota	194	157	***	***	***
Ohio	178	134	***	36	***
Oklahoma	201	157	0	***	***
Oregon	166	129	0	***	0
Pennsylvania	180	128	***	31	***

State	Nonmaternal, Adults Aged 65 Years and Older	Nonmaternal, Adults Aged 18– 64 Years	Maternal	Nonmaternal, Pediatric	Neonatal
Rhode Island	163	128	***	0	***
South Carolina	190	147	0	***	***
South Dakota	174	141	***	***	0
Tennessee	207	155	***	30	***
Texas	179	143	***	21	62
Utah	125	110	***	***	***
Vermont	138	97	***	***	***
Virginia	178	122	0	43	***
Washington	187	131	***	***	***
West Virginia	208	148	***	***	***
Wisconsin	139	98	0	***	***
Wyoming	179	137	***	***	***

Note: Sepsis was required to be the reason for the hospital encounter (principal/first-listed diagnosis). The measure of in-hospital mortality for sepsis hospital encounters includes deaths in the inpatient as well as ED settings. See Appendix C, Clinical Coding for Sepsis, for criteria and Appendix D, Background on Measures, Characteristics, and Calculations, for definitions. “***” denotes suppressed data.

Source: Agency for Healthcare Research and Quality (AHRQ), Healthcare Cost and Utilization Project (HCUP), State Inpatient Databases (SID), 2021, 47 States and the District of Columbia; State Emergency Department Databases (SEDD), 2019 and 2021, 38 States and the District of Columbia.

Appendix E.8. Supporting Documentation for Chapter 8

Appendix Table E.8.1. State-Level Activities and Resources Related to Sepsis

State	Initiative	Entity	Description
Connecticut	Reportable Condition	Connecticut State Health Department	Neonatal bacterial sepsis must be reported by mail within 12 hours of recognition or strong suspicion.
Florida	Mission to Care	Florida Hospital Association	2017 initiative with the goal of reducing sepsis by 20% by September 2018. Included 95 hospitals across the state.
Illinois	Gabby's Law	Illinois Department of Public Health	2016 law requiring hospitals to implement evidence-based protocols for the early recognition and treatment of sepsis and make the protocols available to the state health department. Also requires that hospitals collect utilization and quality measures for internal quality improvement. Hospitals submitting sepsis data to CMS are presumed to fulfill these states requirements. If the state health department receives an appropriation and carries out certain requirements, it may adopt rules around sepsis data collection for submission to the department.
Indiana	2022 Sepsis Awareness Toolkit	Indiana Patient Safety Center of the Indiana Hospital Association	Toolkit to promote evidence-based sepsis care.
Kansas	Stop Sepsis	University of Kansas Health System	Collaborative of hospitals, EMS, and long-term care facilities to deliver professional education on evidence-based care of sepsis and implement quality improvement initiatives.

State	Initiative	Entity	Description
Kentucky	1) An ACT relating to the diagnosis of sepsis 2) Sepsis Kentucky Consortium	1) Kentucky legislature and Department of Medicaid Services 2) Kentucky Hospital Association	1) Encourages the identification and treatment of sepsis by requiring the Department of Medicaid Services (DMS) and any managed care organization contracting with DMS to apply clinical criteria for diagnosing sepsis. Said criteria requires consistency with the ICD-10 coding system, a provider's diagnosis, and the presence of two or more appropriate symptoms. 2) Created by the Kentucky Hospital Association with the objective of reducing the morbidity of sepsis through quality improvement and education. All hospitals have a signed a letter to participate. In 2022, all hospitals in the state started screening patients for sepsis at the time of triage in the ED.
Massachusetts	Massachusetts Sepsis Consortium	Betty Lehman Center for Patient Safety	Collaboration of various partners including but not limited to providers, patients, policymakers, and researchers overseeing a series of initiatives to prevent and mitigate sepsis.
Maryland	1) Sepsis Public Awareness Campaign legislation 2) Lochlin's Law 3) Sepsis Hospital Collaborative	1) Sepsis Public Awareness Campaign Workgroup 2) Maryland Department of Health 3) Maryland Patient Safety Center and Maryland Hospital Association	1) Legislation from 2018 that required the formation of a workgroup tasked with developing a public awareness campaign, identifying, and evaluating sepsis resources for educating the public, and identifying methods for disseminating the information. 2) Legislation requiring each hospital and urgent care center to implement evidence-based protocols for the recognition and treatment of sepsis, severe sepsis, or septic shock by January 1st, 2025. Also requires specialty psychiatric hospitals to establish screening protocols for the sepsis and procedures for transfer to the appropriate facility. 3) Collaborative from 2014-2017 looking to reduce sepsis hospital mortality in Maryland Hospitals.
Michigan	Sepsis Initiative	Michigan Hospital Medicine Safety Consortium	Initiative launched in 2021 with full implementation in all 69 HMS hospitals in early 2023. The goals include reducing long-term morbidity and short-term mortality through education, information sharing, and the implementation of best practices.

State	Initiative	Entity	Description
New Jersey	1) Sepsis Protocol 2) Learning Action Collaborative	1) Department of Health in New Jersey 2) New Jersey Hospital Association	1) Mandate approved in 2017 requiring hospitals to maintain and implement evidence-based protocols for the identification and treatments of patients with sepsis/septic shock. 2) Collaborative of healthcare organizations looking to improve the care of patients with sepsis across New Jersey. Launched in 2014, each participating hospital aimed to reduce sepsis mortality by September 2018.
New York	1) New York State Sepsis Care Improvement Initiative 2) Rory's Laws	New York State Department of Health	1) Quality improvement initiative facilitated by the NYS department of health consisting of hospitals and other partners to improve the detection, interventions, and treatment of sepsis/septic shock. The initiative also aims to reduce the overall mortality of sepsis. 2) Requires hospitals to develop protocols for the rapid identification and treatment of sepsis.
Ohio	Statewide Sepsis Initiative	Ohio Hospital Association	Comprised of 124 hospitals with the objective of reducing sepsis mortality. Consists of education, a gap analysis and bundle implementation
Oklahoma	Oklahoma Sepsis Collaborative	Oklahoma Hospital Association	Voluntary collaborative of hospitals with the goal of educating colleagues, implementing an evidence-based bundle and measuring/monitoring performance. Project period was from July 2015 to June 2016.
Pennsylvania	1) Stopping Sepsis: Saving Lives in PA 2) PA HIIN Project	1) PA Department of Health 2) Hospital and Healthsystem Association of PA	1) 2016 conference where experts discussed prevention strategies and made policy recommendations. 2) 2017 initiative consisting of 54 hospitals with the goal of reducing sepsis mortality by 20% and 30-day all-cause readmissions by 12%.

State	Initiative	Entity	Description
Rhode Island	2023 -- H 5869	Department of Health	Legislation requiring the Health Department in collaboration with the Antimicrobial Stewardship and Environmental Cleaning Task Force to provide information on best practices for treating patients with sepsis/septic shock to practitioners. Hospitals and freestanding emergency care facilities are required to implement policies and procedures based on this information. Hospitals also required to collect sepsis quality measures for internal quality improvement.
Tennessee	THA Sepsis Collaborative	TN Center for Patient Safety and TN Hospital Association	Formed in 2017 to reduce sepsis mortality in Tennessee. Involved a regular convening of healthcare professionals to discuss and share best practices related to sepsis care.
Texas	Sepsis Nursing Home Project	TMF Health Quality Institute	Initiative from 2017–2019 where 200+ nursing homes received sepsis training and education. The initiative saw a 41% improvement in a pre- and post-knowledge assessment of participants.
Utah	26B-2-235	Utah Health and Human Services	Legislation stating hospitals may develop protocols for the treatment of sepsis and septic shock; the department may request these protocols when conducting an inspection.
Virginia	VA HIIN	VA Hospital Association	Collaborative consisting of 36 hospitals with the aim of improving sepsis care. Initiative took place from approximately 2016–2020.