

**Maternity Care Ratings
2014 Methodology**

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Introduction

To help consumers evaluate and compare hospital performance in maternity care, Healthgrades analyzed patient outcome data for virtually every hospital in the 17 states that provide all-payer state data for years 2010 through 2012.

Maternity Care refers to care provided to mothers during and after childbirth or for the care of their newborn babies. It includes the period of time in which a woman is pregnant or has just given birth to a child. Healthgrades Maternity Care ratings are available at www.Healthgrades.com.

Data Source

Healthgrades purchased the initial patient-level data for all states that made their data available. The data represent three years of discharges (2010 – 2012). These data were chosen because they represent all discharges for the associated states. The 17 all-payer states evaluated were as follows:

- Arizona
- Colorado
- Florida
- Iowa
- Maryland
- Massachusetts
- Nevada
- New Jersey
- New York
- Oregon
- Pennsylvania
- Rhode Island
- Texas
- Utah
- Virginia
- Washington
- Wisconsin

Determining Maternity Care Ratings

Maternity Care ratings are based on the analysis of four factors:

- Maternal complication rate among women undergoing single live-born vaginal deliveries
- Maternal complication rate among women undergoing single live-born C-section deliveries
- Newborn volume adjusted for low birth weight
- Newborn mortality risk-adjusted using eight birth weight categories and congenital risk factors developed by the Agency for Healthcare Research and Quality

Maternal Vaginal and C-section Deliveries

For the Healthgrades maternal complication rate calculations, only women with single live-born deliveries were considered. A list of the DRGs (Diagnosis Related Groups) and diagnosis codes used by Healthgrades to identify patients can be found in *Appendix A*. The following records were excluded from the analysis:

- Patients with a code of V23.7 Insufficient Prenatal Care
- Patients under the age of 18 or over the age of 55
- Patients whose sex were listed as male or unknown
- Patients who left against medical advice, were still in the hospital, were transferred to another acute care facility, or whose discharge status was unknown

Maternal Complication Rate: Vaginal and C-section Single Live-Born Deliveries

For the patient population determined above, the rate of complications was calculated for both vaginal and C-section deliveries. A list of the complication codes analyzed can be found in *Appendix B*.

Percentiles were calculated for each measure (vaginal or C-section delivery complication rates). Lower complication rates correspond to lower percentiles.

Newborn Volume Adjusted for Birth Weight

To adjust for hospitals with specialized neonatal services that receive higher rates of low birth weight newborns, Healthgrades calculated a newborn birth weight-adjusted volume score for each hospital. For each hospital, a percentile was calculated based on the overall volume of single live-born deliveries and the percentage of neonates born into the 1,000 to 1,749 gram weight category. Higher volumes in both categories fall into lower percentiles.

This combination of birth weight and volume adjusts for hospitals that have more difficult cases. The measure was developed using "discriminant analysis" – a statistical method that, in this case, was used to create a prediction equation indicating the presence of a Newborn Intensive Care Unit.

Hospitals with newborn intensive care units attract the most difficult pregnancies. With the discriminant analysis approach, numerous factors, including diagnoses and procedures, were included and only the factors that provided the best prediction remained. In this case, volume and neonates in the 1,000 to 1,749 gram weight category provided the best prediction of the presence of a newborn intensive care unit.

A percentile is calculated for each hospital based on the discriminant function, and hospitals with the greatest number of births and the highest percentages of neonates in the 1,000 to 1,749 gram category fall into the lowest percentile.

Newborn Risk-Adjusted Mortality

Healthgrades identified single live-born newborns that were not transferred in or out of the hospital. Codes are listed in *Appendix A*.

To preserve the integrity of the calculation for newborn mortality, Healthgrades conducted a series of data quality checks. Based on the results of these checks, Healthgrades excluded a limited number of cases because they were inappropriate for inclusion based on missing data or other reasons as listed below. Examples of excluded patient records for newborn mortality are:

- Patients over the age of 0 or whose age was unknown
- Patients who had weights in two or more categories for the same admission
- Patients who left against medical advice, were still in the hospital, or whose discharge status was unknown
- Patients having diagnosis codes indicating congenital defects or other conditions that would be incompatible with a live birth (see *Appendix C*)
- Patients with birth weights less than 500 grams
- Patients who were transferred to another acute care facility or were admitted from another facility

Newborn risk-adjusted mortality rates were determined using a multivariate logistic regression model. We utilized eight neonate weight categories and congenital risk factor categories based on those developed by the Agency for Healthcare Research and Quality (Risk Adjustment Coefficients for the PDI. Version 4.2, September 2010. Available at: http://www.qualityindicators.ahrq.gov/Archive/PDI_TechSpec_V42.aspx) as potential risk factors, and using logistic regression determined which of these potential risk factors were statistically important in predicting mortality.

Using the model above, a predicted probability of mortality was calculated for each newborn. The individual predicted probabilities were summed to get an overall predicted number of deaths for the

hospital, and this was compared to the actual mortality. The z-score between the predicted and actual was calculated using the standard deviation, and then ordered from lowest to highest.

Newborn mortality outcomes are measured by Newborn Survival ratings:

- **Better Than Expected** – Fewer newborn mortalities than expected
- **As Expected** – About the same newborn mortalities as expected
- **Worse Than Expected** – More newborn mortalities than expected

Low percentiles corresponded to the hospitals that had fewer deaths than expected, and the greatest statistical significance associated with this difference.

Assignment of Maternity Care Star Ratings

The four factors were weighted equally. Based upon each hospital's overall percentile, Healthgrades applied the following rating system.

- ★★★★★ **Better Than Average** – Top 15% of all hospitals within 17 all-payer states
- ★★★ **Average** – Middle 70% of all hospitals within 17 all-payer states
- ★ **Worse Than Average** – Bottom 15% of all hospitals within 17 all-payer states

The top 10% of hospitals were selected as Healthgrades Maternity Care Excellence Award™ recipients. For details on the Maternity Care Excellence Award™ methodology, see the Healthgrades Specialty Excellence Award and America's 100 Best Hospitals for Specialty Care™ Methodology on the Internet at www.Healthgrades.com

Limitations of the Data Analysis

While these analyses may be valuable in identifying hospitals that perform better than others, one should not use this information alone to determine the quality of care provided at each hospital. The analyses are limited by the following factors:

- Cases may have been coded incorrectly or incompletely by the hospital.
- Healthgrades conditions and procedures models can only account for risk factors that are coded into the billing data. Therefore, if a particular risk factor was not coded into the billing data (such as a patient's socioeconomic status and health behavior) then it was not accounted for.
- Although Healthgrades has taken steps to carefully compile these data, no techniques are infallible; therefore, some information may be missing, outdated or incorrect.

Please note that a high ranking for a particular hospital is not a recommendation or endorsement by Health Grades, Inc. of a particular hospital; it means that the data associated with a particular hospital has met the foregoing qualifications. Only individual patients can decide whether a particular hospital is suited for their unique needs.

Also note that if more than one hospital reported under a single provider ID, Healthgrades analyzed patient outcome data for those hospitals as a single unit. Throughout this document, therefore, "hospital" refers to one hospital or a group of hospitals reporting under a single provider ID.

Appendix A. Patient Cohorts and Related ICD-9-CM Codes

Cesarean Section with Single Birth

Inclusions

Diagnosis Related Groups: 765, 766

Exclusions

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 37.62, 37.63, 765, 766

Diagnoses (Primary or Secondary): 651.00, 651.01, 651.03, 651.10, 651.11, 651.13, 651.20, 651.21, 651.23, 651.30, 651.31, 651.33, 651.40, 651.41, 651.43, 651.50, 651.51, 651.53, 651.60, 651.61, 651.63, 651.70, 651.71, 651.73, 651.80, 651.81, 651.83, 651.90, 651.91, 651.93, 652.61, 660.50, 660.51, 660.53, 678.10, 678.11, 678.13, 996.8, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V23.7, V27.1, V27.2, V27.3, V27.4, V27.5, V27.6, V27.7, V27.9, V32.00, V32.01, V32.1, V32.2, V33.01, V33.1, V33.2, V34.00, V34.01, V34.1, V34.2, V35.00, V35.01, V35.1, V35.2, V36.00, V36.01, V36.1, V36.2, V37.00, V37.01, V37.1, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V91.00, V91.01, V91.02, V91.03, V91.09, V91.10, V91.11, V91.12, V91.19, V91.20, V91.21, V91.22, V91.29, V91.90, V91.91, V91.92, V91.99

Vaginal Delivery with Single Birth

Inclusions

Diagnosis Related Groups: 767, 768, 774, 775

Exclusions

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 37.62, 37.63, 74.0, 74.1, 74.2, 74.4, 74.99, 767, 768, 774, 775

Diagnoses (Primary or Secondary): 651.00, 651.01, 651.03, 651.10, 651.11, 651.13, 651.20, 651.21, 651.23, 651.30, 651.31, 651.33, 651.40, 651.41, 651.43, 651.50, 651.51, 651.53, 651.60, 651.61, 651.63, 651.70, 651.71, 651.73, 651.80, 651.81, 651.83, 651.90, 651.91, 651.93, 652.61, 660.50, 660.51, 660.53, 678.10, 678.11, 678.13, 996.8, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V23.7, V27.1, V27.2, V27.3, V27.4, V27.5, V27.6, V27.7, V27.9, V32.00, V32.01, V32.1, V32.2, V33.01, V33.1, V33.2, V34.00, V34.01, V34.1, V34.2, V35.00, V35.01, V35.1, V35.2, V36.00, V36.01, V36.1, V36.2, V37.00, V37.01, V37.1, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V91.00, V91.01, V91.02, V91.03, V91.09, V91.10, V91.11, V91.12, V91.19, V91.20, V91.21, V91.22, V91.29, V91.90, V91.91, V91.92, V91.99

continued...

Patient Cohorts and Related ICD-9-CM Codes (continued)

Newborn Mortality

Inclusions

Diagnoses (Primary or Secondary): 764.02, 764.03, 764.04, 764.05, 764.06, 764.07, 764.08, 764.09, 764.12, 764.13, 764.14, 764.15, 764.16, 764.17, 764.18, 764.19, 764.22, 764.23, 764.24, 764.25, 764.26, 764.27, 764.28, 764.29, 764.92, 764.93, 764.94, 764.95, 764.96, 764.97, 764.98, 764.99, 765.02, 765.03, 765.04, 765.05, 765.06, 765.07, 765.08, 765.09, 765.12, 765.13, 765.14, 765.15, 765.16, 765.17, 765.18, 765.19, V30.00, V30.01

Congenital Condition Exclusions

Central Nervous System:

Excluding patients with diagnosis codes 740.0 Anencephalus, 740.1 Craniorachischis, 740.2 Inencephaly, 742.1 Microcephalus, 742.2 Reduction deformities of brain

Cardiac:

Excluding patients with diagnosis codes 745.7 Cor biloculare, 746.7 Hypoplastic left heart syndrome, 746.82 Cor triatriatum, 747.22 Atresia & stenosis of aorta, 745.10 Complete transposition of great vessels

Renal:

Excluding patients with diagnosis codes 753.0 Renal agenesis & dysgenesis (only if bilateral)

Chromosomal:

Excluding patients with diagnosis codes 758.1 Patau's syndrome (trisomy 13), 758.2 Edward's syndrome (trisomy 18)

Respiratory:

Excluding patients with diagnosis codes 748.5 Lung agenesis/Hypoplasia, Aplasia of lung, Hypoplasia of lung (lobe), Sequestration of lung. An argument can be made that not all are fatal (e.g., hypoplasia if unilateral). Due to the high frequency of associated malformations, the mortality rate is variable but high.

Multiple Birth Exclusions

Multiple Births - Diagnoses (Primary or Secondary): 759.4, V31.00, V31.01, V31.1, V31.2, V32.00, V32.01, V32.1, V32.2, V33.00, V33.01, V33.1, V33.2, V34.00, V34.01, V34.1, V34.2, V35.00, V35.01, V35.1, V35.2, V36.00, V36.01, V36.1, V36.2, V37.00, V37.01, V37.1

Other Exclusions

Procedures (Primary or Secondary): 37.51, 37.52, 37.53, 37.54, 37.62, 37.63

Diagnoses (Primary or Secondary): 764.00, 764.01, 764.10, 764.11, 764.20, 764.21, 764.90, 764.91, 765.00, 765.01, 765.10, 765.11, 996.8, 996.80, 996.81, 996.82, 996.83, 996.84, 996.85, 996.86, 996.87, 996.89, V42.0, V42.1, V42.4, V42.6, V42.7, V42.81, V42.82, V42.83, V42.84, V42.89, V42.9, V66.7

Appendix B. Maternity Care Complications

Maternity Care—Vaginal Single Delivery

038.0	STREPTOCOCCAL SEPTICEMIA
038.10	STAPHYLOCOCCAL SEPTICEMIA, UNSPECIFIED
038.11	METHICILLIN SUSCEPTIBLE STAPHYLOCOCCUS AUREUS SEPTICEMIA
038.12	METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS SEPTICEMIA
038.19	OTHER STAPHYLOCOCCAL SEPTICEMIA
038.2	PNEUMOCOCCAL SEPTICEMIA
038.3	SEPTICEMIA DUE TO ANAEROBES
038.40	SEPTICEMIA DUE TO GRAM-NEGATIVE ORGANISM, UNSPECIFIED
038.41	SEPTICEMIA DUE TO HEMOPHILUS INFLUENZAE [H. INFLUENZAE]
038.42	SEPTICEMIA DUE TO ESCHERICHIA COLI [E. COLI]
038.43	SEPTICEMIA DUE TO PSEUDOMONAS
038.44	SEPTICEMIA DUE TO SERRATIA
038.49	OTHER SEPTICEMIA DUE TO GRAM-NEGATIVE ORGANISMS
038.8	OTHER SPECIFIED SEPTICEMIAS
038.9	UNSPECIFIED SEPTICEMIA
512.1	IATROGENIC PNEUMOTHORAX
518.4	ACUTE EDEMA OF LUNG, UNSPECIFIED
518.7	TRANSFUSION RELATED ACUTE LUNG INJURY [TRALI]
518.81	ACUTE RESPIRATORY FAILURE
584.5	ACUTE KIDNEY FAILURE WITH LESION OF TUBULAR NECROSIS
584.8	ACUTE KIDNEY FAILURE WITH OTHER SPECIFIED PATHOLOGICAL LESION IN KIDNEY
584.9	ACUTE KIDNEY FAILURE, UNSPECIFIED
664.21	THIRD-DEGREE PERINEAL LACERATION, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
664.31	FOURTH-DEGREE PERINEAL LACERATION, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
665.10	RUPTURE OF UTERUS DURING LABOR, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
665.11	RUPTURE OF UTERUS DURING LABOR, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
665.22	INVERSION OF UTERUS, DELIVERED, WITH POSTPARTUM COMPLICATION
665.31	LACERATION OF CERVIX, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
665.41	HIGH VAGINAL LACERATION, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
666.02	THIRD-STAGE HEMORRHAGE, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
666.04	THIRD-STAGE HEMORRHAGE, POSTPARTUM CONDITION OR COMPLICATION
666.10	OTHER IMMEDIATE POSTPARTUM HEMORRHAGE, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
666.12	OTHER IMMEDIATE POSTPARTUM HEMORRHAGE, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
666.14	OTHER IMMEDIATE POSTPARTUM HEMORRHAGE, POSTPARTUM CONDITION OR COMPLICATION
666.20	DELAYED AND SECONDARY POSTPARTUM HEMORRHAGE, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
666.22	DELAYED AND SECONDARY POSTPARTUM HEMORRHAGE, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
666.24	DELAYED AND SECONDARY POSTPARTUM HEMORRHAGE, POSTPARTUM CONDITION OR COMPLICATION
667.02	RETAINED PLACENTA WITHOUT HEMORRHAGE, WITH DELIVERY, WITH MENTION OF POSTPARTUM COMPLICATION
668.02	PULMONARY COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION

668.12	CARDIAC COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
668.14	CARDIAC COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, POSTPARTUM CONDITION OR COMPLICATION
668.22	CENTRAL NERVOUS SYSTEM COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
668.82	OTHER COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
669.12	SHOCK DURING OR FOLLOWING LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
669.14	SHOCK DURING OR FOLLOWING LABOR AND DELIVERY, POSTPARTUM CONDITION OR COMPLICATION
670.02	MAJOR PUERPERAL INFECTION, UNSPECIFIED, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.12	PUERPERAL ENDOMETRITIS, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.14	PUERPERAL ENDOMETRITIS, POSTPARTUM CONDITION OR COMPLICATION
670.22	PUERPERAL SEPSIS, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.24	PUERPERAL SEPSIS, POSTPARTUM CONDITION OR COMPLICATION
670.32	PUERPERAL SEPTIC THROMBOPHLEBITIS, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.34	PUERPERAL SEPTIC THROMBOPHLEBITIS, POSTPARTUM CONDITION OR COMPLICATION
670.82	OTHER MAJOR PUERPERAL INFECTION, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.84	OTHER MAJOR PUERPERAL INFECTION, POSTPARTUM CONDITION OR COMPLICATION
673.00	OBSTETRICAL AIR EMBOLISM, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
673.01	OBSTETRICAL AIR EMBOLISM, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
673.02	OBSTETRICAL AIR EMBOLISM, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
673.03	OBSTETRICAL AIR EMBOLISM, ANTEPARTUM CONDITION OR COMPLICATION
673.04	OBSTETRICAL AIR EMBOLISM, POSTPARTUM CONDITION OR COMPLICATION
673.20	OBSTETRICAL BLOOD-CLOT EMBOLISM, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
673.21	OBSTETRICAL BLOOD-CLOT EMBOLISM, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
673.22	OBSTETRICAL BLOOD-CLOT EMBOLISM, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
673.23	OBSTETRICAL BLOOD-CLOT EMBOLISM, ANTEPARTUM CONDITION OR COMPLICATION
673.24	OBSTETRICAL BLOOD-CLOT EMBOLISM, POSTPARTUM CONDITION OR COMPLICATION
673.30	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
673.31	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
673.32	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
673.33	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, ANTEPARTUM CONDITION OR COMPLICATION
673.34	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, POSTPARTUM CONDITION OR COMPLICATION
673.80	OTHER OBSTETRICAL PULMONARY EMBOLISM, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
673.81	OTHER OBSTETRICAL PULMONARY EMBOLISM, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
673.82	OTHER OBSTETRICAL PULMONARY EMBOLISM, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
673.83	OTHER OBSTETRICAL PULMONARY EMBOLISM, ANTEPARTUM CONDITION OR COMPLICATION
673.84	OTHER OBSTETRICAL PULMONARY EMBOLISM, POSTPARTUM CONDITION OR COMPLICATION
785.51	CARDIOGENIC SHOCK
785.59	OTHER SHOCK WITHOUT MENTION OF TRAUMA
996.31	MECHANICAL COMPLICATION DUE TO URETHRAL [INDWELLING] CATHETER
996.60	INFECTION AND INFLAMMATORY REACTION DUE TO UNSPECIFIED DEVICE, IMPLANT, AND GRAFT
996.62	INFECTION AND INFLAMMATORY REACTION DUE TO OTHER VASCULAR DEVICE, IMPLANT, AND GRAFT
997.00	NERVOUS SYSTEM COMPLICATION, UNSPECIFIED
997.01	CENTRAL NERVOUS SYSTEM COMPLICATION

997.02	IATROGENIC CEREBROVASCULAR INFARCTION OR HEMORRHAGE
997.09	OTHER NERVOUS SYSTEM COMPLICATIONS
997.1	CARDIAC COMPLICATIONS
997.3	RESPIRATORY COMPLICATIONS
997.32	POSTPROCEDURAL ASPIRATION PNEUMONIA
997.39	OTHER RESPIRATORY COMPLICATIONS
997.4	DIGESTIVE SYSTEM COMPLICATION
997.5	URINARY COMPLICATIONS
997.91	COMPLICATIONS AFFECTING OTHER SPECIFIED BODY SYSTEMS, HYPERTENSION
998.0	POSTOPERATIVE SHOCK
998.00	POSTOPERATIVE SHOCK, UNSPECIFIED
998.01	POSTOPERATIVE SHOCK, CARDIOGENIC
998.02	POSTOPERATIVE SHOCK, SEPTIC
998.09	POSTOPERATIVE SHOCK, OTHER
998.11	HEMORRHAGE COMPLICATING A PROCEDURE
998.2	ACCIDENTAL PUNCTURE OR LACERATION DURING A PROCEDURE
998.3	DISRUPTION OF WOUND
998.4	FOREIGN BODY ACCIDENTALLY LEFT DURING A PROCEDURE
998.59	OTHER POSTOPERATIVE INFECTION
998.7	ACUTE REACTION TO FOREIGN SUBSTANCE ACCIDENTALLY LEFT DURING A PROCEDURE
998.81	EMPHYSEMA (SUBCUTANEOUS) (SURGICAL) RESULTING FROM PROCEDURE
998.9	UNSPECIFIED COMPLICATION OF PROCEDURE
999.1	AIR EMBOLISM AS A COMPLICATION OF MEDICAL CARE, NOT ELSEWHERE CLASSIFIED
999.2	OTHER VASCULAR COMPLICATIONS OF MEDICAL CARE, NOT ELSEWHERE CLASSIFIED
999.3	OTHER INFECTION DUE TO MEDICAL CARE, NOT ELSEWHERE CLASSIFIED
999.31	OTHER AND UNSPECIFIED INFECTION DUE TO CENTRAL VENOUS CATHETER
999.32	BLOODSTREAM INFECTION DUE TO CENTRAL VENOUS CATHETER
999.34	ACUTE INFECTION FOLLOWING TRANSFUSION, INFUSION, OR INJECTION OF BLOOD AND BLOOD PRODUCTS
999.39	INFECTION FOLLOWING OTHER INFUSION, INJECTION, TRANSFUSION, OR VACCINATION
999.4	ANAPHYLACTIC REACTION DUE TO SERUM
999.5	OTHER SERUM REACTION, NOT ELSEWHERE CLASSIFIED
999.6	ABO INCOMPATIBILITY REACTION DUE TO TRANSFUSION OF BLOOD OR BLOOD PRODUCTS
999.7	RH AND OTHER NON-ABO INCOMPATIBILITY REACTION DUE TO TRANSFUSION OF BLOOD OR BLOOD PRODUCTS
999.8	OTHER AND UNSPECIFIED INFUSION AND TRANSFUSION REACTION
999.80	TRANSFUSION REACTION, UNSPECIFIED
999.83	HEMOLYTIC TRANSFUSION REACTION, INCOMPATIBILITY UNSPECIFIED
999.84	ACUTE HEMOLYTIC TRANSFUSION REACTION, INCOMPATIBILITY UNSPECIFIED
999.85	DELAYED HEMOLYTIC TRANSFUSION REACTION, INCOMPATIBILITY UNSPECIFIED
999.9	OTHER AND UNSPECIFIED COMPLICATIONS OF MEDICAL CARE, NOT ELSEWHERE CLASSIFIED

Maternity Care—C-section Single Delivery

038.0	STREPTOCOCCAL SEPTICEMIA
038.10	STAPHYLOCOCCAL SEPTICEMIA, UNSPECIFIED
038.11	METHICILLIN SUSCEPTIBLE STAPHYLOCOCCUS AUREUS SEPTICEMIA
038.12	METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS SEPTICEMIA
038.19	OTHER STAPHYLOCOCCAL SEPTICEMIA
038.2	PNEUMOCOCCAL SEPTICEMIA
038.3	SEPTICEMIA DUE TO ANAEROBES
038.40	SEPTICEMIA DUE TO GRAM-NEGATIVE ORGANISM, UNSPECIFIED
038.41	SEPTICEMIA DUE TO HEMOPHILUS INFLUENZAE [H. INFLUENZAE]
038.42	SEPTICEMIA DUE TO ESCHERICHIA COLI [E. COLI]
038.43	SEPTICEMIA DUE TO PSEUDOMONAS
038.44	SEPTICEMIA DUE TO SERRATIA
038.49	OTHER SEPTICEMIA DUE TO GRAM-NEGATIVE ORGANISMS
038.8	OTHER SPECIFIED SEPTICEMIAS
038.9	UNSPECIFIED SEPTICEMIA
512.1	IATROGENIC PNEUMOTHORAX
518.4	ACUTE EDEMA OF LUNG, UNSPECIFIED
518.7	TRANSFUSION RELATED ACUTE LUNG INJURY [TRALI]
518.81	ACUTE RESPIRATORY FAILURE
584.5	ACUTE KIDNEY FAILURE WITH LESION OF TUBULAR NECROSIS
584.8	ACUTE KIDNEY FAILURE WITH OTHER SPECIFIED PATHOLOGICAL LESION IN KIDNEY
584.9	ACUTE KIDNEY FAILURE, UNSPECIFIED
666.00	THIRD-STAGE HEMORRHAGE, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
666.02	THIRD-STAGE HEMORRHAGE, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
666.04	THIRD-STAGE HEMORRHAGE, POSTPARTUM CONDITION OR COMPLICATION
666.10	OTHER IMMEDIATE POSTPARTUM HEMORRHAGE, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
666.12	OTHER IMMEDIATE POSTPARTUM HEMORRHAGE, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
666.14	OTHER IMMEDIATE POSTPARTUM HEMORRHAGE, POSTPARTUM CONDITION OR COMPLICATION
666.20	DELAYED AND SECONDARY POSTPARTUM HEMORRHAGE, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
666.22	DELAYED AND SECONDARY POSTPARTUM HEMORRHAGE, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
666.24	DELAYED AND SECONDARY POSTPARTUM HEMORRHAGE, POSTPARTUM CONDITION OR COMPLICATION
667.02	RETAINED PLACENTA WITHOUT HEMORRHAGE, WITH DELIVERY, WITH MENTION OF POSTPARTUM COMPLICATION
668.02	PULMONARY COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
668.04	PULMONARY COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, POSTPARTUM CONDITION OR COMPLICATION
668.12	CARDIAC COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
668.14	CARDIAC COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, POSTPARTUM CONDITION OR COMPLICATION
668.22	CENTRAL NERVOUS SYSTEM COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
668.24	CENTRAL NERVOUS SYSTEM COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, POSTPARTUM CONDITION OR COMPLICATION
668.82	OTHER COMPLICATIONS OF ANESTHESIA OR OTHER SEDATION IN LABOR AND DELIVERY, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION

669.42	OTHER COMPLICATIONS OF OBSTETRICAL SURGERY AND PROCEDURES, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
669.44	OTHER COMPLICATIONS OF OBSTETRICAL SURGERY AND PROCEDURES, POSTPARTUM CONDITION OR COMPLICATION
670.02	MAJOR PUERPERAL INFECTION, UNSPECIFIED, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.12	PUERPERAL ENDOMETRITIS, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.14	PUERPERAL ENDOMETRITIS, POSTPARTUM CONDITION OR COMPLICATION
670.22	PUERPERAL SEPSIS, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.24	PUERPERAL SEPSIS, POSTPARTUM CONDITION OR COMPLICATION
670.32	PUERPERAL SEPTIC THROMBOPHLEBITIS, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.34	PUERPERAL SEPTIC THROMBOPHLEBITIS, POSTPARTUM CONDITION OR COMPLICATION
670.82	OTHER MAJOR PUERPERAL INFECTION, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
670.84	OTHER MAJOR PUERPERAL INFECTION, POSTPARTUM CONDITION OR COMPLICATION
673.00	OBSTETRICAL AIR EMBOLISM, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
673.01	OBSTETRICAL AIR EMBOLISM, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
673.02	OBSTETRICAL AIR EMBOLISM, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
673.03	OBSTETRICAL AIR EMBOLISM, ANTEPARTUM CONDITION OR COMPLICATION
673.04	OBSTETRICAL AIR EMBOLISM, POSTPARTUM CONDITION OR COMPLICATION
673.20	OBSTETRICAL BLOOD-CLOT EMBOLISM, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
673.21	OBSTETRICAL BLOOD-CLOT EMBOLISM, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
673.22	OBSTETRICAL BLOOD-CLOT EMBOLISM, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
673.23	OBSTETRICAL BLOOD-CLOT EMBOLISM, ANTEPARTUM CONDITION OR COMPLICATION
673.24	OBSTETRICAL BLOOD-CLOT EMBOLISM, POSTPARTUM CONDITION OR COMPLICATION
673.30	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
673.31	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
673.32	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
673.34	OBSTETRICAL PYEMIC AND SEPTIC EMBOLISM, POSTPARTUM CONDITION OR COMPLICATION
673.80	OTHER OBSTETRICAL PULMONARY EMBOLISM, UNSPECIFIED AS TO EPISODE OF CARE OR NOT APPLICABLE
673.81	OTHER OBSTETRICAL PULMONARY EMBOLISM, DELIVERED, WITH OR WITHOUT MENTION OF ANTEPARTUM CONDITION
673.82	OTHER OBSTETRICAL PULMONARY EMBOLISM, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
673.83	OTHER OBSTETRICAL PULMONARY EMBOLISM, ANTEPARTUM CONDITION OR COMPLICATION
673.84	OTHER OBSTETRICAL PULMONARY EMBOLISM, POSTPARTUM CONDITION OR COMPLICATION
674.12	DISRUPTION OF CESAREAN WOUND, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
674.32	OTHER COMPLICATIONS OF OBSTETRICAL SURGICAL WOUNDS, DELIVERED, WITH MENTION OF POSTPARTUM COMPLICATION
785.50	SHOCK, UNSPECIFIED
785.51	CARDIOGENIC SHOCK
785.59	OTHER SHOCK WITHOUT MENTION OF TRAUMA
996.31	MECHANICAL COMPLICATION DUE TO URETHRAL [INDWELLING] CATHETER
996.60	INFECTION AND INFLAMMATORY REACTION DUE TO UNSPECIFIED DEVICE, IMPLANT, AND GRAFT
996.62	INFECTION AND INFLAMMATORY REACTION DUE TO OTHER VASCULAR DEVICE, IMPLANT, AND GRAFT
997.00	NERVOUS SYSTEM COMPLICATION, UNSPECIFIED
997.01	CENTRAL NERVOUS SYSTEM COMPLICATION
997.02	IATROGENIC CEREBROVASCULAR INFARCTION OR HEMORRHAGE
997.09	OTHER NERVOUS SYSTEM COMPLICATIONS
997.1	CARDIAC COMPLICATIONS

997.3	RESPIRATORY COMPLICATIONS
997.32	POSTPROCEDURAL ASPIRATION PNEUMONIA
997.39	OTHER RESPIRATORY COMPLICATIONS
997.4	DIGESTIVE SYSTEM COMPLICATION
997.5	URINARY COMPLICATIONS
997.91	COMPLICATIONS AFFECTING OTHER SPECIFIED BODY SYSTEMS, HYPERTENSION
998.0	POSTOPERATIVE SHOCK
998.00	POSTOPERATIVE SHOCK, UNSPECIFIED
998.01	POSTOPERATIVE SHOCK, CARDIOGENIC
998.02	POSTOPERATIVE SHOCK, SEPTIC
998.09	POSTOPERATIVE SHOCK, OTHER
998.11	HEMORRHAGE COMPLICATING A PROCEDURE
998.2	ACCIDENTAL PUNCTURE OR LACERATION DURING A PROCEDURE
998.3	DISRUPTION OF WOUND
998.4	FOREIGN BODY ACCIDENTALLY LEFT DURING A PROCEDURE
998.51	INFECTED POSTOPERATIVE SEROMA
998.59	OTHER POSTOPERATIVE INFECTION
998.7	ACUTE REACTION TO FOREIGN SUBSTANCE ACCIDENTALLY LEFT DURING A PROCEDURE
998.81	EMPHYSEMA (SUBCUTANEOUS) (SURGICAL) RESULTING FROM PROCEDURE
998.9	UNSPECIFIED COMPLICATION OF PROCEDURE
999.1	AIR EMBOLISM AS A COMPLICATION OF MEDICAL CARE, NOT ELSEWHERE CLASSIFIED
999.2	OTHER VASCULAR COMPLICATIONS OF MEDICAL CARE, NOT ELSEWHERE CLASSIFIED
999.3	OTHER INFECTION DUE TO MEDICAL CARE, NOT ELSEWHERE CLASSIFIED
999.31	OTHER AND UNSPECIFIED INFECTION DUE TO CENTRAL VENOUS CATHETER
999.32	BLOODSTREAM INFECTION DUE TO CENTRAL VENOUS CATHETER
999.34	ACUTE INFECTION FOLLOWING TRANSFUSION, INFUSION, OR INJECTION OF BLOOD AND BLOOD PRODUCTS
999.39	INFECTION FOLLOWING OTHER INFUSION, INJECTION, TRANSFUSION, OR VACCINATION
999.4	ANAPHYLACTIC REACTION DUE TO SERUM
999.5	OTHER SERUM REACTION, NOT ELSEWHERE CLASSIFIED
999.6	ABO INCOMPATIBILITY REACTION DUE TO TRANSFUSION OF BLOOD OR BLOOD PRODUCTS
999.7	RH AND OTHER NON-ABO INCOMPATIBILITY REACTION DUE TO TRANSFUSION OF BLOOD OR BLOOD PRODUCTS
999.8	OTHER AND UNSPECIFIED INFUSION AND TRANSFUSION REACTION
999.80	TRANSFUSION REACTION, UNSPECIFIED
999.83	HEMOLYTIC TRANSFUSION REACTION, INCOMPATIBILITY UNSPECIFIED
999.84	ACUTE HEMOLYTIC TRANSFUSION REACTION, INCOMPATIBILITY UNSPECIFIED
999.85	DELAYED HEMOLYTIC TRANSFUSION REACTION, INCOMPATIBILITY UNSPECIFIED
999.9	OTHER AND UNSPECIFIED COMPLICATIONS OF MEDICAL CARE, NOT ELSEWHERE CLASSIFIED