**Supplemental Table 3**

Codes used to identify outcome variables. Respiratory and cardiac complications are based on ICD-9 codes; ICU admission was defined based on billing codes; mechanical ventilation is defined by ICD-9 codes, current procedural terminology (CPT ®) codes and billing codes. Mortality is pre-defined in the Premier database.

|  |  |  |
| --- | --- | --- |
| Description | type | code |
| **Respiratory Complications** |  |  |
| Other respiratory distress, insufficiency | ICD-9-CM | 786.09 |
| Pulmonary insufficiency following trauma and surgery | ICD-9-CM | 518.5X |
| Respiratory complications | ICD-9-CM | 997.3X |
| Asphyxia | ICD-9-CM | 799.01 |
| Hypoxemia | ICD-9-CM | 799.02 |
| **Cardiac Complications** |  |  |
| Acute myocardial infarction | ICD-9-CM | 410.XX |
| Cardiac arrest | ICD-9-CM | 427.5X |
| Cardiogenic shock | ICD-9-CM | 785.51 |
| Cardiac complications *(“…during or resulting from a procedure”)* | ICD-9-CM | 997.1X |
| Atrial fibrillation and flutter | ICD-9-CM | 427.3X |
| **Mechanical ventilation** |  |  |
| Non-invasive mechanical ventilation | ICD-9-CM | 93.90 |
| Intermittent positive pressure breathing [IPPB] | ICD-9-CM | 93.91 |
| Other continuous invasive mechanical ventilation | ICD-9-CM | 96.7 |
| Continuous invasive mechanical ventilation of unspecified duration | ICD-9-CM | 96.70 |
| Continuous invasive mechanical ventilation for less than 96 consecutive hours | ICD-9-CM | 96.71 |
| Continuous invasive mechanical ventilation for 96 consecutive hours or more | ICD-9-CM | 96.72 |
|  |  |  |
| Under ventilatory management (current code) | CPT | 94002, 94003 |
| Ventilation (deprecated code) | CPT | 94656, 94657 |
| "VENTILATOR WEANING PARAMETERS", "PF VENTILATOR FIRST DAY", "VENTILATOR SETUP", "VENTILATOR HI FREQUENCY SETUP", "VENTILATOR MAINTENANCE", and "PATIENT CARE ICU W/MECHANICAL VENT 24 HRS OR LESS" | Full Text Billing Codes |  |