

**Appendix 1. ICD-9 Codes for Medical and Obstetric Complications Used to Identify Cases in the NIS 2008 – 2010, and Co-morbid Conditions Used as Covariates**

| <b>Medical Condition</b>  | <b>ICD-9 codes</b>                           |
|---|--|
| <b>Heart Disease</b>  |  |
| Cardiomyopathy  | 425.x, 674.5x                                |
| Valvular heart disease  | 394-397, 424, V42.2                          |
| Congenital heart disease  | 745-747.49, 648.5                            |
| Cardiac conduction disorders  | 426.0-426.9, 785.0, 785.1, V45.0, V53.3      |
| <b>Pulmonary Disease</b>  |  |
| Asthma  | 493.x  |
| Pulmonary hypertension, disorders of pulmonary circulation, pulmonary heart disease | 416.x-417.x                                  |
| <b>Endocrine</b>  |  |
| Diabetes (non-gestational)  | 249.x, 250.x, 648.0x                         |
| Thyroid disease   | 240.x-246.x, 648.1x                          |
| <b>Autoimmune</b>   |  |
| Systemic lupus erythema.  | 710.0, 695.4, 583.8                          |
| Rheumatoid arthritis/ collagen disease  | 701.0, 710, 710.1x-710.9x, 714.x, 720.x, 725 |
| HIV infection   | 042  |
| <b>Hematologic</b>  |  |
| Thrombophilia (includes history of thrombosis and antiphospholipid syndrome [APS])  | 273.8, 286.53, 286.9, 289.81, 289.82, V12.51 |
| Anemia  | 648.2x, 280.x, 285.x                         |
| Thrombocytopenia  | 287.3x, 287.4x, 287.5x                       |
| <b>Drug/Alcohol/Tobacco</b>   |  |

|   |   |
|---|---|
| Drug use                                  | 292.x, 304.x, 305.2x-305.9x, 655.5x, 760.70, 760.72-760.75, 779.5, 965.0x, V65.42 |
| Alcohol use                               | 291.x, 303.x, 305.0x, 760.71, 980.0x  |
| Tobacco use                               | 305.1, V15.82, 649.0x   |
| <b>Chronic hypertension/renal failure</b> |   |
| Chronic Hypertension                      | 401.x-405.x, 437.2, 642.0x-642.2x   |
| Chronic Renal Failure                     | 585.x, 792.5, V42.0, V45.1, V56.x   |
| <b>Event or Condition</b>                 |   |
| Mechanical Ventilation                    | Procedure codes: 93.90, 96.01-96.05, 96.7x  |
| Transfusion                               | V58.2, Procedure codes: 99.00-99.09   |
| <b>Cardiac Event</b>                      |   |
| Myocardial infarction/ischemia            | 410.x, 411.x  |
| Cardiac arrest/ventricular fibrillation   | 427.41, 427.42, 427.5   |
| Arrhythmias                               | 427.x   |
| Heart failure                             | 428.x   |
| <b>Pulmonary Event</b>                    |   |
| Pneumonia                                 | 480.x-486.x, 487.0  |
| Pulmonary edema                           | 518.4   |
| Acute respiratory distress syndrome       | 518.5   |
| <b>Thromboembolic Event</b>               |   |
| Pulmonary embolism                        | 415.1x, 673.x   |
| Deep venous thrombosis                    | 451.1x, 451.2x, 671.3x, 671.4x  |
| Stroke/cerebrovascular disorders          | 325, 430, 431, 432.x, 433.x, 434.x, 436, 437.x, 671.5x, 674.0x, 997.2, 999.2      |
| <b>Infections</b>                         |   |
| Sepsis                                    | 038.x, 790.7  |

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The authors provided this information as a supplement to their article.

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|   |  |
|---|--|
| <b>Renal Event</b>                                  |  |
| Acute renal failure                                 | 584.x, 639.3x, 669.3x                    |
| <b>Obstetric Events</b>                             |  |
| Multiple Gestation                                  | 651.x, 652.6x, V27.2-V27.7               |
| Operative vaginal delivery                          | Procedure codes: 720-724, 726, 727-727.9 |
| Gestational diabetes                                | 648.8x                                   |
| Preeclampsia, eclampsia or gestational hypertension | 642.3x-642.7x                            |
| Preterm labor                                       | 644.x                                    |
| Placental abruption                                 | 641.2x                                   |
| Fetal growth restriction                            | 656.5x                                   |
| Intrauterine fetal death                            | 656.4x                                   |
| Placenta previa                                     | 641.0-641.1x                             |
| Postpartum hemorrhage                               | 666-666.2x                               |
| Chorioamnionitis                                    | 658.4x, 659.2x                           |

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