**Supplementary Table 1.** ICD codes used to isolate patients.

|  |  |  |
| --- | --- | --- |
| **Diagnosis/Procedure** | **ICD-9** | **ICD-10** |
| Thoracic aortic dissection diagnosis | 441.01 | I71.01 |
| Operative repair of thoracic aorta | 39.73, 38.45, 39.57 | 02UW\*, 02UX\*, 02RW\*, 02RX\*, 02VW\*, 02VX\*, 02QW\*, 02QX\* |
| Aneurysm or penetrating aortic ulcer diagnosis | 441.1, 441.9 | I71.1, I71.9 |
| Cardioplegia, valve repair, or operations on vessels of the heart (as evidence of Type A aortic dissection)  | 39.63, 35.00-35.99, 36.00-36.99, 37.0, 37.2, 37.31-37.90, 37.93-37.99 | 3E080GC, 024F\*, 024G\*, 024J\*, 025F\*, 025G\*, 025H\*, 025J\*, 027F\*, 027G\*, 027H\*, 027J\*, 02BF\*, 02BG\*, 02BH\*, 02BJ\*, 02CF\*, 02CG\*, 02CH\*, 02CJ\*, 02NF\*, 02NG\*, 02NH\*, 02NJ\*, 02QF\*, 02QG\*, 02QH\*, 02QJ\*, 02RF\*, 02RG\*, 02RH\*, 02RJ\*, 02UF\*, 02UG\*, 02UH\*, 02UJ\*, 02WF\*, 02WG\*, 02WH\*, 02WJ\*, 02TH\*, 02VG\*, 0210\*, 0211\*, 0212\*, 0213\*, 0254\*, 0270\*, 0271\*, 0272\*, 0273\*, 02B4\*, 02C0\*, 02C1\*, 02C2\*, 02C3\*, 02C4\*, 02H0\*, 02H1\*, 02H2\*, 02H3\*, 02H4\*, 02N0\*, 02N1\*, 02N2\*, 02N3\*, 02N4\*, 02Q0\*, 02Q1\*, 02Q2\*, 02Q3\*, 02Q4\*, 02S0\*, 02S1\*, 02U0\*, 02U1\*, 02U2\*, 02U3\*, 0258\*, 0259\*, 025D\*, 0288\*, 0289\*, 028D\*, 02B8\*, 02B9\*, 02BD\*, 02C8\*, 02C9\*, 02CD\*, 02N8\*, 02N9\*, 02ND\*, 02Q8\*, 02Q9\*, 02QD\*, 02R9\*, 02RD\*, 02T8\*, 02T9\*, 02TD\*, 02U9\*, 02UD\*, 0216\*, 0217\*, 021K\*, 021L\*, 0255\*, 0256\*, 0257\*, 025K\*, 025L\*, 025M\*, 027K\*, 027L\*, 02B5\*, 02B6\*, 02B7\*, 02BK\*, 02BL\*, 02BM\*, 02C5\*, 02C6\*, 02C7\*, 02CK\*, 02CL\*, 02CM\*, 02H6\*, 02H7\*, 02HA\*, 02HK\*, 02HL\*, 02L7\*, 02N5\*, 02N6\*, 02N7\*, 02NK\*, 02NL\*, 02NM\*, 02Q5\*, 02Q6\*, 02Q7\*, 02QA\*, 02QB\*, 02QC\*, 02QK\*, 02QL\*, 02QM\*, 02R5\*, 02R6\*, 02R7\*, 02RK\*, 02RL\*, 02RM\*, 02T5\*, 02TM\*, 02U5\*, 02U6\*, 02U7\*, 02UA\*, 02UK\*, 02UL\*, 02UM\*, 02VA\*, 02W5\*, 02WA\*, 02WM\*, 02YA\* |

Patients were isolated using these International Classification of Diseases (ICD) codes as described in **Figure 1**.

**Supplementary Table 2.** ICD codes used to identify complications experienced during index admissions.

|  |  |  |
| --- | --- | --- |
| **Complication** | **ICD-9** | **ICD-10** |
| Stroke | 430, 431, 432, 433, 434, 436, 997.02 | I63, I97.820 |
| Pneumonia | 480, 481, 482, 483, 484, 485, 486 | J12, J13, J14, J15, J16, J17, J18 |
| Acute renal failure | 584 | N17 |
| Acute myocardial infarction | 410 | I21, I22 |
| Post-procedural hemorrhage | 998.11 | I97.611 |
| Peripheral ischemia | 443.2, 443.9, 459.9, 557.0, 557.9 | I77.7, I77.9, I99.9, K55.0, K55.9,  |