|  |  |
| --- | --- |
| **Diagnoses**  | **Codes used**  |
| Acute pericarditis  | ICD-9 codes 420.0, 420.90, 420.91, 420.99 |
| Cardiac tamponade | ICD-9 code 423.3. Code introduced in 2007. Trends in our study calculated from 2008 onwards.  |
| Hypotension or shock | ICD-9 codes 458.9 (hypotension), 785.50 (shock), 785.51 (cardiogenic shock), 785.59 (shock without trauma) |
| Cardiac dysrhythmia | CCS code 106 |
| **Procedures** |  |
| Pericardiocentesis | ICD-9 procedure code 37.0 |
| Pericardiotomy | ICD-9 procedure code 37.12 |
| Pericardiectomy  | ICD-9 procedure code 37.31 |
| Echocardiogram  | CCS code 193 (Diagnostic ultrasound of the heart) |
| CT scan of the chest | CCS code 178 |
| Diagnostic left heart catheterization | CCS code 47 (Diagnostic cardiac catheterization, coronary arteriography) |

**Supplementary materials**

**Supplemental Table I:** Diagnostic and procedure codes used in the study

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **Relative change****(%)** | **p-value** |
| Overall  | 4.8 | 5.1 | 4.9 | 4.7 | 4.6 | 4.5 | 4.4 | 4.1 | 4.0 | 4.1 | –15.65 | <0.001 |
| **Age** |  |  |  |  |  |  |  |  |  |  |  |  |
| 16 – 49 | 4.0 | 4.1 | 3.8 | 3.8 | 3.7 | 3.5 | 3.5 | 3.4 | 3.2 | 3.3 | –18.40 | <0.001 |
| 50 – 64  | 4.9 | 5.3 | 4.7 | 4.8 | 4.7 | 4.4 | 4.7 | 4.1 | 4.1 | 4.3 | –12.39 | <0.001 |
| 65 – 74 | 5.4 | 5.6 | 6.1 | 5.7 | 5.1 | 5.5 | 4.8 | 4.6 | 5.2 | 4.7 | –13.24 | <0.001 |
| 75 – 84  | 6.1 | 6.4 | 6.4 | 5.9 | 6.0 | 6.3 | 5.9 | 5.7 | 5.0 | 5.3 | –12.95 | 0.001 |
| >=85  | 6.7 | 6.9 | 6.8 | 7.2 | 6.2 | 7.2 | 5.7 | 5.8 | 5.0 | 5.6 | –17.25 | 0.003 |
| **Sex** |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 4.3 | 4.3 | 4.2 | 4.2 | 4.1 | 3.8 | 3.7 | 3.5 | 3.5 | 3.7 | –12.87 | <0.001 |
| Female | 5.6 | 6.2 | 5.8 | 5.5 | 5.4 | 5.5 | 5.4 | 4.9 | 4.8 | 4.6 | –17.69 | <0.001 |

**Supplemental Table II:** Trends in average length of stay for acute pericarditis hospitalizations

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **Relative change****(%)** | **p-value** |
| Overall  | 31,242 | 33,473 | 34,748 | 33,693 | 34,919 | 35,816 | 37,149 | 37,056 | 38,434 | 38,947 | 24.7 | <0.001 |
| **Age** |  |  |  |  |  |  |  |  |  |  |  |  |
| 16 – 49 | 27,566 | 28,505 | 28,525 | 28,568 | 29,214 | 30,151 | 31,339 | 31,617 | 33,034 | 31,863 | 15.6 | 0.001 |
| 50 – 64  | 32,967 | 34,609 | 33,829 | 35,329 | 36,946 | 34,665 | 39,857 | 39,174 | 39,050 | 41,225 | 25.1 | <0.001 |
| 65 – 74 | 32,596 | 36,245 | 39,283 | 38,879 | 38,982 | 41,375 | 37,829 | 42,374 | 48,756 | 46,349 | 42.2 | <0.001 |
| 75 – 84  | 36,638 | 40,387 | 48,173 | 37,311 | 43,099 | 48,873 | 45,969 | 47,427 | 42,103 | 46,905 | 28.0 | 0.02 |
| >=85  | 34,115 | 39,671 | 44,725 | 45,820 | 39,575 | 47,959 | 48,344 | 44,628 | 41,208 | 46,626 | 36.7 | 0.06 |
| **Sex** |  |  |  |  |  |  |  |  |  |  |  |  |
| Male | 28,694 | 28,932 | 32,250 | 30,628 | 32,043 | 32,732 | 32,515 | 34,189 | 35,227 | 37,150 | 29.5 | <0.001 |
| Female | 34,843 | 39,822 | 38,360 | 37,911 | 39,306 | 39,958 | 44,375 | 41,561 | 43,321 | 41,788 | 19.9 | 0.001 |

**Supplemental Table III:** Trends in mean charges for acute pericarditis hospitalizations

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Complications** | **2003** | **2004** | **2005** | **2006** | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** | **Relative change (%)** | **p-trend** |
| Cardiac tamponade (%) | -- | -- | -- | -- | -- | 12.0 | 11.4 | 10.8 | 12.4 | 13.2 | +9.9 | 0.91 |
| Hypotension and shock (%) | 3.6 | 3.7 | 4.7 | 4.9 | 5.1 | 5.4 | 5.5 | 4.9 | 5.2 | 7.0 | +94.0 | <0.001 |
| Atrial fibrillation (%) | 17.7 | 17.8 | 17.7 | 16.2 | 18.0 | 15.5 | 17.9 | 15.0 | 17.8 | 20.5 | +15.8 | <0.001 |
| Myopericarditis (%) | 1.4  | 1.0 | 2.0 | 1.6 | 1.9 | 2.5 | 2.1 | 2.3 | 2.6 | 2.0 | +42.9 | <0.001 |
| Cardiac arrest and ventricular fibrillation(%) | 0.8 | 0.9 | 0.5 | 0.9 | 0.7 | 0.6 | 0.5 | 0.6 | 0.6 | 0.5 | +0.7 | 0.08 |
| **Invasive cardiac procedures** |  |  |  |  |  |  |  |  |  |  |  |  |
| Pericardiocentesis (%) | 11.7 | 12.2 | 12.9 | 13.2 | 12.8 | 12.3 | 11.5 | 11.8 | 10.4 | 12.6 | +7.1 | 0.31 |
| Pericardiotomy (%) | 18.9 | 21.0 | 20.3 | 18.9 | 18.3 | 16.8 | 16.4 | 14.3 | 14.5 | 14.0 | −26.1 | <0.001 |
| Pericardiectomy (%) | 1.7 | 1.8 | 1.7 | 1.4 | 1.6 | 1.2 | 1.1 | 1.1 | 1.1 | 0.8 | −49.9 | <0.001 |
| Diagnostic cardiac catheterization (%) | 10.1 | 9.7 | 11.9 | 12.9 | 12.6 | 14.7 | 14.9 | 15.6 | 15.2 | 15.9 | +48.1 | <0.001 |

**Supplemental table IV:** Trends in complications and procedures in acute pericarditis hospitalizations

-- ICD-9-CM code not available for years