**Supplementary Tables**

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| **Table 1:****Comparison of patients’ characteristics in children with different categories of congenital heart disease\*** |
| **Variable** |  **Types of CHD** | ***p*-value** |
| **Simple****n (%)** | **Moderate****n (%)**  | **Complex****n (%)** |
| **Acute Asthma** | 3,523(75.09) | 462(9.85) | 706(15.06) |  |
| **Mean age in years (SE)** | 3.4(0.099) | 4.3(0.290) | 4.3(0.229) | <0.01 |
| **Gender** |  |  |  | 0.016 |
| Male | 2,078(59.04) | 308(66.78) | 400(56.72) |  |
| Female | 1,441(40.96) | 153(33.22) | 305(43.28) |  |
| **Race** |  |  |  | 0.304 |
| White | 1,252(40.54) | 178(45.24) | 289(47.66) |  |
| Black | 687(22.24) | 84(21.44) | 104(17.18) |  |
| Hispanic | 885(28.69) | 95(24.11) | 158(26.12) |  |
| Asian/Pacific Islander | 84(2.73) | <11(2.30) | 26(4.41) |  |
| Native American | 39(1.27) | <11(1.43) | <11(0.90) |  |
| Others | 139(4.52) | 21(5.48) | 22(3.73) |  |
| **Mean of Length of stay(days)** | 6.7 | 6.3 | 7.0 | 0.825 |
| **Mean total hospital charges ($)** | 66,020 | 73,381 | 70,756 | 0.680 |
| **In hospital death** | 28(0.81) | <11(1.01) | <11 | 0.142 |
| **Comorbidity** |  |  |  |  |
| Tachyarrhythmias | 124(3.56) | 18(4.11) | 22(3.21) | 0.800 |
| Heart Failure | 92(2.64) | 17(3.78) | 41(5.88) | <0.001 |
| Conduction disorders/Heart block | 30(0.87) | <11(1.51) | 13(1.90) | 0.109 |
| Sleep apnea | 141(4.01) | <11(1.59) | 27(3.86) | 0.090 |
| Charlson Comorbidity index |  |  |  | 0.019 |
|  1 | 2,329(95.65) | 299(94.82) | 575(93.68) |  |
|  2 | 79(3.26) | 11(3.69) | 28(4.67) |  |
|  ≥ 3 | 26(1.09) | <11(1.49) | <11(1.65) |  |
| **Complications** |  |  |  |  |
| Acute Respiratory Failure | 434(12.32) | 56(12.30) | 69(9.89) | 0.369 |
| Acute Kidney Injury | 33(0.96) | <11(0.31) | <11(1.26) | 0.400 |
| Invasive Mechanical Ventilation | 192(5.47) | 33(7.28) | 49(6.97) | 0.262 |
| Sudden cardiac arrest | 27(0.78) | <11(0.68) | <11 | 0.170 |
| \*HCUP prohibits reporting tabulated data in a cell less than 11. |

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| **Table 2: ICD codes used in the analysis** |
| Variables  | ICD-9-CM code  | ICD-10-CM code  |
| Acute asthma exacerbation | 493.01, 493.02, 493.11, 493.12, 493.21, 493.22, 493.91, 493.92 | J45.21, J45.31, J45.41, J45.51, J45.901 |
| Acute respiratory failure | 518.81, 518.83,518.84,799.1 | J96.0, J96.0x, J96.9, J96.9x |
| Acute kidney injury  | 584.5, 584.6, 584.7, 584.8, 584.9 | N17, N17.0, N17.1, N17.2, N17.8, N17.9 |
| Congenital heart disease (CHD) | 745.xx to 747.xxExcluded: PDA: 747.0, 747.5, 747.6  | Q20.xx to Q26.xxExcluded: PDA: Q25.0 |
| Invasive mechanical ventilation (IMV) | 93.01, 96.03, 96.04, 96.05, 96.70, 96.71, 96.72 | 0DH57BZ,0DH58BZ, 0BH17EZ, 0BH18EZ, 0B717DZ, 0B718DZ, 0BH07DZ, 0WHQ7YZ, 5A1935Z, 5A1945Z, 5A1955Z |
| Heart failure | 4280,4281,4289,4282,42820,42821,42822,42823,42830,4283,42831,42832,42833,42834,42840,42842,42842,42843,3981,40211,40201,40291,4289,40411,40401,40491,40413,40403,40493 | I50.1, I50.2, I5021, I50.22, I50.23, I50.30, I50.31, I50.32, I50.33, I50.40, I50.41, I50.42, I50.43, I50.9, I09.81, I11.0, I13.0, I13.2, P29.0 |
| Obstructive Sleep apnea | 327.23, 780.51, 780.53, 780.57 | G47.33 |
| Diabetes mellitus | 249.XX, 250.XX | E10.XX, E11.XX, E13.XX |
| Tachyarrhythmias | 427.0, 427.1, 427.41, 427.42, 427.31, 427.32 | I47.1, I47.2, I49.01, I49.0, I48.0, I48.3, I48.4 |
| Heart block | 426.12, 426.13, 426.0, 746.86, 426.6 | I44.1, I44.2 |
| Sudden cardiac arrest | 427.5 | I46.9 |

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| **Table 3: ICD codes used in the classification of CHD** |
| **CHD Classifications** | **ICD-9 CM codes** | **ICD-10 CM codes** |
| **Simple CHD** |  |  |
| Isolated ventricular septal defect | 745.4 | Q21.0 |
| Isolated atrial septal defect | 745.5 | Q21.1 |
| Isolated congenital valve disease | 746.01,746.02, 746.00, 746.1, 746.3, 746.4, 746.5, 746.6, 747.29 | Q22.0, Q22.1, Q22.2, Q22.3, Q22.4, Q22.8, Q22.9, Q23.0, Q23.1, Q23.2, Q23.3, Q25.8 |
| **Moderate CHD** |  |  |
| Tetralogy of Fallot | 745.2, 745.8 | Q21.3, Q21.8, |
| Ebstein’s anomaly | 746.2 | Q22.5 |
| Aortic anomalies | 747.10, 747.11, 747.22 | Q25.1, Q25.21, Q25.219,  |
| Atrioventricular septal defect | 745.60, 745.61 | Q21.2 |
| Partial anomalous pulmonary venous connection | 747.42 | Q26.3, Q26.4 |
| **Complex CHD** |  |  |
| Complex arterial and venous connections | 745.0, 747.41 | Q20.0, Q26.2 |
| Single ventricles | 745.11, 745.19, 745.3, 746.1, 746.7,  | Q20.1, Q20.2, Q20.4, Q22.6, Q23.4,  |
| Transposition of great arteries | 745.10, 745.12 | Q20.3, Q20.5 |