|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Supplemental Table 1. Immediate impact of ICD-10-CM on calculated prevalence of each birth defect per 10,000 hospitalizations (hospital prevalence) during the ICD-9-CM versus ICD-10-CM timeframes, National Inpatient Sample, 2012-2016a** | | | | |
| **Birth defect** | **Immediate impact of transition on reported prevalence** | | | |
| **Impact parameter estimate** | **p-Value** | **Magnitude of change** | **Percent change in hospital prevalence relative to ICD-9 time period (95% CI)** |
| **Central Nervous System** |  |  |  |  |
| Anencephaly | 0.44 | 0.024 | **↑↑** | 64.9 (8.9, 120.9) |
| Encephalocele | -0.01 | 0.983 | –– | -0.5 (-48.3, 47.3) |
| Holoprosencephaly | -7.48 | <0.001 | **↓↓** | -83.0 (-95.2, -70.8) |
| Spina bifida without anencephaly | 0.05 | 0.940 | –– | 0.8 (-20.7, 22.3) |
| **Eye** |  |  |  |  |
| Anophthalmia/microphthalmia | -0.30 | 0.287 | –– | -21.3 (-61.0, 18.4) |
| Congenital cataract | 0.03 | 0.919 | –– | 2.3 (-41.8, 46.3) |
| **Ear** |  |  |  |  |
| Anotia/microtia | 0.43 | 0.132 | –– | 27.2 (-8.4, 62.9) |
| **Cardiovascular** |  |  |  |  |
| ***Primary critical congenital heart defects*** |  |  |  |  |
| Common truncus | -0.38 | 0.094 | –– | -29.3 (-63.8, 5.2) |
| Hypoplastic left heart syndrome | 1.75 | 0.018 | **↑** | 24.6 (4.4, 44.8) |
| Pulmonary valve atresia and stenosis | -0.15 | 0.870 | –– | -1.3 (-17.4, 14.8) |
| Pulmonary valve atresia **b** | -0.49 | 0.160 | –– | -17.8 (-42.9, 7.3) |
| Tetralogy of Fallot | 0.92 | 0.357 | –– | 9.1 (-10.5, 28.8) |
| Total anomalous pulmonary venous connection | 0.88 | <0.001 | **↑** | 40.6 (18.8, 62.5) |
| Transposition of the great arteries | 1.08 | 0.055 | –– | 22.0 (-0.5, 44.4) |
| Dextro-Transposition of great arteries **b** | 1.19 | 0.006 | **↑** | 29.5 (8.7, 50.4) |
| ***Secondary critical congenital heart defects*** |  |  |  |  |
| Coarctation of aorta | -0.91 | 0.124 | –– | -8.5 (-19.3, 2.4) |
| Double outlet right ventricle | -1.10 | 0.024 | **↓** | -22.7 (-42.3, -3.1) |
| Ebstein anomaly | 0.17 | 0.542 | –– | 12.1 (-27.4, 51.5) |
| Interrupted aortic arch **c** | 8.07 | <0.001 | **↑↑↑** | 771.3 (701.9, 840.7) |
| Single ventricle | -0.09 | 0.779 | –– | -3.6 (-29.3, 22.0) |
| Tricuspid valve atresia and stenosis | -0.29 | 0.370 | –– | -12.2 (-39.4, 14.9) |
| ***Other congenital heart defects*** |  |  |  |  |
| Aortic valve stenosis | 0.10 | 0.759 | –– | 5.5 (-30.0, 40.9) |
| Atrial septal defect | -4.87 | 0.520 | –– | -2.5 (-10.4, 5.3) |
| Atrioventricular septal defect | 1.36 | 0.066 | –– | 18.1 (-1.3, 37.4) |
| Ventricular septal defect | 1.32 | 0.619 | –– | 2.0 (-5.9, 9.8) |
| **Orofacial** |  |  |  |  |
| Choanal atresia | 0.00 | 0.990 | –– | -0.1 (-30.3, 30.0) |
| Cleft lip alone (without cleft palate) | 0.04 | 0.933 | –– | 0.9 (-21.4, 23.3) |
| Cleft lip with cleft palate | -0.51 | 0.502 | –– | -4.6 (-18.3, 9.1) |
| Cleft palate alone (without cleft lip) | -0.33 | 0.686 | –– | -3.0 (-17.6, 11.7) |
| **Gastrointestinal** |  |  |  |  |
| Biliary atresia | 2.98 | <0.001 | **↑↑↑** | 132.1 (99.5, 164.6) |
| Esophageal atresia / tracheoesophageal fistula | -1.15 | 0.017 | **↓** | -27.0 (-48.9, -5.0) |
| Rectal and large intestinal atresia/stenosis | -0.51 | 0.481 | –– | -5.6 (-21.5, 10.3) |
| Small intestinal atresia/stenosis | -0.57 | 0.420 | –– | -9.6 (-33.3, 14.1) |
| **Genitourinary** |  |  |  |  |
| Bladder exstrophy | 0.03 | 0.836 | –– | 7.0 (-60.7, 74.8) |
| Cloacal exstrophy | -8.25 | <0.001 | **↓↓↓** | -102.8 (-117.5, -88.0) |
| Congenital posterior urethral valves | -0.49 | 0.113 | –– | -28.8 (-64.6, 7.1) |
| Hypospadias | -0.88 | 0.537 | –– | -2.4 (-10.2, 5.4) |
| Renal agenesis/hypoplasia | -0.86 | 0.164 | –– | -13.8 (-33.4, 5.8) |
| **Musculoskeletal** |  |  |  |  |
| Clubfoot | 5.18 | <0.001 | **↑** | 30.9 (20.1, 41.7) |
| Diaphragmatic hernia | 1.01 | 0.030 | **↑** | 21.0 (2.1, 39.9) |
| Gastroschisis | -0.15 | 0.796 | –– | -2.5 (-21.6, 16.6) |
| Limb deficiencies (reduction defects) | 0.31 | 0.532 | –– | 8.1 (-17.6, 33.7) |
| Omphalocele | -0.02 | 0.960 | –– | -0.7 (-27.0, 25.7) |
| **Chromosomal** |  |  |  |  |
| Deletion 22 q11.2 | -0.56 | 0.007 | **↓↓** | -74.2 (-126.8, -21.6) |
| Turner syndrome | 0.18 | 0.405 | –– | 16.1 (-22.4, 54.7) |
| Trisomy 13 | -0.45 | 0.100 | –– | -39.5 (-86.8, 7.8) |
| Trisomy 18 | 0.28 | 0.380 | –– | 11.6 (-14.6, 37.8) |
| Trisomy 21 (Down syndrome) | 1.34 | 0.422 | –– | 5.3 (-7.8, 18.4) |
| **a** ICD-9-CM period: Hospitalizations in which the discharge was made between January 1, 2012 and September 30, 2015. ICD-10-CM period: Hospitalizations in which the discharge was made between October 1, 2015 and December 31, 2016.  **b** Green arrows: ICD-9-CM to ICD-10-CM transition resulted in a statistically significant decrease in the observed hospital prevalence rate of the birth defect.  **↓** = <50% decrease **↓↓** = 50-99% decrease **↓↓↓** = ≥100% decrease  Red arrows: ICD-9-CM to ICD-10-CM transition resulted in a statistically significant increase in the observed hospital prevalence rate of the birth defect.  **↑** = <50% increase **↑↑** = 50-99% increase **↑↑↑** = ≥100% increase  Horizontal dash: ICD-9-CM to ICD-10-CM transition did not result in a statistically significant change in the observed hospital prevalence rate of the birth defect. | | | | |

**Supplemental Figures. Impact of the ICD-9-CM to ICD-10-CM code transition on monthly hospital prevalence estimates for major birth defects, National Inpatient Sample, 2012-2016**

An example of the guide to interpreting each figure is below.



