

# Hospitalization Charges for Children with Birth Defects in Texas, 2001-2010

Moffit KB, Case AP, Farag NH, Canfield MA. Hospitalization charges for children with birth defects in Texas, 2001-2010. Birth Defects Res A Clin Mol Teratol. 2016; 106(3): 155-163.

*Previous studies have shown that children with birth defects are more likely to suffer from long-term disabilities and illness compared to children without birth defects, often requiring hospitalization. This study looked at data on hospital charges and length of stay for specific birth defects, and identified the defects associated with the highest hospital charges and longest stays in Texas, including charges paid by Medicaid.*

For this study, data on children ages 0-17 years and hospitalized in Texas between 2001 and 2010 were extracted from the Texas Hospital Inpatient Public Use Data File (provided by the Center of Health Statistics, Texas Department of State Health Services). A total of 431,296 hospitalizations with birth defects as a principal or secondary diagnosis were identified in this age group over the 10 years of the study. Aggregate, mean, and median hospitalization charges and mean and median length of stay were calculated for each birth defect group; payer information was also analyzed.

## Main Findings from this Research

- ◇ Mean and median pediatric hospitalization charges associated with birth defect diagnoses were approximately five-fold higher than charges for all other pediatric hospitalizations.
- ◇ Nine of the ten conditions with the highest aggregate charges were cardiovascular defects. The three conditions with the highest charges were: hypoplastic left heart syndrome, transposition of the great arteries, and tetralogy of Fallot. Hypoplastic left heart syndrome alone approached ½ billion dollars in aggregate charges.
- ◇ Pyloric stenosis, a condition in which there is a narrowing of the outlet from the stomach to the small intestine, was associated with the greatest number of hospitalizations, but with shorter hospital stays and lower charges. Cardiovascular defects (e.g. ventricular and atrial septal defects, transposition of the great arteries, tetralogy of Fallot) also accounted for a large number of hospitalizations.
- ◇ Mean length of stay was more than double for children with birth defects compared to children without birth defects (9.7 days vs. 3.7 days, respectively).
- ◇ Looking at a smaller dataset from 2004-2010, total hospital charges for congenital anomalies approached 1 billion dollars, with over ½ billion dollars charged to Medicaid.

## Conclusion and Discussion

This study supports previous findings that birth defects contribute appreciably to charges and length of stay for pediatric hospitalizations. Information on characteristics of hospitalizations of children with birth defects can improve understanding of treatment and health care financing policies. The findings from this study are consistent in some ways and discrepant in some ways with other literature on this topic. Factors that could account for the discrepancies include lower rates of insurance coverage for children in Texas, use of only inpatient hospitalization data, calculation of charges rather than cost, and exclusion of babies who die immediately after birth from the study population.

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