

Statistical Fact Sheet 2013 Update

Congenital Cardiovascular Defects

Congenital cardiovascular defects, also known as congenital heart defects, are structural problems that arise from abnormal formation of the heart or major blood vessels. ICD-9 lists 25 congenital heart defects codes, of which 21 designate specified anatomic or hemodynamic lesions. Defects range in severity from tiny pinholes between chambers that may resolve spontaneously to major malformations that can require multiple surgical procedures before school age and may result in death in utero, in infancy, or in childhood.

The common complex defects include the following:

- Tetralogy of Fallot (TOF)
- Transposition of the great arteries
- Atrioventricular septal defects (ASD)
- Coarctation of the aorta
- Hypoplastic left heart syndrome

Incidence

- Congenital heart defects are serious and common conditions that have significant impact on morbidity, mortality, and healthcare costs in children and adults.
- The most commonly reported incidence of congenital heart defects in the United States is between 4 and 10 per 1,000, clustering around 8 per 1,000 live births.
- Continental variations in birth prevalence have been reported, from 6.9 per 1000 births in Europe to 9.3 per 1000 in Asia.
- An estimated minimum of 32,000 infants are expected to be affected each year in the United States. Of these, an approximate 25%, or 2.4 per 1,000 live births, require invasive treatment in the first year of life.

Prevalence

- It is estimated that the total number of adults living with congenital heart disease in the United States in 2000 was 800,000.
- In the United States, 1 in 150 adults are expected to have some form of congenital heart disease.
- The most common types of defects in children are (at a minimum) ventricular septal defects, 620,000 people; ASD, 235,000 people; valvular pulmonary stenosis, 185,000 people; and patent ductus arteriosus, 173,000 people. The most common lesions seen in adults are ASD and TOF.

Mortality

- Mortality related to congenital cardiovascular defects in 2009 was 3,189. Any-mention mortality related to congenital cardiovascular defects in 2009 was 5,051.
- In 2009, congenital cardiovascular defects were the most common cause of infant death resulting from birth defects; 26.6% of infants who died of a birth defect had a heart defect.
- The mortality rate attributable to congenital heart defects in the United States has continued to decline from 1979 to 1997 and from 1999 to 2006.
- The 2009 death rate attributable to congenital cardiovascular defects was 1.0. Death rates were 1.1 for white males, 1.4 for black males, 0.9 for white females, and 1.2 for black females. Infant mortality rates (<1 year of age) were 31.4 for white infants and 42.2 for black infants.

Congenital Heart Defects - 2012 Statistical Fact Sheet

Hospitalizations & Costs

- In 2004, hospital costs for congenital cardiovascular defect conditions totaled \$2.6 billion. The highest aggregate costs were for stays related to cardiac and circulatory congenital anomalies, which accounted for ≈\$1.4 billion, more than half of all hospital costs for birth defects.
- In 2009, 52,000 U.S. adults and children (25,000 males; 27,000 females) diagnosed with congenital heart defects were discharged from short-stay hospitals.

For additional information, charts and tables, see Chapter 15
[Heart Disease & Stroke Statistics - 2013 Update.](#)

Additional charts may be downloaded directly from the online publication at:

<http://circ.ahajournals.org/lookup/doi/10.1161/CIR.0b013e31828124ad> Or at: www.heart.org/statistics

The American Heart Association requests that this document be cited as follows:

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If you have questions about statistics or any points made in the 2013 Statistical Update, please contact the American Heart Association National Center, Office of Science & Medicine at statistics@heart.org.

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