

US death rate from congenital heart defects continues to decline

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The U.S. death rate from congenital heart defects dropped 24 percent from 1999 to 2006 among children and adults, according to research reported in *Circulation: Journal of the American Heart Association*.

A [congenital heart defect](#) was the underlying cause of 27,960 deaths — an age-standardized rate of 1.2 deaths per 100,000 people — based on data from [death](#) certificates.

In a comparable study published in *Circulation* in 2001, deaths due to congenital heart defects dropped 39 percent from 1979 to 1997.

Congenital heart defects are structural abnormalities of the heart at birth. A variety of conditions are classified as congenital heart defects, ranging from milder problems to more severe malformations. Congenital heart defects can increase risk for other medical conditions including arrhythmias (irregular heartbeats), congestive heart failure and high blood pressure in the arteries that supply blood to the lungs.

Infant deaths consistently account for the highest proportion of deaths due to congenital heart defects, said Suzanne Gilboa, Ph.D., lead author of the study.

In the study, 48 percent of the deaths were among infants. The researchers also reported:

- Death rates from congenital heart defects were highest among non-Hispanic blacks compared with other groups.
- Findings for Hispanics were less consistent; in some age groups, death rates among Hispanics were comparable to those among whites, and in other age groups, death rates were lower among Hispanics than among whites.
- The decline in deaths from congenital heart defects was about 15 percent for all racial-ethnic groups other than whites, and more than 25 percent among whites. "That population (non-Hispanic whites) is the largest subgroup and is driving the decline in the population overall," said Gilboa, an epidemiologist at the National Center on Birth Defects and Developmental Disabilities, part of the Centers for Disease Control and Prevention (CDC) in Atlanta, Ga.
- Death rates from congenital heart defects were higher among males than females, except in people over age 65. This is consistent with earlier findings, Gilboa said.
- Hypoplastic left heart syndrome, an underdeveloped left side of the heart, was the most common fatal congenital heart defect listed, accounting for about 10 percent of the cases.
- A congenital heart defect was listed as the underlying or contributing cause in a total of 41,000 deaths.

The death certificate is filled out at the time of death by healthcare providers before an autopsy is done and often based on limited information on the medical history of the deceased. Consequently, death certificate reports of causes of death are not always accurate and data from such reports can be inconsistent, Gilboa said.

The researchers said that based on their analysis of death certificate data, it was not possible to determine the reason for the overall decline in the death rate from congenital heart defects. But improvements in technology for diagnosis and medical care for heart problems in infants and children probably play a key role, Gilboa said. Because a substantial number of infant deaths continue to be attributed to congenital heart defects, there is a need to identify modifiable risk factors for infant mortality.

This study highlights that congenital heart defects can be chronic conditions with health implications across the lifespan. As more children with congenital heart defects are surviving into adulthood, these patients are likely to leave the care of pediatric cardiologists and seek care from cardiologists who treat adults.

"The Congenital Public Health Consortium (CHPHC), which includes the CDC and other leading public health organizations, has found that the role of the adult cardiologist continues to be critical in the battle against congenital heart defects. These providers face the challenge of managing the care of adults with heart disease as well as understanding the long-term effects of congenital heart defects," Gilboa said.

Provided by American Heart Association

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