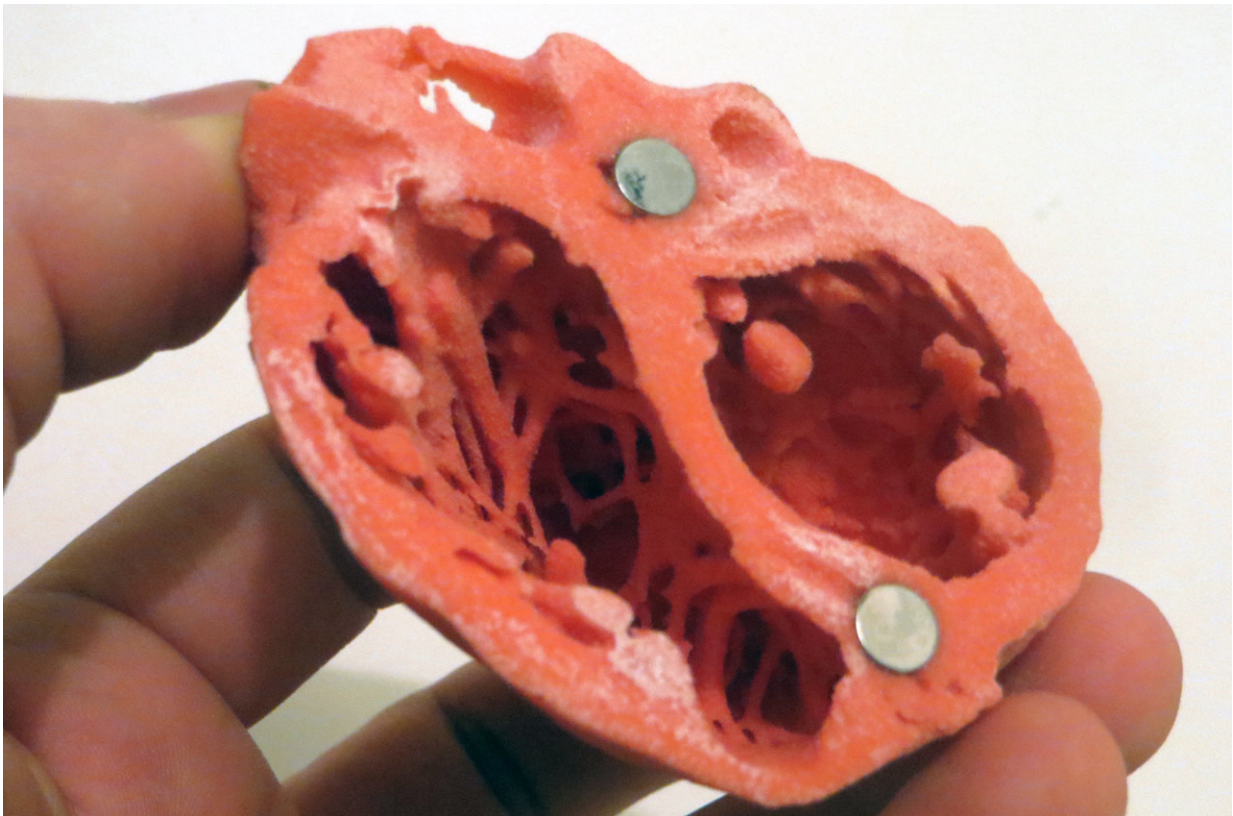


Worse outcomes for Hispanic infants with critical congenital heart disease

October 10 2018



3D Model of the heart by Dr. Matthew Bramlet. Credit: NIH

Hispanic infants with critical types of congenital heart disease have worse outcomes in their first year than do their non-Hispanic white counterparts, a difference largely driven by their mother's level of

education and type of insurance coverage, according to new research in *Journal of the American Heart Association*, the Open Access Journal of the American Heart Association/American Stroke Association.

The investigators focused on two heart defects: hypoplastic left heart syndrome and d-transposition of the great arteries, both of which require neonatal surgery to correct the problem. With hypoplastic left heart syndrome, the left side of the heart is underdeveloped in the womb and the aorta and left ventricle are too small. In infants born with d-transposition of the great arteries, two of the main arteries are connected to the wrong side of the heart.

Consistent with other studies, the researchers found that Hispanic infants had less favorable outcomes in the form of one-year mortality or the number of readmissions up to 1 year of age as compared to non-Hispanic White infants with the same defects. A mother's education level and insurance status appeared to explain a large portion of this disparity among the infants.

"The findings from this paper begin to increase our awareness of non-medical factors that can impact the outcome of children with complex [congenital heart disease](#)," said lead investigator Shabnam Peyvandi, M.D., an assistant professor at the University of California in San Francisco, California.

The researchers studied one-year survival and the number of readmissions up to 1 year of age, together with key socioeconomic variables, in a representative population sample from a large database maintained by the California Office of Statewide Health Planning and Development. The database maintains records on more than three million births from the years 2007-2012.

Each mother's economic and educational status, age, infant prematurity

and birth weight were all considered, as was as the location of the hospital where the child was born—rural, intermediate or urban.

Hispanic mothers were younger, had fewer years of education, higher rates of public insurance, more often lived in cities and their infants were more likely to have been born in community hospitals. Their infants were also small for gestational age compared to non-Hispanic white infants.

The researchers reported that only 22 percent of Hispanic mothers had greater than 12 years of school, while the rate for non-Hispanic white mothers was 70 percent. In terms of health insurance, 69 percent of non-Hispanic White mothers had private coverage versus just 23.5 percent of Hispanic women.

While insurance status and maternal education levels appeared to play a significant role in outcome, other socioeconomic factors not considered in the study, such as income, access to care and occupation, could have contributed to a large percentage of the disparity, the researchers noted.

"This study demonstrates the socioeconomic factors that can in part explain the disparities seen between Hispanic infants with congenital heart disease compared to white [infants](#)," said Peyvandi. "Maternal education levels likely act as a proxy for other [socioeconomic factors](#) that may impede access to care and available resources to certain communities. Community engagement and outreach to at-risk communities are initial steps in identifying specific barriers to healthcare access with a goal of improving outcomes for all children with congenital [heart](#) disease."

Provided by American Heart Association

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