

Costs vary widely for care of children with congenital heart defects across US hospitals

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Costs of care differ significantly across hospitals for children born with heart defects, according to new research led by a University of Michigan researcher. Congenital heart defects are known to be the most common birth defects, impacting nearly 1 in every 100 births.

The cost of care for children with [congenital heart disease](#) undergoing surgical repair varied as much as nine times across a large group of U.S. children's hospitals, says lead author Sara K. Pasquali, M.D., M.H.S., associate professor of pediatrics at the University of Michigan Medical School and C.S. Mott Children's Hospital Congenital Heart Center.

"Before we conducted this study study, there was limited information on the costs associated with caring for these children, even though this is one of the most common and expensive conditions treated across children's hospitals," says Pasquali about the research published today in the journal *Pediatrics*.

Pasquali and her co-authors studied 12,718 patients from 27 U.S. children's hospitals and found wide variation between hospitals in costs associated with [congenital heart surgery](#) for nearly every operation examined. These differences were apparent even after accounting for differences in patient characteristics across hospitals, and for regional differences in cost.

The investigators also evaluated potential reasons for this wide variation across hospitals. They found that hospitals with higher case volumes had

significantly lower costs for the most complex operations.

In addition, the researchers also found that the highest cost hospitals had higher rates of post-operative complications, and their patients tended to stay in the hospital for a longer period of time after surgery.

For example, the study found that hospitals with the highest costs after the Norwood operation had double the rate of major complications compared with hospitals with the lowest costs. In addition, the higher cost hospitals had an average length of stay after the Norwood operation nearly twice as long as the low cost hospitals. Norwood operations are performed on patients with hypoplastic left heart syndrome – a birth defect that ranks at the top of the list for highest health care resource utilization.

"In this era of rising health care costs, there is an increasing need to provide care more efficiently and reduce costs," says Pasquali. "The cost variations we found in this study suggest there is ample room for improvement, and also suggest a link between high quality care and lower cost. For example, initiatives aimed at reducing length of stay and complication rates have the potential to both improve quality and also lower costs."

"More research is needed in order to better understand how hospitals may achieve improvements in this area," says Pasquali. "Data from our institution and others suggest that standardization of practice may be important."

For example a recent study conducted by the Michigan Congenital Heart Center showed that standardizing care for children who develop a chylothorax (fluid accumulation) after surgery led to earlier diagnosis, significantly reduced time on the ventilator, and decreased length of [hospital](#) stay.

"Better ways to share these best practices among hospitals is needed, Pasquali says. " We hope that this research is a catalyst to engage hospitals in working together to both improve quality and lower costs of care for these patients."

More information: *Pediatrics* [DOI: 10.1542/peds.2013-2870](https://doi.org/10.1542/peds.2013-2870)

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