

Nemours Children's Health Researchers Are Advancing Children's Heart Health

Researchers will highlight new information about testing for abnormal cholesterol in childhood, developmental health for children with congenital heart disease, and the use of AI in kids' cardiac care

NEW ORLEANS (November 7, 2025)— Researchers from Nemours Children's Health will discuss some of the most critical topics in children's cardiovascular health at the American Heart Association (AHA) Scientific Sessions 2025, held November 7-10 in New Orleans.



Highlights of Nemours presentations include:

Screening children for high cholesterol

High cholesterol in children, and other pediatric lipid disorders, are among the most treatable causes of cardiovascular disease. Early detection of high cholesterol allows healthcare providers to suggest diet and exercise interventions, as well as to refer to recommended subspecialty care when needed—efforts that can potentially prevent long-term cardiovascular problems. The American Academy of Pediatrics recommends that all children undergo a cholesterol test between age 9 and 11, and again between age 17 and 21. However, estimates indicate that fewer than half of children in the United States receive a lipid screening,

Carissa M. Baker-Smith, MD, Director of the Nemours Preventive Cardiology Program and Director of Research in the Nemours Children's Heart Center in Delaware, co-led an initiative in primary care practices to increase the rate of lipid screening. The initiative recommended screening for all patients, with additional targeted efforts for patients with a family history of high cholesterol. The combined initiative raised screening rates from 36% to over 80% in children 9-11 years of age. Baker-Smith will also moderate a session titled "Lessons Learned: School Health is Cardiovascular Health."

Improving neurodevelopmental outcomes for patients with congenital heart disease

Thanks to advances in the care and treatment of babies born with congenital heart disease (CHD), more than 90% of pediatric CHD patients in the United States survive into adulthood. However, many of them will experience neurodevelopmental delays due to a variety of factors, including underlying genetic conditions or effects of treatment.

Erica Sood, PhD, Director of the Nemours Cardiac Learning and Early Development (LEAD) Program, will provide the latest guidance about how to integrate AHA guidelines into clinical practice to enhance neuroprotection and neurodevelopmental outcomes. In 2024, Sood served as lead author of the AHA's statement on Neurodevelopmental Outcomes for Individuals with Congenital Heart Disease.

Harnessing AI to help prevent CHD patients from experiencing gaps in care

Lifelong continuity of care is essential for individuals with congenital heart disease. However, gaps in care remain common and are associated with adverse health outcomes.

Abbas Zaidi, MD, Pediatric Cardiologist with Nemours Children's Health, Delaware Valley, developed a machine learning model based in artificial intelligence to try to predict which patients were most at risk of experiencing gaps in care. He will present results of the model's accuracy and will discuss potential strategies for preventing gaps in patients' medical care.

"We know that early diagnosis and intervention regarding pediatric cardiac conditions is critical to child health, because such conditions are a major threat to child health across the United States. Our clinicians and researchers at Nemours Children's Health are dedicated to helping ensure these children live long and healthy lives," said Matthew M. Davis, MD, MAPP, Executive Vice President, Enterprise Physician-in-Chief and Chief Scientific Officer, Nemours Children's Health. "Advances in cardiovascular medicine have saved and improved the lives of countless kids, and this research continues to build upon that foundation to create the healthiest generations of children."

Additional studies from Nemours researchers include:

- Increasing Biomarkers of Systemic Inflammation after Pediatric Cardiac Arrest are Associated with Hospital Mortality: A Preliminary Report from a Prospective Cohort Study, presented by Monique M. Gardner, MD, Chief, Division of Cardiac Critical Care Medicine, Nemours Children's Health, Delaware Valley.
- Preoperative Blood Biomarkers Outperform Clinical Variables in Predicting Poor Outcome After Neonatal Cardiopulmonary Bypass Surgery, also presented by Dr. Gardner.
- Distinct Clinical Differences Between Right Aortic Arch with Aberrant Left Subclavian Artery and Double Aortic Arch, presented by Takeshi Tsuda, MD, Pediatric Cardiologist, Nemours Children's Health, Delaware Valley.
- Angiotensin Converting Enzyme Polymorphism (ACE-I/D) Do Not Predict Cardiac Remodeling or Exercise Performance Changes in Adolescents Following Athletic Conditioning, presented by Kristian C. Becker, Pediatric Cardiologist, Nemours Children's Hospital, Delaware.

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About Nemours Children's Health

Nemours Children's Health is one of the nation's largest multistate pediatric health systems, which includes two freestanding children's hospitals and a network of more than 70 primary and specialty care practices. Nemours Children's seeks to transform the health of children by adopting a holistic health model that utilizes innovative, safe, and high-quality care, while also addressing children's needs well beyond medicine. In producing the highly acclaimed, award-winning pediatric medicine podcast Well Beyond Medicine, Nemours underscores that commitment by featuring the people, programs and partnerships addressing whole child health. Nemours Children's also powers the world's most-visited website for information on the health of children and teens, Nemours KidsHealth.org.

The Nemours Foundation, established through the legacy and philanthropy of Alfred I. duPont, provides pediatric clinical care, research, education, advocacy, and prevention programs to the children, families and communities it serves. For more information, visit Nemours.org.

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