Medical Xpress

Survey of CVD programs finds more resources needed for heart disease and stroke risk in youth

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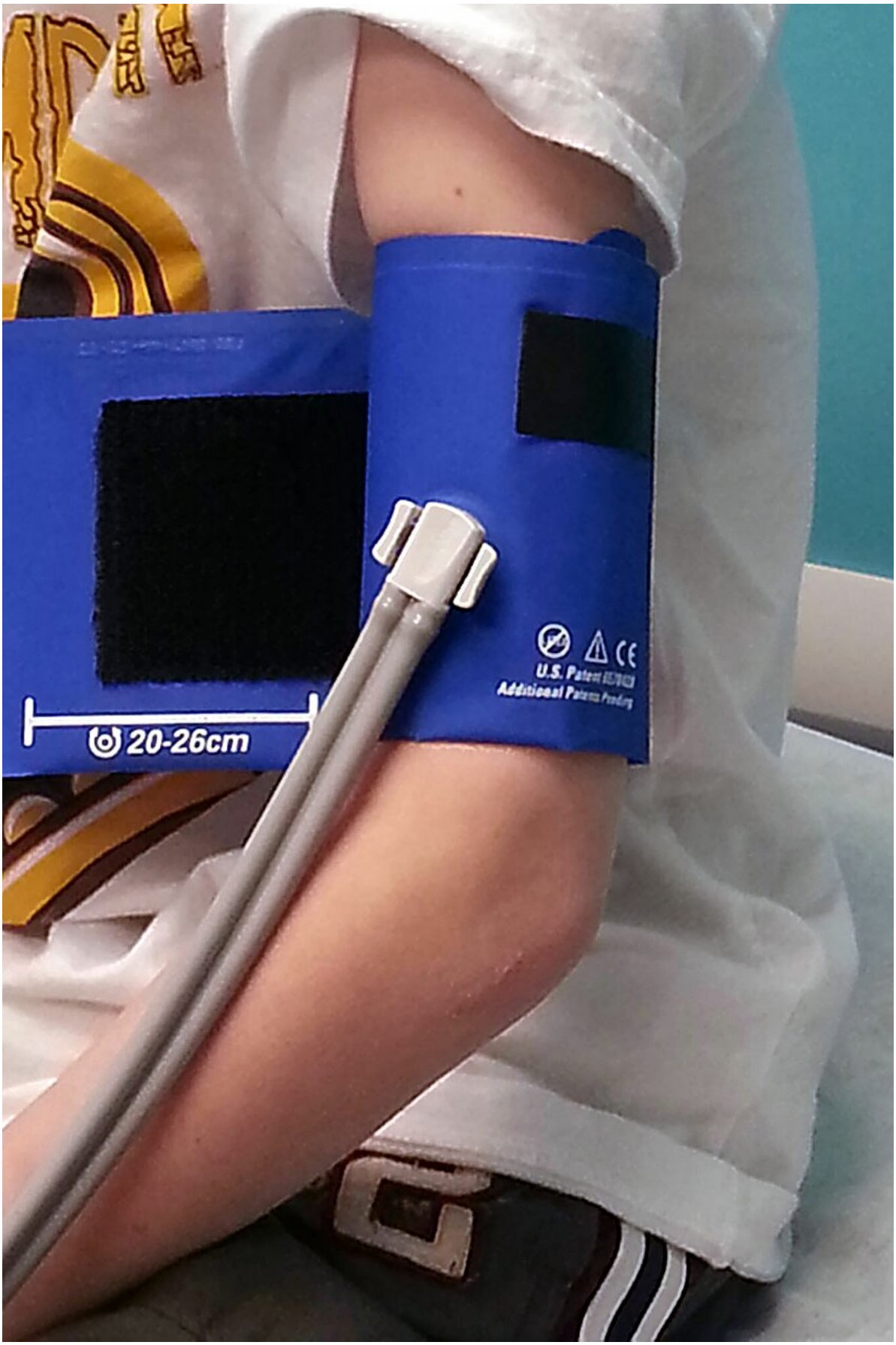
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Blood pressure cuff on a child. Credit: American Heart Association

More adolescents and teens are developing health conditions that may increase their risk of premature cardiovascular disease in adulthood, therefore, early screening, diagnosis and multidisciplinary care are vital.

A new survey of cardiovascular care centers in the U.S. and Canada found that there are not enough resources to meet the needs for pediatric preventive cardiology care, and the survey results are detailed in a new American Heart Association science advisory, published today in the Association's journal *Circulation: Cardiovascular Quality & Outcomes*.

The advisory is the first to address the status of pediatric preventive cardiology (PPC) programs in the U.S. and Canada and present a roadmap for the future of the field.

It reports that 39% of U.S. youth ages 12–19 are diagnosed as having overweight or obesity, 53% have abnormal lipids, 18% have prediabetes and 15% have elevated blood pressure. Children with these conditions have an increased risk of having a heart attack or stroke by the time they reach their 40s or 50s, according to previous research.

"Cardiovascular disease risk factors starting in childhood have important implications for health, quality of life, health care costs and societal costs across the whole life course," said Amanda Marma Perak, M.D., M.S., FAHA, chair of the science advisory writing committee and an assistant professor of pediatrics (cardiology) and preventive medicine at Northwestern University's Feinberg School of Medicine in Chicago.

PPC programs have been independently established across the United States and Canada to address cardiovascular disease risk factors before adulthood and prevent the development of cardiovascular disease. Unfortunately, many programs report being overwhelmed with referrals and have long wait times for appointments. Clinicians also report the need for updated guidelines for treating cardiovascular risk factors in youth to ensure consistent care.

To assess the current state of pediatric preventive cardiology, the advisory writing committee surveyed two groups of health professionals. One survey was for directors of pediatric cardiology divisions at university hospitals; the survey included questions about characteristics of the practice and personal opinions about PPC program needs and logistics. These hospital division programs were classified as small, medium and large based on the number of cardiac surgeries performed annually.

The second survey was directed to lead clinicians at PPC programs across the United States and Canada, whether in a university setting or not. They were asked about current practices at the program, including the types of health professionals who are part of the team, therapies provided and future plans. The writing group received and analyzed responses from 53 division directors and 41 clinician leaders.

The survey of pediatric cardiology division directors revealed:

- Dedicated PPC programs are established in 65% of large pediatric cardiology divisions, 61% of medium-sized divisions and 17% of small divisions.
- The majority of respondents valued the programs, particularly to improve public health, manage patient volume and help generate research funding.
- They largely agreed that PPC programs should provide care for

children and teens with lipid disorders, high blood pressure, obesity or a family history of premature heart disease.
- When asked about staffing, most directors responded that personnel for a PPC program should include a preventive cardiologist, registered dietician, nurse practitioner or physician's assistant, and a registered dietitian.
- About half endorsed that a psychologist or behavioral therapist be part of the PPC team, and three out of four suggested a social worker be included.
- About one-third responded that a genetic counselor, vascular specialist, administrative assistant or research associate should also be on the PPC team.

The survey of PPC lead clinicians revealed:

- Demand exceeds supply, with appointment wait-times of three months or longer in one-third of PPC programs.
- While 37% of PPC clinicians were actively trying to build their programs, 34% reported being overwhelmed with referrals/new patient appointments.
- Despite the need for more PPC specialists, training opportunities are limited, with only two of 41 programs offering fellowship training.

"These findings emphasize the challenges with resources, even when everyone believes certain practices may be beneficial," said Perak, who is also an attending cardiologist at the Ann & Robert H. Lurie Children's Hospital of Chicago.

The advisory suggests policymakers, payers, hospitals and heart centers should invest resources into PPC programs, including support for psychosocial and behavioral care.

Among predefined options to prioritize the most urgent needs, new practice guidelines were ranked as the highest or high priority by four out of five PPC clinicians. In their written responses, PPC clinicians seemed eager to collaborate on best practices and ways to reduce variations in practice among clinics.

The advisory calls on professional societies and foundations to advocate for PPC programs and to support PPC education, training and opportunities for networking and collaboration. The writing group calls for new research to fill gaps in the evidence about how to best prevent heart disease and stroke in children with risk factors, particularly those with high blood pressure and high cholesterol.

They also identify the need to study novel ways to provide care and how to effectively implement lifestyle interventions in racially and economically diverse pediatric populations. The American Heart Association's Young Hearts Council will be exploring opportunities to respond to and support these needs.

"Based on these findings, our hope is that health systems and policymakers will be motivated to reconsider how resources might be realigned to better support this priority area among high-risk youth, before cardiovascular disease develops," said Perak.

According to the advisory, the key next steps include a comprehensive evidence review, updated guidelines and standards, and the development of a strategic action plan to advance PPC care.

More information: Amanda M. Perak et al, Toward a Roadmap for Best Practices in Pediatric Preventive Cardiology: A Science Advisory From the American Heart Association, *Circulation: Cardiovascular Quality and Outcomes* (2023). DOI: 10.1161/HCQ.0000000000000120

Provided by American Heart Association