



Our mission is to prevent disease, promote health and advance health equity through the integration of community engaged research, practice, policy and education.

For more information, visit:
www.umassmed.edu/prc

Pediatric Guideline Recommended Blood Pressure Screening: Health Record Data from a Massachusetts Healthcare System

Overview

Childhood high blood pressure (BP) is associated with adult cardiovascular disease, and therefore is increasingly seen as a critical public health issue. An estimated 10% of US children ages 8-17 years high BP (BP in the elevated or hypertensive range) and children who are Black or Hispanic are more likely to experience this condition. The American Academy of Pediatrics (AAP) issued clinical practice guidelines in 2017 recommending regular blood pressure (BP) screening in children and more frequent screenings for children at increased risk due to conditions such as obesity. Although in general these BP screening guidelines were followed, important differences were found at both the child and clinic levels related to social factors.

Researchers wanted to know

- How well are these screening guidelines followed in clinical practice?
- How do social factors influence adherence to blood pressure screening guidelines?

Study

This study measured how often blood pressure screening was in line with the 2017 guidelines from the American Academy of Pediatrics which recommend ≥ 1 BP screening for children with a BMI < 95 th percentile and BP screening at every healthcare visit for children with a BMI ≥ 95 th percentile. The sample consisted of 19,695 children aged 3-17 years who had been to a healthcare visit at 1 of the 27 pediatric or family medicine outpatient practices within the UMass Memorial Health system between January 1, 2018, and December 31, 2018. The researchers believed that the guidelines would be followed more often than in prior years but there would still be room for improvement. The researchers also suspected that those who experience higher social vulnerability may be less likely to receive the recommended screening. The study also found a high level of adherence to the 2017 AAP screening guidelines, indicating that most children received the recommended BP screenings. However, there were observed disparities in receiving BP screening which were related to BMI status and social vulnerability factors.

Bottom Line

Prevention and early detection of high bp in children is important. This work highlights the role of guideline adherence in addressing disparities in child hypertension. Improved prevention and management of BP in childhood may positively impact health equity.

Contact

Stephenie C. Lemon, PhD
Division of Preventive and Behavioral Medicine
Department of Population and Quantitative Health Sciences
UMass Chan Medical School 55 Lake Avenue N, Worcester, MA 01655
Stephenie.Lemon@umassmed.edu

Source

Goulding, M., Ryan, G., Frisard, C., Stevens, E. M., Person, S., Goldberg, R., Garg, A., & Lemon, S. C. (2023). Disparities in Receipt of Guideline-adherent Blood Pressure Screening: An Observational Examination of Electronic Health Record Data from a Massachusetts Healthcare System. *The Journal of pediatrics*, 261, 113592. Advance online publication. <https://doi.org/10.1016/j.jpeds.2023.113592>

Funding

This work was supported by the National Heart, Lung, and Blood Institute of the National Institutes of Health under Award Number F31HL164126 (M.G.) and NCI Grant #T32 CA172009 (G.R.). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. The funders did not play a role in the (1) study design, (2) collection, analysis, and interpretation of data, (3) writing of the report, or (4) decision to submit the manuscript for publication.



Spotlight on Results:

- 89% of children received BP screening at the frequency recommended by the guidelines
- The more frequent screening recommendation for children with high BMIs was only received by 57% of such children.
- Children with a BMI ≥ 95 th percentile, those with public insurance, and those attending clinics with higher Medicaid populations and larger patient groups were less likely to undergo BP screening that followed guidelines.

Call for Action

Clinical practice guidelines must be properly implemented because they can improve patient outcomes and help tackle health disparities. Addressing provider time limitations and implementing systems-level interventions is crucial to support adherence. An equity focused approach is also necessary to address social differences that can influence children's health.

- @PRCUMassChan
- @PRCUMassChan
- PRC at UMassChan