

Research finds 'very low rates' of dental fluoride varnish treatment for young children

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Fewer than 5% of well-child visits for privately insured young children included a recommended dental fluoride varnish application, despite mandatory insurance coverage for this service, according to a University of Massachusetts Amherst study.

Fluoride [varnish](#) helps reduce [tooth decay](#), which affects nearly 25% of

2- to 5-year-olds and more than half of 6- to 8-year-olds in the U.S., according to earlier studies.

The new research, published Aug. 30 in *JAMA Network Open*, was the first to assess delivery of this evidence-based service recommended by the U.S. Preventive Task Force and the American Academy of Pediatrics for privately insured children. Previous research showed that fewer than 8% of 1- to 5-year-olds covered by Medicaid receive fluoride varnish in medical settings.

While Medicaid in most states has paid for fluoride varnish applications for at least a decade, private insurance coverage was mandated in 2015 under the Affordable Care Act with no cost-share for families, explains lead author Kimberley Geissler, associate professor of health policy and management in the UMass Amherst School of Public Health and Health Sciences.

"Most kids are not getting fluoride varnish applications in the medical office," Geissler says. "I wasn't surprised due to the low rates we've seen in Medicaid-covered children, but I was disappointed that it wasn't higher. Medical providers are not required to do this; it's like a mammogram. It's recommended and it's good and they should do it, and the questions we were looking at were: do they do it and how often?"

Co-author and pediatrician Dr. Sarah Goff, associate professor of health policy and management at UMass Amherst, says knowing that very low rates of fluoride varnish application are found in both Medicaid and commercially insured populations is important because it suggests that broader, system-level barriers exist. "As a health services researcher and primary care pediatrician, I am excited about our next steps of learning what sorts of things are presenting barriers to applying fluoride varnish and developing strategies for overcoming these barriers so all eligible children receive this important preventive intervention," Goff says.

The *JAMA* study is part of a larger project in Massachusetts that will delve into more complex questions, such as *whymedical* providers aren't applying fluoride varnish during well-child visits. The preventive treatment is especially critical in light of the statistic that fewer than one in three children under age 5 have an annual dentist visit, where this service also could be provided.

The research team, including senior author Ashley Kranz of the RAND Corporation, examined data from 2016-2018 for privately insured young children in Connecticut, Maine, New Hampshire and Rhode Island.

The sample included 328,661 well-child visits in the four states. Fluoride varnish application was more common among visits for younger children. A 2-year-old was nearly 8 percentage points more likely to receive fluoride varnish than a 5-year-old, an analysis of the data showed.

Fluoride varnish applications were most common in Rhode Island, with a regression-adjusted probability of 8.7%. New Hampshire had the lowest rate, with a regression-adjusted probability of 2.2%.

Geissler points to one "hopeful takeaway" from the study: the regression-adjusted probability of fluoride varnish application increased from 3.6% in 2016 to 5.8% in 2018. "That's still really low," she says, "but it did go up over time."

The study concludes, "Although increases over time were encouraging, very low rates of [fluoride](#) varnish in medical settings suggest substantial expansion of this service in medical settings is critical for improving [children's](#) oral health and overall well-being."

More information: Kimberley H. Geissler et al, Dental Fluoride Varnish Application During Medical Visits Among Children Who Are

Privately Insured, *JAMA Network Open* (2021). DOI: [10.1001/jamanetworkopen.2021.22953](https://doi.org/10.1001/jamanetworkopen.2021.22953)

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