



Fluoride Varnish Application in Primary Care Settings

This fact sheet is Number 3 in a series of analyses regarding oral health in North Dakota.

Fluoride varnish is a pale yellow gel that is applied to a child's teeth using a soft brush. The gel sets quickly, and provides protection against tooth decay. Fluoride varnish has been scientifically proven to prevent or reduce decay, with a more significant effect when accompanied with regular brushing. It is recommended that pediatric patients begin receiving varnish twice a year by the age of two. The American Academy of Pediatrics (AAP) reports that varnish may be applied in the clinic setting two to four times per year beginning at six months of age. The number of treatments are determined by the risk of tooth decay.¹

In North Dakota, physicians, physician assistants, nurse practitioners, registered nurses, and licensed practical nurses may all assess oral health, apply fluoride varnish, and bill for these services in a primary care setting. Legislation passed in 2007 indicated that healthcare providers could assess oral health and provide varnish in an effort to help prevent tooth decay for high-risk children ages birth through 20 years. Though application has been a billable service, and is a recommendation of the AAP, it was believed that many in North Dakota were still not providing varnish to eligible patients. The Center for Rural Health (CRH) sought to identify how knowledgeable providers were about fluoride varnish application, and how many were providing and billing for the service.

Pediatricians & Family Practice Physicians

Of the 92 pediatricians that received an invitation to participate, 30 completed the survey for a 33% response rate. Of the 238 eligible family practice physicians that were notified of the survey, 22 completed it for a 9% response rate.

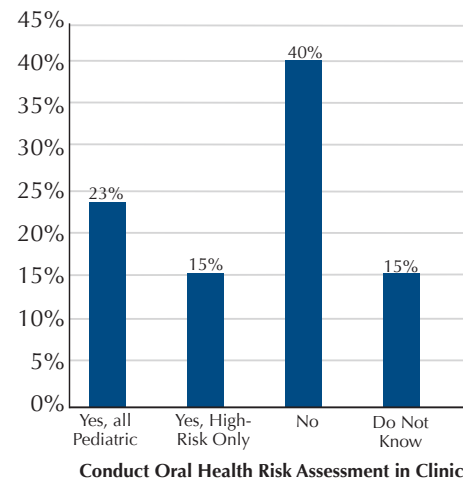
Oral Health Risk Assessments & Referral

Nearly all pediatricians (90%) and family practice physicians (96%) either agreed or strongly agreed that oral health was an important aspect of overall pediatric health. Fewer providers agreed/strongly agreed that oral health of pediatric patients was a primary concern for clinical providers (73% and 68% respectively).

The AAP recommends that all children, beginning at six months of age, should receive an oral health risk assessment by a health care professional; however:

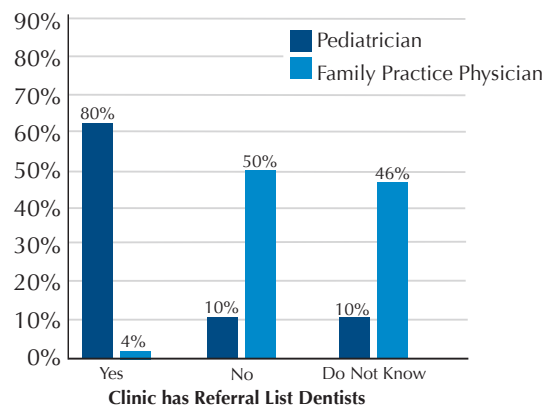
- Only 27% of pediatricians and 18% of family practice physicians indicated that there was an oral health risk assessment tool at their clinic.
- Roughly 38% of all providers conducted oral health risk assessments, but 1/3 of those only did so for at-risk patients.

Figure 1. Percent of Practices where Providers (pediatricians & family practice physicians) Conduct Oral Health Risk Assessments



While 92% of providers referred patients to a dentist when needed, family practice physicians were far less likely than pediatricians to have a list of dentists for patient referral.

Figure 2. List of Dentists for Referral



Fluoride Varnish Application

Only one respondent indicated that they, or someone within their clinic, applied fluoride varnish for all pediatric patients within a particular age group. A majority of pediatricians (60%) and family practice physicians (82%) replied that no one within the clinic provided varnish to any patient demographic.

- Only 10% of the providers had billed for fluoride varnish during the last year.
- Few providers (31%) believed that other providers were aware that it was a reimbursable service.
- Family practice physicians who had applied fluoride varnish were more likely to have billed for the service than pediatricians who had applied fluoride varnish.

Though there was a variability in the rate of fluoride varnish application, providers either agreed or strongly agreed that fluoride varnish was an effective preventative oral health care measure (90% of pediatricians and 82% of family practice physicians); no provider disagreed.

Conclusions

Providers were unaware that fluoride varnish was a reimbursable service, and family practice physicians did not know if varnish application was a quick and easy process. Rates of application and services billed were also low because providers were not knowledgeable on how to determine need for application.

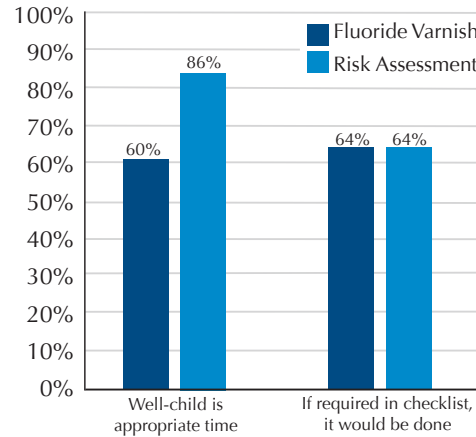
Providers believed that the guardians of their patients were generally unaware of varnish benefits as well. With an ill-informed set of patients, still only 23% of all offices offered informational flyers on oral health and fewer offered pamphlets (12%) on fluoride varnish.

When asked why they were not applying fluoride varnish, though they identified the service as an effective preventative oral health care measure, results indicated a lack of understanding on the importance of oral health for overall patient health. Providers identified a lack of support from their clinic, no policy or protocol in place, and a general impression that this would be the responsibility of the local dental providers; they did not “want to have any problems with turf.” Other identified barriers were training and time, with two others concerned about private insurance reimbursement and billing complications. What is evident is a need to address the importance of oral health for overall patient health, and to educate providers and guardians alike on the importance and benefits of fluoride varnish application in a clinical setting, especially among at-risk patients.

Recommendations

Providers agreed/strongly agreed that well-child visits were an appropriate time for both varnish application (60%) and the oral health risk assessment (86%). If required as part of the well-child checklist, many also believed they would be done. However, few are providing either service for even at-risk patients.

Figure 3. Risk Assessment & Varnish Application at Well-Child Visits



It is imperative to apply fluoride varnish in the primary care setting if health care professionals (dental and medical) are to prevent early tooth decay among the youngest, and most at-risk, patients in North Dakota.

Data

Data were derived from a survey of all pediatricians and family practice physicians. The surveys were disseminated electronically through the respective state chapters and associations.

For more information

Visit the CRH webpage for additional oral health publications and information. ruralhealth.und.edu/what-we-do/oral-health

Shawnda Schroeder, PhD

701.777.0787 • shawnda.schroeder@med.und.edu

Center for Rural Health

University of North Dakota

School of Medicine & Health Sciences

1301 North Columbia Road, Stop 9037, Suite E231

Grand Forks, ND 58202-9037

701.777.3848

ruralhealth.und.edu