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EXECUTIVE SUMMARY: FLUORIDE'S CRITICAL ROLE IN PREVENTING CARIES IN ADULTS AND SENIORS

Exclusive Survey Results



Executive Summary: Fluoride's critical role in preventing caries in adults and seniors

Data shows incidence of dental caries in adults signals an opportunity for improved care, education

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Executive Summary: Fluoride's critical role in preventing caries in adults and seniors

The important role fluoride plays in preventing dental caries has been well documented since community water fluoridation programs were first created in the mid 1940s. More than 75 years later, there has been a notable decline in tooth decay since the 1960s.[1] Yet, challenges persist in this fight to prevent dental caries for dentists, dental professionals, public health and the populations they serve. This white paper was created to share data and insight about the important role of a comprehensive approach to oral care that includes brushing, flossing and fluoride mouth rinses. It also focuses specifically on the emerging needs of adults as cited in the literature[1] examining the incidence of dental caries and untreated tooth decay in this important demographic of the population.



The Centers for Disease Control and Prevention (CDC) estimated that in 2018, "73.0% of the U.S. population on community water systems, or 207,426,535 people, had access to fluoridated water."[2] The challenge is that despite notable scientific advances in public health, improved access to dental care and improved oral health products, incidence of dental caries persists for all age groups, including adults. The incidence of dental caries was noted in 91% of adults 20-64. Almost one-third (27%) also experienced untreated tooth decay.[1] In addition, CDC data show high prevalence of dental caries and untreated dental caries for adults, including ages 35-49 and 50-64.[1]

This white paper offers dentists and dental health professionals a closer look at the results of a 2022 ADA Vendor Showcase survey[3], conducted on behalf of ACT® Professional, to better understand the oral health risks for adults and share practical approaches for dental professionals to help patients prevent dental caries through an active and comprehensive home care regimen between dental visits. A comprehensive approach to care includes brushing for 2 minutes twice daily, cleaning between teeth and rinsing with a fluoride mouth rinse.

The survey results[3]

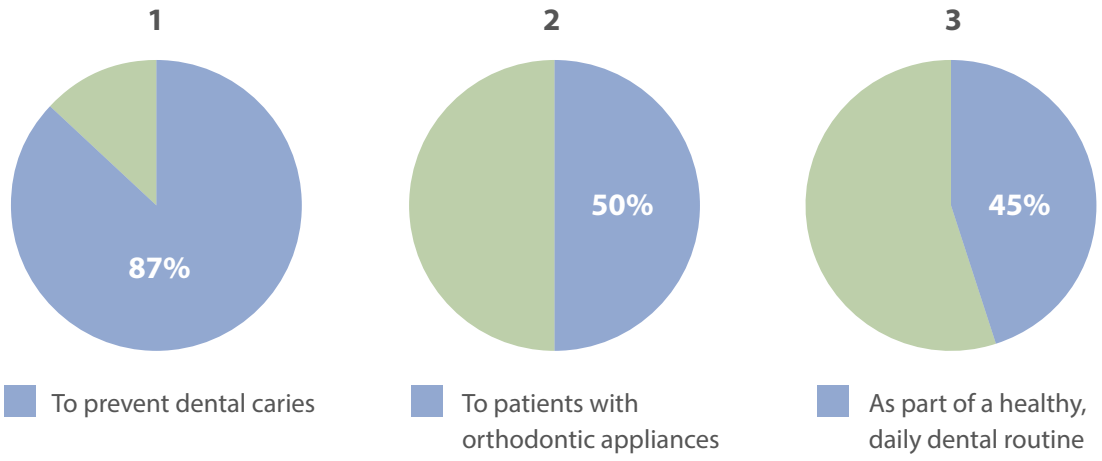
In 2022, ADA Vendor Showcase administered a survey questionnaire to dentists and dental health professionals to better understand their opinions about the use of an over-the-counter (OTC) fluoride mouth rinse and to document opinions about other fluoride trends.

The survey found that the majority of dentists routinely recommend using an OTC fluoride mouth rinse. In fact, 47% of the survey respondents say they often recommend its use, and 29% said they "sometimes" recommend it to their patients. Another 14% of respondents said they do recommend use of an OTC fluoride mouth rinse, but their recommendation is infrequent. Only 10% of survey

respondents reported they do not recommend use of an OTC fluoride mouth rinse. When this group was asked why not, the majority of respondents report routinely offering in-office fluoride treatments. Other responses noted that it was not a focus of the practice's home care program. Only 6% report that patients were resistant to fluoride use.[3]

When asked why dentists and dental professionals recommend an OTC fluoride mouth rinse to patients, the top three responses recorded included:

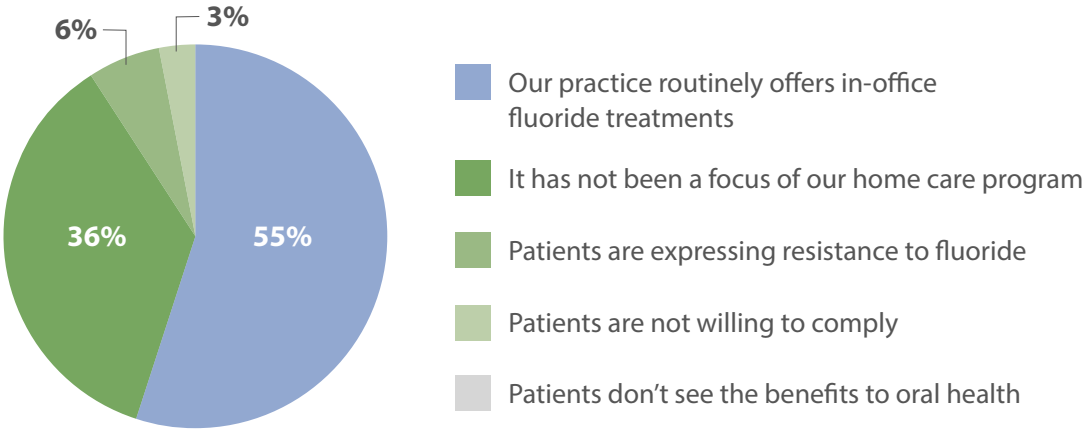
Why do you typically recommend an OTC fluoride mouth rinse to patients (Select top 3)[3]



Other responses included:

- **40%:** To patients at-risk due to lack of fluoride in drinking water
- **37%:** To patients who have a family history of dental caries
- **34%:** After a dental caries event
- **8%:** As daily maintenance after a fluoride varnish treatment
- **0.3%:** After patients lose a tooth

Of the small percentage of respondents (less than 10 percent of total respondents) who indicated they do not routinely recommend use of OTC fluoride mouth rinse to patients, they cited these reasons[3]:

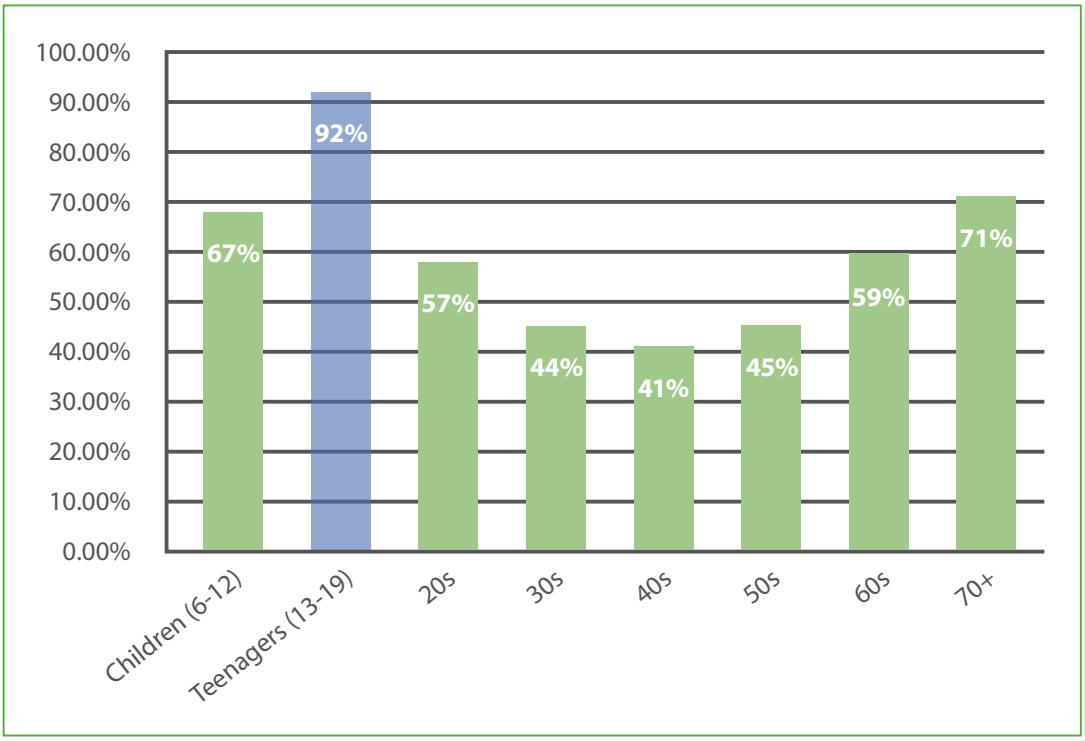


The survey also sought to better understand recommended use patterns of an OTC fluoride mouth rinse based on age.[3]

Importantly, the survey suggests that teenagers (13-19) were the most likely age group to receive a recommendation to use an OTC fluoride mouth rinse. Adults older than 70 were the second leading group.



To which age groups are you more likely to recommend use of an OTC fluoride mouth rinse? (Check all that apply.)



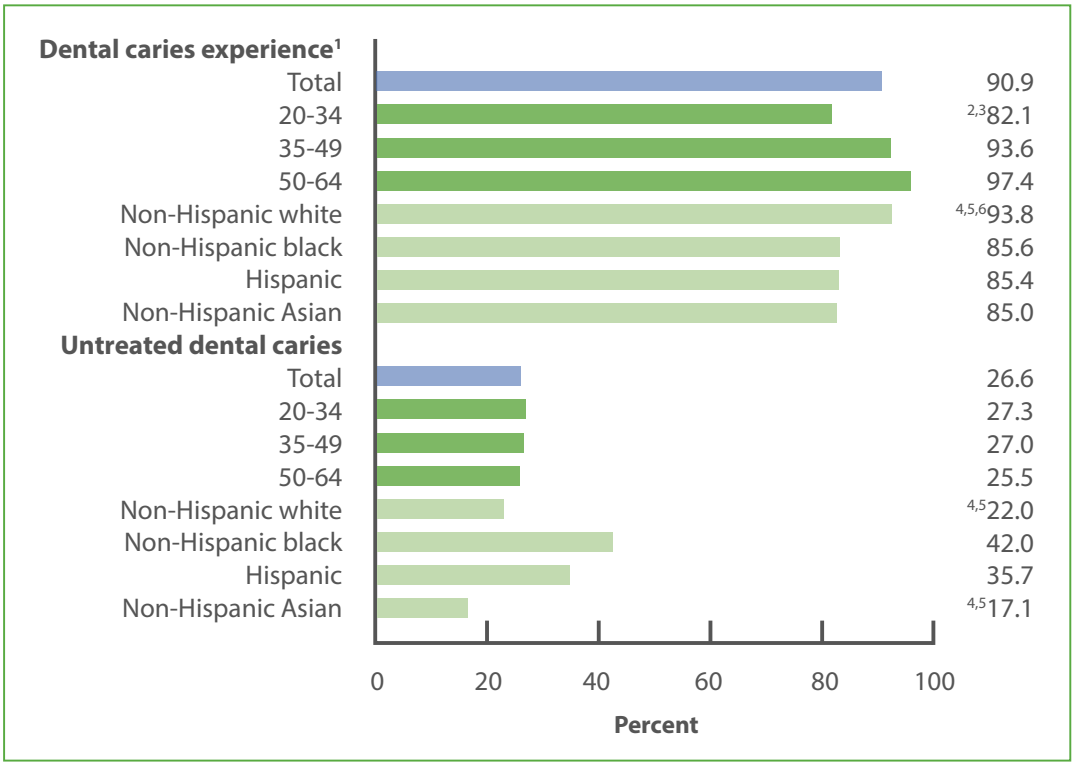
Source: ADA Vendor Showcase Survey, 2022



While the ADA Vendor Showcase survey results show a decline in dentist recommendations for use of a fluoride mouth rinse from ages 30-50, CDC's National Health and Nutrition Examination Survey, 2011-2012 depicts much higher prevalence of dental caries across age groups, race and Hispanic origin.[1] The results underscore an important educational opportunity to help adults reduce caries risk through this comprehensive approach to caries

prevention through homecare (brushing, flossing and rinsing) and regular dental care.

Prevalence of dental caries in permanent teeth among adults aged 20–64, by age and race and Hispanic origin: United States, 2011–2012[1]



Source: CDC/NCHS, National Health and Nutrition Examination Survey, 2011–2012

"With the 30-50 age range, I typically begin to see more recession, and root surface caries are much easier to progress, especially in the presence of xerostomia", explains Jennifer Edwards, RDH, with the State of Connecticut in the Department of Developmental Services, in Norwich, Conn. Christine Provenzano, RDH, from Kingston, N.Y., adds that caries risk factors of medications that cause xerostomia including cancer/head and neck radiation are important considerations for this age group as well.

Valoree Althoff, RDH, MHA, with Pinon Hills Dental in Farmington, N.M., explains that rinsing with a neutral sodium fluoride can reduce incidence of recurrent decay under existing restorations and protect the patient's investment of crowns, fillings, etc. "Acidulated fluoride etches and makes the oral cavity acidic to create a chemical osmotic flow of the fluoride being uptake into the enamel, so the fluoride is no longer bioavailable when acids are exposed to the enamel. ACT is bioavailable."

In addition, adults in this age group have nutritional habits that increase caries risk, Althoff adds. Soda, energy drinks, sugar snack/drinks, tea with sugar/acid, and wine or other beverages with alcohol are still everyday staples for too many individuals, she says.

Therefore, basic routine home care of brushing, flossing, and rinsing for all risk groups – even with low caries risk – can help, Edwards adds. "ACT is a great addition to prevent dental caries and issues in the future. People are habit based, so having a lifelong routine of using ACT is the easiest. By the time people have decalcification, caries (or oral health issues), it is hard to begin new routines and break bad habits of neglect. And there are so many great flavors to choose from!"

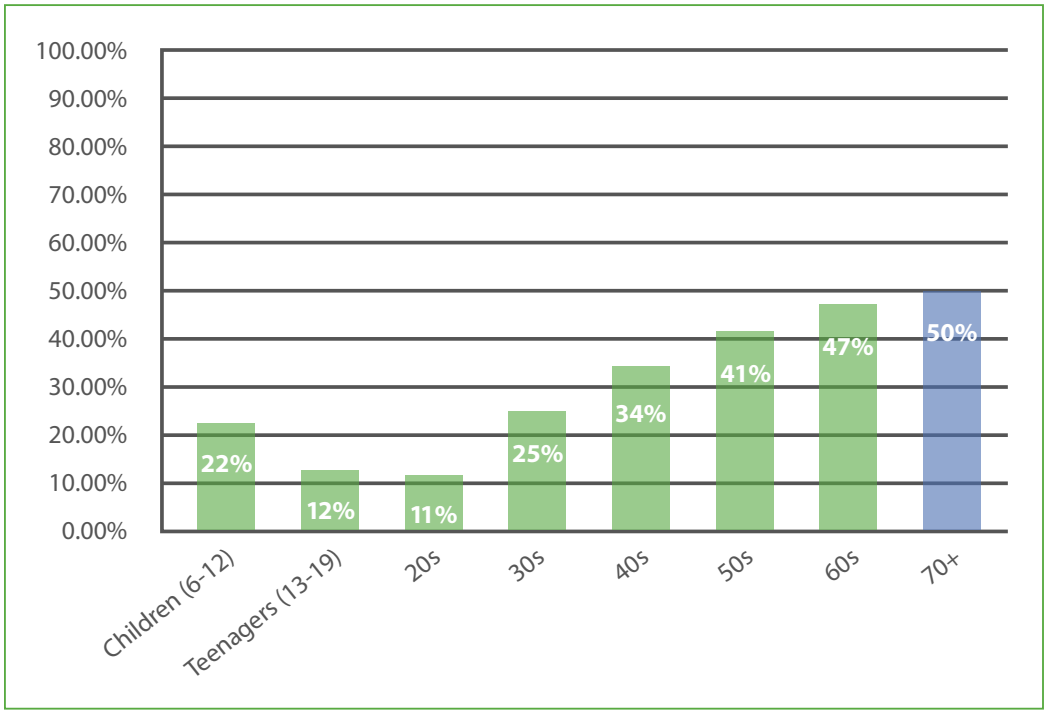
Tell us about patients

When it comes to fluoride use and education about fluoride's benefits in preventing caries, is the subject top of mind for adult patients? The ADA Vendor Showcase survey respondents were mixed when asked this question. About 52% of respondents said yes that fluoride was "top of mind for adult patients," while 36% said no, and 12% said they didn't know. Additionally, when asked to rate (on a scale of 1-10; with 10 as the highest ranking) their average adult patient's knowledge about fluoride and its benefits for oral health, dentists and dental professionals responding to the survey gave consumers an average rating of 5.[3]

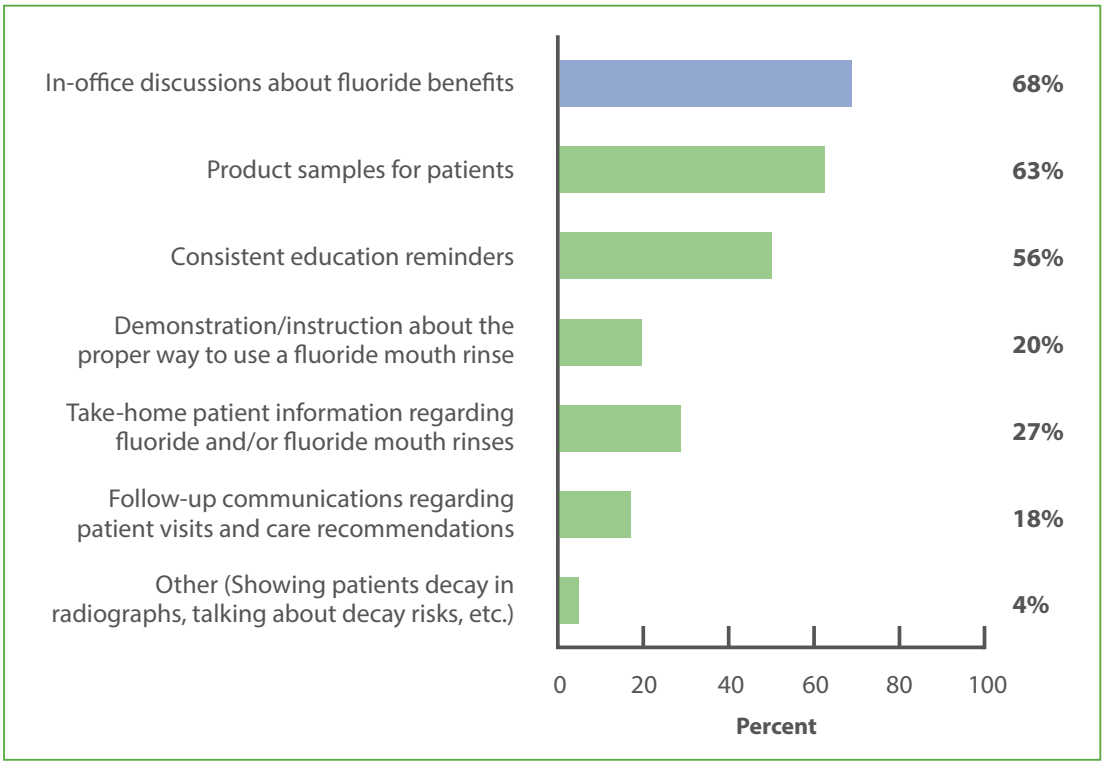
According to survey respondents, patients are more likely to adhere to dentists and dental health professionals' recommendations as they age. But the results also indicate most patients are not fully compliant with home care recommendations, no matter the age.

Survey respondents were asked to identify the age groups most likely to adhere to a dentist or dental health professionals' recommendations for use of an OTC fluoride mouth rinse.[3] The results included:

Age groups most likely to adhere to a dentist or dental health professionals' recommendations for use of an OTC fluoride mouth rinse.[3]

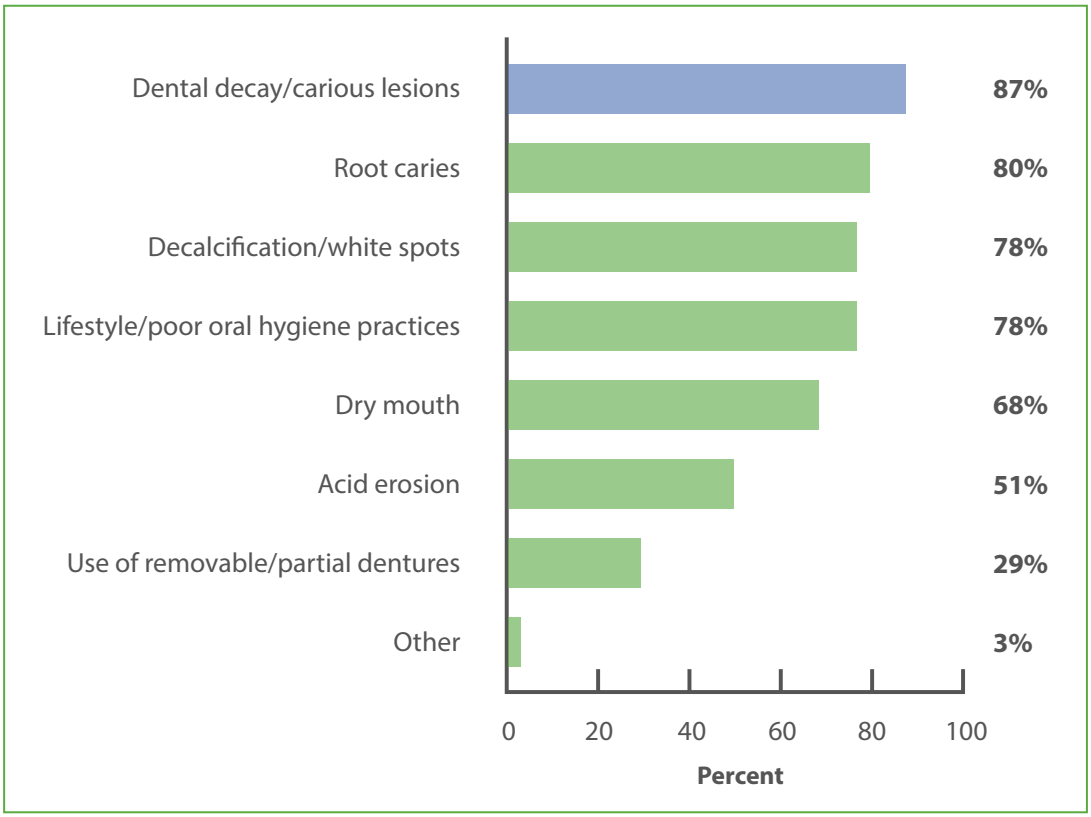


Dental professionals also noted communication tactics that have generated the strongest results after recommending a fluoride mouth rinse.[3] The results include:





Respondents were also asked to share the oral health conditions that would most likely precipitate a recommendation to use an OTC fluoride mouth rinse. The results included[3]:

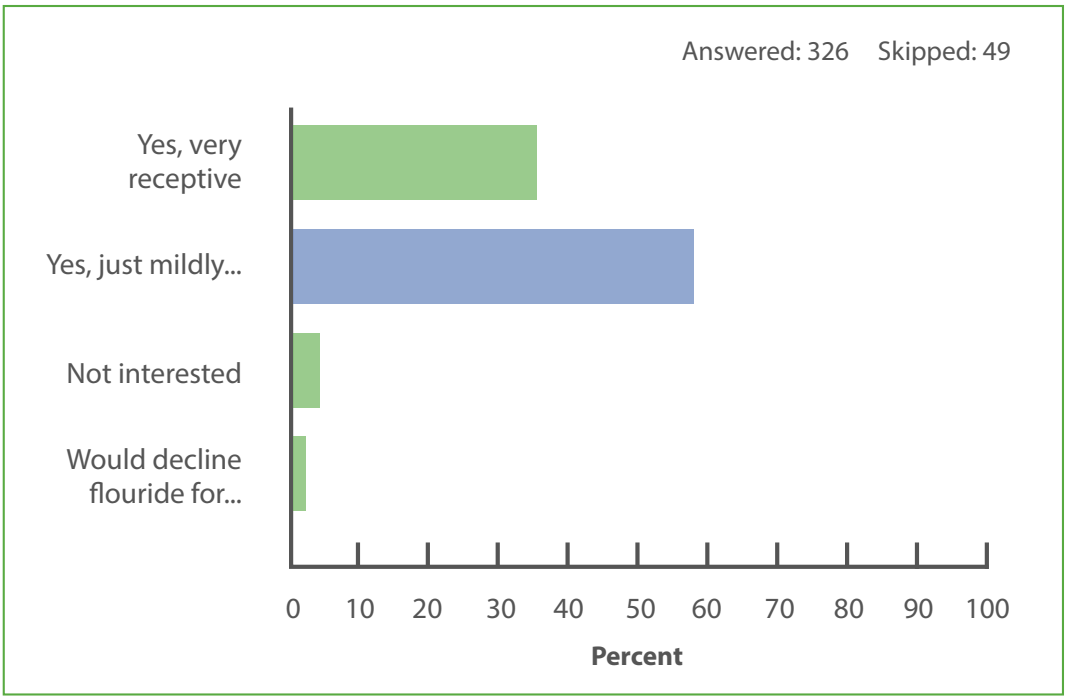


The survey also asked respondents to share the single most successful tactic used by them or their team to improve patient adherence to home care recommendations.[3]

Some suggestions from survey respondents included:

- ☑ Show them success when they use it
- ☑ Explaining about the costs of losing teeth or root canals
- ☑ Intraoral images
- ☑ Education at each visit
- ☑ Parental coaching for children or teenagers
- ☑ Motivational interviewing during recall exams
- ☑ Set goals to improve oral health
- ☑ Tell patients how you care for their teeth
- ☑ Demonstrate
- ☑ Offer samples and demonstrate proper use
- ☑ Coordinated messages with dentist and hygienist
- ☑ Find a flavor the patient likes
- ☑ A patient must be receptive, and that usually comes after a caries event

When you think about your patient population, how receptive are adult patients to the use of an OTC fluoride mouth rinse?



Source: ADA Vendor Showcase Survey

The lack of full adherence to home care recommendations is not a new challenge, but it is persistent. As one respondent noted about the single most successful tactic, "still looking after 45 years."

The building blocks of an education program

When it comes to tactics to consider when educating patients regarding a comprehensive approach to home care, Provenzano says that the best education is both repeatable and consistent during each visit to a dental practice, whether it is for hygiene or for treatment due to dental decay.

"As I'm working, I'm the one talking about their oral care and what they can do to improve it, Provenzano explains. "As I go along and do my exam, I am usually discussing ways they can improve their home care and help address or prevent oral health problems in the future.

At the end of the appointment, we review what we've spoken about and, especially with children, I ask them to demonstrate their ability to brush properly, or, if they are old enough, to properly floss or swish with a mouth rinse," Provenzano explains.



Althoff agrees. "The caries risk assessment offers an excellent time to introduce and reinforce home care topics, simply because you are educating about the oral care issues you are seeing during the examination. Throughout the appointment, I am always discussing brushing, flossing and fluoride," she adds.

Edwards adds that home care and caries prevention education during a caries risk assessment is ideal. "During this time, I am checking for caries, plaque build-up and bleeding during probing and scaling." In addition, she reinforces the home care oral health message at the end of each appointment. She often writes down recommendations, gives oral care product samples or coupons as well.

While the needs of each patient in each age category are different, the core message to maintain a healthy home care regimen is similar for each patient, including brushing, flossing, and rinsing with a fluoride mouth rinse between dental visits, but the most effective messaging is targeted to the needs of the individual patient, Edwards says.

"The strongest building blocks for an effective home care education program should be based on the goals and needs of each patient," Althoff adds.

"Messaging based on age is also important," she says. "After all, trying to get a teenager to adhere to a quality oral home care regimen and a senior usually require differing approaches."

"For teenagers, focus on their primary concerns like preventing bad breath, since this is a topic that comes up frequently," explains Althoff. "You have to impress upon them the importance of self-care," she adds. "While you are focused on messages that will resonate, you also know that you are helping them strengthen teeth and protect against dental caries."

The conversation for older adults may turn to strengthening enamel and/or preventing caries under crowns. Emphasizing the benefits of fluoride and its safety when used as directed remains an important core message for all age groups, no matter the age, Althoff adds.

Each dental examination and visit creates the teachable moment for dental professionals to assess and discuss a patient's oral health needs and goals. Each adult age group can improve through proper self-care technique at home and making OTC product choices by looking for the ADA Seal of Acceptance, which include ACT® fluoride-powered oral care products.

Althoff adds that as patients age, they begin to notice signs of gum recession, sensitivity, xerostomia, and other conditions, and it makes coaching them about the benefits of brushing, flossing and use of a fluoride mouth rinse that much more important. Patients are also much more receptive to complying with homecare recommendations, simply because they are experiencing and seeing changes in their dentition, she adds.

While the most recent ADA Vendor Showcase survey noted a small percentage of patients asking about the overall safety of fluoride[3], Althoff noted that for those few patients who question fluoride safety, it is important to reinforce the benefits of fluoride and why oral care products containing fluoride are recommended as part of a comprehensive homecare regimen.

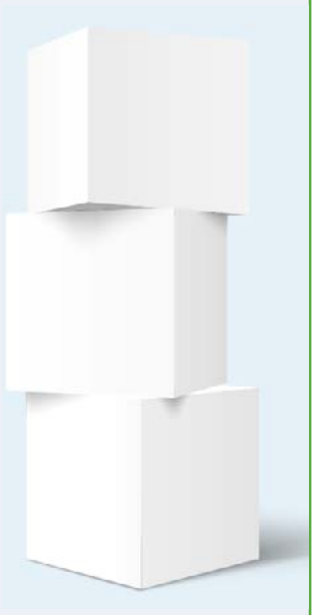
Prevention pays. In fact, a 2022 study[4] examining economic impact of preventive care on Medicaid patients demonstrated that the average Medicaid enrollee with five continuous years of preventive care experienced 43% lower costs than an individual who received no preventive dental care at all. The study concludes that most of the savings were a result of fewer oral surgeries. A Medicaid enrollee with no preventive dental visits was 8 times more likely to have an Emergency Department visit for a nontraumatic dental condition, 7 times more likely to have oral surgery and 6 times more likely to receive a dental-related opioid prescription compared to those who had a dental prevention visit every year in the 5-year lookback period, the study says.

"Regular preventive dental care in the lookback period was associated with significant savings in overall dental care costs when compared to dental care costs for those individuals who received no or few preventive visits," the study says. Prior preventive dental care was also associated with lower rates of emergency department utilization, oral surgery, and dental-related opioid prescriptions.[4]

"If a patient has spent money on dental care, it is a prime motivator to do everything they can with a recommended home care regimen to keep their dentition healthy for as long as possible," the study's authors conclude.[4]

What are the building blocks to an effective home care education plan for patients?

Here are some areas to consider:



- ☑ **Talk to patients** to better understand their oral health goals.
- ☑ **Look for an opportunity** to demonstrate the use of products or techniques to improve home care practices.
- ☑ **Educate** during a caries risk assessment and be sure to reinforce proper home care messaging and technique during any oral health treatment.
- ☑ **Reinforce preventive messaging** at the end of each visit.
- ☑ Ask patients to **demonstrate home care routine** of brushing, flossing and use of a fluoride mouth rinse, so the dental professional can coach about proper use.
- ☑ **Give samples.**
- ☑ **Discuss fluoride,** its impact on dental health and its importance as part of a healthy dental routine.

General fluoride recommendations for all age groups[5]

Fluoride treatment and regimens should be customized according to a patient's caries risk assessment, based on variables such as age, health and fluoride exposure.

Children younger than 6

- Professionally applied 2.26% fluoride varnish at least every three to six months.

Children ages 6-18

- Professionally applied 2.26% fluoride varnish at least every three to six months or 1.23% fluoride (APF) gel for four minutes at least every three to six months.
- At home: 0.09% fluoride mouth rinse at least weekly or 0.5% fluoride gel or paste twice daily.

Older than 18 years

- Professionally applied 2.26% fluoride varnish at least every three to six months or 1.23% fluoride (APF) gel for four minutes at least every three to six month.
- At home: 0.09% fluoride mouth rinse at least weekly or 0.5% fluoride gel or paste twice daily.



Adults and elderly

- Professionally applied 2.26% fluoride varnish at least every three to six months or 1.23% fluoride (APF) gel for four minutes at least every three to six months.
- At home: 0.09% fluoride mouth rinse at least weekly or 0.5% fluoride gel or paste twice daily.
- Among aging patients who may be taking multiple medications, those with xerostomia may benefit from in-office fluoride varnish or gel two to four times a year, in addition to brushing with prescription-strength fluoride paste or gel and rinsing with a sodium fluoride rinse once a day (or more frequently) if they are experiencing dry mouth after eating or drinking.[5]

ADA Seal of Acceptance: Fluoride rinse

The ADA Seal of Acceptance list of products contains 32 OTC fluoride mouth rinses patients can choose from to incorporate into their daily oral hygiene regimen, including

- ACT Anticavity Fluoride Rinse (Sanofi), including Arctic Blast, Cinnamon, and Mint flavors.
- ACT Kids Anticavity Fluoride Rinse (Sanofi)

Explore now

Explore all the content in the **Fluoride Product Learning Center**, sponsored by **ACT® Professional**

Look for these useful resources from ACT® Professional



Fluoride: Access, emerging educational challenges pose risks to cavity prevention

Explore now



Reinforcing the Importance of Fluoride Use for Lifelong Dental

Explore now



Xerostomia: Understanding causes and treatment options

Explore now

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3. *ADA Vendor Showcase Survey, August, 2022.*

4. *Okunev I, Tranby E, Jacob M, Diep VK, Kelly A, Heaton LJ, Frantsve-Hawley J. The impact of underutilization of preventive dental care by adult Medicaid participants. J Pub Health Dent 2022. 16(1): 88-98. Accessed at: https://onlinelibrary.wiley.com/doi/10.1111/jphd.12494.*

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Appendix

More about the survey[3]

Of the 375 respondents, the majority were dentists in private practice. Additionally, nearly 90% of those noted General Dentistry as their primary area of practice. Other specialties noted from the survey respondents included: Pediatric Dentistry, Endodontics, Periodontics, Prosthodontics, Oral and Maxillofacial Surgery and Orthodontics.

Number of dentists in the practice

1: 51%
2: 19%
3-4: 17%
5-6: 6%
7-8: 2%
9 or more: 5%

Number of hygienists in the practice

1: 33%

2: 26%

3-4: 28%

5-6: 7%

7-8: 2%

9 or more: 5%

Position in the practice

Owner: 60%

Owner–Group Practice: 10%

Associate: 12%

Employee: 10%

Independent contractor: 2%

Other: 5%