



The Nation's Health Podcast transcript

S26, EP3 Fluoridation: Your secret hack for better health

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WADE RAKES: We've seen over decades that the community water fluoridation is the most effective, lowest cost, impactful option if we want to reduce oral disease and decay, particularly among children.

From the American Public Health Association, I'm Sophia Meador, and this is The Nation's Health Podcast.

One of the greatest — and perhaps most understated — achievements in public health is the improvement of the nation's oral health, much of which experts credit to fluoride.

During World War II, poor dental health was a major cause of draft rejection and a serious challenge for millions of Americans, many of whom were missing teeth. The introduction of widespread community water fluoridation adoption throughout the 1950s and 1960s led to dramatic improvements in oral health across the U.S. As of 2022, about 73% of Americans were served by community water systems with fluoridation, according to the Centers for Disease Control and Prevention.

But today, those gains are at serious risk as more people begin to mistrust or misunderstand the science behind fluoride.

In the past decade and a half, more than 170 communities have ended or rejected community water fluoridation. And more recently, Utah and Florida have moved to ban fluoride from community drinking water, while several other states are considering similar legislation. Some of this recent momentum has actually been prompted by Robert F. Kennedy Jr., U.S. secretary of health and human services, who has made claims that go against scientific evidence about fluoride. Under his leadership, the U.S. has

restricted fluoride supplements for kids and plans to reexamine the role of water fluoridation, despite decades of sound science.

So today, we're looking at why oral health is a cornerstone of public health, how fluoride supports health equity and what these bans could mean for communities across the country.

RAKES: I'm Wade Rakes and I'm the chief executive officer of the CareQuest Institute for Oral Health.

Wade, we're so glad to have you on the podcast today.

To begin, I want to start with oral health, which is not something most people have on the top of their mind until an oral health issue actually pops up. So to begin, how would you assess the state of the nation's oral health?

Absolutely and you're right, it's not something that people think about each and every day. But we do live in a country where more than 70 million people don't have access to oral health insurance. And even among those that do have access, there are issues around the ability to get appointments, and certainly the ability for folks who live in rural communities to have access to oral health care.

So it leads to a number of challenges to overall health for people — and challenges with oral health can impact people's overall health in major ways, from diabetes to birth outcomes to Alzheimer's.

So the quality of oral health (care) that people have access to absolutely impacts their lives for the long run. And that's why we at CareQuest are absolutely focused on improving oral health for all.

And in public health, we recognize barriers that prevent people from accessing care. What do these barriers look like in oral health care?

Well, some of them are similar to barriers that we see in other parts of health care. It may be transportation, it may be locations, it may be hours of service, it may be a scarcity of clinicians.

And we have a challenge when it comes to dentists, oral health specialists and hygienist — there's just not enough in the country.

So many of the times, the barriers are very similar to barriers to achieving health access across a whole set of specialties and we fight for those each and every day, side by side with other organizations to

ensure again that people understand that taking care of their oral health is really about taking care of their overall health.

And across the U.S., what communities specifically do we see having additional barriers to accessing this care?

If you live in a rural community, you are essentially in an oral health desert, particularly for specialty care. More than 90% of oral care specialists practice in urban areas, which means that many, many people are traveling more than 50 miles just for access to general dentistry and potentially even more for access to specialized care — and I mean that's anything outside of general dentistry, so you can think of orthodontia, surgery...all of those things are really done in cities.

So those individuals who live in communities that are defined as rural, those that live in areas that have scarcity of care, are most at risk.

But that's not to say that even within cities there are pockets of communities where people still have challenge in access and care. And ultimately, a lot of them end up unfortunately in emergency rooms. More than 1.7 million emergency department visits take place every year for an oral health issue. It costs our system billions of dollars for that care. And in some cases, it's not the type of care, certainly, with the area of speciality, that could be provided in the office of an oral health clinician.

So it's, it's truly a crisis that we see each and every day in emergency rooms across the country, because that's where people turn when they have challenges and certainly those challenges that occur at times of day where your local office isn't open.

When we think about oral health in the context of public health, it not always immediately clear how central it is, or why is poses a population-level concern. Can you explain oral health should be considered a cornerstone of public health?

It's one of the issues that we have with health, isn't it? It can come on very quickly. But anyone who's dealt with an oral health crisis — it's not just being able to get care, but it's how do you pay for (it) and are you having to make those trade-offs and decisions?

Because whether it's things like a root canal — which I've had — that were unexpected, or if you may have some trauma, those are things that people have to cover out-of-pocket and it can create a lot of stress on people's, not just budgets, but on their overall well-being.

So we're still working here on ensuring that there is a connection between primary care and oral health. And one of the reasons I'm excited to talk with with you all and your audience, is that that the folks in public health are on the front line of connecting the dots and showing that there are certain things — whether it's in oral health, whether it's in behavioral and mental health, whether it's in primary care — that as we connect each of them, provide visibility and transparency, we see that whole health is what is best for the communities that we're in.

And more recently, fluoride has really been making headlines as more states and municipalities move to ban the practice of community water fluoridation.

Wade, how do you see these bans potentially impacting public health?

So this is a story that we know, because removal has happened in the past. It's happened in Juneau, Alaska. It's happened in in the province of Calgary in Canada. And in both of those instances, we saw a significant increase in caries for children...doubled in Juneau. In Calgary, kids dental infections rose 700%.

We've seen over decades that the community water fluoridation is the most effective, lowest cost, impactful option if we want to reduce oral disease and decay, particularly among children. And so we're here to say that communities have tried it the other way, and they have determined after seeing the results and, unfortunately, seeing the increased pain in their community, that it's important to make community water fluoridation one of the tools — because it doesn't replace all the other tools that are available in a community — making it one of the tools to ensuring that their citizens have the best chance of a happy, healthy and uninterrupted life where they can pursue a whole host of other things than going to deal with a cavity or deal with something worse.

And actually new research is adding to the evidence in support of community water fluoridation. A recent study that was published April 13 in the Proceedings of the National Academy of Sciences offers reassurance for those concerned about fluoride's potential effects on IQ. The long-term analysis, which followed cognitive outcomes over a decade, found no link between community water fluoridation and lower adolescent IQ or diminished mental abilities later in life.

The findings give public health practitioners — like our next guest — a stronger footing to address confusion and misinformation — and to help parents better understand the science.

SUSAN FISHER-OWENS: My name is Susan Fisher-Owens and I'm a pediatrician and a child health advocate. I am professor of pediatrics and of dentistry and health policy at University of California-San Francisco. I'm also a member of the American Academy of Pediatrics and the American Public Health Association, proudly.

Dr. Fisher-Owens, thank you so much for joining the pod. Wade Rakes of the CareQuest Institute just spoke to us on the state of oral health in the U.S. — and a troubling trend as states and municipalities move to end community water fluoridation.

I'm curious, in your practice, have — and if so how — are then bans changing parents' attitudes, questions and approaches to fluoride?

Absolutely, this is something that I've seen with my parents — where they come in and want to do right by their kid — and so ask questions about it.

For many of my parents, they are people who have less access to dental care, may have less access to healthy foods, and they even have less access to other preventive modalities. And so, they're the ones who are up at 2 in the morning when their child has a toothache, or they're the one taking the day off from work because their child was up the night before and is too tired to go to work. So, they care about oral health.

What many people who are fortunate enough to have grown up in better circumstances don't know is that oral health problems in kids, or childhood caries, is the most common chronic condition of childhood. And so many of us may not have had to experience the pain that goes along with having tooth problems, but my patients do.

So they really care about doing right in prevention. They come in and they ask the questions, and they may even be a little hesitant, not wanting to do fluoride varnish, which is one activity we do in the pediatric practice. But it gives us an opportunity to discuss with them about the benefits and the risks.

When you're chatting with parents, what sort of messages or approaches have you found are most effective when trying to help parents understand why fluoride is important to their child's health and overall well-being?

Well, first off, I thank them for expressing their concerns to me. I recognize that the medical world is hierarchical... and parents can not want to challenge me openly, but then say "yes" and then say "no" when the nurse comes in, for instance.

So, I thank them for being open and ask for the opportunity to address some of these misconceptions. I find these tools — bits of motivational interviewing can help and just acknowledging that I'm open to their thoughts.

I also acknowledge that I was concerned about it too, so I looked into it to do a better job, to help them take care of their kids. What I can strongly reassure my families is that at the levels that we use in the U.S., fluoride is safe for children. Fluoride in the appropriate amounts, in appropriately fluoridated community water, small bits of toothpaste — a smear for children who are under age 3 and a pea-sized amount for children who are over age 3 — that these are all safe and appropriate and helpful to prevent problems before they even start, or to help fix them once they have started.

And from a clinical — and more public health perspective, how does community water fluoridation work to improve health disparities?

Community water fluoridation is the most equitable way to get protection to families that may not be able to afford it. It comes into the child's home, it comes to the child's school. While I'm a pediatrician, so I focus on children — it also has been shown to have benefit for adults as well, particularly once we get up into the older population.

So we know that community water fluoridation is, both has an enormous return on investment, so it is one of the most cost beneficial approaches we can use in public health. In fact, in last decade, the CDC considered it one of the top public health achievements of the last century.

We're learning more and more every month about impacts on adult health with having poor oral health — so increased cost of care for things like diabetes, like stroke, advancing of kidney disease, pregnancy — this is a benefit that pays off multi-fold over time and we're only at the tip of the iceberg to really understand that.

Dr. Fisher-Owens, is there one key message that public health practitioners can share when talking to community members and families about fluoride?

This is a mineral that naturally comes out of water and in fact, fluoride was first discovered to help teeth by the fact that it was studied in a community that had lower issues with their teeth and had higher levels of fluoride in the water. So this is all natural from that perspective.

The water that's provided through public water systems, community fluoridated water, is fluoridated to a very precise level. So it's taking what is naturally in the community, which could be even too high in some places in the country or the world, or too low, and it's putting it at that right level.

This also relates to the fact that many of the studies and the headlines that have made splashes are based on other countries where the fluoride in the water is of a much higher natural level and also some countries where more water is consumed on a per capita basis than is in the U.S.

My shorter answer to your question is that at the levels we have in the U.S., it is safe for us to consume community water fluoridation and it helps keep our population healthy.

History offers a clear picture of what can happen when fluoride is removed from community drinking water. Remember Calgary, Canada? After 14 years without fluoridation, the city ultimately moved to restore it, with nearly two-thirds of voters supporting reintroduction.

Here's what Wade had to say about the future amid concerns over bans on community water fluoridation.

RAKES: As someone who cares about, particularly about children, who may not necessarily have all the tools to be the most compliant...I'm sure everyone listening here brushes for a couple minutes and flosses two times a day...But I think any of us who've been around someone who may be just getting their skills together as a young person and young adult, that that level of compliance is not always the easiest thing. So ensuring that you have community water fluoridation as an additional tool is just absolutely critical.

So I'm concerned that it's a discussion, but I am heartened that the history and the results, particularly among children, make the case that this is something that not only should be continued, but is something that we are proud to talk about as a public health tool that's available all around the U.S.

Thanks to our guests for their time and expertise today. For more, visit [CareQuest.org](https://www.carequest.org)