Carolina clinical trial tests effectiveness of mouthwash to kill coronavirus

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Researchers at the University of North Carolina at Chapel Hill Adams School of Dentistry have launched a clinical trial to test whether mouthwash can reduce a person's risk of spreading coronavirus.

Laboratory experiments have shown mouthwash can quickly kill coronaviruses, but there's no evidence mouthwash can prevent the virus from infecting people. The Adams School of Dentistry is investigating how well mouthwash works to reduce the amount of coronavirus in the mouths of those with COVID-19, and if it can lessen the chance of spreading the virus to others.

The focus of their research is to find a way to lower the risk of coronavirus transmission in situations where masking and being more than six feet apart might not be an option, for instance, during dental procedures.

"While we are excited about the bench top data, the true test is whether these mouthwashes have effect on saliva in patients' mouths and whether a mouth rinse could reduce the risk of SARS-CoV2 (the virus that causes COVID-19) transmission through oral droplets," said principal investigator Laura Jacox, an orthodontist and oral health sciences researcher who is director of the Orthodontic Research Program at the Adams School of Dentistry.

Specifically, researchers plan to measure how much virus is found in saliva before and after using mouthwash according to the directions on the label. Adults who have tested positive for COVID-19 within the past seven days are eligible to participate in the clinical trial.

Because the mouth continually makes saliva, samples will be collected and tested every 15 minutes, for up to an hour, to track how long any reduction in viral load and infectivity lasts.

Benefits could reach beyond health care

The clinical trial will test commercially available mouthwashes that contain common antiseptic ingredients such as cethylpyridinium chloride

or ethanol.

"The study will allow us to determine which active ingredient in mouthwash has the most promise," Jacox said. "Ideally it is an ingredient that is already FDA approved so it can go into use immediately."

If proven effective, mouthwash could be a tool in controlling the spread of COVID-19 at one of the body's primary points of coronavirus entry and transmission. Preliminary results of a study led by Adams School of Dentistry and the National Institutes of Health showed the salivary glands, tongue and tonsils, in particular, are vulnerable to coronavirus infection.

COVID-19 commonly spreads during close contact when an infected person coughs, sings, talks or sneezes.

"Using a mouth rinse is an easily implementable intervention that is low risk, inexpensive, and holds the potential for high reward," said Jennifer Webster-Cyriaque, a professor at the Adams School of Dentistry and the Department of Microbiology and Immunology at UNC School of Medicine. "The potential benefit can reach far beyond dental care to educational settings and places of worship and help essential workers when close contact is unavoidable."

Provided by University of North Carolina at Chapel Hill