

The Proactive Approach: Salivary Testing for Preventive Care

This new system allows practitioners to test patient saliva in just 5 minutes and catch issues before they become too serious. [by [Laura Dorr](#)]

Over the years, dentistry has taken a reactive rather than proactive approach to oral health. Much of its emphasis has been on fixing problems once they've taken root. This narrow focus leads to the continuation of the same set of problems. In his pediatric practice in North Ogden, Utah, Boyd Simkins, DDS, used to feel as if he were facing a revolving door of caries.

"I got tired of just filling cavities," he says. "I got to the point where I was unfulfilled because I was just doing the same thing, day in and day out. I wanted to break this endless cycle."

To achieve his goal, Dr Simkins began exploring salivary testing for use as a preventive tool that would change how he—and the dental industry—approached assessment, prevention, and treatment.

"If we really want to be a profession that focuses on prevention, we can't wait until the disease is manifesting," Dr Simkins says. "If we can proactively see what is happening, we can reduce the risk for decay or disease in general, then we can really create a movement...not only [for] our profession but...[for] medical colleagues as well, to shift the paradigm in Western medicine."

Salivary testing is certainly a proactive approach that identifies risk factors for caries and periodontal disease before the problems arise. Although it offers benefits for both children and adults, as a pediatric practitioner Dr Simkins found it extremely useful for his young patients.

"With kids particularly, we can shape the microbiome before it's established," he says. "We can use the saliva before things start showing up on radiographs or in the clinical exam. We can see that there's risk, so we can actually preemptively start to make changes, whether it's to diet or probiot-

ics or specific types of toothpaste or habits in general, and try to prevent that disease from showing up."

The SillHa System

As he began focusing on salivary testing, Dr Simkins tried a number of the systems available. Some had multiday turnaround times, which wasn't conducive to patient education or convenient for his practice workflow. He felt that it wasn't practical to call numerous patients a few days after their appointment to discuss results. Other systems didn't seem to produce reliable results or lacked the ability to track progress over time. In 2019, he discovered the solution he currently employs.

"We tried a few different salivary testing products, but we found they either took too much time or weren't very predictable," Dr Simkins explains. "Then we found the SillHa Oral Wellness System, which is approved for use with both children and adults."

And he was on the right track. A 2022 study examining the benefits of this product from ARKRAY USA, Inc, found that the multipoint saliva analyzer, in conjunction with clinical examination, can provide quick salivary component analysis to support effective treatment planning.¹

By using SillHa to test saliva, one can assess a patient's risk for caries and periodontal disease. In just 5 minutes, it analyzes saliva samples for 7 key biomarkers of oral wellness: ammonia, acidity, proteins, buffer capacity, leukocytes, blood, and cariogenic bacteria, which can indicate predisposition to a range of conditions. For example, the research found that higher leukocytes and protein levels were found in patients with periodontal disease, whereas acidity levels were lower

in patients with sleep apnea. Those with a history of cancer or diabetes had lower leukocyte but higher ammonia levels.¹

Although SillHa offers extensive in-depth results, it is quite simple to use. After a practitioner submits a saliva sample to the system, it is examined using a dual reflectance method, which measures the saliva's reactivity on a test strip. This reactivity provides information on factors invisible to the naked eye that may point to an increased risk of disease or caries.

Once the sample has been analyzed, the system produces a patient-friendly, multipoint analysis of the results in an easy-to-understand format. The mySaliva[®] report provides informa-

tion on current oral status, outlines benchmarks for improvement, and specifies the reasoning behind follow-up appointments.

The report is formatted in either a radar or bar chart that displays information graphically so that patients can readily understand it. Each report includes the 7 biomarkers and allows the clinician to determine the risk for disease combining the numbers with knowledge and clinical assessment.

For example, a patient with high acidity levels can see that a diet that includes acid-producing foods can be a possible cause. The report also explains the effects high acidity can have on teeth and offers recommendations for reducing it, such as limiting simple/processed carbohydrates, practicing proper oral hygiene, or using specific over-the-counter products. Doctors can customize the causes and explanations about recommendations to fit their preferred suggested treatment plans. The system also allows them to compare up to 3 results over time to track patient progress.

"SillHa graphically depicts trends that we're seeing in the saliva," Dr



SillHa Oral Wellness System

The SillHa Oral Wellness System is a salivary screening tool that allows dental professionals to test patient saliva in just 5 minutes, allowing for a quick analysis to bolster preventive care and treatment planning. It uses a dual reflectance method to measure reactivity to saliva, providing tested results and checking for inflammatory markers. The report offers easy-to-understand data visualization to help clinicians make informed decisions on patient care.

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Simkins says. “Any time we do saliva testing, it’s a point in time. So, by creating where you can track results over time, you can see trending and progression towards oral health. And it gives us those concrete numbers that allow us to say, here is the problem and why.”

Dr Simkins has found both the tracking feature and the visual biomarker depiction charts to be exceedingly helpful when explaining potential issues and suggesting care.

“I think the biggest thing I noticed when we started to test was that the parents started to pay attention about preventive care,” he says. “They actually started to listen to what I was saying, because we could put an objective piece in front of them that really showed exactly what was going on.”

Implementing Salivary Testing With SillHa

The ability to produce an accurate analyses in 5 minutes is particularly important to Dr Simkins, as his pediatric patients and their parents are often short on time because they’re running from school to sports practice and other events. The 5-minute turnaround time allows him and his team to discuss the findings and their implications at the end of the appointment. Hygienists can kick it off before the cleaning and exam, and results will be ready by the time the doctor is done.

“My patients and their families are so busy, they don’t have time to discuss results later, or it’s harder to get them to follow through if they aren’t in front of you,” Dr Simkins says. “SillHa is much easier than other systems and better for patient communication in that it only takes 5 minutes to get results.”

Setup is simple, and it is compatible with Windows and Apple software.

“Implementation was really easy,” Dr Simkins says. “The challenging part as the practitioner was figuring out how to interpret the data, and resources are provided to get there.”

Changing Care, Permanently

Dr Simkins believes that any slight learning curve with SillHa is greatly outweighed by the insights and support that salivary testing can provide. Such testing has not only slowed down the revolving door of caries in his practice, but also allowed him to contribute to the betterment of his patients’ oral-systemic health.

“There are so many parts of overall health that science is showing [are] linked to oral health, everything from diabetes to cardiovascular disease,” he says. “If we can see all these things start to take root and make corrections early, especially in children, we’re going to see fewer complications.”

And dentistry is positioned to make a difference in combatting lifelong precursors to oral and systemic disease, provided it embraces preventive care and treatment.

“Our profession is in a really unique situation, where we are at the forefront of the health industry... [and] seeing people on a regular basis,” he says. “If you can harness the regularity of visits, we can start fighting disease and start collaborating to improve overall health.” ●

REFERENCE

1. Adibi SS, Hanson R, Fray DF, et al. Assessment of oral and overall health parameters using the SillHa Oral Wellness System. *Oral Surg Oral Med Oral Pathol Oral Radiol*. 2022;133(6):663-674. doi:10.1016/j.oooo.2022.02.007

