

Cognivue Allows Eyecare Professionals to Address Cognitive Decline in Their Patients

BY SCOTT SEDLACEK, OD

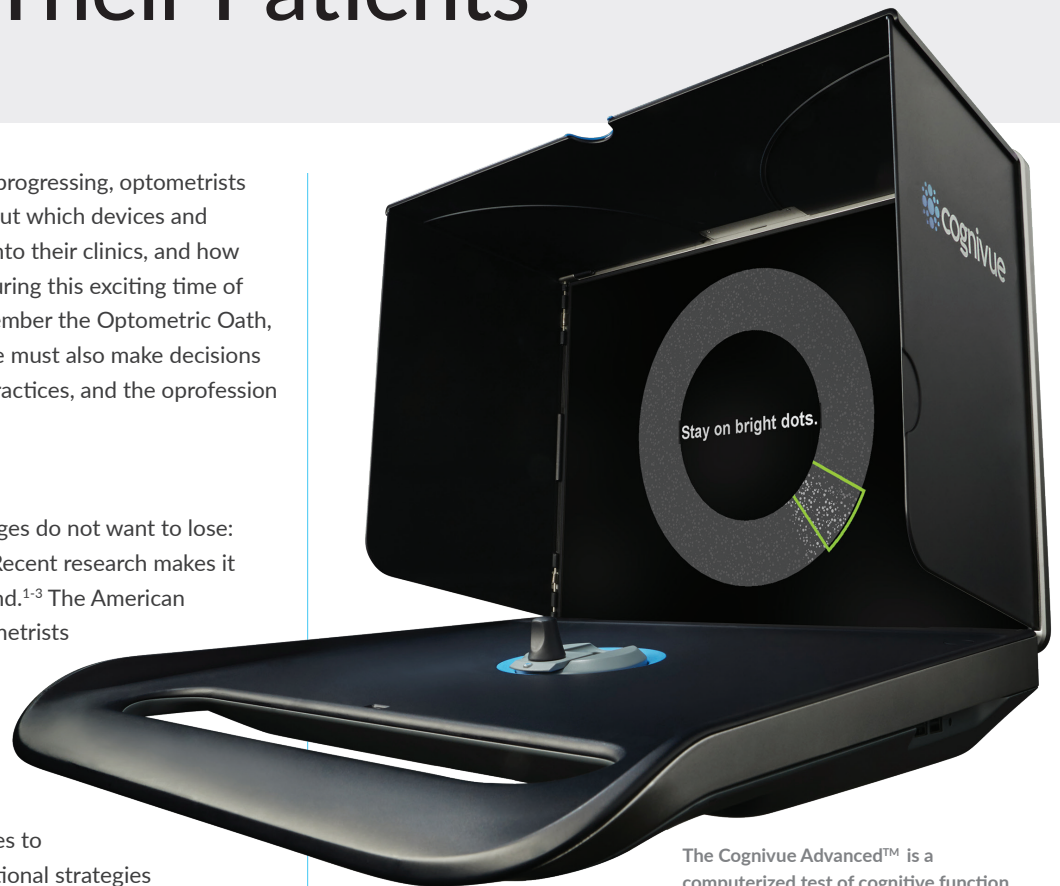
With technology quickly progressing, optometrists have many choices about which devices and technologies to bring into their clinics, and how to best utilize them. During this exciting time of advancement, it's important that we remember the Optometric Oath, which lays out our profession's duties. We must also make decisions that positively benefit our patients, our practices, and the profession of optometry.

Keeping Vision and Cognition

There are two things that patients of all ages do not want to lose: their vision and their cognitive function. Recent research makes it clear that these two things go hand in hand.¹⁻³ The American Optometric Association (AOA) says optometrists now have a key role to play in detecting early cognitive decline. As cognitive decline and vision impairment often co-occur, it's important to note that there may be a relationship between the two, where declining vision contributes to cognitive decline.⁴ Furthermore, interventional strategies that delay vision impairment may also help maintain both cognitive function and physical health as people age.⁵ There is an opportunity here for optometry to be a clear leader in the early detection of cognitive decline, and potentially slow its progression by emphasizing the recommended use of best visual correction.⁶ Maintaining healthy vision leads to healthy aging.

Cognivue Advanced™

Cognivue Advanced™ is a computerized test of cognitive function based on FDA-cleared technology. It's a self-administered, objective, repeatable, and reliable test that takes approximately 5 minutes. It identifies changes in cognitive function that could be indicative of an impairment that may be optimally treated or managed. I believe this device fills a gap in all of medical care, and is better than other tests being done by any medical provider to establish a baseline, and then monitor cognitive function over time. Other cognitive tests tend to be more subjective, and can vary depending on who is administering them, amongst other variables. The Cognivue Advanced™



The Cognivue Advanced™ is a computerized test of cognitive function.

test eliminates human error and bias while having the sensitivity and specificity to detect early signs of cognitive impairment.

The FDA-cleared technology includes CogniCover™, a protective barrier surrounding the display that eliminates distraction and light interference and gives specific uniform dimensions for every patient. Cognivue's CogniWheel™ minimizes all variance in patient response performance by providing one degree of freedom for accurate measurement. In addition, CogniSystem™, the system's scientific algorithm, utilizes adaptive psychophysics and calculates the easy-to-interpret scores.

Upon completing the test, patients are given an informational brochure, called the CogniWell Program. It's educational and well accepted by patients. I find it to be quite impactful as it empowers patients to optimize their cognitive health by adopting a healthy lifestyle, controlling medical risks, and maintaining social connections, along with other things that benefit brain health, eye health, and general health.

CogniCover™, a protective barrier surrounding the display, eliminates distraction and light interference and gives specific, uniform dimensions for every patient.



Why is This Optometry's Domain?

One tenet of the Optometric Oath is, "I will advise my patients fully and honestly of all which may serve to restore, maintain, or enhance their vision and general health."

Brain health, eye health, and general health are inseparable. And, because an optometrist is sometimes the only doctor a patient sees—or the first doctor they see entering the healthcare system—they have an important opportunity to work with other medical professionals in a patient-centered collaborative care model. Almost every underlying systemic condition affects vision and the eye in some way. The profession of optometry can clearly benefit from promoting wellness with a focus on early detection of eye disease and related systemic conditions. This type of care will clearly benefit our patients and cement our relevancy in the emerging models of care where we are an intake point for a healthcare system focused on wellness.

Dementia and age-related macular degeneration (AMD) are rapidly growing public health problems due to the aging U.S. population. The two conditions are similar because of their shared risk factors and significantly increasing burden to the healthcare system. These two areas are where optometry can help solve the Triple Aim (better patient experiences, improved population health, and



The Cognivue system has a small footprint, perfect for all practices.

lower costs). In doing so, the profession will be well positioned to move in the desirable direction of providing more medical eye care and not be as dependent on the business of refractive care—selling glasses and contacts. That will always be part of optometry, but we need to continue advancing our profession into areas that promote wellness in order to prevent vision decline and other systemic illness.

Large Patient Population

This technology appeals to most patients in every practice. Recent data show that out of the most common illnesses, cognitive decline is what people of all ages are most worried about—more than cancer, stroke, heart disease, diabetes, and arthritis. This testing is good for both the young and old, sick and well. Cognitive decline happens for many reasons beyond age and should not necessarily be considered a normal part of the aging process. This is about lifestyle choices, not just chance.

All people who play sports—who are at risk for sub-concussive events or even mild traumatic brain injury—should be tested. This encompasses the entire population of student-athletes, who can be tested to establish a baseline and then retested at their annual eye examinations.

Cognitive decline may also be due to numerous medical risk factors: cardiovascular issues, diabetes, polypharmacy, sleep disorders, depression, alcohol/substance abuse, and even vitamin deficiencies, including vitamins B, D, and coQ10. As a result, patients who have these risk factors should be tested to establish their baseline and then be monitored over time. With cognitive testing, optometry has another important reason to be on the team of medical professionals necessary for managing these patients.

Visual Decline May Worsen Cognitive Decline

An eye doctor's job is to preserve vision, prevent vision loss, and do everything they can to enhance vision. Interestingly, it's been shown that vision impairment may worsen cognitive decline.⁶ So, our job has impact beyond the eye. When you have less input into your brain through your senses, especially from vision, your ability to build and maintain cognitive reserve and function is negatively impacted. Therefore, measuring and monitoring cognitive decline is important and a logical addition to an eye doctor's testing protocol.

Later-year Cataracts

In some older patients, there may be a decision of whether there's a benefit to having cataract surgery. Patients may no longer drive and say they are okay with the vision they have and do not need surgery. However, we now know and can tell patients that the problem with not correcting and optimizing their vision is that it may negatively affect their cognition. We must recommend that they use their best correction in glasses or contacts, or get cataract surgery so they may see optimally. Settling for reduced vision is no longer acceptable, because it affects quality of life beyond simply seeing.

Is Cognivue Good for Your Practice?

The overall goal of a practice is to provide the best patient experience, while improving the patient's health. Accomplishing this over time involves adding new technology. However, the purchase of a new device must also be good for the health of the practice.

For most specialty care in optometry today, whether it's dry eye treatment, myopia control, vision therapy, or something else, it's necessary to buy new equipment, have staff trained and available to administer it, fit it into the work flow, and understand how to bill and code for it in order to get reimbursed. One must also run through a complex calculation to weigh the return on investment before even deciding to purchase the device.

With Cognivue there is no upfront outlay of money. A flat monthly fee covers everything—all software, hardware, future upgrades, training, service, and marketing materials. The company recognizes the value in offering innovative technology that delivers

great clinical value, a simple business model, and superior support services. In my 20+ years as an optometrist, this was the easiest device to acquire and implement. Because the test is self-administered, no staff is required.

As far as workflow, the test can go with the flow, because it fits into the front, middle, or end of the patient testing sequence, or can be done on a separate date. The report generated is self-explanatory and patient-friendly, requiring little discussion. The device will pay for itself starting in the first month.

Structuring Payments

I perform the Cognivue screening on patients at three different price points: \$10, \$50, and \$150. For students and athletes, a screening is \$10 to establish a baseline. Then, I monitor their cognition level annually. I perform a \$50 screening as a wellness offering to "worried well" patients who have a family history of dementia or those who have systemic conditions or other risk factors. This fee also includes a brief chat to introduce the CogniWell Program and give recommendations to use best vision correction. For other patients I identify as needing the Cognivue testing and other early detection or diagnostic tests because of their medical history, increased risk factors, or my exam findings, I bundle them for \$150 (example: the Cognivue, AdaptDX, and Optomap). I schedule these cases back for the testing and a brief discussion to introduce the program and give recommendations.

In my experience, almost every patient says they enjoy the experience of taking the Cognivue Advanced[®] test, and they want to take it again. Patients also appreciate getting their results in an easy-to-read printout immediately following the test. The Cognivue system also generates a letter that can be sent to the patient's medical doctor explaining that the patient has received the Cognivue test along with the results. This helps optometrists share in the care of patients with their primary care physicians. This is good for the patient's well-being, it's good for the bottom line of the practice, and it's good for our advancing profession. 🌟

Dr. Sedlacek is the owner of The Eye Place, an optometry practice located in Olmsted Falls, OH.

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