



CV-5000: High Tech Vision Testing System for a Modern Practice

Union Square Eye Care, New York, NY

The majority of individuals who visit eye care clinics seek refractive error correction and management. Indeed, the Vision Council of America estimates that approximately 75% of US adults use some sort of vision correction, and these individuals require ongoing support to ensure their refractive needs are adequately cared for.

Meeting the needs of these patients can be a fairly extensive process that often requires the use of a wide array of machines and examinations. Topography, keratometry, auto-refractor, and vision tester measurements are just a few of the diagnostic tests utilized when performing a patient's clinical work-up.

Work smart by improving efficiency

In many practices, these different tests are performed in different rooms, on different instruments, and by different people – technicians, optometrists, and ophthalmologists. This inevitably leads to patients having to wait longer, time wasted when gathering results needed for patient review in the consultation room, and more importantly it provides the opportunity for the introduction of error. It is commonplace for test results to be quickly written down as patients move from one room to another. Unfortunately this provides scope for misinterpretation of handwriting or incorrect entry of results into electronic medical records (EMRs).

Our practice recently moved to a new building based in downtown Manhattan in New York City. With a new work environment to set up and design, we started to consider the most effective way of utilizing our office space. We were particularly keen to invest in the most effective technologies for managing and updating EMRs, improving clinical workflow and overall efficiency, and of course, providing the best care for our patients.



Figure 1: The EXAM-5000 all-in-one refraction system houses all the necessary tools for the management of refractive patients.

When I investigated the currently available solutions, one of the best devices I discovered was the EXAM-5000 – a computerized refraction station manufactured by Topcon. We purchased two of these systems for our practice and have been using them for over 16 months.

A vision tester and more

The EXAM-5000 Refraction System (Topcon) is a remarkable all-in one refraction testing system that houses virtually all tools required for the management of refractive patients. Indeed, the system included Topcon's cutting-edge CV-5000 Vision Tester, a chair and equipment table, chart projector, auto refractor, and topographer.

“I believe that the EXAM-5000 System with the CV-5000 Vision Tester is an important addition to any ophthalmic practice looking to provide 21st century care for their patients.”

As an all-in-one system, we have found that the EXAM-5000 is a great paperless tool for streamlining our patient flow and it is also very easy to use. When patients come to see us in clinic, the first thing we do is take them into the room in which we have set up the EXAM-5000. Here we take a history which is inputted into the EMR, and then take refractive readings and optical measurements of the eye if required. A computerized subjective refraction and calculation of the spectacle prescription can be done directly on the CV-5000. These results are transferred directly from the instrument into our EMR. In doing so, there is no need to write down any results, no opportunity for transcription errors, and all eye glasses prescriptions can be printed out directly from the EMR.

The fully automated CV-5000 Vision Tester is a key component of the EXAM-5000. Its compact design offers fast lens rotation to maximize user and patient comfort. It also permits near and far vision screening, and offers the additional benefit of near chart illumination during near vision testing. The device also features a KB-50 control panel with color LCD touch screen through which its user can control all the functions of the automatic phoropter head. Furthermore, its operating system is extremely versatile, allowing operation via a PC.



Figure 1: The CV-5000 Automated Vision Tester with the KB-50 Control Panel is a key component of the EXAM-5000 Refraction System.

The true worth of a comprehensive solution

Not only is the EXAM-5000 System a great time saving device, it is also very accurate in calculating the dioptric power of the refraction. Since using it in our practice, we have had great patient feedback and high satisfaction with eyeglasses prescriptions obtained after using the system. When we first introduced the system into the practice, I was curious to see how it would be embraced by all members of the team. Interestingly, I found that everyone – from technician through to ophthalmologist – uses the system with ease and has voiced appreciation of the value it adds to patient management and to the efficiency of our practice. Many of the functions of the vision tester are automated, and as such, refractions can be calculated with greater ease than with traditional instruments.

I believe that the EXAM-5000 System with the CV-5000 Vision Tester is an important addition to any ophthalmic practice looking to provide 21st century care for their patients. As a highly accurate, time saving, patient-flow enhancing, and user-friendly device, this is a system with the potential to transform the day-to-day practice for any clinic that embraces it.

*H. Jay Wisnicki, MD
is Medical Director, Union Square Eye Care, New York, NY*