


Spot brings long-overdue update to vision screening

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Spot is a new camera-like device for detecting vision problems

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For the past 150 years, ophthalmologists have used the Snellen chart - with its rows of letters in descending sizes - to check patients' vision. While it has done the job reasonably well, PediaVision CEO David Melnik believes that his Spot device offers some distinct advantages. Most importantly, instead of being required to read and recite letters, patients simply look into the device as it takes some pictures. Based on those images, it will proceed to notify clinicians if it detects potential vision problems.

Patients simply sit down and look into the front of the device, focusing their vision on its blinking red, amber and blue lights - a "chirping bird" auditory cue can also be used, to attract the attention of young children. It then takes a series of photos of the patients' eyes using infrared light, all within no more than one second.

By analyzing those images, it is able to determine if their vision is "in range" or "out of range." Should a patient fall into the "out" category, a screen on the device will instantaneously display the name of the likely problem, and advise that a more complete eye exam be performed.

Conditions that Spot can identify include near- and far-sightedness, unequal refractive power, eye structure problems, pupil size deviations, and eye misalignment. That data is stored in pdf format and can be transmitted via Wi-Fi or stored on a USB flash drive, for use by an ophthalmologist.

According to the company, Spot is superior to the Snellen chart in that patients don't need to be able to read or speak, so it could be used with pre-verbal children or patients with a different native language than the clinician. It also assesses their vision in its regular state, instead of as they're unnaturally straining to read letters.

Spot was introduced in the U.S. last September. A somewhat similar system, [DOES](#), is currently in development at the University of Tennessee.