Improving Access to Potentially Vision-Saving

DIABETIC RETINAL EXAMS

Welch Allyn®

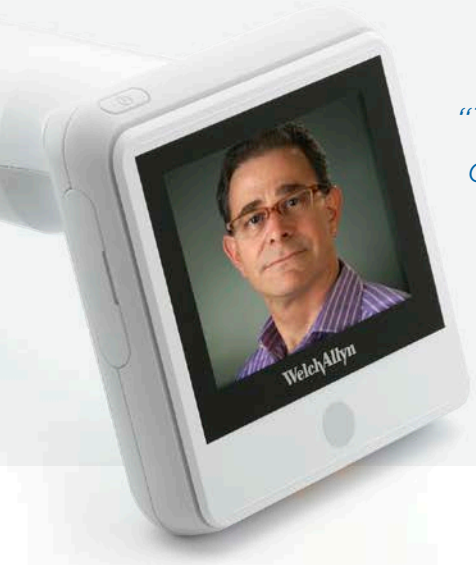
INTRODUCTION

Diabetic retinopathy is the leading cause of blindness among working-age adults.[1] More than 400 million people globally currently live with diabetes and by 2040 the number will grow to 642 million[2]—80% of diabetics will eventually develop some level of diabetic retinopathy.[3] Despite the fact that early detection and treatment can prevent up to 95% of vision loss cases,[4] typically only half of patients with diabetes see an eye specialist for an annual retinal exam.[5]

These numbers should alarm anyone treating patients living with diabetes. One of the best opportunities to help eradicate a leading cause of preventable blindness related to diabetic eye disease is to arm primary healthcare providers with a simple and affordable system that enables retinal assessment during a patient's routine office visit.

Welch Allyn Network is leading the way with a simple and affordable turnkey solution enabling diabetic retinal exams in primary care settings. RetinaVue Network consists of the RetinaVue™ 100 Imager, the HIPAA-compliant RetinaVue™ Network software, and a team of board-certified ophthalmologists who return a complete diagnostic report and referral/screening plan in one day.

Making diabetic retinal exams more accessible in primary care settings means more patients who are not receiving annual exams can be conveniently checked and referred to obtain timely, vision-saving treatment. This is the first crucial step to help eradicate one of the leading causes of preventable blindness.



"The tragedy of diabetic eye disease is that it's the most common cause of vision loss in working-age adults, and less than half of the patients who have diabetes get screened in any given year."

Edward Chaum, M.D., Ph.D., Chief Medical Officer, RetinaVue P.C.

BACKGROUND

Diabetes is an epidemic; there are 44 million (12.9%) people living with diabetes in North America today, and by 2040 there will be 60 million (14.7%).[6] Tie those numbers to the insufficient rate of diabetic retinopathy diagnoses, and it becomes clear that a better solution is necessary to help improve early diagnosis and care.

But not enough patients are being screened for diabetic retinopathy. Of the approximately 143 million people around the world living with some form of diabetic retinopathy,[7] most never even know they have the condition until it's too late. Research points to numerous challenges that prevent patients with diabetes from being screened for diabetic retinopathy. These include insufficient referrals, socioeconomic factors, geographic access to care, lack of patient education, and cultural barriers among minorities and indigenous populations.

"The tragedy of diabetic eye disease is that it's the most common cause of vision loss in working-age adults, and less than half of the patients who have diabetes get screened in any given year," said Edward Chaum, M.D., Ph.D., chief medical officer, RetinaVue P.C.

THE CURRENT STANDARD OF CARE

The current standard of care for a patient with diabetes is to have a dilated retinal examination by a qualified eye specialist, usually on an annual basis if no disease is present, more often if warranted by the level of disease. This standard would be adequate if every person living with diabetes complied with their annual referral to visit the eye specialist—but only half comply.

Consequently, the current standard of care is not adequate, and a paradigm shift is necessary in order to realize a significant decrease in the number of people suffering from severe vision loss and blindness as a result of undiagnosed diabetic retinopathy.

A NEW STANDARD OF CARE

More than a decade ago, the American Academy of Ophthalmology indicated that single-field fundus imaging—used in most teleretinal screening solutions—can successfully capture diabetic retinopathy and detect those patients with disease for referral to eye specialists for ophthalmologic evaluation and management.[8] Another study evaluated single-field fundus images in 2002 and found them to be highly correlated (K = 0.97, P = 0.0001) to the gold standard—seven-field stereo mydriatic images.[9]

While teleretinal imaging technology is not new and has been proven successful, there have been significant barriers to widespread adoption of this technology in primary care settings—mainly cost, device size, and absence of easily accessible diagnostic interpretation services by a nationwide network of board-certified ophthalmologists. With office space, capital, and caregivers' time at a premium in most primary care practices, the adoption of large, more-expensive desktop fundus cameras (designed primarily for eye specialists) has just not been practical.

Recently, Welch Allyn has introduced a low-cost and easy-to-use turnkey solution to examine patients for diabetic retinopathy in primary care settings. Patients with diabetes can be comfortably examined in just minutes as part of their routine visit, avoiding the lost time and cost associated with a separate visit to an eye specialist.

The new handheld RetinaVue 100 Imager makes retinal assessment in primary care settings truly practical by shattering the price barrier at two-thirds less than desktop fundus cameras! The RetinaVue 100 Imager is also very easy to operate. With minimal training, any healthcare professional in the office can capture and transmit high-quality fundus images over the RetinaVue Network software. Critical features include touchless image capture and autofocus technologies, as well as integrated image quality assessment software.

In addition to a design that allows easy and fast image capture, RetinaVue P.C.'s national network of board-certified ophthalmologists will return a complete diagnostic report and referral/screening plan in one business day.

"What makes this camera different from everything else on the market is its compact size, low price, and ease of use," said Dr. Chaum. "The RetinaVue 100 Imager provides primary care providers with the opportunity to evaluate patients simply, quickly and cost-effectively. This revolutionary camera is the key to making a very significant impact on reducing vision loss and preventing blindness from diabetes."

BENEFITS OF DIABETIC RETINAL ASSESSMENT IN PRIMARY CARE SETTINGS

Providing diabetic retinal exams in primary care settings can increase DRE compliance to over 90% within one-year,[10] helping ensure that vision-threatening diabetic retinopathy is detected early enough to prevent blindness and increasing quality metrics for the practice.

Annual retinal examinations are included in the NCQA HEDIS ratings program, the Medicare Advantage STAR quality rating program and Medicare quality rating programs. By intercepting patients during routine primary care office visits, healthcare providers can potentially qualify for financial incentives under these programs.

Additionally, four of the top five commercial healthcare plans provide coverage for RetinaVue diagnostic reports in primary care settings. Many healthcare providers enjoy a favorable return on investment within their first year. DRE coding options include CPT[11] codes 92250, 92227 and 92228. Consult your payer partners to understand coding and coverage options.

5 MEDICARE ADVANTAGE

ACQUIRE
Acquire non-mydriatic fundus images in minutes with the simple, automated Welch Allyn RetinaVue 100 Imager

TRANSFER
Encrypted images sent via secure HIPAA-compliant RetinaVue Network

ANALYZE
Images are evaluated by a board-certified ophthalmologist

REPORT
Diagnostic report and referral/screening plan returned in one day, usually in 90 minutes

HOW RETINAVUE WORKS

Welch Allyn RetinaVue is a complete, turnkey solution, providing everything necessary to perform diabetic retinal exams in primary care settings.

To start, any healthcare professional in the primary care practice can capture high-quality fundus images in minutes with minimal training using either the new RetinaVue 100 Imager or a full-size fundus camera such as the Topcon® TRC-NW400 for clinics with higher patient volume.

Next, encrypted fundus images are transmitted via the secure HIPAA-compliant RetinaVue RetinaVue Network software to be evaluated exclusively by a nationwide group of board-certified ophthalmologists—expert interpretation services are a necessary component of the RetinaVue solution.

Lastly, a complete diagnostic report is returned in one business day—usually in 90 minutes. The diagnostic report includes retinal images, all relevant ICD codes, a referral/screening plan that clearly details next steps for the patient, as well as the retinal specialist's signature and license number.

Every RetinaVue Network subscription includes convenient free access to new and historical retinal reports via the secure, online clinic portal that permits users to receive, store and manage retinal reports as well as review statistics on exam volume, diagnoses and image quality. An industry-standard HL7 interface is available for integration into commercial electronic medical record platforms. Of course Welch Allyn technical support is included, and the ability to consult with RetinaVue P.C. eye care specialists is available.

As the data shows, a shift in the standard of care for detecting and treating patients for diabetic retinopathy is necessary. Making the technology more practical for primary care settings can help make a significant impact—not only on improving patient care, but also on helping practices to improve compliance and increase quality metrics.

#VisionForAll

Join us in helping eradicate the leading causes of preventable blindness.

WELCH ALLYN VISION FOR ALL

In 1999, the World Health Organization, together with more than 20 international nongovernmental organizations, started the VISION 2020 Global Initiative to eliminate the main causes of all preventable and treatable blindness by the year 2020. We believe this is an achievable goal.

The Welch Allyn VISION FOR ALL initiative can assist by producing simple and affordable solutions for primary care settings to help eradicate some of the leading causes of preventable blindness.

The RetinaVue Network is just one example of how Welch Allyn is leveraging breakthrough technology to help make diabetic retinopathy screening simple and affordable enough to be extended into primary care settings, and increase access to potentially vision-saving retinal exams—especially for those patients who may not comply with annual visits to the eye specialist.

To learn more about RetinaVue and request a demonstration at your facility, please visit **www.retinavue.com**.

[1]CDC Vision Health Initiative (VHI), Common Eye Disorders. www.cdc.gov/visionhealth/basics/ced/index.html

[2]IDF Diabetes Atlas, Seventh Edition 2015, page 50. www.idf.org

[3]Preferred Practice Pattern® Guidelines, page 6. American Academy of Ophthalmology; 2014. www.aao.org/ppp

[4]National Eye Institute, Facts about Diabetic Eye Disease. https://nei.nih.gov/health/diabetic/retinopathy

[5]Monitoring Visual Status: Why Patients Do or Do Not Comply with Practice Guidelines; Frank A. Sloan, Derek S. Brown, Emily Streyer Carlisle, Gabriel A. Picone, and Paul P. Lee; HSR: Health Services Research 39:5 (October 2004)

[6]IDF Diabetes Atlas, Seventh Edition 2015, page 82. www.idf.org

[7]Global Prevalence and Major Risk Factors of Diabetic Retinopathy; Diabetes Care, 2012. "The overall prevalence for any DR is 34.6%." Multiply 414 million by 34.6% = 143 million.

[8]Williams GA, Scott IU, Haller JA, Maguire AM, Marcus D, McDonald HR. Single-field fundus photography for diabetic retinopathy screening: a report by the American Academy of Ophthalmology. Ophthalmology. 2004;111 (5):1055-1062.

[9]Lin DY, Blumenkranz MS, Brothers RJ, Grosvenor DM: The sensitivity and specificity of single-field nonmydriatic monochromatic digital fundus photography with remote image interpretation for diabetic retinopathy screening: a comparison with ophthalmoscopy and standardized mydriatic color photography. Am J Ophthalmology 134:204 -213, 2002.

[10]Comparing the Effectiveness of Telemedicine and Traditional Surveillance in Providing Diabetic Retinopathy Screening Examinations: A Randomized Controlled Trial; Mansberger et al, Telemedicine and e-Health, Vol. 19 No. 12, Dec. 2013.

[11]CPT ©2016, American Medical Association

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