

Move Over Digital Imaging, Make Room for an Administration System

The UK's Optimize iP combines digital imaging with automated electronic patient administration.

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Early detection and treatment of retinopathy may ward off associated blindness. In fact, according to a Diabetes UK (London) report, with the proper combination of detection and treatment, it is possible to prevent blindness in 90% of patients with retinopathy who are in jeopardy of losing their sight.¹

If retinopathy goes undetected, it could cost approximately \$414,000 (£237,000) for one patient over the course of a lifetime.

Recently awarded the Best in Class Partner Award in acute care-clinical/patient information systems from Microsoft Healthcare Users Group (Chicago), the Optimize iP (Digital Healthcare, Cambridge, UK) is a messaging system aimed at detecting this serious disease and improving patient health care.² The software combines advanced digital imaging and automated electronic

patient administration to create a program that detects and monitors diabetic retinopathy. By transferring information between computer systems (*messaging*), multiple screening groups can share results and hopefully better detect diabetic retinopathy in larger populations.

EARLY DETECTION

"It is estimated that there are 1.8 million diabetic [patients] in the United Kingdom. It is vital to screen their eyes regularly for retinopathy, as it can be treated very effectively if it is detected at an early stage," said Matthew Adams, development director for Digital Healthcare, in a news release.

Table 1 shows the prevalence of diabetic retinopathy in the United States.

The Optimize iP program is used as a community eye

TABLE 1. PREVALENCE OF DIABETIC RETINOPATHY AMONG ADULTS

Age (Years)	Type 1 Diabetes		All Diabetes — 40 Years and Older	
	Persons	(%)	Persons	(%)
18 to 39	278,000	0.3%	NA	NA
40 to 49	172,000	0.4%	589,000	1.4%
50 to 64	317,000	0.4%	1,582,000	3.8%
65 to 74	1,068,000	5.8%		
>75	824,000	5.0%		
Total	767,000	0.4%	4,063,000	3.4%

Source: National Eye Institute

screening program for diabetic retinopathy. Installed on a Microsoft platform (Microsoft; Redmond, Wash), the digital imaging software captures, grades and analyzes images of the retina. Retina scans may be compared on the screen to earlier images taken from the same patient, and progression can be tracked and reports created with Optomize's fully automated system (Figure 1). Scans may also be printed out for distribution to patients.

The digital imaging software is linked to an electronic database of complete patient records installed in both clinical and community settings to allow for a larger network of documentation. The messaging system creates both patient reports and follow-up letters that can be shared between workstations in the network, allowing for easier documentation and follow-up.

SUCCESSFUL TELEMESSAGING

Among the first communities to use an eye screening program is Central Lancashire, UK. This location encourages patient with diabetes who are aged ≥ 12 years to be screened via digital imaging for retinopathy. The screening program used monitors patients' vision with the Optomize iP system. According to Rob Stichbury, managing director of Digital Healthcare, the Preston and Chorley & South Ribble diabetes retinal screening program is the first program to successfully use telemessaging to share patient information between primary and secondary health care systems.

A total of 12,000 patients have been screened (at the

Preston and Chorley & South Ribble Primary Care Trusts, the Royal Preston Hospital and Chorley District Hospital and 17 area opticians offices) over 1 year. Patient information and screening results are being shared between 48 Central Lancashire locations with telemedicine messaging; the results may be shared immediately so that access to these documents can enhance preventive care, treatment and referral systems.

**Patients with diabetic retinopathy
may be screened at a local optician's
office, eye clinic or hospital.**

Because the administration system is a component of the software, some locations such as Preston and Chorley & South Ribble Primary Care Trusts are screening patients for diabetic retinopathy yearly instead of the suggested once every 2 years. Screening more frequently may help to boost the standard of care for diabetic retinopathy.

FLEXIBLE LOCATIONS FOR SCREENING

Patients have the option of obtaining digital imaging at their local optician's office, eye clinic or hospital. "Our Optomize iP software enables screening, including making screening available to opticians in rural areas and hospitals," Mr. Stichbury said in a news release. "This maximizes the take-up rate and particularly benefits elderly or disabled people who may have difficulty traveling to hospital eye clinics."

Digital Healthcare is the United Kingdom's leading diabetic retinal screening program supplier; it also distributes in the United States, Europe and Australasia. The company has National Health Service approval for Diabetes Retinal Screening Service, a UK initiative to screen 80% of patients with diabetes by 2006 and 100% by 2007. ■

Diabetes UK. Position statement on eye screening. August 2005. Available at www.diabetes.org.uk/good_practice/retinal/Eye_screening.doc.

Digital healthcare scores world first with secure telemessaging for eye screening. Accessed January 25, 2006. Available at www.digital-healthcare.com/news.aspx?id=23.



Photo courtesy of Digital Healthcare

Figure 1. Liam Sweeney (from Digital Healthcare) uses the company's Optomize iP software to check for diabetic maculopathy.