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Addition of primary care-based retinal imaging technology to an existing eye care professional referral program increased the rate of surveillance and treatment of diabetic retinopathy.

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OBJECTIVE: Digital retinal imaging is a relatively new technology that can be used to assess patients for diabetic retinopathy. We evaluated the impact of adding a primary care-based retinal imaging technology to an existing eye care professional referral process on the rate of surveillance and treatment of diabetic retinopathy in a large, well-defined patient population over a 5-year period. **RESEARCH DESIGN AND METHODS:** We performed systematic performance evaluations using a computerized patient information system and a comprehensive procedure log to describe annually the patient population, the number of patients with diabetes, and the proportion of patients with diabetes who received appropriate eye care services, including surveillance and laser treatment for diabetic retinopathy before and after implementation of a digital retinal imaging system at the Phoenix Indian Medical Center Primary Care Medical Clinic. **RESULTS:** The rate of annual retinal examinations increased from 50% (95% CI 44-56%) to 75% (70-80%; $P < 0.000001$), representing a 50% increase in the retinal examination rate. The rate of laser therapy increased from 19.6 per 1,000 patients with diabetes in 1999 to 29.5 per 1,000 in 2003 for a 51% increase in the laser treatment rate. **CONCLUSIONS:** Implementing retinal imaging technology in a primary care setting resulted in a significant increase in the rate of diabetic retinopathy surveillance and a proportional increase in the rate of laser treatment for diabetic retinopathy for a large patient population. Application of this technology in primary care settings holds the potential to extend sight-preserving care by increasing access to appropriate retinal care.

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