Impact of the IRIS-EHR Integration on Engagement and Efficiency in a Teleretinal Examination Program for Diabetic Retinopathy

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Control/Tracking Number: 2016-LBA-6179-Diabetes

Diabetic retinopathy is the leading cause of vision impairment/blindness in adults and the most common cause of blindness in patients with diabetes1. Chronic high blood glucose is associated with damage to the blood vessels that nourish the retina, causing micro-aneurysms, leakage, and ischemia. Ultimately, new, fragile blood vessels prone to hemorrhage form which can lead to vision impairment. Macular edema, glaucoma, and retinal detachment are all potentially blinding conditions that may result from this disease.

Fortunately, early detection and intervention can prevent disease progression and vision loss by 95%. Key to early detection and intervention is the ability to screen and diagnose a large population of diabetic patients. Telemedicine solutions for eye exams have become increasingly prevalent in the management of the diabetic patient population. The IRIS teleretinal exam platform is composed of a non-dilated fundus camera, cloud-based reading center, and secure internet-based transfer portal used to screen patients for retinal abnormalities. Integration of, and ease of access to, the data obtained from these screenings into the Electronic Health Records (EHR) system is imperative to the health care practitioner's ability to diagnose and follow up with the patient. The present study surveyed primary care providers and technicians following the integration of the IRIS teleretinal platform into the EHR used by the Harris Health System (HHS, Houston, Texas).

The integration of the IRIS teleretinal examination program with the EHR system led to:

• Higher physician engagement
• User reported decrease in operational time and effort
• 100% of PCT survey respondents report that, after IRIS-Epic integration, it takes less than 5 minutes to upload patient data and to obtain results from a patient scan.
• A nearly 20% increase in the number of diabetic patients screened

The integration of the IRIS Teleretinal Exam Platform with the EHR allows improved access to a test consistent with the standards of care and quick, easy uploading and retrieval of results from the system. Increased patient access to retinal screenings led to the nearly 50% increase in the number of patients screened – leading to a decrease in disease prevalence as early detection and intervention prevent disease progression. The marked increase in volume of diabetic patients screened will increase practice HEDIS numbers and lead to early intervention in patients with undiagnosed diabetic retinopathy and, therefore, better patient outcome and more sight saved.

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