
Posters and Presentations: Family Medicine

Family Medicine

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AI for A Eye: Implementing Point-of-Care Artificial Intelligence Retinal Screening in a Resident Clinic

Cody Masters

Jeffrey Wallman

Melanie Menning

Jenenne A. Geske

Hannah Christiansen

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AI for A Eye: Implementing Point-of-Care Artificial Intelligence Retinal Screening in a Resident Clinic

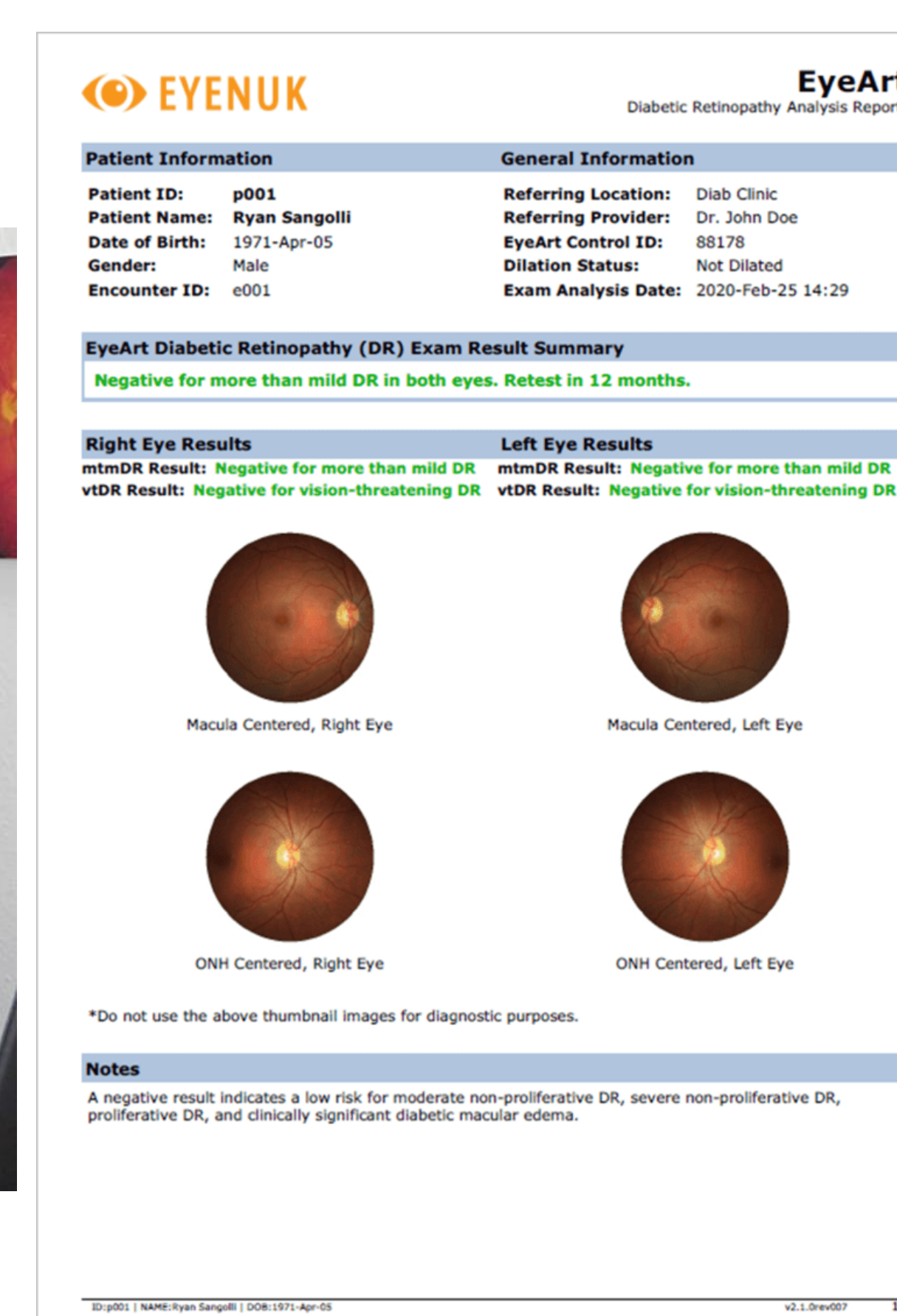
Cody Masters, MD; Jeffrey Wallman, MD; Melanie Menning, MD; Jenenne Geske, PhD; Hannah Christiansen, MD
Department of Family Medicine, University of Nebraska Medical Center, Omaha, NE 68198

References



Background

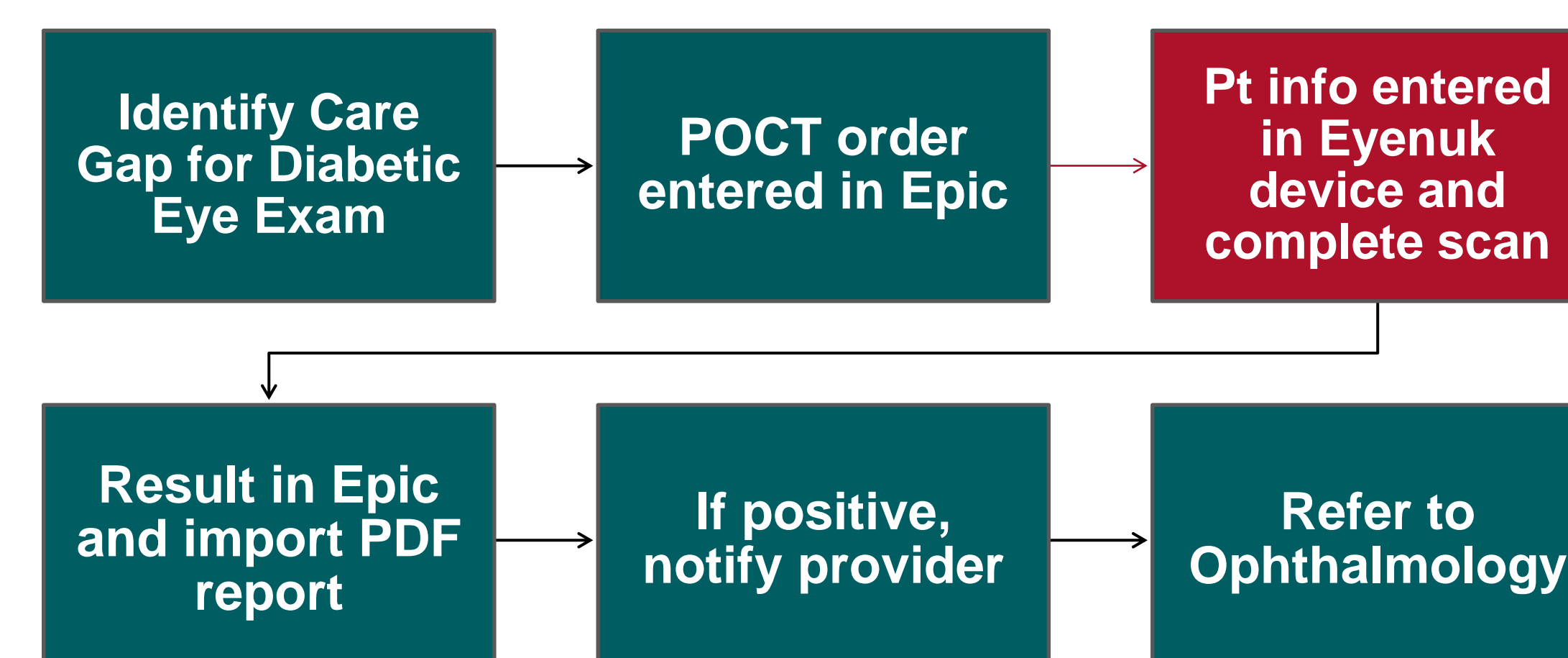
- The American Diabetes Association recommends patients with diabetes mellitus undergo diabetic retinopathy (DR) screening every 1-2 years. DR is the most frequent cause of new blindness among adults in developed countries.
- Unfortunately, screening for DR remains below target and often underperforms other diabetic screening recommendations.
- Despite multiple initiatives to improve screening rates, our clinic screening rate has consistently remained below target, around 56%. This is lower than our health system average.
- Recently, our residency clinic implemented Eyenuk, a direct-in-clinic digital stereoscopic retinal imaging device, which utilizes AI to complete DR screening recommendations.



Methods

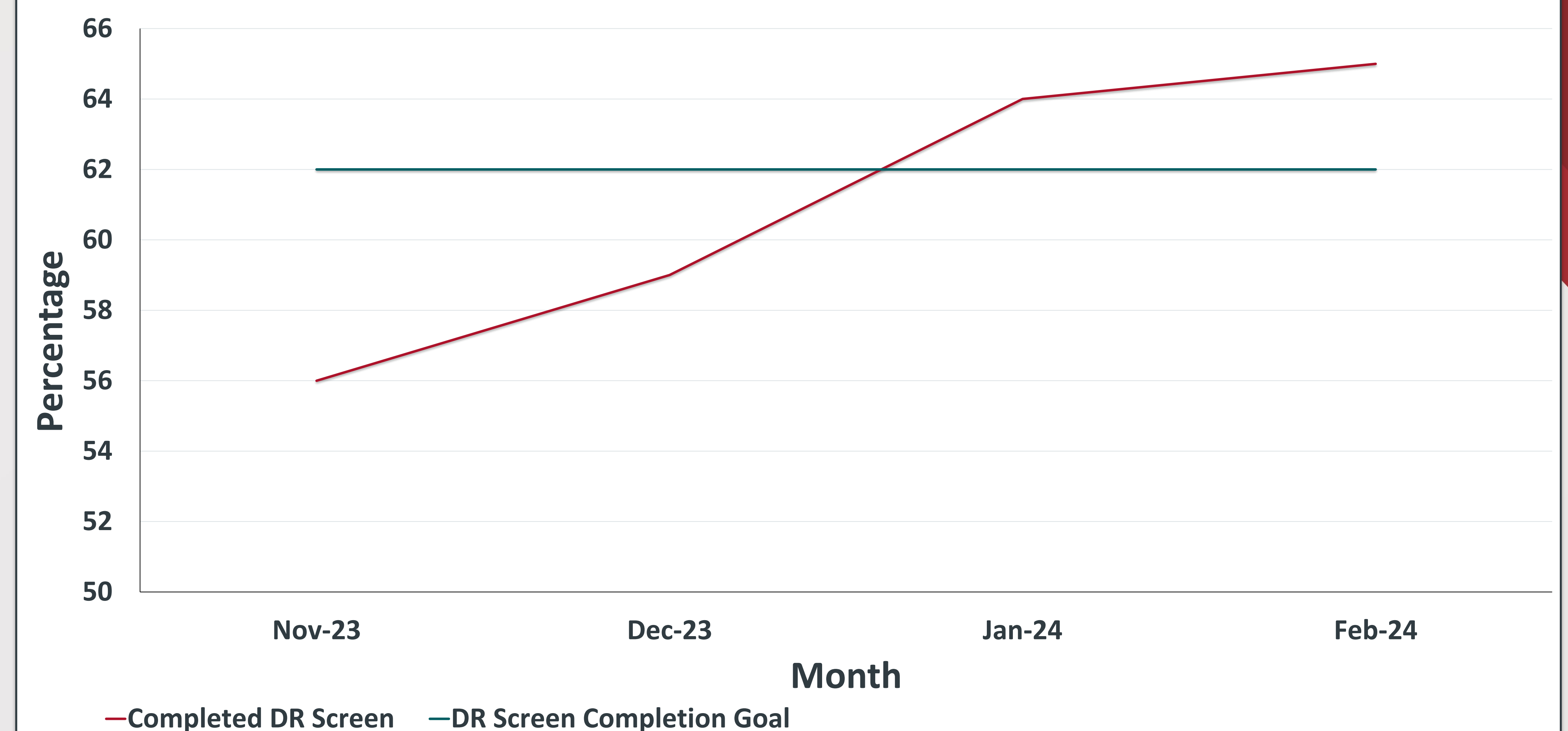
Study Metrics:

- Prospective cohort study of 1560 patients comparing DR screening rates before and after Eyenuk implementation.
- Inclusion criteria:**
 - Patient must receive care at Family Medicine Durham Outpatient Center Clinic.
 - History of type 1 or type 2 diabetes mellitus.
- Clinic Workflow**



Results

DOC Clinic DR Screening Completion



Discussion

- Conclusion:** Since implementation of Eyenuk, DR screening has increased from **56%** to **65%** in only several months and obtain our health system's DR screening goal. Given this result, we predict that this will significantly help improve our clinic's DR screening rates.
- Limitations:**
 - Did not consider patients who follow up with an optometrist or ophthalmologist (i.e. those who have screening done elsewhere besides their PCP's clinic).
 - Did not consider patients' level of diabetic control, which may contribute to perception of DR screening necessity.
- Future Directions:**
 - Comparison of A1c control and completion rate of DR screening may identify trends/barriers to DR screening completion.
 - Evaluate DR screening completion rate one year after Eyenuk implementation.
 - Evaluate time added to scheduled appointments due to Eyenuk DR screening and patient experience surveys.
 - Evaluate impact of DR screening on number of new DR diagnoses.
 - Evaluate DR screening results and number of patients who are screened that require additional confirmatory eye exam/appointment.

Objectives/Interventions

- Compare DR screening completion rates before and after implementing in-clinic Eyenuk DR screening protocol.