

INTRODUCTION

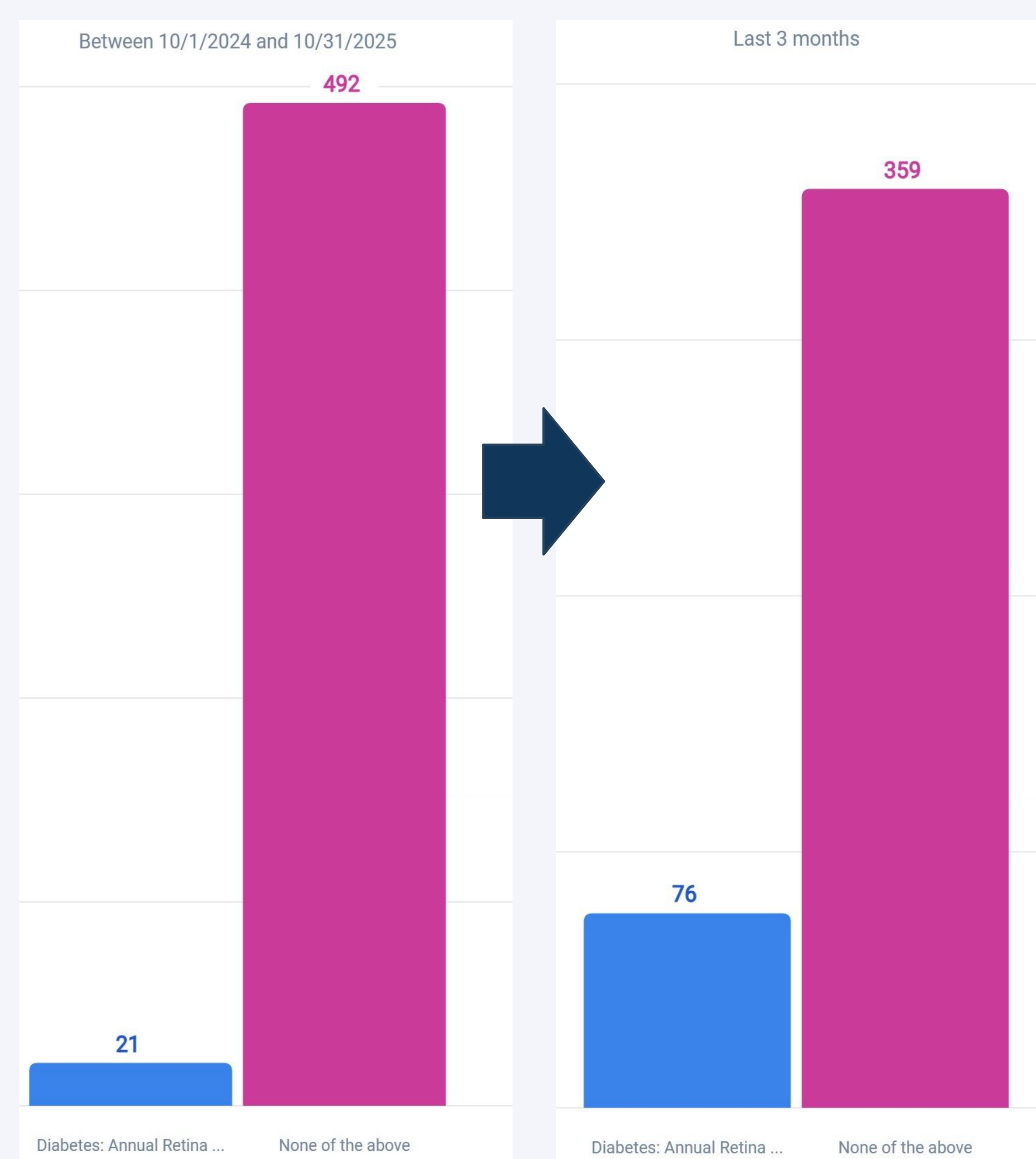
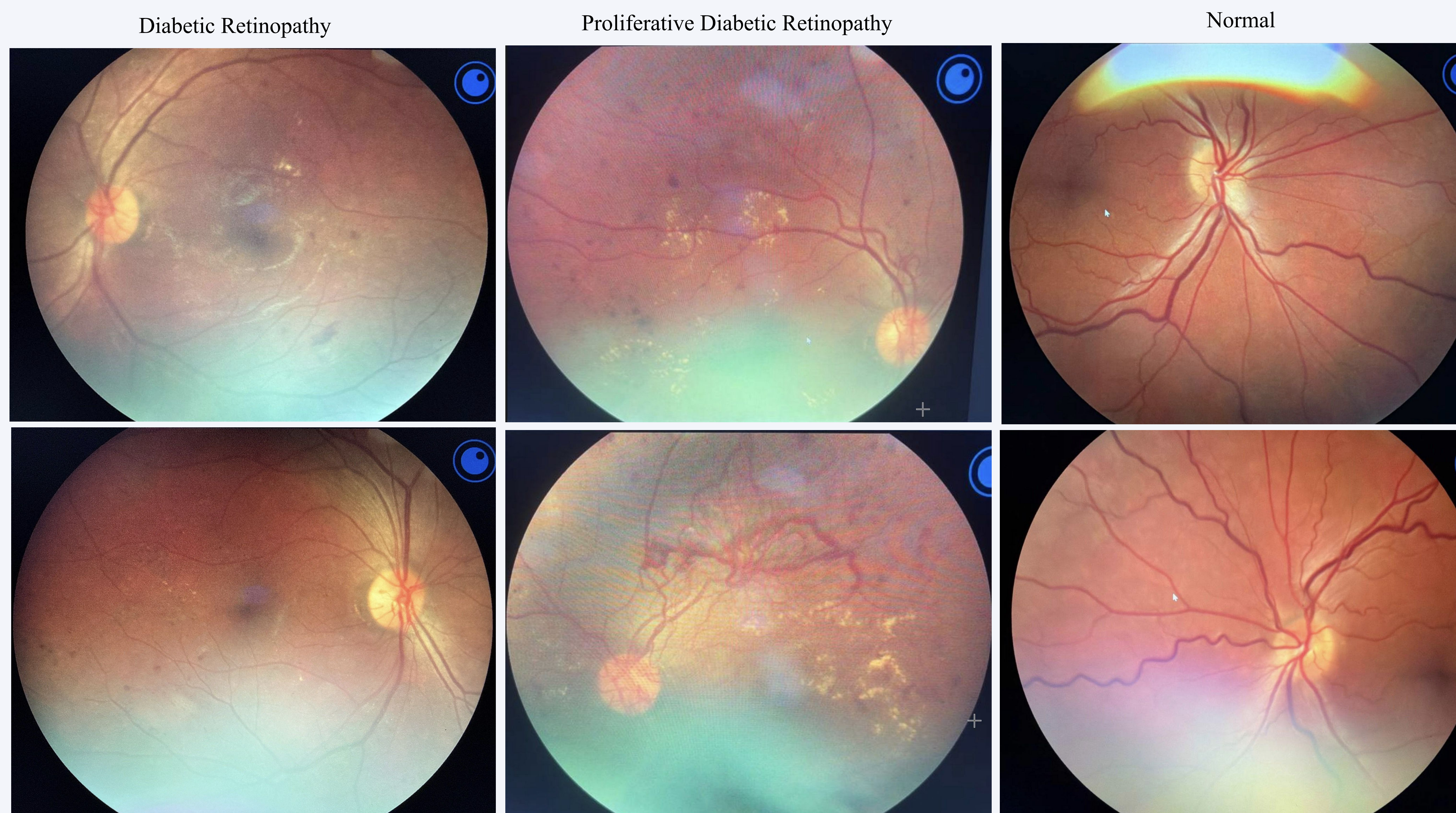
St. Mary Family Medicine Clinic in Bensalem provides primary care to a predominantly immigrant, underinsured, and financially vulnerable population. Diabetic retinopathy is the leading cause of preventable blindness among working-age adults, yet only 4% of diabetic patients at our clinic complete recommended annual retinal screening. Key barriers include limited Medicaid ophthalmology access, transportation challenges, and financial constraints. To address this gap, our QI project implements an on-site screening program using the FDA-cleared Optomed AEYE-DS handheld fundoscopic camera, with dedicated appointments for retinal imaging. Through a partnership with the St. Mary Ophthalmology Residency Program for expert image interpretation, this model enables timely identification of diabetic retinopathy and appropriate referral without requiring patients to navigate external ophthalmology access.

OBJECTIVES

The primary outcome is the completion of annual diabetic retinopathy screenings to 20% within 12 months after the implementation of the intervention. Secondary outcome is to increase referrals to ophthalmology.

METHODS

Diabetic patients due for annual retinopathy screening were identified and communicated to office staff via EPIC chat. Patients were contacted and scheduled for dedicated fundoscopic imaging appointments. Retinal images were captured using the Optomed AEYE-DS handheld camera and uploaded directly to the patient's chart in EPIC. Charts were routed to the St. Mary Ophthalmology Residency Program for image interpretation. Screening outcomes — including exam completion, grading results, and referrals — were tracked in a parallel spreadsheet. Screening completion rates were monitored using EPIC's SlicerDicer tool, with health maintenance care gaps updated at each encounter to ensure accurate and real-time data capture.



RESULTS

Prior to the intervention, diabetic retinopathy screening rates at our institution was around 4.3%. On January 8, 2026, we implemented a point-of-care diabetic retinopathy screening program using the Optomed Aurora AEYE. Patients were scheduled to appointments specifically for this purpose. In the first 3 months of implementation, 76 of 359 diabetic patients completed retinal screening, which is equivalent to 21%. This represents a 4-fold increase in the absolute screening rate compared with the pre-intervention period (21% vs. 4.3%). When annualized to account for the shorter observation window, the post-intervention screening trajectory projects substantially higher throughput than the baseline year. Notably, more patients were screened in under 3 months post-intervention (n=76) than during the entire preceding 12-month period (n=21). We were able to identify two patients with diabetic retinopathy during our intervention and were promptly referred to ophthalmology.

CONCLUSIONS

This quality improvement initiative nearly quadrupled screening rates by introducing dedicated fundoscopic imaging appointments using the Optomed Aurora AEYE-DS handheld camera, supported by collaborative image interpretation with the St. Mary Ophthalmology Residency Program. By creating a streamlined workflow, dedicated scheduling, on-site image capture, and expert remote reading, this model addresses the key barriers identified at our clinic. Our results exceed our projected 12-month target within 3 months.



REFERENCES

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