

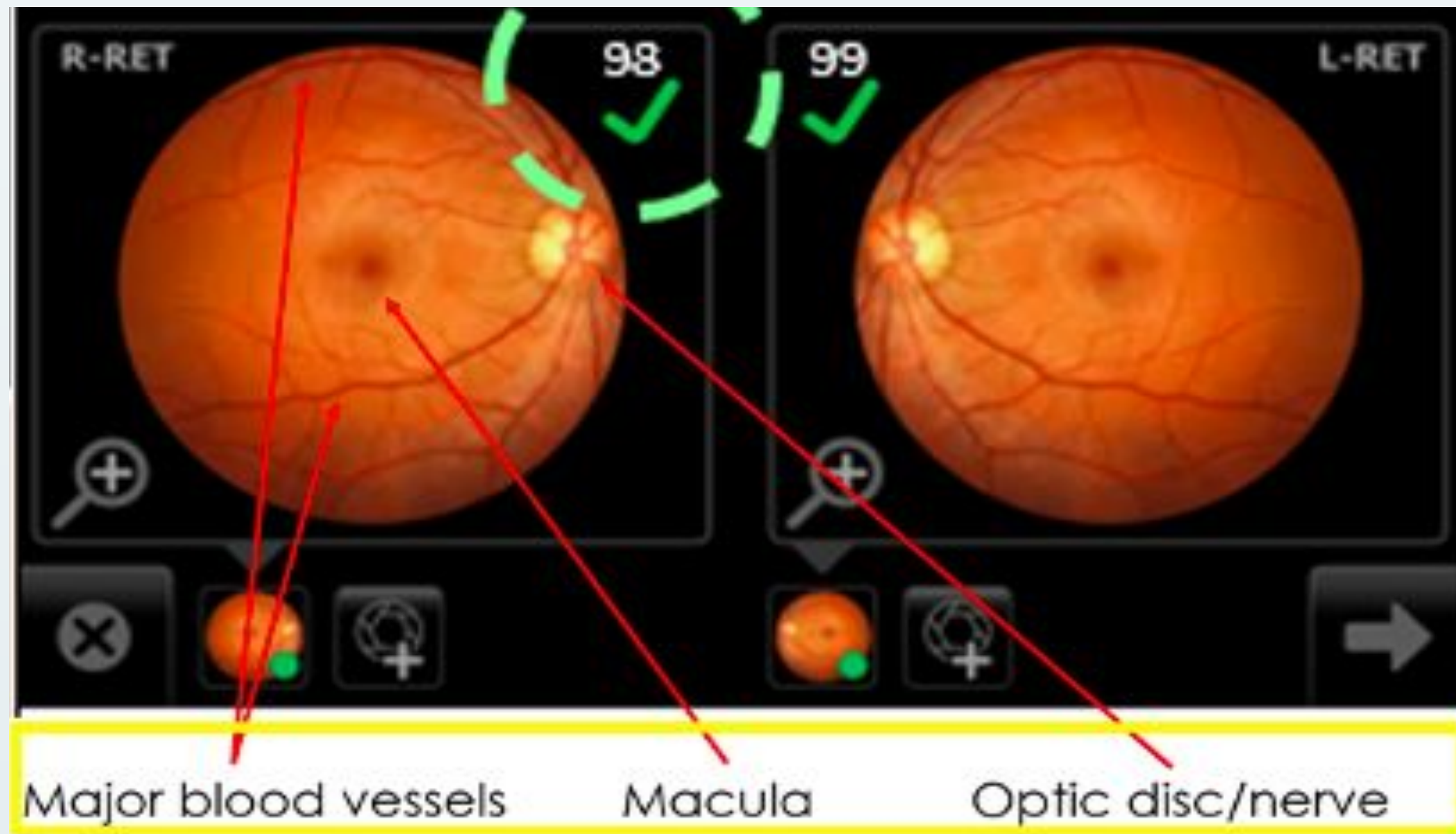
Rapid cycle improvement to identify best practices for diabetic retinopathy screenings in Community Health Centers

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Background

Diabetic retinopathy (DR) is the leading cause of blindness in the U.S in people 20-74 years old. 30 million people in the US have diabetes and 1 in 3 over the age of 40 have retinopathy. People with diabetes should be screened at least once every 2 years for this preventable vision threatening condition in order to receive the treatment needed in a timely manner. The national DR screening rate for the US is only 62.3%. The published national underserved rate drops to 36%, while most studies cite rates between 20-30%. Arizona FQHCs are no different with an average screening rate of 24%.



Although underutilized in general primary care clinics, teleophthalmology using retinal cameras is becoming the standard of care in FQHCs due to convenience, accessibility, affordability and acceptance. Despite this, results from teleophthalmology DR screening programs vary widely with modest increases of about 15% above baseline rates. When implemented in the right setting, clinics have reported increases to the top quartile in the nation for screening while others report no difference or improvements that regressed after the initial implementation period.

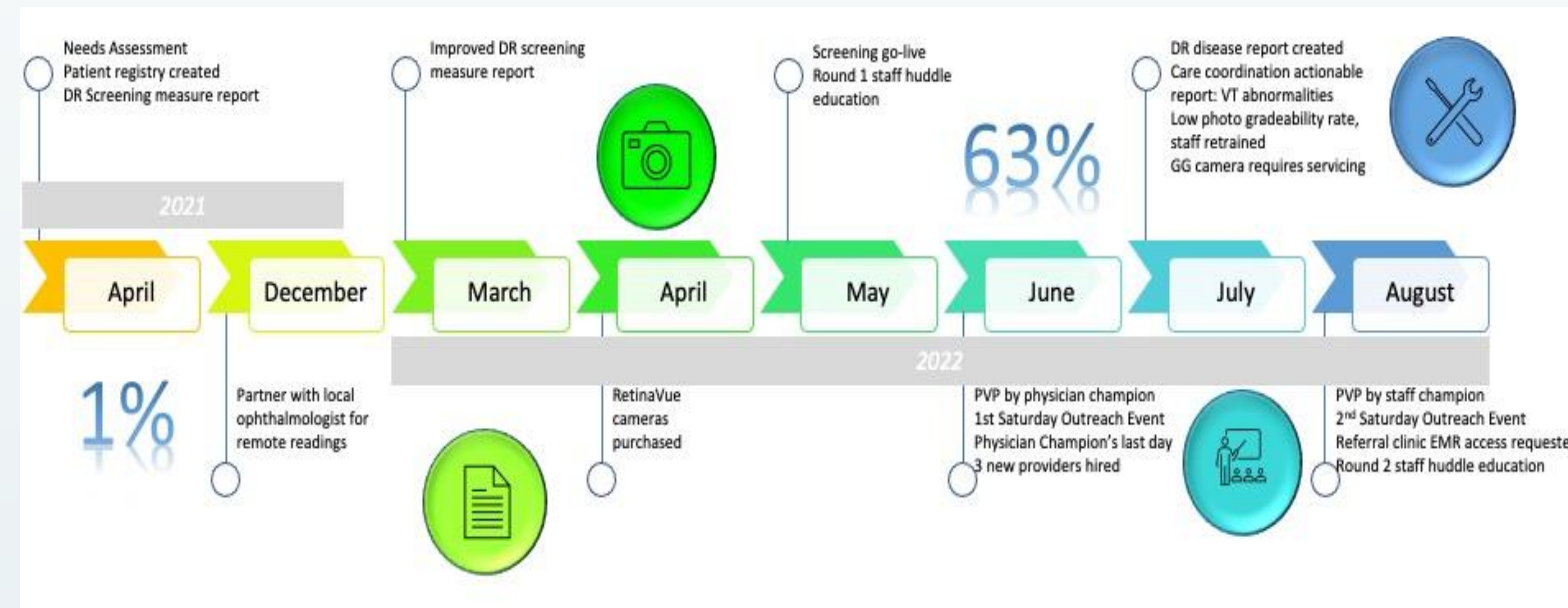
In order to overcome inherent barriers to specialty care, among other social determinants of health, Wesley purchased two retinal cameras in April of 2022 and has implemented a diabetic retinopathy screening quality improvement program.



Objective

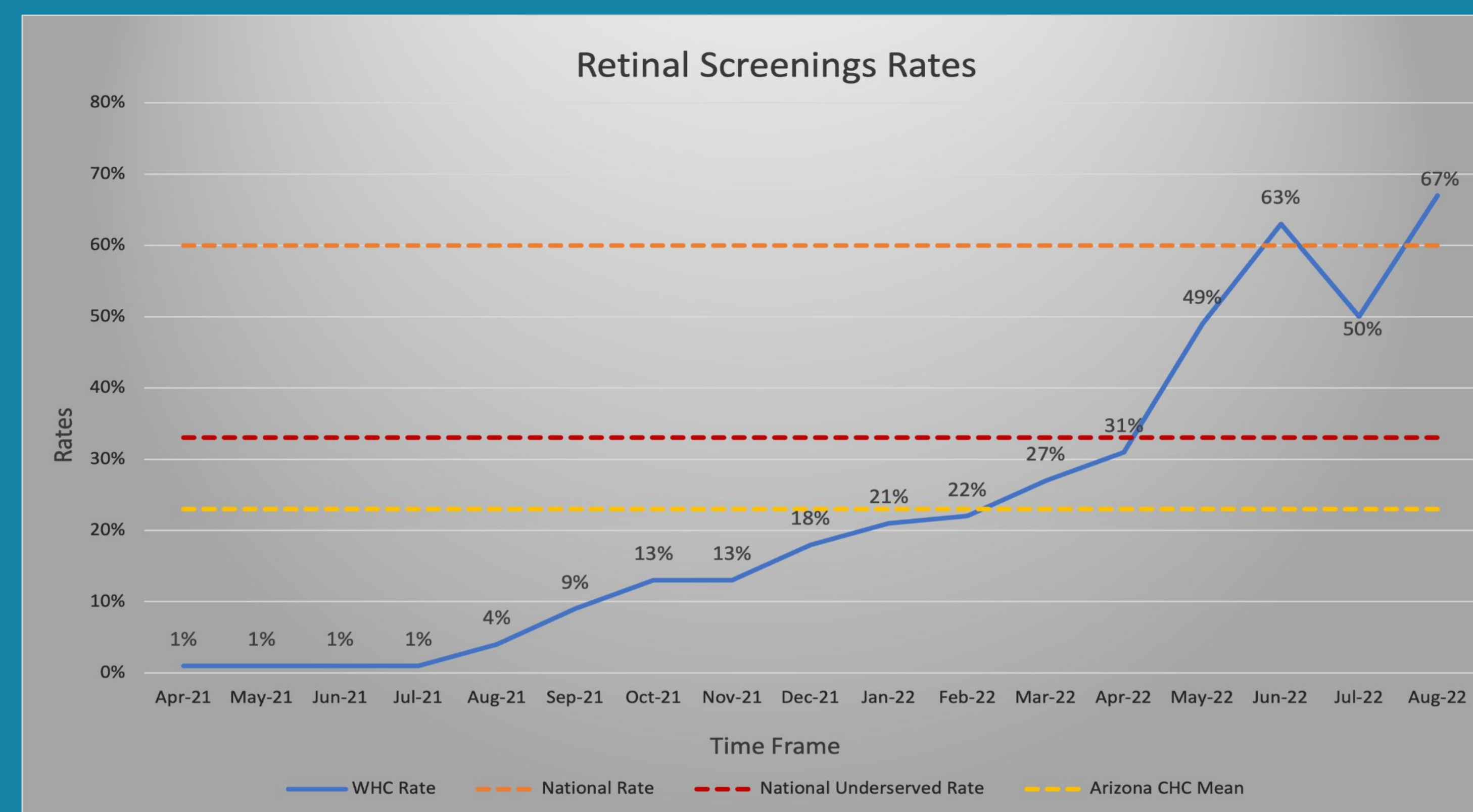
Utilize the Plan-Do-Study-Act (PDSA) cycle for continuous quality improvement in order to increase screening rates for diabetic retinopathy in an underserved population.

Methods- PDSA Cycle

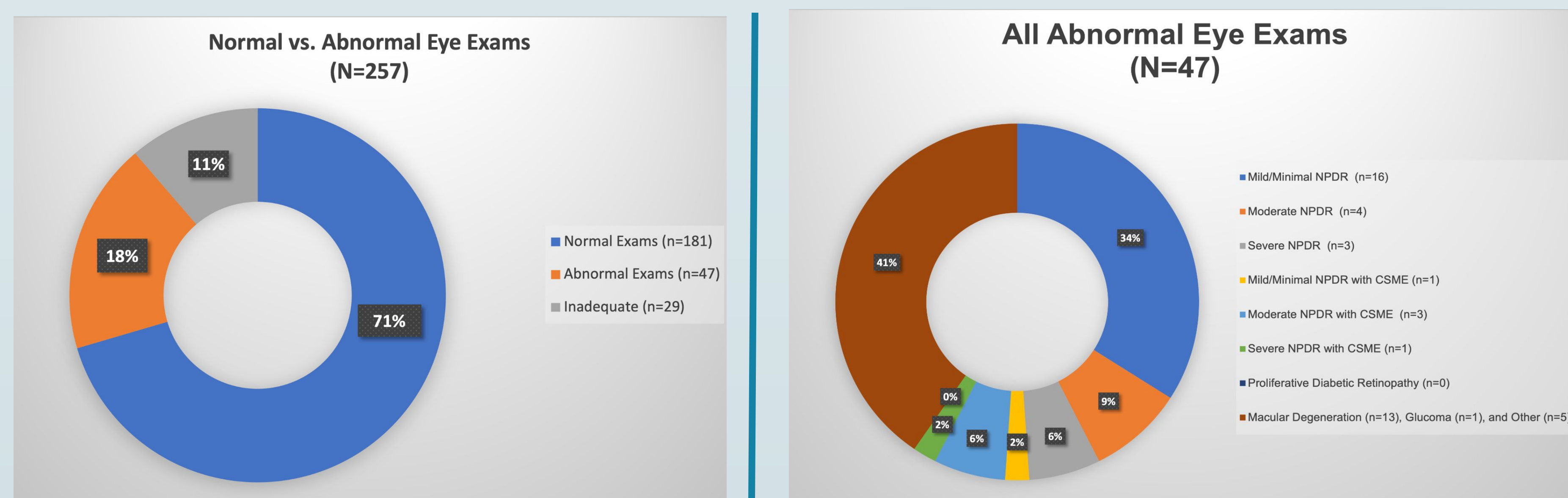


Results

Screening Timeline



Scanning results



Conclusion

Screening rates significantly increased due to in-house fundus photography and a structured QI program. The increase in screening rates was not consistent and ebbed and flowed depending on a few key program characteristics.



Discussion

Rapid increases with subsequent declines is consistent with most other studies of diabetes retinopathy screening interventions. The largest gains were from months where retinal cameras, pre-visit planning and outreach clinics were implemented. The largest decline was associated with loss of the clinical champion.

Wesley was able to increase from the worst performing FQHC in Arizona to the highest performing in one month after purchasing retinal cameras. These gains were lost just as rapidly when the physician champion left yet continues to trend upward.

Best practices identified during this process were:

- On site services
- Free screening
- Transparency
- Accountability
- Adaptability
- Clinical, admin, staff champions
- Accurate reports
- Actionable reports
- Follow evidence based guidelines
- Patient first mindset
- Organization wide buy-in
- Staff empowerment

Increasing retinal screenings is only a surrogate to decreasing vision loss secondary to diabetic retinopathy. The treatment of diabetic retinopathy consists of laser photocoagulation with or without anti-VEGF injections which costs \$10,000 - \$25,000 over a two year treatment period. Although the screening rate significantly increased, only 18% of the patients with abnormal screening needing specialty follow up were able to complete follow up and even fewer followed through to treatment. The next stage in the PDSA cycle will focus on ensuring that the people at risk for vision loss are able to access specialty care, specialists are aware of patient assistance programs for anti-VEGF medications and that the patients at risk of vision loss are getting treated.