

Point of Care Diabetic Retinal Screening: How to Build an Effective Program

Presented By:

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Agenda

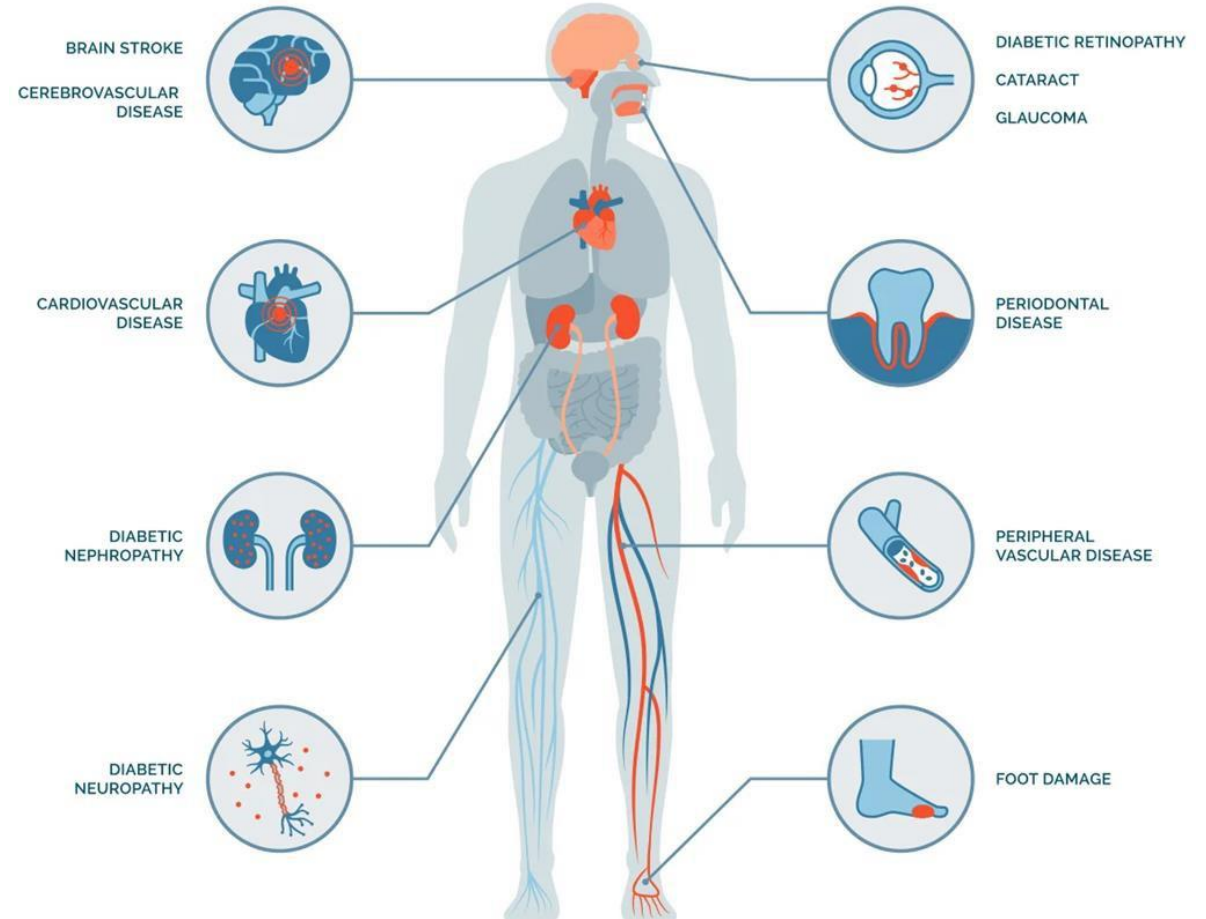
- 01** Introduction to Diabetes and Diabetic Retinopathy
 - 02** Common Challenges and Things to Consider
 - 03** Factors in Developing an ROI
 - 04** Questions / Feedback
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What currently fuels your interest in diabetic retinal screening?

- A. We have a diabetic retinal screening program but have not been satisfied with the results.
- B. We have a diabetic retinal screening program and have been happy with the results but are always looking for ways to improve.
- C. We are considering adding a diabetic retinal screening program.
- D. General information gathering.

What is diabetes and why does it effect the eye?

- Diabetes is a chronic health condition that impacts the way the body turns food into energy.
- In diabetics, the body doesn't make enough insulin, or the body can't use the insulin as well as it should. When there isn't enough insulin or the insulin is not effective, too much blood sugar stays in the bloodstream.
- When blood sugar remains in the blood stream for long periods of time, it damages end organs starting with smaller blood vessels.



Diabetic Retinopathy

Mild
Nonproliferative



Severe
Nonproliferative



Moderate
Nonproliferative

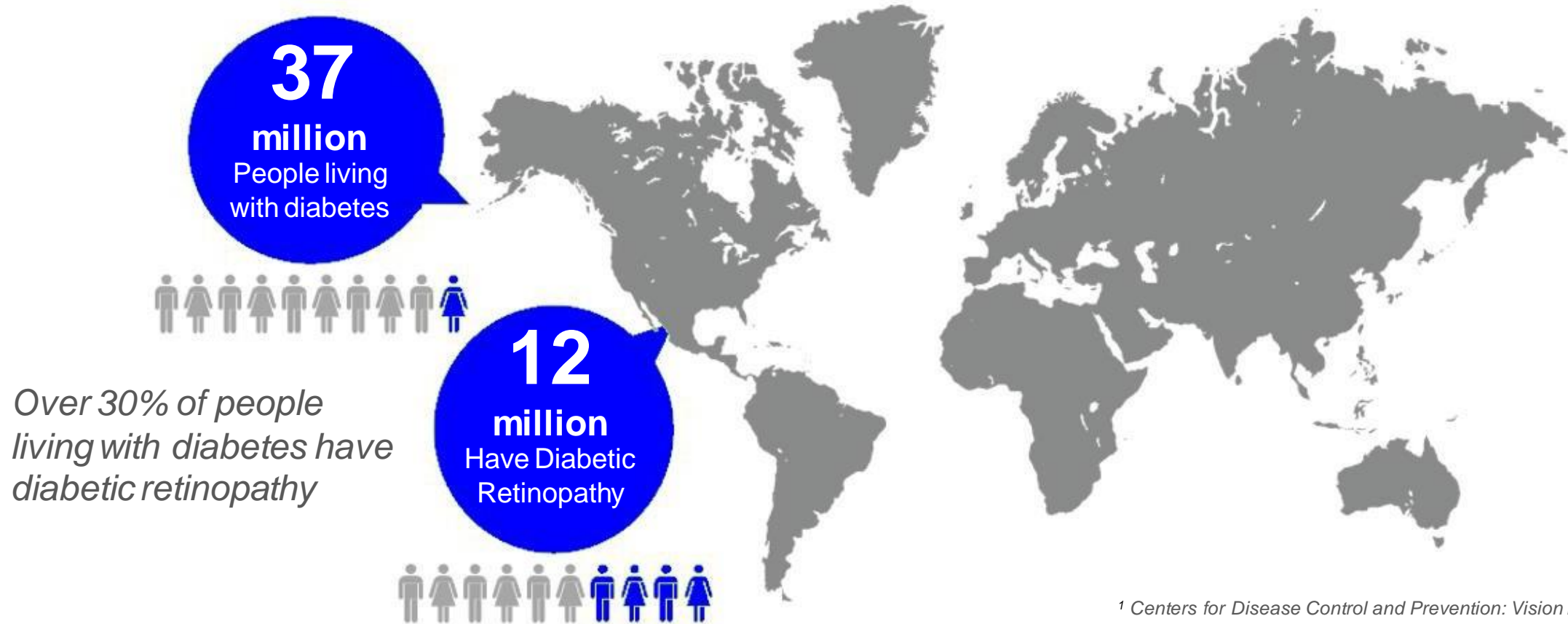


Proliferative



Diabetic retinopathy is one of the world's leading causes of blindness.¹

Diabetes affects over 1 in 10 Americans.



¹ Centers for Disease Control and Prevention: Vision Health Initiative (VHI). Common Eye Disorders. Retrieved February 19, 2018 from <https://www.cdc.gov/visionhealth/basics/ced/index.html>

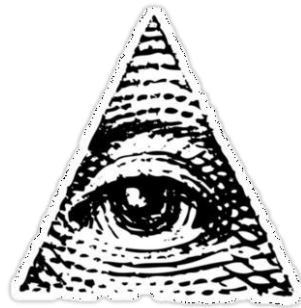
The cost of diabetes and diabetic retinopathy



1 of every **7** health care dollars is spent treating diabetes and its complications.

2.3x greater health care costs for Americans with diabetes

\$327B annual cost of diagnosed diabetes in America



Approximately **4 billion** dollars go directly to management of diabetic retina related complications.

AAO, AOA, and ADA all recommend regular eye exams

- Diabetic Retinopathy is the **#1 cause of blindness** in working-age adults.²
- Diabetic Retinopathy often has **NO symptoms** in its early stages.¹
- **Once vision damage occurs, it often can not be corrected.** However, early detection and treatment can **prevent vision loss and blindness in up to 95% of people.**²
- In patients with diabetes, many other vision threatening disease are more prevalent including glaucoma, cataracts, age-related macular degeneration and other retinal vascular disease.



Normal



Early



Late

1. American Academy of Ophthalmology

[Diabetic Retinopathy: Causes, Symptoms, Treatment - American Academy of Ophthalmology \(aao.org\)](https://www.aao.org/eye-health/diseases/diabetic-retinopathy-causes-symptoms-treatment)

2. Centers for Disease Control

[Diabetes and Vision Loss | Diabetes | CDC](https://www.cdc.gov/diabetes/about/diabetes-and-vision-loss/)

Diabetic Retinopathy

- **Only around half of diabetic patients receive their recommended annual eye examination.**
 - Poor access to Care
 - Geographic
 - Cultural
 - Economic
 - Educational
 - Misconception about the importance of eye examinations if vision is not compromised



Organization Support – AAO, AOA and ADA



AMERICAN ACADEMY
OF OPHTHALMOLOGY®

“Diabetic retinopathy may be asymptomatic for years, even at an advanced stage, so screening using new technologies such as telemedicine, is essential to identify, monitor, and guide the treatment of disease.”



AMERICAN
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“Ocular telehealth programs for diabetic retinopathy can be used to increase access to evaluation, educate patients, and promote appropriate follow-up and treatment...”



“Retinal photography, with remote reading by experts, has great potential to provide screening services in areas where qualified eye care professionals are not readily available.”

Point of Care Diabetic Retinopathy Screening



At Risk Diabetic Patients

Convenient diagnostic

Peace of mind

Early detection and treatment



Primary Care Providers

Fast, easy to use

Point of care testing

Improved control of complete diabetic patient care



Eye Care Providers

Targeted referrals

Add telehealth services

Capture non-compliant patients



Practices and Health Systems

Improve scores and quality measures

Additional POC capability

Improved payments



Payers

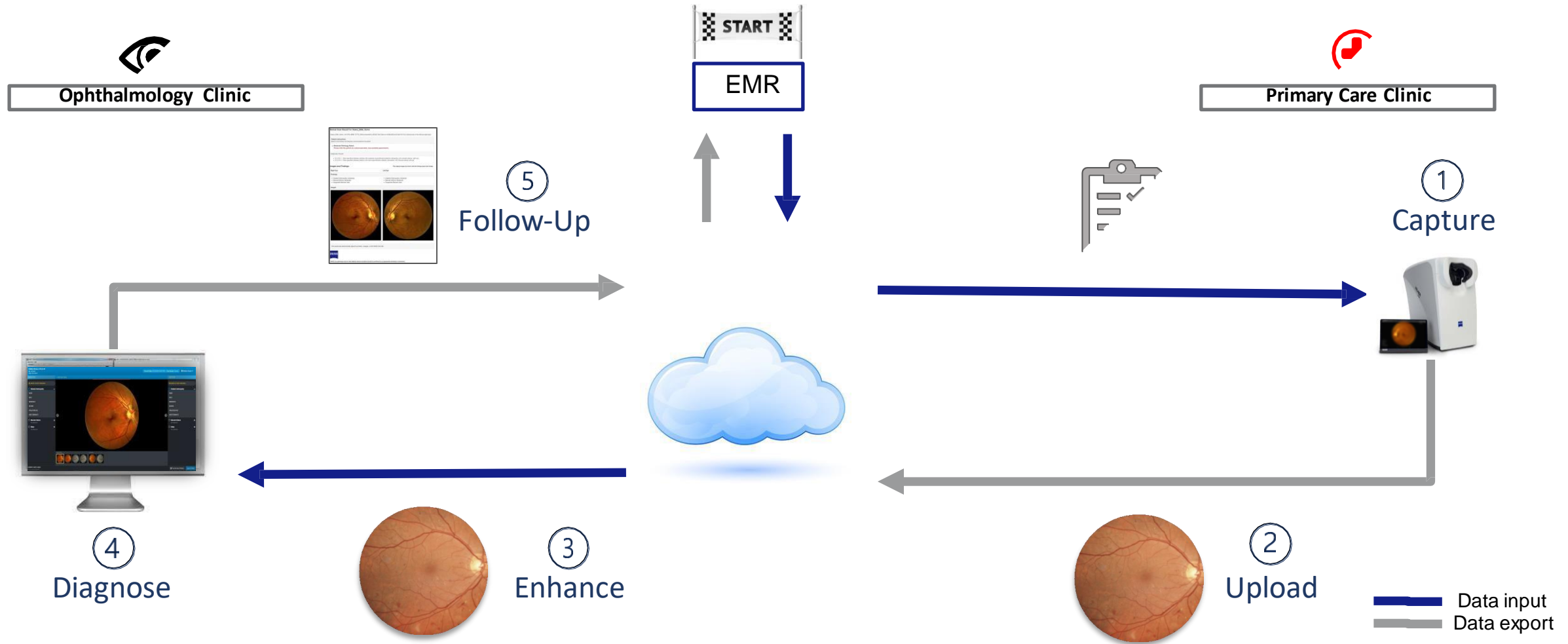
Built in metric tracking

Improved cost of care

Lower rates of advanced disease

Connecting for Better Patient Outcomes

Workflow Optimization – More Than Just Image Capture



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What do you believe is/would be the greatest obstacle when implementing a diabetic retinal screening program?

- A. Cost
- B. Patient Acceptance
- C. Physician Acceptance
- D. Technology and IT Integration
- E. Integrating into clinic workflow (staffing, turnover, workload)

Common Challenges / Things to Consider



What type of camera is most suitable?



What level of staff training will be required?



How will we implement grading?



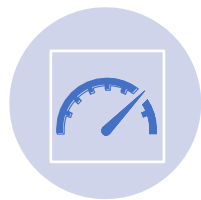
Should we use manual grading or artificial intelligence?



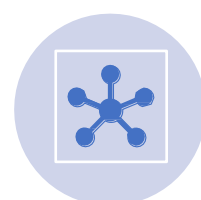
How should I ensure staff buy-in and who will be our clinical champions?



How can you provide patient engagement and education?



What metrics are important to track?



How will this system integrate with our EMR?

Type of Camera – Handheld



PROS:

- Portability (in and outside of clinic)
- Minimal space requirements
- Lower cost



CONS:

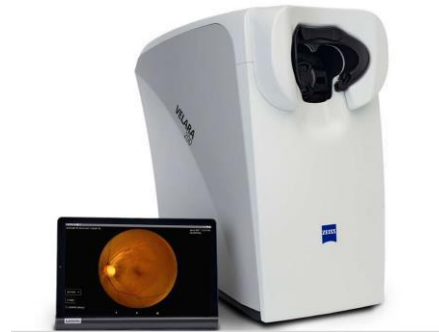
- Requires more training
- Lower gradeability
- Susceptible to loss/theft
- Susceptible to breakage

Type of Camera – Tabletop



PROS:

- Easier to use
- Higher image quality
- Less susceptible to loss/breakage/theft



CONS:

- May be more expensive
- Less mobile
- Requires dedicated space

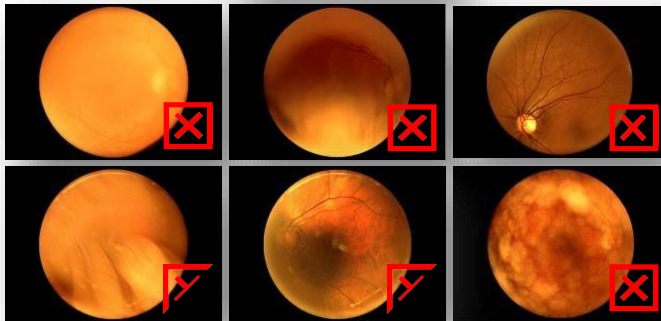
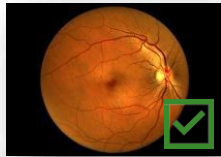


Staff Training



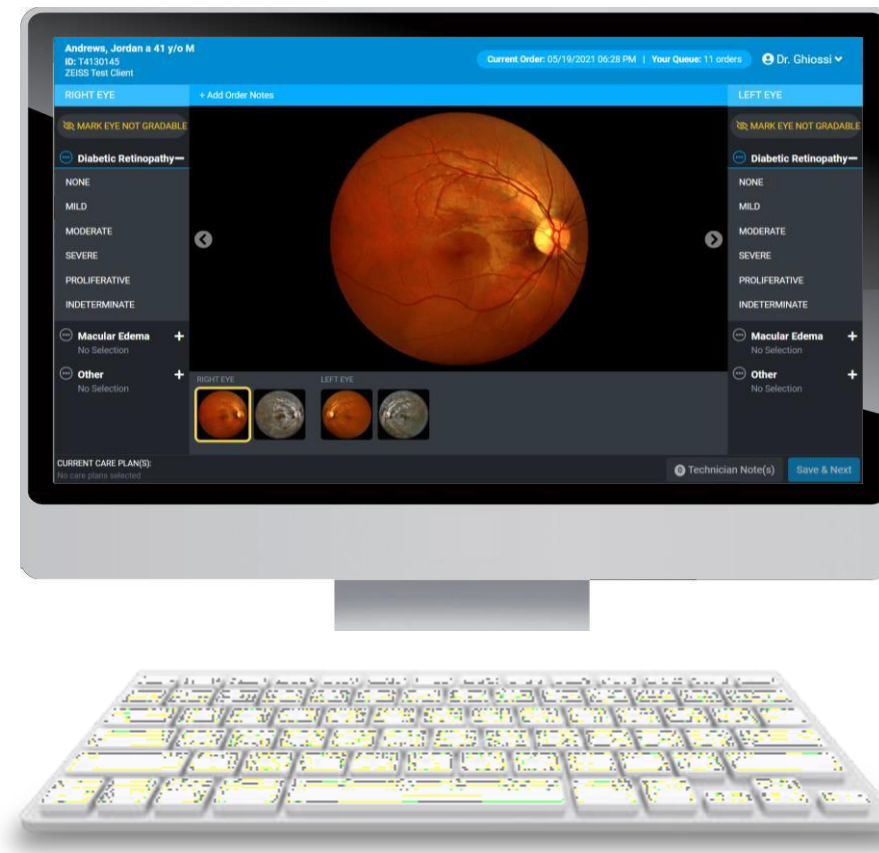
Questions:

1. How does your staff learn best (virtual/in-person)?
2. How long does it take someone to learn the imaging process?
3. How much does your system require the imager to know about the eye and the image?
4. Who will be discussing the process with the patient (technician or physician)?



Grading Needs

- Grading of diabetic retinal photographs (generally) requires a skilled reader (ophthalmologist or optometrist)
- Are services available in house, or do you need to utilize an external grading network?
- Grading application needs to be customizable, quick and easy to use.
- What is the gradeability of the system under consideration?

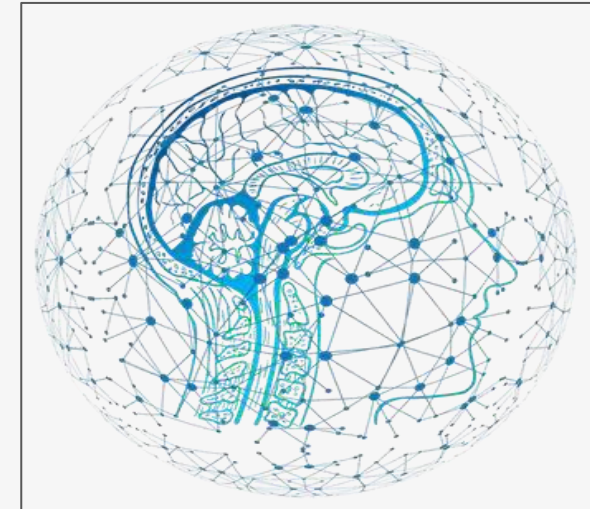


Manual Grading vs. Artificial Intelligence

Human Grader



Artificial Intelligence



- ← Ability to detect other pathology →
- ← Negative finding may give false sense of security →
- ← Grading of diabetic retinopathy →
- ← Speed of results reporting →
- ← Customizable treatment plans →

Staff Buy-In / Stakeholders / Clinical Champions



Administrative Champion

Coordination with IT
Reporting of Metrics
Tracking of Coding
Program Marketing
Creating Incentives



Nurse/MA/Tech Champion

Camera Operation
In-house Staff Training
Patient Education
“Super User” at Each
Camera Location



Physician Champion

Reporting of Outcomes
Sharing Experiences
Patient Education
Provider Education

Patient Engagement and Education

Diabetic Retinopathy is the #1 cause of blindness among working age adults in the United States.

1 in 3 Americans with diabetes will develop diabetic retinopathy.

The risk of blindness from diabetes can be reduced by 95% through early detection and treatment.

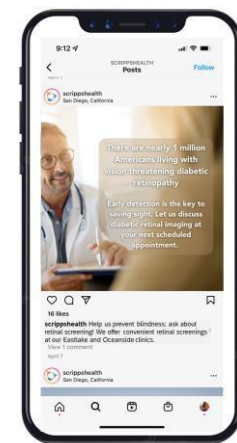
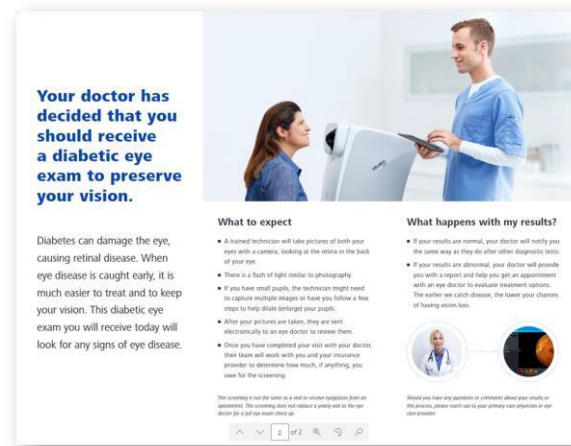
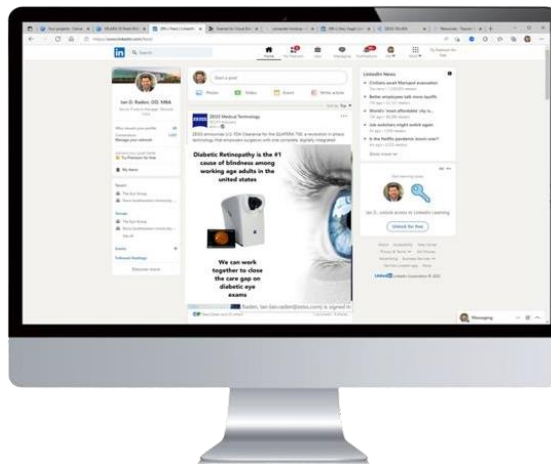
Let's discuss a quick and easy screening that can be completed today.



Seeing beyond

QUESTIONS:

1. What are your most effective marketing channels today?
2. How are you communicating with patients before visits?
3. How many in-office interactions do you have that could be an opportunity to showcase the solution?



Agenda

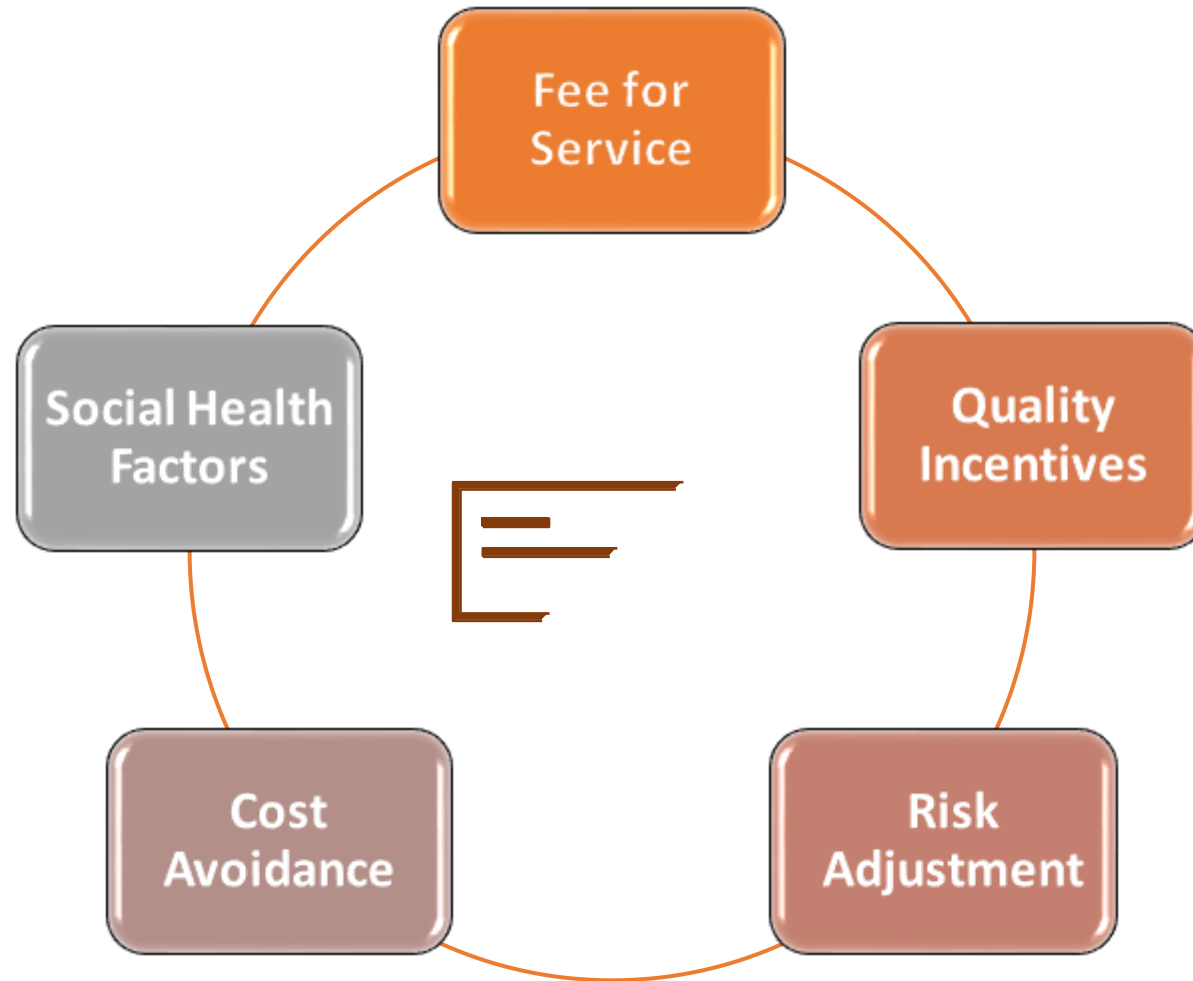
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What percentage of your diabetic patients are receiving diabetic retinal eye examinations currently?

- A. <52%
- B. $\geq 52\%$ but < 62%
- C. $\geq 62\%$ but < 71%
- D. $\geq 71\%$ but < 79%
- E. $\geq 79\%$



Factors in developing an ROI



Fee for Service Reimbursement

CPT Code	Brief Description	Description	Approximate Reimbursement*
92227	Remote DX Retinal Imaging	Imaging of retina for detection or monitoring of disease; with remote clinical staff review and report, unilateral or bilateral	\$16.27
92228	Remote DX Retinal Imaging Management	Imaging of retina for detection or monitoring of disease (diabetic retinopathy); with remote physician or other qualified health care professional interpretation and report, unilateral or bilateral	\$31.15
92229	Remote DX Retinal Imaging Management	Imaging of retina for detection or monitoring of disease (diabetic retinopathy); point-of-care automated analysis and report, unilateral or bilateral	\$47.06
92250	Fundus Photography with Interpretation and Report	Medical necessity must be documented. Photos are usually taken at the end of a comprehensive eye exam when the eyes have been fully dilated. Implications for patient diagnosis, management a, and prognosis should be included.	\$37.72

- National payment amount CMS.gov Physician Fee Schedule

Quality Incentives



- Diabetic Retinal Exams are included in the Medicare STARS and Medicare quality ratings programs.
- Financial incentives are being offered for closing care gaps including diabetic retinal examinations. CMS can impose penalties for poor HEDIS measures and Star Ratings.

<52%	>= 52% to < 62%	≥ 62% to < 71%	≥ 71% to < 79%	≥ 79%
★☆☆☆☆	★★☆☆☆	★★★☆☆	★★★★☆	★★★★★

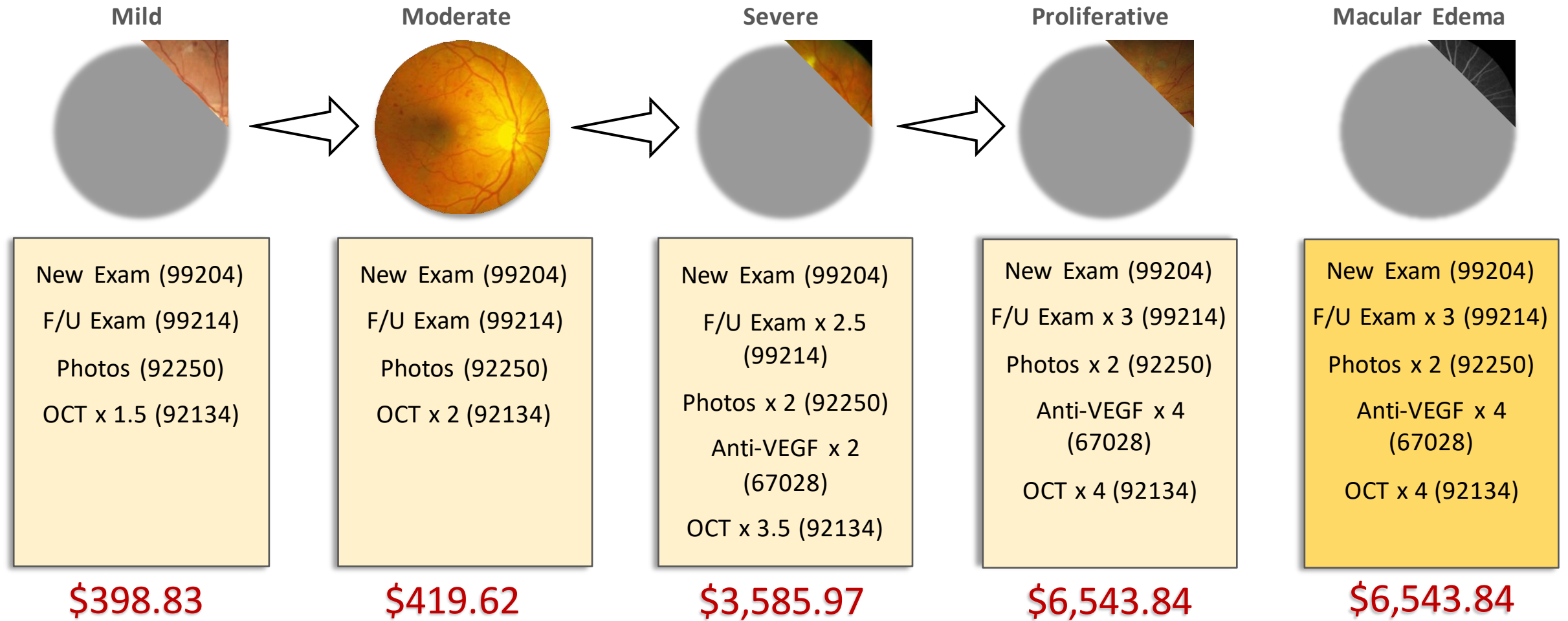
*Medicare 2022 Star Ratings Technical Notes

Risk Adjustment

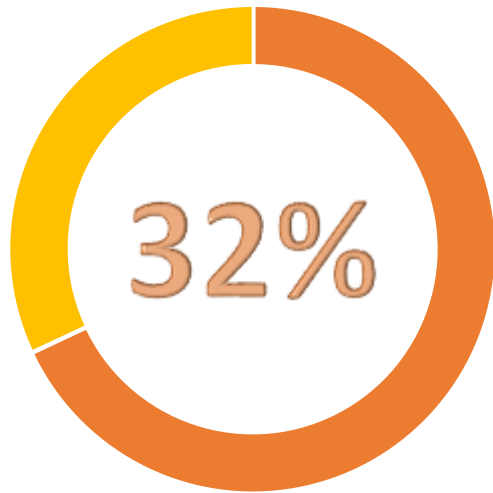
- Diabetic patients with documented eye disease are considered “sicker” than those without. Detecting previously undetected ocular disease can represent significant increases in PMPM payments.
- Over 30% of screened patients are diagnosed with some form of ocular disease.
- ICD-10 codes for diabetes with complications carry a RAF 3x higher than uncomplicated diabetes.



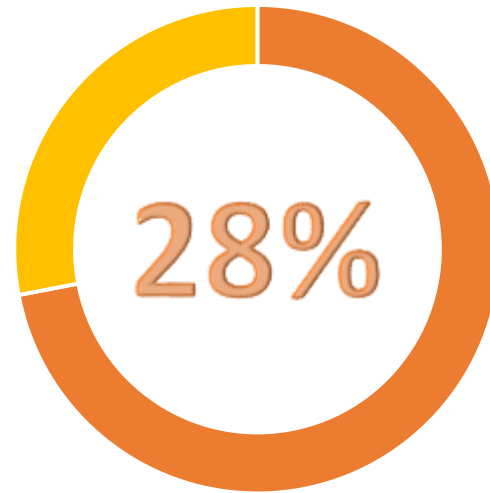
Cost Avoidance / Targeted Referrals



Social Health Factors



Over 30% of patients screened have **some ocular pathology**



28% of patients screened have **diabetic retinopathy**



10% of patients screened are classified as **"Eyesight Saves"**

*Based on pilot data, AAO preferred practice patterns and AAO database

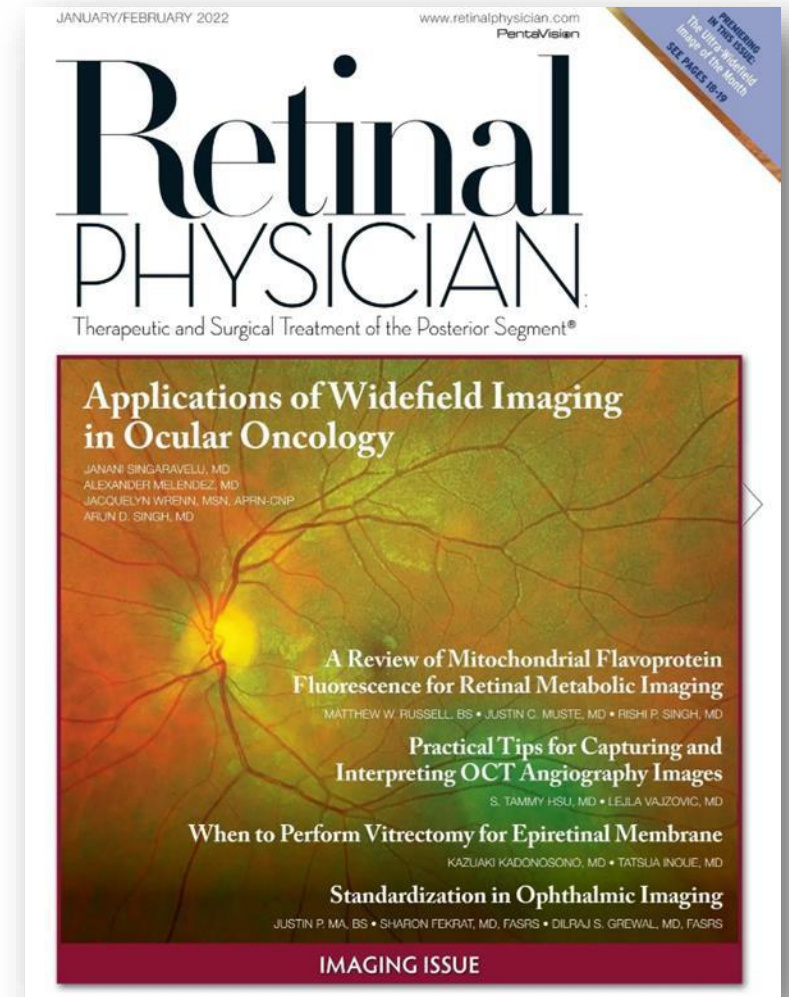
Factors in Developing an ROI - Summary

UC Davis launched a pilot teleophthalmology program in 2018 for remote DR screening and used code 92227

- The cost estimate for operation (including camera cost and personnel time) was **\$41** per patient.

In addition to FFS revenue:

- There was a projected bonus of **\$43** per patient from incentive programs (Integrated Healthcare Association Pay for Performance of the Medicare Shared Savings Program).
- Notable **downstream revenue** from referrals to the University's Eye Center.
- The University's program increased DR screening rates from **49% to 63%**



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Summary

1. Diabetes prevalence in the United States is continuing to increase, and Diabetic Retinopathy is the #1 cause of blindness and vision loss among working age adults.
2. Nearly all cases of vision loss and blindness from diabetes are preventable with early detection and treatment.
3. There are many things to consider prior to selecting and implementing a diabetic retinopathy screening program in your healthcare system.
4. There are many factors to consider when calculating the ROI on a diabetic retinopathy screening program, and fee for service is only a small portion.

THANK YOU

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