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

Presented By:

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We are a network of health care professionals addressing the challenges posed by the emerging landscape of value-based care and government health care reform.

OUR MISSION

Our mission is to provide a community for like-minded professionals to come together for networking, education, and industry collaboration to stay ahead and advance their careers.

ONE ASSOCIATION THREE COMMUNITIES



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ASK YOUR QUESTIONS IN OUR DISCUSSION BOARD



- **01** Introduction to Diabetes and Diabetic Retinopathy
- **02** Common Challenges and Things to Consider
- **03** Factors in Developing an ROI
- **04** Questions / Feedback



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

Nonproliferative Severe

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Mild



Proliferative

Nonproliferative

Moderate

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

Diabetes affects over 1 in 10 Americans.



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



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 \bullet
- **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 \bullet prevalent including glaucoma, cataracts, age-related macular degeneration and other retinal vascular disease.

1. American Academy of Ophthalmology Diabetic Retinopathy: Causes, Symptoms, Treatment - American Academy of Ophthalmology (aao.org Centers for Disease Control Diabetes and Vision Loss | Diabetes | CDC





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."



"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





Workflow Optimization – More Than Just Image Capture





Agenda

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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



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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)?

| ZEL | 22 | |
|---------------------|---|--|
| | | |
| | contact longer and ou | e glasses. They may also detect eve abnormalities and prescribe certain |
| | medications. | e glasses. They may also detect eye abnormanities and prescribe certain |
| | 0.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1 | |
| | | medical doctors who can diagnose disease as well as practice medicine and profession of Ophthalmology also consists of sub-specialties including |
| | Glaucoma, Cornea an | d Retina Specialists. If diabetic retinopathy is found, the Retina Specialists o will help to better treat disease. |
| | Lalread | |
| | I already now? Th | |
| | already t | ZEISS |
| | the doct medical | |
| | medical | |
| | I get my | |
| | this exa | Patient Frequently Asked Questions: |
| | Retinopa | Annual Diabetic Retinal Exam |
| | I had thi | |
| | exam is a | Your Medical Provider and Care Management Team have determined that you need a diabetic eye exam to better manage your care. This exam is part of a comprehensive diabetic check up to |
| | specifica | keep you and your provider on the same page to controlling your diabetes. |
| | and the Ophthali | |
| | | Why does my Provider want to examine my eyes? Patients with diabetes need an annual diabetic retinal exam as a preventative measure to blindness. This exam, while allowing physician: |
| | Will this | to diagnose and treat diabetic retinopathy, also empowers your Provider by providing a more |
| | they see anything | comprehensive understanding of how your Diabetes is affecting your total body. Eye pathology is |
| | 10 I. | a key indicator to higher-risk patients, and by capturing and assessing the photo of your eye, you provider will better be able to customize a Care Plan to keep you healthy and productive. |
| | I don't I | |
| | Exam. | Should pathology be found in later stages of the disease, you will have a Retina Specialist helping |
| | Will my | you through injections and possibly surgery. Should this occur, best outcomes will require care coordination and a team approach. Your Provider will help you manage your total diabetes while |
| | Your out | the eye specialists work to control the progression of retinopathy. |
| | orders w | What is this exam looking for? Diabetic Retinopathy is a vision-threatening complication cause |
| | Your pro | by Diabetes. While this exam is checking your eye health, this is a medical exam to help us better |
| | to come | understand how your diabetes is acting within your body. |
| | associate | What if you find something in the exam? Your provider will have your results from the exam |
| | Should | within a couple of days. If the retina specialists who have read the exam find Diabetic Retinopathy |
| | may app | the next steps will depend upon any severity identified in the diagnosis. If pathology is present, your provider will update your care plan to help you better manage your health. Depending upon |
| | | your provider will update your care plan to help you better manage your health. Depending upon the level of severity, he may refer you to an eye specialist to also treat the eye disease. |
| | | Am I going to get a puff of air or experience anything else uncomfortable during the exam |
| | | No, the eye exam you get with the puff of air at your eye doctor is a different test – checking for glaucoma. There is not discomfort associated with the exam with the exception of looking at a |
| | | green light during the picture. The experience would be similar to looking at a flash of a camera |
| | | when someone is taking your picture. |
| | | Are you going to dilate my eyes? Will I be able to drive? Dilation opens your pupil to get light |
| | | to the back of your eye. When the pupil gets extremely enlarged - as wide as 10mm, vision |
| | | becomes blurry and difficult. For this exam, the camera technician will be taking a photo of the back of your eye. Your pupil only needs to be about 3mm. Your technician will help you to relax |
| | | your pupil naturally - without any kind of drop. For most patients, sitting in a dark room for a few |
| SM 026F Rev A | | moments is all that is necessary. A small percentage of patients require a mild dilation to open |
| and serve they fill | | the pupil slightly. This drop should not impair your vision beyond mild fuzziness for a couple of hours. You should still be able to drive |

I already see my optionstriit / ophthalmologist. Why is thin test necessary here? While you ophthalmologist or optionetist may be providing you with an annual eye exam. Ne or she would help you seek treatment for Diabetic Retinopathy typically when it is in more advanced stagest. I caght early enough. Diabetic SEP Disease is actually treated, and could potnetially even be arrested or reversed, by a Care Plan managed by your Provider. This exam does not replace there for your Ophthalmologist — this is a medical early mutathy and be better care.

is there a difference between Optometry and Ophthalmology? Yes. Optometrists are healthcare professionals who provide vision testing and prescribe corrective measures including

SM 026E Rev A

Grading Needs

ISF

- 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





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

ZEISS

Seeing beyond

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.

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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?







Metrics

Order Intake By Day



- 1. Number of Images per Camera
- 2. Gradeability

- 3. Diseases Detected
- 4. Turnaround Time per Grader





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

A. <52%

B. ≥52% but < 62%

C. ≥62% but < 71%

D. ≥71% but < 79%

E. ≥79%



Factors in developing an ROI





Fee for Service Reimbursement

| CPT Code | Brief Description | Description Approx | imate 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 shou 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

RISE



Social Health Factors



28%



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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