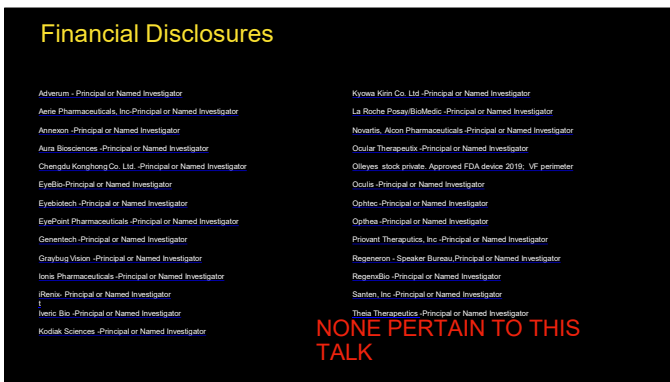
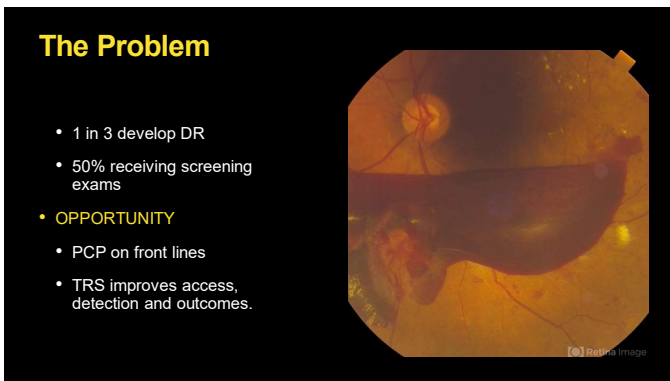


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2



3

Goals of Collaboration

- Enhance patient outcomes.
- Increase screening rates.
- Reduce referral barriers.
- Increase quality of care.
 - MACRA → MIPS (providers)
 - HEDIS → STAR Ratings (ins)



4

AAO supported

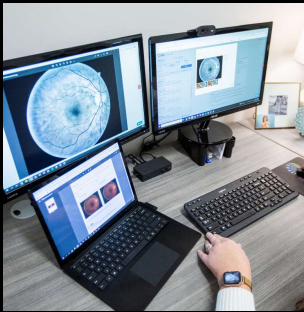
Meta Analyses Establishing Efficacy with good S&S

- Telemedicine for detecting diabetic retinopathy: a systematic review and meta-analysis. Lili Shi^{1,2}, Huiqun Wu¹, Jiancheng Dong¹, Kui Jiang¹, Xiting Lu³, Jian Shi. BJO June 2015 volume 99-6.
- Screening for Presence or Absence of Diabetic Retinopathy: A Meta-analysis. Peter Bragge, PhD; Russell L. Gruen, PhD, MBBS, FRACS; Marisa Chau, BBNSc(Hons). Andrew Forbes, PhD; Hugh R. Taylor, M. Arch Ophthalmol. 2011;129(4):435-444.
- Cost-effectiveness and diagnostic accuracy of telemedicine in macular disease and diabetic retinopathy: A systematic review and meta-analysis. Waqas Ullah, Sana Khan Pathan, Ankur Panchal, Swapna Anandan 2019 JDC. Jefferson.edu.
- According to Research GPT, 118 original articles were published from 2015-2020 on the subject.

5

Why Teleretinal Screening? (TRS)

- ACCESSIBILITY: retinal imaging at PCP office.
- EFFICIENCY: captured and promptly reviewed remotely by MD.
- ACCURACY: high sensitivity and specificity.
- BROADER IMPACT: detects other diseases



6

HEDIS Scores

The HOOK

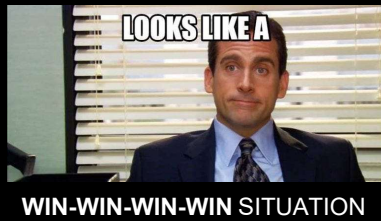
- Healthcare Effectiveness Data and Information Set
 - Hgb A1C
 - **RETINAL SCREENING!!!**
 - Nephropathy screening
 - BP control



7

Win-Win-Win-Win

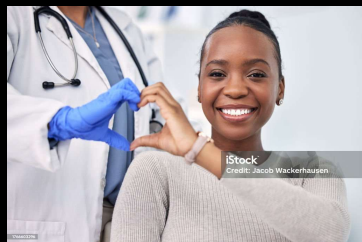
- Patients benefit.
- PCP benefits.
- Retinologist benefits.
- Healthcare system benefits.



8

Why Patients Benefit

- Easy access.
- Fewer appointments.
- Less cost to screen.
- Earlier detection.
- Reduces vision loss.



9

Why Retinologist Benefit

- Builds relationship with PCPs.
- Fewer screening exams in office.
- Managing sight-threatening disease.
- Earlier detection and intervention.
- Preventing vision loss.



10

Why Insurers Benefit

- Improve quality measures.
- Improve patient-doctor relationship.
- Reduce cost
 - Reduce # appointments
 - Earlier intervention
 - Cost savings to screen pts



11

Why PCPs Benefit

- HEDIS Scores determine care quality thus impact reimbursement.
- Better control of pt compliance with in-office cameras.
- Better coordination of care through third party web based infrastructure and outsourced appointment scheduling.
- Patient - Doctor satisfaction.
- Proven benefits. (2 cam to 24 cameras in 8 years)



12

CMO Own Words

15,000 DM pts

- Offering retinal screening builds patient connection to PCP.
- Reduces frustration of chasing outside records.
- PCP showing fundus image improves focus on Hgb A1C.
- MC ACO (and other risk-based contracts) increase pay for DM pts from 12K to 18K if any DR detected.
- Screening rates jumped from 25% to 70%.
- MC Advantage STAR ratings up.
- MC ACO in top quartile.



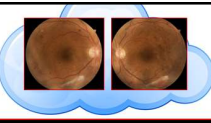
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The Details

- Fee for service ...break even at best
- Code 92250... MC \$74. Commercial Ins... \$125
- Third party infrastructure gets around \$33/ patient
- Table top camera: \$15K ; stability and longevity. Locations >10 PCPs
- Hand held camera: \$7K ; 3% less readability. Locations 5-10 PCPs
- As readers paid \$5/pt.
- Speak to CMO, PCP lead physician, Population Health Department, NOT CFO.



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2. Upload to platform

How TRS works?



1. Image acquisition @ PCP's lab



3. MD reads

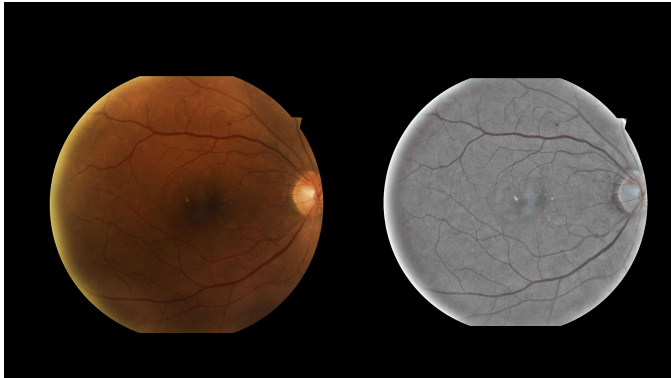


5. Schedule

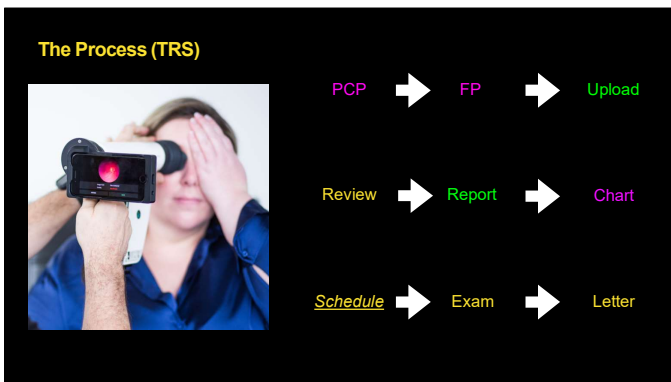


4. Automated report

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Cloud-based TRS Platforms


- Retina Labs
- IRIS
- Eyenuk*
- Hillrom's RetinaVue
- AEYE Health*

*AI for DR

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TRS Platform Considerations

- Image Quality: *table top* v hand held, standard v UWF, FP v *image enhancement*.
- Image Reader: AI as reader, *local retina expert*, centralized Eye MD readers.
- Work Flow: follow up intervals
- Scheduling: who, by when, with whom, no answer protocol...



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Utility of Telemedicine for Diabetic Retinopathy Screening in an Urban, Insured Population Using Fundus Cameras in a Primary Care Office

Poster 217

Authors: Jose Aguirre Martinez, Shelley Day Chabot, C. Armitage Harper, James W. Dooner, Mark Levinson, Peter A. Naon, Ryan C. Young, Robert W. Wong

INTRODUCTION
Telemedicine for diabetic retinopathy screening has been established as a viable screening program option [1-5]. This report reviews our two year experience using telemedicine to screen for diabetic retinopathy in an urban, insured population.

METHODS: We report our two year experience from May of 2015 through April of 2017 deploying telemedicine for diabetic retinopathy screening using table-top fundus cameras stationed in primary care offices of a well established regional medical clinic serving commercially-insured patients. Collected data included the number screened, number with diabetic retinopathy, number requiring further evaluation, and number actually evaluated by trained retina specialist (capture rate). A third party company provided the interconnectivity required via a cloud-based platform. Fundus images were reviewed by a local retina reading center, comprised of local retina specialists whose administration assisted in scheduling at-risk patients.

RESULTS:

- # patients screened: 5,764
- # patients with ungradable images: 132 (2.3%)
- # patients with gradable images: 5,632 (97.7%)
- # patients with retinal pathology 1,830 (32.5%)
- # with diabetic retinopathy were 1,152 (20.5%)
- # requiring a retina appointment: 668 (11.9%)
- # actually examined by a retina specialist: 547 (9.7%)
- compliance capture rate (examined/required) 81.9% (547/668)
- # patients treated 82 (1.45% of total and 15% of those examined).

CONCLUSION
This report confirms the utility of telemedicine for diabetic retinopathy screening, particularly in an insured, urban population. It also documents a higher than previously reported capture rate (81.9%) of those patients needing further retinal evaluation actually seeing a retina specialist. Because of this, telemedicine for diabetic retinopathy screening is likely to expand in the future.

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Authors have no pertinent financial interest. No human research was performed.

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RESULTS

The University of Texas at Austin Dell Medical School

AUSTIN RETINA

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Study	Present report	Jani 2017 JAMA Ophthalmol	Kesavum 2016 JAMA Ophthalmol
Population	urban, insured	rural, underserved	urban, safety net
# screened	5,764	1,681	949
# DR (%)	1,152 (20.5%)	20.3%	UA
# DR needing retinal evaluation (%)	668 (11.9%)	9.3%	UA
Compliance Capture rate 547/668	81.9%	60%	29.9%

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Austin Retina Experience

- Started in 2014
- In last 6 years, 49,409 screened
- 11.32% with DR needing exam
- 76.78% actually examined

	Yr	Reads Total	Priority Patients (Cm Imp)	Scheduled Priority	Seen Priority	Scheduled	Seen
2019 Total	13	5885	579	394	316	532	420
2020 Total	15	6418	677	411	333	647	673
2021 Total	24	8991	803	564	298	1250	971
2022 Total	27	9509	679	476	384	1083	841
2023 Total	30	8867	522	376	310	891	696
2024 Total	32	9739	567	450	361	992	695
Grand Total	35	49409	3827	2671	1990	5595	4296
			7.75%	69.79%	52.00%	11.32%	76.78%
			of Reads of Priority	of Priority of Priority	of Priority of Priority	of Reads Of Scheduled	of Reads Of Scheduled

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Summary

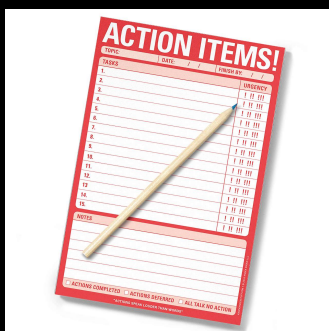
- TRS collaborates with PCPs.
- TRS improves pt access.
- TRS maximizes retinologist time.
- TRS catches disease earlier.
- TRS reduces vision loss.
- TRS saves time and money.
- TRS is a win-win-win.



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Action Items

- Reach out to CMO of large multispecialty groups.
- Propose TRS to improve screening rates for HEDIS scores and ACO risk based DR detection.
- Offer retina scheduling support.
- Signal willingness to leverage technology for better pt outcomes.



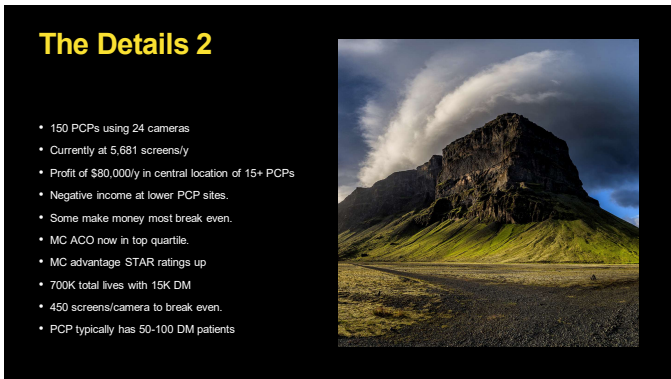
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