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Teleretinal Screening for Diabetic Retinopathy in Primary Care: Why has Uptake of this Promising Innovation Been so Low in USA?

1. Diabetic retinopathy
2. Digital screenings
3. Artificial Intelligent
4. Primary care clinics
5. DR Screening in USA

Summary

Diabetic eye disease is the most common form of blindness in the industrialized world. Many cases could be prevented via screening. Unfortunately many patients with diabetes do not receive retinal screening because of the logistics in getting to an ophthalmology appointment. To address there has been a push to have retinopathy screening at the primary care physician practices through telemedicine in USA.

It is a compelling idea with data to support its effectiveness, but few primary care doctors use it. In this presentation, based on our interviews with primary care physicians from around USA (approached 200 of them), we describe the underlying reasons and potential solutions. I believe the research will be of interest to the wider community and will influence the future of eye screening of patients with diabetes.

We have also implemented AI based screening in primary care clinics in Australia and will present the experience (appeared in JAMA Open Network recently).



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Descriptive CV

Prof Yogesan leads the CSIRO's Digital Health Research in WA and director for CSIRO's Australian Telehealth Research and Development Centre. He is a visiting scholar to Harvard Medical School and an Adjunct Professor at the Medical School, the University of Notre Dame. Professor Yogesan pioneered research on the development of an eye test for early detection of Alzheimer's disease (AD). Prof Yogesan was recently awarded Achiever of the Year for his contribution to WA's Innovation and ICT industry. He was also WA finalist for Australian of the Year in 2015. He was a finalist for the Western Australian of the Year in 2014 and a finalist in AIM Pinnacle Business Leader of the Year in 2014.

He was a Senior Fulbright Scholar to Stanford University School of Medicine. Two of his innovations, the EyeScan device and the Remote-I smart health system have been used around the world. NASA is using his invention, EyeScan, in the Space at the International Space Station. His telemedicine technologies have been implemented in Guangdong Province in China to connect 10 satellite clinics to provide screening services millions of people. He has been working in the field of digital health and telemedicine for more than 20 years and developed innovative technologies and service delivery models to bring specialist medical care to the doorsteps of the underserved. He has published more than 150 peer-reviewed papers and 4 textbooks in the field. He has a patent portfolio of more than 35 patent applications including algorithms for computer-aided disease detection. He has won inventor of the year awards in WA for developing a low cost easy-to-operate ophthalmic imaging device and computer-aided vision testing systems.