

## Health-care delivery and living with diabetes

### Screening

#### Models of care delivery

Organisation of seamless and reliable management of diabetic retinopathy screening through teleophthalmology.

Aims: Teleophthalmology for screening for diabetic retinopathy (DR) has shown significant visual health results and savings of medical resources in urban and remote communities. Although data and image capture and their electronic transfer are relatively straightforward, management and overview of the screening process are necessary to monitor and insure quality of all steps, from creation of appointments to follow-up with an ophthalmologist and yearly patient recall.

Methods: Management tools are needed to insure retrieval of any scheduled patient who has not followed on examination, prompt interpretation of data by the ophthalmologists with an automated redistribution towards other ophthalmologists when delays for interpretation are not met, to flag amongst a large volume of patients any diabetic presenting with a condition dictating intervention or surveillance. Over viewing of timely and appropriate follow-up for each screened diabetic as well as quality control of the medical diagnostics are also needed. Any screening program must insure security and confidentiality, easy management of protected levels of access for specific tasks for imagers, ophthalmologists, computer technicians, administrators as well as tracing of all actions to all individuals who intervene. Continuing care needs be insured by systematic transmission of screening results to medical doctors involved in the care of the diabetics and by feedback to and recall of screened diabetics. Organized and easily retrievable data for public health analysis providing a prospective DR registry is also pertinent. Management tools need be compatible with any camera used for screening and be usable in conditions with no immediate access to internet. Using specially developed software with all of the above characteristics, screening for DR through teleophthalmology has been performed since 2005 in urban, semi urban and remote communities in over 8,000 diabetics through mobile and permanently located cameras, with and without immediate access to internet.

Conclusion: Such management software permits easy overview and reliable, safe management of patients screened for DR, monitoring every step of the screening process from the creation of a screening appointment to follow-up with an ophthalmologist to yearly patient recall while insuring quality control and access to epidemiological data. It could be advantageously used in any public health care screening program for DR.

#### References:

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