Care Pathways and Current Practices of Diabetic Retinopathy Screening in Public Health facilities: a Pilot Study from Northern India

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Introduction and Objectives

Introduction:

- Increasing global burden of diabetes is leading to an increase in the prevalence of diabetic retinopathy (DR).[1]
- DR screening is a proven intervention strategy for early detection of DR and delaying progression of DR to sight threatening diabetic retinopathy (STDR).[2]
- DR screening modalities depend on availability of resources like trained manpower and equipment.[3]
- Early assessment of DR screening practices and care pathways at secondary level of care becomes critical.

Objective:

- To explore the diabetic retinopathy care pathways and current screening practices at district hospital (DH) Mohali, Punjab, and Panchkula Haryana, India

Methods

- **Study design**: Mixed method cross-sectional study.
- **Study site:** Two secondary public health care facilities in Panchkula district, Haryana and Mohali district, Punjab (Figure1)
- **Study participants:** Diabetic patients, health care providers and program implementers. (Table 1)
- **Study tools:** Pretested semi structured questionnaire
- **Data analysis:** Quantitative data was analyzed in SPSS (descriptive analysis) and qualitative data was analyzed in ATLAS.ti 8 (thematic analysis).

Figure 1. Study sites in Haryana and Punjab, India

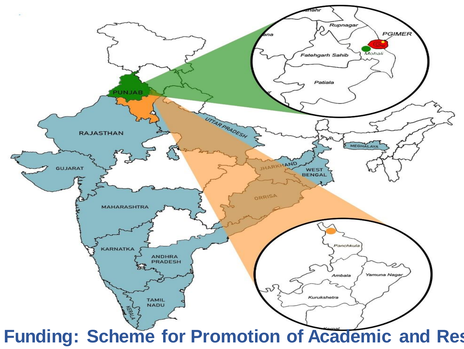


Table 1. Study tools, inclusion criteria and sample size

Study tool	Inclusion criteria	Sample size
People with diabetes mellitus (PwDM)	Aged > 30 years diagnosed with type II diabetes mellitus (DM)	18
Health care provider (HCP)	Health care professional involved in providing medical treatment or eye care to diabetic patients including general physician and ophthalmologists	8
Program Implementer	Program officers and program advisers involved in the implementation of national health programs: National Programme for Prevention & Control of Cancer, Diabetes, Cardiovascular diseases & Stroke (NPCDCS) and National Programme for Control of Blindness & Visual Impairment in study district (NPCB & VI)	5

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References:

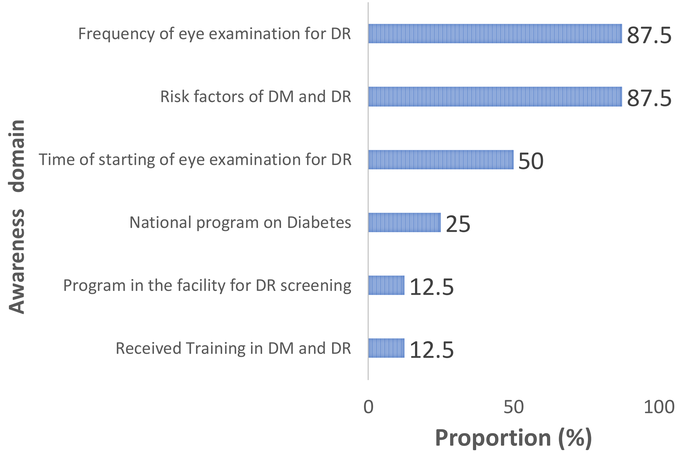
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Results

Health care seeking behavior and care pathways of diabetic patients (PwDM):

- ***Poor Health Literacy***: low awareness about diabetes, its complications, prevention of its complications.
- ***Poor Health care seeking :*** screening for DR remains secondary due to unawareness of self diabetes status
- **Dependency** (***physical and financial***): on family members and difficulty in mobility after dilation in absence of accompanying person
- **Inaccessibility:** distance from screening facility prevents visiting for DR screening
- ***Preference for private practitioners* or proximate primary health facilities:** irrespective of availability of DR screening services.
- ***Long Waiting time:*** between laboratory and Out Patient Department (OPD)
- **Inadequate counseling:** related to DR by health care providers (physician, nurses, optometrist, ophthalmologist)
- ***Existing Care Pathway***: Few patients directly come to DH and rest are referred by lower public health facilities or private practitioners

Figure 2: Knowledge and practices of health care providers (HCPs-8)



Perspective from program implementers:

- ***Shortage of trained staff:*** due to limited or no specific trainings on DR screening and management
- ***Inadequate infrastructure:*** absence of dedicated retina clinic and non-availability of equipment for DR screening and treatment
- ***Increased patient load*** leading to **multitasking** by ophthalmologists and focus on general eye care
- **Undefined Referral pathway for DR after screening** (where and at what stage patient should be referred)

Conclusions and Recommendations

- Barriers exist in timely screening of DR at individual, HCP and program implementer level.
- Awareness about DR as a complication of diabetes and role of DR screening in preventing vision loss should be increased.
- HCPs should be periodically trained in management of DM and screening for complications including DR.
- The role of technology can be explored for DR screening in the public health facilities to overcome the challenge of access to care and shortage of trained human resources.