



Post Programme Report on  
**National Workshop on  
“DIABETIC RETINOPATHY”**

**Venue**  
VIVEKANANDA MISSION ASRAM, CHAITANYAPUR  
31<sup>ST</sup> JANUARY TO 1<sup>ST</sup> FEBRUARY 2006.

### **Introduction**

Diabetic Retinopathy being priority disease in VISION 2020 initiatives and has provided a new impetus to the concept of comprehensive eye care encompassing eye health promotion and prevention of blindness, treatment of eye disease and rehabilitation services for people with progressive Visual problem. The hitherto under-developed component of ‘Diabetic Retinopathy’, along with services for it, has been identified as an upcoming priority in India

### **Objectives**

With an over all objective of prevention and reducing blindness resulting from DR, Vision2020-India organized the **National Workshop on Diabetic Retinopathy** in association with Vivekananda Mission Ashram, Chaitanyapur, West Bengal from 31<sup>st</sup> January 2006 to 1<sup>st</sup> February 2006 . It was a two day workshop and the participants were invited from Govt., INGOs, NGOs and other lead agencies from all parts of the country.

The main **objectives** of the workshop were:

- To bringing about awareness on DR among the various partners in Eye Care.
- To develop an understanding on preventions and necessary interventions in the particular theme
- To bring out the huge experience of our member organizations in this subjects and to arrive at practical best practices in treating DR
- To suggest some policy guidelines to Government/ INGOs particularly in the 11<sup>th</sup> Five Year plan.
- To be able to develop a road map for resource mobilization (HR, Infrastructure, Technical and Financial)

### **Methodology**

The methodologies followed to achieve the said objectives were

- Presentations on contentious issues by the reputed resource persons
- Audio video presentations on different approaches of DR screening program
- Sharing of experiences on DR project
- Group work and Discussion

### **Expected outcome & Action Points**

It was expected that at the end of the workshop following out comes and action points were to be achieved:

- The entire participant should understand the magnitude and burden of the problem and what the preventive measures are.
- They would update the knowledge on the best practices in management of Diabetic Retinopathy
- They would suggest some policy guidelines to Government/ INGOs particularly in the 11<sup>th</sup> Five Year plan.
- They should get the ideas on how to mobilize resources (HR, Infrastructure, Technical) to start and run a DR project.

### **Participants**

A total of 49 delegates from different parts of the country had participated in the Workshop. The participants were from Central and State government officials, Practitioners from lead organizations, Non-Governmental organizations, INGOs representatives and representatives from Optometric association in the Country.

*Dr. Supriyo Ghose, Chief, Dr. RP Centre and Vice President of VISION2020-India Forum* was the chief guest and gave his key note address at the inaugural function. Representatives from our founder INGOs, *Dr. Sara Varghese* from CBM, *Mr. Vinay*

*Patel* from SSI and *Ms. Sangeeta Pinto* from ORBIS had participated in the workshop and gave their inputs.

Resource persons from lead organizations *Dr. S.P. Garg* from Dr. RP Centre, *Dr. Namperumalsamy* from AECS, *Dr. Annie Mathai* from LVPEI, , *Dr. Sourav Sinha* from Sankara Nethralaya, *Dr. Sanjay Thakur* from RIO, Kolkata shared their expertise and also helped the group members to come out with a definite strategy to implement the DR programme in their own situations.

### **Venue and Dates**

The Venue for the National workshop was in Vivekananda Mission Asram, Chaitanyapur, West Bengal and the dates were 31<sup>st</sup> January 2006 to 1<sup>st</sup> February 2006..

### **Proceedings**

#### **Day-One (31<sup>st</sup> January 2006)**

At the outset **Dr. Asim Sil** , Chief Medical Officer, , Vivekananda Mission Asram in his welcome address appreciated the participation from all corners of the Country and extended warm welcome to all participants and the guests on the dais. Later on **Swamy Biswanathananda** , General Secretary, Vivekananda Mission Asram welcomed the guest on the dais and briefed their introduction to all the participants. **Mr. PKM Swamy**, Executive Director VISION 2020-India gave overview of the workshop. The workshop was inaugurated by lighting the lamp and Vedic Chants by the students from the School for the Blind. **Dr. Namperumalsamy**, Vice President, Aravind Eye Care System, Madurai, in his inaugural address, high lightened the need for immediate interventions on Diabetic Retinopathy problem. He also briefed the present best practices and approaches that are following globally and in India. **Dr. Supriyo Ghose**, Chief, Dr. RP Centre and Vice President of VISION2020-India Forum, in his key note address briefed the magnitude of the problem and its urgent intervention. **Mr. Lakshman**, Member of Parliament of Haldia Constituency West Bengal had participated in the National Diabetic Retinopathy workshop as guest of honor and applauded the VISION 2020 movement and offered all possible support to the initiative fighting avoidable blindness. Morning inauguration session was concluded with the vote thanks by Dr. Asim Sil followed by group photo and Tea.

Before the 1<sup>st</sup> plenary session, all delegates introduced themselves and shared their perceptions on DR. **Dr. Bhattacharya** from Vivekananda Mission had presented his paper on “*Magnitude of Diabetic Retinopathy*”. In his presentation, he pointed out Vivekananda Mission Asram’s finding on DR cases in the rural West Bengal. **Dr. Namperumalsamy** from Aravind Eye Care System, Madurai had presented a paper on “*Setting up DR services ( provisions of services-what, where, who) Challenges in primary, secondary & tertiary level*”. In his one hour presentation, he highlighted various aspects of the DR services in India. He shared out of his reach experience on the subject taking the delegate 20 years back when he started practicing DR services in India. He answered to the

questions raised by the delegates on DR. It was very informative and relevant to the present Diabetic Retinopathy problems in India.

Having had an orientation to the topic, all delegates divided into three groups. Each group had delegates from East, West, North and South. All three groups were given topic “**Community out-reach Programme on DR - how to go about it?**” and to discuss among themselves.

Resource persons were assigned to all groups to guide them. All the groups discussed for an hour and came up with their observations. The Group representatives from each group presented their observations before the delegates. (Details given at the end of the report)

In the Second plenary session **Dr. S.P. Garg from Dr. RP Centre for Ophthalmic Sciences** had shared his experiences on the theme “*Diagnosis, proper grading of DR, systemic investigations*”. He also made observations on the group work. Later on **Dr. Saurav Sinha from Sankara Nethralaya (Kolkata Centre)** had shared his experiences on the theme “*Treatment of DR with practical tips, recent advances in DR treatment, systemic management*”. At the end of the plenary there was the Q&A session where resource persons answered the queries of the participants on the above topics. The main lessons from the group presentations and the presentations from resource persons were noted. The first day sessions were ended with the key note address by Dr. Asim Sil followed by tea.

### **Day-Two (1<sup>st</sup> February 2006)**

The day begun with the visit to Vivekananda Mission Asram. After visit we all assembled in the conference hall and the session started with Prayer song sung by the students of the School for the Blind. Mr. Swamy briefed the last day proceedings and also the planned schedule for the day ahead.

In the morning session **Dr. Annie Mathai from LVPEI, Hyderabad** presented her paper on the theme “Training protocol for Ophthalmologists, developing a curriculum for trainers training programme”. It was well prepared and presented meticulously. She shared her experience on how LPVEI is providing Human Resource Training at various levels to the Lions Hospitals. She also suggested the time frame work and the topics to be covered in the various DR training programmes. Dr. **Dr. Sanjay Thakur** from RIO Kolkata had presented his paper on the theme “*Training protocol for Paramedical staff for detecting DR guidelines for referral*”. At the end of the plenary there was the Q&A session where Dr. Annie Mathai and Dr. Thakur answered the queries of the participants on the above topics

Before the tea break Dr. Thota Srinivasa Rao from R.R. Lions Eye Hospital, Palakol., Andhra Pradesh, Dr. Krishna Ingle from Lions Club of Karim Nagar Charitable Eye Hospital Karim Nagar, Andhra Pradesh and Dr. Asim Sil from Vivekananda Mission Asram, Chaitanyapur, West Bengal were on the dais. They shared their unique experiences on conducting the DR screening camps, providing treatment to DR patients

and mobilizing resources for the same in their respective operational areas. All approaches were discussed thoroughly among the delegates. They expressed their concerns on various points and suggestions were made.

After the Tea break the participants were divided into three groups and worked on the following themes.

1. What are the points that could be given importance in the policy frame work for 11<sup>th</sup> FY plan of GOI as far as DR is concerned?
2. What role and responsibility you think that the INGOs and the lead organizations could shoulder in this regard.
3. What role VISION 2020-India could play in the proper development of service delivery in DR
4. What do you think that agencies like yours could do effectively in addressing the DR Onslaught?

First group worked on the Theme -1 Second group worked on the theme-2 where as Third Group worked on the theme -3 & theme -4. Resource persons were assigned to all groups to guide them. All the groups sat for an hour and came out with recommendations. The recommendations were presented before the delegates. All these were debated, discussed and refined. The agreed points were noted for final recommendation and for consideration in the report.

### **Concluding Session**

In the concluding session all resource persons were on the dais. Mr. Swamy summarized the points of the one and half day long workshop and informed that all the suggestions that were came from this workshop will be forwarded to the Government of India for incorporation in the 11<sup>th</sup> Five Year Plan document. Later on all resource persons appreciate the timely call for the National workshop on DR. They also expressed thanks to the organizing team. At the end Dr. Asim Sil, conveyed the vote of thanks. The workshop was formally concluded with the poem from Rabindranath Tagore followed by National Anthem.

### **Group Works on the Themes**

1. **How to go about creating a new DR Service facility in your operational area?**

#### **Group I**

- Involvement of Vision Centre - PHC
- C S C, N G O Hospital, District Hospital
- Paramedical Staff
- Training, Capacity Building

#### **Group-II**

- To look beyond cataract- every ophthalmologist should practice retina examn
- 90D / Indirect Ophthalmoscope/ Direct ophthalmoscope./ slit lamp
- Lasers
- FFA

- Vitrectomy
- B- scan

### Group-III

- Define the area - Urban / With rural
- Assess the demand in the area on previous study
- Define the infrastructure we have and would require up gradation of the existing facility.
- Community based → referral.
- Training of personnel

## **2. How to go about building awareness on DR in the community ?**

### Group-I

Mass Communication/ Posters/ Seminars

Media Communication

- a. T V
- b. Radio
- c. Mick Campaign

Street Play/ Slogan – at different outlet

Regional language is to be used.

Educational Institution to be involved.

Tea shop could be a point.

### Group-II

- Involvement of optometrists, physicians, pharmacists, optical shops, media
- Comprehensive eye camps with DR awareness section
- DR camps for known diabetics
- Involvement of local labs with DR camps
- Interactive setups with target population like elderly group

### Group-III

- Seminars for physician
- Mass communication
- Local Ways of communication
- Assess the Govt. PHC
- Health Mela
- IEC material

## **3. DR screening/ management of treatment procedure in the community.**

### Group-I

Camps – Diabetic Seminar.

Diabetic DR Camp

General Practitioner – Involvement.

Training of GP about Fundus Examination, Dialectologists

Involvement of Optical Shop/Medical Shop

Diagnostic & refraction facilities is to be available at District .Hospital.

Guidelines → cut off

Medical Retina facilities made available at District Hospital. - Training / Equipments

Group-II

- Initial screening can be done by assistants / residents at vision centres and camps
- Ophthalmoscopy by physicians
- Ophthalmologists at base centres and camps
- ABC
- Management at base centre / camp
- Subsidized rates

Group-III

Identify diabetics societies in the local area.

Technician will take the photographs and referred to ophthalmologists

**4. Difficulties / constraints that you anticipate in taking up DR promotional activity**

Group-I

1. Not accepted by public
  - i. Not high in Visual acuity
  - ii. No immediate gain
  - iii. Cost factor
2. Not accepted by NGO/ Panchayat, Community level due to the Following
  - Lack of knowledge
  - Lack of immediate benefit.
  - Cost
  - Sustainability

Group-II

- Lack of awareness
- High expectations by patients
- Higher cost of treatment
- Improper counseling
- Lack of trained personnel
- Practice of standardized counseling

Group-III

- Turnouts will be less
- Not cost effective camps at first.
- Motivation for follow up.
- Counseling

**5. What are the necessary and sufficient conditions to have an effective Programme and also the required resources (human and other) in the region from the Govt. , INGO ,NGOs, and the community sectors**

### Group-I

DR → National Health Programme  
State Govt. Involvement  
Perception – change

2. Infrastructure development by  
INGOs  
Government Hospital
3. Insurance sector – Involvement
4. Training by INGOs/ Govt. level
5. Involvement of Corporate Sector

### Group-II

- Guidelines for standard training for ophthalmologists and Para-medicals
- Funding for retinal services
- Diverting to DR apart from cataract

### Group-III

- Trained personnel
- Manpower
- Funding by INGO.
- Policy decision by Govt
- 

### **6. What are the points that could be given importance in the policy frame work for 11<sup>th</sup> FY plan of GOI as far as DR is concerned?**

- Policy Framework
  - Magnitude of the Problem:
    - Numbers affected & projected for the future
    - Economic burden of DR
  - DR a preventable cause of blindness
  - Awareness Generation using Govt. machinery /Media/Opticians/Legislation/ Pharmacists
- Human Resource Development
  - Awareness/ Training to PHW/ GPs – VA Testing
  - Curriculum Development Standardized for Medical Personal
    - a. U.G. level– VA/ Ophthalmology  
PG – DR treatment
    - b. Guidelines for standard practice  
Diabetic treatment  
Refraction – Fundus Camera
  - Diabetic Clinics in Medical College  
Training of specialists / Training
- Infrastructure:
  - a. Vision Centres – Comprehensive not ready cataract definition.
  - b. Scope & No. to be expanded

- VA charts / Ophthalmoscopes at PHC level
- Lasers at District Eye Hospital
- Vitrectomy facilities ant Tertiary level

➤ Funding

- Govt. subsidy for DR camps
- Govt. funding for DR treatment
- Tax exemption for DR equipment

**3. What role and responsibility you think that the INGOs and the lead organizations could shoulder in this regard.**

Infrastructure development

Human resource training

Capacity Building of Grass root NGOs

Improving the service Delivery System

➤ Infrastructure

- Primary level-

Visual Acuity Recording, Direct Ophthalmoscope/ Retinoscope/ Glucometre

- Secondary level:

Laser, Fundus Camera – FFA

Mobile DR screening Facility

- Tertiary level

Surgical Intervention, Training, OCT

→ Electro Physiological High End Microscopes – BIOM

- Advanced Vitrectomy

➤ Capacity Building

- Primary level

Training of Community Worker/ MLOPs→

- Secondary level

- Camp Manager (Out reach)

- Ophthalmic Surgeon

- Laser Expertise

- Technician Trained for Portable FCAR

- Direct Ophthalmoscopy

- Tertiary level

- VR Surgeries/ Lasers

- Training of Trainers

- Research

➤ Service Delivery System

- Primary level

Creating Awareness, Screening, Referrellal, Primary Treatment

- Secondary level

Tracking System, Treatment, Followup

Training → Secondary

Basic Inputs for Research

- Tertiary level

Research

Advocacy

Creation of IEC Material

**4. What role VISION 2020-India could play in the proper development of service delivery in DR ?**

- Vision 2020 needs to be understood by ophthalmologists and service providers  
State level platforms / programs
- May take inputs from AP/ TN
- Protocol for DR screening /management/ training
- Networking and interactions
- Suggestion to govt.
- Co-ordinate between agencies
- Identify lead areas among agencies
- Mechanism of referral between agency supported hospitals
- Advertise through media and news paper about DR
- Awareness creation by grass root agencies
- Projection at conferences of different fraternity
- Make arrangements for funds for DR projects with appropriate amendments in the regulation
- Standard list of indigenous equipments as well as arrangements for a cheaper imports

## **Recommendations**

### **Vision 2020**

#### **National workshop on Diabetic Retinopathy.**

Venue: Vivekananda Mission Asram Netra Nirmay Niketan,  
PO Chaitanyapur (Haldia), Dist – Purba Mednipur, West Bengal –721645.

31 January 2006 to 1 February 2006

#### Resource Persons:

- 1.) Prof. Supriyo Ghose, Dr. RPC, AIIMS, New Delhi,
- 2.) Dr S P Garg, RPC, AIIMS, New Delhi,
- 3.) Dr Namperumalsamy, AECS, Madurai,
- 4.) Dr Annie Mathai, LVPEI, Hyderabad
- 5.) Dr Sanjay Thakur, RIO, Kolkata,
- 6.) Dr Sourav Sinha, Disha Eye Hospital, Kolkata.

For this the Government, International NGO, NGO and grass root level worker have been involved in planning to reach a national consensus as to how to tackle the problem. Aim is to present the problem with it requirement and Goals to government

#### **National Plan for Diabetic Retinopathy Programme:**

##### Programme Activities

- 1.) To develop nationwide epidemiological data
- 2.) Rapid assessment surveys of blindness
- 3.) Screening programmes
- 4.) Community awareness programmes
- 5.) Initiate multicenter research studies: clinical and operational
- 6.) Training activities
- 7.) Link national diabetic control programme and NPCB.

#### **National Policy Development**

- A) Resource Development

- i) Institutional
  - ii) Human
  - iii) Financial
- B) Plan of action and strategies
- C) National Committee
  - i) To promote
  - ii) To initiate
  - iii) To coordinate
  - iv) To create awareness
- D) To educate policy makers

**AIM: Eliminate Avoidable blindness by 2020.**

**Goals:**

**To keep vision intact by:**

- a) **Early detection of case and treatment**
- b) **Regular Follow up of cases.**

**Problem Statement:**

Blindness – 9 million.

About 2% of the population is Diabetic.

Of the Diabetic population 25% have DR., of which 30%-50% require active follow up.

3% of DR patient are blind.

Required to screen 26 million people.

Ophthalmologist 11000.

Ophthalmologists trained in Laser treatment 1500-2000

Lack of epidemiological study

Result of treatment does not justify expense involved.

Lack of cost effective equipment and medicine

Lack of skilled and trained personal

Lack of national plan

Sustainability

No Government policy on Diabetic Retinopathy.

# Planning

## A. Primary level

### Epidemiological studies

**Diabetic screening Laboratory:** Can be made mandatory to report all case with high Blood sugar level to the nearest PHC/ sub centre where a diabetic Register can be maintained. Diabetic Register can be maintained at PHC level under the guidance of MO. A post of District Diabetic Officer can be created who can look after the management aspect at a district level. Post of State Diabetic Officer can be created look after programme management at state level and coordinate at national level.

Name, address, Date of detection, Neurology, Nephrology, Retinopathy, Diabetic foot

### DR screening,

**Aim:** any retinopathy or/ vision threatening DR, (Macular edema, CSME, PDR)

- |           |   |
|-----------|---|
| Methods:  | 1) Ophthalmocopy<br>2) Fundus Photograph<br>3) Computer based Digital Imaging Technology  |
| Personal: | 1) ophthalmologist based or ophthalmologist lead (ideal)<br>2) Internist and Diabetologists – hospital<br>3) General practitioners<br>4) Technicians: Photograph but interpretation by ophthalmologists |
| Process:  | 1) Community based<br>2) Hospital based<br>3) Diabetic centers  |
| Protocol  | 1) Patients who need urgent referral<br>2) Patients who need routine referral<br>3) Patients who need regular screening and follow up annual  |

### Awareness programmes

Involving community leaders,  
Mass media TV, Radio, Newsprint  
Seminar, medical shop owners, optical shops, Educational institution, street play, puppet show Exhibitions  
Slogans, posters, banners

### Health education

#### **Community outreach programme**

- Involvement of national and state government.
- Up gradation of eye facility in rural areas
- Involvement of Corporate Sector.
- Creation of vision center.
- Capacity building

## **B. Secondary level**

### **Prevention**

Control of diabetes  
Early diagnosis of DR  
To develop relationship with physicians: Diabetologists  
Medical management  
Referral of cases for management

### **Human resource development**

Training of primary health workers  
Training of Primary care physicians  
Training of District health officials  
Training of PHC's medical officers  
Development of material for health education and distribution

**Training Protocol:** 6 days

Theory: 2 days

Lecture with slide presentations of different subtype of DR

Brief overview of different studies on DR

Theoretical aspect of the ophthalmoscope to be used

Practical: 4 days

Practical tips on use of ophthalmoscope

Hands on training on use of direct ophthalmoscope

Examination of normal subjects

Examination of patients with different subtypes of DR

## **C. Tertiary Level**

### **Specialized eye care services**

Fundus photography

FFA

Lasers

PRP

Focal

USG A and B scan

OCT

Surgical management.

Surgical Equipment

Vitreotomy console

VR surgical instruments

Diathermy

Operating Microscope

Indirect Ophthalmoscope

Laser with endolaser probe / indirect ophthalmoscope

### Human Resource development

Training of Ophthalmologist  
Training of Physicians  
Ophthalmic technicians/ nurses  
Uniform protocol for training

### Research

#### RETINA SERVICE

	TYPE		Instruments	Patient load	Staff	Support Manpower	Investment
1	BASIC	<b>Diagnose</b> common retinal lesions and <b>refer</b> to specialist	Slit lamp biomicroscope with 90 D lens, direct ophthalmoscope, indirect ophthalmoscope with 20 D lens	100 pt/day	1-2 Drs	Nurse 1 Technician 0 Counselors 1 Total 2	Rs 30,000 to 50,000/
2	INTERMEDIARY	Diagnose and treat common medical retinal lesion such as diabetic retinopathy	Slit lamp biomicroscope with 90 D lens, direct ophthalmoscope, indirect ophthalmoscope with 20 D lens FFA and Laser	100-300 pt/day	2 or more Drs	Nurse 4 Technician 1 Counselors 1 Total 6	Rs 14 –22 lakhs
3	ADVANCED	Diagnose and treat Medical and Surgical retinal lesion	Slit lamp biomicroscope with 90 D lens, direct ophthalmoscope, indirect ophthalmoscope with 20 D lens FFA Laser USG OCT Surgical equipment	400 or more pt/ day	4 Drs or more	Nurse 6 Technician 1 Counselors 2 Total 9	Rs 80 Lakhs and above

