Eastern Regional Eye Care Programme (EREC-P) is a non-profit, high volume treatment programme providing high quality comprehensive eye services at affordable cost to a huge population in eastern Nepal and northern India. EREC-P comprises of:

- Sagarmatha Choudhary Eye Hospital (SCEH) in Lahan,
- Biratnagar Eye Hospital (BEH) in Biratnagar,
- 13 Eye Care Centres (ECCs) in the Terai and in the hills

Post Graduate MD Ophthalmology was started at EREC-P in affiliation with NAMS. Following ophthalmologists were recognized as faculty by NAMS (Dr. Sanjay Kumar Singh- Professor, Dr. Lila Raj Puri- Associate Professor and Dr. Rakshya Pant Sitoula- Assistant Professor). At present, 2 resident doctors Dr. Ashmita Sharma and Dr. Rajshee Shrestha are enrolled for MD Ophthalmology course at EREC-P.
SURGERY:

**Cataract:** 80,614
- Sutureless ECCE/IOL (SICS): 59,729
- Sutured ECCE/IOL: 473
- On children: 1,178
- Phaco ECCE/IOL: 18,905
- Other lens removal procedures: 329

**Glaucoma:** 2,519
- Trabeculectomy: 566
- Combined (Cat & Trabeculectomy): 918
- Trans scleral cyclo photocoagulation: 190
- Nd. YAG iridotomy: 837
- Surgical PI: 8

**Corneoscleral Surgical Procedures:** 3,492
- Keratoplasty: 91
- Amniotic Membrane Graft (AMG): 87
- Corneoscleral Repair: 572
- Pterygium: 2,332
- Corneal Cross Linking: 10
- Other Corneal Procedures: 400

**Vitreo-Retinal Surgery:** 3,084
- Pars plana Vitrectomy: 955
- Scleral Buckling: 81
- Intra Vitreal Injections: 1,629
- Others: 419

**Oculoplasty Procedures:** 3,355
- Dacryocystorhinostomy: 1,437
- Dacryocystectomy: 536
- Entropion / Ectropion: 349
- Evisceration / Enucleation: 281
- Ptosis: 23
- Other oculoplasty procedures: 729

**Laser procedures:** 4,424
- Retinal Laser: 1,305
- Nd. YAG capsulotomy: 3,119

**Squint:** 31

**Others:** 1,356

**SUB TOTAL:** 98,879

**OUTPATIENTS:**

**Ear Surgeries:** 1,157

**GRAND TOTAL:** 100,036
EARTHQUAKE AND TERAI BANDA EFFECTS:

The earthquake in Nepal on 25 April 2015 killed more than 8,000 people and 21,000 were injured. Continued aftershocks occurred afterwards with one major aftershock on 12 May 2015. Due to this natural calamity patient flow decreased in eye hospitals in Nepal. This was further compounded by political unrest and general shutdown for more than 5 months in terai part of Nepal since September 2015 decreasing total no of patient in EREC-P. Despite the effect of major earthquake and political unrest in Terai part more than 566,869 patients were examined and 100,036 surgeries were performed at EREC-P hospitals, Eye Care Centres and in Out-reach activities.

SPECIAL SERVICES at EREC-P:

Paediatric Ophthalmology Department

Examination: 39,931 children
Surgery: 2,731 (1,178 on cataract)

In the Paediatric Ophthalmology Department of both eye hospitals 39,931 patients were examined and 2,731 patients underwent surgeries. Out of these 1,178 surgeries were for paediatric cataract.

Cornea Department

In the cornea department of both eye hospitals, 3,343 corneal ulcer patients were treated. In this period 91 keratoplasty were performed and amniotic membrane transplantation procedure was performed on 87 patients. A special pterygium surgery (pterygium removal followed by conjunctival transplantation with fibrin glue) was started on a regular basis in both eye hospitals. 5 eye donation awareness programmes were carried out, 60 people filled up eye donation willingness forms and in last one year period 6 corneas were harvested.

Special Cornea investigation procedure Corneal Topography was installed in cornea unit of Biratnagar Eye Hospital.

Picture: Steps of DSEK Surgery
In the vitreo-retinal department of both eye hospitals 3,084 patients underwent operations including intra vitreal injections. In last one year period, 18 diabetic retinopathy camps were carried out; 3,180 patients were screened and 337 patients were referred to base hospital.

**Glaucoma Department**

In the glaucoma department of both eye hospitals 10,663 glaucoma patients were examined and 2,589 patients underwent computerized visual field testing. In last one year 28 children underwent Trabeculotomy and Trabeculectomy surgery.

**Oculoplasty Department**

In the oculoplasty department of both eye hospitals 3,338 surgeries were performed. In the ocular prosthesis unit 234 patients received artificial eyes, 61 of these eyes were custom made.

**Low Vision Department**

In the low vision department 717 patients with low vision were assessed, including 236 children. Special low vision devices were dispensed to 340 patients who required devices for improving vision.
Ear Department

In the ear department of Biratnagar Eye Hospital 24,821 patients with various ear problems were evaluated. 16,755 ear patients were examined at base hospital and 8,066 patients in the outreach activities (ECCs and Screening camps). 146 patients with hearing loss were provided hearing aids.

One paramedic underwent Basic Otology course at ear department of T. U. Teaching Hospital, Kathmandu. At present ear care services are being provided at Eye Care Centres- Diktel and Inaruwa.

OUTREACH ACTIVITIES:

Besides continuing 12 Eye Care Centres (Malangwa, Rajbiraj, Siraha, Gaighat, Diktel, Bhojpur, Terhathum, Rangeli, Inaruwa, Mirchaiya, Katari and Haleshi), 1 new Eye Care Centre was started at Ilam district.

Screening eye camps were conducted in collaboration with several local social organizations in Koshi and Sagarmatha zone.

<table>
<thead>
<tr>
<th>Camp type</th>
<th>No of camps</th>
<th>Patient examined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening Eye Camp</td>
<td>210</td>
<td>37,902</td>
</tr>
<tr>
<td>Diabetic Retinopathy Camp</td>
<td>18</td>
<td>3,180</td>
</tr>
<tr>
<td>Pediatric Eye Camp</td>
<td>32</td>
<td>9,434</td>
</tr>
<tr>
<td>Workplace Camp</td>
<td>1</td>
<td>78</td>
</tr>
<tr>
<td>School Screening</td>
<td>74</td>
<td>11,028</td>
</tr>
<tr>
<td>Mobile bus eye clinic in 3 districts</td>
<td>88</td>
<td>2,641</td>
</tr>
<tr>
<td>Camp at Sagarmatha Festival (Mahotsav)</td>
<td>5</td>
<td>518</td>
</tr>
<tr>
<td>DST Camp Bhojpur</td>
<td>2</td>
<td>200</td>
</tr>
<tr>
<td>Surgical Eye Camp</td>
<td>8</td>
<td>2,096</td>
</tr>
<tr>
<td>Ear Screening Camp</td>
<td>94</td>
<td>4,729</td>
</tr>
<tr>
<td>School screening camp by Ear Dept.</td>
<td>7</td>
<td>966</td>
</tr>
</tbody>
</table>
Out of total 210 Screening Eye Camps 94 were combined Eye and Ear Screening Camps. In 94 combined camps 4,729 ear patients were examined. A total of 211 ear patients were referred to Biratnagar Eye Hospital and out of this 88 patients underwent operations. In Screening Eye Camps, patients with refractive error were dispensed glasses.

In 7 combined eye and ear screening camps with Karuna Foundation, 966 children were screened and 640 children had ear problems such as ear wax, discharge and hearing impairment.

Surgical Eye Camps were conducted in hilly area of Koshi and Sagarmatha zone:
• Bhojpur-3 (Nepali Dada, Okhre and Baikunthe),
• Terhathum-1 (Myanglung),
• Ilam-1 (Fikkal),
• Udayapur-3 (Beltar-2 and Katari-1)

CBR PROGRAMME at BEH:
Community Based Rehabilitation (CBR) programme for people with visual Impairment is running successfully in 11 VDCs and delivering rehabilitative services to more than 100 people with visual Impairments. In 2015, seed money was provided to 10 clients for goat and cow farming. The CBR team underwent 3 days refresher training at Biratnagar Eye Hospital, Biratnagar in December, 2015 to upgrade their services.

EYE HEALTH EDUCATION:
In the year 2015, Eye Health Education department provided training to 369 Female Community Health Volunteers (FCHV), 29 participants from Mothers Group, 44 School Teachers, 87 Drug Retailers, 38 Camp Organizers, 12 Traditional Healers, 58 Health-Post Incharge and one day community sensitization programme to 1,152 people.
Eye health education in different schools was provided by exhibitions, wall paintings and eye health education messages. Pediatric eye health education messages were published in newspapers and Eye/Ear health education was also provided in different Screening Camps. Every fortnightly eye health education program and jingles are aired on F.M. radio program. Different eye health education posters and brochures were designed, printed and distributed in co-ordination with government health posts/sub health posts.

FREE SERVICES TO PATIENTS:
A total of 6,006 cataract patients identified in several screening and surgical eye camps of Koshi and Sagarmatha zone received surgeries free of cost. Patients from eye camps and poor patients presenting to SCEH and BEH received a support worth of NPR 18,481,366.00 in their examination, surgeries, spectacle, medicine, transportation and food cost. Out of all cataract patients 49% surgeries were done on a subsidized package of NPR 1200 (approx. USD 11).

HUMAN RESOURCE DEVELOPMENT & TRAINING:
Besides continuous medical education for the hospitals’ ophthalmologists the following teaching and training activities were performed:

Diploma in Ophthalmic Science Course at SCEH, Lahan
First batch of 39 students completed their first year training and are now posted at SCEH for their clinical training. In second batch 40 students are enrolled and are undergoing their basic science course at Lahan Technical School, Lahan.

Anterior Segment Fellowship and Vitreo-Retinal Fellowship completion
9 Ophthalmologists (Dr. Pramod Kumar Mahto, Dr. Abhijit Holla, Dr. Indranath Prasad, Dr. Mudassar, Dr. Natwar Singh Parihar, Dr. Diwa Hamal Lamichhane, Dr. Mayuri Borah, Dr. Lily Rajbanshi, Dr. Devdutta Nayak) completed their two-year Anterior Segment Fellowship at SCEH and BEH, which also includes training in Small Incision Cataract surgery with Fishhook technique and phacoemulsification. One Ophthalmologist (Dr. Rajya Laxmi Gurung) completed two-year Vitreo-Retinal Fellowship at BEH.
Co-operation with BP Koirala Lions Centre for Ophthalmic Studies (BPKLCOS), Kathmandu was continued with a comprehensive clinical and surgical training for
- 7 Post-graduate MD Residents for 2 months and
- 7 Optometry Students underwent one-month clinical training at SCEH/BEH.

Dr. Rina Yadav and Dr. Sabin Sahu have completed their MD in Ophthalmology. EREC-P is currently sponsoring Dr. Kanchan Prakash Paudyal for MD anaesthesia.

**MISCELLANEOUS:**

**Human Resource at EREC-P:**
The 511 member employee includes 29 ophthalmologists, 2 ENT Specialist, 1 Anaesthesiologist, 28 administrative staff, 39 ophthalmic assistants (OA), 2 anaesthetic assistants, 5 health assistants, 9 optometrists, 5 staff nurse, 82 eye health workers and other support staff.

**Visitors, Visiting Faculty & Guest Lecturers:**
Many visitors came to observe and support the work at EREC-P hospitals.

1. Dr. Albrecht Hennig & Kristina Hennig visited SCEH, Lahan from 1st Feb to 9th March.
3. Mr. Tyler Earley medical student from US visited SCEH, Lahan from 16th Feb to 28th Feb.
4. Dr. Sanjeev Upadhyay and his team from CHEERS visited BEH on 25th April, 30th May & 27th June and provided surgical services to ear patients selected from ear camps in Morang District.
5. Ms. Melanie Jaggi and Mr. Ivano Cheli from CBM Switzerland and Mr. Mitra Lal Shreshtha from CBM Nepal visited SCEH and BEH from 27th March to 28th March.
6. Prof. Dr. Ravi Thomas visited BEH from 25th to 26th April. During his visit, he took part in Glaucoma workshop organized by Nepal Ophthalmic Society and provided hands on training to ophthalmologist from Eastern Regional of Nepal at Biratnagar Eye Hospital.
7. Dr. Alexander Bachernegg from Austria visited SCEH, Lahan from 4th May to 15th May for Short term Phaco training.
8. Mr. Amrit Silwan & Lumbini Eye Institute team visited BEH on 2nd August.
9. Mr. Heath, Mrs. Linda and Mr. Ashok Shah from CBM-Nepal visited BEH on 17th March for finalizing Miracle Day programme live broadcasting from BEH premises.
10. Prof. Dr. D.B. Karki and Prof Dr. Suraj JB Rana visited BEH on 17th & 18th December. During their visit they interacted with residents and oriented NAMS faculty about NAMS residency teaching/ training methodology and examination procedures. They also participated in Optometry Curriculum Development Workshop at BEH.
11. Prof. Dr. D.N. Shah visited EREC-P on 30th Dec for joint evaluation of clinical and surgical posting of Post Graduate MD Ophthalmology residents from BPKLCOS at EREC-P.
12. A 16 team members from CBM Australia and local FM stations in Australia visited BEH from 23rd to 27th Augto conduct live radio broadcasting from Biratnagar Eye Hospital to Australia on the occasion of Miracle Day program by CBM Australia team.
Various orientations, short and long-term ophthalmic training programme were continued for Eye Health Workers, Auxiliary Health Workers (AHW) and Auxiliary Nurse Midwives (ANM), Staff Nurses & Health Assistant (HA) students. In 2015, 54 AHW & ANM had 6 months Primary Eye Health Worker training and 188 Staff Nurse & HA Students had 2 weeks training on primary eye care. Currently 34 AHW & ANM are undergoing 6 months Primary Eye Health Worker training.

Various types of training were provided to the hospital staff for capacity building like:

1. Two Days in-house training on Professional Behavior Skill in the workplace conducted at SCEH, total 28 participant participated in the training from 23rd to 24th May.
2. A total of 24 staffs have participated in Professional Behavioural skills development training at BEH from 5th to 7th June.
3. A total of 32 staffs from BEH and EREC-P central office have participated in Vihasa Training from 13th to 15th June.
4. Patient registration feature in NAV 2015 has been oriented to computer operators at BEH and SCEH on different dates of September 2015.
5. Total of 66 staffs have participated in Disable sensitization workshop at BEH on 5th Dec.
6. A total of 6 staffs have participated in CBR refresher training from 29th to 31st Dec at Biratnagar Eye Hospital.

Various Trainings / Meetings / Workshops & Conferences in Nepal:

1. Dr. Lila Raj Puri Participated in Glaucoma Symposium conducted by Nepal Ophthalmic Society on 29th Jan at Kathmandu.
2. Mr. Som Kumar Shah participated in NAV 2015 training at Agile Solutions Pvt. Ltd., Ktm from 22nd April to 27th April.
3. Dr. Sanjay Kumar Singh and Dr. Lila Raj Puri participated in Western Regional Ophthalmology conference at Bhairahawa on 22nd May organized jointly by Nepal Ophthalmic Society and Lumbini Eye Institute.

4. Mr. Muni Lal Sah Eye Health Worker in Optical Unit of SCEH participated in Essential Selling skill training at Kathmandu organized by ISI-Nepal from 5th to 8th April.

5. Mr. Tirtha Kumar Singh participated in Refresher training in Orthoptics from 21st June to 24th June organized by Nepal Eye Hospital, Kathmandu.

6. Mr. Som Kumar Shah and Mr. Suraj Timsina participated in NAV 2015 Customization and Upgradation Training from 28th May to 5th June at KTM.

7. Dr. Prerana Arjyal Kafle joined one year Oculoplasty fellowship from 1st July at Tilganga Institute of Ophthalmology, Kathmandu.

8. Dr. Lily Rajbanshi joined 1 year Vitreo-Retina fellowship from 15th September at Tilganga Institute of Ophthalmology, Kathmandu.

9. Dr. Pooja Rai Gautam joined 1 year Vitreo-Retina fellowship from 1st August at Tilganga Institute of Ophthalmology, Kathmandu.

10. Ms. Sabitra Wonem participated in one month Basic Otology Training provided by Impact Nepal in TU Teaching Hospital, Kathmandu from 19th July to 18th Aug.

11. Mr. Rakesh Kumar Singh and Mr. Narendra Narayan Chaudhary participated in 1 day Eye Health Education Workshop conducted by C-NNJS, Kathmandu on 7th Aug.

12. Dr. Sanjay Kumar Singh participated on DSEK (Cornea) conference at TIO, Kathmandu from 27th to 30th Sep.

13. Mr. Bindeshwar Mahato, Mr. Som Kumar Shah and Mrs. Neetu Karn participated in HRMS software testing and commissioning at KTM from 9th to 15th Dec.

14. Dr. Lila Raj Puri participated in Oculoplasty Symposium organized jointly by NOS and TIO at Tilganga Institute of Ophthalmology, Kathmandu from 12th Dec to 13th Dec.

15. Dr Sanjay Kumar Singh and Dr. Lila Raj Puri participated in South East Asia International Agencies for Prevention of Blindness meeting at Kathmandu from 15th Dec to 16th Dec.

16. Dr. Sharad Gupta and Dr. Lila Raj Puri Participated at Retina Symposium organized jointly by Nepal Ophthalmic Society and TIO at Kathmandu on 19th Dec.

Courses / Workshops / Conferences & Presentations outside Nepal

1. Mrs. Rusha Pokharel participated in Paediatric Counseling Training at Dr. Shroff Charity Eye Hospital New Delhi from 1st Jan 2015 to 15th Jan.

2. Mr. Ram Kumar Jha participated in Paediatric Optometry Training at Dr. Shroff Charity Eye Hospital, New Delhi from 1st Jan 2015 to 31st Jan.

3. Mr. Ram Sewak Mahato and Ms. Anju Sah from Inpatient Department participated in Pediatric Ophthalmic Nursing training at Sadguru Netra Chikitsalaya, Chitrakoot from 16th March to 15th April.

4. Dr. Paras Panjyar, Mr. Rabindra Lal Chaudhary from SCEH and Dr Lalit Agrawal, Mr. Bindeshwar Mahato participated in APAO (Asia-Pacific Academy of Ophthalmology-Gauchau, China from 1st April to 4th April.

5. Dr. Lalit Agarwal participated in EVRT fellowship in Bremen, Germany from 10th to 25th May.

6. Dr. Sanjay K. Singh participated on DMEK clinical Wetlab course from 2nd to 3rd June at Netherlands Institute for Innovative Ocular Surgery.

7. Dr. Rakshya Pant Sitoula participated in 6th world Glaucoma Conference in Hongkong from 6th to 9th June.

8. Dr. Lila Raj Puri received Oculoplasty training at LVPEI, Hyderabad, India from 8th June to 24th June.
9. Mr. Nabin Sah participated in Paediatric Optometry Training for 1 month from 4th Aug at Dr. Shroff Charity Eye Hospital, New Delhi.

10. Mr. Suresh Kumar Singh participated in Management training at Aravind Eye Hospital, Madurai from 9th Aug to 15th Sept.

11. Dr. Sanjay Kumar Singh and Dr. Lila Raj Puri participated as guest speaker at SAARC summit of Ophthalmology conference in Nalbari Eye Hospital, Assam from 19th to 20th Sep.

12. Mr. Padma Narayan Choudhary & Mr. Sudhir Kumar Thakur visited Aravind Eye Hospital, Madurai on 30th Sept & participated on Leveraging Vision Centres for Universal Eye Health & Strengthening Tertiary Care on 1st to 2nd Oct at LAICO, India

13. Mr. Padma Narayan Chaudhary, Dr. Sanjay Kumar Singh, & Mr. Sudhir Thakur participated in Managing Network of Eye Care facilities conference in LAICO, Madurai from 3rd to 4th Oct.

14. Dr. Sanjay Kumar Singh and Dr. Lila Raj Puri participated as guest speaker in 6th annual conference of Association of Community Ophthalmologist of India from 29th Oct to 1st Nov at Lucknow, India.

15. Mr. Nirajan Sah from SCEH and Mr. Rinkal Suwal from BEH participated in (TOT) Ophthalmic Dispensing training at LVPEI, Hyderabad from 2nd Nov to 9th Nov.

16. Dr. Lila Raj Puri from SCEH, Lahan and Dr. Rajan Kumar Labh & Dr. Rajya Laxmi Gurung from BEH attended American Academy of Ophthalmology Conference at Las Vegas, USA from 14th to 17th Nov.

17. Dr. Paras Panjiyar participated in WHO SEARO workshop on training of trainers on Primary eye care 2015 AIIMS, Delhi from 5th Dec to 6th Dec.

Publications:

1. Labh RK, Adhikari PR, Karki P, Singh SK, Sitoula RP  
   Characteristic of low vision patients attending an eye hospital in eastern region of Nepal  
   Nepalese Journal of Ophthalmology, 2015"

2. Sitoula RP, Singh SK, Mahaseth V, Sharma A, Labh RK  
   Epidemiology and etiological diagnosis of infective keratitis in eastern region of Nepal  
   Nepalese Journal of Ophthalmology, 2015"

3. Kafle PA, Singh SK, Sarkar I, Surin L  
   Amniotic membrane transplantation with and without limbal stem cell transplantation in chemical eye injury  
   Nepalese Journal of Ophthalmology, 2015"

4. Sanjeev Kumar Thakur, Sanjay Kumar Singh, Bindeshwar Mahato, Anand Singh  
   Ear diseases pattern and hearing impairment in the Eastern Nepal- A study in a combined eye and ear set up  
   Asian Journal of Medical Sciences, 2015"
Awards:

1. Mr. Bindeshwar Mahato- APAO Outstanding Service in Prevention of Blindness Awards 2015.
2. Mr. Sudhir Thakur- Netra Jyoti Samman Puraskar 2072, Management Category.
3. Dr. Lila Raj Puri- Winner Amateur Category: IAPB #EyeCareForAll Photo Competition Award 2015.
4. Dr. Sanjay Kumar Singh-Dr J C Khanra and Smt Sarala Devi ACOIN Award 2015 for his contribution in Community Eye Health Services.

Acknowledgments

Despite the effect of major earthquake and continuing political unrest in Terai part, 5,66,869 patients examined and 100,036 surgeries were performed at EREC-P hospitals, Eye Care Centres and in Out-reach activities. These achievements were possible due to continuous support from our partner CBM and their donors. We are thankful to Orbis International & Oertli Instrument AG Berneck, Switzerland for their support. There was constant support from local community and local social organizations. We would like to express our thanks to Ministry of Health & Population, Social Welfare Council for their continuous guidance and support. We also thank Nepal Eye Bank, Kathmandu for providing donor corneas for cornea transplantation on a regular basis and Impact Nepal for providing training on ear care. We would like to specially thank Dr. Albrecht Hennig & Ms. Kristina Hennig for their service, continuous support and guidance.

I would like to thank all my colleagues, administrative staff, clinical staff and other staffs for their hard work to make Eastern Regional Eye Care Programme a success.

Prof. Dr. Sanjay Kumar Singh
Programme Director
Eastern Regional Eye Care Programme
Lahan/Biratnagar, Nepal
Email: sanjay.singh@erec-p.org, info@erec-p.org
Website: www.erec-p.org
Photo: © EREC-P and CBM
A Journey from dependent to self-dependent: Govind B.K, 58 years, Male

Blindness due to glaucoma last 6 years

CBR worker counselling for rehabilitative training

Orientation and mobility training

Vocational training

Independently able to make muda and sell

Now I can go to School!!

Ashmita Pariyara congenital bilateral cataract child age 5 years/female from Orkhale VDC, Khotang District which 158 km away from Lahan. Her congenital bilateral cataract is identified in a Surgical Eye Camp Organized by Sagarmatha Choudhary Eye Hospital (SCEH), Lahan. She has been brought to base hospital for surgery and now her vision is restored and she can do all her activities herself.

Surgical Eye Camp

Eye examination at base hospital

Biometry

Surgery

Vision restored

Playing

Story& Picture: Ashok Shah, CBM-Nepal
Sagarmatha Choudhary Eye Hospital, Lahan-3, Siraha
Email: sceh@erec-p.org | Phone No.: 00977-33-560402

Biratnagar Eye Hospital, Rani, Biratnagar-17, Morang
Email: beh@erec-p.org | Phone No.: 00977-21-436358