



Annual Report

2013



**Striving for the highest levels of Excellence for Prevention of Blindness through
Comprehensive Eye Care Service & Human Resource Development**

**Pakistan Institute of Community Ophthalmology, Hayatabad Medical Complex
Government of Khyber Pakhtunkhwa, Peshawar, Pakistan**

www.pico.org.pk Tel: +92-91-9217377-80 Fax: +92-91-9217413

Table of Contents

S.#	Contents	Page #
01	Executive Summary	03
02	Introduction	05
03	PICO Administrative Structure	06
04	Academic Human Resource Development	07
05	Progress on Academic Activities	9
06	Examination of MPH/BVS 2012-2013	11
07	Admission for Year 2014	12
08	Miscellaneous Activities	13
09	Comprehensive Eye Care Cell Activities	15
10	Research & Development	17
11	Advocacy and Awareness Raising Events	18
12	Micro Surgical Training Center	20
13	Raja Mumtaz Regional Learning Resource Center (RLRC)	21
14	Murad Eye Bank	22
15	Awards	23
16	Glimpses of Different Events at PICO in Year 2013	24
17	Annexure	33

EXECUTIVE SUMMARY

Pakistan Institute of Community Ophthalmology (PICO), Hayatabad Medical Complex, Peshawar is an internationally renowned institute of ophthalmology. Human Resource Development, Research, and Comprehensive Eye Care Program are the three main pillars of the institute and all its functions and progress revolve around them.

Pakistan Institute of Community Ophthalmology (PICO), as an institutional requirement develops different reports showing its progress. As some of its activities are also funded by its International Partners, PICO therefore also fulfills its obligation to its Partners by acquainting them about the latest progress on its different programs on regular basis and as and when required. PICO finally consolidates all its progress in the form of its annual report which is published and disseminated among all the key stakeholders by end of January each year.

In its HRD Program, PICO is running various academic programs like MPH in Community Eye Health, Bachelor of Vision Sciences (four year graduate program), Post graduate diploma and certificate courses for ophthalmic technicians. PICO is affiliated with Khyber Medical University, Khyber Pakhtunkhwa for its Degree and Post-graduate program while it is affiliated with Medical Faculty, Khyber Pakhtunkhwa for its diploma/certificate programs. In the year 2013, the studies of old session students of MPH (CEH) continued while process for fresh admissions for the session 2014 were completed by the end of 2013. Similarly, the four classes of BSC Vision Sciences were continued as per routine while admission process for the new incumbent was completed. Likewise, the admission process for the fresh intake in Ophthalmic Technician Course was completed in the year 2013. The administration of PICO continued its struggle to meet best possible standards of the academic, accommodation, registration and other essential requirements of its students by providing them the qualified teaching faculty, well furnished classrooms and academic environment in the library and suitable hostel accommodation facilities. Besides these regular academic programs, two short courses for the capacity building of district ophthalmologists and trainee medical officers (TMOs) in Eye Health and related disciplines were held in 2013.

Research in any field is not only the academic requirement of the students but it is also of great utility for the society. It provides solution to the problems in the specific areas and new insights for future developments/improvements. PICO gives great importance to its Research and Development Program. It conducted various field surveys in the field of Eye Health in the year 2013. RAAB DR (Rapid Assessment of Avoidable Blindness) was conducted in the district Peshawar to estimate the prevalence and causes of avoidable blindness and visual impairment in people aged 50 & above. 3084 subjects were examined and it was seen that the overall prevalence of blindness amongst age 50 & above was 1.6%. Similarly, another eye health survey "Rapid Assessment of Refractive Errors (RARE)" was conducted in the District Peshawar by PICO in the year 2013.

The Comprehensive Eye Care (CEC) Cell of PICO is responsible for planning, implementation, Monitoring & Evaluation of the District Comprehensive Eye Care Program. In the year 2013 the major

Achievements of the CEC Cell included up gradation of the Eye Departments of three hospitals, one each Teaching, DHQ and THQ hospital. Need Assessment Survey of the District Eye care Program was conducted to assess the present status of the eye departments in the districts and find out deficiencies for further improvement in the program. The major deficiencies found during the need assessment were shortage of staff and M&R issues of the equipment. The approval of PC-I for construction of the PICO Hostel was another great achievement of PICO. When completed, it would resolve the long standing issue of accommodation for the PICO students coming from the far flung areas. CEC Cell PICO also celebrated the World Glaucoma Week and World Sight Day with great spirit in the year 2013. Multiple awareness and advocacy events were arranged for dissemination of important eye care information to the general public during these events. At the end of the year 2013, one day free eye screening camp was arranged in the Benevolent Public School, Kohat Road, Peshawar. About 400 students and teaching staff were examined during the eye camp.

1 Introduction

Pakistan Institute of Community Ophthalmology (PICO) was established as a joint project of the Government of Khyber Pakhtunkhwa (the then NWFP) and international partners (Sight Savers International and CBM Germany) in 1997-98.

The objective of the Institute was to reduce blindness and visual impairment in Pakistan and other developing countries through Human Resource Development (HRD) for eye care, operational and epidemiological research, improving eye care both qualitatively and quantitatively and advocacy to get resources for eye care.

At the time of its establishment in 1997-98, it was the 3rd Institute of its kind in the world and the first in any developing country for postgraduate training of doctors in Community Eye Health (other being International Centre for Eye Health London and Dana Centre John Hopkins USA).

Since the establishment of PICO, in 1997, the Institute has achieved all of its objectives. All the funds made available during the period has been utilized for the purpose, audited by an external chartered accountant and accepted by the donors. Regular internal and external evaluations of the projects have been done by the international donors.

PICO has three important functions

- i) HRD for comprehensive eye care
- ii) Planning, implementation, Monitoring & Evaluation of comprehensive eye care throughout the province.
- iii) Research and Development.

1.1 Vision, Mission, Aims and Objectives

Vision:

Improving quality of life by eliminating avoidable blindness

Mission:

Work towards an enabling environment, which contributes towards strengthening eye health systems

Aim:

To reduce the burden of blindness and visual impairment so as to improve the quality of life of people in EMR.

Objectives:

- ▶ Human resource development.
- ▶ Operational & Epidemiological research related to eye health.
- ▶ Capacity building of the eye care teams.
- ▶ Advocacy:
 - a) The mobilization of resources.
 - b) Policy making.
 - c) The extension of eye care services at community level.
- ▶ Health Promotion & Public Awareness.
- ▶ Support countries in EMR of WHO & other developing countries in planning & implementing their National Eye Care Programs.

2 PICO Administrative Structure

PICO was given its present status under the Medical Institutions of and Health Care Ordinance of 2002. It comes under the Management Council of Hayatabad Medical Complex, which is Headed by the Chief Executive who is appointed by the Government of KPK.

PICO is headed by Dean, who is the overall in charge of the institute. Dean PICO is also a member of the Management Council of Hayatabad Medical Complex.

PICO has various departments, following is few of them.

Academics

- Department of Community Eye Health
- Department of Public Health, Department of Epidemiology
- Department of Optometry, Department of Clinical Ophthalmology
- Department of Social Sciences.

Other Departments

- Student's Affairs' Section
- Regional Learning Resource Center
- Micro Surgical Training Center
- Murad Eye Bank
- Bio-Medical Workshop
- Comprehensive Eye Care Cell
- Administration

Dean PICO is helped by an Academic Council comprising of all Heads of the Academic Departments and a Management Committee.

3 Academics / Human Resource Development

PICO is a distinctive institute in the field of vision sciences. PICO is running various academic programs i.e. Master of Public Health, Bachelor of Vision Sciences (four year graduate program), Post graduate diploma and certificate courses for ophthalmic technicians; Apart from regular academic programs, PICO also conducts various refresher courses for different cadres of eye care teams for the capacity building and continuous medical and professional development.

3.1 Master of Public Health (Community Eye Health)

This program was designed and initiated in the year 2008 and was started in the year 2009. The philosophy behind this academic activity was to produce Master's in Public Health so that to meet the crucial requirements in the field of ophthalmology in Pakistan. Program is comprised of two year duration in which the first year covers the theoretical courses and the 2nd year is consisting of research / thesis activities.

3.1.1 Aims and objectives

Master in Public Health degree is designed to prepare students to address the broad mission of public health,

- To introduce the students to the magnitude, causes and distribution of burden of various diseases including blindness & visual impairment in the world, region, country, province and district.
- To introduce the students to the study of the health system in district / Province / Country and identify the issues in the functioning of the health system.
- To train the students to plan, implement, analyze and interpret different epidemiological studies for need assessment of burden of diseases with their causes including blindness, visual impairment and other eye ailments.
- To enable them to plan, implement, monitor and evaluate health / eye care activities at primary, secondary and tertiary levels.
- To make the students to understand the bases of health promotion practice.
- To improve their managerial skills in order to improve the health care ensuring patient safety and satisfaction.

3.1.2 Affiliation

Pakistan Institute of Community Ophthalmology is an affiliated body of Khyber Medical University Peshawar. The MPH (Community Eye Health) degree is awarded by the KMU, Peshawar.

3.2 Bachelor of Vision Sciences

This program is of Four Years duration which is consisting of eight semesters. From the 2nd Year, students join the clinical Department in the department of Ophthalmology Hayatabad Medical Complex as to learn practical work in the field of Vision Sciences.

3.2.1 Aims and objectives

- Providing advanced training to the best of these graduates so that get specialization in their area of interest. These graduates will meet the needs / requirements of optometry in secondary and tertiary eye care institution.

- This program is open for human resource development so that to cater for similar requirements of the countries of Eastern Mediterranean Region of WHO as well as other developing countries.
- Having a standardized training Program for eye care professionals development and it is nationally and internationally accepted standards of evaluation and accreditation.

3.2.2 Affiliation

Pakistan Institute of Community Ophthalmology is an affiliated body of Khyber Medical University Peshawar. The degree is awarded by KMU.

3.3 Ophthalmic Technician Course

This program is of Two Years duration and from the 2nd Year students also join the clinical Department in the Department of Eye Hayatabad Medical Complex as to learn practical work.

3.3.1 Affiliation

Pakistan Institute of Community Ophthalmology is an affiliated body of Medical Faculty of Khyber Pakhtunkhwa, Peshawar and the certificate is awarded by Medical Faculty Khyber Pakhtunkhwa.

3.3.2 Ophthalmic Nursing Course (ONC)

The Ophthalmic Nursing course was initiated by PICO in the year 2002 and the purpose was to build the capacity of Nurse Cadre in the field of vision sciences so that to get benefits from their expertise in the eye care services. It is now run jointly by PICO and the Postgraduate College of Nursing, Khyber Pakhtunkhwa. In this program, PICO trained 55 nurses in the sessions 2002 to 2011. The Ophthalmic Nursing Course not runs this year because the Nursing College initiated BSc. Nursing which is more appealing to nurses for professional development.

3.3.3 Affiliation

Pakistan Institute of Community Ophthalmology is an affiliated body of Khyber Medical University Peshawar and this course is recognized and affiliated with KMU, Peshawar.

3.4 F.Sc Ophthalmic Technology

PICO is also in process of affiliation for the two year Ophthalmic Technology course with the Board of Intermediate and Secondary Education Peshawar. Through this certificate course titled FSC Ophthalmic Technician, the student can get further education i.e. Bachelor and Master in Ophthalmic Technology

3.5 MS Optometry

Initiation of further education in the field of Optometry is the need of time. PICO is striving hard to start MS Optometry leading to PhD for its graduates aiming to excel their profession in the field of Optometry. In this connection PICO has prepared the draft Curriculum and also in coordination with Khyber Medical University for affiliation. Principally the University has agreed to grant affiliation for MS Optometry which is very encouraging for PICO.

All the courses are running through semester system, semester exams held in June and December each year.

4 Progress on Academic Activities:

4.1 MPH Activities

As a part of regular academic activities, the students of MPH (CEH) were also exposed to field work in community eye health. (Year planner attached as annexure)

4.1.1 Community survey

Students conducted a school survey and they learn how to collect and analyze data .They visited Govt.Girls High School Civil Quarters colony Kohat Road on 28-03 -2013 and they screened the senior school students for refractive errors.

4.1.2 Community Visits

Different visits were done by students to nearby districts and villages. Students also visited Sociology Department of Peshawar University KPK on 27 05.2013 and they were briefed on different types of Researches going on in the Department. On 29.5.2013 students visited Bait UL Maal Department Peshawar KPK.

4.1.3 Symposium, workshops

A 6 day's workshop on Health System Research by Prof. Taslim Akhtar Director Research KMU was held in March 2013 for MPH students at PICO.

A three- days training workshop for District ophthalmologists on Developmental Planning was held from 8th -11th April2013 at PICO, which was participated by the students. The students of MPH also attended a Research symposium organized by Khyber Medical University (KMU) Peshawar on 14/3/2013.



4.1.4 Short Courses

➤ One Week Course in Community Ophthalmology

PICO is regularly organizing one week course for doctor in the field Community Eye Health every year. This course is mandatory for trainee medical officers and for promotion and selection to next upgrades position in ophthalmology. This year, PICO held the same course from 2nd-7th December 2013. List of participants is annexed - 1

4.2 Undergraduate Courses (Bachelor of Vision Sciences /Ophthalmic Technician Course)

All the courses activities are being conducted in sessions of;

- Theory (augmented by practical demonstrations).
- Practical placements at the clinical department of Ophthalmology, Hayatabad Medical Complex (HMC), Peshawar.

In the theoretical session learning is facilitated via classroom teaching, practical demonstrations and discussion. The entire course curriculum for the semester January to December 2013 was carried out successfully. Students fully utilized the Clinical Department of Ophthalmology HMC for practical training.

High qualified faculty from KGMC are teaching the BVS and OTC 1st year, which has a very fruitful impact on the student's learning regarding basic medical sciences since start of this session.



In the 2nd year BVS, Ophthalmologists from the Department of Ophthalmology along with internal faculty teaches eye diseases aiming to enhance knowledge and skills.

To improve and maintain the quality of education the institute invites senior faculty from Department of Ophthalmology HMC teach the final years students in relevant fields.

A special training on Contact lens fitting techniques and hands on training of the students of final year, was conducted by Mr. Ali Minto, who is a contact specialist.

A two week module on research Methodology and epidemiology was conducted by Dr. Zahid Jadoon. He also facilitated the students in their research dissertations which is the requirement of BVS degree Course.

4.3 Refresher training Course for Trained Ophthalmic Technician:

One week refresher course was organized for Ophthalmic Technician from 30th September to 5th October 2013. Total 15 Ophthalmic technicians participated. List of the participants is annexed- 2

4.4 JCAHPO Certification

The third step of JCAHPO certification i.e. COT Skill evaluation was held on 7th December 2013 at Pakistan Institute of Community Ophthalmology. Total 6 candidates participated in the examination, except one all of them successfully clear the 3rd step of JCAHPO.

4.5 Distribution of Medical Kit

Ophthalmic Medical Kits were distributed among the 20 students of BVS 2nd year and 3rd year each aiming to enhance their practical skills.

5 Examination MPH / BVS 2012-2013

5.1 MPH Examination

The annual examination of session 2012 was held on 6th -8th December, 2012. Total 10 students appeared in examination, 3 out of 10 were unable to pass the exam. They will reappear in the next examination. Annual examination for the batch of 2012-2013 was held on 05th – 07th December, 2013. In the annual examination of 2013 10 students appeared in the exam, result is awaited. The board of examiners included the following:



1. Dr. R. Para Raja Segaram
2. Dr. Muhammad Babar Qureshi
3. Dr. Muhammad Aman Khan
4. Dr. Muhammad Zahid Jadoon
5. Dr. Sadiqullah Khan

5.2 BVS Examination

Prior to conduct the final semester examination, midterm exam and internal assessments which is a full fledged exercise and requirement of KMU, was carried out by the faculty of undergraduate courses. The spring semester examinations of all the classes were conducted by the Khyber Medical University in June 2013. This was followed by summer vacation, In September 2013 fall semester started. The fall semester examination was conducted in December 2013. The detail of number of students who appeared class wise given below;

5.2.1 Fall semester examination December, 2012

1st year B. S Vision Sciences (2nd semester exam)

Total number of student appeared in 2nd semester examination were 50. 6 out 50 students were not promoted due poor result.

2nd year B. S Vision Sciences (4th Semester Exam)

There were 36 students who appeared in the 2nd year examination and all of them promoted to the next semester.



3rd year B. S Vision Sciences (6th semester)

There were 30 students who appeared in the said examination and one student was not promoted to the next semester.

4th year B. S Vision Sciences (8th semester)

There were 25 students who appeared in the examination and all of them promoted to the next semester.

5.2.2 Spring semester examination June, 2013

1st year B. S Vision Sciences (1st semester)

Total number of student appeared in 1st semester examination were 47 and all promoted to the next semester.

2nd year B. S Vision Sciences (3rd Semester)

There were 29 students who appeared in the 2nd year examination and all of them promoted to the next semester.

3rd year B. S Vision Sciences (5th semester)

There were 37 students who appeared in the said examination. All were promoted to the next semester.

4th year B. S Vision Sciences (7th semester)

There were 38 students who appeared in the examination. 5 out of 38 were not promoted to the 8th semester.

5.2.3 Fall semester Examination 2013**1st year B. S Vision Sciences (2nd semester exam)**

Total number of student appeared in 2nd semester examination were 52 and their result is awaited.

2nd year B. S Vision Sciences (4th Semester Exam)

There were 27 students who appeared in the 2nd year examination and their result is awaited

3rd year B. S Vision Sciences (6th semester)

There were 37 students who appeared in the said examination and their result is awaited

4th year B. S Vision Sciences (8th semester)

There were 38 students who appeared in the examination and their result is awaited

5.3 Examination of Ophthalmic Technician Course

The examination of ophthalmic technician was conducted by medical Faculty as per practice. PICO has no role in the conduction of examination. The semester examinations were conducted in June and in December 2013. Total Number of students appeared in the examination were 20.

6 Admission for the Y-2014**6.1 Advertisement**

PICO advertised the new admissions for Master in Public Health (CEH), Bachelor of Vision Sciences & Ophthalmic Technician Course for the session 2014 on dated 30th September 2013 in 05 National News Papers (03 English and 02 Urdu).

The Admission Advertisement was also uploaded on PICO website. Director General Health Services, Medical Superintendents of teaching Hospitals, Agency surgeons, District hospitals & Provincial Coordinators were informed through departmental letter and advertisement copy, for appropriate nomination of candidates for the courses.

6.2 MPH Admission

05 doctors and 15 Optometrists applied for admission to the course of MPH (CEH). 05 doctors and 05 optometrists were selected on the basis of interviews. Of these 03 doctors did not join the course and admissions were offered to optometrists on waiting list.

6.3 Bachelor of Vision Sciences

The admissions of BVS were finalized through NTS followed by interview at PICO. Entry Test was conducted by National Testing Services on dated 13th November 2013. Applicants from Baluchistan and Gilgit Bultistan were exempted from entry test.

- Interview for Bachelor of Vision Sciences (BVS) were held on 19th November 2013.
- Number of Students appeared in the Test **135**
- Number of Students qualified **135**

- Number of Students appeared in Interview **142**
- Number of Students selected according to seat distribution given in Prospectus **52**

6.4 Ophthalmic Technician Course

OTC admission was finalized through interview by admission committee on 21th November 2013. Interview was held for OTC on 21st November 2013.

- Number of Students applied for the course **22**
- Number of Students from Government Service **03**
- Number of Students appeared in Interview **20**
- Number of Students selected according to seat distribution given in Prospectus **15**
- Number of Students who did not join the course **01**

7 Miscellaneous Activities

7.1 Participation in Eye Camps

PICO encourages student for participation in volunteer activities which will help them in their carrier building and it also shape student personalities temperament.

PCIO is regularly carrying out Free Eye Camps in collaboration. Students of undergraduate Courses as per practice actively participated in the free eye camps organized by PICO, in collaboration with the Lions Club.

7.2 Sports Week

The Sports week for the extra-curricular activities of the students of PICO was organized and held from 1st-6th April, 2013 at PICO. In this week, sports activities like cricket, football and art competitions were held. For student's encouragement, Dean PICO, Professor Dr. Nasir Saeed presented trophy and shields to the winner and runner up.



7.3 Education Expo

Faculty and students of PICO participated in Education Expo organized by Jung media Group on 15-16 June 2013, held at Peshawar Garrison Club, Peshawar.

7.4 MoU with Khyber Girls Medical College

PICO signed an MoU with the Khyber Girls Medical College, Peshawar for teaching of basic medical sciences subjects of the BVS by subject specialists in order to improve the quality of teaching and education. The students are now in much better position to get in-depth knowledge from the senior qualified professors and other faculty of the Medical College.

7.5 Approval of project for PICO Hostel Construction

PICO has been able to get approval of the Government of Khyber Pakhtunkhwa to fund its most important project for construction of hostel for students of PICO that is worth Rs. 70.000 million in the compound of Hayatabad Medical Complex. The project is planned to be completed in 2 years by 2015.

Presently PICO is providing hostel facility at rented buildings. Boy's hostel is located on Nasar Bagh Road in which 46 students of undergraduate of B.Sc and MPH Program are residing. The Institute is providing pick and drop facility from hostel to PICO.

Gils Hostel is located at Phase 4 Hayatabad close to the Institute, in which 29 students are availing hostel services.

7.6 MoU with National Vocational and Technical Training Council (NAVTTTC) for Ophthalmic Technician Course

National Vocational and Technical Training Council (NAVTTTC) is Federal level organization located at Prime Minister Secretariat Islamabad. NAVTTTC will support 15 additional students of Ophthalmic Technician course at PICO for two years from 2014-2015. This program will be in addition to the current ongoing diploma in Ophthalmic Technicians.

7.7 PICO 1st Convocation

The 1st Convocation of PICO was held on 31st January, 2013 in which the graduates of PICO Bachelor of vision Sciences and MSc/MPH (Community Eye Health) from different sessions were awarded degrees and gold medals. Professor Dr. Hafeezullah, Vice Chancellor, Khyber Medical University, Peshawar was the Chief Guest at the occasion. Prof. Muhammad Daud Khan was awarded with the Distinguished award in the field of Prevention of Blindness. PICO also presented the Partnership awards to its partners including The Fred Hollows Foundation Australia, Light for The World, Sightsaviors International, CHEF International, CBM and The Brien Holden Vision Institute Foundation. In the convocation degrees were awarded to 67 graduates of PICO among them 19 were MPH (CEH)/MSc (CEH) graduates and 48 graduates of Vision Sciences. Total 20 Gold Medals were distributed among the top students of their respective sessions both in BVS and MPH.

7.8 Refurbishment of Optical Lab

PICO Optical lab has a vital role in the training of the BVS and OTC students in the area of spectacle glass making. The available instrument such as auto edger, lensometer (manual) were outdated and most of the instruments were out of order. Upon the request of PICO, The Brien Holden Institute refurbished the Optical Lab and provided latest Auto Lens Edger, Automatic Lens Grover, Hand edger and Polisher Machine, Digital lensometer etc. With the fully equipped optical lab the students are now keen to learn and get quality hands on training. This is another step towards providing quality education to the students.



7.9 Capacity Building of Faculty

- Two faculty members, Mr. Siraj Khan Safi (Lecturer Optometry) and Mr. Azmat Jehan (Lecturer Optometry), were sponsored by The Brien Holden Institute for Vision Sciences for a two weeks training of Optometry Faculty Development in the University of New South Wales, Sydney, Australia.

- Mr. Sardar Daud Jan, Lecturer Optometry, has started Master in Health Research from Khyber Medical University on self finance basis which will ultimately of great help for the students in research.

8 Comprehensive Eye Care Cell

During the year 2013 the CEC cell carried out the following activities;

8.1 Training of District Ophthalmologists in Planning & Development

4 days training workshop on planning and development for District Ophthalmologists was held from 8th to 11th April, 2013 at PICO. District Ophthalmologists from 9 districts participated in the training. They were trained in the planning process of district, province and centre. This activity was supported under the National Program for Prevention and Control of Blindness, Khyber Pakhtunkhwa.

8.2 Purchase of Eye Equipments

PICO also got approval of the proposal for purchase of eye equipments under the National Program for Prevention and Control of Blindness for three hospitals and a fund of Rs. 62.992 million was released. After approval of proposal, a case for purchase of eye equipments for three hospitals (one each of Teaching, DHQ & THQ) has been sent to DGHS and it is hoped that the purchase & supply of eye equipment process will be completed by the end of the CFY 2013-14.

8.3 Purchase of Medicines & IOLs

PICO also got approved the proposal for purchase of medicines & IOLs for holding of eye camp in the remote areas of Khyber Pakhtunkhwa, Pakistan.

Process for purchase of medicines & IOLs for holding of 4 eye camps in the far flung districts of Khyber Pakhtunkhwa has also been initiated and a case has been sent to DGHS for the purchases. The DGHS directed the PICO, CEC Cell for process the same by PICO. The purchase of medicines and IOLs is in process and these camps are scheduled for the months of February and March 2014.

8.4 Approval of PC-I of National Program for Prevention & Control of Blindness Khyber Pakhtunkhwa

PICO was able to prepare and approved the said project/PC-I from the Govt. with a total cost of Rs. 207.615 million for three years (2013-15). Under this project eye departments of 13 hospitals in the Province will be upgraded. PICO, CEC Cell has started activities which is also including of creation of awareness through advocacy, consultation and seminars / walks/ workshops.

8.5 Free Eye Screening Camp under the National Program for Prevention of Control of Blindness, Khyber Pakhtunkhwa

Awareness Raising and Screening Sessions in schools is one of the approved activities of the project "National Program for Prevention and Control of Blindness Khyber Pakhtunkhwa". Purpose of this activity is to diagnose the students with eye problems at the initial stage at schools and to advise the students having eye health problems for further investigation and/or treatment.

In the Current Financial Year (2013-14), Rs. 0.400 million were allocated for the said activity in the project. In view of this, One day free eye screening camp was arranged on Thursday the 19th December, 2013 at the Benevolent Public School situated at Kohat Road, Peshawar. A team of 10 members

consisting of professionals, administration and support staff from Pakistan Institute of Community Ophthalmology (PICO), Hayatabad Medical Complex, Peshawar conducted the eye camp at the Benevolent Public School. Total target set for eye screening was 400 students from class nursery to 10th and 30 faculty/teachers of the school staff.

The camp began on time at 9:00 am. It was conducted in a hall of the school. Eye sight of a total of 366 students (who were present in the school at that day) was screened / inspected and out of which 21 students were diagnosed with refractive errors. Few students were referred to hospitals for further investigation/treatment from the eye specialists. Besides, 20 faculty and support staff including Principal of the School was also inspected by the PICO Team. Some of them were found with refractive errors/eye problems and were advised for change of glasses. The camp continued from 9:00 am to 1:30 pm and all the students and staff present on that day were successfully examined. Mr. Hussain Shah, the Secretary Benevolent Fund, Govt. of Khyber Pakhtunkhwa was also informed about the camp but he could not join the camp due to his pre-fixed engagements. At the end the Principal, Benevolent Public School thanked the PICO team for holding of such a useful activity. He termed it a very useful and successful activity and said that the students and his faculty have greatly benefited from it. He also expressed his gratitude to Dean PICO for selecting the Benevolent Public School and sending his team for this activity.



8.6 Free Eye Camps

PICO has the tradition for extension technical & logistic support to various active organizations in field of Eye Care Services. Likewise, PICO organized various free camps in collaboration with Gulbahar Lions club Peshawar, detail is below;

S. No.	CAMP NO.	VENUE	DATE	OPD	EYEDROPS	GLASSES	CATARACTS DETECTED
01	75	Govt Boys Primary School Sheikhabad Peshawar City	10/02/2013	728	1050	576	52
02	76	Govt Higher Secondary School, Villlage Tarnab, District Charsadda	21/04/2013	675	913	485	54
03	77	Govt. Primary School Afghan Colony Peshwar.	22/09/2013	585	815	478	44
03	78	Govt. Primary School Akhoun Abad, Peshawar	22/12/2013	686	782	491	20
TOTAL				2674	3560	2030	170

8.7 Free Eye Screening Camp for Street Children and their Parents in collaboration with Society for the Protection of Child Rights (SPARC)

Comprehensive Eye Care Cell, PICO, HMC organized free eye screening activity in vicinity of PICO, HMC, Peshawar at 10:00 AM, and about 60 children including their parents were examined. This camp was inaugurated by the Minister Health Khyber Pakhtunkhwa Mr. Shaukat Ali Yousafzai, while visiting the camp Dean PICO Prof. Dr. Nasir Saeed briefed the Minister Health about the importance of the screening activity specially for the vulnerable / marginalized street children of the slum of Peshawar. This was a very successful and useful activity as the most vulnerable segment of the community was targeted and served. This also opened ways for further collaboration with the organization.

9 Research & Development

9.1 Need Assessment of District Comprehensive Eye Care Program.

In December 2012 and January 2013, the need assessment of the district eye units was conducted by the CEC Cell, PICO. Objectives of the need assessment were to assess the on ground situation, identify gaps in the already upgraded eye departments and plan for future interventions. The comprehensive report is being finalized by PICO and submitted to the management of PICO for further utilization. This activity was sponsored by Fred Hollows Foundation.

9.2 Rapid Assessment of Refractive Errors (RARE) Survey

The RARE Survey was conducted in December, 2012 - January 2013. The survey was piloted in District Peshawar. 17 clusters from urban and rural set ups of the District were surveyed. The report was finalized in February 2013. The Survey was sponsored by Brien Holden Foundation (ICEE). For conduction of this survey, a team was selected which was comprised of Epidemiologist, Sociologist, Optometrists and technicians. Prior to field intervention, Sociologist identified the areas and hold meetings with communities and he insured the smooth intervention of survey team work

9.3 RAAB DR in Peshawar

The planning of eye care programs requires data on the prevalence and causes of blindness. Unfortunately, program planning is often hampered by the lack of data, because no surveys have been conducted in the area or the surveys are too old to be relevant. Program planners are often reluctant to plan surveys, as they are believed to be expensive, time-consuming, and complicated. The Rapid Assessment of Avoidable Blindness (RAAB) has been developed as a simple and rapid survey methodology that can provide data on the prevalence and causes of blindness. So far, RAAB has been successfully undertaken in Kenya,¹ Bangladesh,² the Philippines, Botswana, Rwanda, Mexico, and China (personal communication). RAAB is an updated and modified version of the Rapid Assessment of Cataract Surgical Services (RACSS).³

RAAB focuses primarily on the prevalence of avoidable blindness, which is blindness due to cataract, refractive errors, trachoma, onchocerciasis, and other corneal scarring. This is because the aim of VISION 2020: The Right to Sight is to eliminate 80 per cent of avoidable blindness by the year 2020. RAAB DR gives reliable data on prevalence of Diabetes and Diabetic retinopathy in addition to the above information. RAAB is rapid, because it only includes the over-50 age group, where the prevalence is highest,⁴ so that sample size requirements are minimized. RAAB is simple, because it uses straightforward sampling and examination techniques, and data analysis is automatic and does not require a statistician. RAAB is relatively cheap, as it does not take a long time, does not require expensive ophthalmic equipment, and can be carried out by local staff.

• Why RAAB Diabetic Retinopathy

Globally, about 85% of all visual impairment and 75% of blindness could be prevented or cured worldwide. But this needs proper planning and monitoring. Proper planning and monitoring requires information about the target population. Rapid Assessment of Avoidable Blindness was developed to generate this information at relatively lower costs and higher speed.

- The last National Blindness survey was carried out in Pakistan ten years ago i.e. in 2003. The Fred Hollows Foundation has completed two of its major projects PAEDC II and PASEC after that.
- Peshawar is one of the districts where FHF is involved in prevention of blindness activities. FHF is in the process of launching its new project in Pakistan. A major focus of the project is on community level eye health interventions and building a referral chain from the primary level to the secondary and tertiary level. RAAB would provide us with baseline information on blindness visual impairment, and DR prevalence for the new project in district Peshawar.

Objectives

The main objectives of RAAB-DR are;

- To estimate the prevalence and causes of avoidable blindness and visual impairment in people aged 50 and above.
- To assess cataract surgical coverage.
- To identify the main barriers to the uptake of cataract surgery.
- To measure outcome after cataract surgery.
- To estimate the prevalence of Diabetes and Diabetic retinopathy (amongst all diabetics) aged 50 years and older.

Details results of RAAB DR is annexed -3

10 Advocacy and Awareness Raising Events

10.1 Celebration of World Glaucoma Week

The CEC Cell, PICO celebrated the WGW from 11th-17th March, 2013. Theme of the WGW this year was "The World is a wonder to see every day, so don't let Glaucoma come in the way". A number of awareness activities were planned like Screening Camp at HMC, Peshawar, and awareness seminar at Malakand University and Presentation Competition between students of medical colleges at HMC, Peshawar. These activities were sponsored under the National Program for Prevention and Control of Blindness, Khyber Pakhtunkhwa.

10.2 Celebration of World Sight Day October 2013

PICO and HMC marked this day with great zeal and organized three events in different venues in Peshawar valley, the details of events are given below;



10.3 Awareness Raising Eye Screening Camp for Parliamentarians and Establishment Staff of Provincial Assembly Khyber Pakhtunkhwa

On the eve of World Sight Day 2013, an eye screening camp was organized in the premises of Provincial Assembly of Khyber Pakhtunkhwa. About 650 staff including Speaker, Provincial Ministers and MPAs were examined by the doctors of PICO, HMC. The honorable Speaker Mr. Shahid Ullah, inaugurated the camp and also got his sight tested. Speaker applauded the activities of PICO and pledged for taking legislative steps for avoidable blindness and the end he thanked Professor Dr. Nasir Saeed and his team for sensitizing and organizing of Eye Screening camp for the Parliamentarians of Provincial Assembly. The main aim of this activity was to sensitize the political leadership about the problem of blindness and the significance of celebration of World Sight Day. As a result of eye examination, it was found that about 50% of the parliamentarians were having eye problems. They were examined and prescribed medicines/spectacle on the spot.

10.4 Awareness Raising Seminar For General Public

The major activity of the WSD celebrations was holding of an awareness seminar. On eve of celebration of World Sight Day 2013, PICO, HMC organized awareness seminar for general public. The main aim was to sensitize the public and to convey the issue and thoughts about blindness. Chief Guest of the Seminar was Minister for Health, Khyber Pakhtunkhwa Mr. Shaukat Ali Yousafzai. Prominent religious scholar Abdul Gahafor, in his speech depicted the eye health issue in the light of Islamic Principles and thoughts. All his arguments about the avoidable blindness were linked with Islamic jurisprudence, at the end he call upon the dignitary participants including health Minister for taking into account the social responsibility for prevention of blindness in our society. Professor Dr. Mohammad Daud Khan expressed his views on the technical and strategic planning for prevention of blindness and the role of establishment of units of ophthalmology throughout the province. He appreciated the efforts of PICO in elimination of avoidable blindness in general and in celebration of WSD in particular and also ensured full support of the government in improving health care throughout the province. Professor Dr. Nasir Saeed Dean PICO also gave an interview to different print and electronic media in which DAWN TV, Express TV and News paper, BBC World Service, Frontier Post News and Pakistan Television representatives participated.

10.4.1 Posting and Dissemination of Awareness Material

Besides the above mentioned activities of WSD celebrations, the message of WSD and safe eye care was disseminated in English and local languages in collaboration with Gulbahar Lions Club International, Peshawar. It included the installation of hording at key public locations of the city, posters at hospitals, Medical Colleges and public places and hanging of banners carrying key messages for public to get their eyes tested.

10.4.2 One Day Orientation Meeting for Press and Media Personnel

Prior to celebration of World Glaucoma Week, one day orientation meeting with the press and media personnel was held at PICO in March, 2013, in which the aims and objectives of PICO were shared with the media and press. This activity was sponsored under the National Program for Prevention and Control of Blindness, Khyber Pakhtunkhwa.

10.4.3 Media Coverage

In celebration of all the three events, media participated with great zeal and played an important role in the dissemination of World Sight Day message to the general public at large. On the next day of the event, the event was reported in different news papers in different languages including English.

11 Micro Surgical Training Center (MSTC)

MSTC was established in 1997-98 at PICO for the purpose of training of Ophthalmologists in Micro-surgical techniques. It was supported by The Fred Hollow Foundation Australia (FHF) initially. Since 2009

FHF has withdrawn its support, MSTC is now partially supported by FHF in the form of training of Ophthalmologists from Afghanistan. Gulbahar Lions Club, Peshawar also provides support in the form of medicine and IOL's. Salaries of the staff are supported by PICO. All the patients operated upon in the MSTC are provided free of cost services with everything included.

MSTC since its inception has trained 147 ophthalmologists (some of the ophthalmologists took more than one session). This year MSTC has trained total 9 Ophthalmologists, 8 from Hayatabad Medical Complex and one from Afghanistan. Dr. Sidiqullah is the Master trainer of MSTC. Following is the list doctors trained in MSTC.

- Dr. Yousaf Jamal, HMC
- Dr. Zia Ullah, HMC
- Dr. Amir Muhammad, Afghanistan
- Dr. Afzal Qadir, HMC
- Dr. Asif Khan, HMC
- Dr. Tariq Khan, HMC
- Dr. Irfan Khan, HMC

PICO and Gulbahar Lions Club hold free eye camps in various locations of District Peshawar. Patients with surgical requirements were referred to MSTC for surgical Procedure, detail of operated patients are as under;

Name of Operation	Total
MSICE with IOL	76
Phaco	47
ECCE with IOL	9
Trabeculectomy	3
Combined extraction	2
Pteregium	7
Lens Matter Wash	2
Keratoplasty	5
Other	6
G. Total	157

12 Raja Mumtaz Regional Learning Resource Centre (RLRC)

RLRC is an information resource center served by qualified professional librarians. It is basically a research based library which provides up-to-date information to the faculty members, research scholars and Students (members) of the library. RLRC serves the users with e-resources such as full text e-books, e-journals, thesis, research papers and digital library databases etc. The information resource center provides about 3,000 printed books and 38 National and International latest journals.



Reference material such as dictionaries, encyclopedias, Census Reports, Newsletters and other course related books are also the part of this center. It also has a library database which can be

accessed by users of the library. RLRC has a provision of 05 computers with internet access. Printing, scanning, and photocopying facility is also available for the students and research scholars of the institute. 02 CCTV Cameras are fixed for security measures of the library. RLRC receives 05 daily newspapers (English, Urdu) for keeping up to date the users of the library as well as for clipping purpose

RLRC facilitates its users in the following areas.

- **Reading Area**

More than 60 seating capacity are provided in the reading area of RLRC in which study carrels are available for the students, researchers and other library members.

- **Internet Facility**

Library gives internet access facility to its users as well. They surf online which is very essential in their research activities.

- **Periodicals/Latest Journals**

RLRC has the subscription to the latest national and international journals. And all the leading journals related to ophthalmology and public health are available for its users. We also circulate a quarterly journal free of cost to the students, faculty members and to anyone on request i.e. journal of community eye health.



- **Printing, Scanning and Photocopying Facility**

Library facilitates its users in printing photocopying the library materials i.e. articles, newspaper clipping and other research work they conduct in their studies.

- **Reference Section**

Reference section of the library has the valued books available for the users only inside the library. They are not for issuing purposes.

- **Circulation Desk**

Circulation Desk is at the entrance of library where books are circulated among library users. Coordinator RLRC handles the circulations section of RLRC.



- **Text Books**

RLRC has about 3,000 books available which are also circulated keeping in view its circulation terms and conditions.

- **Online Services**

Librarian provides online resources to its users as well. Members are served with the latest e-journals, e-books, e-research papers, e-full text thesis/dissertation etc.

- **E-Library**

Automation of the books, thesis and journals is also in progress. Establishing an electronic library is also in the priorities of RLRC. We are downloading e-books, e-journals, e-dissertations from different online databases keeping in view the demands of the library users.

- **Library Database**

Automation of books and dissertation is also in progress in an open source library database.

- **Thesis/Dissertations**

Dissertations/thesis of ophthalmology and public health is also available in the library for consultation and reference purpose.



- **Audio/Visual Materials**

Audio Visual section includes CD ROM's, audiotapes, videotapes, slide sets, video cassettes with VCR, DVDs with player, CDs and other non book material available for reference. They cannot be issued to anyone.

- **Pigeon Holes/ Lockers**

RLRC has lockers for its users and to keep the library material safe from chances of theft lockers has been recently made available. The members of library put their personal belongings such as bags, rucksacks, personals books etc before entering the reading area of the library. 40 lockers are made available for the convenience of the users.



13 Murad Eye Bank

PICO has the state of the art eye bank facility, where corneal transplants are made possible for the corneal blind patients. This is remarkable service of PICO, HMC in the Khyber Pakhtunkhwa. Murad Eye Bank is having international collaboration with Sri Lanka Eye Donation Society for providing corneal tissues.

13.1 Services

Murad Eye Bank provides following services to corneal blind patients:

- Provision of corneal tissues.
- Provision of corneal transplant facilities.
- Support of poor patients.
- Providing corneal grafts is the main function of Murad Eye Bank.
- In this regards Murad Eye Bank imports cornea from Sri Lanka Eye Donation Society that are provided to corneal blind patients.



Murad Eye Bank also provides transplant facilities to the corneal blind patients. In this regards Eye OT is used for this transplant, where leading surgeons operate the transplant. All the patients are checked by the Eye Ward Doctors for the success of corneal transplant. Once they are checked up, they are registered by depositing the fee for Keratoplasty. Main factor for the corneal transplant is the availability of Cornea; once it is received then registered patients are called for the transplant and operated. Most of the patients are referred from Eye Department HMC. Keratoplasty charges are US \$ 425 MK Media and US \$ 605 for Optisole cornea that includes cost of cornea, Transportation charges and logistics charges, which is very reasonable as compared to private eye banks that charges One Lakh and above for the corneal transplant. However some Government Organizations such as Tanzeem Lissail-e-wal Mahroom and Pakistan Bait Ul Mall provides full financial support to the poor deserving patients. Lion's Club is also one of the private organizations that support Poor patients of Keratoplasty.

During the year 2013, 18 surgeries were done till July. No more registration of patients was made till November as state bank did not allows corporate accounts for US\$ deposit. List of surgeries and surgeon details is annexed.

13.2 Future Activities

Murad Eye Bank is working on proposal for demand of some equipments and additional requirements of Human Resources. Beside this, Murad Eye Bank is also working on proposals for collaboration with other international eye banks for providing of corneal graft.

14 Awards

PICO has honor that the head of institute was declared for Eye Health Leadership Award by the International Agency for the Prevention of Blindness (IAPB). In a council meeting held on 14th September 2013 at United Kingdom, IAPB in partnership with the L'Occitane Foundation was delighted to celebrate and honor Professor Dr. Nasir Saeed as an Eye Health Leader 2013 in recognition of his vision and potential to lead the eye health sector in the future.



15 Glimpses of Different Events at PICO in year 2013

15.1 World Sight Day 10th October 2013





15.2 World Glaucoma Week 10-16 March 2013 (Competition Seminar)





15.3 World Glaucoma Week 10-16 March 2013 (Eye Camp)



15.4 World Glaucoma Week 10-16 March 2013 (Awareness Seminar at Malakand University)



15.5 PICO 1st Convocation 31st January 2013



15.6 Free Eye Screening Camp under the National Program for Prevention & Control of Blindness, Khyber Pakhtunkhwa



15.7 Sport week 1st April 2013 to 4th April 2013



15.8 Education Expo 2013



15.9 Community Ophthalmologist Workshop



16 Annexure

Annexure-1

Participants of One Week Short Course for Doctors

S. No.	PARTICIPANTS	HOSPITAL
1.	Dr. Khushbakht Peters	Khyber Teaching Hospital, Peshawar
2.	Dr. Usman Attique	Khyber Teaching Hospital, Peshawar
3.	Dr. Awais Rauf	Khyber Teaching Hospital, Peshawar
4.	Dr. Nazli	HMC, Peshawar
5.	Dr. Hina Khan	HMC, Peshawar
6.	Dr. Irfan ullah	HMC, Peshawar
7.	Dr. Hamid-ur-Rehman	HMC, Peshawar
8.	Dr. Syed Imed Zahi	HMC, Peshawar
9.	Dr. Shah –i- Rome Khan	HMC, Peshawar
10.	Dr. Tajbar Khan	Saidu Group of Teaching Hospital, Swat
11.	Dr. Faiz ul Mulk	Eye Specialist, DHQH Chitral
12.	Dr. Jamal Azeem	Eye Specialist, DHQH Batkhela, Malakand
13.	Dr. Awalia Jan	Eye Specialist, DHQ Hospital, Hangu
14.	Dr. Saqlain	Eye Specialist, AHQ Hospital, Parachinar
15.	Dr. Muhammad Usman	Lady Reading Hospital, Peshawar

Annexure-2

List of participant of refresher course for Ophthalmic Technicians

Name	Organization/Institution
Mr. Ghulam Farid	Molvi Ameer Shah Memorial Hospital Hashtnagri Peshawar
Mr.Fazal Rehman	BHU Chowaga Shangla
Mr.Ikhtiar Muhammad	Eye OT LRH Pesahwar
Mr.M. Arshad	Dialyses LRH Peshawar
Mr.Tariq Saeed	Eye OPD LRH Peshawar
Mr.Akhir Jan	Leprosy Clinic LRH Peshawar
Mr.Sartaj Hussain	Radiology Dept LRH Peshawar
Mr.Abdul Qadir	Casualty LRH Peshawar
Mr.Akbar Shah	Emergency Satellite Hospital, Nahaqi peshawar
Mr.Shamsher khan	KTH Peshawar
Mr.Barkat Ali	Leprosy Clinic Pir Baba Buneer
Mr.Muhammad Asif	Civil Hospital Pacha Kali Pir Baba Buneer
Mr.Afreen Khan	Leprosy Clinic Matta Swat
Mr.Jan Mir	Leprosy Clinic Darzinda D.I.Khan
Mr.Hidayatullah	Leprosy Clinic Lower Dir

Annexure- 3

RESULTS of RAAB DR Peshawar**Response rate:**

3084 subjects were examined out of 3185 eligible subject yielding an excellent response rate of 96.8%.

1. Eligible persons, coverage, absentees and refusals

	Total eligible		Examined		Not available		Refused		Not capable	
	n	%	n	%	n	%	n	%	n	%
Males	1,632	100.0%	1,572	96.3%	18	1.1%	40	2.5%	2	0.1%
Females	1,553	100.0%	1,512	97.4%	10	0.6%	30	1.9%	1	0.1%
Total	3,185	100.0%	3,084	96.8%	28	0.9%	70	2.2%	3	0.1%

Prevalence of Blindness and Low vision

The overall prevalence of blindness amongst people age 50 and above was 1.6% (95% CI 1.1 – 2.0)

1.25 (95% CI 0.8 – 1.6) of the total examined subjects had Functional Low vision

3. Sample prevalence of blindness, severe (SVI) and moderate (MVI) visual impairment - bilateral PVA

	Males		Females		Total	
	n	% (95% CI)	n	% (95% CI)	n	% (95% CI)
Blindness	29	1.8 (1.2 - 2.5)	19	1.3 (0.7 - 1.9)	48	1.6 (1.1 - 2.0)
SVI	17	1.1 (0.6 - 1.5)	13	0.9 (0.4 - 1.3)	30	1.0 (0.7 - 1.3)
MVI	89	5.7 (4.4 - 6.9)	138	9.1 (7.4 - 10.9)	227	7.4 (6.2 - 8.5)
Functional Low Vision	18	1.2 (0.6 - 1.7)	19	1.3 (0.8 - 1.8)	37	1.2 (0.8 - 1.6)

Causes of Blindness and Visual Impairment

Untreated cataract remains the main cause of Blindness causing 45.8% of all blindness, followed by corneal opacity 14.6%, aphakia un corrected 8.3%, surgical complication 6.3% and Age related Macular degeneration 6.3%.

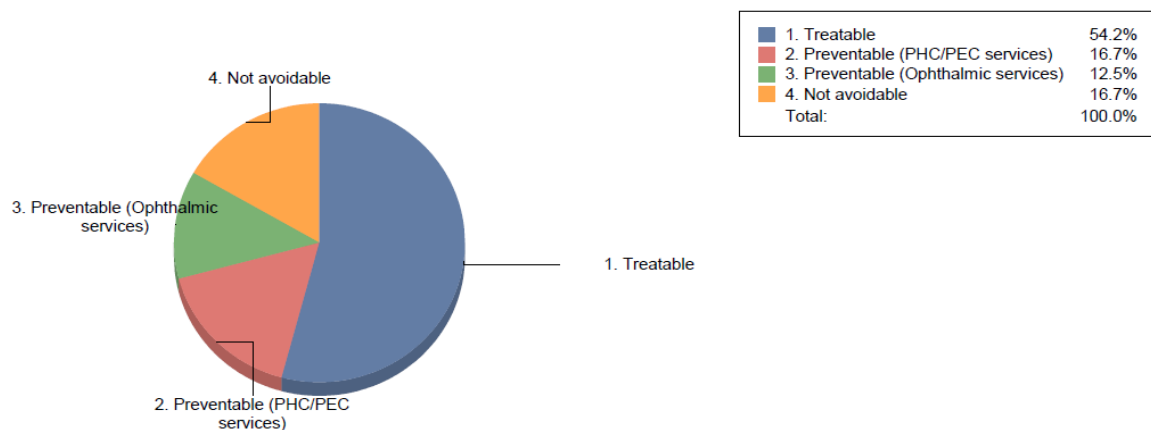
83.3% of all blindness, 73.3% of Visual Impairment and 94.7% is either treatable or preventable.

6. Principal cause of blindness, severe (SVI) and moderate (MVI) visual impairment in persons (PVA)

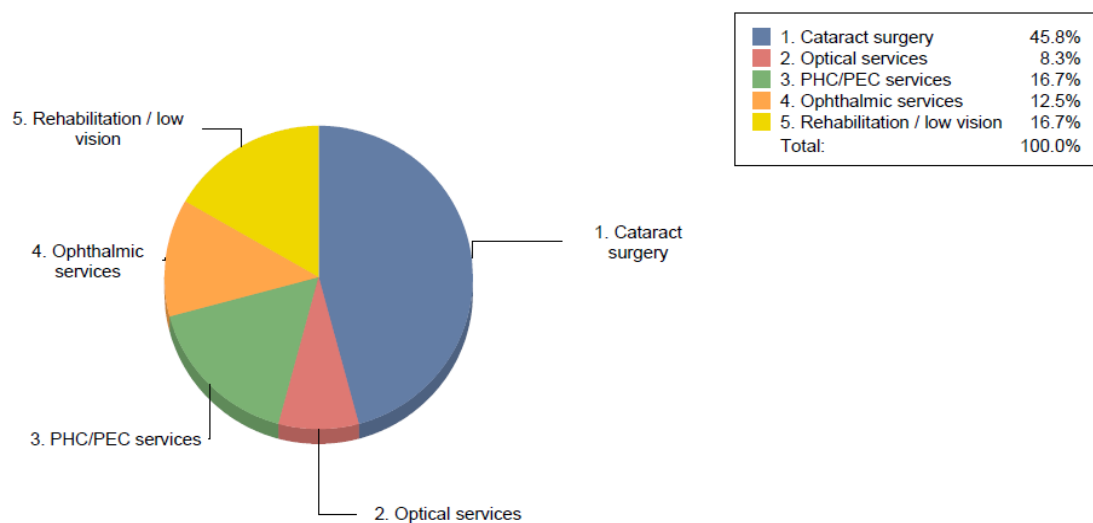
	Blindness		SVI		MVI	
	n	%	n	%	n	%
1. Refractive error	0	0.0%	4	13.3%	161	70.9%
2. Aphakia uncorrected	4	8.3%	0	0.0%	1	0.4%
3. Cataract untreated	22	45.8%	18	60.0%	53	23.3%
4. Cataract surgical complications	3	6.3%	1	3.3%	2	0.9%
5. Trachomatous corneal opacity	0	0.0%	0	0.0%	0	0.0%
6. Non Trachomatous corneal opacity	7	14.6%	0	0.0%	1	0.4%
7. Phthisis	1	2.1%	0	0.0%	0	0.0%
8. Onchocerciasis	0	0.0%	0	0.0%	0	0.0%
9. Glaucoma	1	2.1%	1	3.3%	1	0.4%
10. Diabetic retinopathy	2	4.2%	2	6.7%	3	1.3%
11. ARMD	3	6.3%	3	10.0%	2	0.9%
12. Other posterior segment disease	3	6.3%	1	3.3%	3	1.3%
13. All other globe/CNS abnormalities	2	4.2%	0	0.0%	0	0.0%

A. Treatable (1,2,3)	26	54.2%	22	73.3%	215	94.7%
B. Preventable (PHC/PEC services) (5,6,7,8)	8	16.7%	0	0.0%	1	0.4%
C. Preventable (Ophthalmic services) (4,9,10)	6	12.5%	4	13.3%	6	2.6%
D. Avoidable (A+B+C)	40	83.3%	26	86.7%	222	97.8%
E. Posterior segment causes (8,9,10,11,12)	9	18.8%	7	23.3%	9	4.0%

8. Graph: main category of blindness in persons



9. Graph: action required to reduce blindness



11.8.4 Cataract Surgical Coverage

Cataract surgical coverage for VA<3/60 was 93.8%, VA <6/60 was 90.6% and for VA <6/18 was 77.8%

10. Cataract surgical coverage (persons) - percentage

	Males	Females	Total
VA < 3/60	93,8	93,8	93,8
VA < 6/60	90,4	90,7	90,6
VA < 6/18	79,1	76,6	77,8

11.8.5 Barriers to the uptake of cataract surgery

Need not felt and denial form treatment were the main barriers to the uptake of cataract surgeries.

11. Barriers to cataract surgery - bilateral VA<6/60 due to cataract

	Males		Females		Total	
	n	%	n	%	n	%
Need not felt	6	37.5%	5	31.3%	11	34.4%
Fear	2	12.5%	2	12.5%	4	12.5%
Cost	6	37.5%	7	43.8%	13	40.7%
Treatment denied by provider	0	0.0%	0	0.0%	0	0.0%
Unaware treatment is possible	1	6.3%	1	6.3%	2	6.3%
Cannot access treatment	0	0.0%	0	0.0%	0	0.0%
Local reason	1	6.3%	1	6.3%	2	6.3%
Total	16	100.0%	16	100.0%	32	100.0%

Outcomes of cataract Surgeries

13.3% of all aphkic eyes had visual acuity <6/60, while 14% could see 6/60.

Surgeries done with IOL implants had significantly good outcomes as compared to those without IOLs.

Causes of poor outcome of cataract surgery included selection of subjects 50% followed by poor biometry technique 33.5% and surgical complications 10.9%.

12. Outcome after cataract surgery with available correction (eyes)

	Males		Females		Total	
	n	%	n	%	n	%
Good: can see 6/18	182	75.5%	146	67.9%	328	71.9%
Borderline: can see 6/60	29	12.0%	38	17.6%	67	14.6%
Poor: cannot see 6/60	30	12.4%	31	14.4%	61	13.3%
Total	241	100.0%	215	100.0%	456	100.0%

13. Outcome by type of cataract surgery with available correction (eyes)

	Non-IOL		IOL	
	n	%	n	%
Good: can see 6/18	10	34.4%	318	74.4%
Borderline: can see 6/60	6	20.6%	61	14.2%
Poor: cannot see 6/60	13	44.8%	48	11.2%
Total	29	100.0%	427	100.0%

14. Cause of PVA<6/18 (borderline and poor outcome) after cataract surgery

	Borderline: can see 6/60		Poor: cannot see 6/60		Total	
	n	%	n	%	n	%
Selection	15	22.3%	31	50.8%	46	35.9%
Surgery	5	7.4%	9	14.7%	14	10.9%
Spectacles	33	49.2%	10	16.3%	43	33.5%
Sequelae	14	20.9%	11	18.0%	25	19.5%
Total	67	100.0%	61	100.0%	128	100.0%

Prevalence Diabetes Mellitus

Prevalence of Known and unknown diabetes was 18.6% (95% CI 16.8 – 20.5%). Females had higher prevalence 23.5% as compared to males 14.2%

22% of all diabetics were unaware of their condition.

Of all diabetics only 30.7% had blood glucose levels below 200mg%

1. Prevalence of known and newly diagnosed diabetes by age group and by gender

	Males		Females		Total	
	n	p (95% CI)	n	p (95% CI)	n	p (95% CI)
50 - 59	111	13.8% (11.1-16.5)	215	23.0% (19.8-26.2)	326	18.7% (16.6-20.9)
60 - 69	80	16.8% (12.8-20.9)	102	25.1% (20.9-29.4)	182	20.7% (17.4-24.0)
70 - 79	28	13.3% (8.7-17.9)	27	21.3% (14.7-27.8)	55	16.3% (12.6-20.0)
80+	5	6.0% (0.7-11.2)	7	15.9% (5.3-26.5)	12	9.4% (4.5-14.3)
All ages	224	14.2% (11.9-16.6)	351	23.2% (20.6-25.8)	575	18.6% (16.8-20.5)

2. Diabetics and random blood sugar level

		Males		Females		Total	
		n	%	n	%	n	%
All diabetics	Known diabetes	169	75.4%	280	79.8%	449	78.1%
	Newly diagnosed diabetes	55	24.6%	71	20.2%	126	21.9%
	Total	224	100.0%	351	100.0%	575	100.0%
Known diabetes	Bloodsugar <200 mg/dl	49	29.0%	89	31.8%	138	30.7%
	Bloodsugar >200 mg/dl	120	71.0%	191	68.2%	311	69.3%
	Total	169	100.0%	280	100.0%	449	100.0%

Frequency of eye examination amongst diabetics

83% of known diabetic had never had their eye examination for diabetic complications

4. Last eye examination for DR among known diabetics

		Males		Females		Total	
		n	%	n	%	n	%
Never had eye examination for DR		142	84.0%	231	82.5%	373	83.1%
0-12 months ago		16	9.5%	32	11.4%	48	10.7%
13-24 months ago		4	2.4%	13	4.6%	17	3.8%
>24 months ago		7	4.1%	4	1.4%	11	2.4%
		169	100.0%	280	100.0%	449	100.0%

Prevalence of Diabetic Retinopathy

50% of all diabetic had any grade of retinopathy which constitutes of 95 of the total opulation.

5. Prevalence of DR in diabetics and in entire sample

	N	Among diabetics p (95% CI)	Full sample p (95% CI)
Retinopathy grade			
No retinopathy (R0)	290	50.4% (45.8-55.1)	9.4% (8.0-10.8)
Background DR - mild (R1)	68	11.8% (8.9-14.7)	2.2% (1.6-2.8)
Background DR - observable (R2)	39	6.8% (4.9-8.6)	1.3% (0.9-1.6)
Background DR - referable (R3)	22	3.8% (1.9-5.8)	0.7% (0.3-1.1)
Proliferative DR (R4)	9	1.6% (0.6-2.5)	0.3% (0.1-0.5)
Ungradable DR (R6)	0	0.0% (0.0-0.0)	0.0% (0.0-0.0)
Any retinopathy	138	24.0% (19.9-28.1)	4.5% (3.6-5.4)
Maculopathy grade			
No maculopathy (M0)	369	64.2% (59.6-68.8)	12.0% (10.3-13.6)
Maculopathy - observable (M1)	24	4.2% (2.4-5.9)	0.8% (0.4-1.1)
Maculopathy - referable (M2)	35	6.1% (4.0-8.2)	1.1% (0.7-1.5)
Any maculopathy	59	10.3% (7.5-13.0)	1.9% (1.4-2.5)
Any retinopathy and/or maculopathy	141	24.5% (20.4-28.6)	4.6% (3.6-5.5)
Sight threatening DR (R4 and/or M2)	36	6.3% (4.2-8.4)	1.2% (0.8-1.6)
Any laser scars	15	2.6% (1.4-3.8)	0.5% (0.3-0.7)

Annexure-4

List of PICO Faculty

Department of Community Eye Health & Public Health	
Dr. Sadiqullah MBBS, MCPS Ophth., MSc. (CEH), FCPS Ophth	Assistant Professor, Community Eye Health.
Dr. Samina Naz MBBS, MPH (CEH)	Assistant Professor, Public Health.

Department of Epidemiology and Biostatistics	
Dr. Muhammad Zahid Jadoon MBBS, Msc. Epidemiology (London), DLSHTM (London)	Assistant Professor

Department of Health Promotion and Sociology	
Mr. Muhammad Iqbal Shah MA Social Anthropology, M.Phil Sociology	Sociologist
Ms. Samina Anwaar MA Social Anthropology	Research Officer

Department of Community Medicine, KGMC as attached Department for PICO	
Dr. Sabina Aziz MBBS, FCPS	Associate Professor, Head of Department Community Medicine.
Dr. Raheela Ameen MBBS, FCPS	Assistant Professor
Dr. Ikramullah MBBS, MPH, M. Phil	Assistant Professor
Dr. Aliya Manzoor MBBS, MPH	Assistant Professor
Dr. Shakeela Asif MBBS, MPH	Assistant Professor
Dr. Tauseef Amman BDS, MPH	Assistant Professor

Department of Optometry and Orthoptics	
Mr. Siraj Khan Safi Bachelor of Vision Sciences	Lecturer
Mr. Sami uddin Bachelor of Vision Sciences	Lecturer
Ms. Shazia Noreen Bachelor of Vision Sciences	Lecturer
Mr. Azmat Jahan Bachelor of Vision Sciences	Lecturer
Mr. Muffariq Shah Bachelor of Vision Sciences	Optometrist
Mr. Muhammad Kashif Bachelor of Vision Sciences	Optometrist
Ms. Nasira Begum BSc Nursing	Nursing Tutor

Department of Clinical Ophthalmology, HMC	
Dr. Nasir Saeed MBBS, DO, FCPS, FICO	Professor & Head of Department
Dr. Tariq Farooq Babar MBBS, FCPS	Professor & In charge Eye-B Unit
Dr. Mir Zaman Marwat MBBS, MCPS, FCPS	Associate Professor
Dr. Sofia Iqbal MBBS, MRC Opth, FRCS	Associate Professor
Dr. Sanaullah Jan MBBS, FCPS, FRCS	Assistant Professor
Dr. Mohammad Naeem MBBS, FCPS	Assistant Professor
Dr. Mohammad Tariq MBBS, MCPS, FCPS, FCPS(VR)	Senior Registrar
Dr. Umar khan MBBS,FCPS	Senior Registrar
Dr. Mushtaq Ahmad MBBS, FCPS	Senior Registrar
Dr. Naz Ullah MBBS, FCPS	Senior Registrar

Associated Department	
Mr. Pervez Akhtar MS Management Sciences	Program Officer
Ms. Asma Yaqoob MA English	Lecturer English
Mr. Muhammad Imran MSc. Computer Science, MCSE, PGD GIS	IT Manager / Network Admin
Mr. Zia Ullah BIT (Hons), MCP, PGD GIS	IT Supervisor

VISITING NATIONAL FACULTY	
Prof. Dr. Mohammad Daud Khan	Ex Vice Chancellor (KMU)
Prof. Dr. Shad Mohammad	Director Academics, Admissions & Quality Assurance, KMU, Peshawar.
Prof. Dr. Zia ul Islam	Principal, Bacha Khan Medical College, Mardan.
Dr. Tasleem Akhtar	Consultant Research & Development, KMU.
Prof. Dr. Saleh Memon	Al-Ibrahim Hospital, Karachi. ISRA University.
Prof. Dr. Asad Aslam	Pro Chancellor, King Edward Medical University Lahore, National Coordinator for Prevention & Control of Blindness Program.
Prof. Dr. Mohammad Aman Khan	Head of Department C-MED, Peshawar Medical College, Peshawar.
Prof. Dr. Abid Nawaz	Department of Ophthalmology, Kabir Medical College, Peshawar.
Prof. Dr. Zia Mohammad	Head of Department Ophthalmology, Bacha Khan Medical College, Mardan.
Prof. Dr. Abid Hussain	Head of Department Pharmacology, Principal, KGMC, Peshawar.
Prof. Dr. Maqbool Elahi	Head of Department of Anatomy, KGMC, Peshawar.
Prof. Dr. Musarat Niazi	Head of Department Pathology KGMC, Peshawar.
Dr. Amin ul Haq	Associate Professor Biochemistry KGMC, Peshawar.
Dr. Amjad Qazi	Head of Department Physiology KGMC, Peshawar.

Dr. Ayesha S Abdullah	Deputy Dean, Peshawar Medical College.
Dr. Haroon Awan	CEO, Avicena Consultancy, Islamabad.
Dr. Mohammad Babar Qureshi	Senior Advisor CBM, Co Chair IAPB.
Dr. Rubina Gilani	Country Director, FHF, Peshawar.
Pro. Dr. Zahoor Ullah	Department of Medical Education, Peshawar Medical College.
Mr. Niazullah	Consultant, Avicena Consultancy, Islamabad.
Mr. Hassan Minto	Country Manager, Brien Holden Institute, Islamabad.
Mr. Ali Minto	Optometrist, Islamabad.
Mr. Sohail Ayaz	CEO, CHEF International, Islamabad.