

Report On Optometry Internship Program



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Message Of The Chief Medical Officer

Ever Since the start of my career back in 1982, I have felt the pain for people who couldn't afford decent healthcare for lack of resources.

Working for more than two decades at such (out-of-reach for-the-underprivileged) setups, I finally made peace with myself in 2004. I decided to dedicate the remaining years of my career to the less fortunate.

Twenty-odd years down the line, I am happy to have taken the right decision that I consider sacred. No amount of fee can provide such professional satisfaction and spiritual delight as much as I get in serving the deprived.

Absolutely nothing was possible without the help and support of like-minded friends and supporters all along the journey. They helped and encouraged me with their material, financial and moral assistance. They were always standing behind me for support in the manners I expected and exceeded my expectations. I cannot name them all or even remember the many names in this regard, but sincerely pray to the Almighty, who knows them all very well, to reward them generously much more than they might ever wish.

In 2021, we started a structured teaching and training program at Khairun'nisa Eye Hospital, Karachi. We have trained four interns throughout the year (2021) and put all of our efforts to make them effective primary eye care workers. Initially, starting from the skill enhancement of Optometry graduates, we plan to take it forward to establishing a university, where I aim to fill the existing gaps/deficiencies in the teaching and training structure of Pakistan.

Let us join hands and work together to reduce preventable blindness.

With Best Wishes,

Dr. Muhammad Mazhar Awan

CEO - Vision Trust

An Introduction to The Program

The provision of quality eye care to meet the needs of vulnerable communities is one of the prime concerns in our country. Especially for those who cannot afford the high-quality, high priced services of private practitioners.

An essential prerequisite for providing quality eye care is the development of adequate human resources. An analysis of current practices reveal problems related to the number, quality of training, distribution and utilisation of various categories of eye care personnel.

Human resources are required at all levels (primary, secondary, and tertiary levels) of eye care to ensure comprehensive services. It is by an 'eye care team' consisting of ophthalmologists, Ophthalmic Subspecialties, Optometrists, Ophthalmic Technologists, Orthoptists, Ophthalmic Technicians, and Nurses.

Following a recent situation analysis in Sindh province leading up to the development of the Sindh Integrated people-centered Eye Care Plan 2020 - 2025, the updated statistics on human resources for eye health are as follows: Ophthalmologists – 602, Ophthalmic subspecialists – 33, Optometrists – 206, Ophthalmic technologists –10, Orthoptists – 6, Ophthalmic technicians – 381. These statistics show that there is a lack of required human resources, especially in rural communities, highlighting the need for training.

There are numerous National and International Non-Governmental Organizations (INGOs) working in various sectors to improve the status of eye health care in Pakistan. Currently, in Sindh province, several institutions are producing eye health professionals which has surely increased the total number of trained personnel but there is no such institute providing refresher skill-based structured training to qualified optometrists.

In the light of the above-mentioned facts, Khairun'nisa Institute of Visual Sciences initiative and launched a 'One Year Post Graduate Training Program' in 2021 to enhance the skill of qualified optometrists (BS in Optometry or equivalent)

Purpose of The Program

The main purpose of the program is to ensure comprehensive eye care services by providing structured training opportunities to qualified optometrists.

The program will help trainees to refresh their theoretical knowledge and enhance their skills.

Objectives of The Program

It is designed in the light of **6 Building blocks of WHO Guidelines** which include Strong Advocacy, Essential Resources, User-friendly Physical Infrastructure Essential Technology, Essential HR, Management, Accreditation, and National & International Collaboration.

General Objectives

The program will:

- Enhance the clinical expertise/skills and confidence of the qualified optometrists so that they can work independently as a primary eye care workforce and serve the people in need.
- Help build up professional pathing and provide working exposure to qualified professionals.
- Contribute towards improvement in the quality of service by decreasing the workload on consultants/ Tertiary Care Centers
- Help to benefit the community through doorstep provision of much-needed primary/ family eye care in rural settings.
- Enhance the efficiency and outlook of eye care in the country.
- Improve the quality of life of the Visually Impaired.
- Augment the existing urban public and private eye care facilities by helping in the provision of trained manpower to enhance their capacity.

Academic Objectives

Academically, the program has the following objectives:

- Improve the skill sets of optometrists by providing diversified exposure to both clinical and community eye health.
- Expose the interns to a wide range of patients, enhancing their clinical practices.
- Provide more engaging and hands-on patient interactive opportunities.
- Provide all-inclusive optometry training involving all ophthalmic specialities.
- Build capacity in Patient evaluation & Counseling on Visual/Ocular hygiene, nutritional, and environmental modifications.
- Provide adequate knowledge and skills to fit, assess, prescribe, and dispense Contact lenses for refractive correction.
- Enhance IT and personal grooming skills as professionals.
- Train optometrists on the Inclusive Eye Health Module to promote and adapt disability-inclusive practices.

Course Structure

The program content for batch 2021 was structured in the form of modules. There were mainly 5 modules included:

Module 1: General Skills

Module 2: Basics Sciences

Module 3: Supervised Clinical Skills

Module 4: Independent Field Work

Module 5: Inclusive Eye Health Module.

The details of the content covered in each module are attached as **Annexure 1**

Program Title And Duration

Post-Optometry Training Certificate: 12 months - The year 2021

Eligibility Criteria

4 years BS in Clinical Ophthalmic Technology /BS Vision Sciences or Equivalent education from an HEC recognized optometry school/college/institute.

Selection Criteria

Based on Entrance Test, Interview, and academic performance.

Admission Process

The admission form was made accessible online through our website / social site / Facebook page (Attached as Annexure 2). The advertisement for the program was also made available on the official website and social sites. The Pamphlet is attached as Annexure 3.

Timing and Mode Of Study

Monday to Saturday from 9 to 5, 1 - 2 hours Lecture daily as a refresher of theoretical knowledge. 5 - 6 hours of practical training in various departments of the Khairunnisa Eye Hospital.

Number Of Interns

Enrolled 4 interns in 2021 (2 female, 2 male), 3 have completed the course successfully within the reporting period. One female student could not complete in time due to personal issues.

However, the program has been designed in a flexible manner to ensure students' practical learning at its best. Therefore, she has re-joined in the last quarter of 2021 and will be completing her course in the mid of the year 2022.

Stipend

25,000 PKR per month was given to each intern to ease the financial pressures on them.

Information Technology

Computer tablets were provided to each intern to encourage full usage of IT, transition into a paperless environment and easy access to online learning. A Learning Management Software (Talent LMS) was deployed to manage the program.

Training Methodology

Training methodology included Lectures, workshops, skill-based training, clinical exposure, group work, PowerPoint presentations, case presentation to the supervisor, tutorials/ Awareness Videos, assignments, involvement in Community eye care activities, Field exposure/Clinical rotations, and participation in advocacy events.

Program Components/Features

The optometry internship program was the first-ever effort of its kind to fill the gap and enhance the skills of optometrists. The program's main features are;

Pre & Post Appraisal - Self Assessment & Grading of Their Skills By Interns.

In the planning phase of the program, we developed an online skill grading tool in which we listed down all the relevant skills an optometrist should have. On the orientation day, we got it filled by each intern. They scored their clinical skill level out of 10 and shared their future needs in every area. The purpose of this tool was to have an idea of which skills interns were proficient in and remaining to need more practice to make them trained.

Activity Logbook - To Track Daily Progress And Supervise Clinical Learning

An activity logbook was designed to ensure practical exposure of the interns and track their performance regularly within the hospital premises. It was designed in such a manner that interns could easily record the diagnosis of each patient and validate it with the supervisor/ doctor's findings. Students were asked to record each patient's work-up in the given template daily, whom they examined independently, and those too who were observed under the supervision of the consultant. Every case, which was independently done by the interns, was validated by the supervisor which boosted their confidence and provided the opportunity for hands-on practice.

The whole template was on a "live" document and was easily accessible to the management team anytime for evaluating the progress throughout the year. It also gave us a comprehensive picture of their refraction and diagnostic abilities/skills.

Refresher Sessions By Highly Qualified And Trained Faculty

During the program, we planned both internal and external faculty sessions at Khairunnisa Eye Hospital. There were a total of 05 visiting faculty members. The topics covered by visiting faculty included: cataract visual outcome, community eye health, refraction techniques, rehabilitation of persons with visual disabilities, low vision, and research methodology. The details of the faculty members are as follows:

Faculty Members	
Internal	External
Dr. M Mazhar Awan	Dr. Fatima, Consultant SIUT
Dr. Sana Motyar, FCPS	Ms. Qurat ul Ain, SIUT
Dr. Fatima Sheikh, FCPS	Mr. Ammar, Assistant professor Dow Institute of Medical Technology
Ms. Salma Saleem	Mr. Danial Saqib, BINAIE Welfare Association
Ms. Zeenat Aziz	Mr. Faisal Fahim, Research Associate & Statistician Bahria University.
Ms. Fatima Zehra	

Skill-Based Structured Curriculum

The optometry internship program curriculum was designed to fill the training gaps in optometry and provide skill-based structured learning opportunities.

During the reporting period, the Continuous Improvement Assessment Plan was developed to evaluate the learning progress on a regular basis in a live environment.

In the assessment plan, all essential skills required by a competent optometrist were listed down. The students were guided to grade each of the skills as per their expertise (independent handling). The clinical supervisors reviewed the grading and conducted their practical assessment and provided feedback in terms of rating. Based on the self-assessment by the interns, and practical assessment by the supervisor, the training was planned accordingly.

The process of grading skills was continuous and kept updated throughout the program period. Apart from this, faculty members also took assessments based on the topic they covered. The methodology included presentations, quizzes, and practical exercises.

Involvement in awareness and educational activities

The interns were engaged in a wide range of awareness and educational activities including:

Glaucoma Awareness Month

Fazaia Ruth Pfau college invited Khairunnisa Eye Hospital to attend “Glaucoma awareness month” event organized at Fazaia Ruth Pfau Medical College. We nominated the optometry interns to participate in the event and increase their capacity. The interns found it very interesting and informative.

Low Vision Workshop

A one-day Low Vision Workshop was organized at Khairunnisa Eye Hospital for optometry interns. The workshop covered topics like the assessment of low vision, exposure to Low Vision Devices, prescription of LVDs to the patients and its assessment, and simulation exercises. The purpose of this training workshop was to give them exposure to basic rehabilitation services.

Clinical Rotations/ Exposure visits

Clinical rotations for the interns were planned to provide them an opportunity of diversified learning. It did not only help them in clinical aspects but also boost their attitudinal, environmental, and institutional learning. The interns were sent to the reputed hospitals in Karachi including Patel Hospital, Al Ibrahim Eye Hospital, and LRBT Eye hospital, Karachi. The management of Khairunnisa Eye Hospital is thankful for the management of the mentioned institutes/hospitals.

Participation in WSD Poster Competition:

The interns of Khairunnisa Eye Hospital actively participated in the World Sight Day 2021 event organized by Al Baseer Eye Hospital, Karachi on Friday, 15th October, at Marriot Hotel Karachi. A poster competition on WSD 2021 was organized in the event in which interns took part and prepared a comprehensive poster on "Workplace Safety " and won 2nd prize. The purpose was to raise awareness among the public about eye care.

Research and Statistics Orientation

The program had organized research orientation sessions for the interns so that they could know key elements to conduct the research in eye health. Mr. Faisal Faheem, a Statistician working at Bahria university joined us as a visiting faculty to conduct training in research and SPSS software. Other than interns, consultant ophthalmologists also attended the research training session conducted under the optometry internship program. The interns found this training very useful.

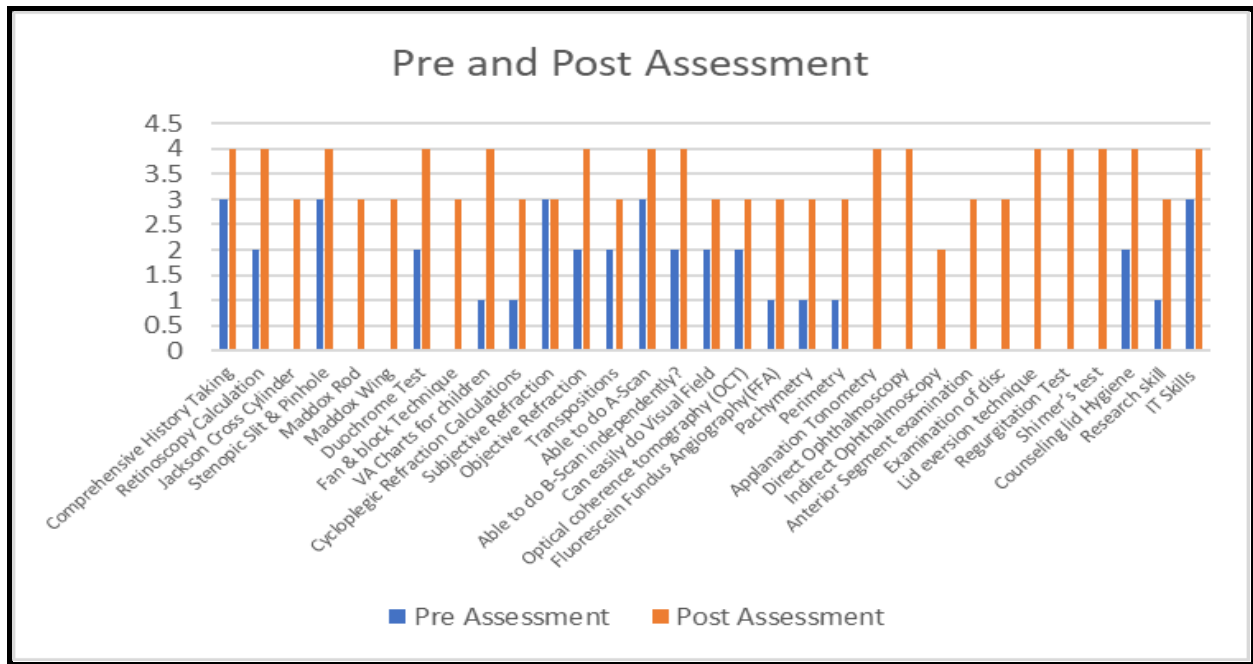
Engagement in the community

The optometry interns also participated in the outreach activities organized in under-privileged areas of interior Sindh. A total of 200 patients was examined by the interns and approximately 45 patients were diagnosed with cataracts and referred to Khairun'nisa Eye hospital for surgery. Moreover, 70 patients were prescribed near glasses.

Overall Impact Of The Training

The overall pre and post-evaluation of the skills showed an impressive improvement in the interns' learning and practice. The graph can clearly show the pre and post performance/achievement of one of the interns during the program.

Rating scale: 4=Excellent, 3=Very Good, 2=Okay, 1=Needs Improvement, 0=Poor



Assessment & Evaluation

During the internship period, there were 12 continuous assessments conducted. Each continuous assessment contributed to their final evaluation.

The final result consisted of aggregate from quizzes, continuous practical assessments, clinical rotations, practical assessment by the external and internal faculty, research, soft and behavioral skills.

Training Outcomes

By the end of the program, the trainees were able to:

1. Work as independent optometrists in any eyecare setup or hospital.
2. Run optometry clinics independently and serve as a primary eye care workforce in both urban and rural areas.
3. Be a public educator on eye health & hygiene and related nutritional and environmental counseling.

Annexure 1: Course Content - Module Wise

Module 1 – General Skills	Module 2 – Basic Sciences
Grooming	Anatomy
Work ethics and Professionalism	Physiology
Communication Skills	Electronic Optics
Workplace Harassment	Physiological optics
Conflict Management Skills	Ametropia-presbyopia
Information technology	Ametropia-Myopia
Basics of Internet	Ametropia-Hypermotropia
Keyboard and Urdu Language	Ametropia-Astigmatism
Cloud Computing and Google drive.	Review of Ocular Pharmacology
Word Processing, Spreadsheet, Presentation	Community Ophthalmology
Electronic Medical Record	Research Methodology and Statistics
Module 3 – Supervised Clinical Skills	
Visual Assessment & Refraction Techniques	Orthoptic, Amblyopia & Low Vision
History Taking	Assessment of Squint, Cover Test, Uncover Test, Alternate cover Test, Prism Cover test
Torch Light Examination	Extraocular Motility Exam
Lids, Lashes, Lacrimal Apparatus, Lymph node	Pediatric Orthoptic Evaluation
Visual Assessments /acuity	Clinical Test for Fusion & Stereopsis
Subjective Refraction Techniques	Random Dot Preschool Stereoacuity Test
Objective Refraction Techniques	Anomalies of Accommodation and its Management.

Cycloplegic Refraction	Amblyopia, its types, and Management
Retinoscopy and its Transposition	Binocular Single Vision
Auto refractometer and its Interpretation.	
Slit Lamp Examination <ul style="list-style-type: none"> ● Adnexa and Anterior Segment ● Glaucoma and IOP ● Iris and Pupil ● Normal Lens and Abnormalities ● Anterior 1/3rd of Vitreous 	Introduction to Low Vision <ul style="list-style-type: none"> ● Clinical Assessment of Low Vision ● Optical & Non-Optical Devices. ● Rehabilitation and Counseling of Low Vision patients.
Visual pathway & Pupil Examination; APD, RAPD	Low vision in children and its Management
Module 4 Independent Fieldwork	Module 5 Inclusive Eye Health Module Orientation
Clinical Rotations at different public and private hospitals in Karachi.	Basic, Intermediate & Advanced
Completion of Activity Logbook	

Activity Logbook

The activity logbook was designed to evaluate the clinical skills of each intern. It possessed the record of all the cases observed and independently seen by the interns. It was regularly tracked and monitored by the project coordinator.

Learning Materials

<https://brienholdenfoundation.org/international-program/learning-resources/global-optometry-resources/>

Photo Gallery



Glaucoma Awareness month





Low Vision Workshop



WSD poster competition participation



Quizzes, Presentations & Continuous Assessment



Session on Rehabilitation Services/Low Vision



Engagement in the Community, Sana Medical centre_Village Sajjan K ghao



External Faculty Visit and Assessments





Final Examination