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The Public Eye Health (PEH) Curriculum for Ophthalmic Residents – For Standard PGY3 Level

Preamble: The study of Public Eye Health is to address the main causes of blindness in the general population. The purpose is to extend the application of clinical ophthalmology to the eye health needs of the community.

The aim of this module is to equip the residents with the skills and knowledge to carry out epidemiologically and regionally specific research, programme planning and implementation of appropriate eye care services including concepts of equity and sustainability.

The topics with an * have been highlighted so that they may be expanded as required in regions/countries/communities where the conditions are endemic.

Aim: Understand the basic principles of PEH and its application to assess and control blinding eye diseases.

General educational objectives:

1. To describe the magnitude, causes and control (preventive and curative) strategies for major blinding eye diseases in the world.
2. To understand basic concepts of epidemiology and the scope of epidemiological methods in relation to Public Eye Health
3. To critically evaluate the application of the principles of Public Eye Health in local programmes to eliminate cataract blindness.
4. To describe and assess the application of the principles of Public Eye Health in local programmes to control Childhood blindness.
5. To describe the application of the principles of Public Eye Health to control blindness in local programmes including tropical infections and corneal diseases.
6. To apply the principles of Public Eye Health to the control of non communicable eye diseases such as: refractive errors, diabetic retinopathy, glaucoma and ARMD.
7. To implement the principles of Public Eye Health for the provision of services for people with Low Vision as well as rehabilitation for incurable blindness.
8. To describe the purpose of Vision 2020: the right to sight and its application in local programmes.

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Cognitive skills:

- To interpret the basic principles of epidemiology – measure of diseases distribution and frequency of occurrence.
- To identify the range of research methods, sampling strategies and its applicability – quantitative and qualitative.
- To critically evaluate research papers and develop an evidence based practice.
- To interpret the basic statistics and the calculation of summary measures (mean, median, mode, confidence interval and p-value).
- To recognize the magnitude of cataract blindness (global and local) and understand the indicators of output, outcome and outlay for the control of cataract blindness in the local programmes.
- To identify and appraise the magnitude, distribution and causes of childhood blindness (globally and locally) and the intervention strategies for Vitamin A Deficiency*, Retinopathy of Prematurity, ophthalmia neonatorum, paediatric cataract and congenital diseases.
- To recognize the magnitude, distribution and causes blindness due to infectious eye diseases (trachoma, onchocerciasis, leprosy, HIV, suppurative keratitis) and the control and treatment strategies. *
- To interpret and apply the SAFE strategy and Community directed ivermectin distribution programmes in trachoma and onchocerciasis endemic regions. *
- To recognise the magnitude, distribution and causes and risk factors of blindness due to diabetic retinopathy, glaucoma, ARMD.
- To understand the principles and applicability of screening and control strategies for Diabetic retinopathy.
- To distinguish the magnitude, distribution and causes of blindness and visual impairment due to refractive errors (myopia, hyperopia, presbyopia, and astigmatism) and understand the models of screening and service delivery.
- To investigate the magnitude, distribution and causes of low vision and the provision of appropriate services and rehabilitation.
- To interpret the VISION 2020: the right to sight initiative and implementation strategy – global, regional and at district level.

* These topics can be regionally expanded as needed by course directors

Technical skills:

- Calculate mean, mode, median, prevalence, incidence, odds ratio, confidence interval, p- value.
- Design and use simple questionnaire to collect data.
- Calculate the cataract surgical rate and coverage of cataract services for local intervention programmes.
- Implement basic cataract surgical outcome monitoring protocols, interpret and manage the results within the clinical and programme set up.
- Understand and implement refractive error screening programmes, e.g., through school eye health programmes.
- Develop and utilize clear referral protocols for patients requiring low vision and rehabilitation services.
- Describe and apply principles of diabetic retinopathy screening to relevant programmes.
- Implement the multifaceted SAFE intervention in Trachoma endemic regions. *
- Carry out advocacy and discussions for eye care services and VISION 2020 amongst local leaders and community.
- Identify local demographic details and main causes of visual impairment and blindness.
- Recognize and describe the local /regional blindness programmes and its functioning strategy.

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