MODULE SPECIFICATION

Academic Year (student cohort covered by specification)	2024-25
Module Code	3403
Module Title	Childhood Eye Disease and Ocular Infections
Module Organiser(s)	Aeesha Malik, Jeremy Hoffman, Astrid Leck & Richard Bowman
Faculty	Infectious & Tropical Diseases
FHEQ Level	Level 7
Credit Value	**CATS:** 15 **ECTS:** 7.5
HECoS Code	100261:100265 (1:1)
Term of Delivery	Term 2
Mode of Delivery	For 2024-25 this module will be delivered by predominantly face-to-face teaching modes. Where specific teaching methods (lectures, seminars, discussion groups) are noted in this module specification these will be delivered by predominantly face-to-face sessions. There will be a combination of live and interactive activities (synchronous learning) as well as recorded or self-directed study (asynchronous learning).
Mode of Study	Full-time
Language of Study	English
Pre-Requisites	None
Accreditation by Professional Statutory and Regulatory Body	None
Module Cap (Indicative number of students)	25 (numbers may be capped due to limitations in facilities or staffing)
Target Audience	This module is compulsory for MSc Public Health for Eye Care. It is suitable for Ophthalmologists; Optometrists; Researchers; Eye Care Programme Managers and other senior health workers involved in planning or delivery of eye care services.

Module Description	The module covers blinding eye conditions of children and ocular infections, highlighting the public health strategies for control.
Duration	5 weeks; 2.5 days per week
Timetabling slot	C1
Last Revised (e.g. year changes approved)	July 2022

Programme(s) This module is linked to the following programme(s)	Status
MSc Public Health for Eye Care	Compulsory

Module Aim and Intended Learning Outcomes

Overall aim of the module
The overall module aim is to: • Equip students with knowledge and skills so that they can improve the control of blinding eye diseases in children and of ocular infections in their work setting.

Module Intended Learning Outcomes
Upon successful completion of the module a student will be able to: 1. Describe the epidemiology of conditions that can give rise to visual loss in children, focusing on low- and middle-income countries; 2. Describe the epidemiology of ocular infections, focusing on low- and middle-income countries; 3. Critically evaluate public health strategies for the control of childhood visual loss and blindness (including from corneal scarring, retinopathy of prematurity, cataract, refractive errors) and ocular infections (including trachoma, onchocerciasis, microbial keratitis, HIV, and infectious uveitis); 4. Design a program for the control of one condition by applying what they have learnt to their own work situation, and consider issues of equity of access within that program.

Indicative Syllabus

Session Content
The module is expected to cover the following topics:

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- Potentially blinding eye diseases in children
- The epidemiology of the following groups of conditions:
  - preventable conditions that can lead to corneal blindness e.g. vitamin A deficiency, measles infection, ophthalmia neonatorum and harmful tradition eye remedies;
  - treatable conditions that require early diagnosis and treatment e.g. cataract, retinopathy of prematurity and refractive errors;
  - management of children with low vision.
- Strategies for control of the major blinding eye diseases of children.
- How to assess needs, identify priorities for control and plan child eye health programmes.

Ocular infections:

- The epidemiology, including the control strategies, of the following conditions:
  - Trachoma;
  - Microbial keratitis;
  - Onchocerciasis;
  - HIV/AIDS and associated infections and malignancies;
  - Infectious uveitis.
- Community orientated strategies /programmes for control (including trachoma and onchocerciasis), including assessment and planning.

Teaching and Learning

Notional Learning Hours

Type of Learning Time	Number of Hours	Expressed as Percentage (%)
Contact time	40	33.3
Directed self-study	25	10
Self-directed learning	35	23
Assessment, review and revision	50	33.3
Total	**150**	**100**

Student contact time refers to the tutor-mediated time allocated to teaching, provision of guidance and feedback to students. This time includes activities that take place in face-to-face contexts such as lectures, seminars, demonstrations, tutorials, supervised laboratory workshops, practical classes, project supervision as well as where tutors are available for one-to-one discussions and interaction by email.

The division of notional learning hours listed above is indicative and is designed to inform students as to the relative split between interactive and self-directed study.

Teaching and Learning Strategy
The teaching and learning strategy for ocular infections (first part of the module) and eye conditions in children (second part of the module) is based on a combination of interactive lectures, individual or group work with presentations and discussion, quizzes and short answer questions. Sessions will entail critically reviewing relevant publications and summarising the findings for discussion, for example, and identifying strategies for control of the major blinding eye diseases and the level in the health system at which they can be implemented. Sessions will also cover the planning steps required to bring the strategies together into a programme for control. During the module students will select one blinding eye disease of children or an ocular infection, for their assessment.

Assessment

Assessment Strategy
The assessment for this module has been designed to measure student learning against the module intended learning outcomes (ILOs) as listed above. Formative assessment methods may be used to measure students' progress. The grade for summative assessment(s) only will go towards the overall award GPA. The assessment for this module will be online. **1. Presentation (40% weighting)** Students select one eye disease in children OR one ocular infection (whichever disease or infection is selected must have been covered in the module), relevant to your own situation to prepare a presentation for the Ministry of Health. **2. Two Applied Questions papers (each paper has a 30% weighting).** These are short answer question papers. One Applied Questions paper will cover Ocular Infections and one Applied Questions paper will cover Childhood Eye Disease. Each paper will consist of 5 questions, each of which must answered and carry an equal weighting. Further instructions will be available on Moodle in the Module Assessment Guidance form.

Summative Assessment

Assessment Type	Assessment Length (i.e. Word Count, Length of presentation in minutes)	Weighting (%)	Intended Module Learning Outcomes Tested
Presentation	Between 5 to 10 minutes for the presentation with a further 5 to 10 minutes of questions	40	1 or 2; 3 and 4
Applied Questions Timed Test (in-module test): Ocular Infections	150 minutes	30	1, 2, 3
Applied Questions Timed Test (in-module test): Childhood Eye Disease	150 minutes	30	1, 2, 3

Resitting assessment
Resits will accord with Chapter 8a of the LSHTM Academic Manual The Resit assessment will be the same assessment type as the first attempt (see previous table). Resit assessments of the Presentation should address a different eye condition to that from the first assessment.

Resources

Childhood Eye Diseases Core reading list

Before start of week 3:

Worldwide Causes of Childhood Blindness. Pediatric Retina 3rd Edition, 2021. Editor: Mary Elizabeth Hartnett; Publisher: Wolters Kluwer; Chapter 50.

Epidemiology. Taylor and Hoyt's Pediatric Ophthalmology and Strabismus. Rahi J and Gilbert C. Elsevier 2017 5th edition; Chapter 2.

Before start of week 4:

Malik, A.N.J., Mafwiri, M. & Gilbert, C. (2017) Integrating primary eye care into global child health policies. Archives of Disease in Childhood. [Online] 103 (2), 176–180. Available from: doi:10.1136/archdischild-2017-313536.

Malik, A.N.J., Mafwiri, M., Gilbert, C., Kim, M.J., et al. (2020) Integrating eye health training into the primary child healthcare programme in Tanzania: a pre-training and post-training study. BMJ paediatrics open. [Online] 4 (1), e000629–e000629. Available from: doi:10.1136/bmjpo-2019-000629.

Self JE, Taylor R, Solebo AL et al. Cataract management in children: a review of the literature and current practice across five large UK centre. Eye 2020 Dec; 34(12):2197-2218. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7784951/

OCULAR INFECTIONS: CORE READING LIST

Microbial Keratitis: Core reading

Austin, A., Lietman, T. & Rose-Nussbaumer, J. (2017) Update on the Management of Infectious Keratitis. *Ophthalmology*. [Online] 124 (11), 1678–1689. Available from: doi:10.1016/j.ophtha.2017.05.012.

Ung, L., Bispo, P.J.., Shanbhag, S.S., Gilmore, M.S., *et al.* (2019) The persistent dilemma of microbial keratitis: Global burden, diagnosis, and antimicrobial resistance. *Survey of Ophthalmology*. [Online] 64 (3), 255–271. Available from: doi:10.1016/j.survophthal.2018.12.003.

Trachoma: Core reading

Taylor, H.R., Burton, M.J., Haddad, D., West, S., *et al.* (2014) Trachoma. *The Lancet*. [Online] 384 (9960), 2142–2152. Available from: doi:10.1016/S0140-6736(13)62182-0.

ABSTRACT ONLY:
WHO (2020) WHO Alliance for the Global Elimination of Trachoma by 2020: progress report, 2020. *WHO Weekly Epidemiological Record*. [Online]. Available from: https://www.who.int/publications/i/item/who-wer9631-353-364

Onchocerciasis: Core reading

Hopkins, A. (2012) Onchocerciasis. In: Gordon J. Johnson (ed.). *The epidemiology of eye disease / edited by Gordon J. Johnson ... [et al.].* 3rd ed. [Online]. London :, Imperial College Press. pp. 487–507. Available from: https://contentstore.cla.co.uk/secure/link?id=b97d4e14-0cef-e811-80cd-005056af4099.

ABSTRACT ONLY:
WHO (2020) Progress report on the elimination of human onchocerciasis, 2020. *WHO Weekly Epidemiological Record*. [Online]. Available from:
https://www.who.int/publications/i/item/who-wer9646-557-567

OCULAR INFECTIONS: SUGGESTED OPTIONAL / ADDITIONAL READING

Microbial Keratitis: optional / additional reading

Lottie Brown, Ms.A.K.L. (2020) The global incidence and diagnosis of fungal keratitis. *The Lancet Infectious Diseases*. [Online] Available from: https://www-sciencedirect-com.ez.lshtm.ac.uk/science/article/pii/S1473309920304485.

Trachoma: optional / additional reading

Matthew Burton, E.H. (2015) Interventions for trachoma trichiasis. *The Cochrane Database of Systematic Reviews*. [Online] 2015 (11). Available from: doi:10.1002/14651858.CD004008.pub3.   https://lshtm.alma.exlibrisgroup.com/leganto/public/44HYG_INST/citation/2253418030003736?auth=SAML

Schachter, J., West, S.K., Mabey, D., Dawson, C.R., *et al.* (1999) Azithromycin in control of trachoma. *The Lancet*. [Online] 354 (9179), 630–635. Available from: doi:10.1016/S0140-6736(98)12387-5.

Jennifer R Evans (n.d.) Antibiotics for trachoma. *Cochrane Database of Systematic Reviews*. [Online] (9). Available from: doi:10.1002/14651858.CD001860.pub4.

West, S., Muñoz, B., Lynch, M., Kayongoya, A., *et al.* (1995) Impact of face-washing on trachoma in Kongwa, Tanzania. *The Lancet*. [Online] 345 (8943), 155–158. Available from: doi:10.1016/S0140-6736(95)90167-1.

Henry OD Ejere, M.B.A. (2015) Face washing promotion for preventing active trachoma. *The Cochrane database of systematic reviews*. [Online] 2. Available from: doi:10.1002/14651858.CD003659.pub4.

Emerson, P.M., Lindsay, S.W., Alexander, N., Bah, M., *et al.* (2004) Role of flies and provision of latrines in trachoma control: cluster-randomised controlled trial. *The Lancet*. [Online] 363 (9415), 1093–1098. Available from: doi:10.1016/S0140-6736(04)15891-1.

Mansur Rabiu, M.B.A. (2012) Environmental sanitary interventions for preventing active trachoma. *The Cochrane database of systematic reviews*. [Online] 2. Available from: doi:10.1002/14651858.CD004003.pub4.

Onchocerciasis: optional / additional reading

Cantey, P.T., Roy, S.L., Boakye, D., Mwingira, U., *et al.* (2018) Transitioning from river blindness control to elimination: steps toward stopping treatment. *International Health*. [Online] 10 (suppl1), i7–i13. Available from: doi:10.1093/inthealth/ihx049.

The Non-Governmental Development Organisation (NGDO) Group for Onchocerciasis Elimination (2016) *River Blindness: The beginning of the end*. [Online]. Available from: https://mectizan.org/wp-content/uploads/2018/11/Onchocerciasis-Advocacy-Document.pdf.

WHO (2016) *WHO Guidelines for stopping mass drug administration and verifying the elimination of human onchocerciasis*. [Online]. Available from: https://apps.who.int/iris/bitstream/handle/10665/204180/9789241510011_eng.pdf?sequence=1.

HIV: optional reading

IeDEA (2019) Research priorities to inform "Treat All" policy implementation for people living with HIV in sub-Saharan Africa: a consensus statement from the International epidemiology Databases to Evaluate AIDS (IeDEA). *Journal of the International AIDS Society*. [Online] Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6338103/.

Hayes, R.J., Donnell, D., Floyd, S., Mandla, N., *et al.* (2019) Effect of Universal Testing and Treatment on HIV Incidence — HPTN 071 (PopART). *The New England Journal of Medicine*. [Online] 381 (3), 207–218. Available from: doi:10.1056/NEJMoa1814556.

Teaching for Disabilities and Learning Differences

The module-specific site on Moodle gives students access to lecture notes and copies of the slides used during the lecture. Where appropriate, lectures are recorded and made available on Moodle. All materials posted on Moodle, including computer-based sessions, have been made accessible where possible.

LSHTM Moodle is accessible to the widest possible audience, regardless of specific needs or disabilities. More detail can be found in the Moodle Accessibility Statement which can also be found within the footer of the Moodle pages. All students have access to "SensusAccess" software which allows conversion of files into alternative formats.

Student Support Services can arrange learning or assessment adjustments for students where needed. Details and how to request support can be found on the LSHTM Disability Support pages.