

## PRIMARY **EYE CARE** TRAINING MANUAL

A course to strengthen the capacity of health personnel to manage eye patients at primary-level health facilities in the African Region.





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"PRIMARY EYE CARE TRAINING MANUAL - A course to strengthen the capacity of health personnel to manage eye patients at primary-level health facilities in the African Region".

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Design and layout: Paprika, Annecy

## Introduction and purpose

The purpose of this manual is to provide guidance in the design, implementation and evaluation of a course that aims to build and strengthen the capacity of health personnel to manage eye patients at primary-level health facilities in the African Region. The course falls within the remit of continuous professional development in its broadest sense. Its content focuses on simple evidence-based practice that can be easily carried out in primary-level health facilities all over Africa.

This manual is intended for use by course directors and facilitators. Its intended audience includes all persons who wish to commission, support or offer a course serving the above aims, including pre-service training. This manual sets out the requisite steps for the preparation and organization of such a course.

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## Abbreviations

HMIS	HEALTH MANAGEMENT INFORMATION SYSTEMS

- MOH MINISTRY OF HEALTH
- NCDs NONCOMMUNICABLE DISEASES
- PEC PRIMARY EYE CARE
- PHC PRIMARY HEALTH CARE
- VA VISUAL ACUITY
- WHO WORLD HEALTH ORGANIZATION

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## PART 1

# COURSE BASICS

## Participants

This course is designed for health personnel such as nurses and clinical officers working at primary-level health facilities. These workers are often the first professional point of contact for patients with eye diseases. The course builds on their existing professional expertise and experience as health workers or trainees. In addition to extending the general skills gained by the participants during their basic health training, the course aims to impart the specific skills required for everyday interventions in patients with eye diseases at the primary care level. What it does not do is attempt to turn participants into mini eye specialists in respect of the specific topics addressed.

Empirical evidence shows that adults learn best by tackling situations, problems or tasks which participants accept as interesting and worthwhile. The course is therefore primarily structured as a series of problembased tasks for small groups. Learning is reinforced by adding tasks in a cumulative manner and allowing trainees to reflect on their experiences.

This course is not designed for personnel without formal medical training such as community health workers.

## Aim and overall objectives

The aim of the course is to strengthen the ability of primary-level health workers to successfully manage patients with eye complaints presenting at primary health care facilities.

The objectives of each session are set out in the Session Summaries and Lesson Plans which specify what participants should be able to do by the end of the course.

## Duration

The duration of any teaching course is a trade-off between achieving various objectives and the length of time a professionally active participant can be removed from his or her duties. The period of three days required for this course allows for comfortable session lengths with adequate breaks. An additional day should be set aside before it starts to allow for induction of the facilitators who will assist the master trainer.

## General design

The task-based learning approach requires a comprehensive task to be subdivided into essential component tasks. In order for it to have a cumulative learning effect the sequence of sub-tasks ought to mirror the order in which issues relating to the main task would normally be tackled. At appropriate junctures, brief tasks that consolidate or synthesize newly acquired knowledge are added. The sequence for most sessions is as follows:

- Skill-based learning through practical sessions based on course protocols
- A walk through each clinical algorithm
- Use of case studies to illustrate the practical use of the algorithms

Each morning starts with an interactive plenary session to explain the session contents. Other prerequisite skills such "How to counsel an eye patient" are taught by means of mini-lectures combined with practical sessions involving volunteer patients. In addition, participants gain first-hand experience with actual patients through a clinic visit on the final day followed by a debriefing session.

**Group Work:** Except for two initial lectures to introduce the course and display images of the normal and abnormal eye, most learning is done by group work. Tasks are introduced in the plenary session following which participants learn by observing and supporting each other, mainly in groups of three, throughout the problem-solving process. Communication over the three days takes place through active participation rather than lectures.

## Preparation and specification of materials

Each trainee is provided with a PEC handbook containing all the charts, recording forms and guidelines taught on the course, including protocols and algorithms. These can also be extracted from the more

detailed manual provided for the facilitators. Participants are expected to consult these materials as they carry out tasks. A training course should not take place unless these materials can be made available to every participant. It is recommended that prior to training participants should receive a kit containing the materials needed to provide PEC in their health facilities. This kit consists of the PEC handbook, distance-vision test chart, N8 near-vision test chart, 3 metre rope, and 40 cm string, +1.50, +2.00, +2.50 and +3.00 reading glasses, torch and spare batteries.

### Course programme

A detailed description of the sequence of activities and programme is presented as a specimen timetable below. Adjustments to the timing of activities can be made provided all the sessions are covered. The timetable displayed is considered the minimum possible length for this training programme.

## Induction of facilitators

The master trainer will need to instruct and induct a minimum of five co-facilitators to assist in supervising the practical sessions, which are carried out in small groups. Each group should ideally have a facilitator working with it. Facilitators should be familiar with the training materials including the use of checklists. They should also assist the master trainer in preparing materials for the practical sessions. Mid-level (allied) eye workers such as ophthalmic clinical officers, ophthalmic technicians and ophthalmic nurses can readily be trained as facilitators.

Facilitators should be inducted immediately before the main training session. It is best if facilitators are familiar with the environment and working conditions of the trainees, which means that locally chosen facilitators are best suited for induction. The suggested modules for induction of facilitators are shown in the Day 0 programme.

## **Registration of participants**

Every effort should be made to ensure that all participants start the course together. It can be very disruptive for a group if one of its members does not arrive until after the start of the course, is absent during the course or leaves before its completion. It is suggested, as a rule of thumb, that participants who arrive after the end of Session 1 should be refused admission to the course, and that those who choose to leave early do not receive the certificate of successful completion.

### Daily programme

Each morning and afternoon starts with a plenary session. Having a plenary session serves a number of purposes: it can be used to introduce a new task or to resolve any outstanding issues from the previous day that participants have not been able to resolve to their satisfaction. It is also used for the oral presentation of group tasks. Furthermore, it ensures that all group members, facilitators and resource persons are present at the scheduled time.

The clinical algorithms are a series of learning activities associated with a logical decision-making process. Each algorithm is introduced in plenary session followed by the sample cases and finally by the practical skills sessions.

## Clinic visit trip

A half-day clinic visit is designed to provide participants with relevant practical exercises and the invaluable experience of managing actual patients in a real-life situation.

The clinic visit should ideally be scheduled for the morning of the third day. The clinic visit is strategically placed at the end of the course programme in order to ensure that participants have by that point acquired all the basic knowledge and skills required to manage actual patients.

The short morning session prior to the clinic visit serves to brief participants. This briefing covers the objectives, programme, logistics and expected outcome of the visit. After the clinic visit a debriefing session allows participants to discuss and reflect on their experience. The final event is the concluding session, which includes course evaluation and issuing of certificates.

## Monitoring and evaluation

Monitoring and evaluation activities are fully integrated into the course programme. Both pre- and postcourse questionnaires are used to assess new knowledge and skill levels gained by participants in the course. Pre-course evaluation takes place on the starting day of the course. Post-course evaluation is scheduled for the final afternoon: this should leave enough time for evaluation and feedback.

Trainees are required to fill in various checklists over the three days of the course in order to ensure that they have taken part in and completed all the practical sessions.

At the end of the course, a workshop evaluation form is also completed.

Monitoring has three purposes:

- to correct in real time any adverse issues or failures of judgement, or to benefit from any particularly successful aspects of how the course was run;
- to gather information for improving future courses;
- to allow participants to express themselves anonymously.

Evaluation has three purposes:

- to clarify whether the conduct of the course was acceptable and effective to participants, organizers, staff and the funding agency;
- to contribute to further course improvements in terms of content and training methods, where applicable;
- to provide information on whether the course is sustainable, acceptable, effective and efficient in terms of the facilities and resources required to organize it.



# COURSE Outline

## PEC training programme summary

#### **KINDLY NOTE:**

- The day's programme will normally start at 08:00 and end at 16:00. It may however be necessary to work later on some days, depending on progress made by the class.
- The timetable for tea, lunch and tea breaks is fixed but may also be shifted slightly depending on the needs of the course.

DAY 0 (Induction of facilitators)			
Time	Session title	Learning objectives	
08:00	Session 1: Introduction to the course	<ul> <li>At the end of the session participants should be able to:</li> <li>recognize other facilitators on the course by name</li> <li>clearly define primary eye care</li> <li>explain how providing eye health services at a primary care level can help eliminate avoidable blindness</li> <li>list the course components including monitoring and evaluation tools.</li> </ul>	
08:30	Session 2: Principals of adult learning for health care workers	At the end of the session participants should be able to: • describe the guiding principles in educating health care workers • recognize the challenges in teaching adult health care workers.	
09:30	Session 3: The normal and abnormal eye	<ul> <li>At the end of the session participants should be familiar with the simple approach used for teaching ocular anatomy and physiology at the primary care level and able to:</li> <li>make a presentation showing a normal eye and its surrounding structures with respect to shape, colour, size, movement, vision and lic closure</li> <li>make a presentation showing an abnormal eye and its surrounding structures with respect to shape, colour, size, movement, vision and lic closure</li> <li>make a presentation showing an abnormal eye and its surrounding structures with respect to shape, colour, size, movement, vision and lic closure</li> <li>explain how to differentiate symptoms from signs</li> <li>complete the recording form for signs and symptoms used in this course.</li> </ul>	
10:30		TEA	
11:00	Session 4: Introduction to the PEC algorithms	<ul> <li>At the end of the session participants should be able to:</li> <li>define the concept of an algorithm and how it is used</li> <li>understand the colour coding on the algorithms</li> <li>talk about each box on the algorithm, from left to right, and how it leads to the next step</li> <li>explain the 5 WHO PEC algorithms</li> <li>choose the correct algorithm for each patient.</li> </ul>	
11:30	Session 5: Sample (photo) cases	At the end of the session participants should be able to: • create sample cases to simulate clinical situations • use sample cases to work through the algorithms.	

DAY 0	(Induction of fa	cilitators)
Time	Session title	Learning objectives
12:00	Session 6: Use of checklists and protocols	<ul> <li>At the end of the session participants should be able to:</li> <li>list the WHO PEC protocols</li> <li>recite the 3-step checklists used in this course: <ol> <li>treating</li> <li>being treated</li> <li>observing the procedure and using the checklist to assess the treating person.</li> </ol> </li> </ul>
12:30		LUNCH
13:30	Session 7: Reading the charts and algorithm 1	At the end of the session participants should be able to: • discuss the modified PEC distance- and near-vision testing charts • understand how trainees will use the charts • understand how to use the charts in relation to algorithm 1.
14:30	Session 8: Practical skills and algorithms 2-4	At the end of the session participants should be able to: • select, plan and facilitate group learning activities • prepare the learning environment for skills training • set up simulated situations for skills training • understand the skills needed to navigate through algorithms 2-4 • select a site for clinical practice.
		10 MINUTE BREAK
15:40	Session 9: Soft skills training: Eye patient counselling and health talks	<ul> <li>At the end of the session participants should be able to:</li> <li>recognize that counselling is a skill needed in the management of eye patients</li> <li>list key health messages</li> <li>describe key points in delivering a health talk.</li> </ul>
16:30		TEA
16:40	Session 10: Referral skills and algorithm 5	<ul> <li>At the end of the session participants should be able to:</li> <li>use the eye examination record and referral forms</li> <li>describe referral pathways for eye patients in their region and select suitable referral sites for these patients.</li> </ul>
17:00		DEBRIEFING AND CLOSURE

DAY 1		
Time	Session title	Learning objectives
08:00	Session 1: Introduction to the course and pre-course assessment	<ul> <li>At the end of the session participants should be able to:</li> <li>recognize other participants on the course by name</li> <li>explain how providing eye health services at the primary care level can help eliminate avoidable blindness</li> <li>list the course components.</li> <li>NB At the end of the session the master trainer will determine participants' baseline knowledge of PEC.</li> </ul>
09:15	Session 2: The normal and abnormal eye	<ul> <li>At the end of the session participants should be able to:</li> <li>recognize when an eye and its surrounding structures are normal with respect to shape, colour, size, movement, vision and lid closure</li> <li>recognize when an eye and its surrounding structures are abnormal with respect to shape, colour, size, movement, vision and lid closure</li> <li>differentiate symptoms from signs</li> <li>record signs and symptoms for normal and abnormal eyes.</li> </ul>
10:00		TEA
10:30	Session 3: Introduction to the WHO PEC algorithms	<ul> <li>At the end of the session participants should be able to:</li> <li>define the concept of an algorithm and how it is used</li> <li>understand the colour coding on the algorithms</li> <li>talk about each box on the algorithm, from left to right, and how it leads to the next step</li> <li>discuss the WHO PEC algorithms</li> <li>choose the correct algorithm for each patient.</li> </ul>
11:30	Session 4: Algorithm 1 "Loss of vision": Part 1 – Distance vision defects	<ul> <li>At the end of the session participants should be able to:</li> <li>understand the definition of poor distance vision</li> <li>appreciate how patients with poor distance vision present to the clinic</li> <li>use algorithm 1 to manage patients presenting with this complaint at a primary care level.</li> </ul>
12:40	Session 5: Measuring visual acuity (VA) for distance vision	<ul> <li>At the end of the session participants should be able to:</li> <li>determine distance visual acuity of a patient over 5 years old using the 3-metre distance reading chart</li> <li>record the result in the accepted format.</li> </ul>
13:40		LUNCH

DAY 1		
Time	Session title	Learning objectives
14:40	Session 6: Algorithm 1 "Loss of vision": Part 2 – Near vision defects	<ul> <li>At the end of the session participants should be able to:</li> <li>understand the definition of poor near vision</li> <li>appreciate how patients with poor near vision present to the clinic</li> <li>use algorithm 1 to manage patients presenting with this complaint at a primary care level.</li> </ul>
15:10	Session 7: Measuring near vision and dispensing reading glasses	<ul> <li>At the end of the session participants should be able to:</li> <li>determine the near visual acuity of a patient over 40 years old using the 40 cm standard near reading chart</li> <li>record the result in the accepted format</li> <li>use a set of standard reading glasses to determine the correction power needed for a presbyopic patient</li> <li>prescribe the glasses required</li> <li>instruct patients on how to access optical services.</li> </ul>
16:10		TEA
16:40	Session 8: Eye patient referral	At the end of the session participants should be able to: • describe referral pathways for eye patients in the region • select suitable referral sites for their patients • write clear referral notes for their eye patients • explain relevant details of referral to their eye patients.
17:50		DEBRIEFING AND CLOSURE

DAY 2		
Time	Session title	Learning objectives
08:00	Introduction and recap of day 1	At the end of the session participants should be able to: • recall and resume the previous day's lessons.
08:15	Session 9: Algorithm 2 "Red eye"	<ul> <li>At the end of the session participants should be able to:</li> <li>understand the definition of a red eye</li> <li>list the different presentations of a red eye</li> <li>use algorithm 2 to manage patients presenting with this complaint at a primary care level.</li> </ul>
09:15	Session 10: Skills for managing eye conditions – 1	At the end of the session participants should be able to: • instil eye medication • clean an eye • make and apply eye patches and shields.
10:15	TEA	
10:45	Session 11: Algorithm 3 "Swelling/ lump on eye or abnormal lashes"	<ul> <li>At the end of the session participants should be able to:</li> <li>understand the definition of a lump or swelling on the eye</li> <li>understand how abnormal eyelashes present</li> <li>use algorithm 3 to manage patients presenting with these complaints at a primary care level.</li> </ul>
11:15	Session 12: Skills for managing eye conditions – 2	At the end of the session participants should be able to: • apply warm compresses • carry out epilation (optional).
11:50	Session 13: Algorithm 4 "Trauma"	<ul><li>At the end of the session participants should be able to:</li><li>use algorithm 4 to manage patients presenting with this complaint at a primary care level.</li></ul>
12:35	Session 14: Skills for managing eye conditions – 3	At the end of the session participants should be able to: • perform lid eversion • irrigate an eye • remove a superficial foreign body from the sclera.
13:20		LUNCH

DAY 2		
Time	Session title	Learning objectives
14:20	Session 15: Algorithm 5 "Children aged 5 years and under"	<ul> <li>At the end of the session participants should be able to:</li> <li>use algorithm 5 to manage patients presenting in this category at a primary care level.</li> </ul>
15:00	Session 16: Counselling eye patients	At the end of the session participants should be able to: • counsel eye patients on how to improve self-management • demonstrate empathy when counselling.
15:45	Session 17: Eye health promotion messages	At the end of the session participants should be able to: • list key eye health messages • discuss characteristics of good health talks • prepare a short health talk.
16:30		TEA
17:00	Session 18: Giving a good eye health talk	At the end of the session participants should be able to: • deliver a good eye health talk.
17:45		DEBRIEFING AND CLOSURE

DAY 3		
Time	Session Title	Learning Objectives
08:00	Session 19: Choosing the appropriate algorithms and recording correctly + Additional conditions	<ul> <li>At the end of the session participants should be able to:</li> <li>write clear patient notes about their eye patients</li> <li>complete an eye record examination form for each patient with confidence</li> <li>select algorithms and the "Additional conditions" document for different cases</li> <li>recognize there may be eye conditions not covered by these algorithms</li> <li>ask for advice when they are unsure about using the algorithms and protocols.</li> </ul>
09:15		TEA AND BUS RIDE TO HEALTH CENTRE
09:45	Session 20: Clinical practice with algorithms	<ul> <li>At the end of the session participants should be able to:</li> <li>use algorithms/protocols as decision-making tools in the management of actual eye patients</li> <li>manage patients under supervision (with referrals to be followed up by eye care specialists)</li> <li>obtain feedback from peers and supervisors.</li> </ul>
14:30		LUNCH
15:30	Session 21: Final course assessment	<ul><li>The aim of this session is to:</li><li>assess the participants' learning progress during the course.</li></ul>
16:05	Session 22: Closing session	<ul> <li>The aim of this session is to:</li> <li>give feedback on assessment results</li> <li>give participants the opportunity to evaluate the course</li> <li>hand out attendance certificates and primary eye care material packs needed for their work</li> <li>deal with final housekeeping issues and thank all participants and contributors.</li> </ul>
16:45		FINAL HOUSEKEEPING AND CLOSURE



# PEC LESSON PLANS

## Session plans: day 1 to day 3

#### Lesson plan: Day 1, Session 1

#### SESSION TITLE: INTRODUCTION TO THE COURSE AND PRE-COURSE ASSESSMENT

#### Expected duration of session: 1 hour 15 minutes

#### **Objectives for the session**

At the end of the session participants should be able to:

- recognize other participants on the course by name
- explain how providing eye health services at the primary care level can help eliminate avoidable blindness
- list the course components.

At the end of the session the master trainer will determine the participants' baseline knowledge of PEC.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Welcome and introductions	<ul> <li>Welcome the participants and introduce yourself: state your name, where you come from, your training and experience as an eye health worker.</li> <li>Ask them to introduce themselves one by one: their names, where they live and work, their training and experience.</li> </ul>	• None	15
Clarifying the rationale for the course	<ul> <li>Ask the participants to discuss what type of eye cases they encounter on a daily basis and make a list on the flip chart. Keep this list in a safe place for the last day of the course.</li> <li>Explain that this is the first of only two lectures that will be held during this course. The rest will take place in small group sessions.</li> <li>Present an audience-specific introductory talk on eye care in the country, the need for eye services and why nurses in primary facilities are key players in the delivery of eye services, and explain what the terms "normal vision", "blindness" and "visual impairment" mean.</li> </ul>	<ul> <li>Flipchart and markers</li> <li>PowerPoint presentation on basics of vision and eye services (not more than 10 slides)</li> </ul>	20
Overview of course content	<ul> <li>Hand out the trainee course guides. Refer the participants to the pages where course objectives are set out. Ask one or two of them to read out the objectives in front of the whole group.</li> <li>Then ask them if they need any clarification, and provide explanations if needed.</li> </ul>	• PEC trainee course guide	10

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Housekeeping issues	<ul> <li>Bring up the following issues and ask for comments about each one, and ensure that the participants acknowledge each issue:</li> <li>timetable: ask the participants to turn to the relevant page in their trainee guide. Give them a few minutes to look through it and ask for comments. Then emphasize that:</li> <li>punctuality is very important because the course covers so many issues: ask for their commitment</li> <li>each day starts promptly at 8 o'clock but there is some flexibility about subsequent events</li> <li>details of accommodation</li> <li>site of toilet facilities</li> <li>site of refectory for meals and tea</li> <li>per diems: these are issued to participants at the end of each day</li> <li>ask if there are any other questions and respond to them.</li> </ul>	• PEC trainee course guide	10
Pre-test	<ul> <li>Explain to the participants that you want to evaluate the conduct of the course: they will have to complete a short test now and another at the end of the course. Reassure them that they will probably do badly in this first test, which is to be expected since most of the course components are new to them.</li> <li>Explain that these are test conditions. Hand out the papers and tell them to answer each question on the corresponding answer sheet. Tell the participants the test will last exactly 20 minutes and no longer.</li> <li>Invigilate the exam and answer queries from the participants.</li> <li>Collect papers and answer sheets promptly. Tell the participants that they will receive the results along with their final test results at the end of the course.</li> </ul>	• Pre-course assessment papers	15
Closure	• Thank the assembled participants and remind them that there will be a 5-minute break before the next session.	• None	5

#### SESSION TITLE: THE NORMAL AND ABNORMAL EYE

#### Expected duration of session: 45 minutes

#### **Objectives for the session**

- recognize when an eye and its surrounding structures are normal, with respect to shape, colour, size, movement, vision and lid closure
- recognize when an eye and its surrounding structures are abnormal with respect to shape, colour, size, movement, vision and lid closure
- differentiate signs and symptoms, and record them.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> </ul>	• None	2
Recognizing the normal eye	<ul> <li>Hand out the checklist: "Assessing for the presence of an eye problem".</li> <li>Hand out copies of the WHO PEC eye record form.</li> <li>Display a photo of an open normal eye visualized frontally (with surrounding structures) (PowerPoint if available). Ask participants to name the anatomical parts and confirm or correct what they say CLEARLY (include the lids, eyelashes and surrounding skin).</li> <li>Do a PowerPoint presentation on the normal eye.</li> <li>Ask participants to turn to a partner (who has normal eyes) and examine their shape, colour, size, movement, vision and lid closure (list these 6 components on a chalkboard or flipchart). Participants should use the checklist provided.</li> <li>Then ask participants to define what is "normal" for each of these components. Add your comments if needed.</li> </ul>	<ul> <li>Checklist: "Assessing for the presence of an eye problem"</li> <li>Poster of a normal eye with its surrounding structures</li> <li>Projection/ handout with the same picture</li> </ul>	15
Recognizing the abnormal eye	<ul> <li>Do the PowerPoint presentation on abnormal eyes explaining each condition.</li> <li>Handout/PowerPoint photos of abnormal eyes (abnormal shape, colour, size, movement, vision and lid closure).</li> <li>Ask participants to work in twos: they should look at each photo in turn, detect the abnormality and write down what it is on the checklist provided.</li> <li>When all participants are finished hold up or project each photo and ask participants to identify what is abnormal about it. Add your comments if needed.</li> <li>Ask participants to record the symptoms and signs on the recording form in front of them.</li> </ul>	<ul> <li>Photos of abnormal eyes and surrounding tissues</li> <li>Projections/ handout containing the same photos</li> <li>Checklist: "Assessing for the presence of an eye problem"</li> <li>WHO PEC recording form for eye examination</li> </ul>	23
Summary	<ul> <li>Ask one or several participants to summarize what they have learnt.</li> <li>Mention that recognizing eye abnormalities is the cornerstone of managing patients with eye problems (algorithms).</li> </ul>	• None	4
Closure	• Thank everyone and announce that there will be a 30-minute tea break before the next session.	• None	1

#### SESSION TITLE: INTRODUCTION TO THE WHO PEC ALGORITHMS

#### Expected duration of session: 60 minutes

#### **Objectives for the session**

- define the concept of an algorithm and how it is used
- understand the colour coding on the algorithms
- talk about each box on the algorithm, from left to right, and how it leads to the next step
- discuss the WHO PEC algorithms, and choose the correct algorithm for each patient.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> </ul>	• None	5
Selecting algorithms to use Asking for advice when trainees are uncertain about using the algorithms and protocols	<ul> <li>Divide the participants into groups of three.</li> <li>Inform them that the rest of the course will be run with these small groups.</li> <li>Ask participants to take out their copies of all five algorithms.</li> <li>Use your algorithm posters or PowerPoint presentations to explain what an algorithm is: a tool to help them make correct management decisions in eye patients. It has been designed by experts and will work well.</li> <li>Talk about each box on the algorithm, from left to right, and how it leads to the next step.</li> <li>Explain the colour coding on the algorithms:</li> <li>Blue = question or examine Green = carry out a procedure Orange = refer soon but not urgently Red = refer as an emergency</li> <li>Project a series of sample (S3a-f) and/or photo cases that display history and visual acuity only.</li> <li>Ask participants to discuss in their groups which protocol should be used to manage each case.</li> <li>Each group should report their findings in plenary session and discuss each case.</li> <li>Open up disagreements between groups for discussion.</li> <li>Do the same for all cases (S3b, S3f, etc.).</li> </ul>	<ul> <li>Posters of the 5 algorithms</li> <li>For each group: copies of 5 mixed sample cases (or PowerPoint projections) and corresponding images (participants should be able to use any of the five algorithms to manage the cases)</li> </ul>	40
Summary	<ul> <li>Ask one volunteer to summarize what has been learned.</li> <li>Mention that these algorithms are the backbone of the entire training programme.</li> </ul>	• None	10
Closure	• Thank everyone and announce that there will be a 5-minute break before the next session.	• None	5

SESSION TITLE: ALGORITHM 1 "LOSS OF VISION": PART 1 - DISTANCE VISION DEFECTS

Expected duration of session: 65 minutes

#### **Objectives for the session**

- understand the definition of poor distance vision
- appreciate how patients with poor distance vision present to the clinic
- use algorithm 1 ("Loss of vision") to manage patients presenting with this complaint at a primary care level.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> </ul>	• None	2
Using algorithm 1 to decide on management of patients presenting with distance vision problems	<ul> <li>Hand out a copy of algorithm 1 to each participant.</li> <li>Go through the section of the algorithm dealing with "distance vision":</li> <li>talk about each box on the algorithm, from left to right, and how it moves on to the next step.</li> <li>explain the colour coding on the algorithm:</li> <li>Blue = question or examine Green = carry out a procedure Orange = refer soon but not urgently Red = refer as an emergency</li> <li>Ask the participants to examine sample case S4 (distance vision). Provide information on the case and show how it and the algorithm can be used to arrive at the correct management decision.</li> <li>Now divide the class into groups of three. Give each group the other sample cases for algorithm 1 (distance vision). Show them how to use the algorithm to decide on the correct management</li> </ul>	<ul> <li>Poster of algorithm 1</li> <li>Copy of algorithm 1 for each participant</li> <li>Copies of all sample cases for algorithm 1 (sample case S5 distance vision) for each group of 3 trainees</li> </ul>	40
	<ul><li>plan for the patients.</li><li>Go from group to group and check how they are doing: assist them if they are stuck or using the algorithm incorrectly.</li></ul>		
Debriefing	<ul> <li>When all participants have practised bring the groups together for a debriefing session. Ask them to present their decision for each case and explain why they chose it.</li> <li>Discuss and clarify different or incorrect decisions.</li> </ul>	• None	13
Summary	• Ask one or more of the participants to summarize what they have learnt.	• None	5
Closure	• Thank everyone and announce that there will be a 5-minute break before the next session.	• None	5

#### SESSION TITLE: MEASURING VISUAL ACUITY (VA) FOR DISTANCE VISION

#### Expected duration of session: 60 minutes

#### Objectives for the session

- determine the distance visual acuity of a patient over 5 years old using the 3-metre distance reading chart
- record the result in the accepted format.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> </ul>	• None	2
Determine distance VA with a 3-metre visual acuity chart	<ul> <li>Set up the VA testing situation, showing the participants how to conduct the test.</li> <li>Hand out the "distance VA testing" checklists.</li> <li>Ask for a trainee volunteer who is myopic and demonstrate distance VA testing, explaining each step as it is listed on the checklist. Show how it is done.</li> <li>Explain that recording VA using an accepted method is an essential skill in primary eye care.</li> <li>Divide the class into groups of three. Give each group a chair, a VA chart and a string and ask them to set up a testing station.</li> <li>Check all the stations are correct, then instruct participants to test each other as follows: <ul> <li>one is being tested</li> <li>another is the tester</li> <li>the third observes the procedure and scores it on the checklist.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to the participants acquiring the skill.</li> <li>Show the participants where to record findings on the eye record form and check that it is being done correctly.</li> <li>Collect a completed checklist from each participant. Explain that you will do this for each participant for each skill over the rest of the course.</li> </ul>	<ul> <li>For each group of 3 participants:</li> <li>a piece of string measuring 3 metres</li> <li>a 3-m WHO PEC reading chart</li> <li>two chairs.</li> <li>Checklist: "Distance VA testing" for each participant</li> </ul>	43
Debriefing	<ul> <li>When all the participants have practised bring them together for a debriefing session. Ask:</li> <li>what went well?</li> <li>what did they find difficult?</li> <li>what problems did they experience?</li> </ul>	• None	10
Closure	<ul> <li>Thank everyone and announce that there will be 60-minute lunch break before the next session.</li> </ul>	• None	5

SESSION TITLE: ALGORITHM 1 "LOSS OF VISION": PART 2 - NEAR VISION DEFECTS

#### Expected duration of session: 30 minutes

#### **Objectives for the session**

- understand the definition of poor near vision
- appreciate how patients with poor near vision present to the clinic
- use algorithm 1 ("Loss of vision") to manage patients presenting with this complaint at a primary care level.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	2
Using algorithm 1 to decide on management of patients presenting with near vision problems	<ul> <li>Ask participants to produce their copies of algorithm 1.</li> <li>Go through the section of the algorithm dealing with "near vision": <ul> <li>talk about each box on the algorithm, from left to right, and how it leads to the next step.</li> </ul> </li> <li>Now divide the class into groups of three. Give each group the sample cases for algorithm 1 (near vision). Tell them to use the algorithm to decide on correct management of the patients.</li> <li>Go from group to group to check how they are getting on: assist them if they are stuck or using the algorithm incorrectly.</li> </ul>	<ul> <li>Poster of algorithm 1</li> <li>Copy of all sample cases for algorithm 1 (S6 near vision) for each group of 3 trainees</li> </ul>	20
Debriefing	<ul> <li>When all participants have practised bring them together for a debriefing session. Ask them to present their decision for each case and explain why they chose it.</li> <li>Discuss and clarify different or incorrect decisions.</li> </ul>	• None	8
Closure	• Thank everyone	• None	0

#### SESSION TITLE: MEASURING NEAR VISION AND DISPENSING READING GLASSES

#### Expected duration of session: 60 minutes

#### Objectives for the session

- determine the near visual acuity of a patient over 40 years old using the 40 cm standard near reading chart
- record the result in the accepted format
- use a set of standard reading glasses to determine the power of correction needed for a presbyopic patient
- prescribe the glasses required
- instruct patients on how to access optical services.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> </ul>	• None	4
Determine near VA with standard near reading chart	<ul> <li>Hand out a "near VA testing" checklist to each participant.</li> <li>Ask for a trainee volunteer who is presbyopic and demonstrate near VA testing, explaining each step as it is listed on the checklist.</li> <li>Explain that recording VA using an accepted method is an essential skill in primary eye care. Show how it is done.</li> <li>Divide the class into groups of three. Give each group two chairs and a VA chart.</li> <li>Instruct participants to test each other as follows: <ul> <li>one is being tested</li> <li>another is the tester</li> <li>the third observes the procedure and scores it on the checklist.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to the participants.</li> <li>Collect a completed checklist from each participant.</li> </ul>	<ul> <li>For each group of 3 trainees:</li> <li>A standard near reading chart for literate and non- literate subjects</li> <li>Two chairs</li> <li>Checklist: "Near VA testing" and eye record forms for each participant</li> </ul>	15

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Using a set of standard glasses to determine correction needed Prescribing reading glasses and referring patients to suitable providers	<ul> <li>Conduct a quick group discussion with the class about where their patients can be referred to obtain spectacles locally.</li> <li>Greet the volunteer patient and introduce her/him to the participants. Ask the patient to sit down and explain that what you are about to do will help her/him and the participants.</li> <li>Demonstrate how to use the 4 glasses in order to determine which provides the best correction, explaining each step as you proceed based on the checklist.</li> <li>Divide the class into groups of three. Allocate a presbyopia patient to each group and give each group two chairs and the set of 4 testing glasses.</li> <li>Instruct participants to test the patient as follows:</li> <li>one is being tested <ul> <li>one is the tester</li> <li>the other observes the procedure and scores it on the checklist.</li> </ul> </li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants where to record findings on the eye record form and check that it is being done correctly</li> <li>Collect a completed checklist from each participant.</li> </ul>	<ul> <li>For each group of 3 trainees:</li> <li>A presbyopia volunteer from each group</li> <li>A set of 4 reading glasses (+1.5, +2.0, +2.5, +3.0)</li> <li>For each participant: a copy of the checklist "Dispensing reading glasses" (which includes writing a short prescription note and discussing with the patient where they can buy glasses)</li> </ul>	30
Debriefing	<ul> <li>When all the participants have practised bring them together for a debriefing session. Ask:</li> <li>what went well?</li> <li>what did they find difficult?</li> <li>what problems did they experience?</li> </ul>	• None	10
Closure	• Thank everyone and announce that there will be a 30-minute tea break before the next session.	• None	1

#### SESSION TITLE: EYE PATIENT REFERRAL

#### Expected duration of session: 1 hour 15 minutes

#### Objectives for the session

- describe the referral pathways for eye patients in their area (also for poor vision and blindness rehabilitation services)
- select suitable referral sites for their patients
- write clear referral notes for their eye patients
- explain relevant details of referral to their eye patients.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	3
Describe referral pathways for eye patients Select referral sites for eye patients	<ul> <li>Present a list you have prepared of: <ul> <li>local district-level eye care referral sites and persons (for clinical cases)</li> <li>poor vision and blindness rehabilitation services. Ask participants to comment on these and add additional places and names if they know any.</li> </ul> </li> <li>Instruct individual participants to prepare a brief list of referral sites relevant to them personally (to be kept for future use).</li> <li>Project any of the sample cases leading to referral from the previous session and ask: "Where exactly would you personally refer these patients?" Participants can shout out their answers.</li> </ul>	<ul> <li>Flipchart poster with details (places and persons) of local clinical and rehabilitation referral sites for eye patients</li> <li>Sample cases leading to referral</li> </ul>	15
Write referral notes for eye patients	<ul> <li>Hand out a checklist on writing a referral note to each participant.</li> <li>Divide participants into groups of 3 and give each group a sample case leading to referral. They should study the checklist together and then each person in the group should practise writing a note for the sample case. Each participant should hand her or his letter to a peer who can score it using the checklist.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to the participants acquiring the skill.</li> <li>Collect a completed checklist from each participant.</li> </ul>	<ul> <li>For each group of 3:</li> <li>a sample case needing referral S9</li> <li>For each participant:</li> <li>Checklist: "Content of a good referral note"</li> <li>Paper and pen</li> </ul>	20

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Explain referral to patient	<ul> <li>Instruct the participants to remain in the same groups of 3.</li> <li>Ask one participant to lead the others in reading through the checklist "Giving patients good referral information".</li> <li>Instruct the participants to role-play in groups of 3, as follows: <ul> <li>one informs the "patient" in order to prepare her/him for referral</li> <li>another is the "patient" being referred</li> <li>the third observes the procedure and scores the information process on the checklist.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants acquiring the skill.</li> <li>Collect a completed checklist from each participant.</li> </ul>	<ul> <li>Each group of 3 uses the same case they were given to write the referral note.</li> <li>Each participant receives the checklist: "Giving patients good referral information"</li> </ul>	20
Debriefing	<ul> <li>When all the participants have practised bring them together for a debriefing session. Ask:</li> <li>what went well?</li> <li>what did they find difficult?</li> <li>what problems did they experience?</li> </ul>	• None	5
Summary of the day's work	<ul> <li>Ask one or more participants to summarize what they have learnt during this first day of the course. Add or correct if necessary.</li> </ul>	• None	10
Closure	• Thank everyone and remind them that the course will resume at 08:00 the following morning.	• None	2

#### SESSION TITLE: ALGORITHM 2 "RED EYE"

#### Expected duration of session: 60 minutes

#### Objectives for the session

- understand the definition of a red eye
- list the different presentations of a red eye
  use algorithm 2 ("Red eye") to manage patients presenting with this complaint at a primary care level.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	3
Using algorithm 2 to decide on management of patients presenting with "red eye"	<ul> <li>Hand out a copy of algorithm 2 to each participant.</li> <li>Go through the algorithm: <ul> <li>use the poster</li> <li>talk about each box on the algorithm, from left to right, and how it leads to the next step.</li> </ul> </li> <li>Now divide the class into groups of three. Give each group the sample cases for algorithm 2. Tell them to use the algorithm to decide on correct management for each patient.</li> <li>Go from group to group to check how they are getting on: assist them if they are stuck or using the algorithm incorrectly.</li> </ul>	<ul> <li>Poster of algorithm 2</li> <li>Copy of algorithm 2 "Red eye" for each participant</li> <li>Copy of all sample cases or PowerPoint presentations for algorithm 2 "Red eye" for each group of 3 trainees</li> </ul>	40
Debriefing	<ul> <li>When all participants have practised bring them together for a debriefing session. Ask them to present their decision for each case and explain why they chose it.</li> <li>Discuss and clarify different or incorrect decisions.</li> </ul>	• None	12
Closure	• Thank everyone and announce that there will be a 5-minute break before the next session.	• None	5

#### SESSION TITLE: SKILLS FOR MANAGING EYE CONDITIONS - 1

#### Expected duration of session: 60 minutes

#### Objectives for the session

- instil eye medication: drops and ointments
- clean an eye
- make and apply eye patches and shields.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	3
Instilling eye medication: drops and ointments Cleaning an eye	<ul> <li>Ask for a volunteer and demonstrate instilling eye drops and applying eye ointment. Explain each step as it is listed on the relevant checklist. Do not clean the eye with ointment in it when you have finished.</li> <li>Immediately thereafter demonstrate how to clean an eye, using the same volunteer's eye containing ointment. Explain each step as it is listed on the relevant checklist.</li> <li>Divide the class into groups of three. Give each group a chair and the medications (drops and ointment).</li> <li>Instruct participants to "treat" each other as follows: <ul> <li>one is being "treated" (ointment is being applied to one eye, drops instilled in the other, with cleaning of the eye containing ointment)</li> <li>another is doing the "instilling" and "cleaning"</li> <li>the third observes the procedures and scores the "treatments" on the two checklists.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants acquiring the skill.</li> <li>Collect two completed checklists from each participant.</li> </ul>	<ul> <li>For each group of 3 trainees:</li> <li>a chair</li> <li>a bottle of artificial tears</li> <li>a tube of tear gel (ointment)</li> <li>paper towels or swabs</li> <li>For each participant:</li> <li>Checklist: "instilling eye medication"</li> <li>Checklist: "cleaning an eye"</li> </ul>	25

CONTENT	ACTIVITIES	MATERIALS NEEDED	ТІМЕ
Making and applying eye patches and shields	<ul> <li>Demonstrate how to make an eye patch and eye shield. Explain each step as it is listed on the checklist.</li> <li>Immediately thereafter ask for a volunteer, and demonstrate how to apply the patch and shield. Explain each step as it is listed on the checklist.</li> <li>Divide the class into groups of three. Show each group the workplace you have prepared for them in advance (table, chair, swabs, cotton wool, scissors, cardboard, adhesive plaster).</li> <li>Instruct participants to work as follows: <ul> <li>one prepares a patch and shield and then applies them to the eye of a second participant</li> <li>another is the "patient" receiving the patch or shield</li> <li>the third observes the procedures and scores the "treatment" on the checklist.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants acquiring the skill.</li> <li>Collect a completed checklist from each participant.</li> </ul>	For each group of 3 participants: • a small table • cotton wool • gauze swabs • scissors • cardboard • adhesive plaster For each participant: • Checklist: "Making and applying eye patches and shields"	25
Debriefing	<ul> <li>When all participants have practised bring them together for a debriefing session. Ask:</li> <li>what went well?</li> <li>what did they find difficult?</li> <li>what problems did they experience?</li> </ul>	• None	5
Closure	• Thank everyone and announce that there will be a 30-minute tea break before the next session.	• None	2

#### SESSION TITLE: ALGORITHM 3 "SWELLING/LUMP ON EYE OR ABNORMAL LASHES"

#### Expected duration of session: 30 minutes

#### **Objectives for the session**

- understand the definition of a lump or swelling on the eye
- understand how abnormal eyelashes present
- use algorithm 3 ("Swelling/lump on eye or abnormal lashes") to manage patients presenting with these complaints at a primary care level.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	3
Using algorithm 3 to decide on management of patients presenting with swellings or lumps on and around the eyes or abnormal lashes	<ul> <li>Hand out a copy of algorithm 3 to each participant.</li> <li>Go through the algorithm: <ul> <li>use the poster</li> <li>talk about each box on the algorithm, from left to right, and how it leads to the next step.</li> </ul> </li> <li>Now divide the class into groups of three. Give each group the sample cases for algorithm 3 or project them, one at a time.</li> <li>Tell them to use the algorithm to decide on the correct management for each patient.</li> <li>Go from group to group and check how they are doing: assist them if they are stuck or using the algorithm incorrectly.</li> </ul>	<ul> <li>Poster of algorithm 3</li> <li>Copy of algorithm 3 "Swelling/ lump on eye or abnormal lashes" for each participant</li> <li>Copies of all sample cases or PowerPoint presentations for algorithm 3 for each group of 3 participants</li> </ul>	20
Debriefing	<ul> <li>When all participants have practised bring them together for a debriefing session. Ask them to present their decision for each case and explain why they chose it.</li> <li>Discuss and clarify different or incorrect decisions.</li> </ul>	• None	6
Closure	• Thank everyone.	• None	1

#### SESSION TITLE: SKILLS FOR MANAGING EYE CONDITIONS - 2

#### Expected duration of session: 35 minutes

#### Objectives for the session

- make and apply a warm compress to an eye
- epilate eye lashes correctly (optional).

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly tell the participants what the objective for the session is and how they are going to achieve it.	• None	2
Making and applying warm compress to an eye	<ul> <li>Ask for a volunteer and demonstrate how to apply a warm compress. Explain each step as it is listed on the relevant checklist.</li> <li>Divide the class into groups of three. Give each group the equipment needed for the procedure.</li> <li>Instruct participants to "treat" each other as follows: <ul> <li>one applies the warm compress</li> <li>another is being "treated"</li> <li>the third observes the procedure and scores the treatment on the two checklists.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants acquiring the skill. When all trainees are comfortable move on to the next skill</li> </ul>	For each group of 3 participants: • a chair • swabs • a bowl of warm (not hot) water • paper towels • epilation forceps (optional) For each participant: • Checklist: "Making and applying a warm compress"	15
Epilating eye lashes correctly (optional)	<ul> <li>Instruct participants to work in the same groups</li> <li>Give each group the equipment needed for the procedure.</li> <li>Demonstrate epilation on one trainee</li> <li>Instruct participants to "treat" each other as follows: <ul> <li>one epilates an eyelash of her/his colleague's eye</li> <li>another is being "treated"</li> <li>the third observes the procedure and scores the "treatment" on the two checklists.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants acquiring the skill.</li> <li>Collect a completed checklist from each participant.</li> </ul>	For each group of 3 trainees: • a chair • paper towels • epilation forceps (optional) For each participant: • Checklist: "How to epilate an eyelash" (optional)	15
Closure	• Thank everyone and announce that there will be a 5-minute break before the next session.	• None	3

#### SESSION TITLE: ALGORITHM 4 "TRAUMA"

#### Expected duration of session: 45 minutes

#### Objectives for the session

At the end of the session the participants should be able to:

• use algorithm 4 ("Trauma") to manage patients presenting with this complaint at a primary care level.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	3
Using algorithm 4 to decide on management of patients presenting with eye trauma	<ul> <li>Hand out a copy of Algorithm 4 to each participant.</li> <li>Go through the algorithm: <ul> <li>Use the poster</li> <li>Talk about each block of the algorithm, from left to right: how it guides you to the next step.</li> </ul> </li> <li>Now divide the class into groups of three. Give each group the sample cases for algorithm 4 or project them, one at a time. Tell them to use the algorithm to decide on the correct management for each patient.</li> <li>Go from group to group and check how they are doing: assist them if they are stuck or using the algorithm incorrectly.</li> </ul>	<ul> <li>Poster of algorithm 4</li> <li>Copy of algorithm 4 "Trauma" for each participant</li> <li>Copies of all sample cases or PowerPoint presentations for algorithm 4 for each group of 3 trainees</li> </ul>	30
Debriefing	<ul> <li>When all the participants have practised bring them together for a debriefing session. Ask them to present their decision for each case and explain why they chose it.</li> <li>Discuss and clarify different or incorrect decisions.</li> </ul>	• None	10
Closure	<ul> <li>Thank everyone and announce that there will be a 5-minute break before the next session.</li> </ul>	• None	2

#### SESSION TITLE: SKILLS FOR MANAGING EYE CONDITIONS - 3

#### Expected duration of session: 45 minutes

#### Objectives for the session

- perform lid eversion using fingers only
- irrigate an eye
- remove a superficial foreign body from the sclera.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> <li>Explain that this is going to be a "fun" session involving lots of water and getting frustrated when it proves impossible to evert an eyelid; hardboiled eggs will also be available to work on. Ask them to participate fully!</li> </ul>	• None	2
Performing lid eversion with fingers only Irrigating an eye	<ul> <li>Ask for a trainee volunteer and demonstrate how to evert the upper eyelid. Explain each step as it is listed on the relevant checklist.</li> <li>Immediately thereafter ask for a volunteer, and demonstrate how to irrigate an eye. Explain each step as it is listed on the checklist.</li> <li>Divide the class into groups of three. Show each group to the station prepared in advance where they can carry out the procedures.</li> <li>Tell participants to "treat" each other as follows: <ul> <li>one does the "eversion" and "irrigated"</li> <li>the third observes the procedures and scores the "treatments" on the two checklists.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants.</li> </ul>	<ul> <li>For each group of 3 trainees:</li> <li>a large container of water</li> <li>a pouring receptacle</li> <li>paper towels</li> <li>soap and a bowl for handwashing.</li> <li>For each participant:</li> <li>Checklist: "Everting an eyelid"</li> <li>Checklist: "Irrigating an eye"</li> </ul>	22

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Removing a superficial foreign body from over the sclera	<ul> <li>Divide the class into groups of three. Show each group the workplace prepared for them in advance (table, chair, egg, cotton wool buds).</li> <li>Tell participants to work as follows: <ul> <li>one attempts to remove both a superficial and an embedded foreign body from the egg using a cotton wool bud</li> <li>the other two observe the procedure and score the attempted removal on the checklist.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants acquiring the skill.</li> <li>Collect two completed checklists from each participant.</li> </ul>	<ul> <li>For each group of 3 trainees:</li> <li>a small table</li> <li>peeled hard- boiled eggs prepared with small superficial and embedded "foreign bodies" (e.g. sawdust)</li> <li>cotton wool buds</li> <li>anaesthetic drops (if available)</li> <li>For each participant:</li> <li>Checklist: "Removing superficial foreign bodies"</li> </ul>	15
Debriefing	<ul> <li>When all participants have practised bring then together for a debriefing session. Ask:</li> <li>what went well?</li> <li>what did they find difficult?</li> <li>what problems did they experience?</li> </ul>	• None	5
Closure	• Thank everyone and announce that there will be a 60-minute lunch break before the next session.	• None	1

#### SESSION TITLE: ALGORITHM 5 "CHILDREN AGED 5 YEARS AND UNDER"

#### Expected duration of session: 40 minutes

#### Objectives for the session

At the end of the session the participants should be able to:

• use algorithm 5 ("Children aged 5 years and under") to manage patients presenting in this category at a primary care level.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	3
Using algorithm 5 to decide on management of children patients presenting with eye trauma	<ul> <li>Hand out a copy of algorithm 5 to each participant.</li> <li>Go through the algorithm: <ul> <li>use the poster</li> <li>talk about each box of the algorithm, from left to right, and how it leads to the next step.</li> </ul> </li> <li>Now divide the class into groups of three. Give each group the sample cases for algorithm 5 or project them, one at a time.</li> <li>Tell them to use the algorithm to decide on the correct management for each patient.</li> <li>Go from group to group and check how they are doing: assist them if they are stuck or using the algorithm incorrectly.</li> </ul>	<ul> <li>Poster of algorithm 5</li> <li>Copy of algorithm 5 "Children aged 5 years and under" for each participant</li> <li>Copies of all sample cases or PowerPoint presentations of algorithm 5 for each group of 3 trainees</li> </ul>	25
Debriefing	<ul> <li>When all participants have practised bring them together for a debriefing session. Ask them to present their decision for each case and explain why they chose it.</li> <li>Discuss and clarify different or incorrect decisions.</li> </ul>	• None	10
Closure	<ul> <li>Thank everyone and announce that there will be a 2-minute break before the next session.</li> </ul>	• None	2

#### SESSION TITLE: COUNSELLING EYE PATIENTS

#### Expected duration of session: 45 minutes

#### Objectives for the session

- counsel eye patients on how to improve self-management
- demonstrate empathy when counselling.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> </ul>	• None	5
Counselling eye patients on how to improve their self- management Demonstrating empathy when counselling	<ul> <li>Short (5 minute) presentation by a "satisfied patient" who has been briefed to talk about the effective treatment received from health workers and what the patient liked about it. Participants should be able a few questions to clarify the issues. Thank the "satisfied patient".</li> <li>A participant reads out the "Counselling eye patients effectively" checklist to the whole class.</li> <li>Divide the class into groups of three. Give each group a sample case of a patient needing counselling. Tell participants to role-play as follows: <ul> <li>one "counsels" the patient</li> <li>another is the patient being "counselled"</li> <li>the third observes the procedure and notes the "counselling" on the checklist.</li> </ul> </li> <li>They should rotate until each participant has performed each role.</li> <li>Go from group to group to ensure the test is progressing well and provide feedback to participants acquiring the skill.</li> <li>Collect a completed checklist from each participant.</li> </ul>	<ul> <li>A "satisfied patient" for role play</li> <li>Checklist:</li> <li>"Counselling eye patients effectively" for each participant</li> <li>For each group of 3 trainees: a sample case needing counselling or projection of 3 cases, one at a time</li> </ul>	30
Debriefing	<ul> <li>When all participants have practised bring them together for a debriefing session. Ask:</li> <li>what went well?</li> <li>what did they find difficult?</li> <li>what problems did they experience?</li> </ul>	• None	5
Closure	• Thank everyone and announce that there will be a 5-minute break before the next session.	• None	5

#### SESSION TITLE: EYE HEALTH PROMOTION MESSAGES

#### Expected duration of session: 45 minutes

#### Objectives for the session

- list and explain key eye health promotion messages
- discuss characteristics of good health talks
- prepare a short health talk.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	2
List and explain the key eye health promotion messages	<ul> <li>Give a 5-min talk or presentation on the need for eye health promotion.</li> <li>Put up the poster "Key African eye health promotion messages" and briefly explain how important they are.</li> <li>Divide the class into groups of three and ask each to appoint a speaker to talk on behalf of the group.</li> <li>Distribute the messages on the handout equally among the groups (probably 2-3 each) and ask them to consider the following questions within the next 5 minutes: <ul> <li>"Who in particular is this message is intended for?"</li> <li>"What is the importance of this message?"</li> </ul> </li> <li>Go from group to group to ensure the exercise is going well and provide advice if needed.</li> <li>Each group's speaker should report back to the whole group. Allow a short discussion afterwards (4 minutes in total per group)</li> </ul>	<ul> <li>"Eye health promotion messages" poster</li> <li>Handout for each participant: "Eye health promotion messages"</li> </ul>	28
Discussing the characteristics of good health talks Preparing to give a good health talk	<ul> <li>Hand out the "Health talk" checklist to each participant.</li> <li>Give the participants 15 minutes to do the following task, and tell them they can take a 30-minute tea break once it is done: <ul> <li>study the checklist</li> <li>each group of 3 trainees should prepare a 5-minute health talk based on any of the eye health promotion messages for presentation at the following session</li> <li>each group must delegate one speaker.</li> </ul> </li> </ul>	• Checklist: "Presenting a good eye health talk" for each participant	15
Closure	<ul> <li>Go from group to group to ensure everyone knows what to do.</li> <li>Thank everyone after 15 minutes and announce that there will be a 30-minute tea break before the next session.</li> <li>Remind them that in the next session they will be involved putting what they have learnt into practice.</li> </ul>	• None	0



#### SESSION TITLE: GIVING A GOOD EYE HEALTH TALK

Expected duration of session: 45 minutes

#### Objectives for the session

At the end of the session the participants should be able to:

• deliver a good eye health talk.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	2
Delivering a good eye health talk	<ul> <li>Instruct participants to take out their "Giving a good health talk" checklist.</li> <li>Issue extra checklists depending on the number of groups.</li> <li>Ask one volunteer to present his health talk and ask another to note him using the checklist. The rest of the class will be the audience.</li> <li>Discuss entries made on the checklist with the class.</li> <li>Now ask the speaker from another group to do the same: likewise discuss entries made on the checklist.</li> <li>Do this with all groups asking each participant to note every presentation (including from her/his own group) using the checklist.</li> <li>Go from group to group to ensure the exercise is progressing well and provide feedback to participants presenting talks.</li> </ul>	• Checklist: "Presenting a good eye health talk"	25
Debriefing	<ul> <li>When all groups have presented bring the participants together for a debriefing session. Ask:</li> <li>what went well?</li> <li>what did they find difficult?</li> <li>what problems did they experience?</li> </ul>	• None	7
Summary of the day's work	<ul> <li>Ask one or more participants to summarize what has been learned during this second day of the course. Supplement or correct if necessary.</li> </ul>	• None	10
Closure	<ul> <li>Thank everyone and remind them that the course will resume at 08h00 the following morning.</li> <li>Explain that they are going to apply what has been learned in a practical situation involving patients.</li> <li>Encourage them to spend the evening thoroughly revising everything they have learnt so far.</li> </ul>	• None	1

#### SESSION TITLE: CHOOSING THE APPROPRIATE ALGORITHMS AND RECORDING CORRECTLY

#### + ADDITIONAL CONDITIONS

Expected duration of session: I hr 15 minutes

#### **Objectives for the session**

- write clear patient notes about their eye patients
- complete an eye record examination form for each patient with confidence
- select algorithms and the "Additional conditions" document for different cases
- recognize there may be eye conditions not covered by these algorithms
- ask for advice when they are unsure about using the algorithms and protocols.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> <li>Explain that this is a competition and the best group will get a prize.</li> </ul>	• None	5
Filling in accepted HMIS forms correctly Charting VA correctly	<ul> <li>Distribute the following to each participant: <ul> <li>copies of the WHO PEC eye record forms which participants can use to monitor their eye patients</li> <li>correct VA recording handout.</li> </ul> </li> <li>Present a case and instruct participants step by step on how to complete the form(s) for that patient. Pay particular attention to how they are expected to record the patient's VA and ensure that no symptoms are missed.</li> <li>Explain that when another form has to be used in their clinics the WHO PEC eye record form can be used as a checklist to ensure all steps are followed and no details omitted.</li> <li>Divide the class into groups of three. Give each group a set of three patient cases or project three sample cases, one at a time, and ask them to record these cases correctly on the eye record forms.</li> <li>Go from group to group to ensure that the exercise is progressing well and provide feedback.</li> <li>This part of the session ends when you are satisfied that participants are able to record findings accurately</li> </ul>	<ul> <li>Copies of WHO PEC eye record forms along with any forms used in the trainees' country.</li> <li>Varied cases for participants to practise recording</li> <li>Paper/photo cases for projection (S9)</li> <li>Checklist: "Correctly recording patient data"</li> </ul>	20

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Selecting algorithms for use Asking for advice when unsure about using the algorithms and protocols	<ul> <li>Ask participants to get out their copies of all 5 algorithms.</li> <li>Divide the class into groups of three and follow this procedure: <ul> <li>Ask each group to give itself a name and list the names on a flipchart or chalkboard.</li> <li>Give or show each group the same sample case No. 1. Ask them to decide which protocol to use to manage it. They should all report back to you. Discuss any disagreement between groups.</li> <li>Instruct each group to follow that algorithm in order to devise the best management plan. They should all report back to you. Discuss any disagreement between groups.</li> <li>Then do the same for cases No. 2, 3, etc.</li> </ul> </li> <li>Keep a tally for each group on the flipchart/ chalkboard – 1 mark for each correct decision per case (i.e. a maximum of 2 marks per case).</li> <li>The last case for the groups is a more complicated one (in which the algorithm to use is not obvious, although known to the master trainer). Responses from the groups are likely to vary considerably.</li> <li>Now ask all the participants: "What will you do when you are really confused?"</li> <li>Guide the discussion in terms of two possible courses of action: "Phone and ask for advice" (better option) and "Refer anyway".</li> </ul>	<ul> <li>Posters of all 5 algorithms</li> <li>For each group of 3: copies or PowerPoint projections of about 10 mixed sample cases (participants can select any of the 5 algorithms to manage them)</li> <li>Checklist: "How to manage an eye patient"</li> <li>A big slab of chocolate or other gift item such as pens</li> </ul>	30
Use of the additional conditions chart (optional)	<ul> <li>Project a photo of an eye condition that is regionally important such as trachoma or onchocerciasis.</li> <li>Ask the participants to discuss in their groups how they would approach the case.</li> <li>Go through the "Additional conditions" chart describing how they should handle these patients.</li> <li>Point out where the algorithms apply to these conditions, if appropriate.</li> </ul>	<ul> <li>"Additional conditions" chart</li> <li>Projection/copies of a complex additional condition</li> <li>Photo/sample cases</li> </ul>	10
Closure	<ul> <li>Tally the marks from the algorithm exercise and announce the winner of the contest. If more than one group has the winning score divide the chocolate/gift between them.</li> <li>Thank everyone and tell them that they are now ready to manage actual patients.</li> <li>Give a briefing on transport arrangements for the clinic visit and other logistical details.</li> <li>Instruct participants to take their algorithms and "Additional conditions" document with them.</li> <li>Allow a 15-minute tea break before boarding the bus for the clinic.</li> </ul>	• A big slab of chocolate or other gift item such as pens	10

#### SESSION TITLE: CLINICAL PRACTICE WITH ALGORITHMS

Expected duration of session: 4 hours 30min

#### Objectives for the session

- use algorithms/protocols as decision-making tools in the management of actual eye patients
- manage patients under supervision (with referrals to be followed up by eye care specialists)
- obtain feedback from peers and supervisors.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	<ul> <li>Briefly describe the session objectives to the participants and tell them how they are going to achieve them.</li> <li>Introduce the trainees to the staff in charge of the host clinic.</li> <li>Tell the trainees how the clinic is arranged so they know where the pharmacy, referral station, optical sections are located.</li> </ul>	• None	15
Applying algorithms in practice with eye patients in a clinical setting	<ul> <li>First session:</li> <li>Hand out the checklist: "Managing a person with an eye problem"</li> <li>Demonstrate to the whole group how to use the algorithms with a patient in the lecture room</li> <li>Participants should practise in groups of 3 under the supervision of an eye care professional: <ul> <li>using the algorithms/protocols to decide on management</li> <li>managing the patient under supervision (referrals should of course be directed to the eye care professional)</li> <li>getting feedback from peers and supervisors.</li> </ul> </li> </ul>	<ul> <li>Checklist: "Managing a person with an eye problem"</li> <li>Eye patients (at least 7 per group)</li> <li>Eye care facilitators for each group of 3 participants</li> <li>Unoccupied consulting rooms</li> <li>All algorithms</li> <li>All the treatment material indicated in the protocols attached to the algorithms</li> <li>Torches (if available)</li> <li>Set of reading glasses</li> </ul>	240
	<ul> <li>Debriefing:</li> <li>When all participants have practised bring them together for a debriefing session in one of the rooms at the clinic. Alternatively this can be done back at the lecture room.</li> <li>Ask: <ul> <li>what went well?</li> <li>what did they find difficult?</li> <li>what problems did they experience?</li> <li>how confident are they now that they can do a better job with eye patients?</li> </ul> </li> </ul>	• None	15

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Closure	<ul> <li>Thank everyone and tell them the arrangements for leaving the clinic</li> <li>Announce that there will be a 75-minute lunch break before the final afternoon session.</li> </ul>	• None	0

#### SESSION TITLE: FINAL COURSE ASSESSMENT

#### Expected duration of session: 35 minutes

#### Objectives for the session

#### The aim of this session is to:

• assess what the participants have learned during the course.

CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Assessing participants' learning during the course	<ul> <li>Tell the participants to take out their algorithms. Explain that they can use them in the test.</li> <li>Explain that these are test conditions. Hand out the papers and answer sheets. Tell participants that the test will last exactly 25 minutes.</li> <li>Invigilate the exam and answer queries from participants.</li> <li>Collect papers and answer sheets promptly.</li> </ul>	<ul> <li>Test papers (same questions as the pre-test)</li> <li>Answer sheets</li> </ul>	30
Closure	<ul><li>Thank everyone and announce that there will be a 15-minute break before the next session.</li><li>Mark the papers during the tea break.</li></ul>	• None	5

#### Lesson plan: Day 3, Closing Session 22

#### SESSION TITLE: CLOSING SESSION

Expected duration of session: 45 minutes

#### Objectives for the session

#### The aim of this session is to:

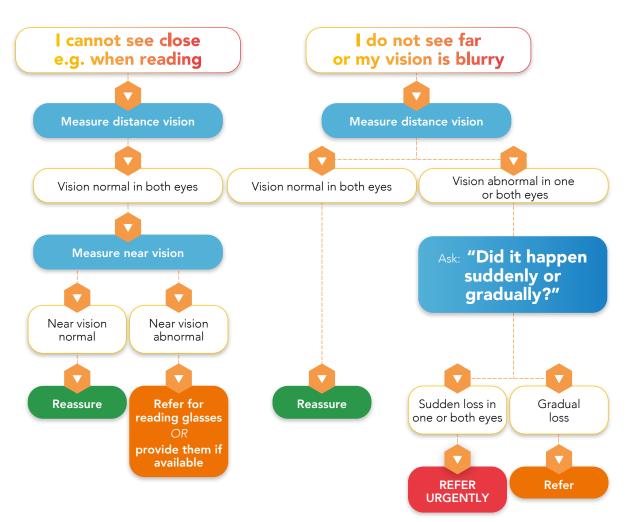
- give feedback on assessment results
- give participants the opportunity to evaluate the course
- hand out attendance certificates and primary eye care material packs needed for their work
- deal with final housekeeping issues and thank all participants and contributors.

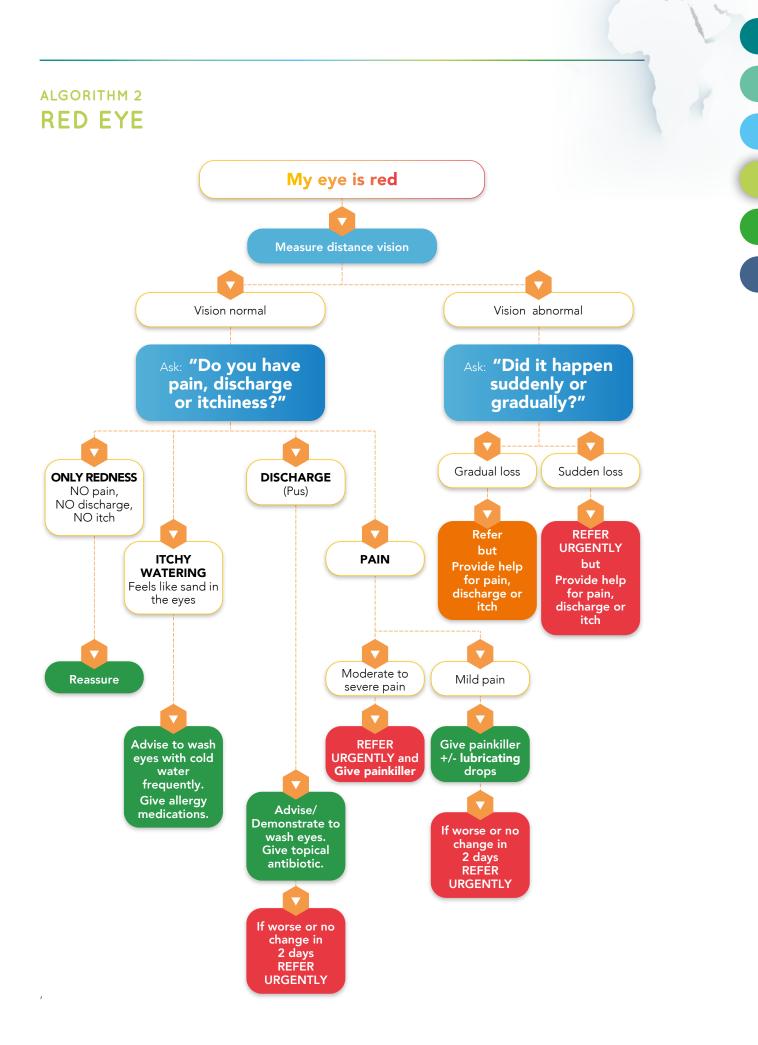
CONTENT	ACTIVITIES	MATERIALS NEEDED	TIME
Introduction and objectives	• Briefly describe the session objectives to the participants and tell them how they are going to achieve them.	• None	2
Providing feedback on assessment results	<ul> <li>Hand them their pre-test and post-test (final assessment) papers.</li> <li>Provide feedback on the post-assessment papers: mention what was done well and where problems lay.</li> </ul>	<ul> <li>Marked pre- test and final assessment scripts</li> </ul>	10
Allowing participants to evaluate the course	• Distribute course evaluation forms to participants. Ask them to complete them and hand them in.	• Course evaluation forms	10
Distributing attendance certificates and PEC packs	• A senior health service official from the district hands out certificates and PEC kits to the participants.	<ul> <li>Attendance certificates (prepared the day before)</li> <li>PEC kits for each participant</li> </ul>	15
Final housekeeping issues and thanks	<ul> <li>Mention final housekeeping issues such as transport and per diems.</li> <li>Explain to the participants that you and other senior persons will follow them up and provide support visits. They are free to contact you at any time.</li> <li>Lastly thank the participants and all the persons who helped with the course.</li> </ul>	• None	5

# PART 4

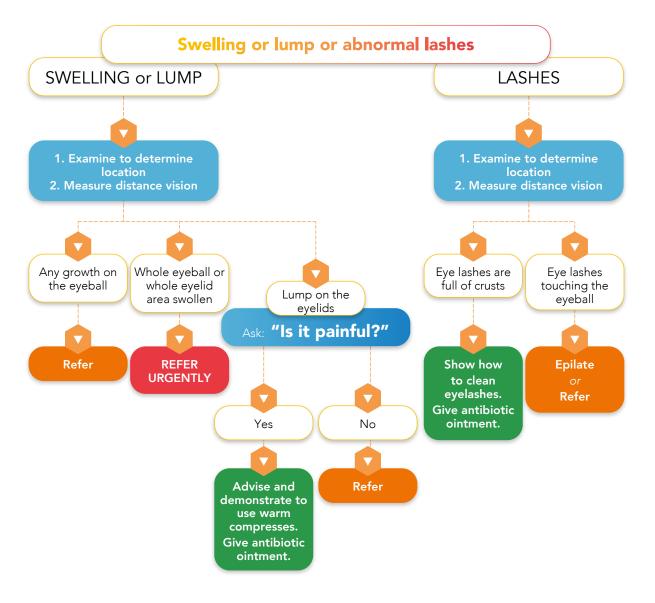
# PRIMARY EYE CLINICAL ALGORITHMS

### ALGORITHM 1 LOSS OF VISION

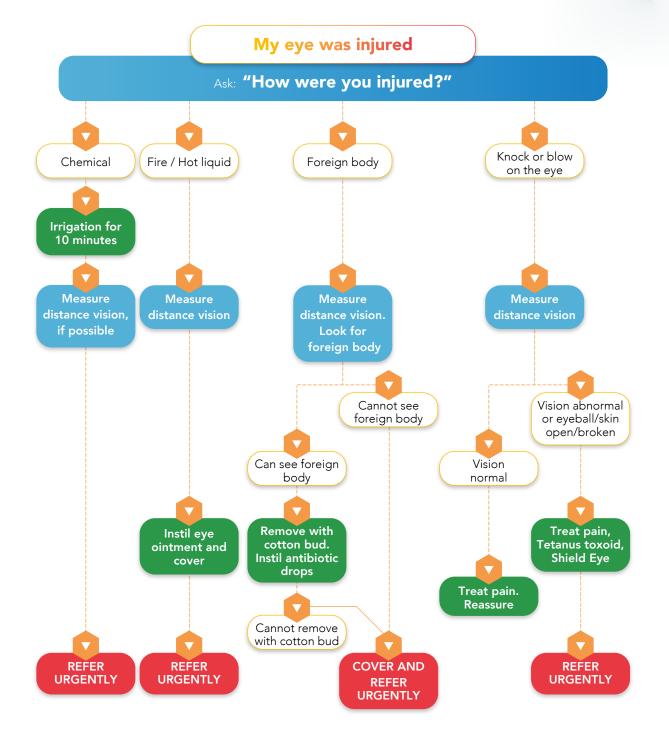




### ALGORITHM 3 SWELLING/LUMP ON EYE OR ABNORMAL LASHES



# ALGORITHM 4



### ALGORITHM 5 CHILDREN AGED 5 YEARS AND UNDER



# PART **5** PEC CLINICAL SKILL PROTOCOLS

Remember - wash your hands before and after all procedures!

## Assessing a person with an eye problem

#### YOU WILL NEED

- A torch if available
- Pen and record card

#### PREPARATION

- Find a space which is properly lit.
- Seat the person comfortably.
- Always **explain to the person** what you are going to do.
- Record the name, age, sex and date.

- Greet the patient warmly.
- Ask the person "Why did you come and see me?"
- Record if they say they have pain, redness, loss of vision, eye injury, swellings or lumps on their lids or anything else indicating which eye is affected.
- Test distance vision (except small children).
- Test near vision (in those aged 40 and above).
- Examine the person's eyes.
- 1. The white should be completely white (with a few red veins).
- 2. The black should be completely black.
- 3. The eyes should be the same size.
- 4. The eyes should look straight ahead.
- Ask the person to close their eyes.
- 5. The lids should open and close normally (lashes should face outwards, not inwards, lids should be smooth).
- Record what you see.
- Choose the correct algorithm in order to reach a management decision.

# Distance vision screening procedure

#### YOU WILL NEED

- Distance vision screening chart
- String measuring 3 metres
- Pen and record card

#### PREPARATION

- Find a space that is properly lit (not too dark, bright or looking into the sun).
- Seat the person comfortably.
- Always **explain to the patient** what you are going to do.

- Hold the vision chart close to the person. Explain that you will point at one of the Es and they should state where the "arms" point. Make sure that the person understands by asking them to indicate the direction of the arms.
- If the person normally wears spectacles to see in the distance, tell them to put their glasses on during the test.
- Measure 3m from the person using the prepared 3m string or tape measure.
- Ask the person to cover their left eye, so that you can test the right eye.
- Stand beside the vision chart and point to one of the 6/60 Es. Ask the person to indicate the direction of its arms.
  - If the person does not indicate the right direction, move to the next E and ask them to point again.
     If the person is unable to point in the right direction for any E, they are functionally blind. Write down R: cannot see 6/60
  - if the person points in the right direction for each E, go to the next level: 6/12 Es.
- Point to the first E on the 6/12 row of Es. Ask the person to indicate the direction of the arms of the E. Note the response. Move to the next E. Continue until all the Es in the 6/12 row have been shown to the person.
- If a person can see 4 or all 5 of the 6/12 Es, write down: *R* 6/12.
- If they can only see 1, 2 or 3 Es correctly, write down: R: cannot see 6/12, but can see 6/60.
- Now ask the person to cover the right eye and repeat the test with the left eye.

#### INTERPRETATION OF DISTANCE VISION RESULTS

#### Abnormal vision

- s If the person cannot see 6/60 Es with one or both eyes, they are functionally blind and need to be referred urgently.
- s If the person cannot see 6/12 Es with one or both eyes, their distance vision is abnormal: they need to be referred as well.

#### Normal vision

If the person can see the 6/12 Es they have normal distance vision.



FIG. 1: TESTING DISTANCE VISION. Courtesy: Ciku Mathenge

# Near vision screening procedure

#### YOU WILL NEED

- Near vision screening chart
- Pen and record card

#### PREPARATION

- Find a space that is properly lit (not too dark, bright or looking into the sun).
- Seat the person comfortably
- Always explain to the patient what you are going to do.

#### METHOD

- For screening near vision, hold the vision screener at the testing distance of 40cm from the person's eyes.
- The test should be undertaken with both eyes open, and if the person wears spectacles for near vision they should put them on.
- If the person can see the N8 line, write down: Near N8.
- If the person cannot see the N8 line, write down: Near: cannot see N8.

#### INTERPRETATION OF NEAR VISION RESULTS

#### Abnormal vision

If the person cannot see N8 with both eyes, their near vision is abnormal.

#### Normal vision

If the person can see the N8 line, they have normal near vision.

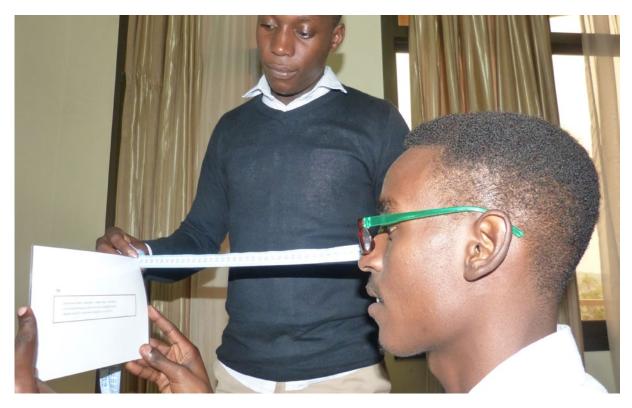


FIG. 2: TESTING NEAR VISION WITH N8 CHART AT 40CM. Courtesy: Ciku Mathenge

# How to determine the power of near vision spectacles

#### IMPORTANT

This test is only to be used once it has been confirmed that:

- 1. distance vision is normal
- 2. the patient is aged 40 years and above

#### YOU WILL NEED

- Near vision chart
- Pen and record card
- +1.50, +2.00, +2.50, +3.00 spectacles

#### PREPARATION

- Find a space that is properly lit.
- Seat the person comfortably.
- Always **explain to the person** what you are going to do.

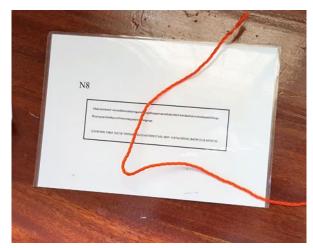
#### METHOD

- Check that both eyes are open.
- Use the 40 cm string to show the patient where they should hold the reading chart.
- The print on the chart represents N8 near vision. Point to the print on the chart and ask them if they can see it clearly.
- If the patient cannot see N8 start testing with the +1.50 glasses.
- Ask the patient if they can see the N8 line. Keep the chart 40cm away from the eyes.
- If the patient cannot see N8 with +1.50DS, try with the next stronger power and continue until they see the N8 clearly.
- Once the patient says they can see the chart clearly, try again with the next weaker power. Allow the patient to decide which power is preferable and record this on the record chart.

#### If the person cannot see N8 with any of the four powers then refer.

#### ISSUE THE FOLLOWING INSTRUCTIONS TO ALL PATIENTS RECEIVING READING GLASSES.

- 1. Tell the person that these spectacles are to be worn for near vision only. Their distance vision will be blurred. Ask them to look up and confirm this.
- 2. Ask the person to clean their spectacles by washing them with soap and water and drying with a soft cloth.
- 3. Record the power of the spectacles on the person's record card and on a piece of paper for their own keeping.
- 4. Advise the person that they will probably need a stronger power of spectacles in about 2 years.
- 5. Ask the person if they have a relative with glaucoma. If yes, refer for a complete eye check.
- 6. Ask the person if they have diabetes. If yes, advise them to have a complete eye check once a year.



# How to instil eye drops

#### YOU WILL NEED

- Eye drops and ointment
- Wipe tissue
- Pen and record card

#### PREPARATION

- Find a space that is properly lit.
- Seat the person comfortably.
- Wash your hands with soap and water and dry them with clean tissue paper.

- Ask the patient to tilt their head backwards and look up. Explain that they might taste the drops in their throat.
- Shake the eye drop bottle and inspect it to make sure that you have the correct medication and it has not expired.
- Explain to the patient what you are doing as you instil the drops.
- Gently pull down the patient's bottom eyelid by retracting it with your index finger. This creates a pocket.Hold the bottle a few centimetres above the eye. Press the bottle so as to release one drop of the
- medication into the lower eyelid pocket, without allowing the dropper to touch the eye.
- Wait a second and then release the bottom eyelid.
- Instruct the patient to close their eye and press gently for a few moments with a finger over the corner of the eye next to their nose. This will keep the drops in the eye so that they can take effect. Wipe away any excess medication which leaks out when they close their eyes.
- For the other eye, ask the patient or caregiver to instil the drops so that you can check it is being done properly.
- If you have to put in more than one kind of eye drop at a time, it usually does not matter which eye drop is instilled first. However, allow 3-5 minutes between instilling different eye drops so that the second eye drop does not wash out the first.







FIG. 3: HOW TO INSTIL EYE DROPS. Photo: Pak Sang Lee. Courtesy: Sally Parsley Community Eye Health Journal

# How to apply eye ointment

#### METHOD

- Ask the patient to tilt their head backwards and look up.
- Shake the eye ointment tube and inspect it to make sure that you have the correct medication and it has not expired.
- Explain to the patient what you are doing as you apply the ointment.
- Gently pull down the patient's bottom eyelid by retracting it with your index finger. This creates a pocket.
- Hold the nozzle of the tube approximately 2.5cm above the eye.
- Apply a line of ointment about 1 cm long to the inner edge of the lower eyelid from the nasal corner outwards.
- Ask the person to close their eyes.
- Wipe away any surplus ointment which may emerge when the patient closes their eye.
- Secure the nozzle cap.
- For the other eye, ask the patient or the caregiver to instil the ointment, so that you can check it is done properly.
- Explain to the patient that their vision will be blurry for a few minutes.







FIG. 4: HOW TO APPLY EYE OINTMENT Photo: Pak Sang Lee. Courtesy: Sally Parsley Community Eye Health Journal

#### Eye drop and eye ointment tips

- Do not evert the eyelid too much as instilled eye drops may spill out onto the cheek.
- Do not allow the eye drops to fall onto the cornea as they can sting: this may alarm the patient and cause loss of confidence.
- Do not allow the bottle or tube to touch the eyelid, skin or eye lashes: if it does it will no longer be sterile and have to be discarded.

# **Cleaning eyelids**

#### YOU WILL NEED

- Sterile gauze swabs or cotton buds Do not use large cotton wool balls as these can leave fluff on eyelid margins, become an irritant and even cause complications
- Saline or water

#### METHOD



#### FIG. 5: HOW TO CLEAN THE EYES AND EYELIDS

Photo courtesy: Pak Sang Lee. Courtesy: Sally Parsley Community Eye Health Journal

#### Top lid

- Take a folded gauze swab or cotton bud.
- Moisten the swab or bud with the saline or water.
- Ask the patient to close both eyes.
- With the swab or bud, clean **gently** along the eyelashes in one movement from inner to outer canthus.
- Discard the swab or bud after use. If the eyelashes need further cleaning use a **new** swab or bud.

#### Bottom lid margin

Ask the patient to look up.

With one hand take a moistened sterile swab or bud.

With the index finger of the other hand **gently** hold down the lower eyelid.

- With the swab or bud clean **gently** along the lower eyelid margin in one movement from inner to outer canthus.
- Discard the swab or bud after use. If the lower eye lid margin needs further cleaning use a new swab or bud.

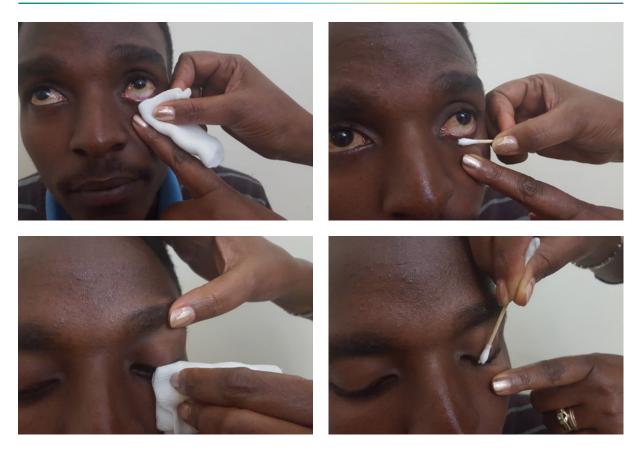


FIG 6: HOW TO CLEAN THE UPPER AND LOWER EYE LIDS Photo: Pak Sang Lee. Courtesy: Sally Parsley Community Eye Health Journal

#### Top lid margin

- Ask the patient to look down.
- With one hand take a moistened sterile swab or bud.
- With a thumb or a finger of the other hand **gently** ease the upper eyelid up against the orbital rim (just below the eyebrow).
- With the swab or bud clean **gently** along the upper eyelid margin in one movement from inner to outer canthus.
- Discard the swab or bud after use. If the upper eye lid margin needs further cleaning use a new swab or bud.

#### LID CLEANING TIPS

- Extra care is needed when cleaning the upper eyelid! Try to keep the cornea in view throughout and avoid touching it with the gauze swab or cotton bud.
- It may be necessary to repeat any part of the above procedure, if the eyelids are **very** sticky, until all debris/discharge is removed.

#### Remember - always use a new swab or bud each time!

# Applying an eye pad

#### YOU WILL NEED

- Adhesive tape
- Eye pad
- Scissors

#### PREPARATION

It is important to remind the patient to try not to open the affected eye under the pad.

- Apply a piece of adhesive tape about fifteen centimetres long to the eye pad, as shown in the picture.
- Ask the patient to close both eyes.
- Position the eye pad diagonally over the closed lids and secure the tape to the patient's forehead and cheek.
- Apply a second and third piece of tape, as shown in the picture, to ensure the eye pad lies flat.
- Eye protection can also be provided with an eye shield. The shield shown in the picture is produced commercially and is called a "Cartella shield".
- Eye pads and shields, if not available as commercial products, can be made very easily as shown in the next protocol.







FIG. 7: HOW TO APPLY AN EYE PAD Photo Courtesy: Pak Sang Lee

# Making an eye pad

#### YOU WILL NEED

- Cotton wool
- Two pieces of gauze
- Scissors

#### METHOD

- Place the cotton wool between the two pieces of gauze.
- Cut the cotton wool and gauze into an oval shape measuring approximately  $5 \times 6$  cm.







FIG. 8: HOW TO MAKE AN EYE PAD Photo Courtesy: Pak Sang Lee

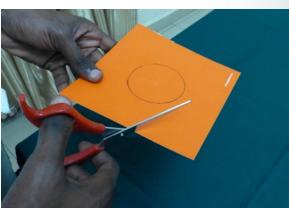
# Making an eye shield

#### YOU WILL NEED

- Adhesive tape
- Thin cardboard or old X-ray film
- Circular object (e.g. cup or glass) approximately eight centimetres in diameter
- Pencil
- Scissors

- Draw a circle on the cardboard. using the circular object and then cut around it.
- Make a single cut into the centre, i.e. half the diameter of the circle.
- Make the cardboard into a cone shape.
- Secure the cone shape with adhesive tape.
- To apply: attach one piece of tape to the cone and place over the affected eye.
- Add a second piece of tape to secure the shield.





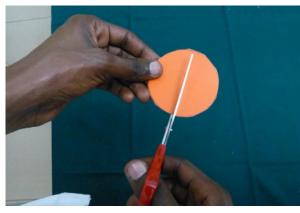










FIG. 9: HOW TO MAKE AN EYE SHIELD Photo Courtesy: Pak Sang Lee

# Applying a hot compress

#### YOU WILL NEED

- Clean cloth
- Bowl of hot water

#### METHOD

- Rinse a clean cloth that has been rinsed with hot water.
- Avoid excessively hot compresses (in order to avoid scalding, particularly in children).
- Hold it to the affected eye for 5–10 minutes.
- Repeat three to four times daily until the lump is gone.

# How to irrigate the eye

This is an Emergency situation - prompt and thorough action is vital.

Do not delay to check visual acuity - **proceed to irrigation** immediately.

Alkali and acid solutions in the eye may cause serious damage to vision.

#### YOU WILL NEED

- Local anaesthetic eye drops if available
- Towel/waterproof sheet
- Cotton buds
- Small holder with pouring spout, e.g. feeding cup or any other container/water bottle
- Irrigating fluid: saline/universal buffer solution, if available. Otherwise, clean water at room temperature should be used.

- Instil local anaesthetic eye drops if available.
- With the patient sitting or lying down, protect the neck and shoulders with the waterproof sheet/towel.
- If there is a chemical burn affecting one eye only then tilt the head so that the water does not flow into the unaffected eye.
- Spread open the eyelids.
- Pour the fluid slowly and steadily, from a distance of no more than 5cm, onto the front surface of the eye, and importantly, inside the lower eyelid and under the upper eyelid. Use copious amounts of fluid, e.g. 1 or 2 big bottles of saline solution.
- Evert the upper eyelid.
- Ask the patient to move the eye continuously in all directions while the irrigation is under way for **at least** 15 minutes (30 minutes is better).
- Remove any residual foreign bodies with moist cotton buds.
- Check and record visual acuity when the procedure is finished.

## How to evert the upper eyelid

Never evert the upper eye lid if a penetrating injury or corneal thinning (e.g. due to ulceration) is suspected.

#### YOU WILL NEED

• Finger, cotton buds, paper clip or small blunt object, e.g. pen top

#### METHOD

- Ask the patient to **look down.**
- With one hand, hold the eyelashes of the upper eyelid between thumb and index finger.
- With the other hand, place a cotton bud or other small blunt object on the upper eyelid midway from the eyelid margin.
- Turn the eyelid against steady and **gentle** pressure on the upper eyelid.
- On completion of the examination and removal of the foreign body, ask the patient to look up and the eyelid will return to its normal position.



FIG. 10: EVERTING AN EYE LID. Photo: Murray McGavin

## How to remove a foreign body

#### YOU WILL NEED

- Local anaesthetic drops, if available
- Cotton buds, or clean cloth
- Saline or cooled boiled water

#### PREPARATION

- **Explain the procedure**, advising the patient that they may experience a brief increase in discomfort but that it is important to relax and keep still.
- Reassure and encourage them by stressing that relief should be felt immediately after the foreign body is removed.

#### METHOD

- Instil a drop of local anaesthetic if available.
- Examine the eye to see if there is a foreign body on the white of the eye.
- Use the moistened tip of the cloth or the cotton bud to remove the foreign body.
- If nothing can be seen, evert the eyelid to check if there is anything on the inside of the lid.
- With a **gentle** upward movement, remove the foreign body using a moistened cotton bud.
- Show the foreign body to the patient: this will reassure them that it has been removed. Ask them to return if the pain is still there the next day.
- Refer if the foreign body cannot be removed or is on the black of the eye.

## How to refer a patient

#### YOU WILL NEED

- Pen and paper or referral form
- Details of the place (and person) to whom you are referring. It is important to know if ophthalmic services are available and when. Some idea of the approximate costs involved is also important.

#### METHODS

Your referral note should include:

- Patient details: Name of the patient, age, sex and address, and date of referral. (Example: Abdulla Ali, age 45M, from Jimna district, 1 June 2017.)
- Referring facility details: Name and telephone number of referring clinic and name of referring person. (Jimma Ndogo Clinic, 05252456, Mrs Kabaka.)
- Information about the eye condition: Patient complaint, details of eye assessment and vision, details of what you did or prescribed ("painful red right eye", "foreign body too deep to remove", "R can see 6/12"," gave tetracycline ointment"). If you have not provided first aid as shown in the algorithms, indicate this and note why in the patient record as well as the referral form.
- Your explanation to the patient and caregiver (if present) should be comprehensive:
- explain why they need to be seen by a specialist eye care provider
- insist firmly but gently on the seriousness of the condition
- state whether the referral is urgent, requiring immediate attention, or can be undertaken at their convenience
- mention the benefits of attending and risks of not attending
- specify where and when the specialist eye care provider is available and the approximate cost
- explain, if a treatment has been started, that that is not definitive.
- Ask the person or caregiver directly "Which questions do you have?" so that they feel at ease posing questions.
- Ask the referral specialist for feedback about the referral, so that you can provide follow-up care, and confirm that your management and referral were correct. If referral was inappropriate you can learn from this experience, and improve your assessment and management next time.

## How to counsel a patient

#### PREPARATION

## "Counselling is a form of helping that is focused on the patient's needs, as perceived by the patient, and not on what others consider these needs to be."

(Fathers P., Stevens S. Improving the patient's experience. Community Eye Health J 2008; 21(68): 55-57)

Successful delivery of eye care will be easier if the eye care team is able to:

- provide information to patients
- instil confidence in patients
- convince them of the need for treatment or follow-up.

Improved communication allows patients to:

- recall information better
- experience greater satisfaction with their health care
- give genuine and informed consent
- cooperate more fully.

Patients tend to spend less time in hospital and recover more quickly. As a result, they are likely to talk about their good experience to other members of their community, thus stimulating better uptake of services.

Remember that every patient must be treated with dignity: this is a basic human right, especially in the health care setting where people feel more vulnerable.

The care delivered to patients must not be in any way restricted because of their age, gender, creed, nationality, political beliefs or other factors. A patient's culture plays an important part in their perception of dignity. It is important to show that you respect the patient's values. For example, ask the patient which name they prefer to use or whether they have a particular title.

#### METHOD

- Create a relation of trust during the initial part of the consultation:
  - greet the patient
  - use polite forms of address
  - listen without interrupting the patient when they are talking
  - appear unhurried
  - use language the patient understands
- Determine what the patient expects from the consultation
- Explain clearly to the patient what you intend to do (i.e. management)
  - describe the plan for managing the current problem
  - mention health promotion and lifestyle issues if relevant
  - try to relate your management plan to the patient's expectations
  - ask the patient for their views or questions about your management plan
- Allow the patient to have the final word about the management plan
- Come to a joint agreement on the decision made:
  - record the agreement clearly on the patient's chart
  - note what the patient has agreed to do and what you intend to do
- Explain how to use the medication if provided, when to return for follow-up or how to attend a referral appointment.

## Counselling protocol on using medications

<b>S</b> implify when to use	Match the treatment to the person's daily routine, e.g. instead of saying "use the drops every 4 hours", say "use the drops every time you have a meal and once before sleep".
Instruct the person	Explain to the person what to do, show them how to do it, let them try. If appropriate, give them written information. Tell the person when they should come to see you next, and explain which signs might indicate that they should come to see you sooner.
Meet patient needs	Find out what the person believes about their problem, and the treatment. Discuss any reasons why they think they may not be able to attend a referral. Follow up the treatment, and help them find solutions.
<b>P</b> atient and family care	Show a caring attitude. Use open-ended questions and active listening. Include the person and the caregiver in decisions made about the treatment. Explain in a clear and direct way, and use language the person can understand. Make sure the person understands: ask if they have any questions.
<b>E</b> valuate use	Ask the person to repeat important instructions. Ask the person how they used the treatment at their next visit.

## How to do a good health talk

#### YOU WILL NEED

- A place for a health talk: it can be held
- in a health facility, at the beginning of the day, when the patients have arrived and before staff attend to them
- in a hospital ward
- on the radio or in the community.
- The subject matter. This can be decided by the health staff, who may have a programme topic for the month. Often the subject matter is related to the medical programme for the day, e.g. on the day of the glaucoma clinic the talk might deal with compliance.
- The talk is usually held in the local language, which makes communication considerably easier.
- Visual aids may be used: posters, or objects like birth control pills.

#### METHOD

• The health talk will be better if the educator keeps the BASE model in mind, and knows what the community's beliefs, attitudes, subjective norms and enabling factors are. This will help the educator to address people's concerns and fears, to deal respectfully with them, to build on useful existing customs and to keep their problems and shortcomings in focus.

This table displays some characteristics of good and bad health talks:

GOOD	BAD
<ul> <li>two-way communication – lots of interaction with the audience</li> <li>short and entertaining – one or two key messages only</li> <li>subject matter practical – deals with important local health issues</li> <li>visual aids used</li> <li>simple, understandable language</li> <li>speaker is friendly, respectful and approachable; audience is encouraged to participate and ask questions</li> <li>creates a jolly atmosphere with lots of laughter and interruptions</li> <li>checks if the audience has understood</li> </ul>	<ul> <li>one-way lecture – only the health worker talks</li> <li>long and boring – too many messages for the audience to remember</li> <li>subject matter theoretical – decided on without considering local priorities</li> <li>no visual aids used</li> <li>lots of technical/English words</li> <li>speaker behaves like a schoolteacher – e.g. a member of audience has to stand up to ask a question, etc.</li> <li>insists on a formal atmosphere, audience silent</li> <li>doesn't check for understanding</li> </ul>

#### **ADVANTAGES OF HEALTH TALKS**

- There is considerable evidence that health talks are effective ways of passing on health information (and passing on knowledge is an important part of empowerment).
- A fairly large number of persons can be brought together for a talk.
- Because staff know their patients and community, messages are usually highly relevant to the health problems and culture of the community.
- Often people come to health care facilities only when they are sick. Health talks convey important information to them about disease prevention which they would otherwise miss.

#### LIMITATIONS OF HEALTH TALKS

- The educator may be talking to people who are already "converted" to modern health care: those who really need the information may not come to the health centre at all.
- People may resent being kept waiting for the sake of a talk they have their lives to live.
- Knowledge can be passed on by a health talk, but not skills. It is also difficult to empower and motivate people just by talking to them.
- Often relatively junior staff members, with less knowledge and experience, are obliged to deliver the talk.

## PART 6

# TRAINING CHECKLISTS

## Assessing whether a patient has an eye problem

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Finds a space that is properly lit		
Seats the person comfortably		
Explains to the person that they are going to examine their eyes		
Looks at each eye		
1. The white should be white (with a few red veins)		
2. The black should be black		
3. The eyes should be the same size		
4. The eyes should look straight ahead		
Asks the person to close their eyes		
5. The lids should open and close normally (lashes should face outwards, not inwards, lids should be smooth)		
Records what you see in the patient's eyes		
Accorcov's nome		

#### Assessor's name:

Assessor's signature:

## Managing a person with an eye problem (choosing the correct algorithm)

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Seats the person comfortably in a space with good light		
Greets the person warmly and records name, age, sex and date		
Asks the person "Why did you come and see me?"		
Records whether the patient reports any pain, redness, loss of vision, eye injury, swellings or lumps on their lids or any other complaints		
Explains to the person that they are going to examine their eyes		
Checks whether the patient is a child aged less than 5 If YES, uses algorithm 5 and examines as outlined below		
Determines whether the patient reports an injury (blow, foreign body, burn) If YES uses algorithm 4		
Examination protocol for all patients		
<ol> <li>Tests and record distance vision (except for small children) If abnormal uses algorithm 1</li> </ol>		
2. Tests and record near vision (if patient is aged 40 and above) If abnormal uses algorithm 1		
<ol> <li>Checks and records if the white of the eye is white (with a few red veins)</li> <li>If NOT then uses algorithm 2</li> </ol>		
4. Checks and records if the black of the eye is black If NOT then uses algorithm 1 or 2		
5. Checks and records if the eyes are the same size If NOT uses algorithm 3		
6. Checks and records if both eyes look straight ahead If NOT uses algorithm 3		
<ol> <li>Checks and records if the lids open and close normally (the lashes should face outwards, not inwards, lids should be smooth with no swelling and the eyelashes clean) If NOT uses algorithm 3</li> </ol>		
8. Selects the correct algorithm option for this patient and goes through it until a management decision is reached		
9. Carries out the management plan indicated by the algorithm (e.g. immediate treatment or referral)		

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Records the chosen management plan.		
Assessor's name:		
Assessor's signature:		
Date:		

## Measuring distance vision

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Stands next to the patient and gives clear and concise instructions		
Checks that the patient understands the principle of the Es		
If the person has spectacles for distant viewing they should be wearing them		
Stands at the correct distance (3m away)		
Tests the right eye. Tells the patient: "Cover your left eye and show me the direction of the arms of this letter E"		
Makes sure the other eye is properly covered		
Points to the 6/60 E without obscuring it		
If the person cannot see the 6/60 E, records "R cannot see 6/60"		
<ul> <li>If the person can see the 6/60 E, tests with the 6/12 E</li> <li>If the person cannot see at least 4 of 6/12 Es, records "R can see 6/60, cannot see 6/12"</li> <li>If the person can see at least 4 of 6/12 Es, records "R can see 6/12"</li> </ul>		
Now tests the left eye. Tells the patient: "Cover your right eye and show me the direction of the arms of this letter E"		
Records vision accurately for each eye		
Interprets distance vision measurement correctly as either normal (can see 6/12 with both R and L eye) or abnormal (cannot see 6/12 or 6/60 with R or L or both eyes)		

#### Assessor's name:

#### Assessor's signature:

## Measuring near vision

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Stands next the patient and gives clear and concise instructions		
Checks whether the person has near vision spectacles and if YES, asks them to put them on		
Holds chart at the correct distance (40cm), and checks using the near vision string		
Checks that patient's eyes are both open		
Asks the person if they can see the N8 line		
Classifies near vision measurement as normal ("can see N8 with eyes") or abnormal ("cannot see N8")		
Records near vision accurately: "Near can see N8" or "Near cannot see N8"		
Asks patient to rate instructions from 1 to 10 (1 very confusing to 10 very clear)		
Assessor's name:		

Assessor's signature:

## Determining the power of near spectacles

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Checks both eyes are open		
Asks the person to hold the chart at 40cm		
Points to the print on the N8 chart and confirms that the person cannot see it clearly		
Gives them the +1.50 spectacles, and asks whether they can see the N8 line		
If the patient cannot see N8 tries the next stronger power		
If the person still cannot see N8 then moves up another power until they say they can see clearly		
Once they can see clearly uses the weaker power and checks whether they can still see. Records the weakest power with which N8 can be seen on their chart		
Tells the person these spectacles are to be worn for near vision only, and that their distance vision will be blurred: asks them to look up and confirm this		
Asks the person to clean their spectacles by washing them with soap and water and drying with a soft cloth		
Records the power of the spectacles on the person's record card and on a piece of paper given to them personally		
Advises the person that they will probably need a stronger power in about 2 years		
Asks the person if they have glaucoma or a relative with glaucoma: if YES, refers for a complete eye check		
Asks the person if they have diabetes, and if YES, advises them to have a complete eye check once a year		
Assessor's name:		

#### Assessor's signature:

## Instilling eye medication (drops and ointment)

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Seats the person comfortably		
The trainee washes his or her hands before doing anything else		
Checks that the medication is correct and has not expired		
Explains to the patient what they are going to do: asks the patient to tilt their head backwards and look up		
Gently pulls down the patient's bottom eyelid with the index finger		
Puts drops in right eye and ointment in left eye without touching the eye or lids		
Asks the person to close their eyes (and press gently with one finger over the corner of the eye next to the nose for few moments if drops have been instilled)		
Wipes away excess drops or ointment		
Records information about the eye medication administered		
Asks the patient to rate their degree of gentleness (1 to 10) (1 "too rough!" to 10 "almost didn't feel it")		

#### Assessor's name:

Assessor's signature:

## Cleaning the eyes

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Seats the person comfortably		
The trainee washes his or her hands before doing anything else		
Making and securing an eye pad		
Places the cotton wool between the two pieces of gauze		
Cuts the cotton wool and gauze into an oval shape measuring approximately 5 × 6 cm		
Applies a piece of adhesive tape, about 15cm long, to the eye pad		
Asks the patient to close both eyes		
Positions the eye pad diagonally over the closed lids, secures the tape to the forehead and cheek		
Applies a second and third piece of tape		
Making and securing an eye shield		
Makes a circle with a single cut towards the centre, i.e. half the diameter of the circle, and uses adhesive tape to make a cone		
Applies the shield by attaching two pieces of tape to the cone		
Asks the patient to rate their degree of gentleness (1 to 10) (1 "too rough!" to 10 "almost didn't feel it")		
Assessor's name:		
Assessor's signature:		

## Applying a hot compress

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Seats the person comfortably		
The trainee washes his or her hands before doing anything else		
Rinses a clean cloth with hot water		
Avoids excessively hot compresses (in order to avoid scalding, particularly in children)		
Holds it to the affected eye for 5–10 minutes		
Asks the patient to repeat the procedure three to four times daily until the lump is gone		
Asks the patient to rate the hotness of the compress (1 to 10) (1 "too hot" to 10 "too cold")		
Assessor's name:		
Assessor's signature:		

## Everting an eyelid

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Asks the patient to <b>look down</b>		
With one hand, holds the eyelashes of the upper eyelid between thumb and index finger		
With the other hand, places a cotton bud or paper clip or other small blunt object midway from the eyelid margin		
Turns up the eyelid against steady and gentle pressure on the upper eyelid		
On completion of the examination and removal of the foreign body, asks the patient to look up so that the eyelid can return to its normal position		

#### Assessor's name:

#### Assessor's signature:

## Irrigating an eye

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Instils local anaesthetic eye drops if available		
With the patient sitting or lying down, protects the patient's neck and shoulders with the waterproof sheet or towel		
If a chemical burn affects one eye only, tilts the patient's head so that the irrigation water does not flow into the other eye		
<ul> <li>Spreads open the eyelids. Pours the fluid slowly and steadily, from a distance of no more than 5cm</li> <li>onto the front surface of the eye</li> <li>inside the lower eyelid</li> <li>under the upper eyelid (everts the upper eyelid)</li> <li>Asks the patient to move the eye continuously in all directions</li> </ul>		
Irrigates for <b>at least</b> 15 minutes, 30 minutes is better		
Checks and records visual acuity when the procedure is finished		
Assessor's name:		

Assessor's signature:

## Removing a foreign body

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Explains the procedure, advising the patient that they may experience a brief increase in discomfort but that it is important to relax and keep still		
Reassures and encourages the patient by stressing that relief should be felt immediately once the FB is removed		
Instils a drop of local anaesthetic if available		
Examines the eye to establish whether there is a foreign body on the white of the eye. Uses the moistened tip of cloth or cotton bud to remove the foreign body		
If nothing can be seen, everts the eyelid to check where there is a foreign body on the inside of the lid. With a gentle upward movement, removes the foreign body using a moistened cotton bud		
Shows the foreign body to the patient in order to reassure them that it has been removed, and asks them to return if they are still in discomfort the next day		
Refers the patient If the foreign body cannot be removed or is on the black of the eye		

#### Assessor's name:

#### Assessor's signature:

## Counselling

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Creates a trusting relationship during the first part of the consultation:		
Greets the patient		
Uses a polite form of address		
Listens without interrupting when the patient recounts their history, appears unhurried		
Uses language the patient understands		
Determines what the patient expects from the consultation		
Clearly explains to the patient what he or she intends to do (i.e. management)		
Describes the plan for managing the current problem and mentions health promotion and lifestyle issues if relevant		
Tries to link his or her management plan to the patient's expectations		
Asks the patient for their views or questions about his or her management plan		
Allows the patient to have the final word about the management plan		
Comes to a joint agreement on the decision made		
Records the agreement clearly on the patient's chart and notes what the patient has agreed to do and what he or she intends to do		
Explains how to use the medication if provided, making the instructions easy to remember		
Explains when to return for follow-up or how to attend a referral appointment		
Assessor's name:		
Assessor's signature:		

## Good referral process

Trainee's name:	THE TRAINEE:	
STEPS	did this step well	did not do or only partly did this step
Referral note		
Enters patient details: patient name, age, sex and address, and date of referral		
Enters referral facility details: name, telephone number of referral clinic and name of referral person		
Provides information about the eye condition: patient's complaint, details of eye assessment and vision, details of what was done or prescribed, or not done		
Explanation		
Tells the patient why they need to be seen by a specialist eye care provider		
Insists firmly but gently on the seriousness of the condition		
States whether the referral is urgent, requiring immediate medical attention or whether it can be undertaken at their convenience		
Mentions the benefits of attending and risks of not attending the referral appointment		
Specifies where and when the specialist eye care provider is available and the approximate cost		
Explains if a treatment has been started that it is not definitive		
Asks directly "Which questions do you have?" and provides the information required		
Requests feedback about the referral, so that follow-up care can be provided, and confirms that management and referral were correct. (If referral was inappropriate the trainee can learn from this experience, improving assessment and management next time.)		
Assessor's name:		
Assessor's signature:		

## Preparing a good health talk

#### Trainee's name:

STEPS	did this step well	did not do or only partly did this step
Building a good relationship		
Introduces her or himself		
Uses appropriate forms of address when speaking to group members		
Is friendly and polite		
Is familiar with and sympathetic to group members' situation and problems		
Respects and tries to understand group members' beliefs		
Doesn't blame or condemn group members		
Doesn't appear to be in a hurry		
Praises enterprising effects by group members		
Listens without interrupting when group members are speaking		
Is honest about her or his opinions		
Making the message clear		
First finds out what other group members know		
Presents just enough facts and detail ("must knows") to make the message clear		
Presents facts in a logical way		
Uses familiar words and avoids jargon		
Uses short, simple sentences		
Gives the impression of knowing what he or she is talking about		
Seeks questions, interacts with group members, encourages their participation		
Uses two-way communication to make sure the messages are understood		
Uses relevant visual aids in an appropriate way		
Admits to not knowing when appropriate, and promises to rectify areas of ignorance		
Success		

#### Trainee's name:

STEPS	did this step well	did not do or only partly did this step
Ensures that all group members have understood the talk		
Ensures that the concluding message is accepted by all group members		
Assessor's name:		
Assessor's signature:		
Date:		



# APPENDICES



Appendices I 87

## PEC record card and referral card

Name ...... Female 🛛 Male

Age: ..... Date:....

Address.....

**Presenting complaint** (tick as many boxes as required. Indicate "R" or "L" or mark "both" if both eyes affected)

□ Redness	R L	□ with pain R L	□ with discharge	□ itchy	□ dry
□ Loss of visio	n R L	□ poor distance vision	□ near vision	🗆 gradual	🗆 sudden
□ Eye injury	R L	□ chemical	□ hot liquid/ flame	🗆 foreign body	□ knock/blow
🗆 Lids	R L	□ whole eyeball swollen	□ lump on lids	□ growth on eyeball	□ lashes turned in
□ Pain	R L	□ severe pain	□ pain not severe		
□ Other sympt	oms				

Eye Assessment (tick as many boxes as required, adding details as necessary)

	Right eye Deta	ails	Left eye Detai	ls
Distance vision	□ can see 6/60 but not 6/12		□ cannot see 6/60 □ can see 6/60 but not 6/12 □ can see 6/12	
Near vision			□ cannot see № □ can see N8	18
The white of the eye is white (with a few red veins)	□ Yes	□ No	□ Yes	□ No
The black of the eye is black and shiny	□ Yes	□ No	□ Yes	□ No
The eyes are the same size	□ Yes	□ No	□ Yes	□ No
The eyes look straight ahead	□ Yes	□ No	□ Yes	□ No
The lids are normal: close well, no growths	□ Yes	□ No	□ Yes	□ No
The lashes should face outwards; clean	□ Yes	□ No	□ Yes	□ No
Other signs of abnormality	□ Yes	□ No	□ Yes	□ No

anagement (Pl	ease provide details of each managemen	t option)	
Vanagement	□ First Aid	□ Medication	
Referral	□ Urgent	□ Non-urgent	
Advice given:			
Other			
ealth facility:			
ame:			

## Healthy eyes — Messages for all ages

- 1. Use protective eyewear when working with objects that might damage your eyes: welding, chemicals, projectile metal or wood, etc.
- 2. If chemicals, or substances that burn or sting, come into contact with your eye, immediately rinse your eye with clean water for at least 15 minutes.
- 3. If you have an eye problem go to your nearest health care facility as soon as possible. Go **immediately** if you have an eye injury, if your eyes are painful or if your vision suddenly becomes poor.
- 4. Do not put any medication into your eyes unless prescribed by a health care provider.
- 5. Protect your eyes from excessive sunlight with, for example, hats, scarves, sunglasses or umbrellas.
- 6. If you have diabetes prevent your eyes from going blind by having a complete eye examination at least once a year, and by checking your blood sugar regularly.
- 7. If you have a relative with glaucoma, have an eye examination for glaucoma at least once a year.
- 8. If you have problems seeing small nearby objects or when reading, you may need glasses for near work.

## HEALTH MESSAGES WHICH ARE IMPORTANT FOR EYE HEALTH BUT ARE ALSO INTEGRATED INTO OTHER PROGRAMMES:

9. Wear seat belts to avoid injuries including eye injuries.

- 10. Keep hands and faces clean to avoid infections, including eye infections.
- 11. Protect your health, including your eye health, by not smoking.

### Healthy eye messages for children, mothers and caregivers

- 1. Prevent serious eye infections in newborn infants: clean their eyes immediately after birth and if available, instil antibiotic eye medication.
- 2. A baby with swollen eyelids and severe eye discharge needs treatment immediately: seek help from the nearest health facility.
- 3. To avoid your child being lifelong blind, seek help from an eye care provider as soon as possible if:
- the child's eyes do not look normal
- the child does not look towards or follow a face, bright object or light source
- or if someone thinks the child may have eye or vision problems.
- 4. Children should not play with or near sharp objects to avoid eye injuries.

## HEALTH MESSAGES WHICH ARE IMPORTANT FOR EYE HEALTH BUT ARE ALSO INTEGRATED INTO OTHER PROGRAMMES:

- 1. Promote exclusive breastfeeding for six months.
- 2. Mothers and children should be fully immunized including against rubella and measles.
- 3. Regular vitamin A supplementation of pre-school children is important for good vision and healthy growth.
- 4. Children should eat foods like fish, dark green leafy vegetables, carrots and fruits to keep their eyes healthy.
- 5. Children should be secured in car seats and with seat belts.

## Core list of consumable items

Day 1		NU	JMBER OF I	TEMS NEED	ED
_		For the instructor	For each group of 3 participants	For each participant	Undefined: generous quantity
Session 1	<ul> <li>PowerPoint presentation: "Why primary eye care training?"</li> </ul>	1			
	<ul> <li>Poster: "Why primary eye care training?"</li> </ul>	1			
	<ul> <li>Trainee course manuals</li> </ul>			1	
	<ul> <li>Pre-test exam papers and answer sheets</li> </ul>			1	
Session 2	<ul> <li>Poster: A normal eye with its surrounding tissues</li> </ul>	1			
	<ul> <li>Set of photos: Abnormal eyes and surrounding tissues</li> </ul>		1		
	<ul> <li>Checklist: "Assessing for the presence of an eye problem"</li> </ul>			1	
	<ul> <li>PowerPoint presentation: "Normal eye and abnormal eyes"</li> </ul>	1			
	<ul> <li>Handout: "Normal eye and abnormal eyes"</li> </ul>			1	
Session 3	<ul> <li>PowerPoint presentations or posters of WHO PEC algorithms</li> </ul>	1			
	<ul> <li>Copies of WHO PEC algorithms for all participants</li> </ul>			1	
Session	• Poster: algorithm 1 (Loss of vision)	1			
4	<ul> <li>Sample cases for algorithm 1 (distance vision)</li> </ul>		1		
	<ul> <li>Plasticized handout: algorithm 1 (Loss of vision)</li> </ul>			1	
Session	• 3-metre pieces of string		1		
5	• 3-metre distance vision chart		1		
	• Checklist: "Distance VA testing"			1	
Session 6	<ul> <li>Sample cases for algorithm 1 (near vision)</li> </ul>		1		
Session	<ul> <li>Presbyopic patient</li> </ul>		1		
7	<ul> <li>N8 reading par. charts</li> </ul>			1	
	Checklist: "Near VA testing"			1	
	• Set of 4 reading glasses (+1.5, +2.0, +2.5, +3.0)	enertation: "Why tarining?"1IIimary eye care11nanuals11apers and answer11leye with its ues11bnormal eyes and ues11bnormal eyes and ues11ssing for the eye problem"11al eyes"11al eyes"11al eyes11entation: "Normal al eye and11entations or PEC algorithms11PEC algorithms ts11pect algorithm 111out: algorithm 11out: algorithm 11			
	<ul> <li>Checklist: "Dispensing reading glasses"</li> </ul>		1		

Day 1		NU	UMBER OF I	TEMS NEED	ED
		For the instructor	For each group of 3 participants	For each participant	Undefined: generous quantity
Session 8	<ul> <li>Flipchart poster with details (places and persons) of local clinical and rehabilitation referral sites for eye patients</li> </ul>	1			
	<ul> <li>Prepared list of cases for referral to use in "drill"</li> </ul>	1			
	<ul> <li>Sample case needing referral (different for each group)</li> </ul>		1		
	<ul> <li>Checklist: "Giving patients good referral information"</li> </ul>			1	
	• Writing paper			1	

NOTE: items already provided for an earlier session are not mentioned again if needed for a later one.

Day 2		NU	JMBER OF I	TEMS NEED	ED
		For the instructor	For each group of 3 participants	For each participant	Undefined: generous quantity
Session	• Poster: algorithm 2 "Red eye"	1			
9	<ul> <li>Sample cases for algorithm 2 "Red eye"</li> </ul>		1		
	<ul> <li>Plasticized handout: algorithm 2 "Red eye"</li> </ul>			1	
Session	Bottle of artificial tears		1		
10	• Tube of tear gel		1		
	<ul> <li>Scissors and sheet of cardboard</li> </ul>		1		
	• Roll of adhesive plaster		1		
	<ul> <li>Checklist: "Instilling eye medication"</li> </ul>			1	
	• Checklist: "Cleaning an eye"			1	
	<ul> <li>Checklist: "Making and applying eye patches and shields"</li> </ul>			1	
	• Cotton wool				1
	• Paper towels				1
	• Gauze swabs				1
Session 11	<ul> <li>Sample cases for algorithm 3 "Swelling/lump on eye"</li> </ul>	1			
	<ul> <li>Poster: algorithm 3 "Swelling/ lump on eye"</li> </ul>		1		
	<ul> <li>Plasticized handout: algorithm 3 "Swelling/lump on eye or abnormal lashes"</li> </ul>			1	
Session	• Bowl of warm (not hot) water		1		
12	<ul> <li>Checklist: "Making and applying a warm compress"</li> </ul>			1	
Session 13	• Poster: algorithm 4 "Trauma"	1			
	<ul> <li>Sample cases for algorithm 4 "Trauma"</li> </ul>		1		
	<ul> <li>Plasticized handout: algorithm 4 "Trauma"</li> </ul>			1	

Day 2		NUMBER OF ITEMS NEEDED			
		For the instructor	For each group of 3 participants	For each participant	Undefined: generous quantity
Session 14	<ul> <li>Peeled hard-boiled eggs prepared with small superficial and embedded "foreign bodies" (e.g. sawdust)</li> </ul>		1		
	<ul> <li>Bottle of anaesthetic eye drops (if available)</li> </ul>		1		
	<ul> <li>Checklist: "Removing superficial foreign bodies"</li> </ul>			1	
	<ul> <li>Cotton wool buds</li> </ul>				1
Session 15	<ul> <li>Poster: algorithm 5 "Children aged 5 years and under"</li> </ul>	1			
	<ul> <li>Sample cases for algorithm 5 "Children aged 5 years and under"</li> </ul>		1		
	<ul> <li>Plasticized handout: algorithm 5 "Children aged 5 years and under"</li> </ul>			1	
Session 16	• A "satisfied patient"	1			
	• Sample case needing counselling		1		
	<ul> <li>Checklist: "Counselling eye patients effectively"</li> </ul>			1	
Session 17	<ul> <li>Poster with eye health promotion messages</li> </ul>	1			
	<ul> <li>Handout: "Eye health promotion messages"</li> </ul>			1	
	<ul> <li>Checklist: "Presenting a good eye health talk" for each participant</li> </ul>		1		
Session 18	<ul> <li>Preparing a health talk</li> </ul>		1		

Day 3		NUMBER OF ITEMS NEEDED				
		For the instructor	For each group of 3 participants	For each participant	Undefined: generous quantity	
Session 19	<ul> <li>Set of cases for participants to practise recording</li> </ul>		1			
	<ul> <li>Agreed HMIS forms (e.g. for the specific country and the WHO- AFRO eye care project)</li> </ul>			1		
	<ul> <li>Checklist: "Correctly recording patient data"</li> </ul>			1		
	<ul> <li>About 10 mixed sample cases: use any of the 5 algorithms and the "Additional condition" document to manage them)</li> </ul>	1				
	• A big slab of chocolate or gift pens	1				
Session 19 (Optional)	• Poster: "Additional Conditions"	1				
	• Sample cases for the additional conditions		1			
	• Plasticized handout: "Additional Conditions"			1		
Session 20	• Eye patients		7			
	• Eye care facilitators		1			
	• Torch		1			
	• Set of treatment materials*		1			
	<ul> <li>Checklist : "Managing a person with an eye problem"</li> </ul>			1		
Session 21	<ul> <li>Assessment papers (identical to the pre-test) and answer sheets</li> </ul>			1		
Session 22	Course evaluation forms			1		
	• Attendance certificates (prepared the previous day)			1		
	<ul> <li>PEC packs for each participant</li> </ul>			1		

\*This list of equipment includes all therapeutic consumable items indicated in the protocols attached to the algorithms and "Additional conditions" document.

- Antibiotic eye drops and ointment; sodium cromoglycate drops, tetanus toxoid with syringes and needles, paracetamol tablets and syrup
- Swabs, cotton wool, cotton buds, eye pads and shields, adhesive plaster, paper towels
- Water and vessels for irrigation, warm water for compresses
- Soap for hand washing
- Set of 4 glasses for near vision testing
- Set of Distance and near N8 par. testing charts

### Sample case studies

#### VISION LOSS – DISTANCE VISION

John: "Nurse – I've noticed that when I'm in class I can't see the blackboard unless I sit near the front. This is difficult for me as I'm always late and find the front desks taken."

Nurse: "How old are you?"

John: "I'm 22 years old and in my second year at University."

Nurse: "When did you first notice this problem?"

John: "It wasn't so bad when I was in first year but now it's worse."

Nurse: "Let me test your vision." He finds he can see 6/60 but not 6/12.

#### 1. VISION LOSS – DISTANCE VISION

Margaret: "My son, these days when I look at things I feel like I'm looking through smoke." Nurse: "How long has this been happening?"

Margaret: "I noticed it first about 8 months ago but I feel the smoke is getting thicker." Nurse: "Margaret, I want you to relax and I will examine your eyes."

#### 2. SUDDEN VISION LOSS

Juma and Halima come into the clinic looking frantic.

Juma: "Nurse, I'm so worried. My wife has been coughing terribly all night. Then when we woke up she said she couldn't see anything with her right eye."

Nurse: "I'm sorry to hear that. Halima can you describe what happened?"

Halima: (Cough, cough) "My son, I'm sure I'll be blind forever. I've been having this bad cough. It disturbs me so much at night. But last night I felt a strange feeling in my eyes." (Cough, cough) "I didn't think so much about it as it was dark. I was shocked this morning to find my right eye is only seeing darkness. The funny thing is I feel no pain."

Nurse: "Halima have a seat. Here is some water. Drink some." (Halima drinks)

Nurse: "Let me examine your eyes, and then we will talk. I'll have to give you something for that cough as well."

(Finds Halima cannot see 6/60) What does the nurse do?

#### 3. VISION LOSS -- NEAR VISION 1

Mr Hassan: "My daughter, I have a problem reading my bible these days. The letters have become too small."

Nurse: "How old are you Mr Hassan?"

Mr Hassan: "I'm still young as my wife will tell you; I'm now 59 years old".

Nurse: "Let me examine your eyes and then I'll tell you how I can help you".

#### Pretends to examine patient

**Nurse:** "Mr Hassan, your eyes look completely normal and you can see very far". Mr Hassan: "I know that, nurse. I just can't understand why I can't see my bible. Is it the devil tricking me?"

#### 4. VISION LOSS – NEAR VISION 2

Mrs Kamanzi: "My son, I have a problem putting thread into a needle these days".

Nurse: "Have a seat. I'm sure I can help you. How old are you Mr Kamanzi?"

Mrs Kamanzi: "Only 43 years old. My last born is still breast feeding".

Nurse: "Let me examine your eyes and then I will tell you how I can help you".

#### Pretends to examine patient

**Nurse:** "Mrs Kamanzi, your eyes look very good. You can see very far. But I know what your problem is. I will help you".

#### 5. VISION LOSS -- DISTANCE AND NEAR

Mr Mulumba: "Jambo, my daughter, I've a problem with my eyes. I make diamond rings but these days I can't see the small pieces of diamond".

Nurse: "How is Bukavu? (Karibu Rwanda). Let me examine your eyes and then I'll tell you how I can help you".

Nurse: "Mr Mulumba, how old are you? I think I know what your problem is. Age is catching up". Mr Mulumba: "Bien sur.....I reached 50 last week".

Nurse: "OK, let me examine you now".

Nurse examines Mr Mulumba's distance VA and finds it abnormal (Can see 6/12 but not 6/60). The eyes look normal.

What does she do next?

#### 6. SAMPLE CASE – ALGORITHM 3

Misha walks into the clinic with half her face covered with a scarf Nurse: "How can I help you?"

Misha: "I don't want anyone to look at my face. Yesterday my lower lid was a bit itchy but when I woke up this morning, I have this painful lump and my face looks so ugly".

Nurse: "Let me have a look, Misha".

#### Nurses sees a small red lump on Misha's right lower lid.

Nurse: "Misha, you don't look ugly and you don't need to cover your face. Is this the first time you have this problem?"

Misha: "No, last year I had a similar one on the upper lid but it disappeared after a few days". Nurse: "OK, Misha let me test your sight then I'll tell you how I will help you with this". Nurse finds vision is 6/12 both eyes

7. A young tourist Pierre, 26 years old, is brought to Kinyinya Health Centre with a severe injury of the face after falling off a taxi motorbike. One of his eyes is bleeding a lot and he is very worried as he cannot see at all. However, when you clean away the blood you find that he can see normally.

## This case can be used for algorithm 4 "Trauma" regarding counselling (reassuring the patient that he is not blind) and referral

- 8. Jean de Dieu is a trainee at the University of Brilliance. He went fishing on Lake Kivu and had a nasty accident. You look at his eye and almost faint. The fish hook has gone right through. You must refer him to a specialist immediately. What do you do next?
- 9. Mrs Okonkwo saw you yesterday at Freetown health centre and you gave her reading glasses. She was very happy. Today she has brought her baby. The baby was born with only one eye but Mrs Okonkwo was too shy to ask for help before. Her mother-in-law had told her that such a baby is a curse to the family. But now she is so happy with what you did for her yesterday she is sure you can help her. Mrs Okonkwo shows you her 5-month old baby. You realize that the baby has one seeing eye; the other eye is shrunken and looks completely white. What do you do?

## This case can be used for algorithm 5 "Children aged 5 years and under" regarding counselling and referral

PowerPoint photo cases are available in the presentation "Normal and abnormal eyes". Create additional case studies as appropriate.

