



सत्यमेव जयते

Ministry of Health & Family Welfare
Government of India



राष्ट्रीय स्वास्थ्य मिशन



Training Manual on Eye Care for Community Health Officer at Ayushman Bharat – Health and Wellness Centres





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2021

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List of Abbreviations

AB-HWC	Ayushman Bharat- Health and Wellness Centre
AB-HWC-SHC	Ayushman Bharat- Health and Wellness Centre- Sub- Health Centre
AB-HWC-PHC	Ayushman Bharat- Health and Wellness Centre- Primary Health Centre
AF	ASHA Facilitator
ANM	Auxiliary Nurse Midwife
AWW	Anganwadi Worker
CBAC	Community Based Assessment Checklist
CHC	Community Health Centre
CHO	Community Health Officer
CPHC	Comprehensive Primary Health Care
DH	District Hospital
DM	Diabetes Mellitus
ECG	Electrocardiogram
HIV	Human Immunodeficiency Virus
HTN	Hypertension
IEC	Information, Education and Communication
IOL	Intra Ocular Lens
IOP	Intra Ocular Pressure
IU	International Unit
LE	Left Eye
MAS	Mahila Arogya Samiti
MPW	Multi-purpose Worker
MO	Medical Officer

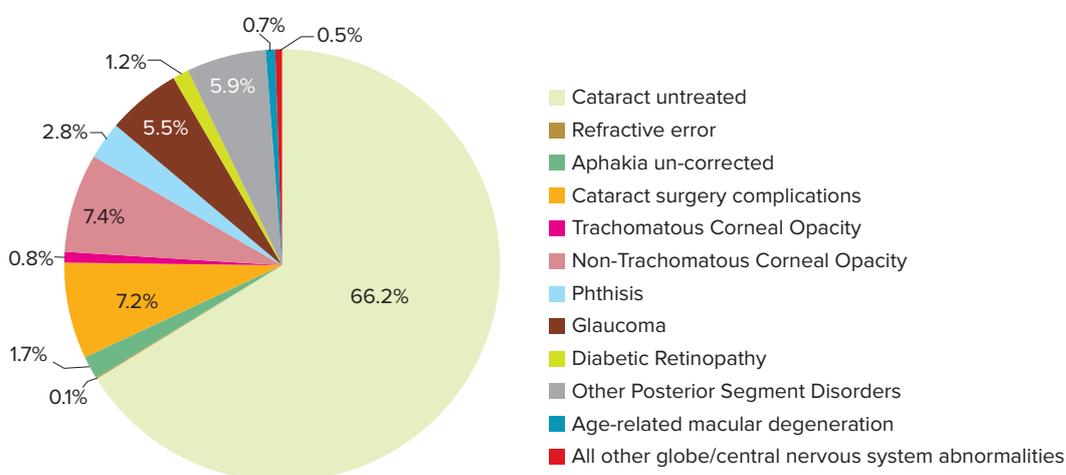
NCD	Non-Communicable Diseases
NGO	Non-Governmental Organisation
NPCB&VI	National Programme for Control of Blindness and Visual Impairment
OA	Ophthalmic Assistant
RAAB	Rapid Assessment of Avoidable Blindness
RBS	Random Blood Sugar
RBSK	Rashtriya Bal Swasthya Karyakram
RE	Right Eye
RIO	Regional Institutes of Ophthalmology
SAM	Severe Acute Malnutrition
SDH	Sub-District Hospital
UHSND	Urban Health, Sanitation and Nutrition Day
VC	Vision Centre
VHSNC	Village Health, Sanitation and Nutrition Committee
VHSND	Village Health, Sanitation and Nutrition Day

CHAPTER 1

Introduction

In the last few years, various components of the Comprehensive Primary Health Care (CPHC) package of services under Ayushman Bharat have been rolled out and are currently being implemented across the country. Some of the newer services introduced in this package include screening, prevention, control and management of non-communicable diseases, screening and basic management of mental health ailments, care for common ophthalmic (eye) and ear, nose and throat problems, basic oral health care, elderly and palliative health care services and emergency medical services. These additional packages are aimed to ensure that every citizen in this country will be able to access comprehensive services at the place they live or nearby to them.

Eye problems are very common and can occur from infancy to old age. Many people must have come to you with complaints about some eye disorders at some time. Most of these are preventable and easily treatable if detected in the early stages. A large proportion of these disorders (more than 80%) are preventable or easily treatable. Moreover, disability arising due to these diseases seriously affects an individual's potential of leading a socio-economically independent life. Hence, as a Community Health Officer (CHO), it is vital for you to not only promote activities leading to better eye care in your area, but also to identify early eye disease conditions and its associated risk factors, which would need intervention by a doctor for prevention of blindness.



Source: Causes of blindness in 2019 in population aged ≥ 50 years, National Blindness & Visual Impairment Survey India, 2015-2019- A Summary Report.

What are the Problems of the Eye?

India has around 4.9 million blind people and 32.9 million people with visual impairment (presuming population of India as 136 crores)¹. Refractive error and Cataract are the most common causes of visual impairment in the country.

The National Programme for Control of Blindness and Visual Impairment (NPCB&VI) was launched in 1976 to reduce the overall prevalence of blindness in India to below 0.3%. Under the National Programme, some of the tertiary care centres were upgraded to Centres of Excellence [Regional Institutes of Ophthalmology (RIO)] focusing on the development of manpower and infrastructure. In order to facilitate the outreach activities, more than 3000 Vision Centres (VC) were started in providing primary eye care services. These peripheral Vision Centres, staffed with a trained Ophthalmic Assistant (OA), can carry out comprehensive eye examination and management of simple eye diseases. Currently, the plan is to establish Vision Centres at the level of Community Health Centres (Secondary Level Health Centres) later scaling up to the Primary Health Centre Level.

Now, with the introduction of Ayushman Bharat, this service will be expanded to the Ayushman Bharat-Health and Wellness Centres (AB-HWC) for the community members.

Most of the cases with eye problems will be referred to the nearest AB-HWCs while high-risk cases will require referral to the Vision Centres (wherever available) and to the Eye specialist/Eye doctor at the Community Health Centre (CHC)/Sub-District Hospital (SDH)/District Hospital (DH) or other higher health facilities for complete diagnosis and treatment.

You, present at the Ayushman Bharat- Health and Wellness Centre- Sub- Health Centre (AB-HWC-SHC) are responsible for making referral to the Medical Officer (MO), heading the Ayushman Bharat- Health and Wellness Centre- Primary Health Centre (AB-HWC-PHC). In some cases, referrals to higher facilities will also be required (this will be in consultation with the MO). Multi-Purpose Worker/Auxiliary Nurse Midwife (MPW/ANM) will assist you in undertaking this task. Inform the MO regarding any visits to the health facility undertaken by any individual in your community for Eye Care to ensure regular follow-up of these individuals.

You will continue to provide support to ASHA, ASHA Facilitators (AFs) and MPW/ANM in undertaking their tasks and work under the overall supervision of the MO. MO will monitor, support and supervise you in delivery of Eye Care services to the community in your area.

This Training Manual builds on your existing knowledge and skills by providing you with new information and skills.

This Training Manual has the following content:

1. Overview of Anatomy of Human Eye.
2. Health Promotion for Good Eye Care.
3. Assessing a person with an Eye Problem, Common Eye Complaints and How to Approach them.
4. Overview and management of Common Eye Problems at Primary Care Level.
5. Service Delivery Framework and Roles and Responsibilities of Community Health Officer (CHO) in Eye Care.

1. National Blindness Survey- The Rapid Assessment of Avoidable Blindness (RAAB) survey India- 2015-2019.

CHAPTER 2

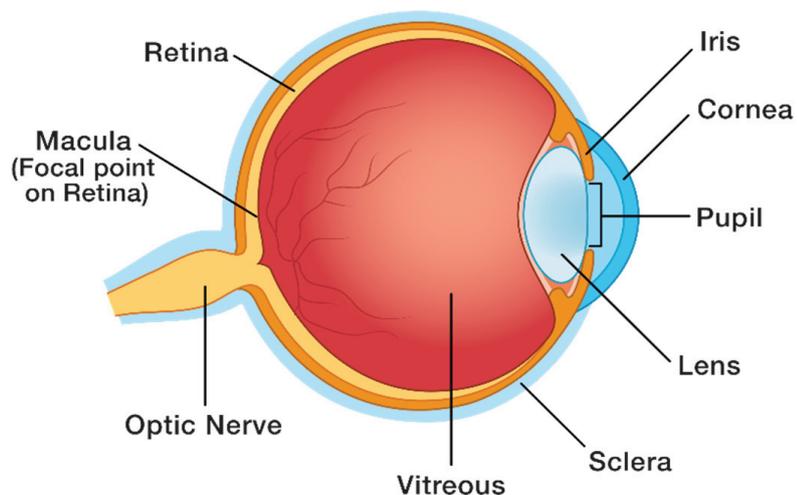
Overview of Anatomy of Human Eye

2.1 Structure of the Eye

The human eye is a slightly asymmetrical sphere with an approximate length of about 24 to 25 mm. It has a volume of about 6.5 cc.

The human eye has three layers:

- ▶ The external layer, formed by the **sclera and cornea**.
- ▶ The intermediate layer, divided into parts: anterior (**iris & ciliary body**) & posterior (**choroid**).
- ▶ The internal layer, or the sensory part of the eye, the **retina**.



Transverse section of the eye

Three chambers of fluid:

- ▶ Anterior chamber (between cornea and iris),
- ▶ Posterior chamber (between iris, zonule fibers and lens), &
- ▶ The vitreous chamber (between the lens and the retina).

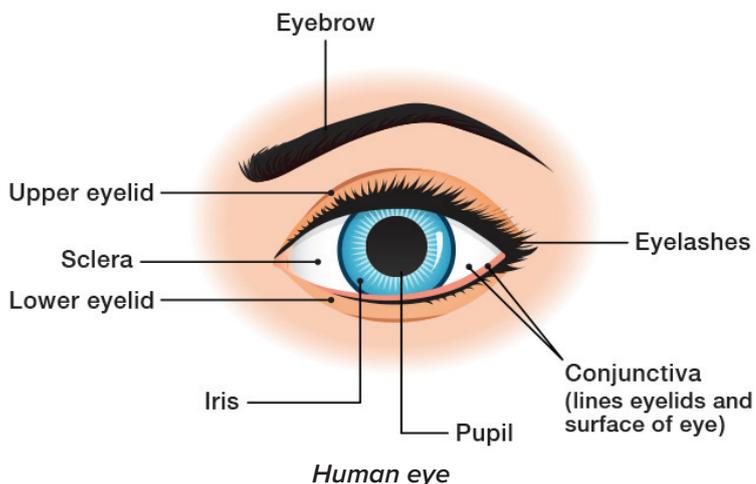
The first two chambers are filled with aqueous humor, whereas the vitreous chamber is filled with a more viscous fluid, the vitreous humor.

On simple inspection of the eye, the following can be easily seen:

Eyelids: upper and lower eye lids with eyelashes emanating from them. At medial canthus, on the lower lid margin, a punctum can be seen, which drains the tears from the eyes into the nose through the nasolacrimal duct.

The "white of the eye", the **sclera**, which forms part of the supporting wall of the eyeball. The sclera is continuous with the cornea which is the transparent one-fifth dome like part of the external layer and through which both the pupil and the iris can be seen. This is the first and most powerful lens of the optical system of the eye and allows, together with the crystalline lens, the formation of a sharp image at the retinal fovea.

A black-looking aperture, the **pupil**, allows light to enter the eye. Pupil is a central aperture in the coloured circular muscle, the **iris**, which is pigmented and gives us our eye colour. This circular muscle (iris) controls the size of the pupil so that more or less light, depending on conditions, is allowed to enter the eye.

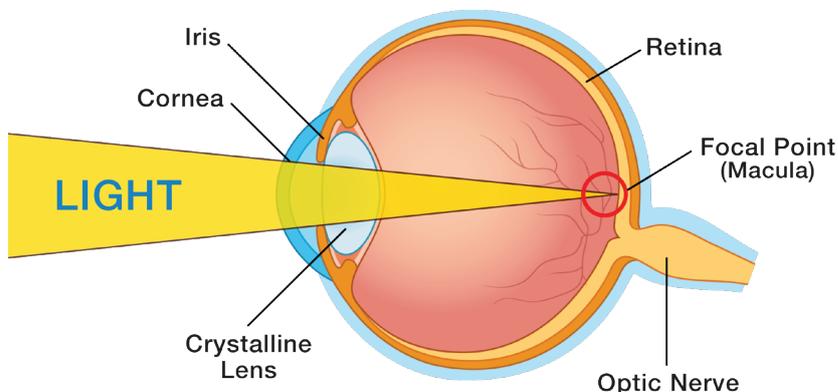


The **lens** is a transparent body located behind the iris. It is suspended by ligaments (called zonule fibers) attached to the anterior portion of the ciliary body. The contraction or relaxation of these ligaments, as a consequence of ciliary muscle actions, changes the shape of the lens, a process called **accommodation** that allows to form a sharp image on the retina.

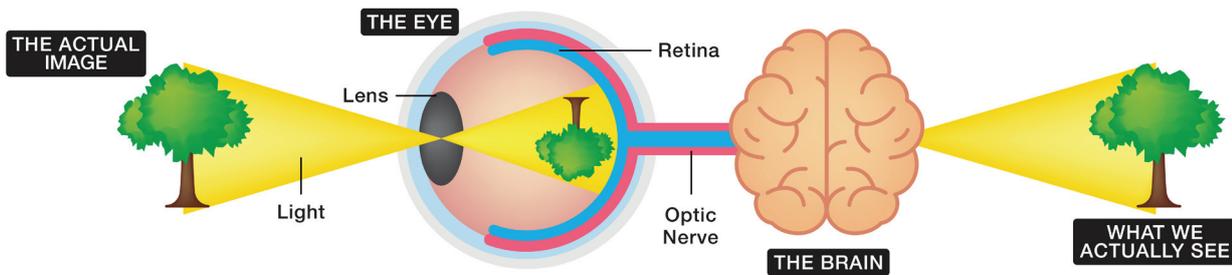
Each eyeball is held in position in the orbital cavity by various ligaments, muscles, and fascial expansions that surround it. Three pairs of muscles (six muscles altogether) called as **extraocular muscles** are inserted into the sclera. These extraocular muscles, in coordination, rotate the eyeball in the orbits and allow the image to be focused, at all times, on the fovea of the retina of both the eyes at the same time.

2.2 How do we see?

The rays from the object are focused through the cornea, enter the eye via pupil, then pass through the lenses to reach finally into the back of eye that is the retina. From here, signals are sent to the optic nerve which carries the signal to the brain and that helps in forming the images that we see. Any defect in any part of this process will lead to a problem in our normal vision.



Light rays focussed on the retina



How do we see

Human beings have two eyes and the advantage of viewing from two eyes is that it gives us a three-dimensional view and correct recognition of things. We can see from one eye also but it affects the depth perception (ability to see things in three dimensions including length, width and depth and to judge how far away an object is).

If any part of this vision process is damaged, then the person will have a difficulty in seeing properly.

CHAPTER 3

Health Promotion for Good Eye Care

The eyes are extremely delicate part of the body and hence need good care. This care begins at birth and continues throughout the life span. Health promotion activities at the AB-HWC will include regular awareness on care of the eye, identification of common eye related symptoms and importance of seeking treatment early. For those suffering from blindness, health promotion activities will be centred on rehabilitation, regular check-ups and reintegrating the person into the community.

You, with support of other members of Primary Health Care Team at AB-HWC-SHC, will be responsible for spreading awareness among the community members for keeping the eyes healthy.

3.1 How to keep the Eyes Healthy?

Provide the following messages related specifically to the eye for all populations and ages-

1. 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.
2. Do not put any medication into your eyes unless prescribed by a Medical Doctor.
3. Protect your eyes from excessive sunlight with, for example, hats, scarves, sunglasses or umbrellas.
4. If you have hypertension or diabetes, have a complete eye examination at least once a year, and check your blood pressure and blood sugar regularly.
5. If you have a relative with glaucoma, have an eye examination for glaucoma at least once a year.
6. Use protective eyewear when working with objects that might damage your eyes: welding, chemicals, metal or wood, farming season, etc.

7. 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 and visit the nearest AB-HWC.
8. If you have problems seeing small nearby objects or when reading, you may need glasses for near work.
9. Keep the eyelashes clean. Eyelashes of individuals might have ticks/lice/mites or their eggs. These individuals should be referred to the nearest AB-HWCs. Provide them tips for maintaining eye hygiene.

3.2 General health messages which also impact Eye Health

1. While driving/travelling, wear a seat belt so injuries are avoided to both the body as well as the eyes. Those driving two wheelers, must wear helmets covered with the front glass.
2. Keep hands and faces clean to avoid infections, including eye infections.
3. Protect your health, including your eye health, by not smoking.

3.3 Healthy Eye messages for mothers and caregivers for their children

1. Clean their eyes immediately after birth. You can teach the mother/caregivers to provide eye care to the newborn, if required by use of an eye ointment.
2. A baby with eye discharge needs treatment immediately; inform them to seek help from the nearest AB-HWC.
3. Make sure all mothers/caregivers report if their child is not looking at them or not looking straight after the age of 6 weeks. Mobilise the mother/caregivers for screening of children for eye care by Rashtriya Bal Swasthya Karyakram (RBSK) team.
4. Children should not play with or near sharp objects to avoid eye injuries.
5. Avoid applying 'kajal' or 'surma' in the eyes of the children.
6. Promote early and exclusive breastfeeding for first six months of life.
7. Mothers and children should be fully immunized including against rubella and measles.
8. Regular vitamin A supplementation of pre-school children from age of 9 months is important for good vision and healthy growth.
9. Children should eat foods rich in Vitamin A to keep their eyes healthy (you will read in Chapter on Vitamin A deficiency).
10. Children should be made secure while travelling by taking all possible preventive measures to avoid eye injuries.

3.4 Simple Eye Care messages in Health Promotion

Infections of the eye spread very rapidly, if proper care is not taken. Ways to maintain eye health are as follows:

1. Keep eyes clean by washing them with clean water. Washing eyes at bedtime is very good as it removes the dirt and dust collected throughout the day.
2. Do not work in poor light. Reading in poor light can strain eyes.

3. Always use a clean cloth to wipe eyes. Do not use saris, dhotis, or sleeves of clothes to wipe eyes. These may cause serious infection in the eyes. Eye diseases such as conjunctivitis and trachoma spread by this way.
4. Each person should use a separate cloth, towel or handkerchief for wiping eyes. If one eye is already infected, use a separate clean cloth for each eye.
5. Avoid the glare. Do not stare at the sun and other bright objects.
6. Never walk out in the sun without sunglasses.
7. Eat a diet rich in Vitamin A and appropriate breastfeeding by mothers (colostrum is rich in Vitamin A).
8. Do follow the 20-20-20 rule of eye care when using a computer/laptop, mobile phone, or watching television. Every 20 minutes, refocus your eyes for 20 seconds to an object located at least 20 feet away.
9. Report any eye infection to a health worker. Do not use home remedies for eye medication. Do not use medicines given by road-side medicine sellers. These may not help and may even cause blindness.
10. Eye drops and eye ointment only provided by a Medical doctor should be used. Do not use any eye medicine without any medical prescription.
11. Educate community members to pay special attention in using the eye drops. They might not make the difference between eye drops and ear drops and can put drops of the ear into their eyes.
12. Patient with eye infection should avoid going in swimming pools and visiting public places.



Checking distant vision in the community

Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences



Eye Testing

Source: Aravind Eye Hospital, Madurai



Community Awareness on Eye Care

Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences

CHAPTER 4

Assessing a person with an Eye Problem, Common Eye Complaints and How to Approach Them

4.1 To undertake and record an eye examination, you will need:

- ▶ A torch
- ▶ Pen and record card/register

4.2 Preparation

- ▶ Find a space which has proper light.
- ▶ Make the person sit comfortably.
- ▶ Explain to the person what you are going to do.
- ▶ Record the name, age, sex, address and date.

4.3 Method

- ▶ Greet the patient and find out their main complaint.
- ▶ 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 near vision (in those aged 40 years and above) at a distance of one foot.
- ▶ Test vision in all symptomatic individuals complaining of diminished vision (Distant vision at a distance of 6 meters or if mirror is available at a distance of 3 meters).



Source: Aravind Eye Hospital, Madurai

- ▶ Examine the person's eyes:
 - The sclera should be completely white (with a few red veins).
 - The pupil should be completely black.
 - Both eyes should be the same size.
 - The eyes should look straight ahead, and not one looking in another direction.
- ▶ Ask the person to close their eyes.
 - The lids should open and close normally (lashes should face outwards, not inwards, lids should be smooth).
- ▶ Record what you see.

4.4 Common Complaints and How to Approach Them

Some of the common eye conditions which you are expected to experience during your work include the following:

- ▶ Cataract
- ▶ Refractive Errors
- ▶ Conjunctivitis
- ▶ Stye
- ▶ Xerophthalmia (Vitamin A deficiency)
- ▶ Glaucoma
- ▶ Trachoma
- ▶ Eye Injuries
- ▶ Special situations for Eye Care

A brief description of the risk factors, clinical features and management of each of these conditions, is given next in the chapters.

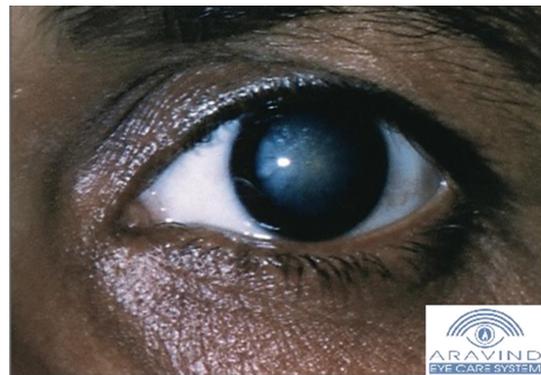
CHAPTER 5

Overview and Management of Cataract

5.1 Introduction

Cataract is one of the major reasons for blindness in India. It is also called as **'Safed Motia'** in Hindi, other regions will also have a local term for it.

Cataract refers to the opacification of crystalline lens, which obstructs the passage of light reaching the retina leading to impaired vision. It affects lens of the eye that helps in normal vision of an individual. Largely, adults more than 50 years, can be affected by it which means it is an age-related condition which occurs due to degeneration and ageing process but it may also be present congenitally in children. Cataract can also occur due to other conditions like Diabetes Mellitus (DM) in adults, or after an eye injury, inflammation or long-term steroid use. Sometimes, people who are younger may also develop Cataract.



Cataract

Source: Aravind Eye Hospital, Madurai



Congenital Cataract (Cataract from birth)

Source: RBSK, 2017

5.2 Clinical Features

Let us compare the photograph of two eyes shown below. What do you notice?



Normal and Cataract Eye

Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences

The normal eye has central black hole and people are able to see properly because light rays can enter through it normally and in the second eye in the photograph, you notice correctly, black hole is replaced with white or greyish colour. Due to this, light rays will not be able to enter normally and thus people

having this kind of situation will have their vision affected. This condition is called **‘Cataract’** and it affects mainly the lens of the eye.

ASHA will complete the Community Based Assessment Checklist (CBAC) for the target population which also includes questions regarding eye care. If there is any ‘yes’ response to any of the symptoms related to eye, ASHA will refer the individual immediately to the nearest AB-HWC.

You must also pay special attention to those who have problems in seeing normally from a distance or in whom you can visibly see the central black hole with white or greyish colour.

You should also know that adult persons with diabetes are more likely to develop early Cataract. Such persons should get their annual eye examination done by an Eye doctor/Eye specialist. Also, look for children, whose families have complained of their child with poor vision and coordinate with the RBSK team for further management.

5.3 Clinical Features

Symptoms

- ▶ Cloudy vision/blurring of vision
- ▶ Gradual painless progressive diminution of vision in one or both eyes
- ▶ Excessive glare
- ▶ Monocular diplopia (double vision in only one eye) or Polyopia (seeing of multiple images on focusing on one object)
- ▶ Coloured halos/bright circles around lights

Signs

- ▶ Greyish white or whitish lenticular opacity on torch light examinations.

5.4 Investigations

- ▶ Visual Acuity, Intra Ocular Pressure (IOP)
- ▶ Blood Pressure, Random Blood sugar (RBS)
- ▶ Prior to Surgery: Electrocardiogram (ECG), Urine routine examination, A-scan, Xylocaine sensitivity test.

5.5 Health education messages for the community on Cataract

1. It is normally seen in elderly people and is a result of ageing. However, it can also occur in younger age groups and in children. Adult persons with diabetes are more likely to develop Cataract at an early age.
2. It cannot be cured by putting any eye drops/eye ointment. Cataract can be cured ONLY with eye surgery.
3. The eye procedure commonly involves taking out the affected lens from the eye and replacing it with a new artificial lens so that vision can be restored to normal.
4. This procedure for correction of cataract is a safe and commonly done, but only in a recognized hospital with eye specialist. It cannot be done in the Community or at AB-HWCs.
5. Under National Programme for Control of Blindness and Visual Impairment (NPCB&VI), Government Eye Hospitals and Non-Governmental Organisations (NGOs) provide free surgeries to affected persons.
6. In adults that have cataract due to ageing, both eyes may be affected and treatment may be required for both the eyes.

Common Myths and Facts about Cataract

1. MYTH: Cataract can be treated with eye drops.
FACT: Only surgery can treat cataract.
2. MYTH: Cataract surgery is dangerous.
FACT: It is one of the safest operations.
3. MYTH: It can take a long time to recover after cataract surgery.
FACT: Most of the patients resume normal activity and restore their vision within one week-one month time period.
4. MYTH: Cataract is reversible.
FACT: No. Once the cataract occurs, it is not reversible and it will progress to reduce vision further.
5. MYTH: Cataract surgery can be done only in winter season.
FACT: Cataract surgery can be done in any season.

5.6 Messages for the Community

A. Preparation before Cataract surgery

1. The patient must be checked up by the doctor to determine which eye has the cataract.
2. Before surgery is done, simple investigations will be done and advice about date of surgery and general precautions will be explained to the affected person.
3. Some persons delay their operation. It is important to note that delaying the surgery may increase the chance of complications after the surgery. So, it is better to get operated early and avoid any complications.
4. The person undergoing cataract surgery must understand that proper rest will be required after the surgery, and that there should not be any exposure to dust, smoke or pollution.

5. Any person with cough or other problems must first get that treated before getting a cataract surgery.

B. Post-surgery information

1. The operated eye should be protected with an eye shield.
2. The operated eye should be protected from bright light, TV screen, mobile, computer, dust, smoke, smoke from chullas and jerks (quick, sharp, sudden movement) for time period as suggested by the doctor. Need for using protective eye wear such as dark eyeglasses during daytime will be advised by the doctor.
3. The eye doctor will advise the patients for putting frequent eye drops in daytime and eye ointment at night to the operated eye. These should be done correctly for the period prescribed.
4. The patient should not rub the operated eye.
5. The patient should not put water into the operated eye but should maintain hygiene around the eyes by cleaning it. The area around eyes can be cleaned by using cotton. Take a bowl of water and cotton, boil it and let it cool. Now, cotton can be used to put water around eyes. This can be done every morning by the patient after the surgery.
6. Avoid having a head bath for at least 5 days after cataract surgery.
7. The patient should not sleep on the same side as the operated eye atleast for one week.
8. Avoid lifting heavy objects/ exercises for 4-6 weeks and avoid applying kajal/any eye make-up for at least 4 weeks.
9. Normal balanced diet should be taken by the patient after the surgery.
10. After the eye surgery is done, it is important for the patient to visit and consult eye doctor after one week of operation and then after one month of operation.
11. If there are any complaints in the operated eye like redness, pain or poor vision, the patient should contact the eye surgeon/eye doctor immediately.
12. Patients after the surgery may require spectacles depending on type of lens used in the eye.

5.7 Management

a) Screening for Cataract

In order to screen for cataract, you need to examine the eye of the patient with the help of a torch. In normal cases, the pupils get constricted and appear jet black. However, in patients suffering from cataract, due to the opacity of the lens, light gets reflected and the pupil appears to be white (as depicted in the above image).

b) Treatment for Cataract

There are no medicines which can cure cataract. Surgery is the primary method of treatment. If the Cataract is not timely operated, it can lead to vision loss. Hence, all suspected cases of cataract should be referred to eye camps (organized under NPCB&VI)/eye surgeons for further evaluation and management. Cataract surgeries are very safe.

c) Role of CHO in management of Cataract

You will play an important role in screening, counselling screen positive patients for the need to get treated as soon as possible then linking them with the OA at Vision Centre/ Eye Surgeon/Eye Specialist. In order to facilitate this, you need to maintain a list of all facilities where Eye Surgeon/ Eye Specialist is available, for



*Patient with Eye Shield after Cataract Surgery
Source: Aravind Eye Hospital, Madurai*

identification of operable cataract and surgery nearest to your service area. It is important to inform the individuals that under the National Programme, cataract surgeries with Intra Ocular Lens (IOL) insertion would be done free of cost at all government institutions.

All individuals 50 years and above, should be screened for cataract, even if they are not suffering from any apparent symptoms. The person may only complain that s/he has to change his/her spectacles/glasses very frequently but are still not able to see clearly with the use of spectacles/glasses. The screening may be started even earlier if there is history of diabetes, hypertension (HTN), steroid usage or eye surgery in past.

The Eye doctor will advise the patients for putting frequent eye drops in daytime and eye ointment at night to the operated eye. These should be done correctly for the period prescribed.

Refer to Annexure- 1 and Annexure-2 for correct steps to administer eye drops and eye ointment, respectively. Also, Refer Annexure-3 on how to clean eyelids and eyes daily as post-operative care of patient after Cataract surgery.

Any individual who has undergone cataract operation in one eye, must be counselled to not neglect the other eye. Ensure the individual pays attention to the other eye to avoid any complications. These individuals will be referred for regular check-up of both the eyes by CHO/MO heading the nearest AB-HWC.

Role of CHO in Management of Cataract

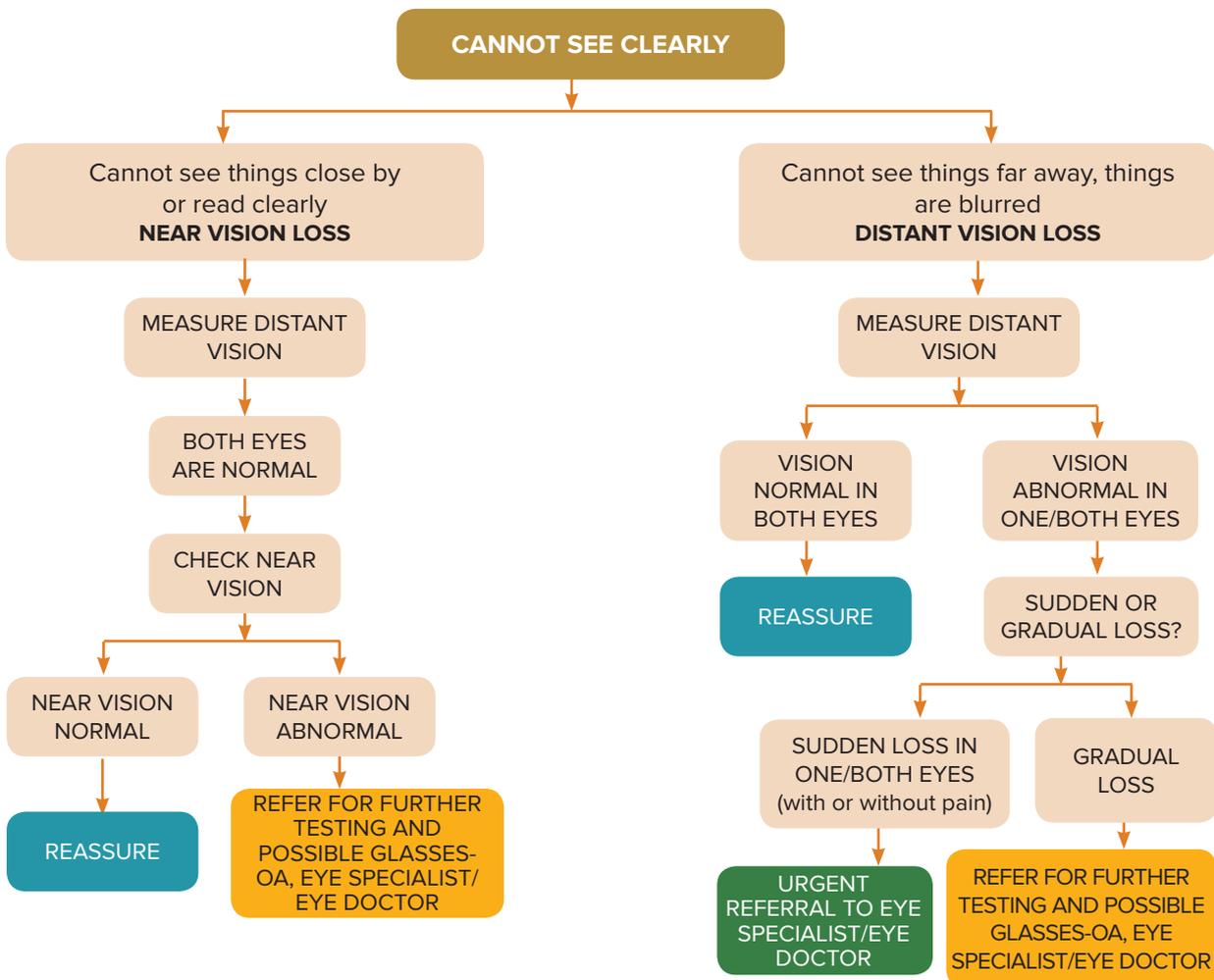
- Screening all individuals suspected by ASHAs with any eye problem. Also, identify cataract in individuals during home visits (even in younger age group).
- Making a list of all Vision Centres/Eye Surgeons in the area.
- Inform the patients that MO at AB-HWC-PHC will provide medical fitness for cataract surgery.
- Linking patients with suspected cataract to the Eye doctor/Eye specialist at higher health centres for further testing and treatment (refer to the MO at AB-HWC-PHC; undertake referral in consultation with MO; MO to also be informed regarding any visits to health facility by the community members). MPW/ANM will assist you in making arrangements for referral.
- Inform the patients that the Intra Ocular Lens (IOL) insertion of cataract is done free in all Government Institutions.
- Follow up all post-operative cases to ensure that they follow proper eye care post cataract surgery and do not develop any complications.
- Long term follow- up of all cataract cases for vision acuity.
- Supervise the primary healthcare team for conducting health promotion activities and ensure screening of individuals for eye disorders and blindness. Pay special attention to those with diabetes, hypertension or individuals found at risk after filling Community Based Assessment Checklist (CBAC) by the ASHAs.
- Maintenance of records and registers. ANM/MPW will assist you in maintaining the records and reports, as required.

CHAPTER 6

Overview and Management of Refractive Errors

6.1 Diminution (Decrease) of Vision

Diminution (decrease) of vision can be due to many reasons. The flow chart below will guide you how to check anybody who complains of diminution (decrease) of vision.



It is to be noted that you posted at the AB-HWC-SHC will be responsible for making all referrals required to the appropriate health facility. You will undertake any referral to the health facility in consultation with the MO at AB-HWC-PHC. The MO will also be informed regarding any visits to the health facilities undertaken by the community members for any eye condition. MPW/ANM will assist you in arranging for referral. You along with the primary health care team (ASHA, ASHA Facilitators, MPW/ANM) will help in providing follow-up care for ensuring adherence to treatment as advised and for developing any complications.

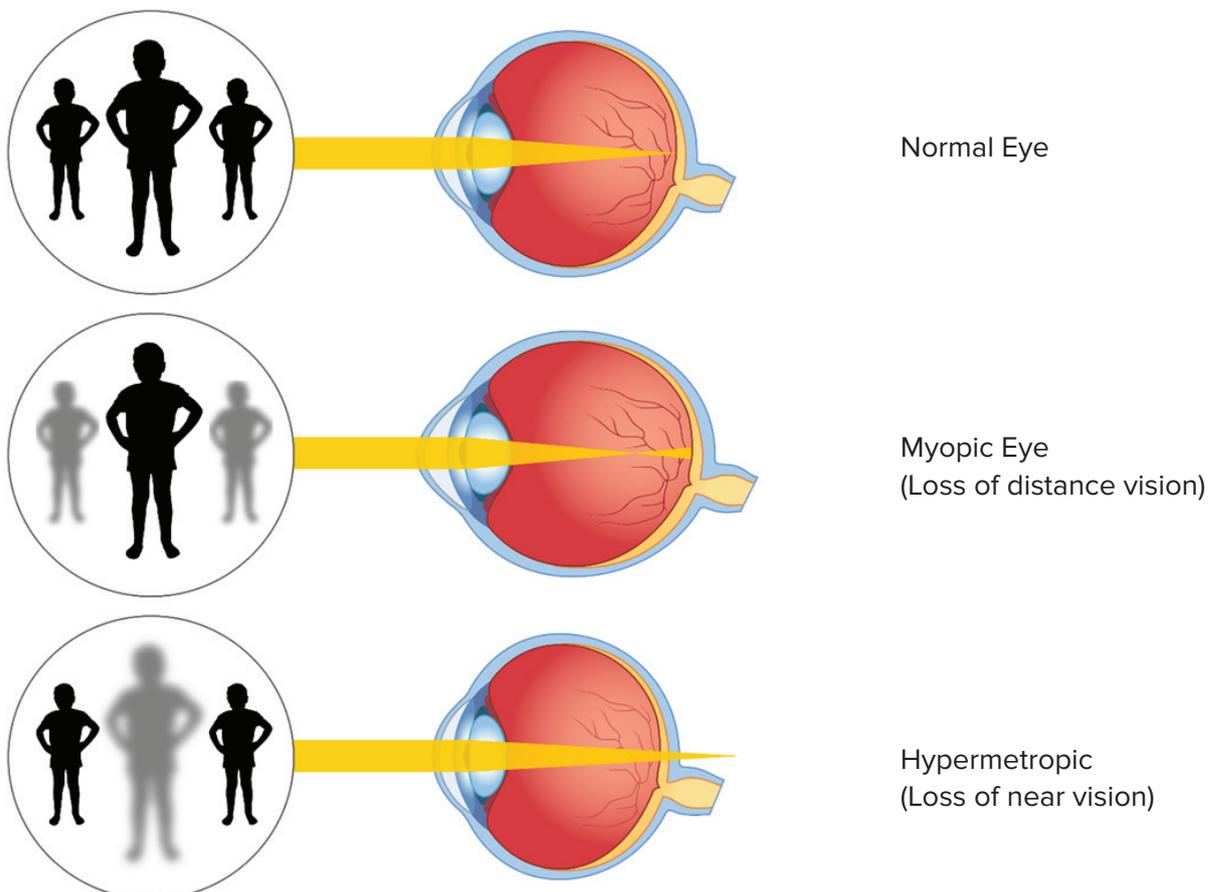
The most common cause of gradual loss of vision is Refractive Errors. As the age progresses, after the age of 40 years, there is also a gradual loss in both distant and near vision. Let us understand about refractive errors now.

6.1.1 Refractive Errors

Normally, the rays of light entering the eye are brought to a precise focus on the retina. Refractive errors (**Drishti Dosh**) occur when light rays do not fall and focus properly to the back of eyes, that is on the retina. It is the commonest eye problem and affects all age groups. In developing countries, like India, it is estimated to be the second largest cause of treatable visual impairment (low vision problems), next only to cataract.

6.1.2 What are the different types of Refractive Errors?

- ▶ Ametropia includes myopia (when light rays focus at a point in front of retina)/Near sightedness (Loss of distant vision)
- ▶ Hypermetropia (when light rays focus at a point behind the retina)/Far sightedness (Loss of near vision)



- ▶ Astigmatism (when light rays focus at different points on the retina)
- ▶ Presbyopia (common type of vision disorder that occurs due to ageing where the eye is not able to focus light from near objects directly onto the retina due to the hardening of the zonular ligaments of the natural lens).

What is Near sightedness?

- ▶ The person is able to view near objects clearly but distant objects are not clear.
- ▶ It occurs both in children (most commonly in 10 -18 years of age) and adults.
- ▶ Usually, little changes occur after 20 years of age.

What is Far sightedness?

- ▶ The person is able to view far objects clearly but objects seen from nearby are not clear.
- ▶ Far sightedness usually decreases and corrects itself till the child attains 5 years of age. However, it remains in some people till later age.

What is Astigmatism?

The images are blurred and distorted. The complaints are similar to patients with other type of refractive errors. In children, this condition requires early referral to the nearest AB-HWC with information to the RBSK team for follow-up.

All these conditions can be treated by wearing of an appropriate spectacle after refraction.

6.1.3 What is Presbyopia?

This is a condition that is age related and occurs in almost everybody by the age of 40 years. It occurs because with old age there is degenerative changes (loss of function) in the eyes and the eyes lose the ability to accommodate (focus on near objects). In this case, the person is not able to view near objects properly and finds difficulty in reading. Other activities requiring near vision are also affected such as: sorting rice and pulses/or food grains, threading the needle, reading small print on medicines, seeing the text in mobile phones, etc.



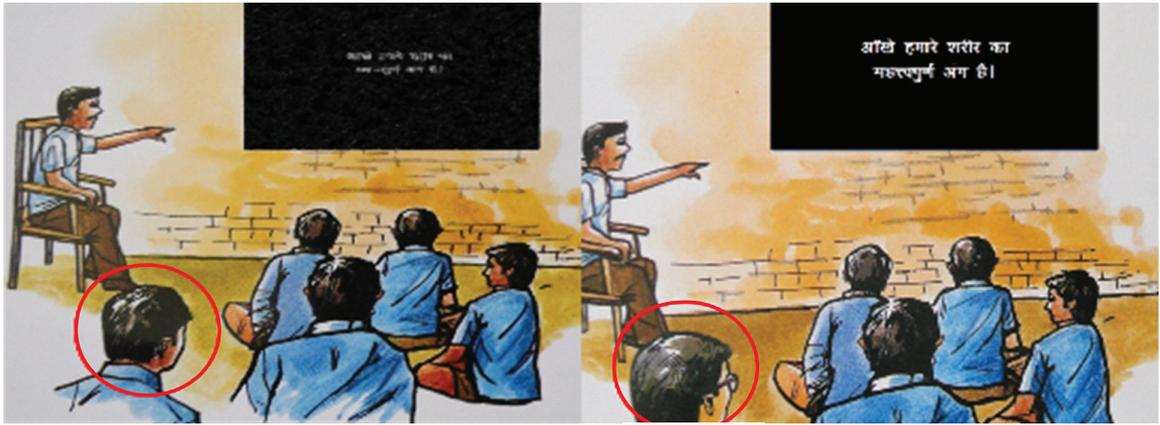
*Correction of Presbyopia with use of spectacles
Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences*

Presbyopia can be corrected by use of spectacles easily. There are ready made glasses with necessary correction for near vision. This can be easily detected and guided by the Ophthalmic Assistant or an Eye doctor/Eye specialist.

6.1.4 Refractive errors in children

Refractive errors also occur in children. The common signals in children that can indicate presence of refractive errors in children and will call for eye examination by Eye doctor/Ophthalmic Assistant are:

1. One eye moves or aims in a different direction than the other.
2. The child blinks or rubs his/her eyes excessively on watching TV or reading.



Difficulty in seeing distant vision in a child due to Refractive Error

Easy to see distant vision by a child with use of spectacles/glasses

Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences

3. The child hits into things or drops things.
4. The child holds reading material or objects too close, turns head to focus.
5. The child frequently complains of headaches, eyestrain, double vision or blurring of vision.
6. The child has watering of eyes.
7. The child is not able to read the blackboard from back benches of the classroom.
8. The child less than one year of age does not follow light or objects.

6.1.5 When should eye sight be checked?

Eyesight of children and adults should be checked as per follows in nearby health facility where Eye doctor/Eye specialist/Ophthalmic Assistant is available:

- ▶ When the child starts going to school at entry level. After that once in a year.
- ▶ For children wearing glasses: once every six months.
- ▶ For adults: When they turn 40 years, especially for near vision.

Squint

In this condition, both the eyes look in different directions, also referred as 'crossed eyes'.

This is usually seen in children, in early years of their life. So, when a child looks at an object, both eyes will align differently. In most cases, the child will only use one eye at a time, thus straining that eye, and losing the benefits of both eyes.

The condition in most of the cases can be noticed by parents/caregivers. This situation can be corrected, if detected



Squint (Cross Eyes)

Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences

early and timely treatment is provided. If you get to know of such a history in your service area during your home visits, or are informed by parents/caregivers that their child has problem in vision and complains of cross eyes, you should refer the child at the earliest to the nearest AB-HWC-PHC for eye examination. You will coordinate with the RBSK team and assist in facilitating referral of children to appropriate health facility usually the District Early Intervention Centre. Such children will require a detailed eye examination.

Squint may also develop in adults due to stroke, physical trauma or other causes. Such individuals require to be identified by the primary health care team and referred to nearest AB-HWC-SHC. You will refer to higher health facility where Ophthalmic Assistant (OA)/Eye specialist/Eye doctor is available for detailed examination (in consultation with the MO). Treatment may involve use of spectacles, patching, eye exercises and/or surgery on the muscles of one or both eyes.

6.1.6 Clinical Features of Refractive Errors

Symptoms

- ▶ Difficulty in seeing distant objects clearly (myopia), difficulty in seeing nearby objects clearly (hypermetropia), far-away and nearby objects look blurry or distorted or difficult for middle-aged and older adults to see things up close.
- ▶ Headache/Eye ache or eye pain.
- ▶ Tiredness and watering from eyes.
- ▶ Constant itching of the eyes.
- ▶ Frequently blinking/squeezing eyelids or rubbing of eyes.
- ▶ Eyelid swelling.
- ▶ Some children may have squint (cross-eyes).
- ▶ Recurrent formation of sty in the eye.

6.1.7 Management

a. Screening for Refractive Errors/Testing of Vision

Testing of the Vision of an individual is done using certain vision charts. Separate charts are used for testing the distant and near vision. You along with the MPW/ANM will be responsible for screening for blindness and refractive errors using Snellen's chart and near vision card/chart at the AB-HWC-SHC.

In addition to identifying high-risk individuals through filling of CBAC, ASHA will also identify adult individuals at community level with blindness and visual impairment by the finger counting method and 6/18 Vision Chart (Snellen E chart), respectively.



Screening for Refractive Errors/Testing of Vision

Source: Aravind Eye Hospital, Madurai

ASHA will refer all these screened individuals to nearest AB-HWC for further management of refractive errors by using Snellen's chart and near Vision card.

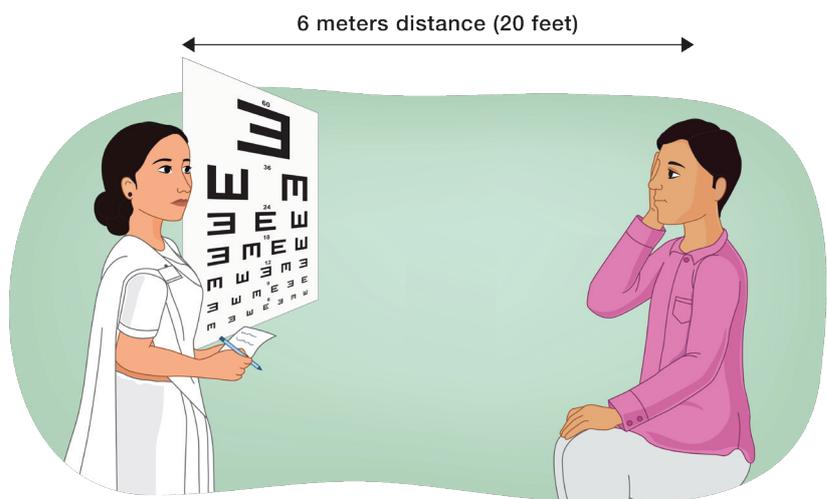
The steps for testing the visual acuity of an individual are as follows:

Material Required

- ▶ Snellen's chart (E chart)
- ▶ Space that is well lit and has 6 meters distance available or a 3 meters space with a mirror at the opposite wall from where the chart is placed.
- ▶ Measuring tape
- ▶ Pen and record card/recording format
- ▶ Referral cards

Steps to be undertaken by CHO at AB-HWC-SHC for testing Distant Vision

- ▶ Ask the person to stand at the distance of 6 meters or 20 feet away from the chart. If there is shortage of space, a mirror can be used and a distance of 3 meters or 10 feet can be recorded. The Snellen vision chart (E chart) should be at the same level as the person's eyes.
- ▶ If the person normally wears spectacles/glasses to see in the distance, tell them to put their glasses on during the test.
- ▶ Ask the person to cover his/her left eye with the palm of their left hand properly and see the chart with right eye. Do not squeeze the eye as it may lead to error in reading, the person should read normally.
- ▶ Stand beside the vision chart. The person should speak aloud/point the direction of the open end of the "E" letter of each row beginning from the top.
- ▶ Ensure that the person stands straight and does not lean forward.
- ▶ The lower most line which the patient is able to read clearly, corresponds to the vision of the patient.
- ▶ Now ask the person to cover the right eye properly with the palm of their right hand and repeat the test with the left eye.
- ▶ Any patient with a vision < 6/9 (less than) needs to be referred to the OA at Vision Centre/ Eye Specialist/Eye Doctor at higher health facilities for further evaluation and management. You will undertake the referral. The MO must be informed regarding any referral made for identified cases to the health facilities. Maintain a list of referrals and ensure follow-up of these individuals.



Under RBSK, all children and adolescents (0-18 years) are screened for eye and vision related problems at school and Anganwadi levels by the RBSK Mobile Health Team. Ensure the eye is properly covered by the child with the palm of their hand while testing for vision related problems.

How to record findings from the Snellen's Chart

The results of the acuity exam (chart reading) will determine the quality of the eyesight. The vision results (acuity) will be expressed as a fraction. Visual acuity is sometimes expressed as 20/20, or a similar number, meaning the smallest letters accurately read on the chart. If the person can see the E direction in the line that says 18, then you record it as RE (for right eye) 6/18. Again, if another person can see with the left eye Es in line that says 6, then you record it as LE (for left eye) 6/6. It will be recorded as reading of Right Eye vision (on top)/reading of Left Eye vision. Maintain records of all community members.

Example to record reading

Vision (Vn)	R/E- 6/18
	L/E- 6/6

Individuals who are not able to read the top most letter of the Snellen chart, for them, the finger counting method should be undertaken for both eyes separately to see at which distance the patient can count fingers. Record the findings.

b. How to Measure Near Vision using Near Vision card/chart

Material Required

- ▶ Near Vision card/chart
- ▶ Space that is well lit
- ▶ Measuring tape
- ▶ Pen and record card/recording format
- ▶ Referral cards

Steps for testing Near Vision undertaken by CHO at AB-HWC-SHC

Undertake the near vision test in adults of 40 years of age.

1. Make the individual sit upright in a well illuminated room.
2. Place the near vision card/chart at a distance of 35 cms from the individual.
3. Ask the individual to close one eye and start reading the alphabets from the top line moving downwards. The lowermost readable line is the near vision of the patient.
4. The individuals who cannot read N 12 line or below in the chart will be referred by you to the Ophthalmic Assistant at the Vision Centre for further assessment/higher health centres (MO to be informed regarding the referral).

Refer to Annexure- 4 regarding Eye Charts-Snellen Chart and Near Vision Chart at Community level, Ayushman Bharat- Health and Wellness Centre and Referral Centre/Vision Centre.

6.1.7 Treatment of Refractive Errors

Like in cases of cataract, there are yet no medicines which can 'cure' refractive errors altogether. The primary mode of treatment for simple refractive errors is through use of glasses (spectacles). Very rarely, surgery may be needed to correct the vision and prevent other complications.

6.1.8 Your role in management of Refractive Errors

People suffering from refractive errors usually may not be aware of their condition. This is primarily because the vision loss is so gradual, that people often perceive their reduced vision as normal. Some individuals do complain of vague symptoms such as eye fatigue, watering of eyes, headache, etc. Hence, the diagnosis is often missed, until and unless screening is carried out. Parents sometimes note that the child is seeing television from too near or reading a book by keeping it too close to the eyes or is squeezing the eyes to read or focus distant objects. Inform and coordinate with the RBSK team for further management of the suspected child.

Role of CHO in Management of Refractive Errors

If any adult or child is suspected to have refractive errors, squint or presbyopia, you must inform the Medical Officer, for further referral of the person to nearby health facility where an Ophthalmic Assistant or an Eye specialist/Eye doctor is available. Inform and coordinate with the RBSK team for further management of the suspected child.

1. Support the primary healthcare team in convincing resistant community members that require to wear spectacles for correcting their eye problem.
2. Encourage the community members to wear spectacles as prescribed and make them understand the importance of wearing the spectacles regularly.
3. Annual screening of all the adult community members for early identification of blindness and refractive errors and timely referral.
4. Support the RBSK team in undertaking eye screening of children and adolescents 0-18 years of age.
5. Inform the patients that free spectacles are available free in all Government Health Institutions.
6. Follow- up with all individuals – those who have refractive errors and are given corrective glasses – to ensure that they use them properly.
7. Counsel the individuals on the importance of consumption of Vitamin A rich foods and limit the use of television/mobile phones, computer and other electronic items that can cause strain to the eyes as much as possible (20-20-20 rule- Every 20 minutes, look away about 20 feet in front of you for 20 seconds).
8. Refer any person in case of symptoms such as continued redness, watering, eye fatigue, diminished vision following the use of spectacles to the OA/Eye specialist/Eye doctor (in consultation with MO).
9. Make a list of all Vision Centres/higher health facilities having OA/Eye specialist/Eye doctor in your service area.
10. Linking patients with any suspected refractive errors to the OA at nearest Vision Centre/ Eye doctor/Eye specialist at higher health centres for further testing and treatment (undertake referral in consultation with MO; MO to also be informed regarding any visits to health facility by the community members). MPW/ANM will assist you in making arrangements for referral.
11. Maintenance of records. MPW/ANM will assist you in maintenance of records and registers, as required.

CHAPTER 7

Overview and Management of Conjunctivitis

7.1 Introduction

Inflammation of conjunctiva is called as Conjunctivitis. It is one of the most common reasons for an acute episode of red eye. It is also commonly known as '**Eye Flu**'. It occurs more towards end of summer and beginning of monsoon season and is contagious in nature (it spreads from one person to another).

It often affects both eyes and begins with an itchy sensation in the eyes. This is followed by redness in eyes, and then stickiness of eyelashes and swelling of the eyes.

Remember- Not every Red Eye is Conjunctivitis.

Depending on the type of aetiology, it is further classified as:

A) Infective:

- Bacterial Conjunctivitis:
Staphylococci,
Streptococci,
Pneumococci,
Gonococci.
- Viral Conjunctivitis:
Herpes simplex,
Herpes Zoster,
Adenovirus, etc.



Bacterial Conjunctivitis



Viral Conjunctivitis

Source: Aravind Eye Hospital, Madurai

B) Allergic conjunctivitis (more common):

- Allergic reactions to dust, pollen, etc.

7.2 Clinical Features

Symptoms

- ▶ Acute redness of eyes
- ▶ Foreign body sensation in eyes

- ▶ Watering from eyes
- ▶ Photophobia (intolerance to light)

Signs

Certain signs can point towards the aetiology:

- ▶ Purulent discharge with matting of eye lashes due to discharge with photophobia: Probable case of Bacterial Conjunctivitis.
- ▶ Watery discharge with pre-auricular lymphadenopathy and swollen lids: Probable case of Viral conjunctivitis.
- ▶ Slightly muco-purulent discharge, recurrent episodes without much photophobia: Probable case of Allergic conjunctivitis.

7.3 Common Differential diagnosis of Painful-Red eyes

Like conjunctivitis, few other conditions, such as foreign body in eye (dust, pollen, etc.), eye injuries, trachoma, hay fever, glaucoma, corneal ulcer, etc., may also present as painful-red eye.

7.4 Management of Conjunctivitis

a) Early identification and referral:

The probable diagnosis of conjunctivitis is often simple and is based on the basis of typical presenting signs and symptoms of the patient. Normally, it gets corrected on its own within 3-4 days without any medicine and with hygienic measures. Refer the case to the MO at AB-HWC-PHC for appropriate treatment and care.

b) Treatment at the referral centre:

Treatment of a diagnosed case of conjunctivitis depends on the probable underlying aetiology of the condition. Frequent antibiotic eye drops in daytime and antibiotic eye ointment in night time are usually needed for the treatment except in Allergic Conjunctivitis.

Allergic conjunctivitis can be treated using topical anti-allergic (anti-histaminic) drugs. Supportive treatment for pain relief should also be given. You will dispense the medicines as prescribed by the MO/Eye Specialist/Eye Doctor.

Your role in overall management of Conjunctivitis:

It is important to differentiate simple conjunctivitis from certain other serious conditions which lead to blindness rapidly and hence need **URGENT** referral to an Eye doctor/Eye specialist (in consultation with the MO at AB-HWC-PHC). Certain signs which may point towards probable underlying cause are mentioned above. As a patient with red eye will mostly first present to you, it is vital that you are able to differentiate simple conjunctivitis from other serious conditions and judge the level of care needed for each patient. Whenever in doubt, it is always better to refer the patient to the Medical Officer. The MO will refer the patient to the higher facility with an Eye doctor/Eye specialist (you may also undertake referral in emergency cases, only with consultation with MO).

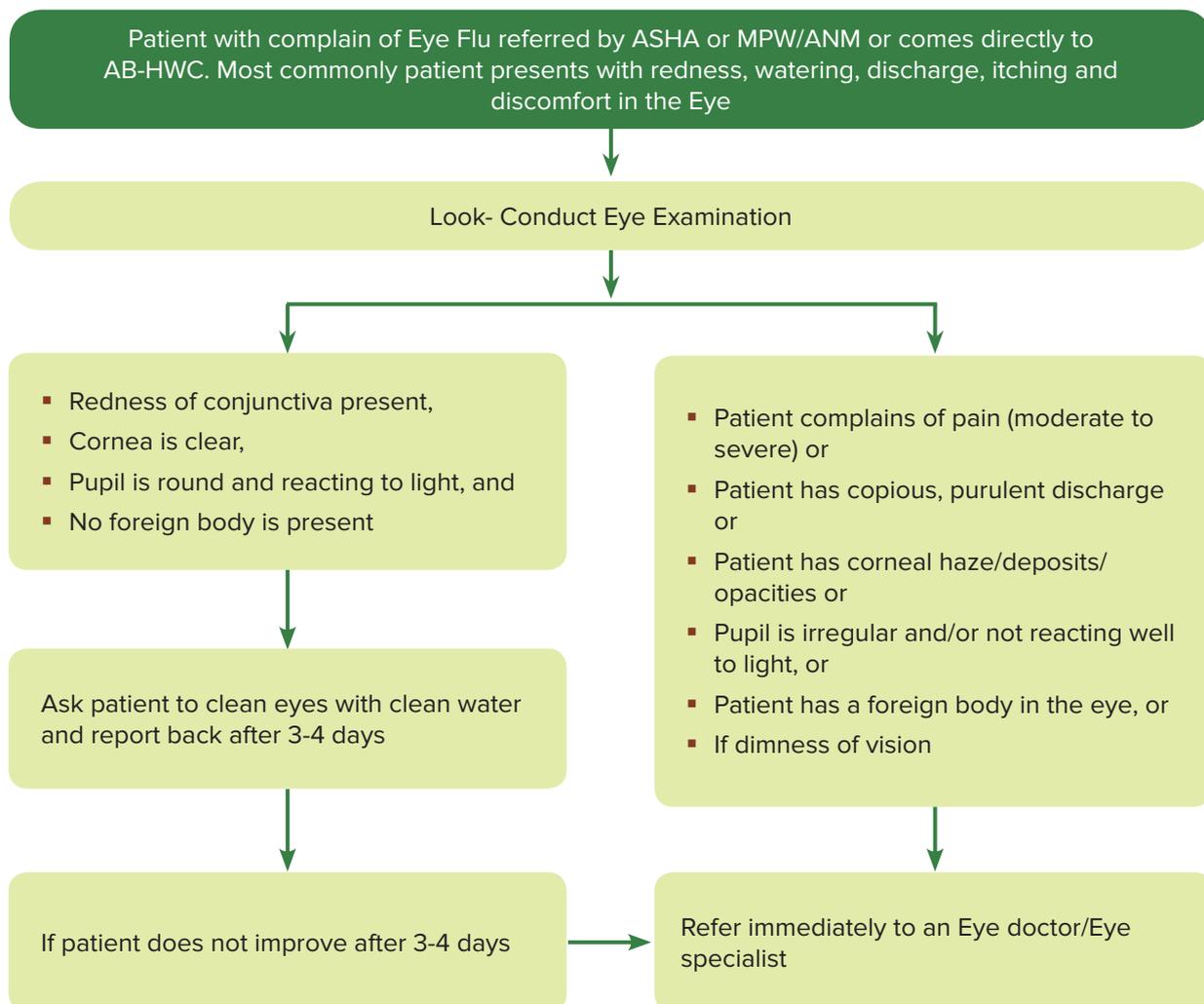
Post treatment at the referral centre, the follow-up care will be provided by you. Apart from counselling the patients about the general principles of good eye care, you would be expected to examine the patient and assess the compliance and response to the treatment advised to the patient. In case the symptoms do not subside within a period of 3-4 days, the patient should be encouraged to re-visit the treating doctor.

Refer Annexure-3 on how to clean eyelids and eyes daily for patients with conjunctivitis.

Role of CHO in Management of Conjunctivitis

- Identification and diagnosis of conjunctivitis amongst the community members.
- Linking suspected patients with conjunctivitis to the Medical Officer at AB-HWC-PHC/Eye doctor/Eye specialist at higher health centres for further testing and treatment (refer to the MO at the AB-HWC-PHC; undertake referral in consultation with MO; MO to also be informed regarding any visits to health facility by the community members). MPW/ANM will assist you in making arrangements for referral.
- Follow-up care of those diagnosed with conjunctivitis by referral centre.
- Regular follow up of all treated cases.
- Health Promotion activities- informing all community members to maintain good personal hygiene, good eye hygiene, preventive measures and to report immediately for excessive watering and redness in the eye.
- Maintenance of records and registers. ANM/MPW will assist you in maintaining the records and reports, as required.

Approach to a patient with Conjunctivitis



CHAPTER 8

Overview and Management of Stye

8.1 What is a Stye?

A sty is like a pimple on the eyelid as the result of a blocked gland. The medical name for sty is hordeolum. There are two types of swellings on the eyelid: sty (hordeolum) and chalazion. Each has different causes and treatments.

A **hordeolum (Stye)** is an acute inflammation of the sweat glands found in the skin of the lid and base of the eyelashes, or one of the small sebaceous glands found at the base of the eyelashes. It is a painful condition.

A **chalazion** is a blockage of a meibomian gland, which is a special oil gland (sebaceous) unique to the eyelids. Unlike a sty, a chalazion is usually not painful and is not caused by a bacterial infection. Instead, a chalazion occurs when the opening of the oil-producing glands in the eyelid becomes clogged. Treatment for both conditions also is different.



Hordeolum



Chalazion

Source: Aravind Eye Hospital, Madurai

8.2 Causes of Styne

Styes occur when a gland in or on the eyelid becomes inflamed due to blockage.

This can happen due to poor hygiene or dust particles blocking the opening of the gland.

8.3 Symptoms and Signs of formation of Styne

- ▶ Feeling of a foreign body sensation in the eye (particularly with blinking).
- ▶ Pressure on the eye.
- ▶ Painful red bump.
- ▶ May also be blurred vision if thick sebum or pus from within the styne spreads over the eye's surface.
- ▶ Presence of a lump (like a pimple) on the edge of the eyelid.
- ▶ Redness and swelling of the skin.
- ▶ May be thick discharge or crusting on the lids and lashes.
- ▶ Tears can also be produced in response to irritation.

8.4 Treatment for Styne/Chalazion

The most conservative treatment is application of frequent dry warm (not too hot) compresses several times a day. Plucking of the involved cilium (eye lash) helps sometimes to hasten the healing. A simple pain reliever can also be given. If there is severe burning, discharge and redness that interferes with vision, you will refer to the Medical Officer at AB-HWC-PHC for further care. If it is a chalazion, it has to be incised and drained by an Eye Surgeon. Antibiotic eye drops as prescribed by the Medical Doctor, may be required for styes. There is no role of oral antibiotics in treatment of Styne/Chalazion.

8.5 Prevention of Styne

1. The most effective method of prevention is to keep the eyelids and eyelashes clean.
2. Dry and warm compresses on a daily basis on the styne at the first sign of irritation in the eyelid can prevent it from getting worse.
3. Following general eye health and hygienic measures.
4. In children with styes, closely follow-up as it can spread fast and become dangerous.
5. If there is formation of recurrent styes in individuals, check for Diabetes Mellitus and/or Refractive Errors. Refer to Medical Officer at AB-HWC-PHC for further check-up if required.

Refer to Annexure - 5A for Applying a Dry Warm Compress in case of Styne in individuals.

Role of CHO in Management of Stye

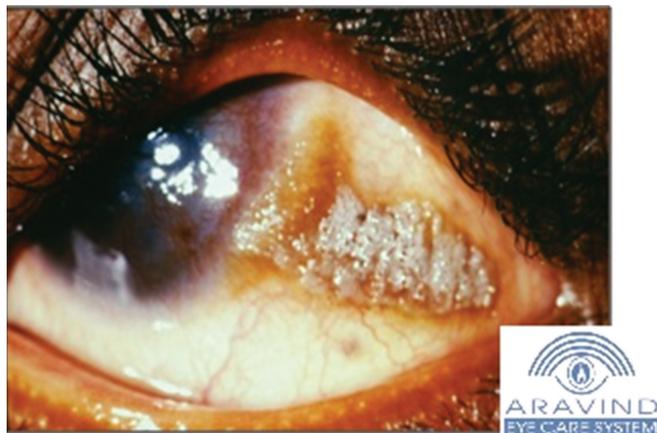
- Identification and diagnosis of stye formation amongst the community members.
- Screen for Diabetes Mellitus and/or Refractive Errors in patients with recurrent stye formation. Patient will be referred to Medical Officer at AB-HWC-PHC for further check-up, if required.
- Linking patients with styes to the Medical Officer at AB-HWC-PHC. Patients may also be referred to Eye doctor/Eye specialist at higher health centres for surgical removal of the pus (refer to the MO at the AB-HWC-PHC; undertake referral in consultation with MO; MO to also be informed regarding any visits to health facility by the community members). MPW/ANM will assist you in making arrangements for referral.
- Regular follow up of all treated cases.
- Health Promotion activities- informing all community members to maintain good personal hygiene, good eye hygiene and take preventive measures.
- Maintenance of records and registers. MPW/ANM will assist you in maintaining the records and reports, as required.

CHAPTER 9

Overview and Management of Xerophthalmia (Vitamin A Deficiency)

9.1 Introduction

Xerophthalmia is a condition of early vitamin A deficiency in which cornea keratinises, become opaque and forms dry, scaly layers of cells. The affected cornea is susceptible to infection leading to corneal opacity and even melting of Cornea (Keratomalacia). The conjunctiva may keratinise and develop plaques known as Bitot's spots. Although rates of Xerophthalmia have fallen, the number of affected children is still high. It is seen especially in poor families and malnourished children/Severe Acute Malnutrition (SAM), children with diarrhoea and children with measles. Clinical or sub-clinical zinc deficiency may also increase the risk of vitamin A deficiency.



Bitot's Spot

Source: Aravind Eye Hospital, Madurai

9.2 Classification of Xerophthalmia by ocular signs

Stage	Features	Description
XN	Night Blindness	Difficulty in seeing in the dark
X1A	Conjunctival xerosis	Dryness of the conjunctiva – outer lining of the eye; no tears
X1B	Bitot's Spots	Dirty white patch on outer side of conjunctiva
X2	Corneal xerosis	Dry, hazy appearance of the cornea

Stage	Features	Description
X3A	Corneal ulceration/keratomalacia < 1/3 corneal surface	Small ulcer on cornea
X3B	Corneal ulceration/keratomalacia >1/3 corneal surface	Ulcer larger in the corner
XS	Corneal scar	Damaged cornea – causes blindness
XF	Xerophthalmic fundus	Damage to the retina at back of eye – advanced stage – complete blindness

9.3 Clinical Features

Symptoms

- ▶ Delayed dark adaptation (an early symptom)
- ▶ Night blindness or nyctalopia (seen in more advanced cases)
- ▶ Photophobia (sensitivity to light)
- ▶ Diminution of vision
- ▶ Dry and scaly cornea (Xerophthalmia)
- ▶ Conjunctival plaques (Bitot's spot)
- ▶ Besides eye lesion, child with vitamin A deficiency may have systemic features such as growth retardation, susceptibility to infections, anaemia, diarrhoea, mental retardation, apathy, increased intracranial pressure, and wide separation of the cranial bone at the sutures.



Bitot's Spot

Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences

Signs

- ▶ Early vitamin A deficiency shows delayed dark adaptation.
- ▶ Keratinised conjunctiva shows Bitot's spots at a relatively early stage.
- ▶ Cornea shows dry and scaly layers of cells known as xerophthalmia.
- ▶ Cornea may degenerate and produce corneal ulceration, necrosis, and permanent corneal scars.

9.4 Management of Xerophthalmia

a) Screening and early diagnosis of Xerophthalmia

Although biochemical tests exist for measuring the levels of Vit. A (retinol) in the blood, clinically the presence of Bitot's spot and history of night blindness is often sufficient for referring the individual for further evaluation and management. Bitot's spots once formed cannot be removed by Vitamin A treatment.

b) Treatment of Xerophthalmia

Children below 5 years, receive 2 lakh International Unit (IU) of Vitamin A orally every 6 months under the Universal Immunization Programme (1 lakh IU below age of 1 year). Severe cases of

Xerophthalmia are treated using 2 lakh IU of vitamin A by mouth on the first day. Repeat the same dose on the second day and again after 14 days.

c) Your role in management of Xerophthalmia

- ▶ The treatment for Xerophthalmia is simple, especially if detected early. Hence, it is important to check for signs and symptoms indicating Vitamin A deficiency, especially in sick and malnourished children. Even if one child in a house has Xerophthalmia, the neighbouring children of other households should be checked for the disease.
- ▶ Prior to referral, counsel the patient about:
 - The need and importance of referral.
 - Probable line of management which would be initiated at the referral health facility.
 - The importance of mobilizing family members for screening, especially the children.
- ▶ Once the treatment has been initiated at the referral centre, the patient will follow-up with you through the AB-HWC-SHC. Hence it would be necessary to:
 - Ensure that the patient is compliant to the treatment and undertaking the follow-up visit as advised.
 - Counsel about the regular consumption of locally available vitamin A rich foods such as milk and milk products, butter, ghee; whole egg, liver, meat, chicken, fish; dark green leafy vegetables like Amaranthus leaves (chulai), drumstick leaves, methi (fenugreek) leaves, spinach (palak), mustard leaves (sarson saag), turnip leaves, coriander, radish leaves, bathua leaves, mint leaves; yellow and orange vegetables and fruits like carrots, tomato, sweet potato (shakarkandi), papaya, mango, apricots (khoomani), dates, etc. and appropriate breastfeeding (colostrum is rich in Vitamin A). Home garden/Community Garden to grow vitamin rich vegetables and fruits should be encouraged, wherever applicable.



Vitamin A rich foods

- Monitor the response to the treatment and refer to MO at AB-HWC-PHC/Eye doctor/ Eye specialist at higher health facilities (referral in consultation with MO) if there are no signs of improvement/symptoms recur after few days.
- ▶ Public health function:
 - Help the ASHA and MPW/ANM in your area in maintaining a register with a list of individuals suffering from Xerophthalmia.
 - Educate and create awareness generation of the community members on prevention of Vitamin A deficiency disorders.

- Vit. A deficiency should be considered of public health significance in your area, if their prevalence in children between 6 months-6 years is as follows:

Sr. No	Clinical Feature	Prevalence ²
1	Night blindness	>1%
2	Bitot's Spot	>0.5%

- In such cases, you should inform the Medical Officer at AB-HWC-PHC about the situation, so that necessary corrective measures, such as carrying out a rapid epidemiological survey for early identification and treatment, up-scaling immunization services, etc. can be undertaken.

Role of CHO in Management of Xerophthalmia

- Early detection of night blindness in children and treatment with Vitamin A prophylaxis.
- Early identification of signs, symptoms of Vitamin A deficiency in children and also in pregnant women.
- Assure Vitamin A prophylaxis in children between 9 months to 5 years of age as per National Immunization Schedule.
- Monitoring all measles cases in children and ensuring that they receive vitamin A supplementation.
- Linking patients with any signs of Vitamin A deficiency to the MO at AB-HWC-PHC/Eye doctor/eye specialist at higher health centres for further testing and treatment (refer to the MO at the nearest AB-HWC-PHC; undertake referral in consultation with MO; MO to also be informed regarding any visits to health facility by the community members). MPW/ANM will assist you in making arrangements for referral.
- Follow up of all treated cases with regular eye check-up and Vitamin A prophylaxis.
- Health education on importance of Vitamin A Prophylaxis and Vitamin A rich diet. Encouraging breastfeeding focusing on colostrum feeding.
- Ensure regular screening of all children in Anganwadis and schools for early signs of Vitamin A Deficiency by RBSK team.
- Maintenance of records and registers. ANM/MPW will assist you in maintaining the records and reports, as required.

2. Control of vitamin A deficiency and xerophthalmia. Report of a joint WHO/UNICEF/USAID/Helen Keller International/IVACC meeting. Geneva: World Health Organization; 1982 (WHO Technical Report Series, No. 672) (http://whqlibdoc.who.int/trs/WHO_TRS_672.pdf, accessed 26 April, 2021).

CHAPTER 10

Overview and Management of Glaucoma

10.1 Introduction

Glaucoma is a group of related eye disorders that cause damage to the optic nerve that carries images from the eye to the brain. In most cases, glaucoma is associated with higher-than-normal pressure inside the eye and changes in field of vision.

It is also called as '**Kala Motia**' in Hindi. If untreated or uncontrolled, glaucoma first causes peripheral vision loss and eventually can lead to blindness (known as '**silent thief**' of vision). It is usually detected late when 40% of the vision is lost.

10.2 Types of Glaucoma

The eye continuously produces an aqueous fluid which normally gets drained out from the eye via an angle between the iris and cornea. There are two main types of glaucoma which can be stated as follows:

- A) Open-Angle Glaucoma: This is the most common form of the diseases. It happens gradually; where the eye does not drain fluid as well as it should (like a clogged drain). As a result, eye pressure builds and starts to damage the optic nerve.
- B) Angle-closure Glaucoma: This happens when the drainage angle gets narrowed or completely blocked, resulting in rapid rise in the eye pressure. This leads to acute severe pain in the eye and should be treated as an eye emergency.

10.3 Risk Factors for Glaucoma

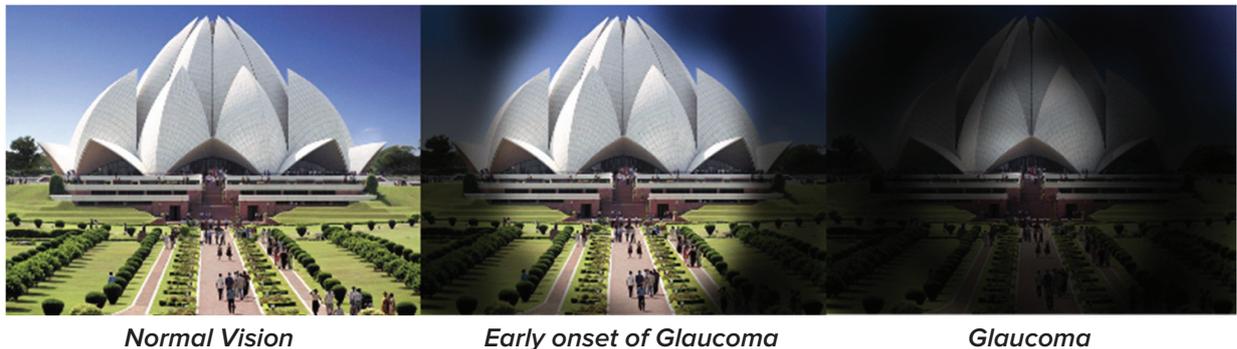
- ▶ Age more than 40 years of age (sometimes it can also occur in children).
- ▶ Family history of glaucoma.
- ▶ History of diabetes, hypertension (blood pressure), heart disease, high lipids/cholesterol.
- ▶ Use of steroid medications, like prednisone.

- ▶ History of trauma to the eye or eyes.
- ▶ Very high refractive errors.

10.4 Clinical Features of Glaucoma

In Open Angle Glaucoma, the patient is mostly asymptomatic, at least in the initial stages. Some patients may complain of patchy blind spots in side (peripheral) or central vision, frequently in both eyes. Patients are left with only a tunnel vision in the advanced stages.

The first picture is what a person with normal vision can see. The other two are from patients with glaucoma. In early stages, only the side vision gets damaged. If left without treatment, this becomes worse and finally the person can only see the middle part of the picture.



Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences

Note: Individuals having tunnel vision (seen in second and third picture) in glaucoma, may still have normal vision and can still read the last line in the Snellen chart. Therefore, individuals with any of the risk factors given above, should be advised for regular check-up for glaucoma once a year at the nearest AB-HWC.

10.5 Features of Angle closure Glaucoma include:

- ▶ Sudden diminution of vision
- ▶ Severe eye pain
- ▶ Sudden redness of the eye
- ▶ Constitutional symptoms such as headache, nausea, vomiting, etc.
- ▶ Coloured halos/bright circles around source of light

10.6 Management of Glaucoma

a) Screening for Glaucoma

Early diagnosis and treatment of glaucoma is essential for saving the vision in glaucoma cases. Once diagnosed it should be ensured that the patient complies with the regular treatment (Anti Glaucoma Eye drops) and follow up as and when told by the Eye doctor/Eye specialist.

Glaucoma is diagnosed by measuring the Intra-Ocular Pressure (IOP) by an instrument known as Applanation Tonometer (available at the level of Vision Centres), checking of Visual fields and optic nerve examination. Hence, early referral is necessary. The Medical Officer at AB-HWC-PHC or the OA at Vision Centre will screen the individual for glaucoma and refer to an Eye specialist/ Eye doctor at higher referral centres for medical treatment/surgery.

All cases with diabetes, hypertension, heart disease, high lipids/cholesterol in the community must go at least once a year for eye examination. Persons detected with glaucoma will be prescribed medication (medical treatment) or laser or surgery depending on phases of disease by the Eye doctor/Eye specialist.

b) Treatment

Glaucoma is usually controlled with anti-glaucoma eye drops. Used every day, these eye drops lower eye pressure. Some do this by reducing the amount of aqueous fluid the eye makes. Others reduce pressure by helping fluid flow better through the drainage angle. Few cases of glaucoma may also need surgery/laser treatment.

c) Your role in management

Chronic open glaucoma is often asymptomatic unless in advanced cases, by which the disease condition and vision loss is mostly irreversible. Hence, referral of all **'at risk'** individuals should be carried out and they should be encouraged to seek appropriate care early.

Similar to conditions like diabetes mellitus (DM) and hypertension (HTN), the medications for glaucoma (anti-glaucoma eye drops) could continue for a long time and hence it is important to have regular follow up and ensure the compliance to the treatment advised.

As you would be responsible for dispensing the eye drops during the follow-up visits (prescribed by the Medical Doctor), you should be aware of the indications and common side effects of these eye drops.

Role of CHO in Management of Glaucoma

- Making a list of all Vision Centres/Eye surgeons in the service area.
- Regular screening of all cases with hypertension, diabetes, heart disease, high lipids/cholesterol for any symptoms suggestive of glaucoma (if they can see full picture or not). Such individuals and their family members should get their eye pressure checked and eye examination at least once in a year.
- Linking suspected glaucoma patients to the Medical Officer at AB-HWC-PHC/OA at Vision Centres for screening for glaucoma (eye pressure test). Confirmed/High-risk cases for glaucoma will be referred by MO/OA for medical treatment and further management to higher facilities by Eye surgeon/Eye doctor (refer to the MO at the nearest AB-HWC-PHC; undertake referral in consultation with MO; MO to also be informed regarding any visits to health facility by the community members). MPW/ANM will assist you in making arrangements for referral.
- Educate the community members that eye drops prescribed by a medical doctor for glaucoma need to be continued life-long similar to taking medications for life in conditions like Diabetes and Hypertension.
- Regular follow-up of all diagnosed glaucoma cases to monitor that they are putting their eye drops regularly and also ensure that they are visiting the eye doctor as and when advised.
- Health promotion activities for proper eye care, signs and symptoms of glaucoma and prevention of glaucoma.
- Maintenance of records and registers. ANM/MPW will assist you in maintaining the records and reports, as required.

CHAPTER 11

Overview and Management of Trachoma

11.1 What is Trachoma?

It is an infection of the eye with *Chlamydia Trachomatis* which normally occurs in childhood (below 10 years of age). In adults (after 15 years of age), because of repeated infections earlier in life, scarring of conjunctiva occurs because of which, the eyelashes can turn inwards (trichiasis) and can rub against the front part of the eye resulting in its opaqueness (cloudiness), that in turn, leads to blindness. In adults, the inward turning of eyelashes in an individual can be checked through torch examination of the eye.

It is more prevalent in northern belt of India and Andaman and Nicobar Islands.

11.2 How is Trachoma spread?

The mode of spread of trachoma infection is a case of trachoma with infected eye secretions. The most common routes of transmission are:

- ▶ Close physical contact for e.g., mothers of affected children
- ▶ Sharing of towels, handkerchiefs, etc.
- ▶ Houseflies
- ▶ Coughing and sneezing

Trachoma is also referred as '**water washed**' disease because frequent washing of faces and good personal hygiene will prevent people from getting this disease.

11.3 What are the signs and symptoms of Trachoma?

Active Trachoma infection in children is associated with-

- ▶ Irritation of the eye with scratchiness
- ▶ Pain and redness in eye

- ▶ Foreign body sensation in inner eyelid
- ▶ Mucus and pus-filled discharge
- ▶ Swelling of upper eyelid
- ▶ Continuous tears from the eye
- ▶ Sensitivity to bright light
- ▶ Appearance of nodules on the inner surface of eyelids (usually upper eyelid)



Nodules on the inner surface of upper eyelid
 Source: Dr. Rajendra Prasad Centre for Ophthalmic Sciences

In adults, this leads to inward turning of eyelashes and eyelids. This can be checked through torch examination of the eye.

11.4 What is Trichiasis?

The progress of infection of trachoma causes the eyelashes of upper eyelid to turn inwards so that the lashes rub against the globe (eyeball). Sometimes whole lid margin may turn inwards.

11.5 Complications of Trachoma

Constant rubbing of the eyelashes on the corneal surface lead to the formation of corneal ulcers, corneal scarring and eventually corneal opacities.

11.6 Risk factors which spread Trachoma

- ▶ Overcrowding
- ▶ Poor personal/environmental hygiene
- ▶ Shortage of water
- ▶ Inadequate latrines and sanitation facilities

11.7 Can trichiasis be prevented?

Yes, Trichiasis can be prevented using measures such as-

1. Promoting face hygiene among community members by regular bathing and face washing. Teach and promote the steps of regular hand-washing with soap and clean water.
2. Promoting use of latrines and educating community members about harms related to open defecation.
3. Spreading the following messages amongst the community members:
 - a. Keep your environment clean.
 - b. Houses and surroundings should be kept free of breeding of houseflies. The breeding ground is usually garbage, manure, uncovered fruits and vegetables, open defecation areas, open drains, etc.

- c. Maintain personal hygiene. Wash your face with clean water several times in a day.
- d. Keep separate towel, linens, handkerchief, etc. for each member of family and keep them clean.

11.8 What is the treatment of Trachoma?

- ▶ Promote hand and facial hygiene practices (personal hygiene) among individuals and cleanliness of environment.
- ▶ The inward turned eyelash can be easily removed by you/MPW (ANM) or the MO/OA on examination but if the number of inward turned eyelashes is more than three, then patient should be referred for corrective eyelid surgery to the Eye Specialist/Eye Doctor.
- ▶ You will refer patients with Trachoma/Trichiasis to MO at AB-HWC-PHC/OA at Vision Centre/Eye specialist at higher health facility as appropriate for confirmation and treatment (*in consultation with MO*).
- ▶ Providing follow- up care for trachoma as advised at the referral centre.
- ▶ Ensure adherence to treatment by the patient as advised by the doctor.

Role of CHO in Management of Trachoma

- Linking suspected patients with Trachoma/Trichiasis to the Medical Officer at AB-HWC-PHC/OA at Vision Centres/Eye doctor/Eye specialist at higher health centres for testing and treatment (refer to the MO at the AB-HWC-PHC; undertake referral in consultation with MO; MO to also be informed regarding any visits to health facility by the community members). MPW/ANM will assist you in making arrangements for referral.
- Follow- up care of those diagnosed by referral centre.
- Health promotion for good personal hygiene, facial cleanliness and environmental hygiene and to report immediately for any symptoms.
- Regular follow up of all treated cases.
- Maintenance of records and registers. ANM/MPW will assist you in maintaining the records and reports, as required.

CHAPTER 12

Overview and Management of Eye Injuries

12.1 Introduction

Eye injuries are a leading cause of blindness in children and young people (less than 25 years of age). In the absence of severe ocular compromise, most conservative treatments for standard eye complaints produce healing within 48 to 72 hours. However, if severe, blindness may set very soon.

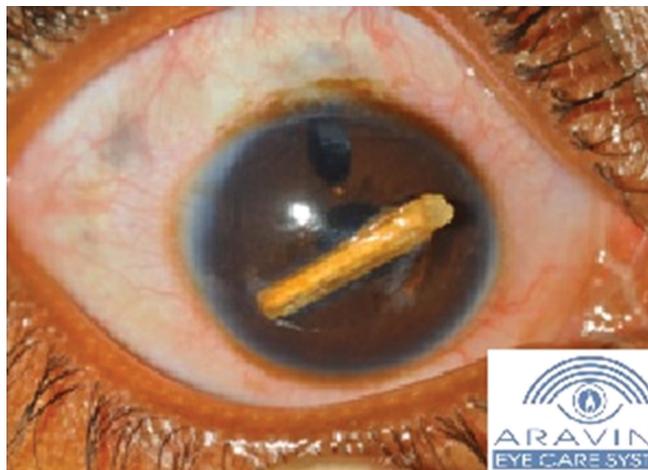
12.2 Type of Eye Injuries

Injuries can be due to:

- a) Mechanical trauma:
 - ▶ Blunt trauma (most common) –some object hitting the eye
 - ▶ Penetrating trauma
- b) Chemical injuries
- c) Radiation/Heat injuries

There are different situations where someone can have an Eye Injury. Some of the direct causes are:

1. Chemical colours falling into the eyes while playing holi.
2. During a physical fight or playing outdoor games.
3. Hot water burning the eyes or Diwali crackers falling into the eye.



Foreign body in the eye
Source: Aravind Eye Hospital, Madurai

4. Sharp objects or grain husks/small sticks going into the eye during some physical work e.g. cutting wood, farming season.
5. Ultra violet light entering the eye when a welder does work without eye protection.
6. Looking directly at the sun during a Solar Eclipse.

Damage to the eye due to injuries are preventable if adequate precautions are taken. These can happen without any prior warning. Eye injuries can be minor or serious and can lead to permanent blindness also.

12.3 Clinical Features of Eye Injuries

- ▶ Acute pain in the eye, may be associated with redness, cuts
- ▶ Diminished vision
- ▶ Photophobia
- ▶ Watering from eyes
- ▶ Injury to eyelids
- ▶ Other injuries on face and neck region

12.4 Management

- a) Take a brief history, noting the cause of injury, severity and duration of symptoms and any change in vision. Do a rapid examination to check for pupillary responses, extraocular movements, integrity of orbital rim (eye socket).
- b) Initiate the First Aid for foreign body and eye injuries, provide stabilization while arranging for transport of the patient to the nearest facility having an Eye Specialist (in consultation with MO at AB-HWC-PHC). If person wear spectacles/glasses, make them wear them while referring.

Steps of the first aid for foreign body and eye injuries include:

1. Wash eyes with clean and running water.
2. Do not rub the eye in case of foreign body.
3. Attempt to remove only superficial foreign body especially those located in the conjunctival sac of the eye.
4. Do not attempt to remove foreign body from cornea.
5. Stabilization and patch the affected eye with sterilized gauze pad and cover the eye with an eye shield, if available. In case, a sterilised gauze pad is not available, cover the eye with a clean cloth.
6. Refer to nearest facility having an Ophthalmologist (referral in consultation with MO at AB-HWC-PHC).

12.5 For penetrating injuries, treatment before referral

The goal of management for penetrating eye injuries at primary care settings is to avoid secondary eye injury/damage by preventing any increase in intraocular pressure (IOP).

- a. Application of any external pressure to the eye must be avoided. Do not bandage the eye.
- b. Cover the injured eye with a clean cloth/eye pad/eye cover/protective eye shield over the affected eye for eye protection during transportation.
- c. Do not to place any pressure points of the protective eye shield onto the eye itself, but place the pressure points instead onto the bones surrounding the eye.
- d. If a metal or plastic eye shield is not available, a styrofoam or plastic cup should be taped over the eye for protection.
- e. The head of the bed should be elevated if possible, to prevent increased IOP.
- f. Give tetanus toxoid injection, if there is any breakage of skin around the eye.
- g. As pain, agitation, uncontrolled hypertension and Valsalva maneuvers can elevate IOP, appropriate analgesic, antiemetic and sedative therapy should be provided before referral.

Penetrating and chemical injuries would need specialized care and hence should be referred only to such centres where an Ophthalmologist is available (referral in consultation with MO at AB-HWC-PHC).

12.6 For chemical burns (acid/alkali/chemical exposure), treatment before referral

Do **immediate and copious irrigation** of the eye to dilute and remove as much of the chemical as possible.

- a. Wash your hands with soap and clean water.
- b. Wear gloves to do the treatment.
- c. Irrigation should begin as soon as the patient is seen - whether in community settings or at the AB-HWC-SHC or at any other facility.
- d. The patient should be made to lie on his/her side with the affected eye being downwards.
- e. Irrigation using Normal saline/ Ringer's lactate or clean water should be directed



Chemical Burns
Source: Aravind Eye Hospital, Madurai

from the nasal corner outward to wash away chemicals from the lacrimal punctum towards the lateral canthus for at least 30 minutes. Avoid spilling over on unaffected facial area.

- f. If these solutions are not available clean tap water for Irrigation can be used.
- g. Irrigation can be done through Intravenous cannula or nasal cannula tubing into the affected eye.
- h. During the irrigation patient must be directed to look in all directions so that complete removal of chemicals from all the surface of the eye is ensured.
- i. Attempt should be made to identify the chemical in question and mention this information on referral slip or telephonically.
- j. Refer immediately to an Eye specialist/Eye doctor (referral in consultation with MO at AB-HWC-PHC).

Refer to Annexure- 5 B regarding Applying an Eye Cover or Pad in case of Eye Injuries. Also, Refer to Annexure-6, regarding Steps in removal of superficial foreign bodies in the eye.

Role of CHO in Management of Eye Injuries

- Take brief history of incident and cause of eye injury.
- Examine eye to note extent and depth of injury.
- Give first aid for foreign body, eye injuries, provide stabilization and then referral. Washing the eyes in case of chemical burns and keeping them covered with a clean cloth till the patient reaches the treating doctor.
- Linking individuals with eye injuries to the Medical Officer at AB-HWC-PHC/Eye doctor/ Eye specialist at higher health centres for treatment (refer to the MO at the AB-HWC-PHC; undertake referral in consultation with MO; MO to also be informed regarding any visits to health facility by the community members). MPW/ANM will assist you in making arrangements for referral.
- Follow- up on all cases after treatment.
- Raise awareness among community members about prevention of eye injuries at home, in the community and during festivals.
- Supervise special festivals where eye injuries are common such as Holi and Diwali.
- Promote use of protective eye glasses for farmers, those doing mechanical or welding work, use of helmets covered with front glass for those driving two-wheelers, educating community members to not look directly at the sun during Solar Eclipse, etc. The flying husk/small sticks of plants/any foreign body can enter the eye and lead to ulcers in the cornea and to blindness.
- If you suspect any foul play and probable medico-legal case in any patient with eye injury, inform the Medical Officer at AB-HWC-PHC immediately.
- Maintenance of records and registers. ANM/MPW will assist you in maintaining the records and reports, as required.

CHAPTER 13

Special situations for Eye Care

13.1 Diabetes and Eye Diseases

ASHA, AF and MPW/ANM in your service area is mobilizing the target population for screening for diabetes to the nearest AB-HWC as part of Non-Communicable Diseases (NCDs) screening programme. It is important to ensure that all confirmed cases of diabetes get an eye check-up done once a year even if they do not have any eye complaints.

The problem of diabetes is increasing in our country and so are its long-term effects. As you know, in diabetes, the blood glucose levels are increased. It can be controlled by taking medicines that are available now at the AB-HWCs.

Diabetes affects many organs and one of them is the eyes. It affects mainly the back lining of the eye called the retina. It can also result in early cataract development and glaucoma. This is important to understand, if the retina gets affected by the disease, person will have problems in his/her vision. Also, here the loss of vision is irreversible. So, you must encourage all the target population to get their regular eye examination as well as control their high blood pressure and diabetes through various means like lifestyle modification and/or medicines. The diabetic individuals will be referred to the MO at the AB-HWC-PHC or to Ophthalmic Assistant (OA) at Vision Centres for timely detection of diabetic related eye diseases, if any (referral in consultation with MO). MO/OA will facilitate consultation of diabetic patients with eye specialist at an early stage for timely detection of diabetic eye diseases (Diabetic Retinopathy), if any, as required.

13.2 Prematurity and Eyes

Those babies that are born premature (before complete term) such as before 32 weeks of gestation or whose birth weight is less than 1500 gms, their retina (back lining of the eye) is not fully developed. These children may also have difficulty in breathing and low oxygen. They may be kept in neonatal units if they are born within hospitals for support and management.

These babies require an eye check-up within 30 days of birth so as to examine whether the retina is okay or not. If there is abnormal development, these babies can have blindness if not detected

and treated early. Babies that are very low birth weight (<1200 gm birth weight), eye examination should be done earlier.

Ensure that the ASHA, ASHA Facilitator and/or MPW/ANM, get an eye check-up done of all babies born in the service area with weight less than 1500 gms or born before 32 weeks, within 30 days of birth through RBSK team. Inform parents about the screening, mobilize them and accompany them, if required for eye examination. Ensure follow-up care of such children on a regular basis as advised by the referral centre.

13.3 Eye Donation

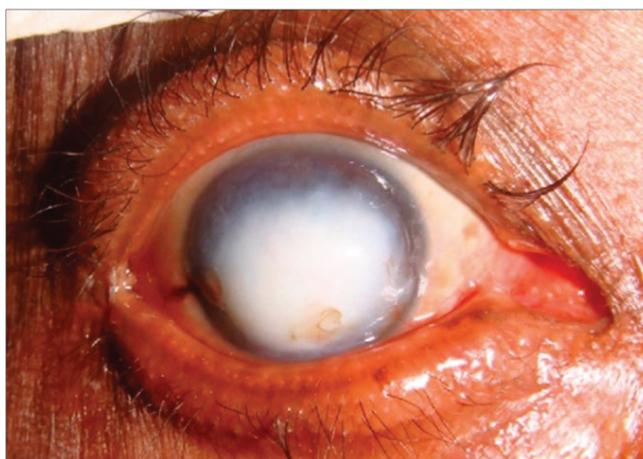
The front transparent portion of the eye that covers pupil is called as cornea. In certain conditions, it becomes opaque and it leads to corneal blindness. Persons affected with same, can get rid of their blindness by replacing with a healthy cornea tissue. **Donating the eyes after death of the individual is referred as 'Eye Donation'.**

Eye donation is an act when one person can donate their eyes to persons suffering from corneal blindness. An eye donation helps 3-4 persons to regain their vision.

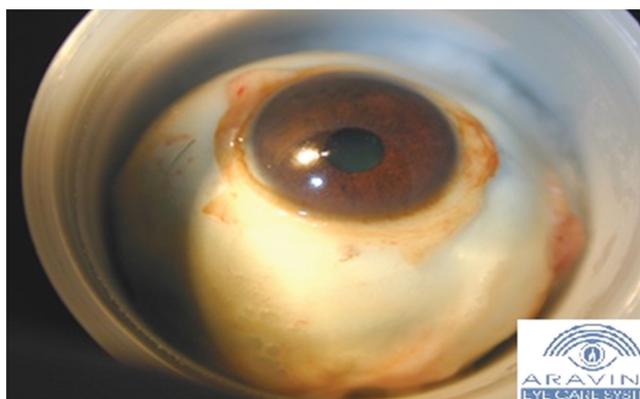
There is a huge demand and the supply is not sufficient for the people who need it. Thus, as a society, we need to come forward for this noble cause and help our community. You should encourage community members to understand this and agree to donate their eyes after their death.

Very often the individual usually agrees, but the relatives have a problem after their death. There is no cost involved in eye donation as even the person receiving the cornea, does not have to pay any amount. It is a voluntary act and is free of cost. A person of any age, sex, religion, caste can donate his/her eyes. Donated eyes are never bought or sold. In your target area, people with diabetes, hypertension and asthma can also donate their eyes after their death.

The eyes can be donated at home or hospital after death. The Eyes/corneas are taken by the trained team within 6 hours of death, beyond which corneas cannot be donated. For those ready to donate their



Corneal opacity



A Donated Eye

Source: Aravind Eye Hospital, Madurai



Transplanted cornea in an eye immediately after surgery
Source: Aravind Eye Hospital, Madurai

eyes, the relatives must call up the nearest eye bank at **National toll-free number (24X7) – 1800114770 and 1919 (for metro cities)**. On receiving the call, the team members will visit them within 6 hours of death and collect the Eyes/corneas.

The whole eye or the front portion of the eyes that is corneascleral rim of the dead person is taken out by trained team members. It will not lead to any defect of the face.

CHO/MO heading the nearest AB-HWCs is responsible for creating awareness generation on eye donation and will be supported by the primary healthcare team, Village Health, Sanitation and Nutrition Committee (VHSNC) members, support groups, etc. in motivating community members for eye donation.

Precautions to be taken after death for donation of eyes

The family members should take care that there is no wind or breeze where the body of the deceased (dead person) is kept, and the fan should be switched off in that room. This will prevent drying of the eye. The head of the deceased person should be supported by pillow, eyelids should be closed and eyes can be covered with moist cotton piece or ice. This will enable corneas of the eye to remain fresh for donation.

Explain to the community that pledging for eye donation can be done by anyone in their lifetime. Persons who have pledged their eyes, must inform their family members regarding the pledge, as they would be able to contact the nearest eye bank after their death. Even if the pledge has not been done, the family members can still call the eye bank and donate the eyes of the deceased person. Any person can donate their eyes; even those who have undergone any eye operation or have any eye disease condition except those with Hepatitis, Human Immunodeficiency Virus (HIV), rabies, blood cancers or stage IV cancers.

Some Myths and Facts about Eye Donation

1. MYTH: Removal of eyes causes defect of the face.
FACT: Removal of eyes does not produce any defect of the face.
2. MYTH: Eye donation interferes with or delays customary final rites.
FACT: Eye donation does not interfere with or delay final rites, as the process of taking the whole eyes out of the face takes less than 20 minutes.
3. MYTH: Eyes of aged donors are not acceptable.
FACT: All donor eyes are acceptable irrespective of donor's age, including eyes of premature/still born babies.
4. MYTH: An entire eye can be transplanted.
FACT: Only the cornea can be transplanted for regaining vision.
5. MYTH: Human eyes can be bought or sold.
FACT: Selling or buying of human eyes is illegal.

Role of CHO in Eye Donation

- Along with ASHA, ASHA Facilitators, VHSNC members, support groups, etc. help motivating community members for Eye donation.
- Organize community meetings to educate people about Eye donation.
- Organize pledge ceremonies on important village days/festivals about Eye donation. Remember, every year, August 25th to September 8th is observed as National eye donation fortnight all over our country.
- Facilitate whenever required, for willing family to donate eyes of the deceased persons. Inform the MO at AB-HWC-PHC regarding such families and assist them in making necessary arrangements.

CHAPTER 14

Service Delivery Framework and Roles and Responsibilities of Community Health Officer in Eye Care

You, the Community Health Officer (CHO) at the AB-HWC-SHC, will lead the primary health care team and ensure that regular eye screening is undertaken in the community under your area, coordinate with the Rashtriya Bal Swasthya Karyakram (RBSK) Team for screening children of age group 0-18 years in the Anganwadi and schools, manage referral of those requiring surgery and treatment of refractive errors, ensure access to free spectacles, and also undertake home and community based follow up visits. You will support and supervise the activities to be undertaken by the ASHA, AF and Multipurpose Workers such as - screening, preventive care activities, promotion of eye care and home-based follow-up care.

As a part of the Ayushman Bharat- Health and Wellness Centre team at the Sub-Health Centre, your key roles and responsibilities is to ensure that Eye Care services are available and promptly provided to the community in which you are working. It would require active cooperation of all the members in the AB-HWC team. The table below summarizes the eye health care services that are to be provided at different levels. It will help you to understand the range of services that need to be provided at each level and how to strengthen the continuum of care and referral linkages.

Service Delivery Framework for Eye Care Services

Care at Community Level	Care at AB-HWC-SHC	Care at AB-HWC-PHC/ UPHC	Care at Vision Centre/ Secondary/Tertiary care facility
<ul style="list-style-type: none"> Awareness generation on common eye disorders and the need for early care seeking through VHSNC/ MAS, VHSND/ UHSND and other community level meetings (ASHA/ AF/MPW). 	<ul style="list-style-type: none"> Screening for blindness and refractive errors- Testing of visual acuity (distance and near vision), diagnosis of refractive errors and referral to Vision Centre of those requiring surgery/ for management or treatment 	<ul style="list-style-type: none"> The Medical Officer (MBBS) at the AB-HWC-PHC/ UPHC would be responsible for ensuring that eye care services are delivered through all AB-HWCs in her/ his area. Examination and diagnosis of all eye 	<ul style="list-style-type: none"> Eye Screening Camp- Assist district team during eye screening/ outreach camps (Ophthalmic Assistant- OA). Diagnosis for refractive errors and provision of free spectacles to patients diagnosed

Care at Community Level	Care at AB-HWC-SHC	Care at AB-HWC-PHC/ UPHC	Care at Vision Centre/ Secondary/Tertiary care facility
<ul style="list-style-type: none"> Clarifying misconceptions related to eye care and eye disorders (ASHA/AF/MPW). Providing Information about the availability of services related of eye treatment at different levels of healthcare (ASHA/AF/MPW/VHSNC/MAS). Screening of pre-term/ LBW newborns for congenital disorders and referral, children and adolescents through Anganwadis and schools for vision problems/visual acuity and adult population for blindness and refractive errors (facilitated by ASHA/AF/MPW in coordination with RBSK team, where needed). Identification/ Mobilization of patient with identified eye diseases (of known diabetic, identified patients) (ASHA/AF/MPW). Ensuring Vitamin A prophylaxis routinely for children aged 6 months to 5 years (ASHA/AF/MPW). Referral of patients with eye/vision problems to the nearest AB-HWC and follow- up (ASHA/AF/MPW). 	<ul style="list-style-type: none"> including provision of spectacles (CHO/MPW). Identification of common diseases of the eye and referral to Vision centres – Cataract, corneal diseases, glaucoma, eye disorders in known diabetic/ hypertensive patients (CHO). Diagnosis and referral to MO at AB-HWC-PHC– conjunctivitis, trachoma, eye allergy, acute red eye, xerophthalmia (CHO). Regular eye screening and coordination with RBSK team for screening children aged 0-18 years in AWC and schools (CHO). To identify and treat Vitamin A deficiency and Bitot’s spot; and provide Vitamin A prophylaxis (CHO/MPW). Undertake home and community-based follow up visits; also, along with the ASHA/AF (CHO/MPW). Health Promotion activities with use of IEC - Awareness generation about refractive disorders, common eye diseases, contagious eye diseases and infections and preventive care (CHO/MPW). Stabilization and referral of cases with trauma to the eye, chemical injury to 	<ul style="list-style-type: none"> cases referred from community or AB-HWC-SHC (MO). Diagnosis and treatment of common eye diseases like conjunctivitis, trachoma, refractive errors, dry eye, stye, superficial foreign body, eye allergy, acute red eye, xerophthalmia, etc. (MO). Primary eye care for trauma (MO). Screening for high-risk cases of glaucoma and referral to higher centres for early diagnosis and treatment (MO). Screening for diabetic retinopathy, using non-mydriatic fundus camera and facilitating consultation with eye specialist at early stage with referral for further treatment (MO). Referral for advice to eye specialist for corneal blindness and follow instructions given by specialist (MO). Act as Nodal Officer for Vision Centre operations (MO). Medical fitness for cataract surgery, disability certification (in consultation with an Eye doctor/Eye specialist), outreach activities, quality assurance of ASHA and OA activities (MO). 	<ul style="list-style-type: none"> with presbyopia and school children with refractive errors (OA). Collaboration with RBSK team to provide spectacles to children with refractive errors (OA). Identification of operable cataract, screening for high-risk cases of glaucoma and referral to higher centres for early diagnosis and treatment; and follow-up of post-operative cases (OA). Screening for diabetic retinopathy, using non-mydriatic fundus camera and facilitating consultation with eye specialist at early stage with referral for further treatment (OA). Referral for advice to eye specialist for corneal blindness and follow instructions given by specialist (OA). Referral to ophthalmologist for removal of corneal/ deep foreign bodies in eye (OA). Surveillance of trachoma and referral to eye specialist where needed (OA). Surgical care for eye diseases like cataract, corneal blindness, trachoma, glaucoma, severe trauma to eye,

Care at Community Level	Care at AB-HWC-SHC	Care at AB-HWC-PHC/UPHC	Care at Vision Centre/Secondary/Tertiary care facility
<ul style="list-style-type: none"> ▪ Follow up of post-operative cataract patients and distribution of spectacles to them (ASHA/AF/MPW). ▪ Ensure regular use of spectacles and follow-up bi-annually in children with refractive error (ASHA/AF/MPW). ▪ Enabling elderly and those with Presbyopia to get free spectacles (ASHA/AF/MPW). ▪ IEC for health promotion activities related to Eye Health; imparting health education to at-risk of visual impairment (ASHA/AF/MPW). ▪ Maintenance of records of visually impaired/blind individuals in the community (ASHA/AF/MPW); maintaining a list of referrals from community who cannot count by finger counting method, read by 6/18 Snellen Vision Chart (E chart) and those at risk through CBAC (ASHA). ▪ Undertake rehabilitation and counselling (ASHA/AF/MPW). 	<ul style="list-style-type: none"> eye, foreign body lodged in cornea to the higher health centres (CHO). ▪ Dispensing of medicines for conjunctivitis, dry eye, Trachoma and follow-up medicines for chronic eye disease (e.g. Cataract, Glaucoma and Diabetes) treated at referral centre (CHO). ▪ Awareness generation on eye donation, provide first aid for foreign body, eye injuries, stabilization and then referral (CHO). ▪ Care of eye due to acid/alkali/chemical exposure and immediate referral (CHO/MPW). ▪ Maintenance of records as per NPCB&VI guidelines (CHO). 	<ul style="list-style-type: none"> ▪ Surveillance of trachoma and referral to eye specialist where needed (MO). ▪ Providing follow up care for post-operative cases as recommended by the eye specialist (MO). ▪ Ensure record maintenance as per NPCB&VI guidelines and periodic review of progress (MO). 	<ul style="list-style-type: none"> corneal/deep lodgement of foreign body in eye, retinal disease (Ophthalmologist). ▪ Treatment of vision disorders, eye diseases and infections (Ophthalmologist). ▪ Record maintenance as per NPCB&VI guidelines (OA).

Key Roles and Responsibilities of Community Health Officer (CHO) in Eye Care is as follows:

The Primary Health Care team will be led by a Community Health Officer (CHO) at AB-HWC-SHC.

Clinical functions

1. Screening of population for common eye conditions and vision testing

As leader of the AB-HWC-SHC, it is important for you to make a detailed plan for eye care services in your service area. This will include screening of your population for common eye problems. Screening of the eye will be undertaken by ASHA for all adult community members using finger counting method, 6/18 Snellen vision chart (E chart) and risk assessment through Community Based Assessment Checklist (CBAC); screening of 0-18 years children and adolescents through the RBSK team in schools and Anganwadi centres, screening for children during Village Health, Sanitation and Nutrition Day (VHSND) by primary healthcare team, school health check-up programmes, organising eye screening camps, etc. for early identification of blindness and refractive errors with timely referral. Regular monitoring of blood pressure, blood sugar, heart diseases, etc. of the target community members should be done. Besides these opportunities, you might have to have special eye screening camps for older populations. At the end of the screening activities, the ASHA and ANM/MPW will update the registers and records.

2. Early detection of common eye disorders

ASHA/ANM/MPW will identify those with Presbyopia (poor near vision related to ageing), symptomatic person with visual impairment, cataract, known diabetic/hypertensive patient and person with subnormal vision, red eye and any other eye complaint, etc. and refer them to AB-HWC-SHC for screening for blindness and refractive errors. The referral cases of visual impairment identified after screening by ASHA (using finger counting method, 6/18 Snellen vision chart (E chart) and risk assessment through CBAC) will be referred to you for visual acuity by using Snellen's Chart and near Vision card. You will help in case identification of cataract, presbyopia, trachoma, corneal disease, conjunctivitis, acute red eye, eye allergies, and other common eye conditions. Refer to Annexure-7 for Community Based Assessment Checklist (CBAC).

3. Referral of individuals with complex eye disorders

Referral of individuals such as of suspected/complex cases with eye problems, cataracts or eye complications of diabetes, eye injuries, etc. to appropriate health facilities such as AB-HWC-PHC/ higher centres/referral centres for treatment of refractive errors and surgery. ANM/MPW will assist you in arranging for referral. You must ensure that all referrals to the concerned health facility is made in consultation with the MO at AB-HWC-PHC and is informed regarding any referral made by community members in the community.

4. Providing follow-up care

Follow-up is a very important step in order to complete the cycle of comprehensive health care. All cases that were referred for further management to AB-HWC-PHC and higher centres/referral centres will return to the community. You with support of ANM/MPW and ASHA will provide home and community-based follow up visits to such individuals and ensure that they receive complete care and, if on treatment, are complying with all the advice given to them. Long term follow-up will be necessary for certain cases.

5. Dispense the medications as prescribed by MO at AB-HWC-PHC or Eye Specialist/Eye Doctor.

6. Ensure access to free spectacles (in collaboration with District NPCB&VI Officer) and motivating individuals to regularly wear spectacles, motivation for eye donation, counselling of identified patients for cataract surgery, compliance for glaucoma, etc.

7. Along with the primary healthcare team, **arrange for rehabilitation** for those with long term and permanent blindness including vocational rehabilitation, re- integration into school, etc.

Public health activities

8. Carrying out health promotion activities along with the AB-HWC-SHC team

Make monthly action plans for health promotion activities including eye care messaging for the primary health care team-general eye care, eye hygiene, causes and prevention of common eye problems, counselling of patients and family members with eye problems. Participate in VHSNC meetings, VHSND, health promotion campaigns, eye screening camps and school programs and ensure that eye health promotion activities are carried out. Educate school teachers and Anganwadi Workers (AWW) about causes and prevention of common eye problem, identification of visual impairment among children and special needs of children with eye problems, including blind children.

Managerial activities

9. Maintenance of records and registers and stock management

In addition to all the clinical work related to eye care, you will have to take administrative decisions. One of them is stock inventory of all eye related medicines and equipment. Besides stock maintenance, you will also have to monitor and ensure that all records and registers related to eye care services are updated, all referrals are entered and all follow-up cases are given timely follow up. Maintenance of record will be as per NPCB&VI guidelines. ANM/MPW will support you in undertaking these tasks. You will submit reports, manually or through portal to the MO at AB-HWC-PHC on a regular basis related to eye care. You will need to check the CBAC form filled by ASHAs, monitor the registers and records maintained by the ASHA and ANM/MPW. These can be done at the monthly meeting at the AB-HWC-SHC.

10. Supervise the AB-HWC-SHC team in awareness generation regarding maintaining good eye hygiene, eating a healthy diet, maintaining good sanitation, information regarding common eye problems, importance of early care-seeking and eye care services available in the community and AB-HWC-SHC; activities carried out in the community like screening for eye diseases, identification and listing of individuals with complaints related to eyes.

Refer to Annexure-8 for Medicines and Diagnostics available at Community, Ayushman Bharat-Health and Wellness Centres- SHC/PHC/UPHC and Referral Centre. Refer to Annexure-9 for commonly used medicines for Eye Diseases and Annexure- 10 regarding list of equipment for Eye Care.

The key role and responsibilities of different members of team at AB-HWC for Eye Care is listed below:

ASHA:

1. To identify people with blindness and visual impairment in the service/coverage area. Prepare a line list of all those with poor vision including children and adults living in your service area.

2. Screening for blindness in the community by using finger counting method, visual impairment in the community using 6/18 vision chart for all adult community members and undertake the exercise of filling Community Based Assessment Checklist (CBAC) for target individuals.
3. Mobilise individuals found at risk (unable to see with finger counting test, visual impairment less than 6/18 in any eye and with any symptom in CBAC form) for further screening at nearest AB-HWC.
4. Mobilise the mother/caregivers for eye examination for all children (including preterm and low birth weight children) and adolescents for screening for visual acuity at school and Anganwadi levels through RBSK team (0-18 years of age).
5. Create awareness in the communities regarding maintenance for personal hygiene and environmental and lifestyle modifications, avoid myths and misconception related to eye care and motivate for eye donation.
6. Create awareness in the communities on need for early care seeking for eye problems and help bring change in health seeking behaviour of patients and caregivers.
7. Educate communities about prevention and common treatment of eye diseases such as Refractive Error, Cataract, Trachoma, Diabetic Retinopathy, childhood blindness, etc. that lead to visual impairment.
8. Monitor and encourage patients with eye problems to complete their treatment and coordinate with the AB-HWC.
9. Generate awareness in the communities and mobilize children for Vitamin A prophylaxis and measles immunization.
10. Promote people with chronic conditions like diabetes and hypertension in getting their annual eye examinations and mobilize them to visit the nearest AB-HWC.
11. Assist in organizing community outreach eye care activities such as eye camps through AB-HWC. Provide support in mobilizing community members for attending eye screening camps organized in the community.
12. Utilize community-based platforms like through VHSNC/Mahila Arogya Samiti (MAS), Village Health, Sanitation and Nutrition Day (VHSND)/Urban Health, Sanitation and Nutrition Day (UHSND) and other community level meetings for health talk fixed for eye care; impart information about basic eye care of the newborn to the pregnant and lactating women and caregivers.
13. Inform people with blindness and uncorrected refractive errors about financial schemes and benefits for their uptake, if found to be eligible.
14. Identify individuals in community for simple condition such as conjunctivitis (red eye), sty (swelling of eyelid), night blindness, difficulty in seeing or any other eye complaint and refer identified cases with eye/vision problems to the nearest AB-HWC for a proper check-up by the healthcare staff.
15. Ensure follow-up of patients requiring long term medication for diseases like glaucoma, diabetic retinopathy, post-operative patients, etc. through home visits.
16. Distribution of free spectacles to post-operative cataract patients, enable the elderly with Presbyopia to get free spectacles and ensure regular use of spectacles in children with refractive error.

17. Rehabilitation by counselling people about role of family in supporting visually impaired and blind individual.

The ASHA Facilitators along with MPW/ANM, will mentor and provide support to the ASHAs in undertaking the above listed activities.

ANM/MPW:

1. Role in outreach as well as AB-HWC based activities.
2. Support and supervise the ASHA in undertaking her activities related to eye care. Undertake joint household visits with ASHAs for cross verification of 10% population.
3. Assist and support the CHO in providing eye care services in AB-HWC-SHC.
4. Support CHO in screening of individuals identified as high-risk by ASHA through finger counting method, 6/18 Snellen vision chart (E chart) and risk assessment through CBAC for visual acuity by using Snellen's Chart and near Vision card. Along with the ASHA, will ensure that all babies (including preterm and low birth weight children) and adolescents (0-18 years) undergo screening of vision and examination of the eye by the RBSK team at Anganwadi centres and schools. Provide support to the RBSK team. Inform parents about the screening, mobilize them and accompany them, if required for eye examination. Ensures follow-up care of such children on a regular basis as advised by the referral centre.
5. Help in case identification for Cataract, Presbyopia, Trachoma and Corneal disease.
6. Identify Vitamin A deficiency and Bitot's spot and assure Vitamin A prophylaxis.
7. Help in providing first aid for acid/alkali/chemical exposure under the guidance of the CHO.
8. Explain the community members about the availability of services related of eye treatment at different levels of healthcare.
9. Ensure regular use of spectacles in children with refractive error and enabling elderly and those with presbyopia and cataract to get free spectacles.
10. Identify suspected cases with eye/vision problems and inform the CHO for referral of complex cases to the appropriate facility as per the case. Assist the CHO in arranging referral.
11. Follow up care to patients, as advised by the referral centre during home visits or during their visit to AB-HWC for ensuring compliance to treatment, ensuring patients are not experiencing any complications, maintaining all required hygienic practices, responding to the treatment, etc. Do regular eye check-ups to look for any complication as well as advise the person for proper eye care.
12. Assist in organizing community outreach eye care activities such as eye camps through AB-HWC. Provide support in mobilizing community members for attending eye screening camps organized in the community.
13. Conduct health promotion activities along with the AB-HWC team- Vitamin A Prophylaxis, basic eye care, maintenance for personal hygiene and environmental cleanliness and lifestyle modifications, screening and early detection of problems as soon as any symptoms come, awareness generation about refractive disorders, common eye diseases, contagious eye diseases and infections and preventive care, teaching correct method of

putting eye ointment/eye drops to community members, regular eye check-up and follow up of all referred cases, etc.

14. Along with CHO, help in educating school teachers and AWW about causes and prevention of common eye problem, identification of visual impairment among children and special needs of children with eye problems, including blind children.
15. Support the CHO in record keeping and reporting of information related to eye care/ disorders. Compilation and submission of timely reports related to eye care.
16. Support the CHO in stock management for eye related medicines and equipment.
17. Along with ASHA and ASHA Facilitator (AF), help in clarifying misconceptions related to eye care and eye disorders in the community.
18. Along with the ASHA Facilitator, help in providing community-based rehabilitation, social acceptance and vocational training and inclusive education for low vision patients.

Staff Nurse at Ayushman Bharat- Health and Wellness Centre- Primary Health Centre and Urban Primary Health Centre (AB-HWC -PHC/UPHC):

Staff nurse may be tasked with the following roles by the Medical Officer In-charge:

1. Assist and support the Medical Officer at AB-HWCs in rural and urban areas in ensuring that eye care services are delivered at AB-HWCs. Work under his/her guidance in providing eye care services to the community members.
2. Help the Eye Care Team with screening at any of the screening camps organized under the AB-HWCs.
3. Support Medical Officer in screening of all population visiting the AB-HWCs for early identification of eye problems.
4. Can help in plan of the awareness programme, preparation of Information, Education and Communication (IEC) material required and arrange for audio-visual aids to assist in the health promotion activities at the AB-HWCs or in the field along with the AB-HWC team members.
5. Generate awareness amongst the individuals visiting AB-HWCs regarding maintaining good eye hygiene, eating a healthy diet, maintaining good sanitation, information regarding common eye problems, importance of early care-seeking and eye care services available at AB-HWCs.
6. Doing some minor procedures - irrigation of eyes, applying eye patch for eye protection, instilling eye drops, etc.
7. Early identification of cases suspected to be suffering from common eye diseases such as conjunctivitis, dry eyes, eye allergies, stye, trachoma, squint, etc.
8. Ensure access to free spectacles and motivating individuals to regularly wear spectacles, motivation for eye donation, counselling of identified patients for cataract surgery, compliance for glaucoma, etc. amongst the individuals visiting AB-HWCs.
9. Provide first aid of injured eye.
10. Compilation and validation of data reported by AB-HWCs as per guidance of MO.

11. Follow-up is a very important step in order to complete the cycle of comprehensive health care. Provide follow up care to patients who have undergone eye surgery/other eye procedures, as advised by the referral centre. Ensure that they receive complete care and, if on treatment, are complying with all the advice given to them. Long term follow-up will be necessary for certain cases.
12. Collaborate with the primary healthcare team, arrange for rehabilitation for those with long term and permanent blindness including vocational rehabilitation, re-integration into school, etc.
13. Stock management for eye related medicines and equipment.
14. Maintenance of registers and records related to eye health.

Medical Officer (MO) at AB-HWC-PHC/UPHC:

1. The Medical Officer (MBBS) at the AB-HWC-PHC/UPHC would be responsible for ensuring that eye care services are delivered through all AB-HWCs in her/his area.
2. Diagnostic and treatment of common eye conditions/infections and primary eye care for trauma.
3. Referral of more complex cases to CHC/Sub-District Hospital/District Hospital to Eye Specialists/Eye Doctors, provide medical fitness for cataract surgery and disability certification (in consultation with an Eye doctor/Eye specialist).
4. Nodal officer for Vision Centre operations, outreach activities (planning, monitor wellness clinics/community workers and co-ordination with district hospitals), quality assurance of ASHA and Ophthalmic Assistant (OA) in delivering Eye Care.
5. Ensure record maintenance and periodic review of progress.

The Eye Specialist/Eye Doctor at higher health facilities would prescribe a treatment, which would be continued at community and AB-HWC-SHC level. The patient would need to visit the Eye Specialist/Eye Doctor or MO as per the instructions provided.

Ophthalmic Assistant (OA) at Vision Centres:

1. Work under the supervision of Medical Officers/Eye Specialists/Eye Doctors.
2. Screening and identification of eye diseases, distribution of spectacles, provide primary eye care including treatment for eye diseases, refer complex cases for surgery, organize eye screening camps, school eye health sessions and community health education sessions.

ANNEXURES

ANNEXURE 1

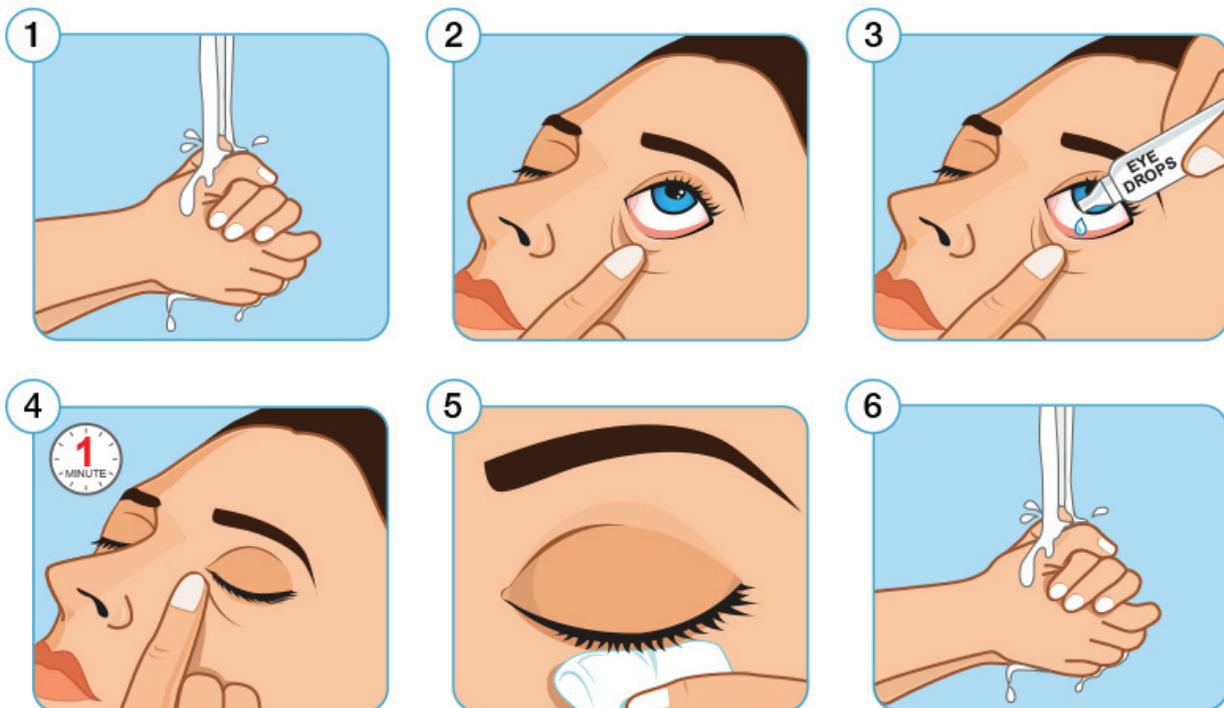
How to Apply Eye Drops Correctly

You may counsel the individual or families for following the correct steps given below while applying eye drops.

1. Check for the expiry date of the eye drops and make sure that you have the correct medication.
2. Wash your hands with soap and clean water before using eye drops, to prevent dirt or germs from getting into your eye.
3. If you also use contact lenses, it is advisable to put your eye drops when you are not wearing contact lenses. Put them back into your eye at least 15 minutes after using eye drops.
4. Do not put the eye drops directly into the eye. Tilt your head back and gently pull your lower eyelid down (this forms a pocket) with your finger. Look up.
5. Hold the bottle close to your eye. Do not let the bottle tip touch your eye, eyelid, eye lashes or skin; if it does, the eye drop bottle will need to be discarded. Eye drops should be put into the eye from a distance.
6. Put only one drop at a time in the pocket made. Squeeze the eye drops into your lower eyelid, without touching your eye.
7. Let go of your eyelid and close your eyes. You should not keep blinking your eyes after putting the eye drop. Individual should not squeeze the eyes tightly as the eye drops will come out.
8. To keep the drop for the maximum time in the eye, put some pressure on your nose with your finger near the corner of the eye. It is normal if you, sometimes, feel the taste of the eye drop in your throat.
9. Keep your eye closed for about one minute after putting the eye drop.
10. Now, put the eye drop in the other eye if suggested by the doctor, by following the steps as given above.

11. If you need to put other eye drops as well, then there must be a gap of 5-10 minutes between each eye drop.
12. If you need to apply an eye ointment also then make sure to use it after putting all the eye drops.
13. Wash your hands with soap and clean water after using eye drops.
14. Try using eye drops while sitting and while lying down, to see whether it is easier for you to apply eye drops in either position.
15. Once the eye drop bottle is open, it must be used within one month. Discard the eye drop bottle after one month of opening (even if it is not empty).
16. Do not use eye drops prescribed to another person/family member.
17. Be careful in using the eye drops. Do not use ear drops into the eyes.
18. You must put the drops at the right time interval as suggested by your medical doctor. If you put the drops every day, you should put it at the same fixed time every day as far as possible.

How to apply Eye Drops correctly



ANNEXURE 2

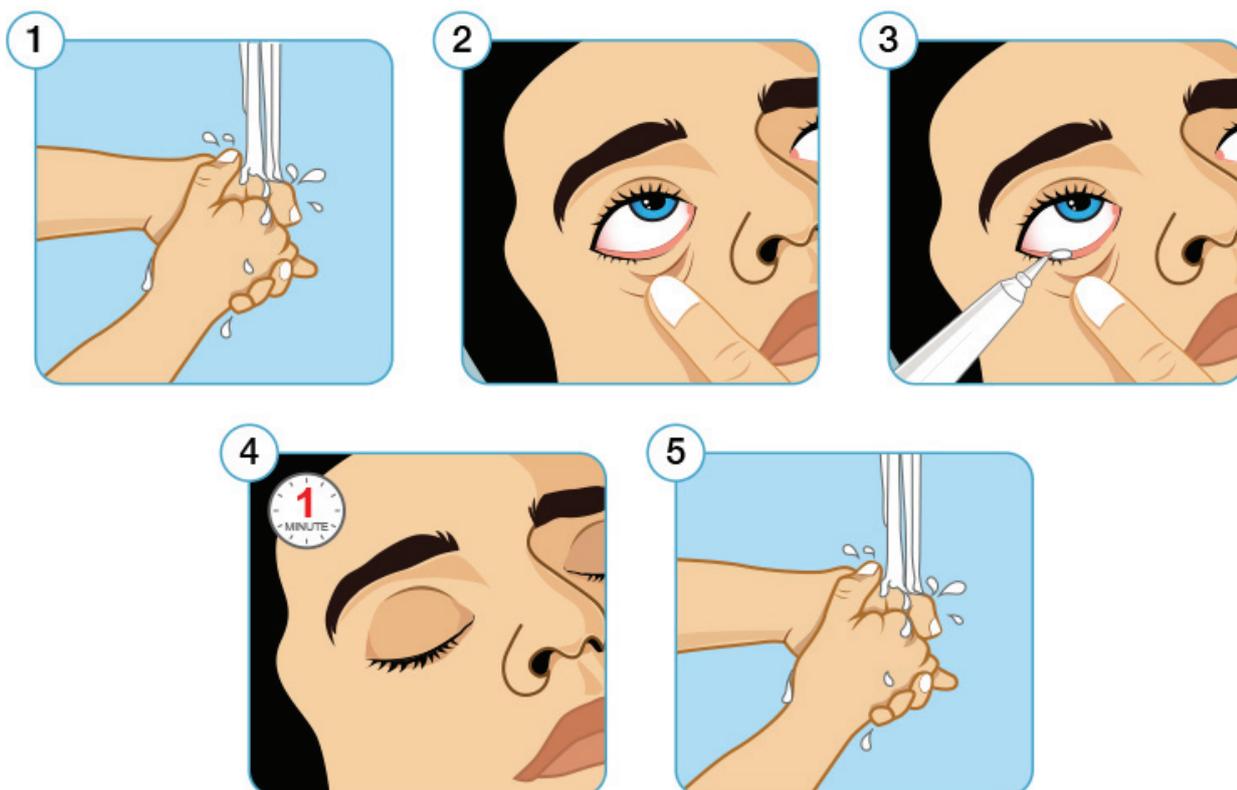
How to Apply Eye Ointment Correctly

You may counsel the individual or families for following the correct steps given below while applying eye ointment.

1. Check for the expiry date of the eye ointment and make sure that you have the correct medication.
2. Wash your hands with soap and clean water before using the eye ointment, to prevent dirt or germs from getting into your eye.
3. Do not put the eye ointment directly into the eye. Tilt your head back and gently pull your lower eyelid down (this forms a pocket) with your finger. Look up.
4. Hold the eye ointment close to your eye. Do not let the tip of the ointment tube touch any part of your eye (eyelid or eye lashes). If it does, the ointment tube will have to be discarded.
5. The quantity of the eye ointment should be just enough (like size of rice/wheat grain). Do **NOT** apply the eye ointment as you apply kajal.
6. Let go of your eyelid and close your eyes. You should not keep blinking your eyes after putting the eye ointment. Individual should not squeeze the eyes tightly as the eye ointment will come out. Wipe away any surplus ointment which may come out.
7. Keep your eye closed for about one minute after putting the eye ointment in one eye. Then, put the ointment in the other eye if suggested by the doctor by following the above steps.
8. Wash your hands with soap and clean water after using the eye ointment.
9. The eye ointment should be applied only after putting all the eye drops.

10. Explain to the individual that their vision will be blurry (not clear) for a few minutes.
11. Close the cap of the ointment tube. Once the eye ointment is open, it must be used only for one month. Discard the eye ointment tube after one month of opening (even if it is not empty).
12. Do not use eye ointment given to another person/family member.
13. You must put the eye ointment at the right time interval as suggested by your medical doctor.

How to apply Eye Ointment correctly



ANNEXURE 3

How to Clean Eyelids and Eyes in Conjunctivitis and Post-Operative Cataract Surgery

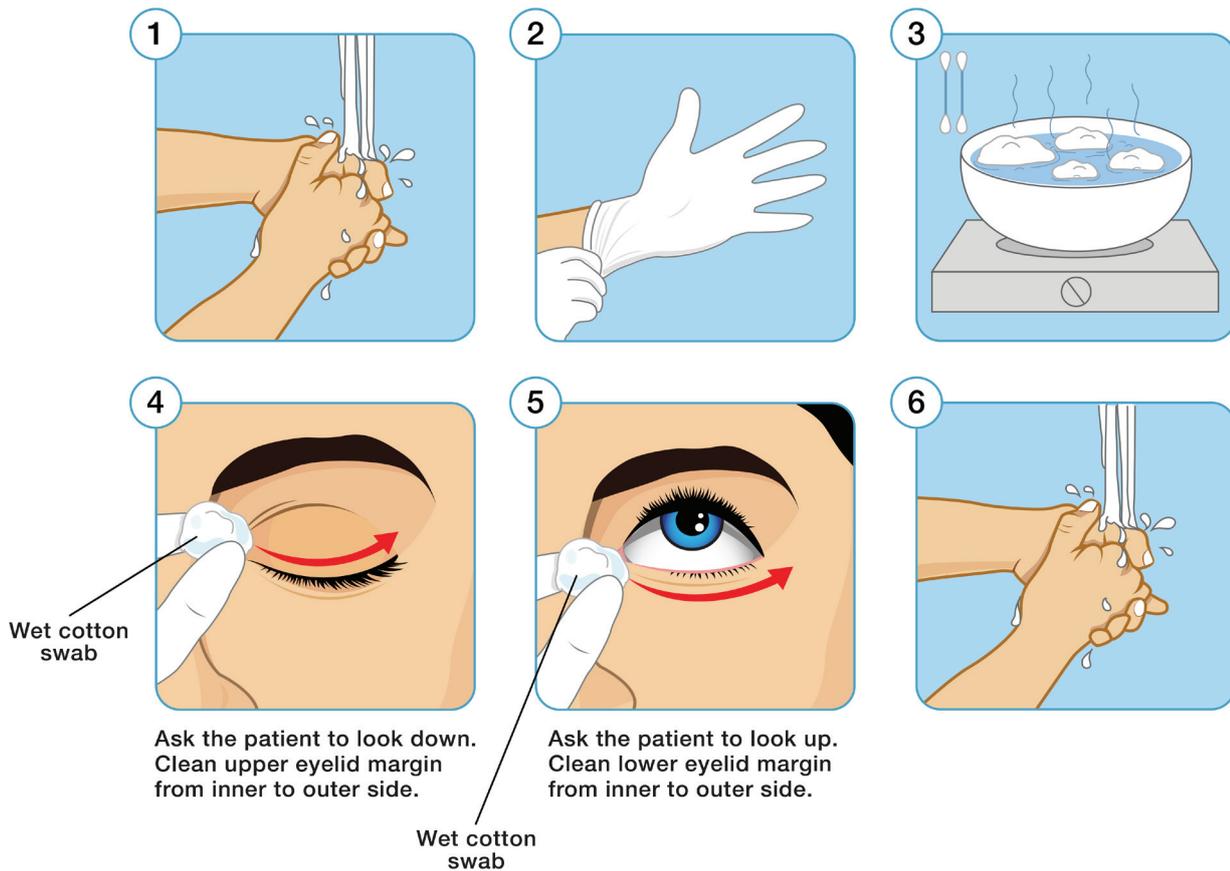
- ▶ Use a sterile gauze or small cotton balls.
- ▶ You need saline and/or clean water.

Top lid

1. Take a folded gauze swab or cotton bud.
2. Moisten the swab or bud with the saline or water.
3. Ask the patient to close both eyes.
4. With the swab or bud, clean gently along the eyelashes in one movement from inner to outer canthus (inner edge of eyelid to outer edge of eyelid).
5. Discard the swab or bud after use. If the eyelashes need further cleaning use a new swab or bud.

Bottom lid margin

1. Ask the patient to look up.
2. With one hand take a moistened sterile swab or bud.
3. With the index finger of the other hand gently hold down the lower eyelid.
4. With the swab or bud clean gently along the lower eyelid margin in one movement from inner to outer canthus (inner edge of eyelid to outer edge of eyelid).
5. Discard the swab or bud after use. If the lower eye lid margin needs further cleaning use a new swab or bud.



Top lid margin

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

Eyelid 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!

ANNEXURE 4

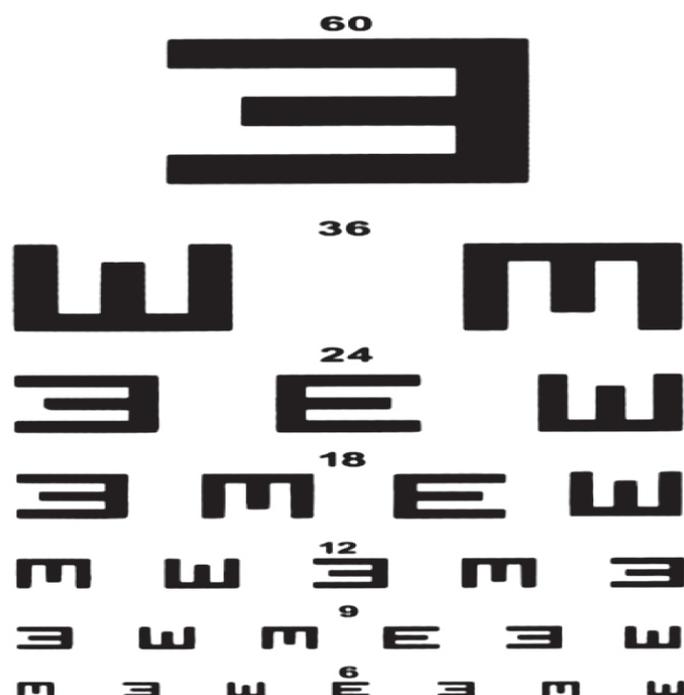
Eye Screening Tool to be used at Various Levels

4.1 Vision Chart at Community Level

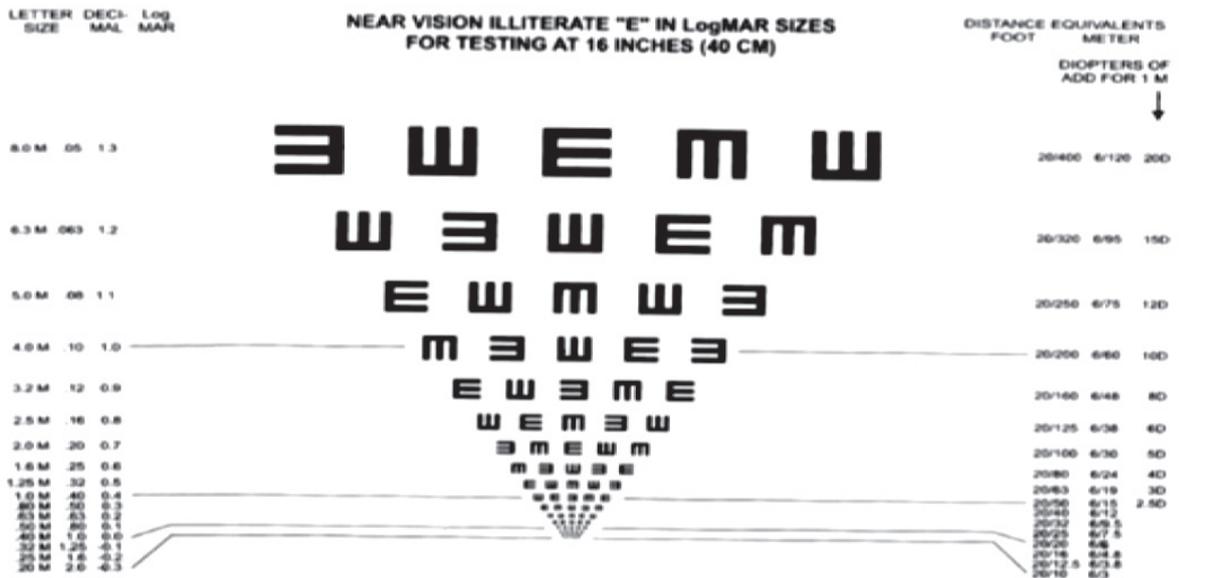


4.2 Ayushman Bharat - Health and Wellness Centre and Referral Centre/Vision Centre

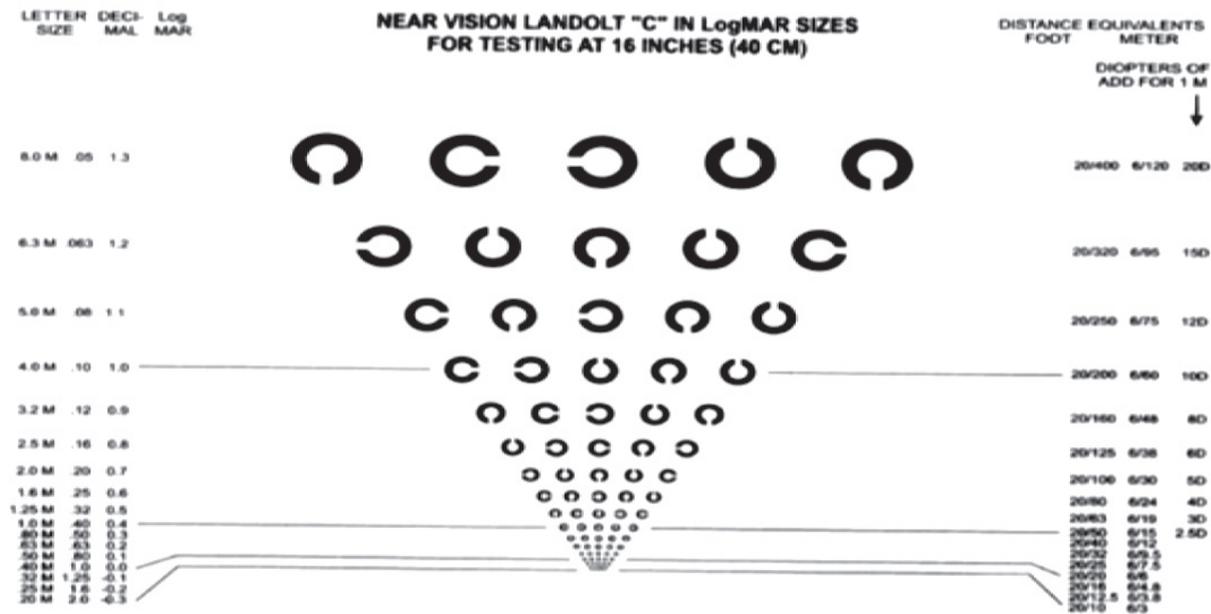
1. Snellen's Chart



2. Near vision chart



#108004



ANNEXURE 5 A

Applying Dry Warm Compress for Stye

1. Boil water in a vessel and put a clean cloth under/or on the side of the vessel to warm the cloth. Iron if available at home, can also be used for warming the cloth.
2. Touch and see if the cloth is warm with your hand (back of the hand).
3. Do not use wet warm compresses for the eye.
4. Avoid excessively hot compresses (in order to avoid scalding (burning), particularly in children).
5. Continue to give warm compress to the affected eye for 5–10 minutes.
6. Repeat three to four times daily.

ANNEXURE 5 B

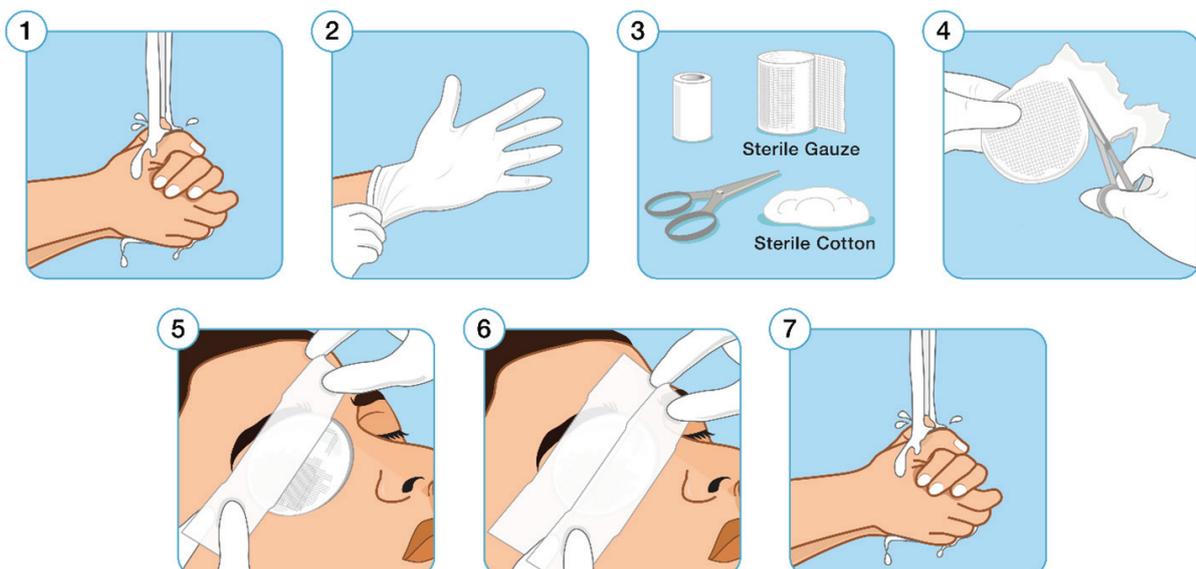
Applying an Eye Cover or Pad for Eye Injuries

Preparation

It is important to remind the patient to try not to open the affected eye under the pad. You will need stainless steel tray with tape, sterile cotton/swabs, gauze pad cut into a circle shape, pair of scissors and gloves.

Method

1. Wash your hands with soap and clean water. Wear gloves. Make the gauze eye pad by putting cotton between 2 pieces of gauze. Then cut it in a circular shape.
2. Apply a piece of adhesive tape over one side of the gauze pad, as shown in the picture.
3. Ask the patient to close both eyes.
4. Position the eye pad diagonally over the closed lid and secure the tape to the patient's forehead and cheek.
5. Apply a second and third piece of tape, to ensure the eye pad lies flat.
6. Eye protection can also be provided with a readymade eye cover or a shield.



ANNEXURE 6

Removal of Superficial Foreign Bodies in the Eye

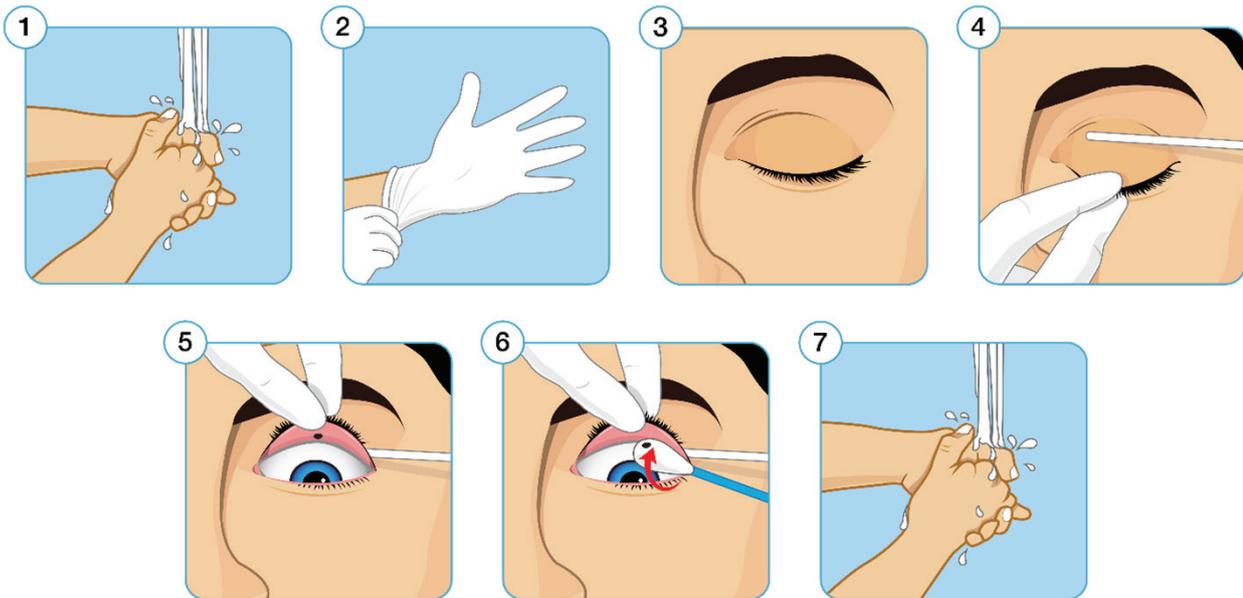
Management of foreign body in the eye

Being exposed to the external world, foreign bodies such as dust, sand, small stones, etc. commonly get lodged in the eye. Whereas, in most cases the foreign bodies are superficial, favouring easy removal by you/MO, in rare cases these articles may get lodged deep in the eye, needing management by Eye specialist/Eye doctor.

Steps for removal of superficial foreign bodies:

- ▶ While you hold her/his eye open, have her/him look to the left, right, up and down (this step should be done only once).
- ▶ This will make the eye produce more tears and the dirt often comes out by itself.
- ▶ Or you can try to remove the bit of dirt or sand by flooding the eye with clean water or by using the corner of a clean cloth or some moist cotton.

If the particle of dirt is under the upper lid, look for it by turning the lid up over a thin stick. The person should look down while you do this. This is shown diagrammatically as follows:



If you cannot get the particle out easily, use an antibiotic eye ointment (as prescribed by the Medical Officer/Eye Specialist/Eye Doctor). Cover the eye with an eye pad, and refer the patient to MO/Eye Specialist/Eye Doctor for further care.

ANNEXURE 7

Community Based Assessment Checklist (CBAC)

Date: DD/MM/YYYY

General Information	
Name of ASHA:	Village/Ward:
Name of MPW/ANM:	Sub Centre:
	PHC/UPHC:
Personal Details	
Name:	Any Identifier (Aadhar Card/any other UID – Voter ID etc.):
Age:	State Health Insurance Schemes: Yes/No If yes, specify:
Sex:	Telephone No. (self/family member/other - specify details):
Address:	
Does this person have any of the following: Visible defect/known disability/Bed ridden/require support for Activities of Daily Living	If yes, Please specify

Part A: Risk Assessment			
Question	Range	Circle Any	Write Score
1. What is your age? (in complete years)	0 – 29 years	0	
	30 – 39 years	1	
	40 – 49 years	2	
	50 – 59 years	3	
	≥ 60 years	4	

Part A: Risk Assessment				
Question	Range		Circle Any	Write Score
2. Do you smoke or consume smokeless products such as gutka or khaini?	Never		0	
	Used to consume in the past/ Sometimes now		1	
	Daily		2	
3. Do you consume alcohol daily	No		0	
	Yes		1	
4. Measurement of waist (in cm)	Female	Male		
	80 cm or less	90 cm or less	0	
	81-90 cm	91-100 cm	1	
	More than 90 cm	More than 100 cm	2	
5. Do you undertake any physical activities for minimum of 150 minutes in a week? <i>(Daily minimum 30 minutes per day – Five days a week)</i>	At least 150 minutes in a week		0	
	Less than 150 minutes in a week		1	
6. Do you have a family history (any one of your parents or siblings) of high blood pressure, diabetes and heart disease?	No		0	
	Yes		2	
Total Score				
Every individual needs to be screened irrespective of their scores.				
A score above 4 indicates that the person may be at higher risk of NCDs and needs to be prioritised for attending the weekly screening day.				

Part B: Early Detection: Ask if Patient has any of these Symptoms			
B1: Women and Men	Y/N		Y/N
Shortness of breath (difficulty in breathing)		History of fits	
Coughing more than 2 weeks*		Difficulty in opening mouth	
Blood in sputum*		Any ulcers in mouth that has not healed in two weeks	
Fever for > 2 weeks*		Any growth in mouth that has not healed in two weeks	
Loss of weight*		Any white or red patch in mouth that has not healed in two weeks	
Night Sweats*		Pain while chewing	
Are you currently taking anti-TB drugs**		Any change in the tone of your voice	
Anyone in family currently suffering from TB**		Any hypopigmented patch(es) or discoloured lesion(s) with loss of sensation	
History of TB *		Any thickened skin	
Recurrent ulceration on palm or sole		Any nodules on skin	

Part B: Early Detection: Ask if Patient has any of these Symptoms

B1: Women and Men		Y/N		Y/N
Recurrent tingling on palm(s) or sole(s)			Recurrent numbness on palm(s) or sole(s)	
Cloudy or blurred vision			Clawing of fingers in hands and/or feet	
Difficulty in reading			Tingling and numbness in hands and/or feet	
Pain in eyes lasting for more than a week			Inability to close eyelid	
Redness in eyes lasting for more than a week			Difficulty in holding objects with hands/fingers	
Difficulty in hearing			Weakness in feet that causes difficulty in walking	
B2: Women only		Y/N		Y/N
Lump in the breast			Bleeding after menopause	
Blood stained discharge from the nipple			Bleeding after intercourse	
Change in shape and size of breast			Foul smelling vaginal discharge	
Bleeding between periods				
B3: Elderly Specific (60 years and above)		Y/N		Y/N
Feeling unsteady while standing or walking			Needing help from others to perform everyday activities such as eating, getting dressed, grooming, bathing, walking, or using the toilet	
Suffering from any physical disability that restricts movement			Forgetting names of your near ones or your own home address	
In case of individual answers Yes to any one of the above-mentioned symptoms, refer the patient immediately to the nearest facility where a Medical Officer is available				
<i>*If the response is Yes- action suggested: Sputum sample collection and transport to nearest TB testing centre</i>				
<i>** If the answer is yes, tracing of all family members to be done by ANM/MPW</i>				

Part C: Risk factors for COPD

Circle all that Apply

Type of Fuel used for cooking – Firewood/Crop Residue/Cow dung cake/Coal/Kerosene/LPG

Occupational exposure – Crop residue burning/burning of garbage – leaves/working in industries with smoke, gas and dust exposure such as brick kilns and glass factories etc.

Part D: PHQ 2

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things?	0	+1	+2	+3
2. Feeling down, depressed, or hopeless?	0	+1	+2	+3
Total Score				
Anyone with total score greater than 3 should be referred to CHO/MO (PHC/UPHC)				

ANNEXURE 8

Medicines and Diagnostics

The following medicines and consumables should be available at Community, Ayushman Bharat-Health and Wellness Centres - SHC/PHC/UPHC and Referral Centre.

Community Level	Ayushman Bharat - Health & Wellness centre- Sub Health Centre
Vitamin A prophylaxis	<p>Essential</p> <ul style="list-style-type: none"> ▪ Eye drops Methyl cellulose* ▪ Eye drops Sodium Cromoglycate 2% ▪ Facilities for pad and patching of the eye <p>Desirable: (to be dispensed only on prescription of a registered Medical Practitioner)</p> <ul style="list-style-type: none"> ▪ Eye drops Ciprofloxacin 0.3% ▪ Eye ointment Ciprofloxacin 0.3% ▪ Eye drops Tropicamide 1%
Ayushman Bharat - Health & Wellness centre-PHC/UPHC	Referral Centre/Vision Centre
<ul style="list-style-type: none"> ▪ Eye drops Methyl cellulose* ▪ Eye drops Sodium cromoglycate 2% ▪ Eye drops Lignocaine 4% ▪ Eye drops Ciprofloxacin 0.3%** ▪ Eye ointment Ciprofloxacin 0.3%** ▪ Eye drops Tropicamide 1%** ▪ All medicines as per Essential Medicine List 	<ul style="list-style-type: none"> ▪ Tab Acetazolamide 250 mg ▪ Eye drop Lignocaine 4% ▪ Eye drop Tropicamide 1% ▪ Eye drop Pilocarpine 2% and 4% ▪ Eye drop Cyclopentolate 1%
<p><i>*Do not use/store eye drops containing steroids.</i></p> <p><i>**To be dispensed only on prescription of a registered Medical Practitioner.</i></p>	

Source: Adapted from Operational Guidelines for Eye Care at Health and Wellness Centres, GOI, 2020.

ANNEXURE 9

Commonly used Medicines for Eye Diseases

Uses	Side effects	Dosage
Methyl cellulose eye drops:		
It is an eye lubricant which keeps the eye moist, helps to protect the eye from injury and infection, and decreases the symptoms of dry eyes such as burning, itching, and feeling as if something is in the eye.	Vision may be temporarily blurred when this product is first used. Also, minor burning/stinging/irritation may temporarily occur. Rare but serious side effect is allergic reaction including rash, itching/swelling (especially of the face/tongue/throat), severe dizziness, trouble breathing.	1-2 drops in the affected eye, 3-4 times a day (<i>or as prescribed by the Medical Doctor</i>). Re-evaluate/refer after 3 days, if no relief in symptoms.
Sodium Cromoglycate 2% eye drops:		
It is used in the treatment of acute, seasonal and perennial allergic conjunctivitis.	Transient stinging and burning on instillation. Rarely, hypersensitivity.	1-2 drops into each eye, up to 4 times a day (<i>or as prescribed by the Medical Doctor</i>).
<i>To be dispensed only on prescription of a registered Medical Practitioner</i>		
Ciprofloxacin 0.3% eye drops/eye ointment:		
This medication is used to treat bacterial eye infections. It will not work for other types of eye infections. Ciprofloxacin belongs to a class of drugs called quinolone antibiotics and works by stopping the growth of bacteria. Unnecessary use or overuse of any antibiotic can lead to its decreased effectiveness.	This medication may cause temporary stinging or burning sensation in patient's eyes. Some other less common side effects include itching, redness, tearing, eyelid crusting, foreign body sensation in the eye, blurred vision, a bad taste in mouth, or sensitivity to light. Rarely it may cause allergic reactions.	Depending on the severity of the condition the dosage may change slightly. For conjunctivitis, the usual dose is around 1-2 drops in the affected eye, every 4-6 hours and eye ointment in the eye (<i>or as prescribed by the Medical Doctor</i>).

Uses	Side effects	Dosage
Tropicamide 1% eye drops:		
<p>This medication is used to widen (dilate) the pupil of the eye in preparation for certain eye examinations. It belongs to a class of drugs known as anticholinergics. Tropicamide works by relaxing certain eye muscles.</p>	<p>Transient stinging and burning on instillation. Rarely-hypersensitivity.</p>	<p>1-2 drops, 15-20 mins before the scheduled eye examination (<i>or as prescribed by the Medical Doctor</i>).</p> <p>May be repeated once if needed.</p>

ANNEXURE 10

List of Equipment for Eye Care

The following equipment should be available at Community, Ayushman Bharat - Health & Wellness Centre and Referral Centre:

Community Level	Ayushman Bharat- Health and Wellness Centre	Referral Centre/Vision Centre
<p>ASHA kit</p> <ul style="list-style-type: none"> ▪ Vision Screening card for 6/18 vision ▪ Measuring tape (6 meter) ▪ Recording format ▪ Reading module ▪ Referral cards <p>School Teacher kit</p> <ul style="list-style-type: none"> ▪ Vision Screening card of 6/9 vision ▪ Measuring tape (6 meter) ▪ Recording format ▪ Reading module ▪ Referral cards 	<p>Instruments</p> <ul style="list-style-type: none"> ▪ Covered stainless steel tray with sterile cottons/swabs/gloves <p>Equipment</p> <ul style="list-style-type: none"> ▪ Illuminated/Non-Illuminated Vision chart (near & distant) ▪ Torch (with batteries) ▪ Data entry - mechanism (e.g. Registers/tablets/PCs) ▪ IEC materials (Flipcharts, Posters & Brochures for common eye conditions) ▪ Access to electronic learning material; can be developed by reviewing various existing models from the institution/ Non-Governmental Organization (NGOs) 	<p>Essential Equipment</p> <ul style="list-style-type: none"> ▪ Trial set ▪ Trial frame (adult and child) ▪ Tonometer (Schiotz) ▪ Direct Ophthalmoscope ▪ Illuminated Vision Testing Drum ▪ Plane mirror for retinoscopy ▪ Streak Retinoscope ▪ Snellen & Near Vision Charts ▪ Binomag/magnifying loupe ▪ Torch (with batteries) ▪ Lid speculum ▪ Furnishing & fixtures ▪ Slit lamp (optional) ▪ Epilation forceps ▪ Foreign body spud and needle <p>Desirable equipment's</p> <ul style="list-style-type: none"> ▪ Non-mydratic fundus camera ▪ Non-contact tonometer ▪ Auto refraction meter

Source: Adapted from Operational guidelines for Eye Care at Health and Wellness Centres, GOI, 2020.

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Namaste!

You are a valuable member of the Ayushman Bharat – Health and Wellness Centre (AB-HWC) team committed to delivering quality comprehensive primary healthcare services to the people of the country.

To reach out to community members about the services at AB-HWCs, do connect to the following social media handles:

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