



सत्यमेव जयते

Ministry of Health & Family Welfare  
Government of India



राष्ट्रीय स्वास्थ्य मिशन



# Training Manual on Ear, Nose and Throat (ENT) Care for Community Health Officer at Ayushman Bharat – Health and Wellness Centres





**Training Manual on Ear, Nose and Throat (ENT) Care  
for Community Health Officer**  
at Ayushman Bharat – Health and Wellness Centres

**2021**



**ENT**

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# 01 CHAPTER

## INTRODUCTION

Ayushman Bharat initiative was launched as recommended by the National Health Policy 2017 to move from sectoral and segmented approach to a comprehensive need-based health care delivery to achieve the vision of Universal Health Coverage (UHC). Under this scheme 1,50,000 Health and Wellness Centres (HWCs) were proposed to be operationalised by transforming existing Sub Centres and Primary Health Centres which would deliver Comprehensive Primary Health Care (CPHC) covering maternal and child health services communicable and noncommunicable diseases, including free essential drugs and diagnostic services.

Problems related to the Ear, Nose and Throat (ENT) constitute the bulk of the patients visiting the Out-patient Department. Owing to availability of large number of home-based remedies, patients suffering from the common ENT problems seek medical care less frequently. This, along with limited access to health care professionals trained in proper ENT care, often delays the initiation of correct diagnosis and treatment.

From the data available from various community-level surveys in India, the burden of ENT-related illnesses range from 4.3% to 11%. Out of these, Ear, Nose and Throat related disorders are 60%, 27% and 13% respectively, thus making disorders leading to hearing loss a major public health concern. The common ear problems include ear wax (18.7%), Chronic Suppurative Otitis media (5.4%), dry perforation of Tympanic Membrane (0.6%), Congenital deafness (0.2%) and age-related hearing loss i.e., presbycusis (10.5%)

Adult-onset hearing loss ranks 15th amongst the leading causes of the Global Burden of Disease (GBD), and second in the leading causes of Years Lived with a Disability (YLD). In developing countries, children with hearing loss and deafness rarely receive any schooling. The adults with hearing loss are usually paid lower and have a much higher unemployment rate.

The National Programme for Prevention and Control of Deafness (NPPCD) was launched in 2006 with a purpose of early identification, diagnosis and treatment of ear problems responsible for hearing loss and deafness. Under the programme, training of health personnel, screening camps for deafness, provision of hearing aids, screening at schools, etc. were undertaken to reduce the burden of hearing loss. However, basic ENT services were not available at health care facilities at the grassroot level, thus increasing patient load in tertiary health care facilities.

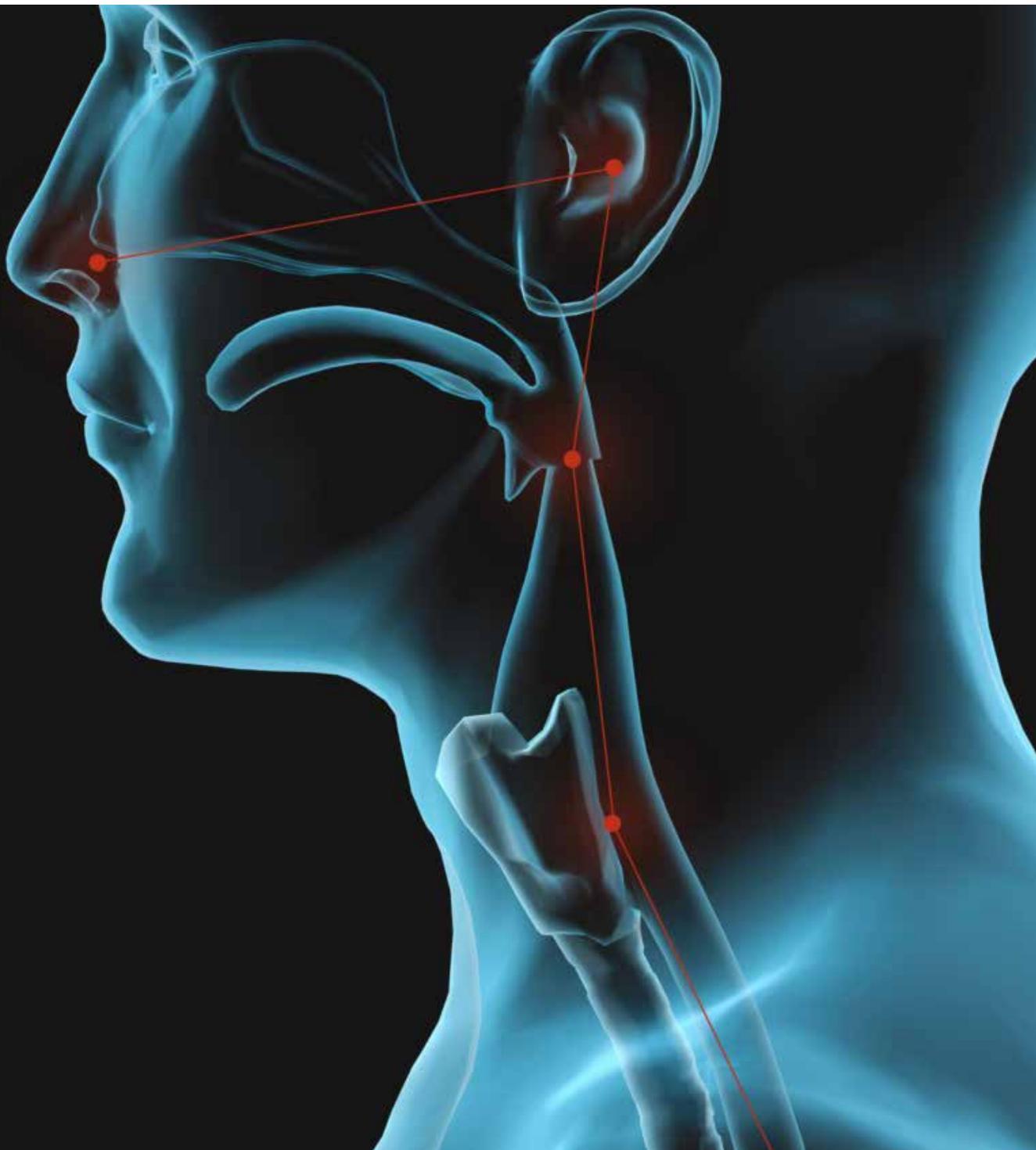
Under the Ayushman Bharat Scheme, delivery of basic ENT services has been included in the package in HWCs, thus bringing comprehensive care closer to the community. Focus is on training

ASHA, ANM and CHO in providing ENT services at the SHC-HWCs and the community.

This module will guide you and provide you with new information and skills related to ENT care.

**This module has four parts:**

1. Understanding the anatomy, physiology, and procedure for examination of the ear, nose and throat.
2. Protocols for detection and management for common problems of the ear, nose and throat at the SHC-HWC.
3. Health promotion activities for health of ear, nose and throat.
4. Service delivery framework and roles and responsibilities of the SHC-HWC team in ENT services.



# 02 CHAPTER

## UNDERSTANDING THE EAR, NOSE AND THROAT

### Structure of ear

The ear is made up of 3 parts:

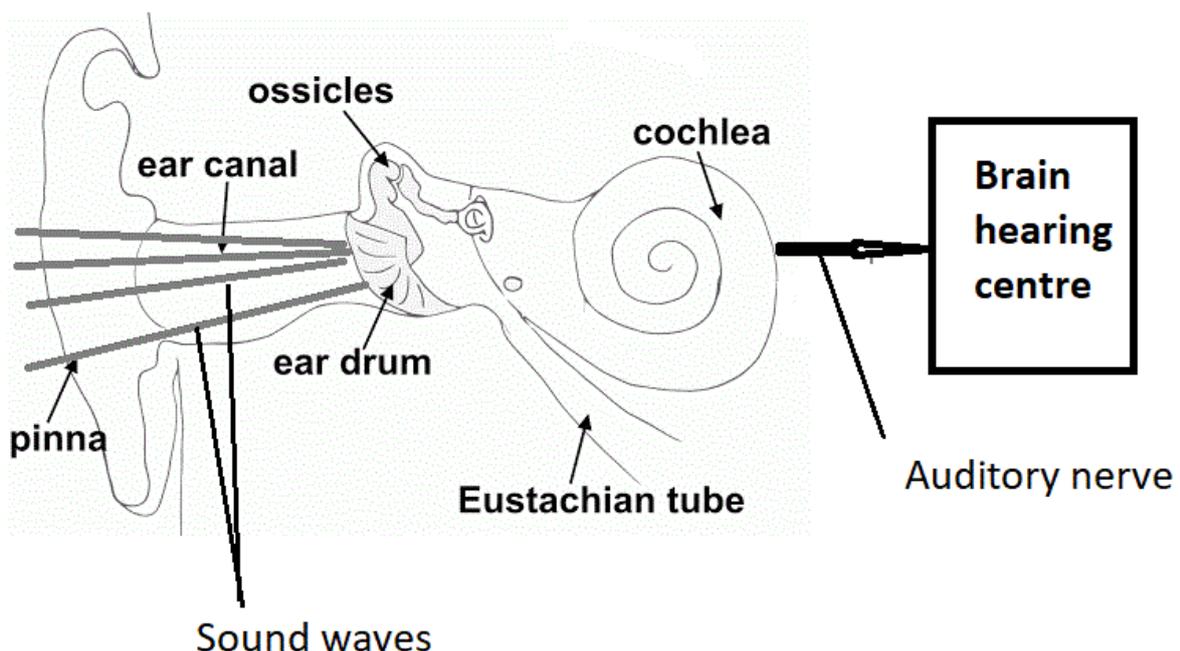
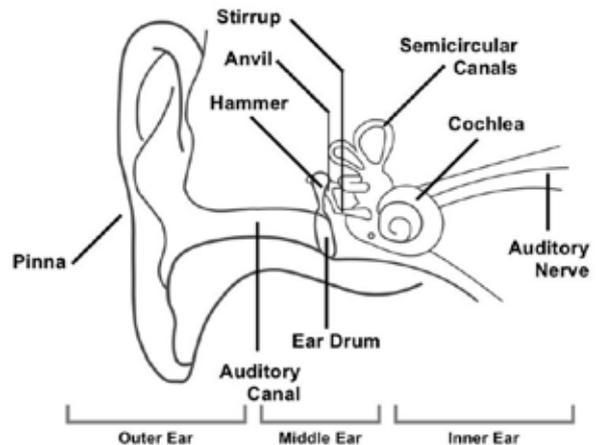
**Outer ear** – This consists of the pinna (earlobe) and the external auditory meatus (ear canal). The ear canal ends with a cover called the tympanic membrane (ear drum).

**Middle ear** – It is a closed box like structure which starts from the ear drum and contains three small bones – Auditory Ossicle attached to each other known as malleus, incus, and stapes.

**Inner ear** – The inside most part of the ear which has the hearing centre called the cochlea and the balance canals called the semi-circular canals.

### How does the ear function?

Sound waves enter the ear through the pinna and ear canal and hit the ear drum. These cause the ear drum to vibrate. The vibrations cause the small bones to carry the sound to the cochlea in the inner ear. These send electrical signals through auditory nerves to the brain and sound is perceived.



## Structure of nose and throat

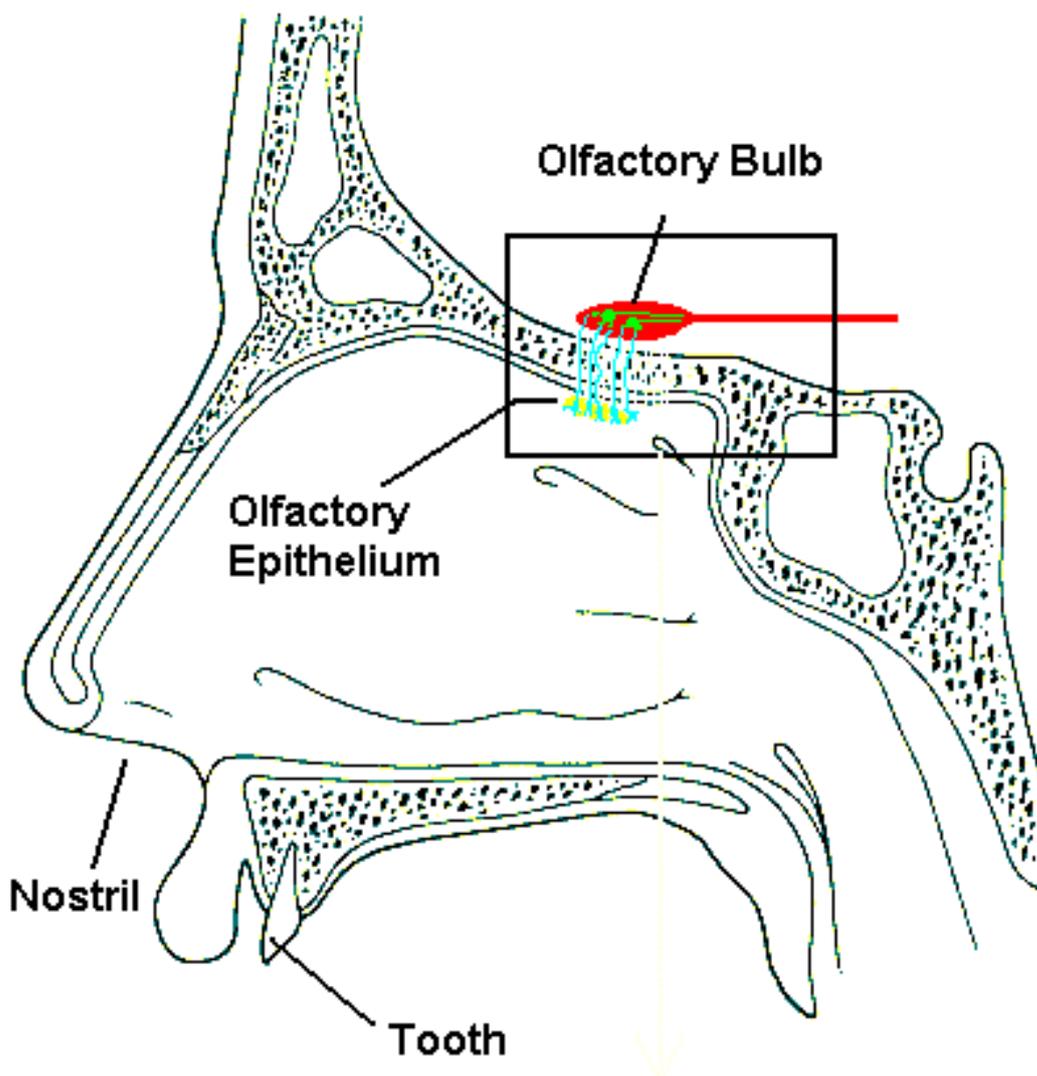
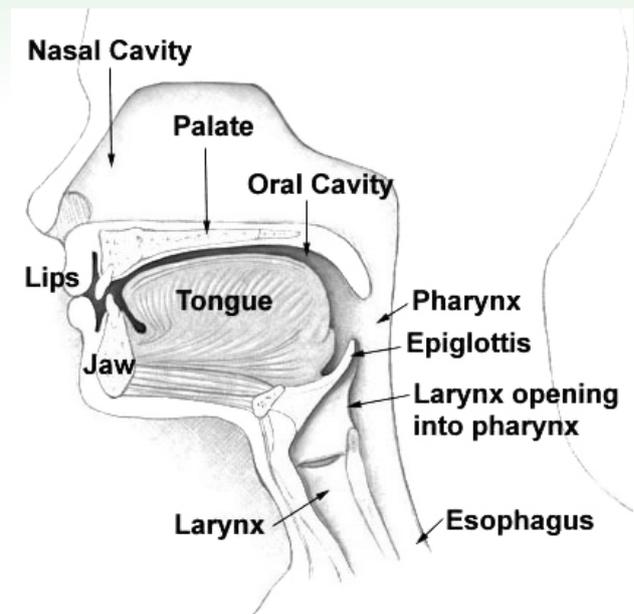
**External nose** – It is a triangular projection made up of nasal bone and cartilage

**Nasal cavity** – There are two nasal cavities/passages separated by a nasal septum.

**Pharynx** – The nasal passages end in the nasopharynx which further continues downward as the oropharynx (back of the oral cavity) and ends in the epiglottis (a cartilage separating the entry to the air passage from the food passage).

## How does the nose function?

The nose helps in the sense of smell as well as filtering dust particles from entering the airway. There are nerve endings in the roof of the nose called the olfactory bulb which carry the smell signals to the brain and smell is perceived.



# 03 CHAPTER

## EXAMINATION OF EAR, NOSE AND THROAT

### To undertake and record an ENT examination, you will need

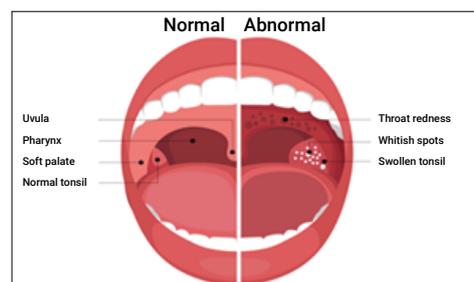
- A torch or LED head lamp
- Ear speculum
- Nasal speculum
- Tongue depressor
- Pen and record card

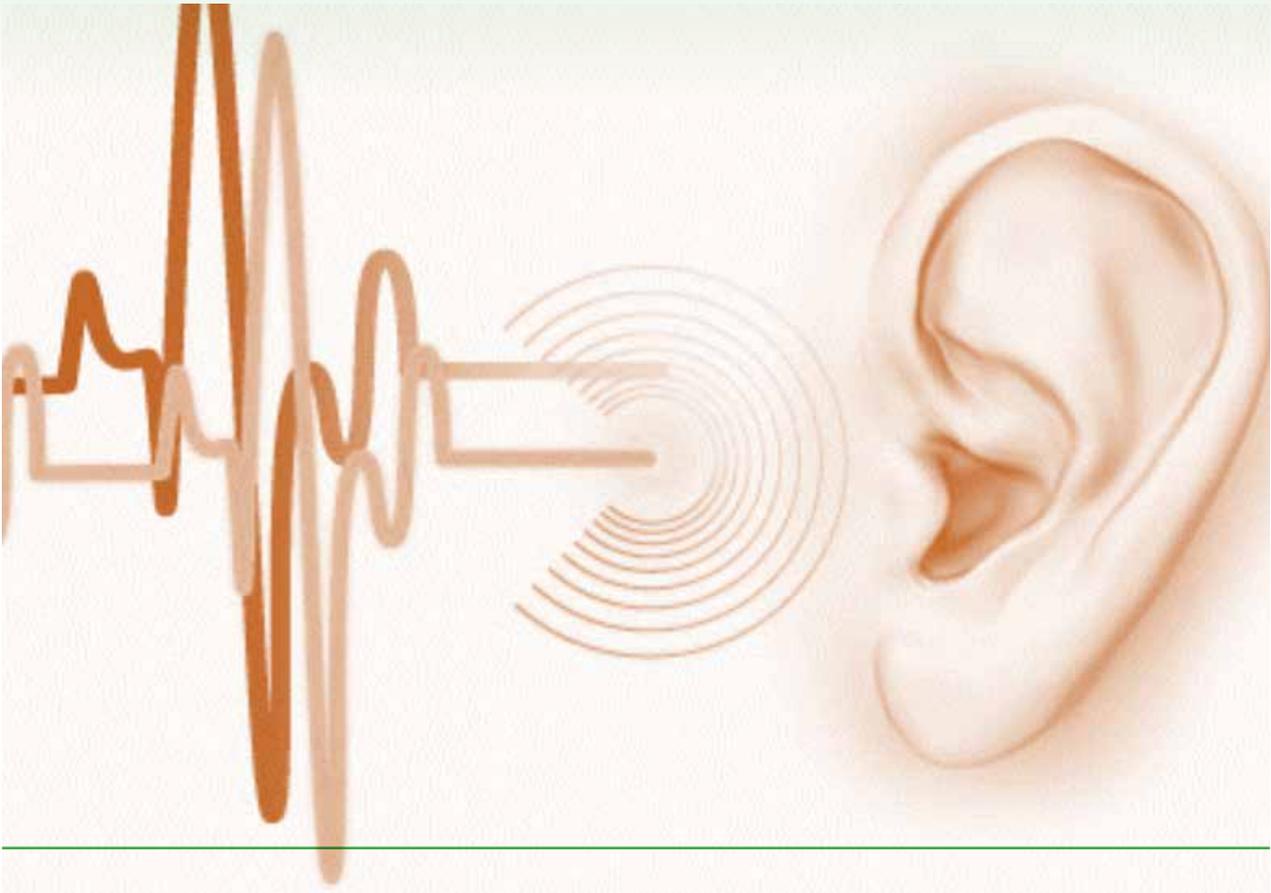
### Preparation

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

### Method

- Greet the patient and find out their main complaint, duration of symptoms, and any other associated predisposing factors.
- Record if they say they have any symptoms of the ear, nose or throat – pain, loss of hearing, injury, difficulty in swallowing, difficulty in breathing, bleeding from nasal cavity, or anything else indicating disease.
- Examine the person's ears. The pinna should be normal in shape and size and there should be no visible discharge (watery, purulent or blood-stained) coming out from the ear. Now pull the pinna outwards and upwards to view the ear canal with a torch. There should be no discharge, pus, blood, boil or swelling. You can use an ear speculum to view the ear canal more clearly.
- Examine the person's nose. Lift the tip of the nose to view the nasal cavity. Use a nasal speculum to view each nasal cavity separately. There should be no swelling, blood, pus, or discharge.
- Examine the person's throat. Ask the person to open his/her mouth wide and say "Aah". Place the tongue depressor over the centre of the patient's tongue and pull down. This





will open up the throat and you will be able to see the tonsils, soft palate, uvula and pharynx. There should be no swelling, redness, or pus.

- In all the three examinations, look for the following:
  - Any kind of discharge - pus, clear fluid, blood etc.
  - Any kind of foreign body - visible as it is or with help of torch.
  - Any sign of inflammation i.e., redness, warmth, swelling, pain.
- Record what you see under examination of ear, nose and throat separately.

### **Hearing assessment**

For this you will require a tuning fork (512 Hz).

#### **Initial assessment**

Sit about one metre from the child/adult with one ear towards you. The other ear should be blocked. Cover your lips while speaking (to prevent lip reading).

First, whisper:

- Correct response = normal hearing
- Incorrect response: Repeat in conversational voice
  - Correct response = slight hearing loss
  - Incorrect response: Repeat in loud voice

- Correct response = moderate hearing loss
- Incorrect response: Repeat by shouting
  - Correct response = Severe hearing loss
  - Incorrect response: Deafness

### **Tuning fork tests**

Tuning fork tests are examinations that test for hearing loss and differentiate the types of hearing loss. There are three types of hearing loss:

1. Conductive hearing loss – due to problems in the ear canal, ear drum or middle ear, like ear infection, blockage due to ear wax, punctured ear drum, fluid in the middle ear, damage to the bones of middle ear.
2. Sensorineural hearing loss – damage to cochlea or auditory nerve
3. Mixed type

#### **A) Rinne's test**

- a. Strike the tuning fork and place it on the mastoid bone behind one ear of the patient. Instruct the patient to tell you exactly when the sound stops.
- b. When the patient can no longer hear the sound, move the tuning fork to 1-2 cm beside the patient's ear canal and instruct to tell you when the sound stops again.
- c. Record the length of time the patient hears each sound..
  - Normal hearing – The sound next to the ear (air conduction) will be twice as long as the sound behind the ear on mastoid bone (bone conduction).
  - Conductive hearing loss – Bone conduction is heard longer than the air conduction sound.
  - Sensorineural hearing loss – Air conduction is heard longer than bone conduction but may not be twice as long.

#### **B) Weber's test**

- a. Strike the tuning fork and place it on the middle of the patient's head or on the bone in between patient's eyebrows.
- b. Instruct the patient to tell you where the sound is better heard: the left ear, the right ear, or both ears equally.
  - Normal hearing will produce equal sound in both ears.
  - Conductive loss will cause the sound to be heard better in the abnormal ear.
  - Sensorineural loss will cause the sound to be heard better in the normal ear.

# 04 CHAPTER

## COMMON ENT COMPLAINTS AND HOW TO APPROACH THEM

### 1. EPISTAXIS (NOSE BLEEDS)

Epistaxis, or bleeding from the nose, is a common complaint, especially during winters. In majority of cases, nosebleeds are self-limiting and spontaneous, but it may be of significant concern if it is recurrent, massive or occurring in children.

**Based on the site of bleeding, it is classified as:**

- Anterior bleeds: Most common and relatively easier to control. Occurs as bleeding from the nose.
- Posterior bleeds: Less common. May cause profuse bleeding. More difficult to control. Usually occurs as bleeding from mouth.

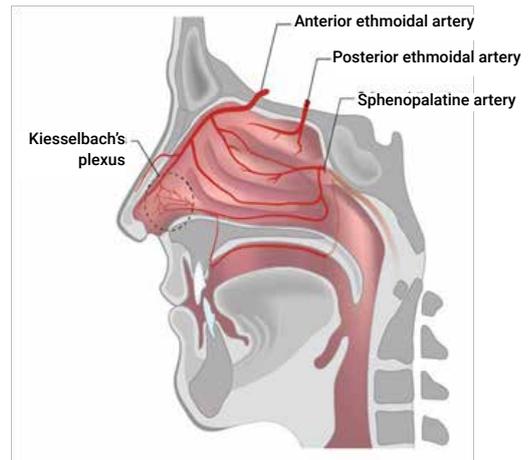
#### Pathophysiology

The nose has a rich vascular supply (as depicted in the figure). There is one part in the anterior cartilaginous septum where a number of blood vessel connections exists. This is the most common site for epistaxis.

Nosebleeds occur more frequently in the drier, colder months, and in less humid environments. This is because dry air facilitates drying and cracking of the nasal mucosa, vessel trauma, and subsequent epistaxis.

#### Causes

- Local causes: finger-nail trauma, mucosal irritation, inflammation, tumours
- Systemic causes: hypertension, liver disease, kidney disease, blood thinning drugs like aspirin, warfarin, etc.
- Idiopathic or reason unknown



#### Management at SHC-HWC

History taking	Examination
Duration of current episode Previous h/o of similar episodes H/o trauma H/o bleeding tendencies elsewhere H/o chronic liver disease H/o any drug intake Family history H/o Chronic alcohol intake	Site of bleeding Blood pressure check Nasal septum deviation

If the bleeding is mild and from the anterior part of the nose, it can be managed easily at the SHCHWC. If it is moderate to massive anterior bleeding as well as from the posterior part of the nose, it will need specialised care, and hence, must be referred to a facility with ENT specialist for further management after giving first aid.

- For mild bleed: Immediate relief can be obtained by tilting the head forward and pinching the nostrils together for 10 minutes. If it continues bleeding, pinch nostrils together for 10 more minutes.
- For moderate bleed:
  - Make sure the person is relaxed. Check whether the bleeding is anterior (bleeding from nose) or posterior (bleeding from mouth).
  - Make him/her sit upright with head slight bent forward.
  - Ask the patient not to blow through his nose.
  - In case of anterior bleeds, apply pressure on the bleeding side of the nose for 10 mins.
  - If bleeding does not stop, apply a combination of topical anaesthetic, such as 2% lidocaine and vasoconstrictor and wait for 10 mins. Soak cotton balls in a mix of 2% lidocaine and 1:1000 epinephrine. Put 1-2 cotton balls into the bleeding nostril. (If bleeding is not clearly unilateral, put cotton balls into both nostrils.) Place a dry cotton ball at the nostril opening to prevent leakage and dripping. Leave the cotton balls in place for 10 minutes.
  - If the bleeding still does not stop, or in case of posterior bleeds, pack the nose and refer to higher centre for appropriate care.
  - Antibiotics may be given to prevent infection (sinusitis) if pack is to be kept beyond 24 hours. **(can only be prescribed by a doctor; the CHO will consult the MO-PHC for antibiotics)**
  - If bleeding is severe or the person is unconscious, call an ambulance and refer immediately to the District Hospital where ENT surgeon is available.

### Indications for referral

- i. High BP at presentation
- ii. Epistaxis not controlled with local pressure for over 20 min
- iii. Massive blood loss
- iv. Bleeding following trauma to the face, with suspected facial fractures
- v. Other co morbidities requiring appropriate cross consultations
- vi. For posterior nasal packing in case of posterior epistaxis

### Follow up of cases

After an episode of nosebleed, it is important to follow up with the client. If the case has been treated at the SHC-HWC, follow up after a week to see that the person has recovered. If the client has high blood pressure, then this also needs to be followed up. All the cases that are referred to higher facilities must be followed up after treatment.

## Prevention of epistaxis

Some advice that can be given during health promotion activities to prevent nose bleeds include:

- Keep fingernails short to prevent injuring the nostril
- Blow nose gently and without too much force
- In winter, can use a vaporiser in the room of the person prone to nose bleeds
- Apply a thin coating of petroleum jelly inside each nostril daily in the dry season. The inner lining will then be moist

## ANTERIOR PACKING OF THE BLEEDING NOSE

Indication: Controlling nose bleeds which are not controlled by pressure or lignocaine.

Tools needed: Gloves, 2% lignocaine jelly, lubricants such as petroleum jelly, gauze ribbon, forceps, etc.

Procedure:

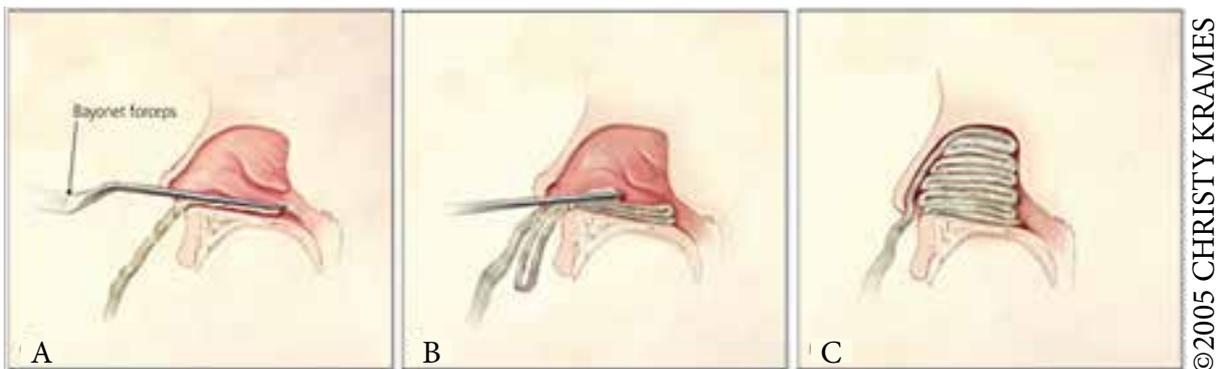
Make the patient sit up with a back rest.

Apply local anaesthetic such as lignocaine 2% to the nasal mucosa

Prepare a long ribbon gauze piece and smear it with abundant lubricant such as petroleum jelly

Using the help of a scalpel, the gauze pieces have to be layered one upon each other, packing it from anterior to posterior, as depicted in the diagram below.

The gauze should be pushed in back as far as possible. Packing is continued until the anterior nasal cavity is filled.



## RESPONSIBILITIES OF CHO IN MANAGING EPISTAXIS

Administer first aid for any case of nose bleeds brought to the centre.

Check for high blood pressure or any other injury.

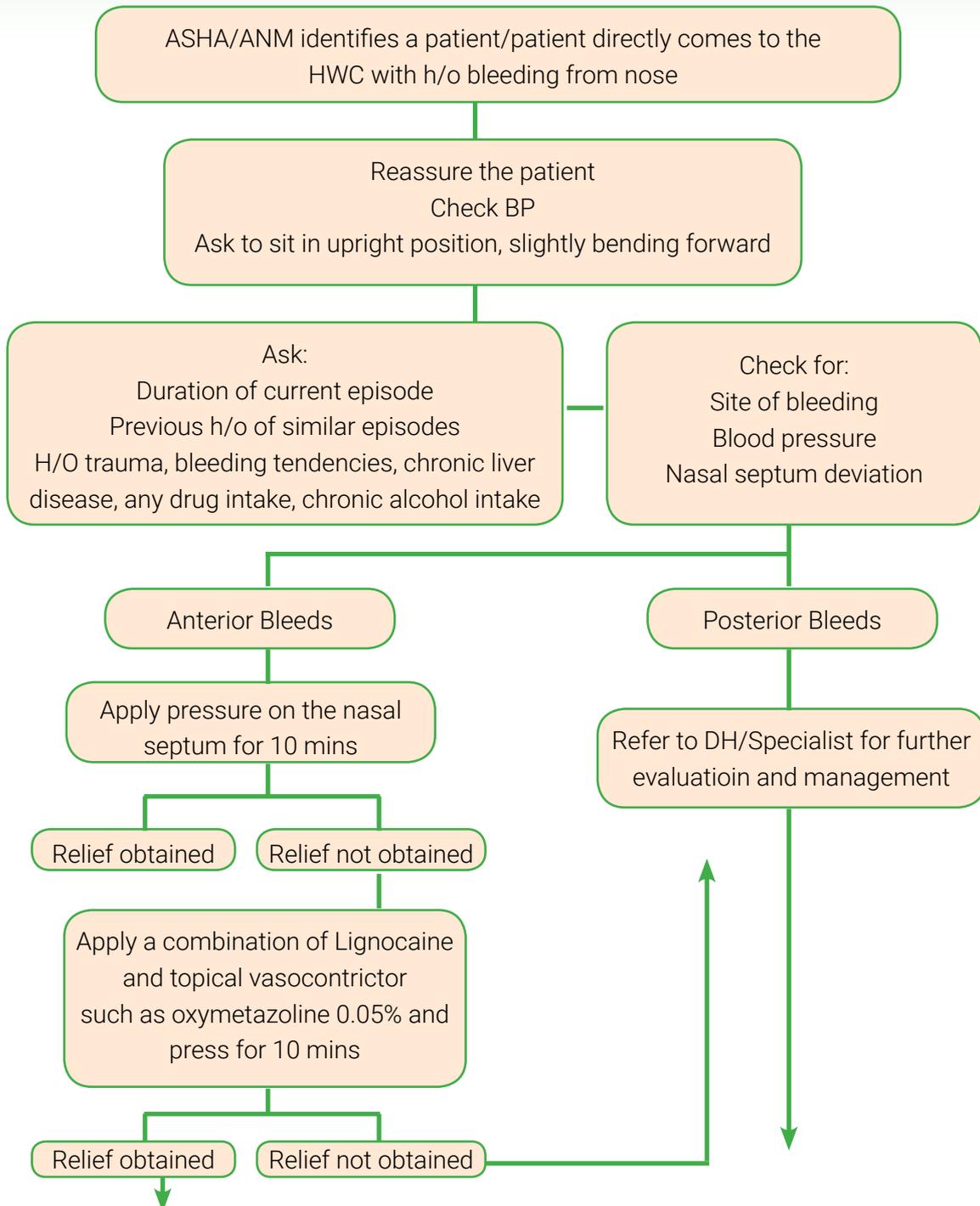
If nose bleed does not stop after 15 minutes, refer to higher centre.

Follow up all cases that are referred or treated.

During health education, focus on awareness of how to prevent nose bleeds by avoiding picking of the nose and to use vaseline during summer and dry season.

Keep records of all cases and report on a monthly basis to the PHC.

## Referral pathway for epistaxis



- A) F/u care by CHO @SHC-HWC:(1) Ensure compliance to the f/u visits and Rx advised; (2) Counsel about avoiding picking of nose, maintaining moist nasal mucosa (especially during dry seasons) by applying vaseline/sniffing water with little salt in it and importance of maintaining BP (3) Encourage people to eat oranges, tomatoes, etc. (Vitamin C rich foods) to strengthen the small blood vessels so that nose bleeds decrease; (4) Advise the patient to revisit the Specialist in case of relapse.
- B) F/u care by ASHA/ ANM @Community: (1) Encourage known HTN cases to undergo regular check-up; (2) Promote consumption of Vitamin C rich foods; (3) Counsel for care of nasal mucosa, especially during the drier, winter seasons.

## 2. UPPER RESPIRATORY TRACT INFECTIONS

Most people develop an acute respiratory tract infection (RTI) every year. Upper respiratory tract infections (URTIs) are one of the most common reasons for seeking Out-patient medical care, especially amongst children. Since the vast majority of these are viral infections, the use of antibiotics to treat URIs is usually not recommended, and symptom-based treatment is practised. However, certain conditions which need antibiotics include:

- If the patient has symptoms and signs suggestive of serious illness and/or complications (particularly pneumonia, throat abscess, etc.).
- All cases of bacterial infection like acute tonsillitis, sinusitis.
- If the patient is at high risk of serious complications because of pre-existing conditions like heart, lung, kidney, liver disease.
- Young children who were born prematurely or patients older than 65 years with severe disease..

### Types of URIs

1. Sinusitis
2. Rhinitis – may be viral (common cold), allergic or atrophic rhinitis
3. Pharyngitis
4. Tonsillitis (discussed in the next section)

### Clinical features

<b>SINUSITIS</b> Facial pain or sinus pain; Purulent nasal drainage; Fever; Stuffy/blocked nose.	<b>PHARYNGITIS</b> Sudden onset of sore throat; Pain in throat; Fever, malaise.
<b>RHINITIS</b> Simple viral rhinitis: Watery nasal discharge; Watering from eyes; Nasal stuffiness; Malaise, fever and headache. Allergic rhinitis: Frequent bouts of sneezing, about 10 to 20 sneezes at a time; Itching of nose, eyes, ears, palate; Watery nasal discharge; Blockage of nose; Watering from eyes with redness & itching. Atrophic rhinitis: Greenish crusts present in nasal cavity; Foul smell from nose and patient unaware of it; Nasal blockage, roomy nasal cavity, nasal deformity, history of maggots.	

### Management at SHC-HWC

Most cases of rhinitis and pharyngitis are viral, and will need only symptomatic treatment, if any. You should counsel the patient about the following for treatment and prevention of these diseases.

1. Drink plenty of water and get enough rest.
2. Sniff a little salt water into the nose or inhale steam from hot water to clear the nose.

3. No special diet is needed. However, eating oranges, tomatoes, and other fruit containing vitamin C may help.
4. Do not take antibiotics if not prescribed.
5. Contrary to popular belief, colds do not occur from getting cold or wet (although getting very cold, wet, or tired can make a cold worse). A cold is 'caught' from others who have the infection and sneeze the virus into the air.
6. To prevent infecting others with cold, the sick person should eat and sleep separately and take special care to stay far away from small babies. He/she should cover his/her nose and mouth when coughing or sneezing, and wash hands as often as possible.
7. Simple medicine such as Paracetamol helps lower temperature and relieves body aches and headaches. The expensive 'cold tablets' are not necessarily better.
8. Wipe a runny or stuffy nose but try not to blow it. Blowing the nose may lead to earache and sinus infections.

Note: If the facial pain/sinus pain is continuing for more than 3 months than it is known as chronic sinusitis, for which you must refer the patient to a higher centre for further management and treatment. Follow-up is the key here.

Some medicines which are commonly used for the treatment of URTIs include:

- T. Paracetamol 500 mg TDS (Adult) OR Syrup Paracetamol 10-15mg/kg bodyweight in 3 divided doses (Paediatric)
- Nasal drops containing nasal decongestants such as 1% Ephedrine, 0.1% Xylometazoline
- Antibiotics such as Amoxicillin 500mg TDS/Azithromycin 500mg OD, when indicated OR Syrup Amoxicillin 40mg/kg/day in 3 divided doses for Paediatric age group. **(can only be prescribed by a doctor; the CHO will consult the MO-PHC for antibiotics)**

### RESPONSIBILITIES OF CHO IN MANAGING URIs

Identify the type of URTI when the patient comes to the clinic or you see a case in the field.

Provide general symptomatic treatment for the fever, runny nose and headache.

Advise rest, steam inhalation, drinking warm fluids and good nutrition.

If suspecting a bacterial infection, refer to the MO to initiate antibiotics. Once prescribed, you can ensure that the patient gets and takes the antibiotics correctly and completes the course.

Follow up all cases treated with antibiotics and all chronic cases.

Conduct health education session to prevent colds and raise immunity through good nutrition and regular health checkups.

Keep records updated.

## Referral pathway for Upper Respiratory Tract Infection

Patient presents with fever, cough & cold, sore throat, running nose, etc.

Ask for:

(1) onset and progression of symptoms (2) previous h/o of similar episode (3) use of OTC medicines/ self-medication (4) relevant risk factors such as smoking (5) Co-morbid conditions such as HTN/DM/Cirrhosis, etc.

Assess:

(1) vitals (temperature/pulse/BP/RR) (2) Cervical lymphadenopathy (3) tonsillar exudates

Patient appears unstable

- Advise and Initiate the patient on the nonpharmacological treatment options  
 - Give symptomatic Rx in the form of T.PCM/T.CPM/ Nasal decongestants  
 - Counsel the patient to avoid sleeping in congested rooms and cover his mouth with handkerchief while coughing  
 - F/u the patient after a period of 5 days

Relief obtained

Relief not obtained

Patient appears stable

Refer to PHC-HWC for further evaluation and Mn

F/u care @ SHC\_HWC through CHO:

- (1) Ask if the patient has any issues in being compliant to the treatment advised
- (2) Advise the patient to refer similar cases, especially children in the family to the SHC-HWC
- (3) Counsel the patient to avoid OTC medications and home-based, non-pharmacological remedies which can be started by the patient in case of future episodes
- (4) Advise the patient to report back to the Centre if: (i) there is no response to the treatment advised within in 5 days, patient experiences new symptoms such as high-grade fever, breathlessness, purulent ear/throat discharge, etc.

### 3. ACUTE TONSILLITIS

Tonsils are a pair of special tissues situated at the back of the throat. Often, especially in children, they get infected and inflamed leading to a condition known as Tonsillitis.

#### Clinical features

Symptoms:

- Sore throat
- Difficult or painful swallowing
- Fever
- Earache
- Change in voice
- General symptoms like headache, body ache etc.

Signs:

- Red and swollen tonsils. May be studded with follicles or membrane. (White or yellow coating or patches on the tonsils)
- Enlarged, tender glands (lymph nodes) in the neck



#### Management at SHC-HWC

Most of the cases with tonsillitis can be managed by medicines alone. The usual line of treatment in uncomplicated cases includes:

1. T. Paracetamol (500 mg) 3 times a day OR Syrup Paracetamol 10-15mg/kg bodyweight in 3 divided doses (Paediatric)
2. T. Amoxicillin (500 mg) 3 times a day OR Syrup Amoxicillin 40mg/kg/day in 3 divided doses for Paediatric age group (**can only be prescribed by a doctor; the CHO will consult the MO-PHC for antibiotics**)
3. Warm saline gargles/betadine gargles 3-4 times a day
4. If the symptoms persist, then the person must be referred to an ENT specialist or to the DH for investigations (blood counts, throat swab, chest x-ray)

Some patients may need to undergo surgery for cure. Indications for surgery are as follows:

- Recurrent infection of throat (7 or more episodes in 1 year or 5 episodes per year for 2 years or 3 episodes per year for 3 years)
- Association with febrile seizures
- Tonsillar swelling causing airway obstruction
- Difficulty in swallowing/speaking, suspicion of cancer
- Cases who do not respond to antibiotics.

#### RESPONSIBILITIES OF CHO IN MANAGING ACUTE TONSILLITIS

Check the throat of all those who complain of sore throat or difficulty in swallowing.

Advise hot saline water gargles and to avoid cold, oily, or spicy food.

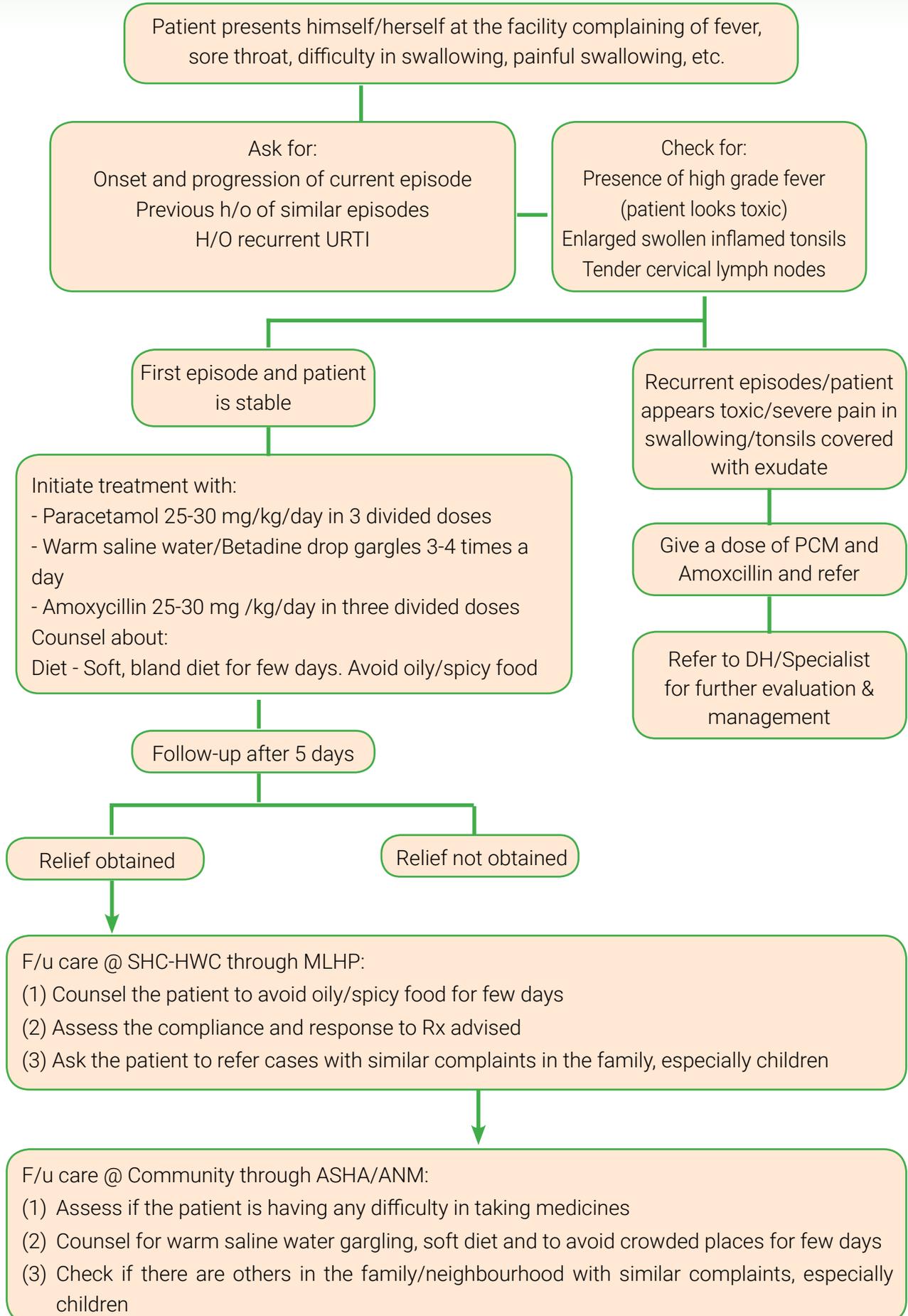
If tonsils are inflamed or there is an exudate, the patient will require antibiotics, refer the patient to the MO-PHC to initiate antibiotics. Ensure that the patient is taking the full course of antibiotics and other medicines prescribed.

Follow up all cases. If there is no improvement in a week, refer the case back to a higher centre where there is an ENT specialist.

During health education sessions, emphasise on importance of avoiding dust, keeping the throat moist by sipping water often and maintaining good personal hygiene.

Keep records of all cases updated.

## Referral pathway for Acute tonsillitis



## 4. ACUTE EPIGLOTTITIS

It is a very serious/dangerous condition which mostly affects children between 2 to 7 years of age. It is caused by bacterial infection of the lower airway (larynx), which causes the airway to swell up and leads to obstruction and difficulty in breathing.

### Clinical features

- Sudden onset of symptoms
- Difficulty in breathing
- Noisy breathing
- Very high fever
- Sore throat and difficulty in eating (in adults)

### Management at SHC-HWC

Children with this infection must be hospitalised because there is danger of respiratory obstruction and death. The child might be unable to swallow, therefore, intravenous fluids and antibiotics have to be started urgently. Immediately refer the child to a higher centre where an ENT specialist or paediatrician is available.

### RESPONSIBILITIES OF CHO IN MANAGING ACUTE EPIGLOTTITIS

If you see a child with breathlessness, noisy breathing and fever, immediately refer the patient to an ENT specialist to initiate treatment.

Follow up with the child once he/she returns from the facility to ensure that he/she is taking the full course of antibiotics and other medicines prescribed.

Follow up all cases. If there is no improvement in a week, refer the case back to a higher centre where there is an ENT specialist.

During health education sessions, emphasise on maintaining good personal hygiene.

Pentavalent vaccine (given at 6, 10 and 14 weeks of age) is protective against this disease. Ensure that all children are fully immunised.

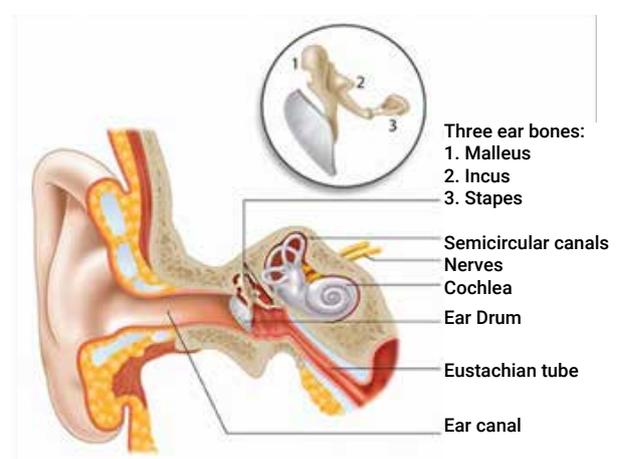
Keep records of all cases updated.

## 5. EARACHE (OTALGIA)

Pain in the ear is known as Otolgia. It is a symptom caused by several conditions. It is essential to find its cause before a specific treatment can be started. Most commonly occurs during childhood, although it may occur in adults too.

### Causes of otalgia

- a) Primary otalgia (most common):



The cause of the pain exists within the ear itself. E.g., external otitis, otitis media, mastoiditis, impacted wax etc..

b) Secondary (referred) otalgia:

The ear is innervated by many nerves, namely the cranial nerves number V, VII, IX and X. Any abnormal stimulation of any branch of the above-mentioned nerves leads to pain in ear (known as 'referred pain'). E.g., problems in the teeth, jaw, trigeminal neuralgia, intracranial lesions, etc.

### Management at SHC-HWC

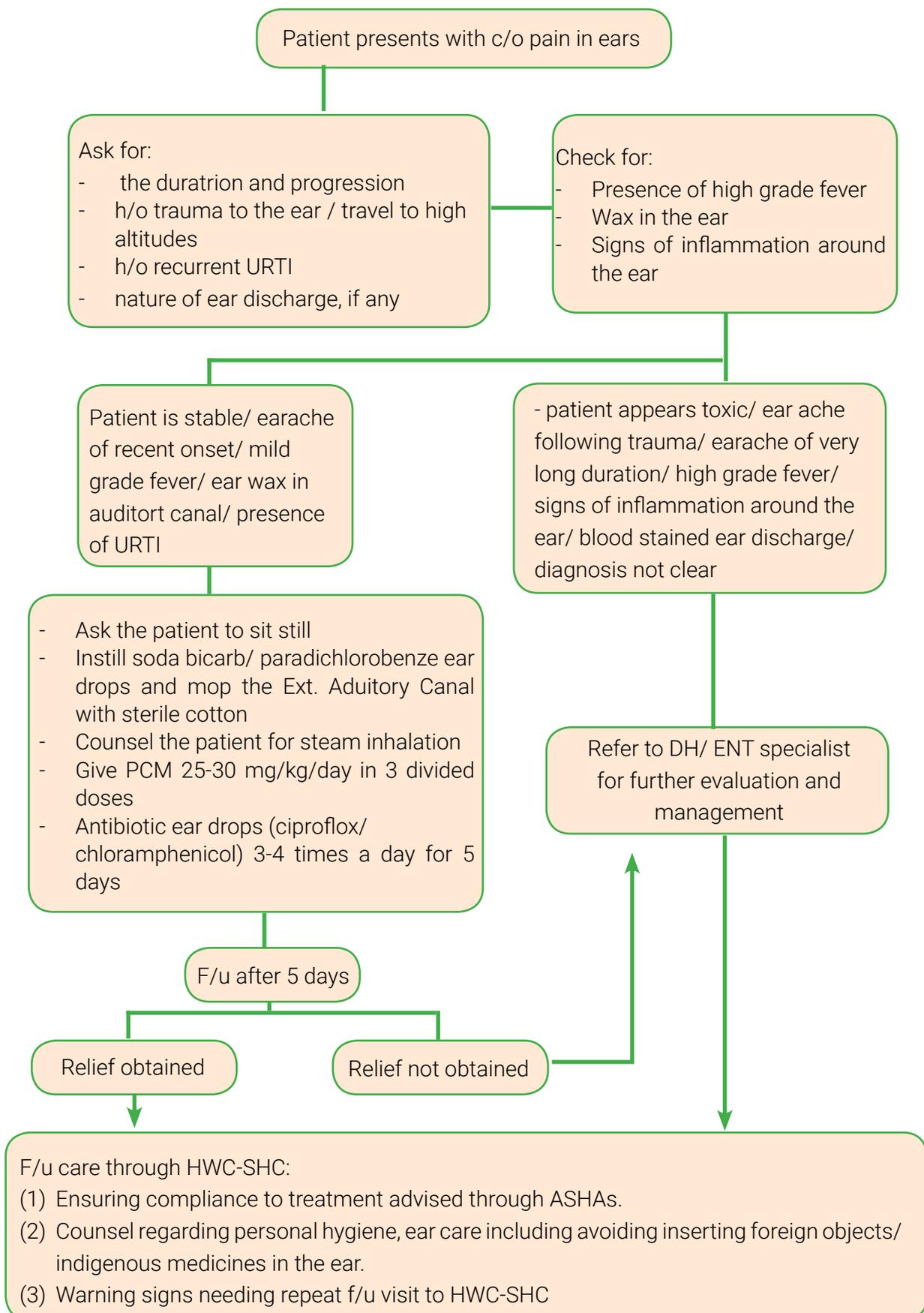
- Carry out a thorough general and systemic examination, including ear, oral and throat examination.
- It is important to find out the underlying cause before starting any specific treatment.
- Look for signs of infection/trauma around the ear.
- If there are secretions in the ear canal, mop them clean with a sterile gauze piece.
- Instil antibiotic ear drops such as Ciprofloxacin ear drops, 2 drops at a time, 2-3 times a day only when no discharge is coming out from ear. In case of active discharge, the possibility of ear perforation may be there, so keep the ear dry.
- For reducing pain, start Paracetamol 25-30 mg/kg/d in three divided doses.
- Follow up after 5 days to assess response to treatment.

### Indications for referral to ENT specialist

- Any severe acute pain needs referral after giving painkillers.
- Chronic pain (i.e., pain lasting >2 weeks), especially if associated with other head/neck symptoms.
- Swelling/other signs of inflammation at external auditory canal.
- Patient having high grade fever/appearing toxic.
- Earache following trauma.
- When no apparent reason for earache can be found even after thorough history taking and examination.



## Referral pathway for Earache



## 6. OTITIS EXTERNA (EXTERNAL EAR INFECTION)

Otitis externa is an inflammatory process of the external ear canal. It is most commonly caused by infection (usually bacterial, although occasionally fungal), but it may also be associated with a variety of non-infectious systemic or local dermatologic processes.

### Risk factors

- i. The ear canal is warm, dark, and prone to becoming moist, making it an excellent environment for bacterial and fungal growth.
- ii. The canal is easily traumatised in injuries.
- iii. Because there is a curve in the canal, anything that goes inside is difficult to come out.
- iv. The presence of hair, especially the thicker hair common in older men can lead to infected boils.

### Clinical features

- i. Severe pain in ear on movement of pinna.
- ii. Jaw movements can also be painful.
- iii. Swelling of lymph nodes around the neck can also be present.
- iv. Diffuse inflammation of ear canal with crusts and discharge from ear.

### Management at SHC-HWC

- i. Clean ear with a dry cotton wick.
- ii. An ear pack of 10% ichthammol glycerine provides relief and reduces pain. (Hygroscopic action of glycerine reduces oedema, while ichthammol is mildly antiseptic).
- iii. Cap Amoxicillin for 5 days in age-appropriate dosage (**can only be prescribed by a doctor; the CHO will consult the MO-PHC for antibiotics**)
- iv. Tab Paracetamol 500 mg twice daily for 5 days.

## 7. OTITIS MEDIA (MIDDLE EAR INFECTION)

An inflammatory condition of the middle ear space is known as Otitis Media. It is common in infants and children but may also occur in adults. It is commonly associated with poor hygiene.

There are two types of otitis media:

1. Acute Suppurative Otitis Media which is an acute bacterial infection of the middle ear
2. Chronic Suppurative Otitis Media which is a result of long-standing infection of the middle ear

Risk factors	Symptoms	Signs
Recurrent attacks of common cold and upper respiratory tract infections; Diseases like measles, diphtheria, whooping cough; Infections of tonsils; Chronic rhinitis and sinusitis; Nasal allergy; Cleft palate (congenital disorder)	Earache – which even disturbs sleep; Reduced hearing; Very high fever; If the ear drum is perforated: Bleeding/pus ear discharge, Tinnitus (ringing sound in the ear) in some cases; Additional symptoms in children – fever/vomiting/ loose motion/sleeplessness/ incessant crying/irritability.	Signs of Upper Respiratory Tract Infection; Tenderness can be present over mastoid region (bony part behind the ear lobe); External auditory canal may contain blood-tinged discharge which may also have pus.
<p>Note: There is a condition known as Serous Otitis Media which has watery discharge from the middle ear. The condition is common in school-going children. Mostly, viral infection and seasonal allergies are its causes. It is also associated with hearing loss, mild earaches but the symptoms are less severe than Suppurative Otitis Media. This condition can be treated only with nasal decongestants and antiallergic medicines and does not require antibiotics.</p>		

### Management at SHC-HWC

- Counsel the patient to:
  - Keep the ear dry (prevent water from getting into the ear).
  - In case of discharge – dry mopping of the ear with a clean cotton wick.
  - No putting of any ear drops or oil into the ear.
- Dry mopping of the of the ear canal with sterile cotton wick.
- Tab Paracetamol (500 mg) 3 times a day OR Syrup Paracetamol 10-15mg/kg bodyweight in 3 divided doses (Paediatric).
- Antibiotics like Amoxicillin or Azithromycin for 5-7 days (can only be prescribed by a doctor; the CHO will consult the MO-PHC for antibiotics)
- Nose drops (1% in adults and 0.5% in children or Xylometazoline or oxymetazoline can be used 2-3 drops thrice a day) to reduce nasal blockage. This can improve symptoms.
- Ear toilet: If discharge is present, then a sterile cotton can be used to mopped it but care to be taken not to put cotton roll inside, only discharging pus needs to be cleaned.
- Dry local heat: it also helps to relieve pain. Take a small hand towel, dip in hot water, and place over the ear lobe.

### When to refer to a specialist

- No improvement or symptoms worsen even after 48 hours of medical treatment
- Patient develops features like vomiting with headache/facial palsy/dizziness/mastoid tenderness.

- Any other condition is also present, such as tonsillitis, rhinosinusitis.
- If foul smelling discharge is present.

### RESPONSIBILITIES OF CHO IN MANAGING MIDDLE EAR INFECTION

Diagnose all cases of ear pain and fever confirm infection of the middle ear.

Clean ear with a dry cotton wick.

Give symptomatic treatment for pain.

Consult with the MO-PHC or ENT specialist for confirming diagnosis and initiating treatment.

Follow up all cases to ensure that they complete the antibiotic treatment. In case there is no improvement after one week, refer the case back to the ENT specialist.

Maintain updated records.

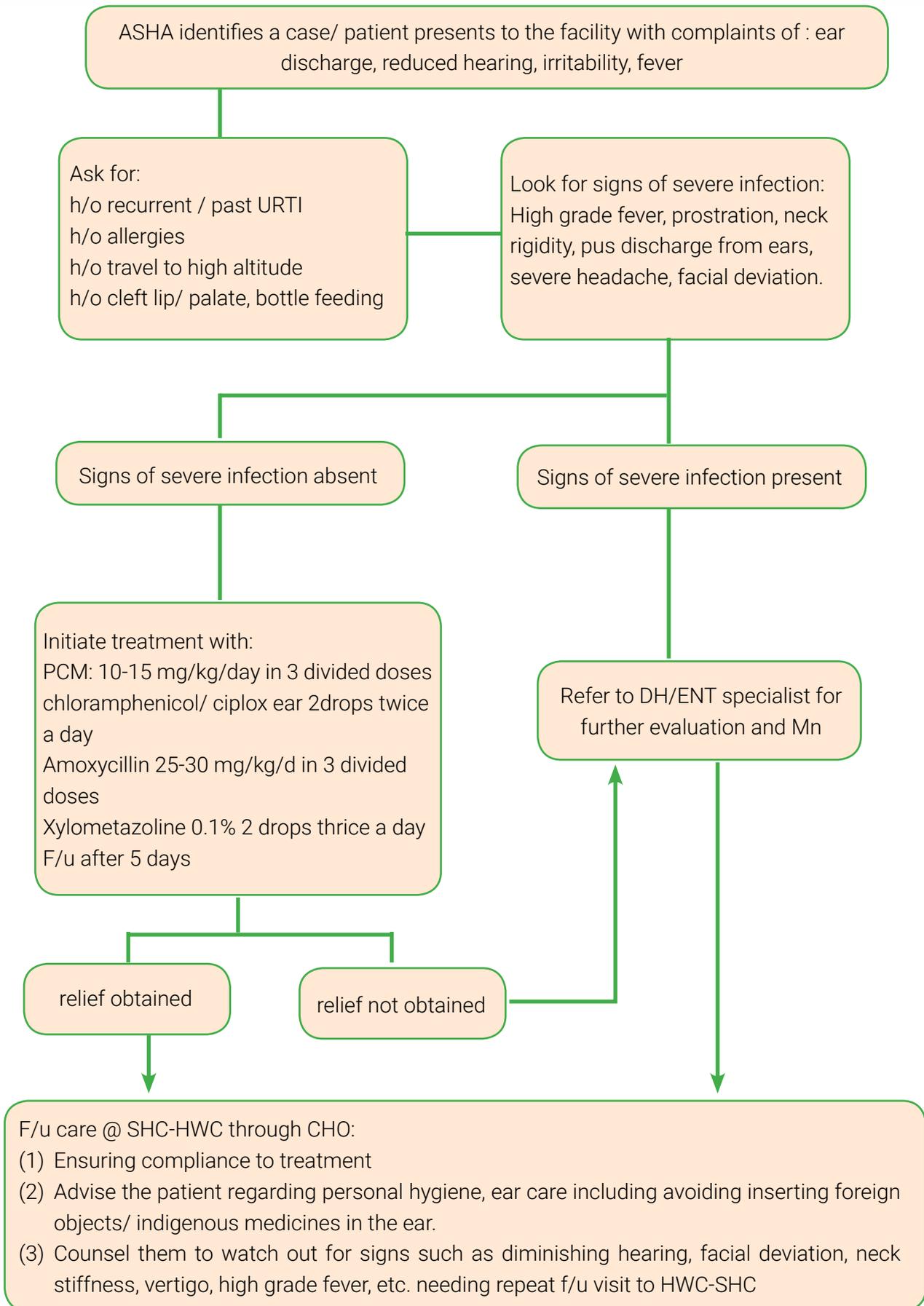
Advise the community about maintaining personal hygiene and how to clean the ear regularly.

Also advise to avoid putting sharp objects in the ear. Clean and dry the ears after swimming.

Ensure that all children in your area are fully immunised.



## Referral pathway for Otitis Media



## 8. VERTIGO

Vertigo is a subjective feeling of movement, either of self or the objects around in the environment. Various terms are used by patients to describe this feeling. For e.g., bouncing, oscillating, twisting, rolling, spinning, light-headedness, imbalance, floating, fainting, etc.

It is different from dizziness which occurs due to low blood pressure or weakness. The inner ear is responsible for carrying sound and for maintaining balance. Any disease of the inner ear, therefore, causes a feeling of imbalance. Most of these conditions are treated with specific medicines, but sometimes the underlying cause can also be a tumour (benign or malignant) in the inner ear or in the brain.

### Clinical features

The patient complains of:

- Dizziness
- Feeling of rotation or spinning
- Light headedness, faintness, weakness
- May be associated with blurring of vision, syncope or 'blacking out' and imbalance/unsteadiness

Causes	Symptoms	Signs
<p>Ear related causes: Meniere's disease, Benign paroxysmal positional vertigo (BPPV), labyrinthitis, vestibule-toxic drugs, otosclerosis, etc.</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Dizziness</li> <li><input type="checkbox"/> Feeling of rotation or spinning</li> <li><input type="checkbox"/> Light headedness, faintness, weakness</li> <li><input type="checkbox"/> May be associated with blurring of vision, syncope or 'blacking out' and imbalance/unsteadiness</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Detailed general and systemic examination (especially CVS and CNS examination) may show abnormalities</li> <li><input type="checkbox"/> BP and RBS may be raised</li> <li><input type="checkbox"/> Tuning fork tests may show reduced hearing</li> </ul>
<p>Neurological causes: Multiple sclerosis, transient ischemic attacks, intra-cranial tumours, seizures, etc</p> <p>Systemic causes: Hypotension, certain viral infections, hypothyroidism, DM, head injury</p> <p>Certain drugs such as anticonvulsants (phenytoin, pregabalin, gabapentin), anti-hypertensive (propranolol, furosemide), anti-depressants (fluoxetine), analgesics (codeine), alcohol, etc.</p>	<p>Romberg's test: Ask the patient to stand with their feet together (touching each other). Then ask the patient to close their eyes. Remain close at hand in case the patient begins to sway or fall.</p> <p>Interpretation: If the patient does not sway at all: <b>Normal</b> Patient sways after closure of eyes: Also known as <b>Romberg Positive</b>. Occurs due to diseases in the vestibular system (ear problem) or sensory nervous system If the patient sways even with eyes open: Disease in the cerebellar functions of the patient</p>	

### Management at SHC-HWC

- Reassurance regarding the nature of the disease, avoiding the posture that triggers the symptoms.

- Certain drugs like Prochlorperazine 5mg BD OR Cinnarizine 25 mg BD OR Betahistine 16 mg BD for 5 days may be started in **consultation with the Medical Officer.**
- Multi-vitamin supplements may also be added.
- Counsel the patient about:
  - Reducing intake of caffeine/alcohol
  - Avoiding performing tasks which may cause harm, such as working on heavy machines, driving, etc.
  - Keeping a note of the medicines being taken and emergency contact numbers in pocket whenever going out of house alone
- Exercises are helpful in regaining the balance and confidence of the patient: The manoeuvre consists of five positions.

Position 1- Ask the person to sit on the bed. Turn the head 45 degrees towards the affected ear.

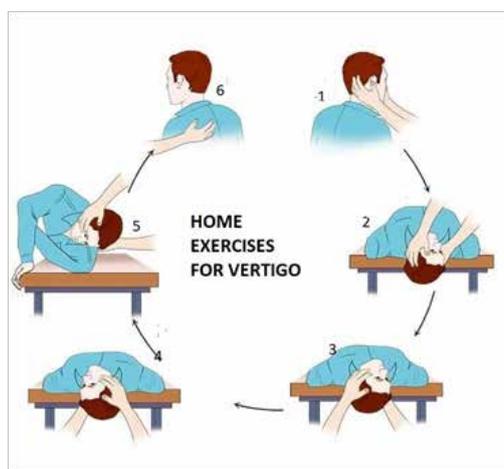
Position 2 - With the head turned 45 degrees, the patient is made to lie down in head hanging position. It will cause vertigo and nystagmus (sudden jerky movements of the eyes). Wait till vertigo and nystagmus subside.

Position 3 - Head is now turned so that the affected ear is up.

Position 4 - The whole body and head are now rotated away from the affected ear to a lateral recumbent position in a facedown position.

Position 5 - Patient is now brought in a sitting position with head still turned to the unaffected side by 45 degrees.

Position 6 - The head is now turned forward and chin brought down 20 degrees.



There should be a pause at each position till there is no nystagmus or there is slowing of nystagmus, before changing to the next position. After the manoeuvre is complete, the patient should maintain an upright position for 4 to 6 hours. 80% of the patients will benefit from this exercise. If the patient remains symptomatic, the manoeuvre can be repeated..

### **When to refer to a specialist**

- No improvement after 2 days of starting treatment
- Sudden fainting
- History of injury to the head or ear
- Known case of Epilepsy (fits)

Known case of any inner ear problems, tumours

### **RESPONSIBILITIES OF CHO IN MANAGING VERTIGO**

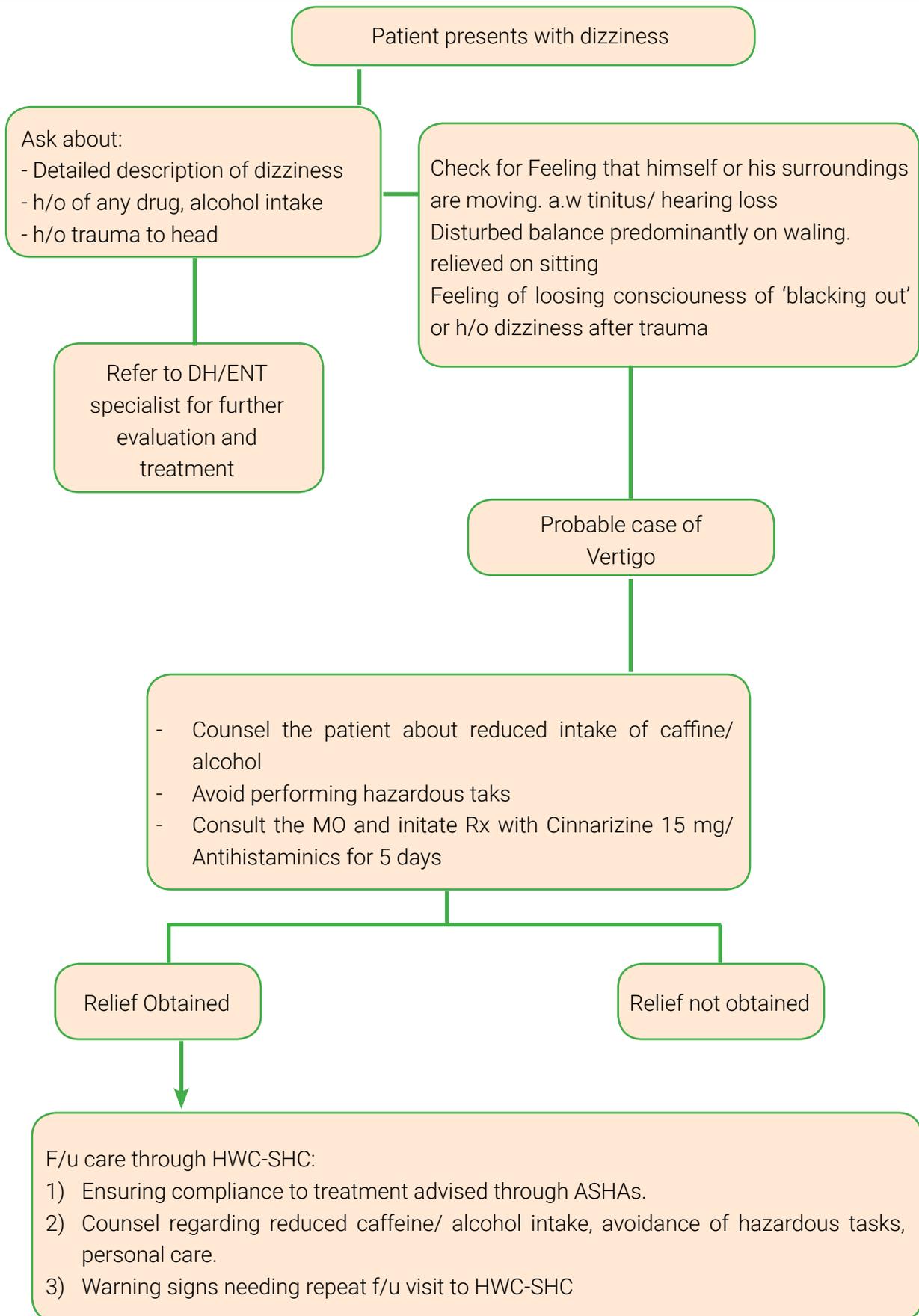
Consult with the MO-PHC and refer the patient to an ENT specialist for confirming diagnosis and initiating treatment.

Follow up all cases to ensure that they complete the prescribed treatment. In case there is no improvement after one week, refer the case back to the ENT specialist.

Maintain updated records.

Support the patient for any lifestyle modification or exercise that may have been prescribed by the Specialist.

## Referral pathway for Vertigo



## 9. HEARING LOSS/ REDUCED HEARING

Reduced hearing or loss of hearing (deafness) is a condition where the person is not able to hear anything or can hear only loud sounds. Hearing loss may affect people of any age group. Children and adults may also lose their hearing completely or partially due to various reasons, like an injury causing rupture of the eardrum, severe infection of the ear, tumour in the ear, sudden exposure to very loud sounds (like explosions) or prolonged



exposure to loud sounds (like people working in factories with noise from heavy machinery).

Sometimes, babies are born with deafness (known as congenital deafness) which happens when the mother is exposed to certain infections, medicines, or radiation during pregnancy. As people become older, they slowly lose their hearing (known as presbycusis), usually after 65 years of age, due to physiological ageing process.

Hearing loss can be of three types – conductive hearing loss, sensorineural hearing loss and mixed type of hearing loss (refer to the chapter on ENT examination).

Untreated hearing loss affects communication and thus may also contribute to social isolation and loss of autonomy. Not being able to hear properly is often associated with anxiety, and depression. Hearing loss in children can affect their growing-up years, education, interaction with others and personality development. Hearing loss in old age can impair the quality of life..

### Management at SHC-HWC

ASHA/MPW will identify the people with hearing loss in the community and refer them to you at the SHC-HWC.

At the sub centre HWC level, it is important to get the history of hearing loss. Some of the questions that should be asked and answered are:

- a) Onset of hearing loss – from birth or later
- b) Hearing loss happened suddenly or gradually

- c) Hearing loss is stationary or progressive
- d) Any family history of hearing loss
- e) Any other ear symptoms
- f) Any test or treatment done earlier

Since most of the diagnosis and treatment requires a specialist, you should confirm the presence of hearing loss and refer the patient to the centre where there is an ENT specialist.

Before referring the person, you can check for the following:

- 1) Any obstruction in the ear canal – foreign body, wax, etc.
- 2) Any discharge from the ear or recent history of injury to the ear.
- 3) Whether speech is affected or not.
- 4) If the hearing is lost for low frequency sounds or high frequency sounds.
- 5) Any history of taking certain drugs recently.
- 6) Exposure to very loud sounds – explosion, gun fire..

**Disability certificate and entitlements:** WHO classifies hearing loss as a disability depending on the percentage of hearing loss (determined by audiometric tests). The people with hearing loss are issued a disability certificate by a Medical Officer. These people are eligible for social security schemes and benefits. You must be aware of the social benefits in your State and inform the client regarding the benefits that he/she is eligible for.

### RESPONSIBILITIES OF CHO IN HEARING LOSS

Supervision of ASHA/MPW in screening of individuals for hearing loss in the community.

Assist RBSK teams to screen children up to 18 years of age for hearing loss through Anganwadi centres, schools, etc.

Identify hearing loss in patients and refer to an ENT specialist for confirming diagnosis and initiating treatment.

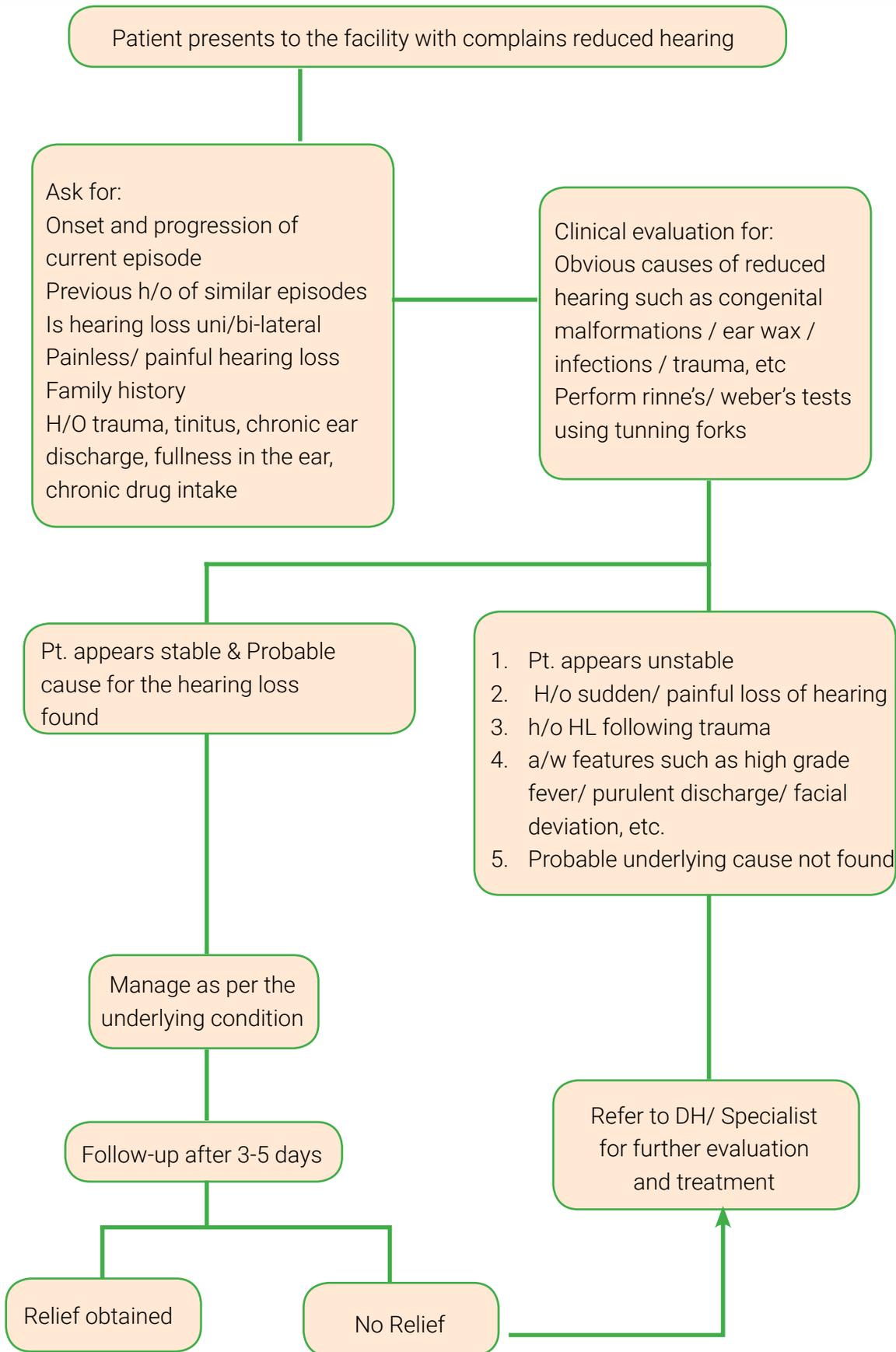
Follow up and support individuals who have been prescribed hearing aid and post-operative individuals in the community.

Arrange for assistive devices (hearing aids, etc.) as per the requirement from the PHC.

Maintain updated records.

Inform people with deafness about financial schemes and benefits for their uptake, if found to be eligible.

## Referral pathway for Hearing loss



## 10. FOREIGN BODY IN EAR

Foreign bodies of the ear are relatively common. Usually, children insert small objects such as small toys, beads, stones, folded paper, and biologic materials such as insects or seeds into their ear, but even adults may also be affected by a foreign body in the ear canal, such as cotton swabs/first-aid products, etc.

### Classification of foreign bodies

- (a) Living: e.g., Insect, Flies, Maggots
- (b) Non - living:
  - i. Hygroscopic (can expand in moisture): e.g., vegetable, beans, and seeds
  - ii. Non-hygroscopic: e.g., beads, stones, pebbles, rubber, metallic object

### Clinical Features

- History of foreign body entering the ear
- Ear Pain
- Tinnitus (ringing sound in the ear)
- Discomfort and complaint of nausea or vomiting if a live insect is in the ear canal
- Bleeding may occur in case of sharp objects
- Hearing loss
- With delayed presentation, erythema and swelling of the canal, and a foul-smelling discharge may be present

### Management at SHC-HWC

Inspect the ear canal using a torch to confirm the presence of foreign body. Method of removing foreign body depends on its type.

Type of foreign body	What to use to remove
Soft and irregular like a piece of paper, swab, or a piece of sponge	Fine alligator forceps
Smooth objects like seed grains, metallic objects	Syringing
Insect	First step is to kill the insect with mineral oil or lidocaine Then remove dead insect with forceps
Sharp object	Refer to the ENT specialist for removal

### When to refer to an ENT specialist

- Small child who cannot stay in one position to attempt removal
- Sharp objects
- Objects appear deep in ear canal
- Object appears to be tightly impacted
- Any kind of discharge from the ear
- Previous removal attempt was unsuccessful

## RESPONSIBILITIES OF CHO IN CASE OF FOREIGN BODY IN EAR

First find out the type of foreign body and where exactly it is.

If possible, try and remove.

If person is restless, then do not try to remove the object; refer to an ENT specialist or the DH.

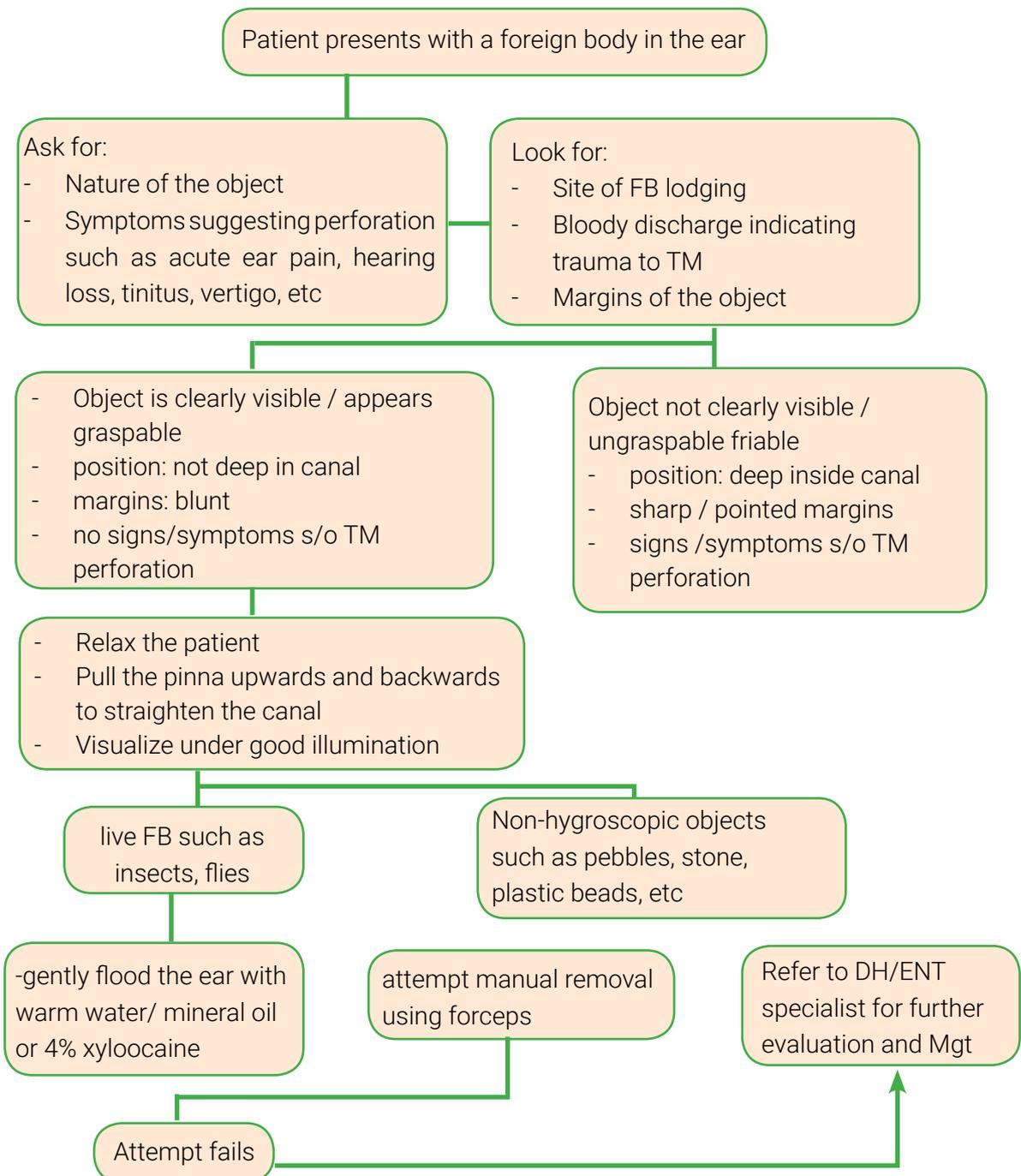
Ensure that there is no other injury to the head or neighbouring area.

Follow up all the cases that are referred

Advise the community about keeping children safe and away from small seeds, stones etc. that can go into their ear.

Keep records and registers updated.

## Referral pathway for Foreign Body in ear



## 11. FOREIGN BODY IN NASAL CAVITY

Sometimes, some foreign object may enter the nose either accidentally, or children may insert objects into their nose. If the object is hygroscopic (e.g., vegetable or seed), it can absorb moisture and swell up and cause difficulty in breathing. The foreign body may even be aspirated into the airway.

### Clinical Features

- History of foreign body entering the nose
- Pain in nose
- Difficulty in breathing
- Discomfort and watering of nose and eyes

### Management at SHC-HWC

- If the foreign body is superficial, visible, and not a sharp object, you may attempt to remove it. Otherwise refer the person to the Specialist at the DH.
- Forceps may be used to remove the foreign body at the SHC-HWC.
- If the patient is breathless and gasping, call an ambulance and urgently refer to an ENT specialist.

### When to refer to an ENT specialist

- Small child who cannot stay in one position to attempt removal
- Sharp objects
- Objects appear deep in nasal cavity
- Object appears to be tightly impacted
- Any kind of discharge from the nose
- Previous removal attempt was unsuccessful

## 12. FOREIGN BODY IN AIR PASSAGE

Foreign body aspirated into air passage is yet another emergency which may happen in the community or at the HWC. The object can lodge in the back of the throat, voice box or upper lung tubes called bronchi. It depends on the size of the foreign body. This condition is more common in children (50% of them are below 4 years) but can also occur in adults.

### Clinical features:

- Foreign body in the back of the throat: there will be an initial period of choking, gagging and wheezing. Then it may be coughed out or it may lodge in the larynx.
- Foreign body in voice box (larynx) – will have discomfort, pain in throat, hoarseness of voice, cough, and difficulty in breathing, wheezing and coughing blood.

- Foreign body in upper tube (Tracheal) – a sharp object will produce cough and hemoptysis (blood in sputum).

### Management at SHC-HWC

A person can suspect there is a foreign body if there is a sudden choking after eating food, or sudden bout of cough, discomfort and difficulty in breathing.

#### Steps to perform in case of choking:

- If the person is able to cough forcefully, the person should keep coughing.
- If the person is choking and can't talk, cry or laugh forcefully, the American Red Cross recommends a **'five-and-five'** approach to delivering first aid:



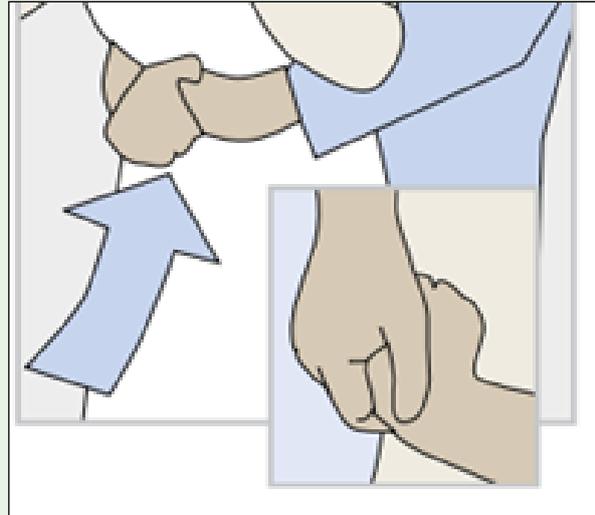
Figure: Showing 'five-and-five' approach in case of choking

- Give 5 back blows (as shown in the image above). Stand to the side and just behind a choking adult. For a child, kneel behind. Place one arm across the person's chest for support. Bend the person over at the waist so that the upper body is parallel with the ground. Deliver five separate back blows between the person's shoulder blades with the heel of your hand.
- Give 5 abdominal thrusts. Perform five abdominal thrusts (also known as the Heimlich manoeuvre).
- Alternate between 5 blows and 5 thrusts until the blockage is dislodged.

## The Heimlich maneuver

Do not perform the Heimlich maneuver if the victim is coughing, speaking or breathing. If the person cannot cough, speak or breathe, proceed as follows :

1. Stand behind the victim, wrap your arms around his or her waist.
2. Clasp your hands together in a double fist and place the fist - thumb side in - just below the victim's rib cage and above the navel\*
3. Press into the victim's abdomen (not the rib cage) with a quick, upward thrust.
4. Repeat thrusts until object is dislodged.



When to refer to an ENT specialist

- If all the above methods fail
- If patient is turning blue (facial skin colour turning blue – cyanosis)
- If patient become unconscious
- If suspected foreign body is poisonous
- If patient requires immediate investigation (like X-ray) to locate the position of the object

### **RESPONSIBILITIES OF CHO IN CASE OF FOREIGN BODY IN AIRWAY**

First find out the type of foreign body and where exactly it is.

If possible, try and remove by asking the patient to cough it out.

Try the Heimlich manoeuvre if the person is choking.

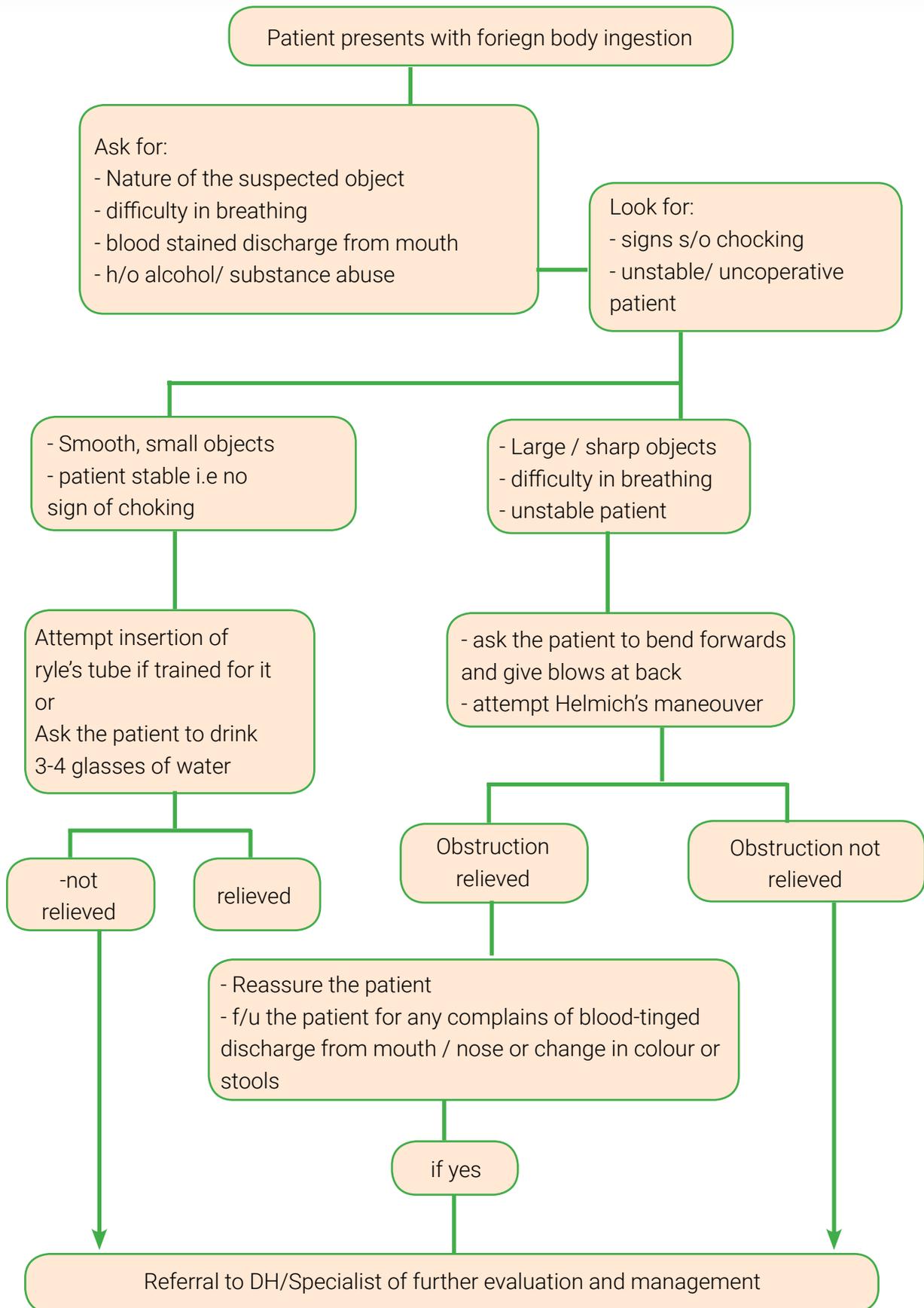
If person is restless, then do not try and remove object – refer to an ENT specialist or the DH.

Ensure that there is no other injury to the head or neighbouring area.

Follow up all cases that are referred.

Advise the community about keeping children safe and away from small seeds, toys, stones etc that can go into the throat or be swallowed.

## Referral pathway for Foreign Body in throat/airway



# 05 CHAPTER

## ESSENTIAL SKILLS NEEDED FOR PROVIDING PRIMARY ENT SERVICES

### A) How to use Nasal Drops:

- i. Ask the patient to blow nose gently
- ii. Wash the hands thoroughly with soap and water
- iii. Check if the dropper tip is chipped or cracked
- iv. Avoid touching the dropper tip against the nasal mucosa
- v. Tilt your head as far back as possible, or lie down on your back on a flat surface (such as a bed) and hang your head over the edge (as shown in the figure above)
- vi. Put the correct number of drops into your nose
- vii. Bend your head forward towards your knees and gently move it left and right (as shown in the figure above)
- viii. Remain in this position for a few minutes
- ix. Clean the dropper tip with warm water. Cap the bottle right away
- x. Wash your hands to remove any medication



### B) How to put ear drops:

- i. Make the patient lie down or tilt the head, with the affected ear facing upwards.
- ii. Open the ear canal by gently pulling the ear upwards and backwards. This straightens the ear canal.
- iii. Clear any visible superficial discharge.
- iv. Hold the dropper of the medicine upside down over the ear and put the recommended number of drops into the ear.
- v. Avoid touching the dropper tip inside the ear, as it may get contaminated.
- vi. After use, wipe the tip with a clean tissue. Do not wash with water or soap.
- vii. Advise the patient to stay in the position for at least 15 minutes. A small piece of cotton may be used to plug the ear.

### C) How to check for patency of the nasal passage:

Two clinical procedures can be carried out for assessing the patency of the nose:

#### a) **Spatula Test:**

- Place a tongue depressor/spatula below the nostrils of the patient (as shown in the figure).
- Ask the patient to blow through his nose and compare the area of mist formation from both the sides.
- In normal cases, the areas of mist formation under both the nostrils are equal.



#### b) Cotton-wool test:

- Hold a fluff of cotton against each nostril and observe its movements when the patient inhales/exhales.
- In case of nasal obstruction due to polyp/septum deviation, the movement of the cotton fluff on that side would be reduced.

### D) How to remove ear wax:

Various techniques are used for the removal of ear wax from the ear canal. Steps to be followed for removal of ear wax using syringing are as follows:

- i. Make the patient sit on a chair, such that the affected ear is towards you.
- ii. Pull the ear lobe upwards and backwards gently to straighten the external ear canal and enable better visualisation (in younger children, pull the pinna downwards and backwards gently).
- iii. Place a kidney-shaped dish under the ear to collect the water overflow.
- iv. Fill a large (e.g., 20ml) syringe with a firmly attached metal or plastic cannula with lukewarm water.



Manual Syringing Equipment



Direction of water jet while syringing

- v. Direct the jet of water backwards and upwards and not directly at the tympanic membrane. Several syringe-fuls may be required before the wax is cleared.
- vi. Intermittently inspect the canal.
- vii. Inspect the expelled water for evidence of wax.

It is important to ensure that the water is at body temperature (37 °C); otherwise discomfort and vertigo may be induced by stimulation of the labyrinth (caloric effect)..

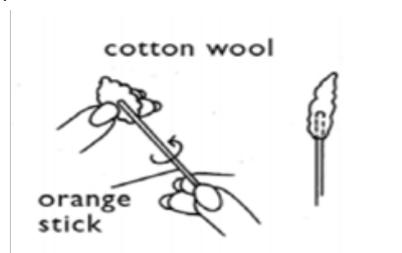
### E) How to do dry mopping of the ear:

- Clean the ear with a dry mop only when the ear is discharging.

- When the ear is dry it must not be cleaned with a dry mop.
- A dry mop is not the same as a 'cotton bud'.
- 'Cotton buds' must never be used to clean ear canals as they are too big and the cotton wool is wound onto the stick too tightly.
- How to make a dry mop:
  - Wash your hands with soap and water – air dry.
  - Pull off a small piece of cotton wool.
  - Gently pull it out into an oval shape.
  - Put the tip of the stick into the centre of the cotton wool.
  - Twist the stick round and round with one hand whilst holding half of the cotton wool tightly against the stick with the thumb and index finger of your other hand.
  - Half of the cotton wool should extend from the end of the stick and form a fluffy, soft tip.
  - The rolled-up piece of cotton wool should be long enough so that when the soft tip is deep in the ear canal and next to the eardrum there is still some cotton wool sticking out of the ear canal.
  - This is so that you can hold the cotton wool and ensure that the cotton wool comes out of the ear canal.
  - After completing dry mopping, wash your hands again.

How to make a wick:

- Make a wick by rolling a cloth or a tissue paper into a pointed shape.
- Gently pull the ear lobe away from the head. This helps straighten the ear canal.
- Place the wick into the ear canal. It will absorb any discharge or blood in the ear canal.
- Leave it in place until it is wet.
- Remove the wet wick and inspect it. Is there pus on the wick?
- Replace with a clean wick.
- Repeat until the wick comes out dry.



Dry mop



Wick

#### **F) How to perform tuning fork tests:**

Described in Chapter 3

#### **G) How to perform Heimlich's manoeuvre**

Described in Chapter 4

# 06 CHAPTER

## HEALTH PROMOTION AND PREVENTION OF ENT PROBLEMS

**M**ost of the conditions of the ear, nose and throat are preventable. It is important to create awareness among the community members regarding harmful practices which can predispose one to diseases of the ear, nose and throat. Here are some common risk factors of these diseases:

### **Risk factors for diseases of the ear:**

1. Cleaning ear canal with sharp objects like hairpins, toothpicks, etc.
2. Applying oil or any liquid inside the ear.
3. Putting unprescribed medication inside the ear.
4. Using dirty cloth or towel to clean the ears.
5. Swimming in dirty water.
6. Leaving cotton wool or other material inside the ear for prolonged period.
7. Getting exposed to very loud noise regularly or for prolonged period.
8. Untreated infection of the ear for a prolonged period.
9. Injury to the ear leading to rupture of eardrum..

### **Risk factors for diseases of the nose:**

1. Inserting sharp objects inside nasal cavity for cleaning.
2. Using dirty cloth or towel to clean the nose.
3. Picking of nose.
4. Injury to the nose might predispose one to infections.

### **Risk factors for diseases of throat:**

1. Exposure to cold climate.
2. Exposure to allergens like pollen, cotton dust, wood shavings, etc.
3. Chewing tobacco/paan/gutka, smoking.

*Below are some messages that can be given to patients/community members:*

## HOW TO MAINTAIN EAR HYGIENE

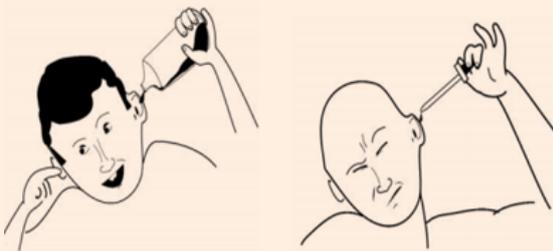


### Personal Hygiene

DO NOT put dirty fingers in ears, wash hands before working with food and do not eat with dirty hand ALWAYS wash your hands after going the toilet

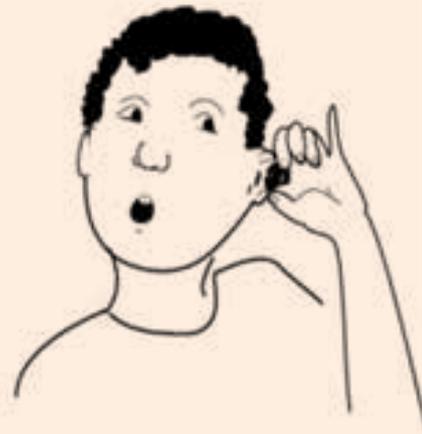


DO NOT swim or wash in dirty water



DO NOT put anything in you ears:

- hot or cold oil
- herbal remedies
- liquids such as kerosene



NOTE : Teach children NOT to put anything in their ears - seeds, beads, stones, sticks.

NOTE:

- ONLY use medicine given by the nurse or doctor at the clinic/hospital and take the correct dosage.
- If the ears are painful or have pus coming out of them, send the person to the clinic or hospital. This means the ears are infected and need to be treated by the nurse or other health worker or doctor.

## HOW TO MAINTAIN NASAL HYGIENE

### General point for advice during community visit:

1. Always use a handkerchief/clean cloth for cleaning nasal secretion.
2. Cover your mouth and nose with a tissue when you cough or sneeze, remember to wash your hands with soap and water after coughing or sneezing.
3. Maintain a little distance (one arm distance), while sneezing, cleaning nose in public or around people.
4. Never put finger in your nostril, it might cause bleeding from nose (epistaxis), as nose is a very vascular organ.
5. Always consult a doctor during the time of illness as it may rapidly infect other family members and might be serious for small children.

### STEAM INHALATION



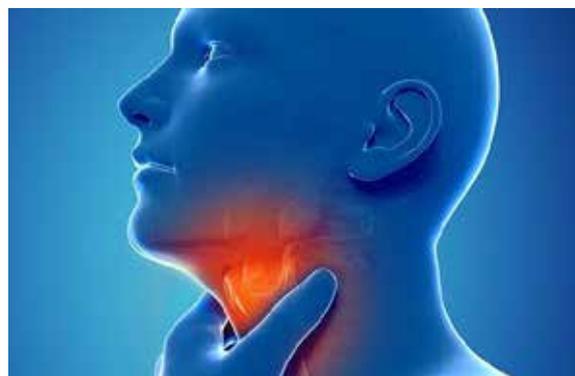
Steam inhalation is beneficial and one of the common home remedies used in our country. But there is some caution to be taken:

1. Never leave children alone for it, they might get burns.
2. Never come too close to hot water bowl.
3. Take vapours both from nose and mouth.

## HOW TO MAINTAIN THROAT HYGIENE

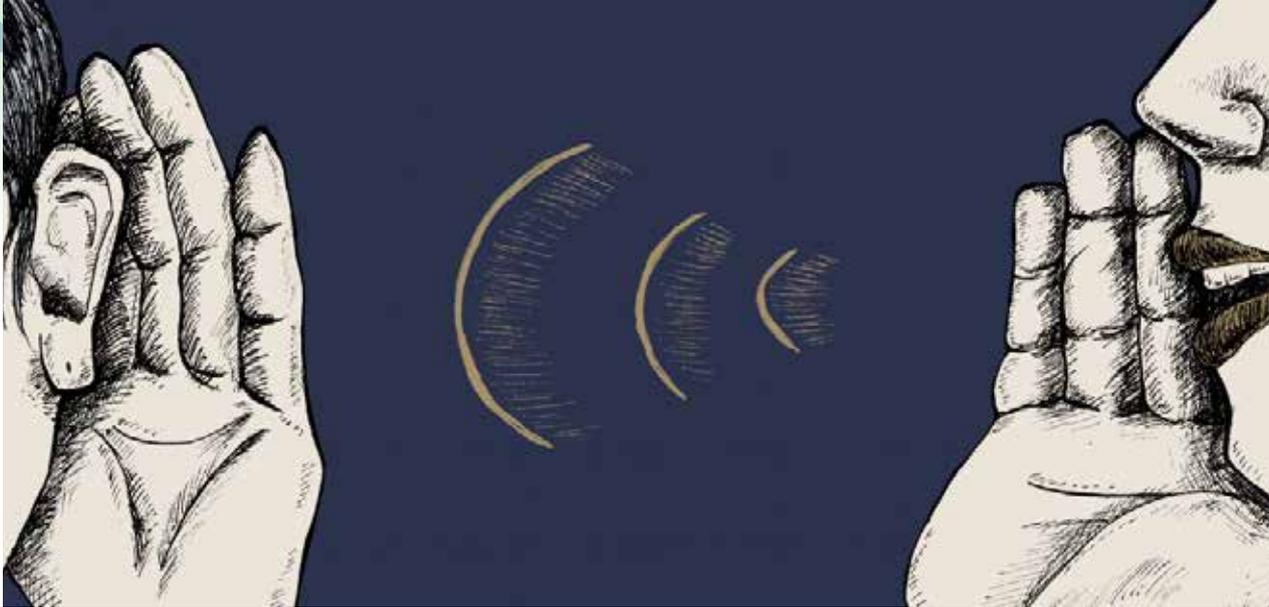
Many people complain that they have an irritation in the throat. It feels like something is scratching the throat. Cough is rare and dry. They don't have pain, but their voice can get hoarse.

There are many causes of irritation – it can be due to bacteria or viral germs. It could also be because of allergies to dust. Many times, it is due to gastric acidity which causes reflux into the throat.



### How to Reduce Irritation That Triggers Coughing:

- 1. Drink lots of fluids:** The most important thing you can do is to drink plenty of water to reduce dryness of your throat. Drink at least one and a half litre of water each day, that is about 6-8 glasses. Avoid tea, coffee, or soft drinks as they usually contain caffeine.
- 2. Breathing:**
  - a. Sit and stand with good posture – that is, neck and back straight and your chin gently tucked in. This opens your airway, makes breathing easier and allows you to relax the throat.
  - b. Avoid bad posture. When you sit or stand in a lazy posture your shoulders tilt forwards and your head tilts backwards and your chin lifts slightly. This puts pressure on your throat, vocal cords, and your neck. It can increase irritation and put strain on your voice.
  - c. Breathe through your nose. Mouth breathing dries your throat. Breathing through your nose cleans, warms, and moistens the air before it reaches your throat and vocal cords..
- 3. Talking:**
  - a. Limit harmful voice use, such as shouting, grunting, or screaming. Talking, laughing, or singing too loudly can also damage your vocal cords.
  - b. Try not to speak over other noise such as television or music or around machinery such as a lawnmower.
  - c. Do not whisper, as whispering increases air pressure in your vocal cords and may irritate your throat.
  - d. Use your natural voice, not too high, not too low, and not too loud.
  - e. Limit coughing and clearing your throat. Sometimes, coughing can be excessive and clearing the throat can become a habit. When you cough and clear your throat it puts too much force on your throat and vocal cords.
- 4. Everyday:**
  - a. Avoid chewing tobacco/paan/gutka, smoking cigarette, bidi, etc.
  - b. Limit intake of caffeine-containing drinks as caffeine can increase dryness and irritation in the throat.
  - c. Do not smoke, avoid smoky environment and avoid alcohol. It also increases the likelihood of heartburn, which can also damage the throat and vocal cords.
  - d. Do not use mouthwash that contains alcohol as this will dry your throat.
  - e. Remember to drink plenty of water every day.



## RAISING AWARENESS IN COMMUNITY REGARDING DEAFNESS

People with hearing loss are often left out in the community. It is necessary to make the community aware of how to help people with hearing loss. You must encourage them to take the persons with hearing loss to have their ears examined and tested.

Public awareness campaigns could create a better understanding of hearing loss and the disability that it causes::

- Local clinics could display posters/pictures about hearing loss and ear care to raise awareness amongst patients.
- Communities should be encouraged to have a 'Healthy Ear Day' to raise awareness in the community.
- Visit schools and talk to teachers and learners about hearing loss and its causes and effects. They should encourage activities such as designing posters to raise awareness and playing "What can you hear?" games to find out if any of the children may have a hearing loss.
- Tell teachers about hearing loss and encourage them to include this in their teaching programme.
- Explain to teachers what to look for in children with hearing loss and refer the children with possible hearing loss for treatment.
- Encourage people with hearing loss to have their ears checked and their hearing tested.
- Raise awareness in the community by speaking to social, religious, and other groups about hearing loss.
- Encourage parents and teachers to use sign language with deaf and hard of hearing children.
- Encourage the inclusion of hearing-impaired people in the workplace, in education and in society.
- Encourage and support hearing-impaired people to form support groups for themselves and their families.

# 07 CHAPTER

## SERVICE DELIVERY FRAMEWORK: PROVIDING ENT CARE AS A TEAM AND KEY TASKS OF CHO

In earlier chapters, you have learnt about your specific role related to several conditions of the ear, nose and throat. In this chapter, you will learn what tasks are expected of you in primary ENT care services. You will now learn about services available at referral facilities and role of different service providers. You will find that many points that have been highlighted are repeated here, but this will help you to understand and plan your day-to-day work.

### **Service delivery framework for providing care for ENT related disorders.**

As you know, delivery of health care services to the community is a teamwork. You would need to know about the roles of other team members – ASHA, MPW, PHC team and service providers at secondary care facility in order to effectively provide Continuum of Care in ENT care services.

### **What are the roles of other members of Primary Health Care Team at SHC-HWC?**

**1. ASHA :** She will identify and list the individuals in the community having complaints related to the ear, nose and throat. She will identify individuals with hearing loss while filling up the CBAC form. She will mobilise people for screening camps, mobilise mothers/caregivers for getting their children screened through RBSK. She will create awareness in the community regarding healthy habits of the ear, nose and throat and prevention of diseases. Along with the ASHA Facilitator, she will help in providing community-based rehabilitation, social acceptance and vocational training and inclusive education for hearing-impaired patients.

**2. MPW :** MPW will support the ASHA in carrying out screening and awareness generation activities in the community. She will use home visits, Village Health Sanitation and Nutrition Day (VHSND), Urban Health Sanitation and Nutrition Day (UHSND), meetings of Village Health Sanitation and Nutrition Committee (VHSNC), Mahila Arogya Samiti (MAS) and health promotion campaigns to disseminate health promotion messages related to health of the ear, nose and throat, early identification and referral and ensuring treatment adherence. She will also assist you in primary management of ENT conditions in patients coming to the SHC-HWC, including screening and referral of complicated cases to higher centres. She will also assist you in maintaining relevant records at the SHC-HWC.

**3. PHC team :** You will refer the individuals with any signs and symptoms of loss of hearing and other complicated cases of ENT to Medical Officer at PHC for diagnosis. PHC-MO will confirm the diagnosis and provide treatment of common ENT conditions/infections, primary care for trauma, refer cases with hearing impairment to ENT surgeon for further assessment and confirmation, disability certification, and outreach activities (planning, monitor wellness clinics/community workers and co-ordination with district hospitals).

The specialists at higher health facilities would prescribe a treatment, which would be continued at SHC-HWC level. The patient would need to visit the specialist or MO as per the instructions provided.

#### 4. Key roles and responsibilities of CHO in providing ENT care services

As we are committed to provide quality comprehensive health care at HWCs, you play a crucial role in providing basic ENT services at SHC-HWC and in the community.

- You will support the ASHA and MPW in carrying out screening and awareness generation activities in the community.
- You will screen, detect, and provide primary management to patients coming to the SHC-HWC with conditions of ear, nose and throat.
- You will refer complicated cases, cases of hearing loss and any other case requiring specialised care to the PHC Medical Officer or ENT specialist at the DH.
- You will follow up all referred cases for treatment adherence, recovery, and any side effect of medications, as well as re-referral if necessary.
- You will organise screening camps to screen for hearing loss and other ENT conditions and coordinate with Medical Officer/specialist for these camps.
- You will support ASHA and MPW in Home Visits, Village Health Sanitation and Nutrition Day (VHSND), Urban Health Sanitation and Nutrition Day (UHSND), meetings of Village Health Sanitation and Nutrition Committee (VHSNC), Mahila Arogya Samiti (MAS) and health promotion campaigns.
- You will maintain relevant records at the SHC-HWC and maintain inventory control of drugs and equipment related to ENT care..

#### List of services to be provided at Community and SHC-HWC level

Community Level		
Services	Preventive and Curative care activities	Responsibilities
Community based services for ENT care and Counselling and support for care seeking for disorders of ear, nose and throat	<ul style="list-style-type: none"> <li>▪ Awareness generation on common disorders of the ear, nose and throat, and the need for seeking early care through VHSNC/MAS, VHSND/UHSND and other community level meetings.</li> <li>▪ Providing information about availability of services related to ear, nose and throat disorders at different levels of health care.</li> <li>▪ Identification/Mobilisation of patients with disease of the ear, nose and throat to attend the SHC-HWC.</li> <li>▪ Follow-up with patients to ensure compliance to treatment.</li> </ul>	ASHA with support/ guidance of the ASHA Facilitator (AF)

Screening for hearing impairment	<ul style="list-style-type: none"> <li>▪ By ASHA: Screening for hearing impairment and Presbycusis while filling Community Based Assessment Checklist for all individuals above 30 years of age.</li> <li>▪ Follow up of hearing-impaired patients who have been prescribed hearing aid.</li> <li>▪ Under the RBSK, all children are screened for visual acuity at school and Anganwadi levels.</li> <li>▪ To inform people with deafness about financial schemes and benefits for their uptake, if found eligible.</li> <li>▪ Record keeping: maintaining a list of individuals with hearing impairment in the community.</li> <li>▪ Undertake rehabilitation and counselling of hearing-impaired individuals.</li> </ul>	Primary Health Care team (in coordination with RBSK team, wherever needed)
Community screening for congenital disorders referral	<ul style="list-style-type: none"> <li>▪ Encourage hearing examination for all children within 30 days of their birth through RBSK.</li> </ul>	Facilitated by ASHA/AF

#### SHC-HWC level

Services	Preventive and Curative care activities	Responsibilities
Care for common ENT problems	<ul style="list-style-type: none"> <li>▪ Primary management of common conditions of the ear nose and throat – Common colds, Acute Suppurative Otitis Media (ASOM), pharyngitis, tonsillitis, epistaxis, foreign body removal.</li> <li>▪ Referral of complicated cases to the MO-PHC or ENT specialist as required.</li> <li>▪ Early detection of hearing impairment and deafness with referral to ENT specialist.</li> <li>▪ First aid for injuries/stabilisation and then</li> <li>▪ Referral to the MO-PHC or ENT specialist.</li> </ul>	CHO/ANM

#### Where Referral is a must:

Refer immediately to ENT Surgeon District Hospital/Medical College Hospital:

- History of foreign body ingestion/inhalation followed by respiratory distress/dysphagia/vomiting.
- History of foreign body in ear or nose.
- Ear discharge with fever/giddiness/headache/vomiting/blurring of vision/loss of consciousness.
- Watery discharge from nose following trauma which increases on bending down or coughing.
- Inability to open mouth.
- Severe trauma to ear or nose, resulting in uncontrolled bleeding.

# ANNEXURE - 1

## COMMONLY USED ENT MEDICINES IN SHC-HWC

### 1. Normal Saline nasal drops – Sodium chloride (0.5% w/v):

Use: It is used in cases of rhino-sinusitis, rhinitis co-existing with nasal polyps, post nasal surgeries. It helps in ridding the nose of allergens, mucus and crusting. Dose: 2 drops in each nostril, 2-3 times a day

### 2. Xylometazoline 0.1% nasal drops:

Use: For relief from nasal congestion caused by conditions such as common cold, sinusitis and allergies. It works by narrowing the blood vessels in the nose area, reducing swelling and congestion. Dose: 2-3 drops in each nostril 2 times a day.

Side effects: Temporary burning, stinging, dryness in the nose, runny nose, and sneezing may occur. Rare side effect: Allergic reactions

### 3. Wax solvent ear drops:

Use: To treat ear wax build-up in the ear. It helps to soften, loosen, and remove the ear wax. This medication releases oxygen and starts to foam when it comes in contact with skin. The foaming helps break and remove the ear wax.

Dose: 4-5 drops in each ear, once a day. The patient has to lie down for at least 15-30 minutes. It may be repeated after a week if no relief.

Side effects: A foaming or crackling sound in the ear after using the ear drops, temporary decrease in hearing after using the drops, mild feeling of fullness in the ear, mild itching inside the ear.

### 4. Cetirizine syrup/tablets

Use: Cetirizine belongs to the Antihistamines class of medicines. They are used to relieve the symptoms of allergic inflammation of the nasal airways due to allergens. This medicine works by blocking the action of an allergic substance in the body known as histamine.

Dose: The usual adult dose is 5-10 mg once a day.

Side effects: Common side effects of cetirizine include dizziness, drowsiness, feeling tired, dry mouth, etc.

### 5. Boro spirit ear drops

Use: Boro spirit ear drops contain Alcohol and Boric Acid as active ingredients. They possess an antiseptic, antifungal, and antibacterial action, and hence, used for ear infections such as otitis externa or in cases with trauma/boil in the ear canal causing pain. It works by stopping the growth of bacteria and fungus.

Dose: 2 drops in the affected ear 2 times a day.



Side effects: Side effects are not so common. Some of the side effects include headache, drowsiness, fainting, vomiting, etc.

#### **6. Amoxicillin – Syrup/tablets**

Use: Amoxicillin belongs to a class of drugs called penicillin. It works by killing bacteria and stopping its growth in your body. As this antibiotic treats only bacterial infections, it is ineffective for viral infections (such as common cold, flu). This drug may be used alone or in combination with Clavulanic Acid, which increases its efficacy, for common ENT indications such as Acute Otitis Media, acute mastoiditis, acute bacterial rhinosinusitis, tonsillitis, peri- tonsillar abscess, etc.

Adult Dose: 500mg 3 times a day (when used in combination with clavulanic acid dose is 625 mg, 2 times a day).

Side effects: Nausea, vomiting, diarrhoea, and rash.

#### **7. Combo ear drops (Chloramphenicol + Clotrimazole + Lignocaine hydrochloride)**

Use: These ear drops having a combination of a broad-spectrum Antibiotic, Antifungal and local anaesthetic, can be used to treat a variety of ear infections such as otitis media/externa, otomycosis, etc.

Dose: 4-5 drops in the affected ear, 3-4 times a day.

Side effects: Itching in the ear, mild stinging/burning sensation, dermatitis, etc.

#### **8. Liquid paraffin – menthol drops**

Use: It is used as a nasal decongestant.

## ANNEXURE - 2

### HOW TO COMMUNICATE WITH PEOPLE WITH REDUCED HEARING/HEARING LOSS

Some ways people can help the children or adults who cannot hear well are:

1. Let the person see your face when you speak to him/her.
2. Make sure there is good light for the person to see your face.
3. Get the person's attention before you speak to him/her.
4. Try to make sure there are no distractions – especially loud noises.
5. Speak clearly and slowly.
6. Don't shout and make exaggerated movements.
7. Repeat (say again and again) things many times slowly.
8. Use gestures, drawings, pictures – point at things.
9. Do not over protect the person – he/she should be encouraged to mix with other people.
10. Point to your lips so that they learn to watch how the words are formed – this encourages lipreading.
11. Stand close to the person when you speak.
12. If the person has a hearing aid, he/she should learn to use it.



## ANNEXURE - 3

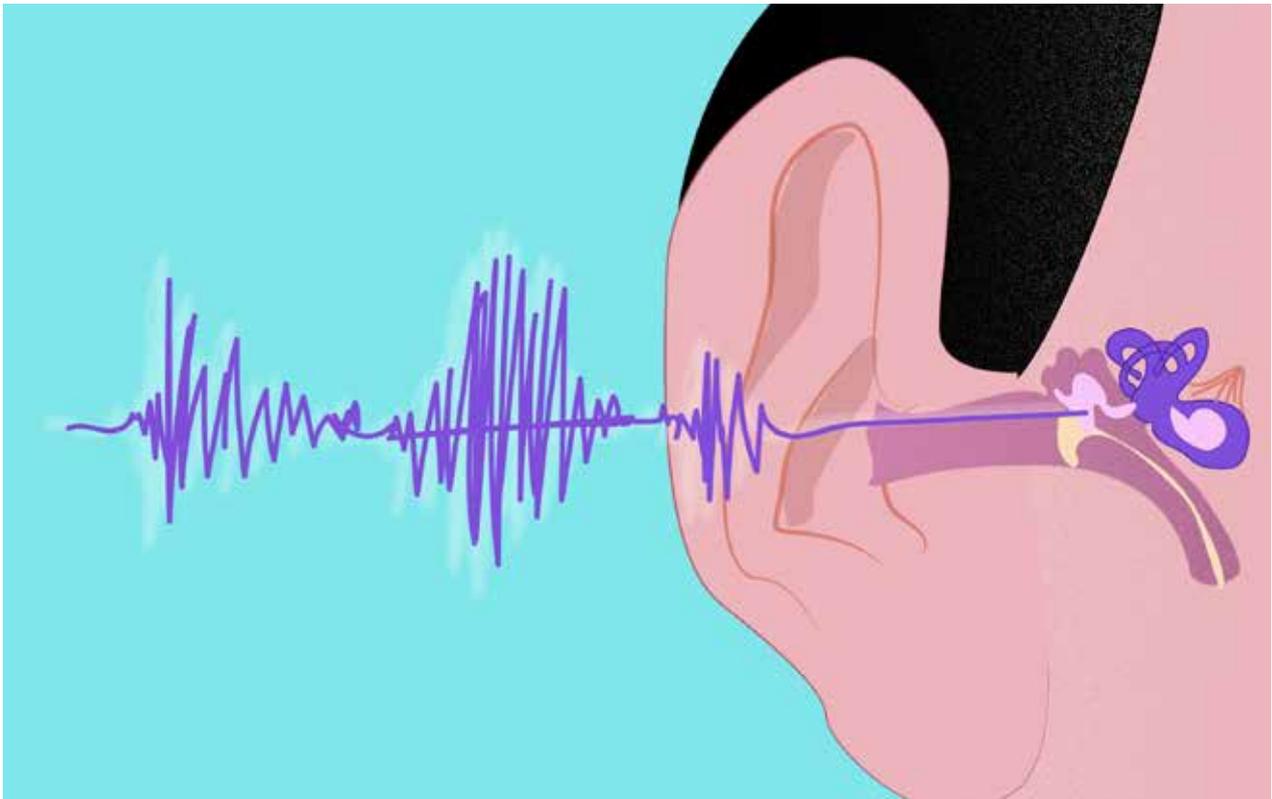
### SCREENING FOR COMMON ENT CONDITIONS

The most important ENT condition which is widely screened for is deafness or hearing loss. Hearing loss is a condition which is prevalent in all age groups. Hearing loss may be congenital (present at birth) or acquired later in life. Both the types of hearing loss are preventable.

- Congenital hearing loss occurs mainly due to infections in a pregnant woman in early pregnancy or consumption of certain drugs by a pregnant woman which are harmful for the fetus (ototoxic drugs).
- Acquired hearing loss can occur due to injury to tympanic membrane, infection of nose or ear, intake of ototoxic drugs, chronic infections like diabetes and exposure to loud noise.
- Hearing loss also occurs with age in elderly due to degenerative process (presbycusis).

Various National Programmes have aimed at screening the population regularly for hearing loss. Early diagnosis of deafness by means of screening can find out its cause and provide treatment at the earliest.

- National Programme for Prevention and Control of Deafness (NPPCD) – Screening for deafness in hospitals and health camps.
- National Programme for Health Care of the Elderly (NPHCE) – Screening of geriatric population for deafness in primary health care facilities as well as specialised geriatric clinics.
- Rashtriya Bal Suraksha Karyakram (RBSK) – Screening of children and adolescents using platforms like anganwadi centres and schools.



## ANNEXURE - 4

### COMMUNITY BASED ASSESSMENT CHECKLIST COMMUNITY BASED ASSESSMENT CHECKLIST (CBAC)

**revised draft 6 October 2020 V.5**

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		
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?  (Daily minimum 30 minutes per day – Five days a week)	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	
<b>Total Score</b>			
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.			

<b>Part B: Early Detection: Ask if Patient has any of these Symptoms</b>			
<b>B1: Women and Men</b>	<b>Y/N</b>		<b>Y/N</b>
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	
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	

<b>B2: Women only</b>	<b>Y/N</b>		<b>Y/N</b>
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			
<b>B3: Elderly Specific (60 years and above)</b>	<b>Y/N</b>		<b>Y/N</b>
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 an 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			
*If the response is Yes - action suggested: Sputum sample collection and transport to nearest TB testing centre			
** If the answer is Yes, tracing of all family members to be done by ANM/MPW			

<b>Part C: Risk factors for COPD</b>
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.

<b>Part D: PHQ 2</b>					
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)					

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## LIST OF CONTRIBUTORS

Dr. Kanwar Sen	Addl. DG, Dte. GHS, MoHFW
Dr. Sudhir Gupta	Sr. CMO, Dte. GHS, MoHFW
Dr. Sunny Swarnkar	DADG, Dte. GHS, MoHFW
Maj. Gen. (Prof.) Atul Kotwal	Executive Director, National Health Systems Resource Centre (NHSRC), New Delhi
Dr. (Flt Lt) M A Balasubramanya	Advisor, Community Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)
Dr. Maya Mascarenhas	External Consultant, National Health Systems Resource Centre (NHSRC), New Delhi
Dr. Vineet Kumar Pathak	Senior Resident, Department of Community and Family Medicine, All India Institute of Medical Sciences, Raipur
Dr. Neha Dumka	Lead Consultant, Knowledge Management Division, National Health Systems Resource Centre (NHSRC)
Dr. Suman Bhardwaj	Senior Consultant, Community Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)
Dr. Anantha Kumar SR	Senior Consultant, Community, Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)
Dr Neha Singhal	Senior Consultant, Community, Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)
Dr. Shalini Singh	Former Senior Consultant, Community Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)
Dr. Har Ashish Jindal	Former Senior Consultant, Community Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)
Dr. Rupsa Banerjee	Former Senior Consultant, Community Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)
Dr Anusha Sharma	Consultant, Community Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)
Dr. Amit Dhage	External Consultant, Community Processes and Comprehensive Primary, Health Care, National Health Systems Resource Centre (NHSRC)
Dr Vijaya Shekhar Salkar	Junior Consultant, Community Processes and Comprehensive Primary Health Care, National Health Systems Resource Centre (NHSRC)







## 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:

-  <https://instagram.com/ayushmanhwcs>
-  <https://twitter.com/AyushmanHWCs>
-  <https://www.facebook.com/AyushmanHWCs>
-  [https://www.youtube.com/c/NHSRC\\_MoHFW](https://www.youtube.com/c/NHSRC_MoHFW)



National Health Systems Resource Centre