MINISTRY OF HEALTH

NATIONAL DRUG AUTHORITY

Pharmaceutical Society of Uganda

msh Management Sciences for Health

Accredited Drug Shops Training *Uganda*

Module 4: Case Management

EADSI East African Drug Seller Initiative

Module Outline

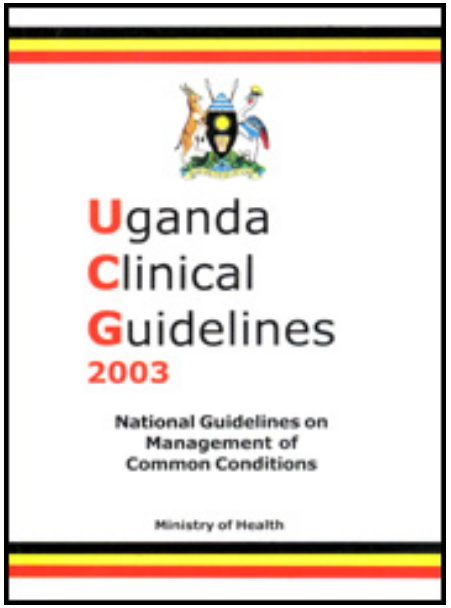
- Malaria
- Gastrointestinal conditions – childhood diarrhoiea
- Common worm infestations
- Pain and fever
- Other conditions are discussed in your manual

Please remember…

- ADS play a very important role treating minor illnesses in the community.
- But… some diseases are best treated by more highly trained health professionals
- It is critical to know:
  - What questions to ask patients
  - When referral is indicated

Resources

- References:
  - Uganda Clinical Guidelines for Malaria
  - National Malaria Treatment Policy



These will be provided to all ADS sites upon completion of the program.

Malaria

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Objectives

The objectives of this section are to:

- Understand the disease burden due to malaria in Uganda
- Understand the causes, signs and symptoms of malaria
- Understand the National Malaria Treatment Policy for uncomplicated malaria
- Understand how to prevent and control malaria
- To recognize complicated/severe malaria, provide appropriate management, including referral

ADS have a very important role in managing malaria in the community.

Malaria: Signs & Symptoms

- **Fever:** raised temperature detected by thermometer or touch; history of fever
- **Mild anaemia:** mild pallor of palms and mucous membranes (occurs commonly in children)
- **Dehydration:** dry mouth, coated tongue, and sunken eyes. (In adults, sunken eyes are usually a sign of severe dehydration.)

- **Loss of appetite**
- **Nausea**
- **Vomiting**
- **Headache**
- **Joint pains**
- **Muscle aches**
- **Weakness**
- **Lethargy**

Malaria: Signs & Symptoms (2)

- Observe for the signs and symptoms of malaria, and possibly other diseases
- Ask the patient or caretaker:
  - Have there been or are there any danger signs now?
  - When did the illness begin?
  - How did it begin?
  - Have any medicines been taken, especially antimalarials?
- If medicines have been taken, establish type, dose, and duration of treatment.

DANGER SIGNS – Must refer!

- Convulsions or fits: now or within the last two days
- Not able to drink or breast-feed
- Vomiting everything
- Altered mental state: lethargic, drowsy, unconscious, or confused
- Prostration or extreme weakness: unable to stand or sit without support
- Severe respiratory distress or difficult breathing
- Severe anaemia: very pale palms and mucous membranes
- Severe dehydration: sunken eyes, coated tongue, lethargy, inability to drink

Management of Uncomplicated Malaria

General principles of treatment:

- Any patient with fever or a history of fever within the last 24 hours without evidence of other diseases should be treated for malaria even with a negative blood smear for malaria parasites.
- Always give a full course of treatment: the right number of tablets over the right number of days.
- Give the medicine orally unless the patient vomits repeatedly.

Management of Uncomplicated Malaria (2)

- If symptoms persist but there are no danger signs, wait at least 48 hours before you change the treatment.
- Malaria parasites may develop resistance against antimalarial medicines.
  - Medicine is not able to cure the patient
  - After some improvement, the symptoms return within 14 days
- If a patient does not respond to the first-line medicine after two days and no laboratory facility is available, give the second-line medicine if there is no evidence of any other cause of the fever.

Management of Uncomplicated Malaria (3)

- Remember to use the weight and/or age to determine the right dose of antimalarial treatment, especially in young children!

- **First line treatment:** Artemether/lumefantrine
  - Refer to training manual for dosing chart

Alternative First-Line Treatments of Uncomplicated Malaria

Use the following as first-line treatments for uncomplicated malaria in situations when artemether/lumefantrine is not available.

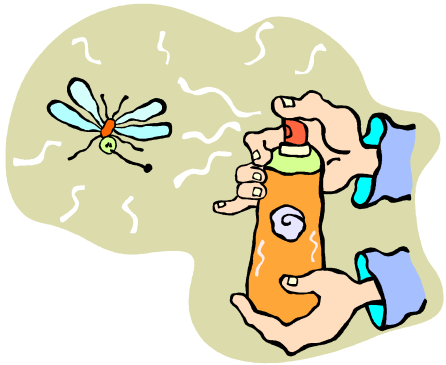
1. Artesunate and amodiaquine combination treatment:
   - Separate scored tablets containing 50 mg of artesunate and 153 mg base of amodiaquine, respectively.
   - Tablets may need to be divided for children younger than one year.
   - Refer to manual for dosing
2. Duo-cotecxin - dihydroartemisinin 40mg and piperaquine 320mg available as 8 tabs per pack
   - Refer to manual for chart of dosing.

Second-line Treatment of Uncomplicated Malaria

- Only use if first-line or alternative therapies have failed.
- Quinine tablets:
  - Refer to manual for dosing
  - Always give supportive treatment to manage the symptoms such as high temperature, dehydration
- Advise patients on ways of controlling and preventing mosquito bites.

Control and Prevention of Malaria

- Sleep under ITNs
- Use screens in houses, like wire mesh in windows, ventilators and keep doors closed in the evening
- Clear stagnant waters around homes
- Spray insecticides to destroy mosquitoes
- Clear bushes located around your house



Gastrointestinal Tract (GIT) Conditions

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Objectives

- Understand gastrointestinal system
- Understand common gastrointestinal diseases and disorders
- Understand the causes, signs, symptoms and clinical manifestation of common gastrointestinal diseases and disorders
- Understand the management of the common gastrointestinal disease and disorders
- Understand the common medicines used in treatment of gastrointestinal problems
- Patient information and condition for referral

Common GIT Disorders

1. **Diarrhoea**
2. Gastroenteritis
3. Dysentery
4. Girdiasis
5. Shigellosis
6. Cholera
7. Typhoid
8. Gastritis
9. Ulcers
10. Constipation

Diarrhoea

- Diarrhoea is the frequent passage (4 or more times in 24 hours) of loose, watery, soft stools plus bloating, pressure, and cramps commonly referred to as gas.

- More specific forms of diarrhoeal diseases include:
  - Chronic diarrhoea is seen in people who have had loose or liquid stools for over two weeks
  - Acute enteritis which is the inflammation of the intestine
  - Gastroenteritis is diarrhoea associated with nausea and vomiting
  - Dysentery is diarrhoea that contains blood, pus, or mucus.

Causes of diarrhoea

- Viral infections cause most cases of diarrhoea, usually mild-to-moderate symptoms with frequent, watery bowel movements, abdominal cramps, and low-grade fevers. Diarrhoea generally lasts from 3 to 7 days. Viral infections are the common cause of epidemics of diarrhoea among adults and school age children.
- Bacterial infections cause the more serious cases of diarrhoea. Most common cause of food poisoning. Bacterial infections cause severe symptoms with vomiting, fever, and severe abdominal cramps or abdominal pain. In more serious cases, the stool may contain mucus, pus, or bright red blood.
- Protozoa infections, e.g., amoebiasis, giardiasis (giardia infection)
- Malnutrition, e.g., kwashiorkor

Diarrhoea Sympotms

- **Watery, liquid stool**: The stool may be any colour. The passage of red stool suggests intestinal bleeding and could mean a more severe infection. The passage of thick, tarry black stool suggests significant bleeding in the stomach or upper portions of the intestine—this is not usually caused by acute infections.
- **Abdominal cramps:** These are occasional mild-to-moderate abdominal pain. Severe abdominal pain is not usually common but if present, it suggests more severe disease.
- **Fever:** A high fever is usually not common but if present, it suggests a more severe disease.
- **Dehydration:** If not well managed, diarrhoea may leads to dehydration. Dehydration is a sign of potentially serious disease.

Supportive Management

- As most cases of diarrhoea improve on their own
- Supportive treatment is often sufficient in diarrhoeal management.
- Only if the cause is specifically identified as bacteria or protozoa infection, will an antibiotic be required.
- For dehydration:
  1. Give ORS
     - Contents to be dissolved in or 1 litre
     - The solution should be used within 24 hours
     - Cover the solution and store in a cool place
  2. Give zinc sulphate dispersible tablets (ZINKID-20mg Zn)
     - 2–6 months of age, ½ tablet per day for 10 days
     - 6 months–5 years, 1 tablet per day for 10 days

Preventive measures

- Advise adults and children to wash their hands after visiting the toilet
- Advise patients to practice safe food-handling and always wash hands before and after handling food
- Advise patients to always eat food when it is still hot
- Utensils coming in contact with raw food should be cleaned in hot water with soap.
- Fruits and vegetables consumed raw should be thoroughly rinsed in clean water.
- Advise patients to avoid eating foods from street vendors.
- Boil all water for drinking

Associated Conditions That Require Referral

- Dysentery
- Giardiasis
- Typhoid
- Cholera: notify health authorities so victim can be isolated

Worm Infestation

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Objectives

- The objective of this section is to enable one to:
  - Recognise the common worm infestations and
  - Understand how to manage and prevent worm infestations
  - Explain the importance of hygiene and proper sanitation

Worm Infestation

- Worm infestation is sometimes referred to as Helminthic infestations.
- Food contaminated with worms at any stage of their development can pose a threat.
- Most worm infestations result from ingesting foods and drinks that are contaminated with worms.

Types of Worm Infestations

- Ascariasis
- Pinworms
- Threadworms
- Hookworms
- Tapeworms

Signs & Symptoms

Signs and symptoms of worm infestations include:

- Abdominal pain
- Itching around the anus
- Coughing or difficulty breathing

Management of Worms

- Medicines for worm infestations include mebendazole and albendazole.
- These medicines are effective and appear to have few side effects.
- Additional stool exams are done 1 to 2 weeks after therapy.
- If the infection is still present, repeat treatment.

Management of Worms (2)

- **Presentation of mebendazole:**
  - Tablet 100 mg; Suspension 100 mg/5 mL
    - Adult and Child over the age of 2: 100 mg every 12 hours for 3 consecutive days or 500 mg single dose
    - Not indicated for children under two years
- **Presentation for albendazole:**
  - Tablet 200 mg; 400 mg; Suspension 400 mg/10mL
  - The dose for adults and children over 2 years of age is 400 mg single dose
  - In severe infections, 400 mg every 12 hours for three days can be used. It can be repeated after 3 weeks if necessary.

Preventive Measures

- Avoid contact with human excreta
- Wash hands with soap and water
- Avoid anal region scratching
- Keep finger nails short
- Drink boiled water
- Avoid eating half cooked food

Fever and Pain

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Fever

- What is fever?
  - Fever is an increase in the body's normal temperature.
  - Normal average body temperature is 37 degrees Celsius (37°C).
- What causes fever?
  - Bacterial infections: tonsillitis, otitis media, bronchitis, pneumonia, tetani, UTI, wounds, gastrointestinal infections
  - Viral infections: colds, flu, measles, mumps, chicken pox, AIDS
  - Medications
  - Illicit drugs
  - Heat illnesses

Signs & Symptoms

- **Infants**
  - Irritable
  - Hard to please
  - Tired
  - Quiet
  - Feel warm or hot
  - Not feeding normally
  - Crying
  - Rapid breathing
  - Exhibit changes in sleeping or eating habits
  - Elevated body temperature on the thermometer

Signs & Symptoms (2)

- Adults and older children
  - Feeling hotter or colder than others in the room who feel comfortable,
  - Body aches
  - Headache
  - Having difficulty sleeping or sleeping more
  - Poor appetite

- When the fever is rising, especially rapidly, the patient shivers and has chills, and when the fever is dropping, or breaking, the patient sweats.

When to Refer a Fever

- You should refer if any of the following are present with fever, or if a child is younger than 6 months of age (regardless of prematurity).
  - If child is possibly dehydrated from vomiting, diarrhoea, or not drinking (sunken eyes, dry diapers, tented skin, unable to be aroused)
  - Child is getting worse or new symptoms have developed despite the treatment given.
  - Your child's breathing is shallow, rapid, or difficult.

When to Refer a Fever (2)

- If patient's fever does not respond to treatment
- If patient has convulsions
- If patient has a purple or red rash
- If patient becomes unconscious or is hallucinating
- If patient has complex medical problems or takes prescription medications on a chronic basis (medications ordered for more than two weeks' duration)

Supportive Therapies

- Advise the parent to sponge bath the child in warm water as this helps reduce the fever
  - Put the child in a few inches of warm water, and use a sponge or washcloth to wet the child's skin.
  - The water itself does not cool the child, but the water evaporating off the skin does, so do not cover the child with wet towels (which would prevent evaporation).
- Keep child from becoming dehydrated
  - Encourage the child to drink clear fluids such as noncarbonated drinks without caffeine or juice.
  - Water does not contain the necessary electrolytes and glucose.
- REFER is fever persists

Medicines Used for Fever

- Aspirin, Paracetamol
- See manual for regimens and note that some therapies are inappropriate for specific populations.

Inflammation and Pain

- Inflammation is how the body reacts to infection, irritation or other injury. The key features of inflammation are redness, warmth, swelling, and pain.
- Pain is an unpleasant sensation. Pain can be sharp or dull, burning or numbing, minor or major, acute or chronic. It can be a minor inconvenience or completely disabling.
- Causes of pain include: Arthritic condition, back pain, sports injuries, headaches (tension, migraine, cluster, stress etc), muscle pain (spasms, strain, spasticity), nueropathic pains.

Management of Pain and Inflammation

The following medicines can be used in the management of pain:

- Paracetamol
- Aspirin
- Ibuprofen
- Diclofenac

Supportive Management

- Resting /sleeping is an adjunct to pain medication
- Counselling

When to Refer a Patient

- Unable to tolerate any food or drink
- Signs of dehydration; in cases of dehydration, IV fluids may be required but these can only be administered at a health centre
- High fever, significant abdominal pain, very frequent loose bowel movements
- If patient is elderly or have serious underlying medical problems, particularly diabetes, heart, kidney, or liver disease, or HIV/AIDS
- If patient is a newborn or infant
- If symptoms do not improve in 2-3 days or appear to getting worse
- If the diarrhoea appears to contain blood (may be bright red or may look like black, thick tar)
- If patient appears very sleepy or is acting unusual

Diseases of the Upper respiratory tract

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Upper Respiratory Tract Infections

- It is an infection by bacteria or viruses of the upper part of the respiratory system which is above the lungs.
- These infections may affect the throat (pharyngitis), nasopharynx (nasopharyngitis), sinuses (sinusitis), larynx (laryngitis), trachea (tracheitis) or bronchi (bronchitis).
- These infections usually present as cold, sore throat, flu and coughs.

Common Cold

- A common cold is an illness that may cure without any specific treatment except supportive management (symptomatic management).
- Common cold is caused by any 1 of more than 200 viruses.
- It produces mild symptoms lasting only 5 – 10 days.

Symptoms of common cold

- Runny nose
- Sneezing
- Nasal and sinus blockage
- Headache
- Sore throat
- Cough

Cases of referral for further care

- Shaking chills
- Profuse sweating
- Muscle aches
- Nausea
- Vomiting
- High fever (greater than 39°C)

Management of common cold

- Since common cold is viral, **ANTIBIOTICS SHOULD NOT BE USED.** management involves alleviation of the cold symptom
- **Pain and fever** are treated with pain killers
- **Nasal congestion and cough** are managed by antihistamines and cough preparation
- **Sore throat** - Lozenges warm salt water gargle can relieve a scratchy throat.
- Drink plenty of fluids to help break up your congestion

Sore throat

Sore throats are usually defined by the anatomical site affected ;

- Pharyngitis: pain and inflammation of the pharynx. The pharynx the area of the throat directly behind the mouth and soft palate.
- Tonsillitis: involves inflammation of the tonsils (tonsils are located on either side of the base of the tongue).
- Laryngitis: The larynx, the top portion of your windpipe (trachea). Laryngitis is pain and inflammation of the larynx (often associated with a hoarse voice).

Causes of Sore throat

- Infection by viruses
- Chemicals (cigarette smoke), injury (swallowing a fish bone), allergy or postnasal drip, or, rarely, cancer (early cancer often presents with painless symptoms).

Signs and symptoms of sore throat

- Fever, headache, nausea and malaise
- Pain with swallowing for pharyngitis and a hoarse voice when laryngitis is present.

Cases of referral for further care

- Severe sore throat without much of a cough, swallowing hurts enough that salivating occurs
- Persistent fever over 38°C
- Associated headache, abdominal pain, or vomiting
- Difficulty in breathing may be a symptom of more serious illness
- If patient is dehydrated (dry mouth, sunken eyes, severe weakness, or decreased urine output).

Management of sore throat

Pharmacological management of sore throat

- Throat lozenges often prove inadequate for all but the most minor cases.
- Gargling with salt water is sometimes helpful.
- NSAIDs (non steroidal anti-inflammatory drugs, such as aspirin, ibuprofen) are often more effective pain relievers than paracetamol.

Supportive management

- Drinking enough fluids is very important.
- Resting
- Pain treatment can help increase fluid intake.

Note: Antibiotics are not helpful when a virus causes a sore throat. However antibiotics such as Pen-V, may be given as a precaution and

Cough

- A cough is an action your body takes to get rid of substances that are irritating to your air passages, which carry the air you breathe in from the nose and mouth to the lungs

Causes of coughs

- Acute cough may be caused by infectious agents e.g. viral upper respiratory infections (the common cold), sinus infections, pneumonia, and whooping cough and non infectious agents
- Chronic cough may be caused by Environmental substances e.g. cigarette smoke, dusts, pollen, asthma, emphysema, and chronic bronchitis.

Signs and symptoms of Cough

- Acute coughs have been divided into infectious and non infectious causes.
  - If the cough is due to an infection, patient will have fever, chills, body aches, sore throat, nausea, vomiting, headache, sinus pressure, runny nose, night sweats, and postnasal drip.
  - If the cough is of a non infectious cause, signs and symptoms include coughs that occur when you are exposed to certain chemicals or irritants in the environment, coughs with wheezing, coughs that routinely worsen when you go to certain locations or do certain activities, or coughs that improve with inhalers or allergy medications.

Conditions that necessitate referral

- Cough fails to get better after other symptoms go away or lessen
- Cough that changes in character
- Trial therapy shows no signs of reducing the cough
- Coughing up blood
- Cough interferes with the activities of daily living or sleep cycles
- Shortness of breath or difficulty breathing could imply more serious medical problems.
- Cough that is caused by a chronic condition, discuss what signs and symptoms warrant seeking specialized care.
- Elderly people or people with weakened immune systems who develop a cough and high fever.

Management of cough

- Over-the-counter cough remedies cough mixtures and syrups for symptomatic relief
- Antibiotics after examination in a health facility and prescription of appropriate antibiotics. It is important that antibiotics are given in appropriate doses for age, enough quantity for appropriate duration of treatment.
- Examples of antibiotics used include…

Dermatological conditions

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Boils

- A boil is also referred to as a skin abscess. A boil is a localized bacterial infections deep in the skin.

Clinical features

- One or more acute tender, painful swelling at the site of infection.
- The site of the boil may feel hot
- Fever.

Management

- Heat application, usually with hot soaks or hot packs. Advice patient to apply hot soaks
- ***NOTE: Do not incise the boil this may spread the infection to other areas, refer immediately patients with accompanied fever and generalised lymph node inflammation***
- Give pain killers such as paracetamol to relive pain and refer for further management

Ringworm (Tinea)

Ringworm is a fungal infection that occurs on the surface of the skin

- **Tinea barbea**: ringworm of the bearded area of the face and neck,
- **Tinea capitis**: Ringworm of the scalp and commonly affects children
- **Tinea criris**: Ringworm of the groin ("jock itch")
- **Tinea faciei**: ringworm on the face except in the area of the beard.
- **Tinea manus**: ringworm involving the hands, particularly the palms and the spaces between the fingers.
- **Tinea pedis**: Athlete's foot may cause scaling and inflammation in the toe webs,

Management

- All types of ringworm infections can be treated topically such as **clotrimazole cream, Whitsfield's ointment or sulphur ointment.**
  - These are applied twice a day on the affected part after bathing.
- If the infection does not respond to topical preparations, refer for specialized attention

Prevention

- Minimizing sweat and moisture and improving personal hygiene

Skin Allergy/Urticaria

- An acute, sub-acute or chronic inflammation of the skin caused by contact with a multitude of agents that induce allergic reactions
- characterised by redness, itching and oedema

Management

- Try to establish cause and remove cause
- Apply calamine lotion 15% twice a day
- Give pain killers like paracetamol to relieve pain
- Give:
  - **Chlorphenilamine**; *Adults* 4mg every 8 hours, *Children* 2mg per dose
  - **Promethazine**; *Adults* 25mg once a day or every 12 hours, *children* 6.25mg-12.5mg once a day or every 12 hour
  - **Cetrizine;** *Adults and children above 6 years* 10mg once a day, *children* 2-6 years 5mg once a day
- ***(Note: children below 12 years should be given the syrup form of the medicine of choice)***

Scabies

- Is a contagious skin disease associated with severe itch. It is caused by a parasitic mite that is transmitted through personal contact

Management

- Advise patient to wash the body thoroughly and apply **Benzyl benzoate Application (BBE) every 12 hours avoid contact with the eyes**
- Give antihistamines such as chlorpheniramine to relieve itching
- Treat all close contacts, especially children in the same house hold with BBE
- Wash clothing and bedding and leave in the sun to dry
- In case of septic sores, refer for specialized attention
- Advice that the itch may continue for several weeks

Nappy Rash

- It is a reddish, yellow skin rash in areas covered by the a baby's nappy such as buttocks, external genetalia, thighs and lower abdomen caused by persistent dampness of wet nappies that leads to irritation of the skin.

Management

- Advice parent to change the child's nappy more regularly
- Apply calamine lotion twice a day
- If the rash persists or becomes worse refer for further management

Wounds

- It is an injury of the skin that exposes tissue beneath the skin. The injury be due to an object cutting through the skin, burns due to chemicals or heat or may be as a result of an infection.
- Since wound break the body's first line of defence, badly managed wounds may get infected leading to complications such sepsis, tetanus, etc.

Management

- Large wounds and wound that have lasted for several week should be referred immediately for specialist attention immediately
- Minor particularly fresh ones can be managed by applying antiseptics such as iodine tincture and antibiotic creams such as silver sulfadiazine cream to keep from getting infected

Diseases of the Reproductive system

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urinary tract infection

- A urinary tract infection (UTI) is an infection involving the kidneys, ureters, bladder, or urethra
- Infection in the upper urinary tract generally affects the kidneys (pyelonephritis).
- Infection in the lower urinary tract can affect the urethra (urethritis) or the bladder (cystitis).

Causes of UTI

- Bacterial infections; the commonest cause is Escherichia coli, a bacteria that normally leaves in the bowel (colon) and around the anus

Lower Urinary tract infections

Symptoms

- Dysuria - Pain or burning during urination
- More frequent urination (or waking up at night to urinate)
- Urgency - The sensation of not being able to hold urine
- Hesitancy - The sensation of not being able to urinate easily or completely (or feeling that you have to urinate but only a few drops of urine come out)
- Cloudy, bad smelling, or bloody urine
- Lower abdominal pain
- Mild fever (less than 39°C), chills, and "just not feeling well" (malaise

symptoms that necessitate referral

- Vomiting and inability to keep down clear fluids or medication
- Not better after taking antibiotics for two days
- Pregnant; an unrecognized infection can cause miscarriage or other pregnancy complications
- Having diabetes or another disease that affects the immune system (for example, AIDS)

Supportive treatment

- Take a pain-relieving medication.
- Use a hot-water bottle to ease pain.
- Ensure high fluid intake.
- Avoid coffee, alcohol, and spicy foods, all of which irritate the bladder.
- Quit smoking.
- Complete antibiotic medication.

Pharmacological treatment

Medications will include;

- Alkalinise the urine with oral **sodium bicarbonate solution** 5% (dissolve 5g in 100mL water) twice daily - may help to relieve symptoms in mild cases
- **Cotrimoxazole** 1.92g (4 tablets of 480mg) single dose, *child:* 48mg/kg single dose *or* **ciprofloxacin** 500mg single dose, *child:* 10-15mg/kg single dose
- ***If poor response, or recurrent infections, refer to more specialised health centre for further management***

Sexually Transmitted Diseases

- Are spread through sexual intercourse.
- STDs affect men and women of all ages and backgrounds
- With STDs, a person can easily pick up more than one infection at a time
- people with STDs are too embarrassed or frightened to ask for help or information.
- The sooner a person seeks treatment and warns sexual partners about the disease, the less likely the disease will do permanent damage, be spread to others, or be passed to a baby.

Urethral discharge syndrome (Males)

Causes

- **Gonorrhoea:** caused by the bacterium *Neisseria gonorrhoea*
- **Trichomoniasis:** caused by the protozoan *Trichomonas vaginalis*
- **Non-gonococcal urethritis:** caused by virus-like bacteria *Mycoplasma* and *Chlamydia trachomatis. Chlamdia trachomatis* is most common cause of bacterial STDs.

Clinical features

- Patients complain of mucus or pus appearing at the tip of the penis or staining of underwear
- Burning pain on passing urine (dysuria)
- Examination may show a scanty or profuse discharge

Treatment (patients and partners)

- **Ciprofloxacin** 500mg single dose *plus* **doxycycline** 100mg every 12 hours for 7 days
- *If partner is pregnant:*
- Give **erythomycin** 500mg every 6 hours for 7 days *plus* **cotrimoxazole** 2.4g (5 tabs) every 12 hours for 3 days

Note: Antibiotic treatment is initiated upon prescription from a health facility

If discharge still persists, inform the patient to go to higher facility for specialist management

Abnormal Vaginal Discharge Syndrome

Causes

- Can be a variety and often mixture of organisms
- Bacterial vaginosis

Clinical features

- In all cases: abnormal increase of vaginal discharge - normal discharge is small in quantity and white to colourless
- *Gonorrhoea* produces a thin mucoid slightly yellow pus discharge with no smell
- *Trichomoniasis* causes a greenish-yellow discharge with small bubbles and a fishy smell and itching of the vulva
- *Candida albicans* causes a very itchy, thick white discharge like sour milk
- *Mycoplasma, chlamydia* may cause a non-itchy, thin, colourless discharge
- Ectopic pregnancy and infertility are most serious complications

Treatment

If there is lower abdominal tenderness:

- ciprofloxacin 500mg every 12 hours for 3 days *plus* doxycycline 100mg every 12 hours for 10 days *plus* metronidazole 400mg every 12 hours for 10 days

If there is no lower abdominal tenderness but there is itching, erythema or excoriations:

- Insert one nystatin pessary 100,000 IU into the vagina at night for 14 days *or plus* metronidazole 2g single dose

Note: Antibiotic treatment is initiated upon prescription from a health facility

If discharge still persists, inform the patient to go to higher facility for specialist management

Prevention

- Counsel patient on risk reduction, e.g. practice of safe sex by using condoms, remaining faithful to one sexual partner, personal hygiene, avoiding anal intercourse, abstaining or delaying sexual relations as long as possible.
- Encourage to correctly and consistently use a male latex condom.
- Have regular checkups.
- Avoid having sex during menstruation. (HIV is passed more easily at this time.)
- Give health education about STIs (very important) e.g. including symptoms of STDs. Provide specific education on the need for early reporting and compliance with treatment
- Ensure notification and treatment of sexual partners

Reproductive Health

Family Planning; It is the effective ability to control when and whether a woman becomes pregnant

Behavioural Methods

- Continuous abstinence Coitus interruptus
- Rhythm
- *Breastfeeding*

Barrier Devices

- Male condom
- Female condom
- Diaphragm

Oral Contraceptives

- These are pills containing hormones that are taken orally to try to mimic the natural menstrual cycle.
- The pills prevent ovulation (release of an egg) and thus prevent pregnancy
- Initiation of family planning using oral contraceptives will be from a health facility. The accredited drugshop, can only re-fill or supply the contraceptives after prescription from the health facility
- Oral Contraceptive pills can either be Combined Oral contraceptive pills (COC) or Progestin only pills (POP)

Combined Oral contraceptive pills

- Contain an oestrogen and a progestin.
- It is recommended;
  - Women less than 35 years
  - Both breast feeding and non breast feeding
  - Women with dysmenorrhea
  - Women with heavy periods or ovulation pain
- **Contra Indications:**
  - cardiac diseases, thrombo – embolic disease, cerebral vascular disease,
  - known or suspected carcinoma of the breast,
  - abnormal undiagnosed vaginal bleeding,
  - known or suspected pregnancy,
  - impaired liver function

Products available on the market

- Products are normally come in as 28 – day packs, with the pills for the last 7 days containing only ferrous sulphate. This is implies that the active pill is taken daily for 21 days, followed by a 7 days pill free period.
- Products include; Microgynon, Lofemenal, Newfem, piplan

Unwanted effects:

- Nausea oedema, light headache
- Breakthrough bleeding
- Weight gain, acne.
- Withdrawal bleeding
- Interaction with other medicines
-

Progestin-only pills

Progestin-only pill, also known as the mini-pill, is good for women who are breastfeeding and women who cannot take estrogen e.g women above 40 years.

Contraindication

Known or suspected breast or genital malignancy

- suspected or known pregnancy
- undiagnosed vaginal bleeding

Products available on the market; Ovrette, Softsure

Unwanted effects:

- Spotting
- Amennorrhea
- Unpredictable irregular periods
- Interaction with some medicine

Anaemia and Nutritional Deficiency

EADSI
East African Drug Seller Initiative

Anaemia

Definition: This is a condition caused by inadequate blood Haemoglobin levels.

Causes of anaemia

- Loss of blood or increased break down of blood cells
- Iron deficiency due to malaria, malnutrition, acute and chronic blood loss e.g hemorrhage, after trauma, hookworm infestation, pregnancy, abortion, heavy menstrual loss
- Vitamin deficiency/malabsorption as in folic acid and vitamin B12 deficiencies.
- Blood disorders e.g leukemia
- Congenital disorders e.g sickle-cell anaemia
- Chronic infections e.g TB, AIDS (especially in adults), schistosomiasis

Anaemia…

Clinical Features

- Tiredness
- Headache, dizziness, palpitations
- Swelling of body or feet cases
- Pallor of palms and mucous membranes- tongue, eye
- Breathlessness
- Poor appetite
- Heart failure

In children

- Severe wasting
- Oedema of both feet
- Palmor pallor

Management of Anaemia

- Iron deficiency anaemia: ferrous sulphate 200mg every 12 hours with food for 3 months to replenish iron stores
- **For a child:**
- 2 to < 4 mths or 4 to 6kg: 30mg elemental iron
- 4mths to 3 years or 6 to <14kg: 60mg elemental iron
- 3yrs to < 5years or 14 to < 19kg: 90mg elemental iron
- **Pregnant women-** give ferrous sulphate + folic acid tablets

Prevention

- Improved nutrition-give foods reach in iron and vitamins e.g vegetables, fruits, meat, liver
- Prevention or prompt and effective treatment of infections and infestations especially malaria, hookworm and respiratory infections

NUTRITION

Protein- Energy deficiency (Kwashiorkor, Marasmus)

- Due to reduced consumption of protein and high energy foods; chronic diseases in children, chronic diarrhea, inadequate breastfeeding
- Features-
  - wasting,
  - stunting(child looks younger than their real age),
  - muscle wasting especially at buttocks,
  - poor attitude, irritable, poor appetite,
  - thin hair and brown hair,
  - wise old man facial appearance, severe pallor of palms and soles, dehydration

Management of Kwashiorkor

- Advice mother/caretaker on proper feeding
- Check for other diseases- malaria, diarrhea:
- Give foods rich in proteins especially soya meal, groundnuts, milk.
- Give children multivitamin syrup to improve appetite.
- Vitamin and mineral deficiency.Refer to the manual

Eye, Ear and Nose Disorders

EADSI
East African Drug Seller Initiative

EYE CONDITIONS

Foreign body (FB) in the EYE

- **Causes**
- Solids: dust, insects, metal or wood particles, Liquids: splashes of irritating fluids
- **Clinical features**
- May be severe pain, tears or redness, FB may be visible

Management (all patients):

- Make a thin 'finger' of moistened cotton wool, move the eyelid out of the way and gently remove the FB
- **If this fails***:* Refer to an Eye Specialist
- **For irritating fluids in the eye:** Wash the eye with plenty of clean water
- If cornea is damaged refer to eye specialist

STYE (Hordeolum):

- A localized infection of the hair follicle of the eyelids. Locally known as *"kasekere"*

Cause: a bacteria called *Staphylococcus aureus*

Signs and symptoms

- Itching in the early stages , Swelling, Pain, tenderness, Pus formation,

Management

- Usually the stye will heal spontaneously,
- avoid rubbing the eye as this might spread the infection and apply a warm/hot compress to the eye
- Apply **tetracycline eye ointment 1%** 2-4 times daily
- Remove the eye lash when it is loose

Prevention

- Remove any loose eyelashes
- Good personal hygiene

EYE Conditions the need to be recognised and referred immediately

CATARACTS

- An opacity of the lens inside the eye

Cause: Old age, Trauma, Genetic, Severe dehydration in childhood

Signs and symptoms:

- Reduced vision
- Pupil is **not** the normal black colour but is grey, white, brown or reddish in colour
- Condition is not painful unless caused by trauma,
- Eye is not red unless condition is caused by trauma

CONJUCTIVITIS

Causes

- Infection: bacterial or viral, Trauma: chemicals, foreign bodies, Smoke, dust, Allergy

Clinical features

- Watery discharge (virus or chemicals)
- Pus discharge (bacteria)
- Cornea is clear and does not stain with fluorescein
- Visual acuity is normal
- Redness (usually both eyes, but may start/be worse in one, usually reddest at outer edge of the eye)
- Swelling
- Itching (may be present)

Management (adults & children: 7 day course)

- Apply **tetracycline eye ointment 1% HC1** *or* **chloramphenicol eye ointment 1%** and refer to a higher health center

KERATITIS

- Inflammation of the cornea

Cause

- Infection: bacterial, viral or fungal, leading to corneal ulceration, Trauma: chemical, foreign bodies
- **Clinical features:** As for conjunctivitis **except** that in keratitis, the cornea is **not** clear and cannot see clearly,
- Condition is often in one eye
- The eye is painful

Management (adults and children)

- Apply **tetracycline eye ointment 1**%
- Explain the seriousness of the condition to the patient
- Refer to a qualified eye health worker

Prevention

- Wear protective goggles when hammering, sawing, chopping, grinding, etc
- Warn children playing with sticks on risk of eye injuries

OPHTHALMIA OF THE NEWBORN

Purulent discharge from the eyes in babies <1 month

Causes: Infections: usually from mother's birth canal or due to poor hygiene of the person caring for the newborn - bacterial, eg. *Gonococci* - chlamydial

Clinical features

- Reddening of one or both eyes
- Swelling of the eye lids
- Purulent discharge
- Excessive production of tears (lacrimation)
- If not treated early, will result in scar formation or perforation of the cornea, either of which will lead to blindness

Prevention and prophylaxis

- Good antenatal care with screening and treatment of mother for genital or urinary tract infections
- Clean delivery; prophylactic treatment of all neonates

Management

- Apply **tetracycline eye ointment 1%** twice daily, carefully clean away any purulent discharge as required and refer for further management

XEROPHTHALMIA

- Dryness of the part of the eye ball exposed to air and light due to Vitamin A deficiency

Clinical features

- Starts with night blindness, followed by dryness of the conjunctiva and cornea, Eventually the cornea melts away, the eye perforates and total blindness occurs

Management : supplement with Vitamin A

Prevention

- Good balanced diet especially for children, women, long-term hospital in-patients, boarding school students, etc

EAR CONDITIONS

FOREIGN BODY (FB) IN THE EAR

Causes

- Children may insert foreign bodies in their ears as they play .
- Adults: usually insects, cotton buds
- Occasionally the FB may penetrate adjacent parts and lodge in the ear

Signs and symptoms

- Blockage - FB may be seen
- Noise in the ear
- Hearing loss
- If attempts have been made to remove the FB: Bleeding/discharge from the ear

Management

- These are normally mechanically removed using special equipment. Because such equipment is not be present at the medicine outlet refer for specialist attention
- **<u>NOTE</u>: Attempts to remove the FB at the medicine outlet may lead to eardrum perforation that may lead to deafness**

OTITIS MEDIA (Middle ear infection)

- It may or may not present with pus effusion

Cause

- Blockage of the Eustachian tube by: adenoids, infection in the tube, thick mucoid fluid, tumours, unresolved acute otitis media, Viral or Bacterial infection, eg. *Streptococcus pneumoniae*, *H.influenzae* commonly follows an acute infection of the upper respiratory tract

Clinical features

- Hearing impairment i.e. the patient sometimes hears, sometime he doesn't
- Presence of non-purulent fluid in middle ear
- Buzzing noise in ears/head
- Retracted or bulging ear drum
- Loss of usual colour of ear drum or dullness
- Acute onset of pain in the ear, redness, Fever, Pus discharge in case of otitis media with pus
- Bulging of the eardrum

Management

- Antibiotic ear drop e.g. Chloramphenical ear drop
- Amoxicillin 500mg every 8 hours for five days, *child:* 15mg/kg per dose
- Paracetamol 1g every 8 hours and as indicated above in children
- Refer to ENT specialist in case on otitis media with no pus or otitis media with pus lasting for more than 7 days

Prevention

- Health education, e.g., advising patients on recognizing the discharge of otitis media (believed by some to be ‘milk in the ear’)
- Early diagnosis and treatment of otitis media and URTI

OTITIS EXTERNA (Infection of the outside ear)

- Infection of the external ear canal which may be localised or generalised (diffuse)

Causes: Bacterial, fungal, viral infections

Clinical features

- Pain, tenderness on pulling the pinna (external ear)
- Itching
- Swelling
- Pus discharge

Management

- Thoroughly clean external ear canal
- Apply antibiotic drops, eg. chloramphenicol ear drops 1% 2 drops into the ear every 8 hours for 14 days
- Give pain killers
- If fungal infection suspected: Apply gentian violet 1% application 2-3 times daily - continue until discharge dries up
- Refer if condition does not improve or if severe

WAX IN THE EAR

- An accumulation of wax in the external ear

Cause

- Excessive and/or thick wax production, Small and/or hairy ear canal

Clinical features

- Blocked ears, Buzzing sound, Sometimes mild pain

Management (adults and children)

- Wax in the ear is normal and usually comes out naturally from time to time
- If it accumulates to form a wax plug and causes a problem for the patient refer to the health centre where the ear may be cleaned

MASTOIDITIS

- Inflammation of the mastoid bone behind the ear

Causes

- Usually a complication of middle ear infection with pus

Clinical features

- Pain or tender swelling felt over the mastoid bone - with or without pus discharge from the ear, Fever,

Management

- Refer to hospital urgently

NASAL CONDITIONS

NOSE BLEEDING

Causes:

- Nose-picking, Trauma, Infections of the nose, Tumours, High blood pressure, Bleeding disorders, Pertussis, Sickle-cell trait/disease, kidney failure or it may be genetic.

Management

- Sit the patient up (if patient not in shock)
- Instruct patient to pinch the nose between the finger and the thumb for 15 minutes, breath through the mouth and spit out any blood
- Manage as indicated in the course of first aid
- **If bleeding still does not stop after this period:** Refer to hospital for further management
- **Prevention**
- Avoid picking the nose
- Treat/control predisposing conditions

NASAL ALLERGY

- An abnormal reaction of the nasal tissues to certain allergens which tends to start in childhood although it may start at adolescence. It may be hereditary or may be predisposed by infections.
- **Causes**
- Changes in humidity and temperature, dust mite, certain foods and medicines and infection
- **Clinical features**
- Sneezing in spasms,
- Profuse watery nasal discharge,
- Nasal obstruction - variable in intensity and may alternate from side to side, Postnasal drip (mucus dripping to the back of the nose)

Management

- Avoid precipitating factors (most important)
- Antihistamines, e.g., **chlorphenamine** 4mg every 12 hours when necessary
- Reassurance and refer if no improvement

SINUSITIS (Acute)

- Inflammation of air sinuses of the skull
- **Causes**
- Allergy, Foreign body in the nose, Dental focal infection, Viruses, eg. rhinovirus, often as a complication of URTI or Bacteria, e.g., *Streptococcus pneumoniae, Haemophilus influenzae, Streptococcus pyogenes*
- **Clinical features**
- Throbbing headache above the eyes, sinus tenderness
- Discharge from nostrils and into the throat - clear when due to viruses - yellow (purulent) when due to bacteria
- Nasal blockage (sometimes)
- **Management**
- Give pain killers and give supportive management as in common cold
- Refer if symptoms persist or if become severe
- **Other nose conditions such as adenoid disease, atrophic rhinitis should be referred for specialized attention.**