

# Accredited Drug Shops Training *Uganda*

## Module 3: Session 16

### Conditions Affecting the Reproductive and Urinary Systems



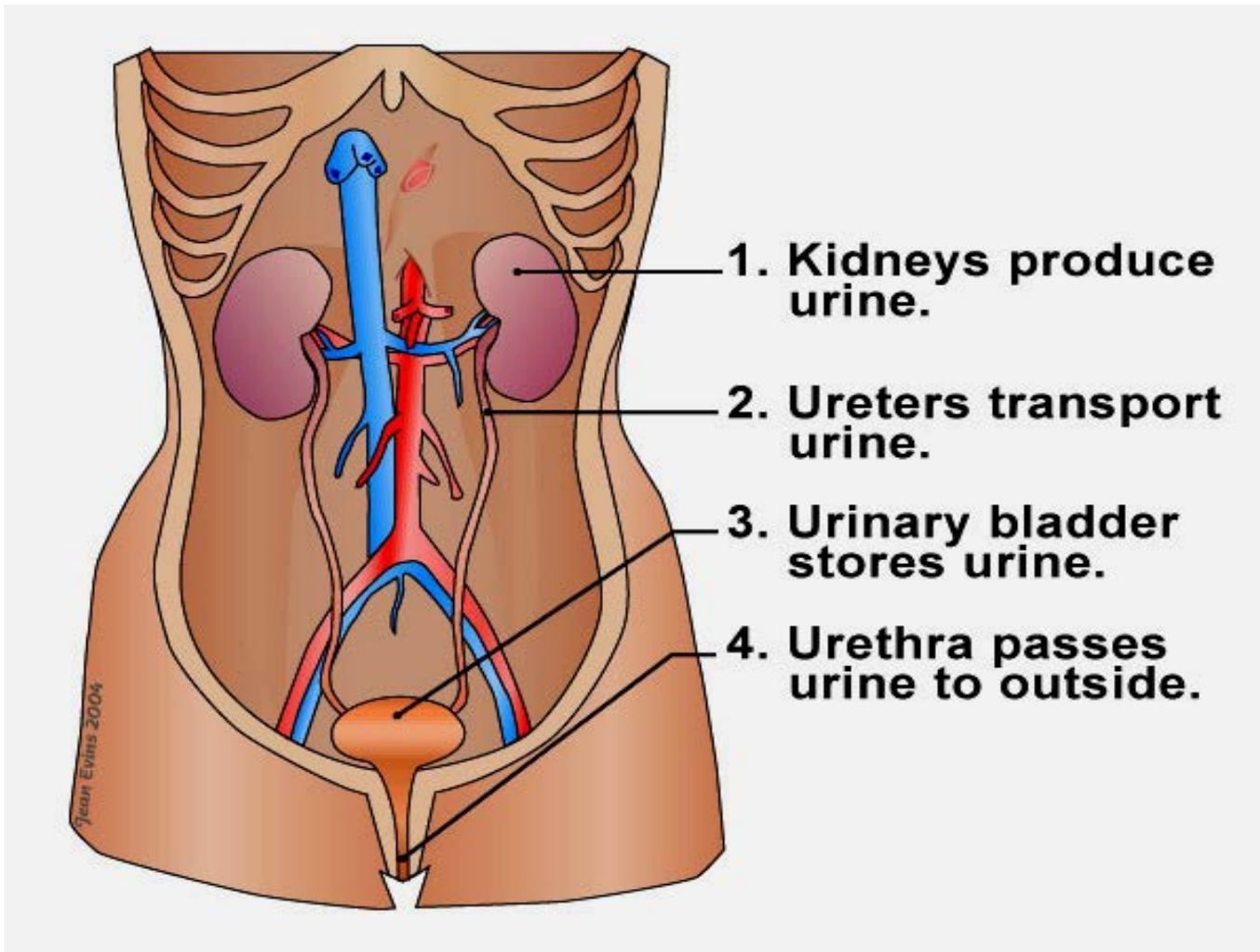
# Objectives

As a result of actively participating in this session, the individual will be able to:

Explain how to *assess* and *manage* the following reproductive and urinary tract conditions:

- Dysmenorrhoea
- Premenstrual syndrome
- Pelvic inflammatory disease
- Vaginal candidiasis
- Trichomoniasis
- Urethral discharge
- Urinary tract infection

# Reproductive and Urinary System



# Pain in the Lower Abdomen in Females

Pain in the lower abdomen may be due to:

- Painful periods
- Premenstrual syndrome
- Pelvic inflammatory disease (PID)

Take time to make a proper diagnosis as per the guidelines that follow.

# **Dysmenorrhoea (Painful Periods)**

# Definition and Overview

- Dysmenorrhoea is a type of pain that occurs in the lower abdomen during the time of menstruation.
- It occurs at the beginning of menstruation and subsides within 3 days.
- Women have dysmenorrhoea of varying severity.

# Classification of Dysmenorrhoea

There are 2 types of dysmenorrhea, namely:

- Primary dysmenorrhea: pain that occurs during menstruation without a known cause or disease.
- Secondary dysmenorrhea: pain that occurs during menstruation and is associated with an existing condition.

# Primary Dysmenorrhoea

- Primary dysmenorrhoea usually begins when a young woman has just started experiencing menstruation.
- It may subside when the woman gives birth.



# Signs and Symptoms

- Lower abdominal pain
- Backache
- Nausea and vomiting
- Headache
- Diarrhoea

# General Measures

Give the client the following advice:

- Rest
- Wear loose fitting clothes.
- Apply moist warm cloth (e.g., towel) to the stomach.
- Do some exercise (e.g., walk, light chores).
- Limit the intake of alcohol.
- Do not smoke.

# Drug Treatment

Advise the client to take ONE of the following treatments:

*Either Ibuprofen*

Age	Dose	Dosage
Adult	400 mg	3 times daily (after eating) for 3-4 days

*Or Diclofenac*

Age	Dose	Dosage
Adult	50 mg	3 times daily for 3-4 days

*Or Paracetamol*

Age	Dose	Dosage
Adult	2 tabs	3 times daily for 3-4 days

# Note

- Do not recommend ibuprofen or diclofenac to clients with peptic ulcer disease.
- Begin treatment at least 1 day before the start of menstruation.
- The client should take the medicine as frequently as recommended.

# Secondary Dysmenorrhoea

Reminder:

Secondary dysmenorrhoea is pain that occurs during menstruation and is associated with an existing condition.

# Guidelines for Referral

## **REFER:**

- All clients with secondary dysmenorrhea.
- Clients who faint during menstruation.
- Clients with heavy and unexplained vaginal bleeding.
- Clients with very severe pain not responding to pain killers.

# Premenstrual Syndrome (PMS)

- Premenstrual syndrome is a group of symptoms that occur 1 week before menstruation begins.
- The cause of premenstrual syndrome is not known.
- The hormonal changes (estrogen & progesterone levels) are suspected to be the cause.

# Signs and Symptoms

- Breast tenderness
- Abdominal pain
- Abdominal bloating or gas
- Client gets annoyed easily
- Changes in mood
- Weight gain
- Poor concentration
- Disturbed sleep



# General Measures

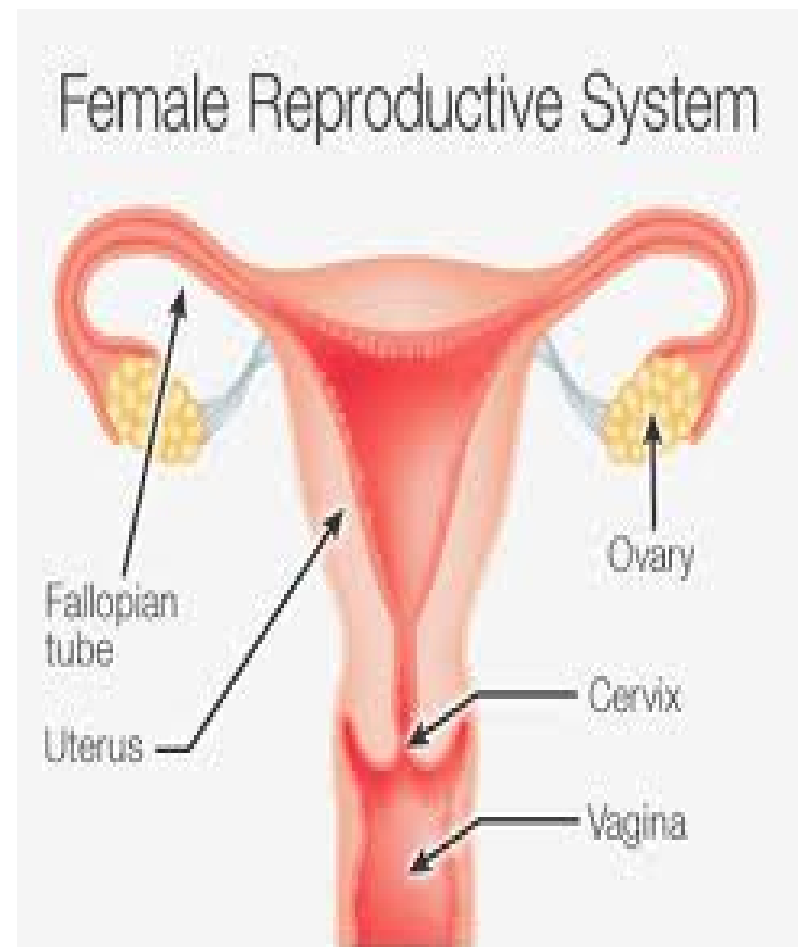
Give the client the following advice:

- Participate in regular exercise.
- Have a diet low in fats.
- Avoid alcohol and caffeine, which can increase irritability.
- Eat foods containing less salt.
- Avoid anything that would cause stress.
- In case of severe symptoms, see a doctor!

# **Pelvic Inflammatory Disease (PID)**

# Definition

- PID is a bacterial infection that affects the female reproductive organs.
- The reproductive organs most affected include: uterus, Fallopian tubes, ovaries.



# Caution

Untreated PID may lead to:

- Infertility
- Chronic pelvic pain
- Ectopic pregnancy (when the embryo implants and begins to grow in a location other than the uterus).

# Signs and Symptoms

- Vaginal discharge that may be smelly and mixed with pus.
- Lower abdominal pain.
- Pain on palpating the lower abdomen.

# Factors that Increase Risk of PID

Chances of developing PID increases in persons with:

- Many sexual partners.
- Previous infections from STIs, especially gonorrhoea.
- Use of intrauterine devices (IUD).

# Management of PID

- PID can be only be handled by a health centre.
- **REFER** all clients who complain of lower abdominal pain and vaginal discharge to the nearest health centre or hospital.

# Assessment of Female Client With Lower Abdominal Pain

Question	Remarks
1. Ask the client if she is having her period.	<ul style="list-style-type: none"> <li>✓ If yes, determine if this is primary or secondary dysmenorrhoea.</li> <li>✓ Treat primary dysmenorrhoea with pain killers.</li> <li>✓ <b>REFER</b> secondary dysmenorrhoea to the health unit.</li> </ul>
2. Ask the client if she is having any vaginal discharge.	<ul style="list-style-type: none"> <li>✓ Lower abdominal pain associated with vaginal discharge is usually due to PID.</li> <li>✓ <b>REFER</b> the client to health centre III or IV in case you suspect PID.</li> </ul>
3. Ask the client whether she is pregnant or missed her period.	<ul style="list-style-type: none"> <li>✓ If yes, <b>REFER</b>.</li> </ul>
4. Ask the client about treatment received so far.	<ul style="list-style-type: none"> <li>✓ Helps to guide on the choice of treatment to be given.</li> <li>✓ If client has already used your recommended treatment and is not better, <b>REFER</b>.</li> </ul>



# Exercise 1

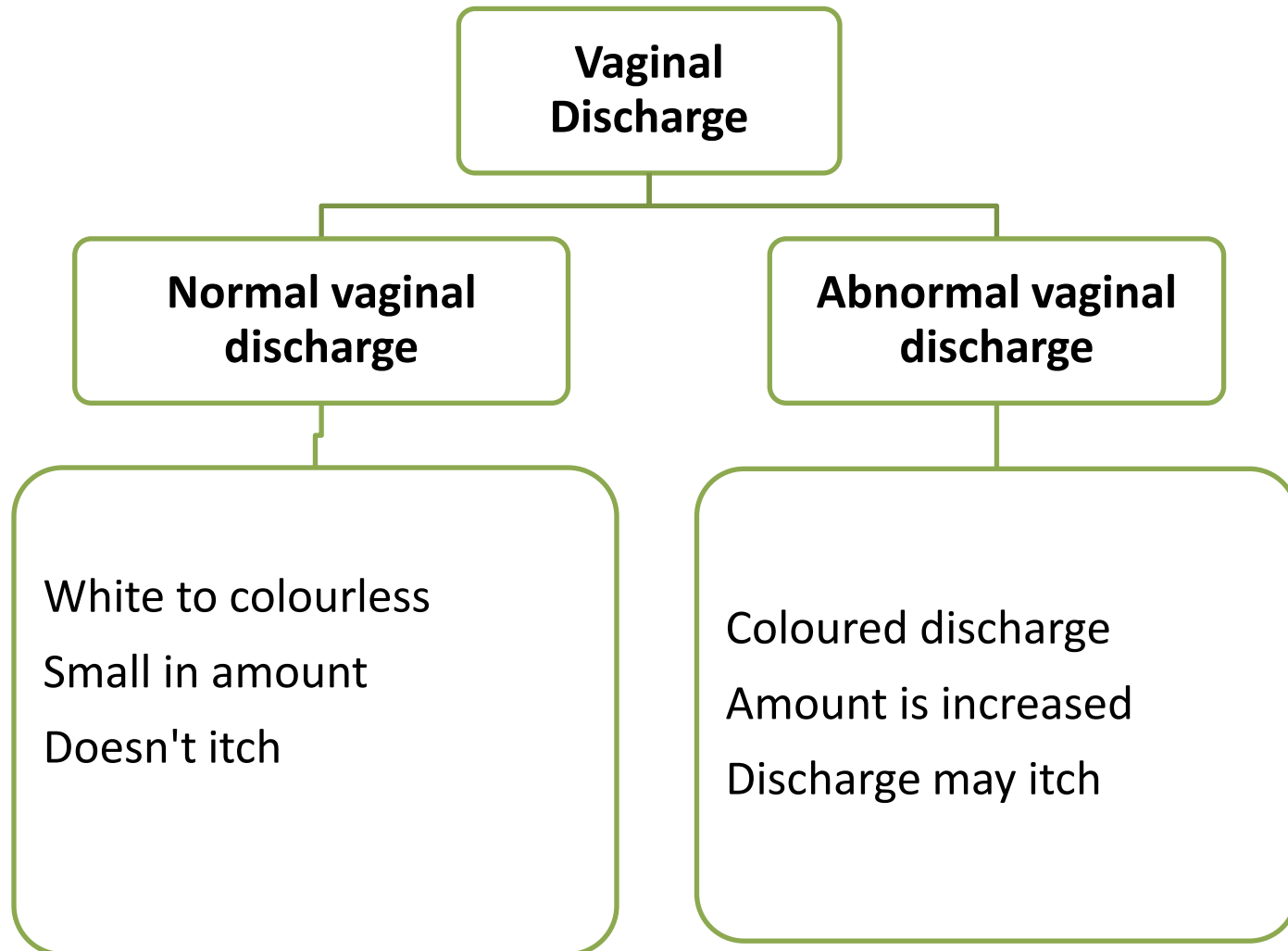
Assessing and managing lower abdominal pain  
in women

# **Client Presenting with Abnormal Vaginal Discharge**

# Vaginal Discharge

- Vaginal discharge is the release of fluid from the vagina.
- The amount of vaginal discharge varies according to the age of the woman.
  - Before puberty and during menopause, vaginal discharge tends to be less.
  - During ovulation and pregnancy, vaginal discharge tends to increase.
- Vaginal discharge can be normal or abnormal.

# Characteristics of Vaginal Discharge



# Abnormal Vaginal Discharge Causes

- Vaginal candidiasis
- Trichomoniasis
- Gonorrhoea
- Mycoplasma
- Chlamydia

# Vaginal Candidiasis

# Definition and Overview

- Vaginal candidiasis is infection caused by fungi called *Candida albicans*.
- It occurs when there is an overgrowth of the normal flora *Candida albicans*.
- It can affect females of any age.
- Vaginal candidiasis is not considered a sexually transmitted disease.

# Signs and Symptoms

- White (milky) vaginal discharge.
- Vaginal itching.
- Soreness of the vagina and vulva.
- Stinging sensation when passing urine.



# Drug Treatment for Candidiasis

1. Recommend one of the two medicines shown below.
2. Instruct the client in how to insert the pessaries into the vagina, how often to use them, and for how long to use them.
3. Dispense the selected medicine to the client.

## Nystatin pessaries

Dose	Dosage
100,000 units	Inserted into the vagina once at night for 14 days.

## Chlortrimazole pessaries

Dose	Dosage
100 mg	Inserted into the vagina once at night for 6 days.

# Conditions that Increase a Woman's Chances of Getting Candidiasis

- Pregnancy
- Diabetes mellitus (due to lowered immunity).
- Use of broad spectrum antibiotics (e.g., doxycycline).
- Immunosuppression (e.g., HIV infection, cancer).
- Use of oral contraceptives.
- Suitable environment in the vagina around menstruation.
- Use of tight fitting nylon knickers or pants (a warm and damp environment).

# Trichomoniasis (Trichomonas Vaginalis)

# Definition and Overview

- Trichomoniasis is a sexually transmitted infection caused by the protozoa *Trichomonas vaginalis*.
- It affects both women and men, but most men do not have symptoms.
- Trichomoniasis may increase somebody's chances of acquiring HIV infection.
- It may exist together with vaginal candidiasis.

# How Do You Get Trichomoniasis?

- Sexual intercourse with an infected person.
- Sharing of contaminated articles, such as towels, toilet seats, and knickers.

# Signs and Symptoms

- Yellow discharge.
- Foul (bad) smelling discharge.
- Itching of the vagina.
- Redness of the vagina.
- Burning sensation on urination.

# Drug Treatment for Trichomoniasis

1. Treat the client with metronidazole.
2. If she is breastfeeding, recommend the lower dose (because metronidazole can affect the taste of breast milk).
3. Dispense the selected medicine to the client, instructing her in how to use it.
4. Instruct her not to drink alcohol while taking this medicine.

## Metronidazole

Dose	Dosage
400 mg	Every 12 hours for 5 days.

**OR**

Dose	Dosage
2 g (10 tablets)	One time (all at once)

# **Mycoplasma and Chlamydia**



# Signs and Symptoms

- Burning sensation when urinating.
- Abnormal discharge.
- Spread through sexual contact with infected person.

# Drug Treatment

**REFER** the client to the nearest health centre for treatment. (Cefixime is not on the ADS list.)

Cefixime

Dose	Dosage
400 mg	Single dose

Doxycycline

Dose	Dosage
100 mg	Every 12 hours for 7 days.

# Client Assessment for Abnormal Vaginal Discharge (1)

Questions to ask	Remarks
1. How old are you?	✓ <b>REFER</b> all children under 12 years with vaginal discharge.
2. Are you pregnant?	✓ <b>REFER</b> all pregnant women with vaginal discharge.
3. Do you have pain in the lower abdomen?	✓ If YES, <b>REFER</b> because lower abdominal pain associated with vaginal discharge is usually due to PID.
4. Do you have: <ul style="list-style-type: none"> <li>• White (milky) vaginal discharge</li> <li>• Vaginal itching</li> <li>• Soreness of the vagina and vulva</li> <li>• Stinging sensation when passing urine</li> </ul>	✓ If YES to all, treat with either one or the other of these: <ul style="list-style-type: none"> <li>• <b>Nystatin</b> – 100,000 units inserted into the vagina once at night for 14 days.</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>• <b>Chlortrimazole</b> – 100 mg inserted into the vagina once at night for 6 days.</li> </ul>

# Client Assessment for Abnormal Vaginal Discharge (2)

Questions to ask the client	Remarks
5. Do you have: <ul style="list-style-type: none"><li>• Yellow discharge</li><li>• Foul (bad) smelling discharge</li><li>• Itching of the vagina</li><li>• Redness of the vagina</li><li>• Burning sensation on urination</li></ul>	✓ If YES to all, give a course of metronidazole (also known as Flagyl): <ul style="list-style-type: none"><li>✓ 400 mg every 12 hours for 5 days</li></ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"><li>✓ 2 g (10 tablets) all at once</li></ul> ✓ Recommend that her sexual partner is also treated.
5. Has itching persisted after the above treatment?	✓ <b>REFER</b> <ul style="list-style-type: none"><li>✓ Recommend that her sexual partner is also treated.</li></ul>

# General Advice For All Females With Abnormal Discharge or Itching

- Keep the vaginal area clean and dry.
- Wear loose cotton knickers.
- Avoid sex during treatment.
- Do not drink alcohol during treatment.
- Sleep in a nightgown without knickers at night.
- Avoid sharing towels, undergarments, basins.
- Take the medicine as recommended.
- In case of infections other than candidiasis, treat the sexual partner at the same time to avoid re-infection.

# Guidelines for Referral

Refer the following categories of clients:

- Children under 12 years.
- Pregnant mothers.
- Clients with HIV infections.
- Elderly women above 60 years.
- Clients who fail to respond to the recommended treatment.

# Exercise 2

Assessing and managing abnormal vaginal discharge in women

# **Pus Discharge From the Penis (Urethral Discharge)**



# Introduction

- The most common cause of pus discharge from the penis is gonorrhoea.
- Gonorrhoea is transmitted from an infected person to an uninfected one during unprotected sex.

# Signs and Symptoms

- Pus discharge
- Painful urination
- Mucus staining of underwear

# Client Assessment (1)

Questions to ask	Remarks
1. Do you feel pain on urination?	✓ Pain on urination may be a symptom of gonorrhoea.
2. Do you pass out urine with pus?	✓ Pus discharge with pain on urination is common with gonorrhoea. ✓ If YES to questions 1 and 2, <b>REFER</b> to nearby health unit.
3. Do you have one or more sexual partners?	✓ Pus discharge from the penis is associated with STIs. ✓ Chances of acquiring STIs increase with the number of sexual partners. ✓ Advise client to take all sexual partners for treatment.

# Client Assessment (2)

4. Have you received any treatment so far? If yes, how was the response?	<ul style="list-style-type: none"><li>✓ Helps to guide on treatment to be given.</li><li>✓ Advise client to inform health unit staff of the prior treatment.</li></ul>
5. Was/were the sexual partner(s) also treated?	<ul style="list-style-type: none"><li>✓ Helps to know the cause of treatment failure in case of re-infection due to untreated partners.</li><li>✓ Advise client to take all sexual partners for treatment.</li></ul>

# General Measures

- Re-assure the client that the condition is curable.
- Teach the client about the use of condoms/abstinence and their importance.
- Advise that the sexual partner be treated at the same time.
- Advise the client to avoid sex (or to be sure to use a condom) during treatment.
- Encourage the client to take the medicines as prescribed by the doctor to prevent re-infection.
- Advise the client on the need for an HIV test.

# Drug Treatment

**REFER** the client to the nearest health centre for treatment. (Cefixime is not on the ADS list.)

Cefixime

Dose	Dosage
400 mg	Single dose

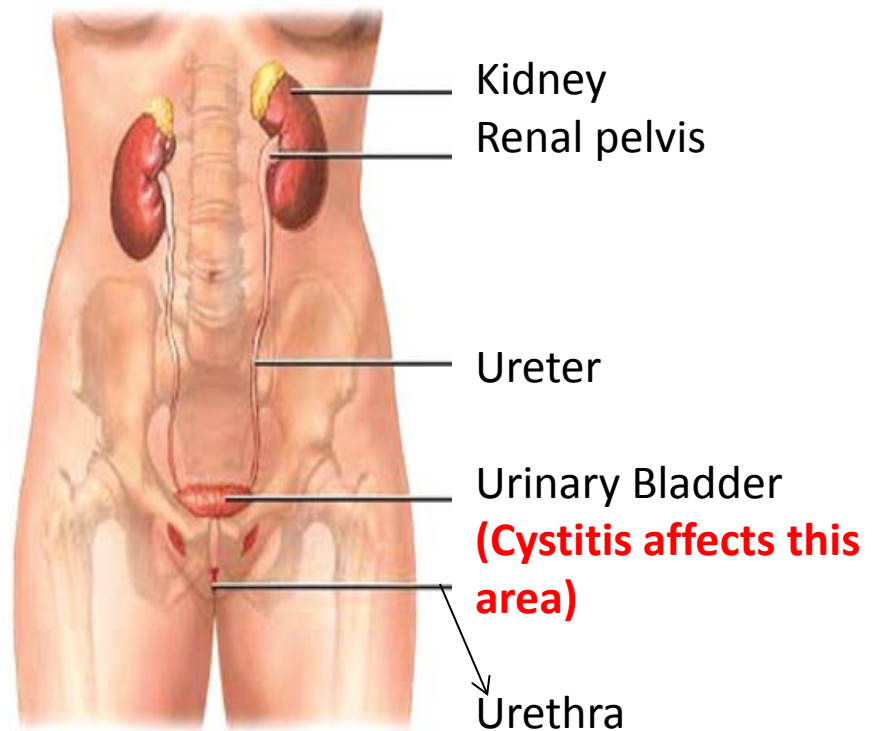
Doxycycline

Dose	Dosage
100 mg	Two times daily (every 12 hours) for 7 days.

# Urinary Tract Infection (UTI)

- Urinary tract infection is a condition due to the presence of bacteria in the urinary tract.

## *Female Urinary tract*



# Signs and Symptoms

- Pain on urination.
- Need to urinate more often than usual.
- Need to urinate immediately.
- Bad smell of urine.



# Client Assessment For Pain on Urination (1)

Question to ask	Reason for asking
1. For how long have you had the symptoms?	<ul style="list-style-type: none"><li>✓ Helps to know whether the UTI is acute or chronic.</li><li>✓ <b>REFER</b> if symptoms have been present for more than 7 days.</li></ul>
2. How old are you?	<ul style="list-style-type: none"><li>✓ Determine dose of treatment.</li></ul>
3. Do you have fever?	<ul style="list-style-type: none"><li>✓ Fever with pain on urination usually suggests kidney infection (Pyelonephritis).</li><li>✓ If yes, <b>REFER</b>.</li></ul>

# Client Assessment For Pain on Urination (2)

<p>4. (If the client is a woman): Are you pregnant?</p>	<ul style="list-style-type: none"><li>✓ If yes, <b>REFER.</b></li><li>✓ UTIs during pregnancy need immediate referral.</li></ul>
<p>5. Do you have a vaginal/ urethral discharge?</p>	<ul style="list-style-type: none"><li>✓ Vaginal discharge usually suggests PID or trichomoniasis, but not a UTI.</li><li>✓ Urethral discharge usually suggests gonorrhoea, but not a UTI.</li></ul>
<p>6. Have you received any treatment so far? If yes, which one?</p>	<ul style="list-style-type: none"><li>✓ Helps to guide on treatment selection.</li><li>✓ If recommended treatment already given, <b>REFER.</b></li></ul>

# Drug Treatment for UTI (1)

## Adult

Cotrimoxazole

Dose	Dosage
4 tablets	480 mg – Single dose

**OR**

Doxycycline

Dose	Dosage
100 mg	Two times daily (every 12 hours) for 7 days.

**NOTE: Do not give not both!**

# Drug Treatment for UTI (2)

## Child

Cotrimoxazole

Dose	Dosage
48 mg/kg	as a single dose

# General Measures

## Advise:

- Women to wipe from the front to the back to avoid introducing bacteria into the urethra.
- Women to urinate immediately after sex to flush out the bacteria.
- Women to avoid using vaginal deodorants or perfumed soap to wash the vagina.
- All clients to drink plenty of fluids.
- All clients to swallow the medicine as recommended.
- All clients to wear cotton rather than synthetic underwear.

# Guidelines for Referral

## **REFER:**

- All clients who fail to respond to treatment within 3 days.
- All clients that present with cloudy urine or blood in urine, fever, and chills.
- All pregnant mothers with suspected UTIs.
- All clients above the age of 60 years.

# Exercise 3

Urethral discharge and UTI

# Accredited Drug Shops Training *Uganda*

## Module 3: Session 17 Family Planning Methods





# Objectives (1)

As a result of actively participating in this session, the individual will be able to:

1. Name their tasks in providing family planning (FP) counselling and methods to their clients.
2. Describe each of the following FP methods: male condoms, female condoms, combined oral contraceptives (COC), and progestin-only pills (POP).
3. Explain the need for screening clients for COCs and POPs.
4. Explain how to use the pregnancy screening and COCs checklists.

# Objectives (2)

As a result of actively participating in this session, the individual will be able to:

5. Demonstrate the ability to give accurate instructions for use of the oral pills, COCs, and POPs.
6. Demonstrate the ability to give accurate instructions for use of male and female condoms.
7. Demonstrate the ability to submit clinic returns to the appropriate authority.
8. Know about other FP methods that require referral to a health center

# ADS Seller Tasks in Family Planning

Tasks the ADS seller is expected to perform regarding FP:

1. Inform clients about FP methods.
2. Screen clients for use of oral pills.
3. Manage clients who use oral pills and condoms.

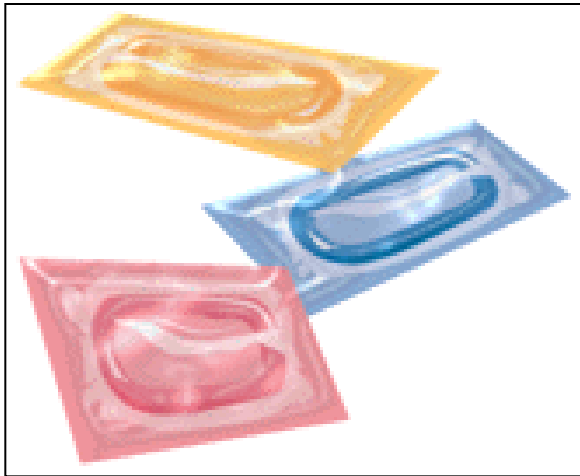
# Key Points to Share About a Family Planning Method

1. What it is.
2. Its effectiveness in preventing pregnancy (including the user's role).
3. How it works.
4. Advantages and other benefits apart from preventing pregnancy.
5. Whether the method protects against STIs and HIV and AIDS.
6. Common side effects and disadvantages.
7. Who can use the method.
8. Who cannot use it.
9. Signs of problems that require urgent medical attention.

# Condoms

# Condom: Definition and Overview (1)

A condom is a thin sheath made of latex or other materials. There are male condoms and female condoms.



A male condom covers a man's penis during sex.



A woman's condom is inserted into the vagina before the penis enters.

## Overview (2)

- The condom is the only FP method that also protects you from STIs (e.g., HIV).
- BUT ... it works only if used correctly every time one has sex.
- One size fits all.
- Always check expiry date.

# Examples

## Male condoms

- Life guard
- Protector
- Ngabo
- Rough rider
- Condom **O**

## Female Condoms

- Femidom



# How Do They Work?

- Both types of condoms prevent sperm and infections from entering the vagina.
- Both types of condoms stop sperm from mixing with vaginal fluids.
- This prevents pregnancy and transmission of infection.
- But again, it only works if used correctly every time one has sex.

# Untrue Stories About Condoms

It is not true that:

- Condoms decrease sexual enjoyment for couples.
- Only prostitutes use condoms.
- The condom might get lost inside the woman.
- Use of a condom shows lack of trust.

# Advantages of Using Condoms

- Condoms are very effective in preventing STIs.
- Condoms help a man maintain an erection and prevent premature ejaculation.
- Condoms provide immediate visible proof of effectiveness by retaining semen.
- Condoms are not associated with any systemic side effects.

# Disadvantages of Using Condoms

- They reduce feeling and sensitivity for the male.
- They can interrupt sexual spontaneity because the condom must be put on before sexual intercourse.
- It may embarrass either partner to suggest condom use.
- The male condom may slip off or either condom may break during intercourse.
- Product quality is reduced if stored in too much heat and sunlight.

# Exercise 1

**Counselling on condom use**

# Oral Contraceptive Methods

# Why Screen Clients For Oral Pills?

A drug shop operator needs to screen FP clients before initiating them on oral pills to ensure that:

1. The method is suitable for the client.
2. The client has no medical or other condition or current practices that would prevent her from using the method.
3. The client is not pregnant.

# Screening Clients For Possible Pregnancy

A drug shop operator will use the following checklist to screen clients for contraceptive use to ensure that they are not pregnant:

**“Pregnancy checklist: How to be reasonably sure a client is not pregnant”**



# Exercise 2

Pregnancy checklist game

**COCs**

# Combined Oral Pills (COC)

- Birth control pills that contain two hormones: artificial oestrogen and progestin.
- Effective when taken at the same time every day.

# How to Screen Clients Who Want to Use COCs

A drug shop operator will use the following checklist to screen clients who want to use COCs to ensure that the client does not have medical conditions that may prevent her from taking them:

**“Checklist for Screening Clients Who Want to Start Using Combined Oral Contraceptives (COC)”**

# Exercise 3

**COC screening checklist game**

# Women Who Can Use COCs

## Women with:

- Anaemia: cause must be established.
- Painful periods not caused by infection.
- Irregular cycles.
- History of ectopic pregnancies.
- BP less than 160/100mmHg.
- Unexplained thyroid disease.
- Benign breast disease.
- STIs, including HIV and AIDS.

# Women Who Should Not Use COCs

## Women who:

- Are having side effects the ADS seller cannot handle.
- Are breastfeeding babies less than 6 months.
- Have heart disease.
- Have high blood pressure.
- Are diabetic.
- Are pregnant.
- Have headache with blurred vision.
- Have yellow colouring of the eyes.
- Smoke cigarettes when older than 35 yrs.
- Are taking medicines for TB or epilepsy.
- Are forgetful or mentally retarded.

# When a Woman Can Initiate COCs

A woman can initiate COCs at any of the following times:

- Any time in her menstrual cycle when it is certain she is not pregnant.
- After 6 months postpartum with LAM when it is certain she is not pregnant.
- When she is changing from Depo Provera, even if she is having no periods.
- 1 week after an abortion (during the first 3 months).
- 2 weeks after an abortion (during months 4-6).
- After delivery and not breastfeeding.



# Instructions For Clients Starting to Use COCs (1)

Instruct the woman to:

- Take the first white pill on any of the first 7 days of her menstrual cycle.
- Take one pill a day – at the same time each day. (This will help her remember to take it.)
- Try to take her pill at bed time to help prevent any discomfort, such as nausea.

# Instructions For Clients Starting to Use COCs (2)

(Instruct the woman to):

- If she starts taking COCs after day 5 of her menstrual cycle, use another method (such as condoms) or abstain from sex for one week (7 days).
- NOTE: You must take the pill for seven days in a row to begin your protection from getting pregnant.

# Instructions For Clients Starting to Use COCs (3)

(Instruct the woman to):

- Start on a new packet of pills when she finishes a packet.
- Return to the drug shop for more pills before she has finished her last packet of pills.
- Store the pills (and all other medicines) in a dry place and out of reach of children.
- Tell the woman that she will have her period when she is taking the brown pills.

# What the Woman Should Do When She Misses Taking COCs (1)

Inform the woman:

- If you miss one white pill, take it as soon as you remember, then continue to take one daily until you finish that packet.
- If you miss two or more days in a row of taking the white pill, start taking them as soon as you remember and continue doing so until you finish the packet. BUT you must use condoms or abstain from sexual intercourse until you have taken one white pill each day for 7 days in a row.
- NOTE: You must take the pill for seven days in a row to begin your protection from getting pregnant.

# What the Woman Should Do When She Misses Taking COCs (2)

(Inform the woman):

- If you keep forgetting to take pills, you may need to use another method that is easier for you to use.
  - You should return to the drug shop or go the health facility for counselling on another method.
- NOTE: You must take the pill for seven days in a row to begin protection from getting pregnant.

# Minor Side Effects of COCs

Inform the woman that she may have some of the following side effects, but they should disappear with time:

- Nausea
- Headaches
- Spotting
- Breast tenderness
- Headaches
- Weight gain
- Depression
- Acne

## NOTE:

Tell her that if any of these side effects lasts for more than 3 months, she should return to the ADS.

# In Case of Diarrhoea or Vomiting

Inform the woman:

- Diarrhoea or vomiting may reduce the effectiveness of the pills.
- Use a condom or abstain from sexual intercourse until you are well.
- Once the vomiting and diarrhoea stop, take the white pills for 7 days AND continue using the condom or abstaining from sexual intercourse during those 7 days.
- Remember: You must take the pill for seven days in a row to begin your protection from getting pregnant.

# In Case of Any of These Signs

Inform the woman that if she has any of the following conditions, she must go to the clinic or hospital immediately:

- Severe abdominal or chest pain or shortness of breath
- Severe headaches
- Pain in the calf muscle
- Eyes become unusually yellow
- Severe leg pain on the calf or thigh



# Examples of COCs

- Microgynon
- Lofemenal
- Newfem
- Pilplan

**POPs**

# Progestin Only Pills (POP)

- Birth control pills that contain one hormone (progestin).
- Also called **minipills**.
- Effective when taken at the same time every day.

# Who Can Use POPs? (1)

- Breastfeeding mothers (beginning 6 weeks postpartum).
- Women with sickle cell disease.
- Women with diabetes (if no hypertension or history of heart attack).
- Women who are post abortion (anytime).
- Women who are undergoing treatment with:
  - Antibiotic griseofulvin
  - ARVs (although effectiveness may be reduced)

# Who Can Use POPs? (2)

- Women who cannot take COCs because of estrogen, such as:
  - Women who are obese.
  - Women with hypertension.
  - Women with heart disease.
  - Women at risk of developing blood clots.
  - Smokers

# Who Should Not Use POPs? (1)

POPs are generally not recommended or are contraindicated for women with the following conditions:

- Breastfeeding less than six weeks postpartum.
- Pregnant mothers (although there is no harm to women or the foetus if POPs are accidentally used during pregnancy).
- Women with current breast cancer or history of breast cancer.
- Women undertaking treatment for epilepsy with phenytoin or TB with Rifampicin.

# Who Should Not Use POPs? (2)

(POPs are generally not recommended or are contraindicated for women with the following conditions):

- Current deep venous thrombosis
- Active viral hepatitis
- Severe cirrhosis or liver tumours

# Advantages of Using POPs

- Can be used by breastfeeding mothers, unlike COCs.
- Quality and quantity of milk are not affected.
- Can be very effective during breastfeeding because breastfeeding acts as a backup method.



# Advantages of Using POPs (cont.)

- Immediate return of fertility when stopped.
- No estrogen side effects like heart attack, stroke.
- May help prevent PID and cancer of the breasts.

# Disadvantages of Using POPs (1)

- Changes in menstrual bleeding, including irregular periods, spotting, or bleeding between periods.
- Associated with amenorrhoea (missed periods).
- Prolonged or heavy menstrual bleeding.
- Side effects, like headache and breast tenderness.

## Disadvantages of Using POPs (2)

- Do not prevent ectopic pregnancy.
- MUST be taken at the same time every day.
- Do not protect against STIs.
- Forgetfulness increases failure rate.

# When a Woman Can Initiate POPs

- Any time in the cycle when it is certain that the client is not pregnant.
- At 6-8 weeks postpartum if mother is using LAM and is not pregnant.
- Changing from Depo Provera or COC.
- Immediately postpartum or post abortion.

# Instructions For Clients Starting to Use POPs

Instruct the woman to:

- Take the first white pill on any of the first 7 days of her menstrual cycle.
- Take one pill a day, at the same time each day. (This will help her remember to take it.)
- Try to take her pill at bed time to help prevent any discomfort, such as nausea.

# What to Do When You Miss Taking POPs

- If you miss one white pill, take it as soon as you remember, then continue to take one daily until you finish that packet.
- If you miss two or more days in a row of taking the white pill, start taking them as soon as you remember and continue doing so until you finish the packet, but use condoms or abstain from sexual intercourse until you have taken one white pill each day for 7 days in a row.

# In Case of Any of These Signs ...

Inform the woman that if she has any of the following conditions, she must go to the clinic or hospital immediately:

- Repeated severe headaches, which start or become worse while client is on POCs.
- Missed or delayed menstrual period after several months of regular menses.
- Severe lower abdominal pain, which maybe a sign of ectopic pregnancy.
- Very heavy vaginal bleeding, twice as much or twice as long as the client usually bleeds during a menstrual period.

# Examples of POPs

- Soft sure
- Overette



# Pills and Medical Care

- Tell the client to bring her pill packets (COCs or POPs) with her on each return visit.
- Emphasize that she should tell any health service provider that she is using pills for FP.
- This helps the service provider understand not to give the client other medicines that may reduce the effectiveness of the pills or, if necessary, to advise on other measures.

# Exercise 4

- **Small group work on counselling for COCs and POPs**

# Pills and Emergency Contraception

- Some women think pills will make them barren. This will not happen. If a woman stops taking the pill, she will become fertile again in one or two months
- A woman can take emergency contraception pills when:
  - She has been raped or defiled.
  - A condom breaks or slips off during sex.
  - She has unprotected sex and wants to avoid pregnancy.
- These pills must be taken within 5 days or 120 hours after the sexual act.

# Other Family Planning Methods Requiring Referral

- Depo Provera (DMPA)
- Implants under the skin
- Intrauterine device (IUD)
- Lactational amenorrhea method (LAM)
- Surgical methods (permanent)
  - Vasectomy
  - Tubal ligation

# Accredited Drug Shops Training *Uganda*

## Module 3: Session 18

### Care for Pregnant Women and Newborns



# Objectives

As a result of actively participating in this session, the individual will be able to:

1. Describe the role of the ADS in caring for newborns and pregnant women in the community.
2. Describe danger signs in a newborn that require URGENT REFERRAL.
3. Describe danger signs in a pregnant woman that require URGENT REFERRAL.
4. Describe the benefits of antenatal and postnatal care.
5. Explain how to manage minor disorders that occur during pregnancy.

# ADS Role in Newborn and Maternal Care

An ADS seller should offer the following services to newborns and pregnant women:

- Assessment and referral in case of danger signs.
- Information about antenatal care offered at health facilities.
- Counselling about management of minor disorders during pregnancy.
- Information about facility-based deliveries.
- Information about postnatal care
- Referral for regular HIV testing and care.
- Information about family planning (FP) methods.

# Impact of Some Maternal and Newborn Practices in the Community

- Many births take place at home.
- Even when deliveries occur at a facility, mothers and babies are often discharged 24 hours (or less) after birth.
- If there is a problem with the newborn, it may be seen as “mystical,” and medical care may not be sought.
- New mothers stay at home and do not always access the care they may need.



# Advice for the Pregnant Woman

# Antenatal Care Visits

Antenatal care visits (ANC) are visits to a health facility that a woman makes during her pregnancy to help her ensure:

- That she and her unborn child are healthy.
- That they are growing well.
- That she understands how to stay healthy and growing well.

# The Role of the ADS in ANC

1. Tell a pregnant woman when to begin ANC visits and how many she should make.
2. Explain what she can expect at the ANC visit.
3. Give advice about how to manage minor disorders during pregnancy.

# The Role of the ADS in ANC (1)

1. Tell a pregnant woman when to begin ANC visits and how many she should make:
  - 1<sup>st</sup> visit when she misses at least 2 menstrual periods.
  - Health worker will advise her on when to return.
  - At least 4 ANC visits should be made during pregnancy.

# The Role of the ADS in ANC (2)

2. Explain what she can expect at the ANC visit:
  - Blood and urine testing (to screen for disease).
  - Physical examination:
    - Blood pressure
    - Weight
    - Vaginal exam
    - Movement of the baby
  - Vaccinations

# The Role of the ADS in ANC (3)

(Explain what she can expect at the ANC visit, cont.)

- Advice about how to have a healthy pregnancy and a safe delivery:
  - Eating well
  - Getting enough rest and sleep
  - Preventing malaria
  - Seeking care in case of danger signs
- Advice about newborn care.

# The Role of the ADS in ANC (4)

3. Give advice about how to manage minor disorders during pregnancy.

# Exercise 1

- **Explaining to a pregnant woman what she can expect at the ANC visits**



# Management of Minor Disorders During Pregnancy (1)

<b>Complaint</b>	<b>Action</b>
Morning sickness (Vomiting that occurs during the first trimester)	<ul style="list-style-type: none"><li>• Avoid cooking fried spicy foods.</li><li>• Eat dry snacks (e.g., biscuits, popcorn, etc.).</li></ul>
Constipation	<ul style="list-style-type: none"><li>• Eat more vegetables and fruits.</li><li>• Drink lots of water.</li></ul>
Haemorrhoids	<ul style="list-style-type: none"><li>• Eat more vegetables and fruits.</li><li>• Drink lots of water.</li></ul>
Lower backache	<ul style="list-style-type: none"><li>• Do simple exercise, like walking.</li></ul>

# Management of Minor Disorders During Pregnancy (2)

Heartburn	<ul style="list-style-type: none"><li>• Eat small quantities of food.</li><li>• Elevate the head of the bed using pillows or blocks.</li><li>• Eat at least 3 hours before going to bed.</li></ul>
Food craving	<ul style="list-style-type: none"><li>• Eat a balanced diet.</li><li>• Do not eat soil or clay.</li><li>• Eat more fruits and vegetables.</li></ul>
Excessive salivation	<ul style="list-style-type: none"><li>• Don't worry, it will disappear.</li></ul>
Swelling of the legs	<ul style="list-style-type: none"><li>• Don't worry, it is harmless.</li><li>• Elevate the legs for at least 1 hour.</li></ul>

# Danger Signs in Pregnancy

**REFER** a pregnant woman for any of the following:

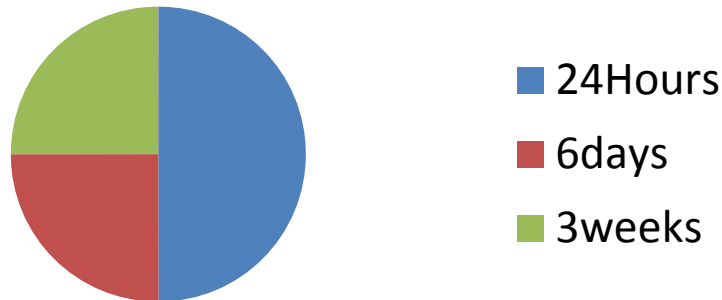
- Breaking of waters
- Any vaginal bleeding
- Very high temperature
- Severe headache or dizziness
- Swollen feet, hands, and face
- Fits or convulsions
- Paleness or fatigue
- When the baby has stopped moving

# Postnatal Care and Newborns

# Newborns at Risk

- Half (50%) of the deaths in babies take place within 24 hours after birth (day one).
- As many as three-quarters (75%) of the deaths in babies take place by the end of the first week or 7 days.

**Newborn Deaths**



# Postnatal Care

- All mothers and babies need at least four postnatal check-ups in the first 6 weeks.
- Promote early and exclusive breastfeeding for 6 months.
- Mothers should apply chlorhexidine solution or gel daily to the umbilical cord stump during the first week of life.
- Mothers should take iron and folic acid supplementation for at least 3 months after delivery.

# Danger Signs for Newborns (1)

Newborns can become sick and die very quickly and must be REFERRED IMMEDIATELY—day or night—with the following danger signs:

- Difficulty in breathing or in-drawing
- Fits
- Fever
- Feels cold
- Bleeding
- Not feeding
- Yellow palms and soles of the feet
- Diarrhoea

**No management of newborns should be carried out at the ADS.**

# Danger Signs for Newborns (2)

The mother and family should go to the health centre as soon as possible if a baby has any of the following signs:

- Difficulty feeding (poor attachment, not suckling well), pus coming from the eyes or skin pustules.
- Irritated cord with pus or blood.
- Yellow eyes or skin.
- Ulcers or thrush (white patches) in the mouth. Explain that this is different from normal breast milk in the mouth.

**No management of newborns should be carried out at the ADS.**



# Danger Signs for Mothers (1)

She SHOULD NOT WAIT to go to the hospital or health centre immediately—day or night—if she has any of the following danger signs:

- Vaginal bleeding has increased
- Fits
- Fast or difficult breathing
- Fever and too weak to get out of bed
- Severe headaches with blurred vision
- Calf pain, redness, or swelling
- Shortness of breath or chest pain

# Danger Signs for Mothers (2)

Danger signs (continued):

- Swollen, red, or tender breasts or nipples
- Problems urinating or leaking
- Increased pain or infection in the perineum
- Infection in the wound area (redness, swelling, pain, or pus in wound site)
- Smelly vaginal discharge
- Severe depression or suicidal behaviour (ideas, plan, or attempt)

# National Recommendations for Breastfeeding Babies

- Start breastfeeding within 1 hour of birth.
- Breastfeed exclusively from 0-6 months.



- Give complementary foods to all children from 6 months.



- Continue breastfeeding up to 2 years or beyond.

# Exercise 2

- **Advice about pregnancy and newborn care**

# Where to Refer

ADS sellers should keep an up-to-date list of facilities (and their locations) to refer mothers and children.

# Accredited Drug Shops Training

## *Uganda*

### Module 3: Session 19

### Chronic Conditions



# Objectives

As a result of actively participating in this session, the individual will be able to:

1. Name at least three signs or symptoms of each of the following chronic conditions: hypertension (high blood pressure), diabetes mellitus, and asthma.
2. Locate the complete list of signs and symptoms of each of these chronic conditions in the ADS Seller's Manual.
3. **REFER** clients who have signs and/or symptoms of any of the three conditions.
4. Advise clients on how to prevent hypertension/high blood pressure, diabetes mellitus, and asthma.
5. Advise clients on how to manage hypertension/high blood pressure, diabetes mellitus, and asthma.

# Chronic Conditions: Definition

Chronic conditions are diseases or conditions characterized by:

- Long course of illness.
- Slow recovery.
- Rarely being cured completely.
- Having several contributing factors.
- A long development period, for which there may be no symptoms.
- Possibly leading to other health complications.



# Responsibilities of the ADS

The ADS seller is responsible for:

1. Educating clients on prevention of three chronic conditions: **hypertension, diabetes mellitus, and asthma.**
2. Identifying (and referring) clients who show signs and symptoms of any of these chronic conditions.
3. Advising clients on the management of these chronic conditions.

# Hypertension

# Definition and Overview

- Hypertension is persistent above normal blood pressure (e.g., 140/90mmHg.)
- It is also called “high blood pressure.”
- Most clients with high blood pressure are older. (It rarely occurs among children.)
- High blood pressure is sometimes called a “silent killer.”

# Signs and Symptoms

Common symptoms of high blood pressure:

- Severe headache
- Bleeding from the nose
- Dizziness
- Increased heart beat
- Difficulty in breathing

**Note:** Each of the signs and symptoms by itself may not seem dangerous, but if a client presents with at least 2 of these symptoms, suspect high blood pressure and **REFER**.

# Risk Factors for High Blood Pressure

- Being overweight.
- Excessive drinking of alcohol.
- Eating food with too much salt.
- Eating food with too much fat.
- Smoking cigarettes.
- Not getting enough exercise.
- Having stress over a long period of time.

# Responsibilities of ADS Operators

- Identify and **REFER** suspected cases of high blood pressure.
- Advise the client who has been diagnosed with high blood pressure to follow the doctor's advice about how to manage it.
- Advise the client how to manage his or her high blood pressure.

# Advice for High Blood Pressure (1)

## 1. Change your eating habits:

- Reduce the amount of salt in your food.
- Eat more fruits and vegetables.
- Avoid eating foods with lots of fats.

## 2. Exercise more:

- Do some exercises, like walking or riding a bicycle, at least 5 days a week.
- Lose weight through regular exercise.

# Advice for High Blood Pressure (2)

## 3. Stop or reduce bad habits:

- Stop smoking if you are a smoker.
- Reduce alcohol intake if you drink alcohol.

## 4. Follow your doctor's advice:

- Take your prescribed medicine every day.
- Visit your doctor as per appointment.
- Monitor your blood pressure at the nearest health centre.



# Diabetes Mellitus

# Definition and Overview

- Diabetes is a chronic disease that occurs when the blood sugar is consistently above normal.
- It is more common in adults above 40 years.

# Signs and Symptoms

- Excessive thirst with excessive urination, especially at night.
- Excessive hunger with increased appetite.
- Tiredness

**Note:** Suspect diabetes if a client complains of excessive urination and thirst and **REFER** the client to the health centre IV or hospital.

# Risk Factors for Diabetes

- Having diabetes in the immediate or extended family.
- Being overweight.
- Having high blood pressure.
- Getting little exercise or staying seated in one place for long periods of time.
- Prolonged use of medicines, such as dexamethasone or prednisolone.
- (Females only): having given birth to a big baby weighing 4 kg or more.

# Advice for Clients (1)

Advise all clients to:

- Do regular exercises, such as walking or riding a bicycle.
- Reduce the amount of alcohol taken to 1 bottle of beer per day or less.
- Lose weight, if they are overweight.
- Add little or no sugar to their tea.
- Drink water, rather than sodas and c sweetened drinks.



# Advice for Clients (2)

Advise all clients who have diabetes to:

- Take their medicine every day without missing a dose. *(Diabetes is not curable, but medicines control the blood sugar and symptoms.)*
- Regularly check their blood sugar from home or at a nearby clinic.
- Put on properly fitting shoes to avoid getting wounds.
- Visit the eye specialist every year for eye check-up.
- Eat lots of vegetables and fruits.
- Store their insulin (if they use it) in a cool place (such as in a pot or refrigerator).

# Low Blood Sugar

# Definition and Overview (1)

- People with diabetes get low blood sugar (also known as *hypoglycemia*) when their bodies don't have enough sugar to use as fuel.
- Low blood sugar means that a person's blood sugar is excessively lower than normal (<2.2mmol/L).



# Definition and Overview (2)

- People most at risk for low blood sugar:
  - Those using insulin to help control their diabetes.
  - Those using oral drugs, like glibenclamide.
- People who have diabetes need to know how to recognize and manage the signs and symptoms of low blood sugar.

# Signs and Symptoms of Low Blood Sugar

- Excessive sweating
- Tiredness
- Trembling and shaking
- Tingling of the lips
- Excessive hunger
- Palpitations (rapid heartbeat)
- Confusion

# Management of Low Blood Sugar

Tell the client:

- Drink anything containing sugar (safi juice, splash, honey, glass of milk, solutions containing sugar or glucose, or even soda).
- If the symptoms of low blood sugar are severe, **REFER** the client to a health centre for treatment.

# Prevention of Low Blood Sugar

Advise the client to:

- Eat on time.
- Reduce the amount of alcohol taken to 1 bottle of beer per day or less
- Be sure to eat when taking alcohol.
- Inject insulin at the right time and with the right dose.
- Always carry glucose powder or packed juice as first aid for low blood sugar.

# Asthma

# Definition and Overview

- Asthma is a chronic lung disease characterized by difficulty in breathing and whistling sound (wheezing).
- Asthma is more common in children than adults.
- Most clients with asthma also have a family history of allergy of the nose, asthma, or eczema.

# Signs and Symptoms

- Shortness of breath.
- Wheezing (whistling sound) when breathing out.
- Night coughs, especially in children.
- Chest tightness.

## **Note :**

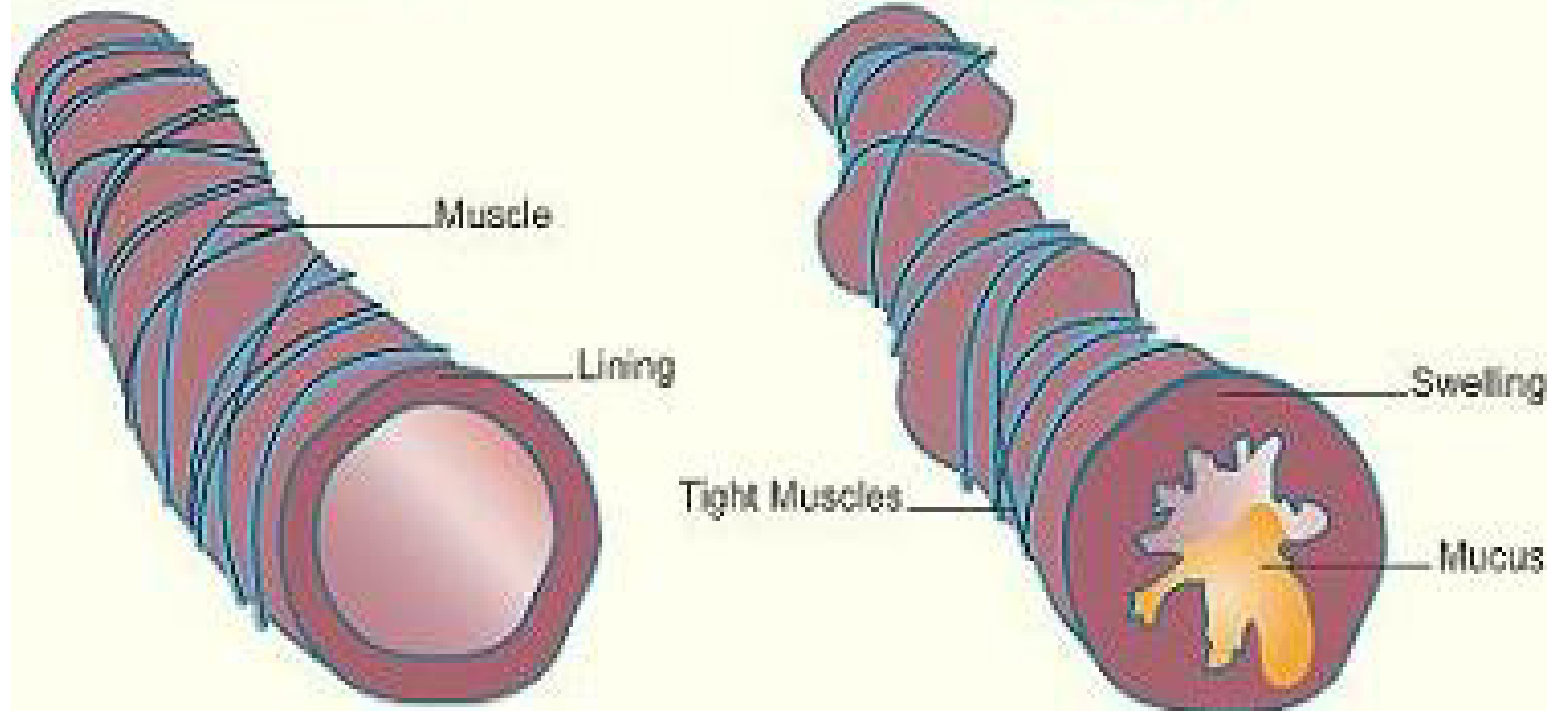
- These symptoms tend to be severe at night and early morning.
- **REFER** all suspected cases of asthma.

# What Happens During an Attack of Asthma?

## Asthma

Normal Airway

Airway in Person with Asthma





# Causes of Asthma

The cause of asthma is not known, but any of the following may trigger an asthma attack:

- Presence of cats in the house
- Presence of cockroaches
- Cigarette smoking
- House dust mites
- Exercise
- Use of perfumes
- Cold weather

# Client Information

Advise the client who has been diagnosed with asthma:

- Asthma is chronic and not curable.
- Minimize exposure to substances, such as perfumes and insecticide sprays.
- Remove cats from the house.
- Do not smoke cigarettes (and avoid exposure to cigarette smoke).

# Drug Treatment

Drugs used in the treatment of asthma include:

- Salbutamol
- Aminophylline

**Note:** These medicines should only be prescribed by the health centre or clinic.

# Exercise 1

Identifying and providing advice about chronic conditions

# Accredited Drug Shops Training

## *Uganda*

### Module 3: Session 20

### Notifiable Diseases



# Introduction

- Notifiable diseases are diseases that affect a large number of people at a time.
- They spread easily in the community and kill very fast.
- Suspected cases of any of these diseases should be reported to the appropriate health official in order to get government support.
- Timely reporting minimizes illness and death.

# Objectives

As a result of actively participating in this session, the individual will be able to:

1. State the common notifiable diseases.
2. State their mode of transmission.
3. State the signs and symptoms.
4. Know how to manage suspected cases.
5. Outline basic preventive measures.
6. Know who to contact in case of an outbreak.

# General

- Timely detection through surveillance will enable health authorities to take quick action to control an outbreak.
- Important factors for effective surveillance include:
  - Rapid identification of suspected cases.
  - Reporting procedures and analysis in place.
  - Appropriate coordination at all levels (i.e., community, health facility, district, national, and international).



# What to Do?

If you suspect a customer has a notifiable disease:

- Refer him or her to a health centre or hospital (if appropriate for the disease).
- Contact your local health official as soon as possible and describe the situation.
- [INCLUDE HERE THE NAME OF THE APPROPRIATE CONTACT]
- Follow the management and prevention advice for the individual disease.

# Notifiable Diseases

- Cholera
- Haemorrhagic fevers: Ebola, Marburg, Crimean-Congo
- Dengue and Chikungunya Fevers
- Meningitis
- Yellow Fever
- Rift Valley Fever
- Lassa Fever

# Cholera

# Introduction

- *Vibrio cholerae* is bacteria that lives in water.
- Patients have sudden onset of profuse watery stool leading to rapid dehydration.
- Cholera can kill patients within hours.
- Percentage of infected patients who die ranges from 0.1% to 25%, with an average of 1.1% depending on location.
- Identification of early cases is important to limit spread of disease.

# How Do You Get Cholera?

Cholera is spread through:

- Eating contaminated food.
- Drinking contaminated water or juice.
- Touching the infected person without protective gloves.
- Touching items contaminated with stool or vomitus of the infected person.

# Signs and Symptoms

- The time from exposure to illness ranges from 2 hours to 5 days.
- Sudden onset of symptoms, such as:
  - Profuse rice water stools
  - Vomiting
  - Rapid dehydration
  - Muscle cramps
  - Body weakness

# Management and Prevention (1)

- Rehydrate the client with ORS/zinc and refer immediately to a high-level health centre.
- Infected people with or without symptoms can spread disease quickly, so fast action is important.
- Use gloves to touch the client.
- Isolate the client from others.
- Clean all items that have come into contact with the vomitus or stool of the client with chlorine solution (1 part to 9 parts) (JIK); use immediately.

# Management and Prevention (2)

- Oral cholera vaccine can control an outbreak.
- Encourage people to:
  - Boil water or use water purifying solutions.
  - Avoid food or drinks not prepared carefully at home.
  - Wash their hands with soap and water after visiting the latrine and before eating.
  - Use pit latrines to dispose of faeces.
  - Keep their latrines clean and covered.



# Haemorrhagic Fevers

Ebola, Marburg, Crimean-Congo (CCHF)

# Introduction (1)

- Haemorrhagic fevers are caused by viruses.
- A high percentage of people die in outbreaks:
  - Ebola (25-90%)
  - Marburg (25-90%)
  - CCHF (10-40%)
- Outbreaks occur periodically, but unpredictably.
- Illness can spread quickly from person to person.

## Introduction (2)

- Only supportive treatment in a hospital is available for the three diseases.
- Time from exposure to illness:
  - Ebola: 2-21 days
  - Marburg: 5-10 days
  - CCHF after tick bite: 1-3 days (up to 9 days)
  - CCHF after exposure to sick animal or person: 5-6 days (up to 13 days)

# How Do You Get Ebola Virus Disease?

- Direct contact with wounds, blood, saliva, vomitus, stool, and urine from an infected person.
- Direct physical handling of persons who have died of Ebola.
- Contact with infected animals, especially monkeys or bats.
- Sexual contact with an infected person.
- Contact with contaminated items (bedding, clothes, etc.).

# How Do You Get Marburg Fever?

- Marburg is rare, but can spread rapidly.
- Probably contact with faeces or urine of African fruit bats (inside of caves, for example).
- Contact with infected monkeys.
- Direct contact with wounds, blood, saliva, vomitus, faeces, or urine from infected people.
- Contact with contaminated items (bedding, clothes, etc.).
- Sexual contact (?)

# Signs and Symptoms: Ebola Virus Disease

Sudden onset of symptoms that include:

- Fever
- Headache
- Body weakness
- Vomiting
- Diarrhoea
- Sore throat
- Bleeding through body openings (e.g., eyes, nose, mouth, ears, anus) may or may not be present.

# Signs and Symptoms: Marburg

- Initial symptoms are:
  - Fever
  - Headache
  - Muscle pain
- Around the 5<sup>th</sup> day, a body rash may occur.
- Nausea, vomiting, chest pain, a sore throat, abdominal pain, and diarrhoea may then appear.
- Increasingly severe symptoms include jaundice, delirium, massive bleeding, and shock
- Bleeding may or may not happen.

# How Do You Get CCHF?

- Bite from a tick.
- Contact with blood of infected animals (especially during slaughter).
- Human-to-human transmission can occur through close contact with the blood, secretions, or other bodily fluids of infected people.
- People who work with animals (abattoir, herding, etc.) are at high risk.



# Signs and Symptoms: CCHF

- Initial symptoms are: sudden fever, headache, body pain, neck stiffness, eye pain and sensitivity to light, dizziness.
- Next symptoms may be nausea, vomiting, diarrhoea, stomach pain, and sore throat, followed by mood swings and confusion.
- After 2-4 days, agitation may be replaced by sleepiness, depression, lassitude.
- Other signs include fast heart rate, enlarged lymph nodes.
- Bleeding from all body openings and into the skin is common.
- After the 5<sup>th</sup> day, severely ill patients may experience rapid kidney, liver, or pulmonary failure.

# Haemorrhagic Fever Management

- **Avoid** contact with the client.
- Isolate client from others.
- Immediately **REFER** the client to the nearest health centre for better management.
- Report the suspected case to the appropriate local health official as quickly as possible.

# Prevention for Haemorrhagic Fevers (1)

- Do not eat dead bush animals, especially monkeys and bats.
- Bury dead bodies immediately. Do not participate in communal burying of persons who have died of haemorrhagic fever; health officials should supervise.
- Avoid direct contact with body fluids, blood, saliva, vomitus, urine, and faeces by wearing protective clothes, like gloves and goggles.
- Wash your hands with soap and water containing JIK (chlorine).

## Prevention for Haemorrhagic Fevers (2)

- Client's clothes and bedding should soak in a chlorine/water solution (1 part to 9 parts).
- Clean client environment with chlorine solution (1:9).
- Do not touch wounds of an infected person with unprotected hands.
- Do not allow anybody to touch the client as you arrange for transfer to the hospital.
- Advise those who touched the client to minimize movement in the community; contacts should be monitored for 3 weeks.

# Plus Special Prevention for CCHF

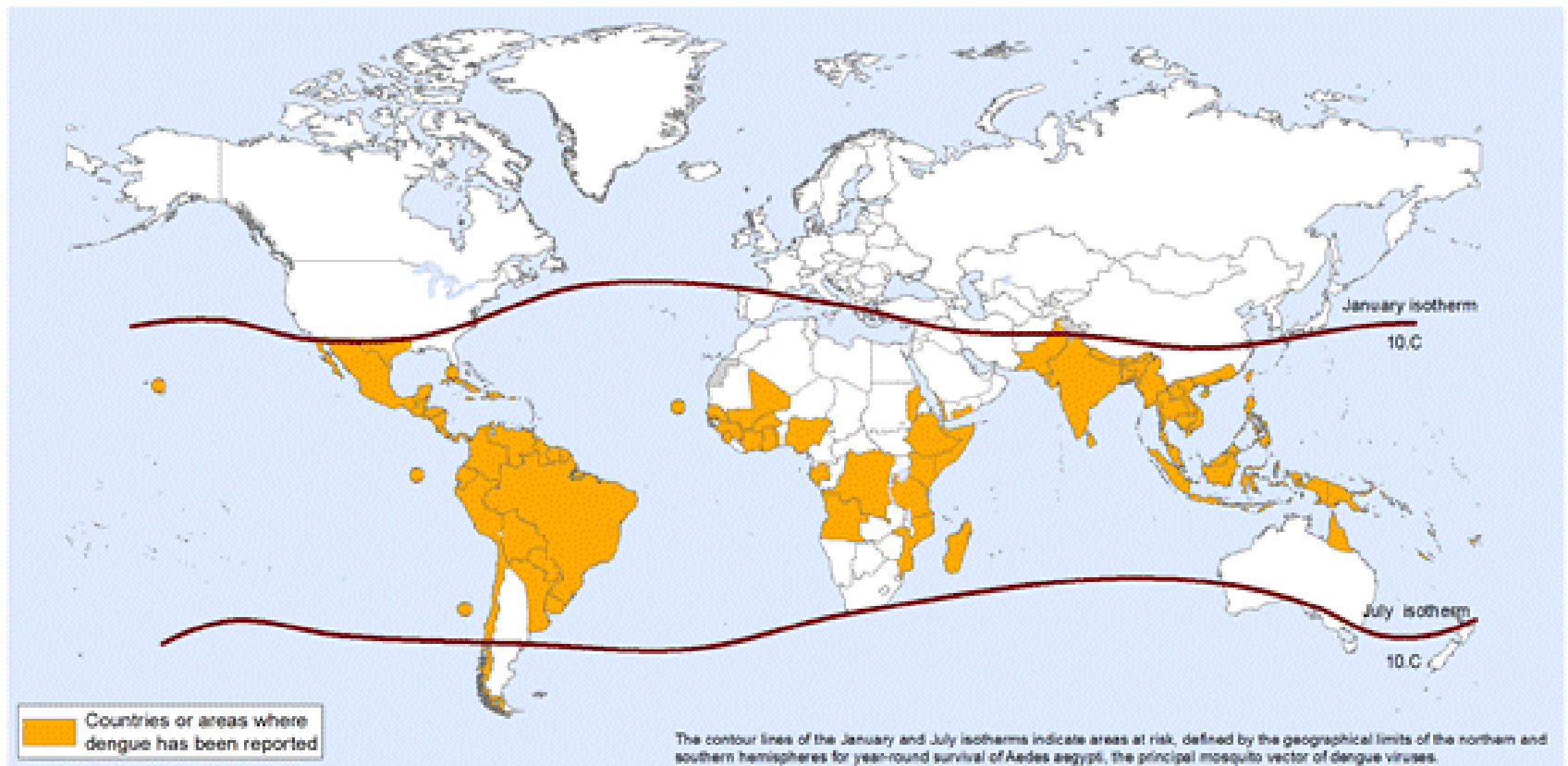
- Reduce the risk of tick-to-human transmission:
  - Wear protective clothing (long sleeves, long trousers).
  - Wear light-coloured clothing to allow easy detection of ticks on the clothes.
  - Use insect repellent on the skin and clothing.
  - Regularly examine clothing and skin for ticks and remove them.
  - Control tick infestations on animals or in barns.
  - Avoid areas where ticks are abundant and seasons when they are most active.
- Reduce the risk of animal-to-human transmission by wearing protective clothing while handling animals or their tissues, notably during slaughtering or butchering.

# Dengue and Chikungunya Fevers

# Introduction

- Viruses spread by mosquitoes.
- Major causes of illness in the tropics and subtropics.
- Dengue and chikungunya have similar symptoms and no treatment.
- Dengue can become severe in children, but mostly those living in Asia and South America.

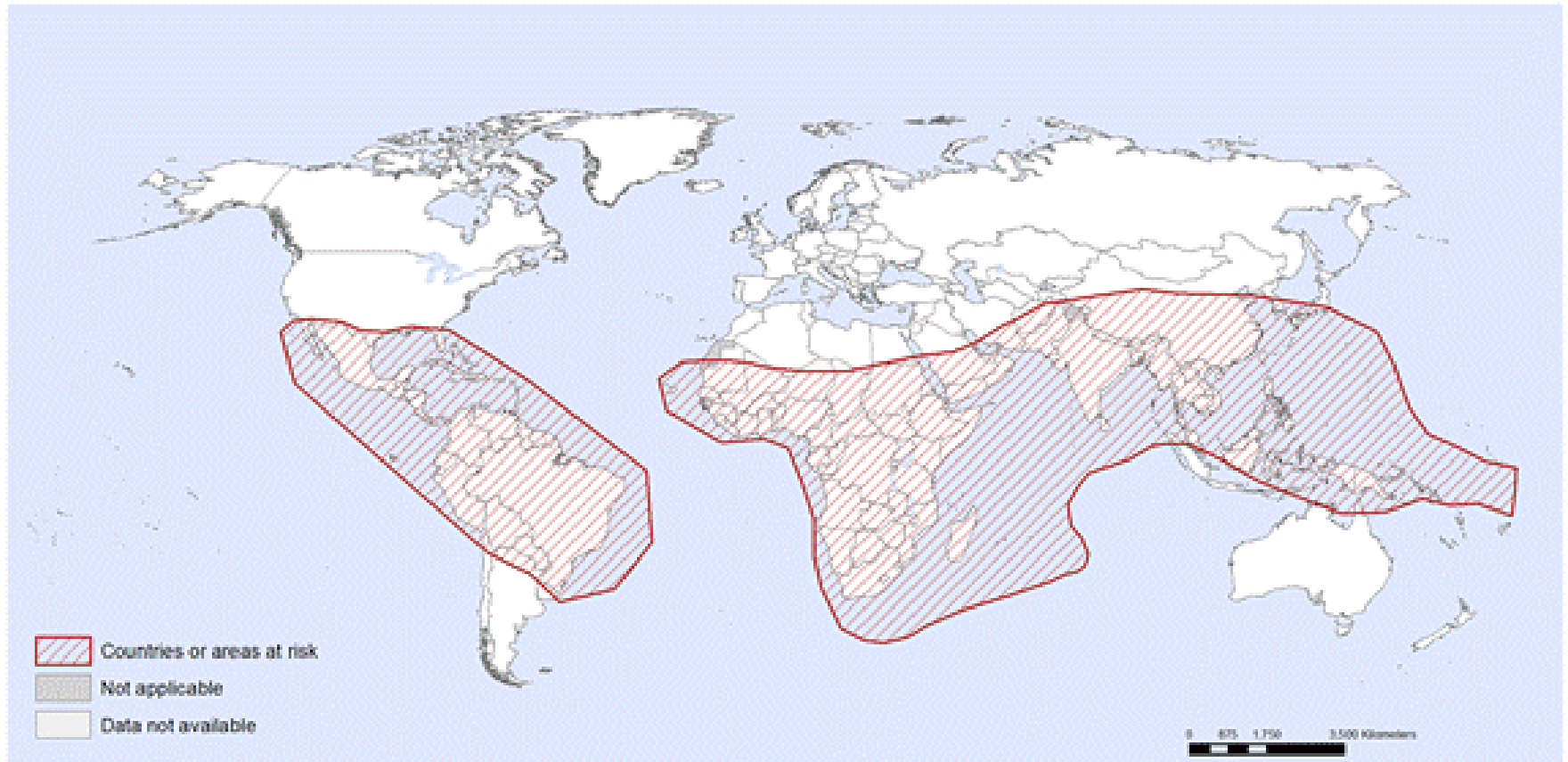
# Countries at Risk for Dengue



Adapted from World Health Organization



# Countries at Risk for Chikungunya



Adapted from World Health Organization

# Symptoms: Dengue and Chikungunya

- Flu-like symptoms usually begin 4-7 days after mosquito bite and typically last 3-10 days.
- Major symptoms are fever, joint pain, headache.
- Other symptoms may include muscle pain, joint swelling, or rash.
- With chikungunya, joint pain may persist for months.

# Symptoms: Severe Dengue

- Occurs 1-2 days after end of initial fever.
- Patients (usually children) suffer from:
  - Severe abdominal pain
  - Persistent vomiting
  - Fever
  - Bleeding
  - Breathing difficulty
- Potentially lethal

# Management

- No medicine to treat chikungunya or dengue virus illness.
- Treat symptoms by advising:
  - Plenty of rest
  - Drinking fluids to prevent dehydration
  - Paracetamol to relieve fever and pain
- In cases of severe dengue, refer to a hospital.

# Prevent Spread

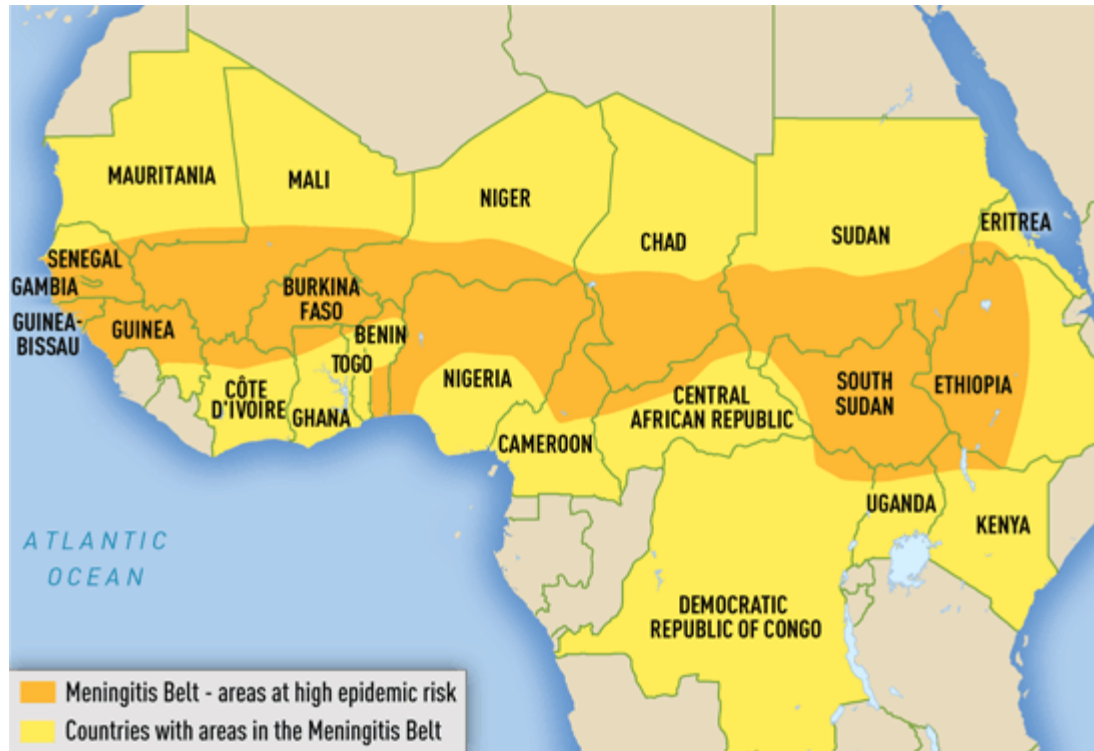
- These diseases are not spread from person-to-person (rarely from pregnant mother to baby).
- Avoid mosquito bites:
  - Eliminate potential mosquito breeding sites (standing water).
  - Use insecticide-treated mosquito nets.
  - Wear proper clothing to reduce mosquito bites.
  - Be aware of peak mosquito hours and limit outdoor activity.

# Meningitis

# Introduction

- Caused by bacteria, *Neisseria meningitides*.
- Serious infection of the lining of the brain and spinal cord.
- 1 in 10 people carry the bacteria in their body, but are not ill.
- High attack rates seen in people up to 30 years of age.
- Fatal in 50% of cases if not treated.
- Vaccines are available to prevent meningitis.

# Meningitis Belt



- *N. meningitidis* is found worldwide, but the highest incidence is in the “meningitis belt.”
- Epidemics during the dry season (December-June).



# How Do You Get Meningitis?

Meningitis is spread through close contact with another person:

- Kissing
- Sneezing or coughing
- Sharing eating utensils
- Living in a crowded place

# Signs and Symptoms

- Time from exposure to symptoms: 2-10 days (average 4 days).
- Sudden onset of stiff neck, high fever, sensitivity to light, confusion, headaches, vomiting.
- Even with early diagnosis and treatment, 5%-10% of patients die, typically within 24-48 hours after symptoms start.
- Bacterial meningitis may result in brain damage or hearing loss in 10%-20% of survivors.
- A less common form of disease is septicemia, which causes a haemorrhagic rash and often death.

# Manage Illness and Prevent Spread

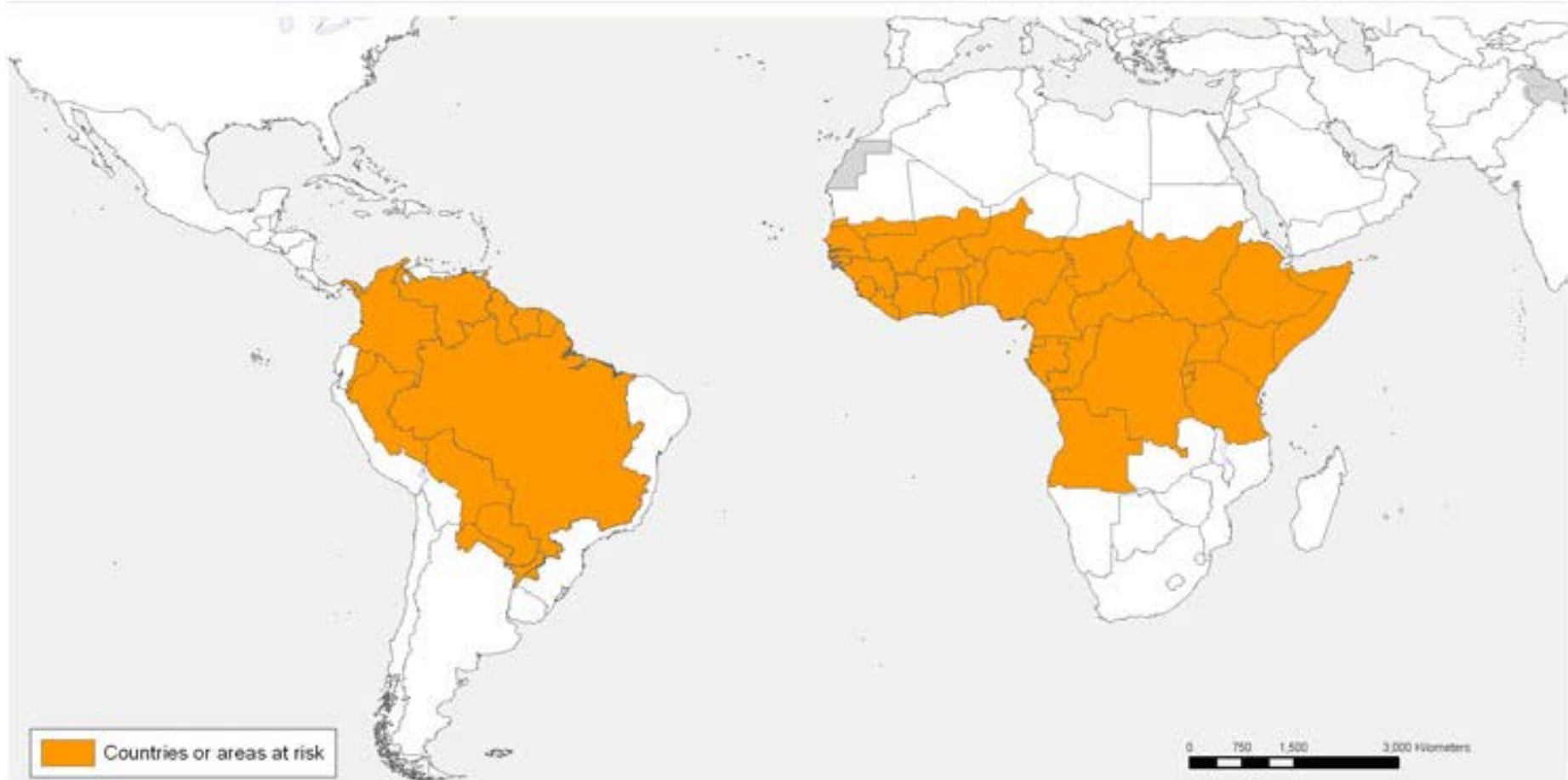
- Meningitis is a medical emergency! Refer immediately to a health centre.
- Treat with ceftriaxone (first choice), penicillin, ampicillin, chloramphenicol.
- Client isolation is not needed.
- In an outbreak, people at high risk in the community should receive vaccinations.
- Close contacts of client (family members) should receive antibiotics to prevent illness.

# Yellow Fever

# Introduction

- Yellow fever is spread through mosquito bites.
- Estimated 200,000 cases of yellow fever and 30,000 deaths worldwide each year, with 90% occurring in Africa.
- The true number of cases may be 10 to 250 times more than what is reported.
- Up to 50% of those who have severe illness without support will die from yellow fever.
- Most people infected with yellow fever virus have no illness or only mild illness.

# Countries at Risk of Yellow Fever



Adapted from World Health Organization

# Signs and Symptoms

- Time from infection until symptoms is about 3-6 days.
- Initial symptoms: sudden fever, chills, severe headache, back pain, general body aches, nausea and vomiting, fatigue, and weakness.
- Most people improve after the initial presentation.
- After a remission of hours to a day, about 15% of cases develop a severe form of the disease: high fever, jaundice (yellow skin), bleeding, and eventually shock and organ failure.
- Yellow fever is difficult to diagnose, especially in early stages. It can be confused with: severe malaria; dengue, Ebola and other haemorrhagic fevers; leptospirosis; viral hepatitis, and poisoning.

# Management

- Yellow fever has no specific treatment; treatment aims to reduce symptoms for the patient's comfort.
- Rest, fluids, and paracetamol may relieve symptoms.
- Refer immediately to a health centre.
- Clients should avoid medications, such as aspirin, which may increase the risk of bleeding.
- Clients should avoid further mosquito exposure for 5 days after the fever starts. This breaks the disease transmission cycle and reduces the risk to others.

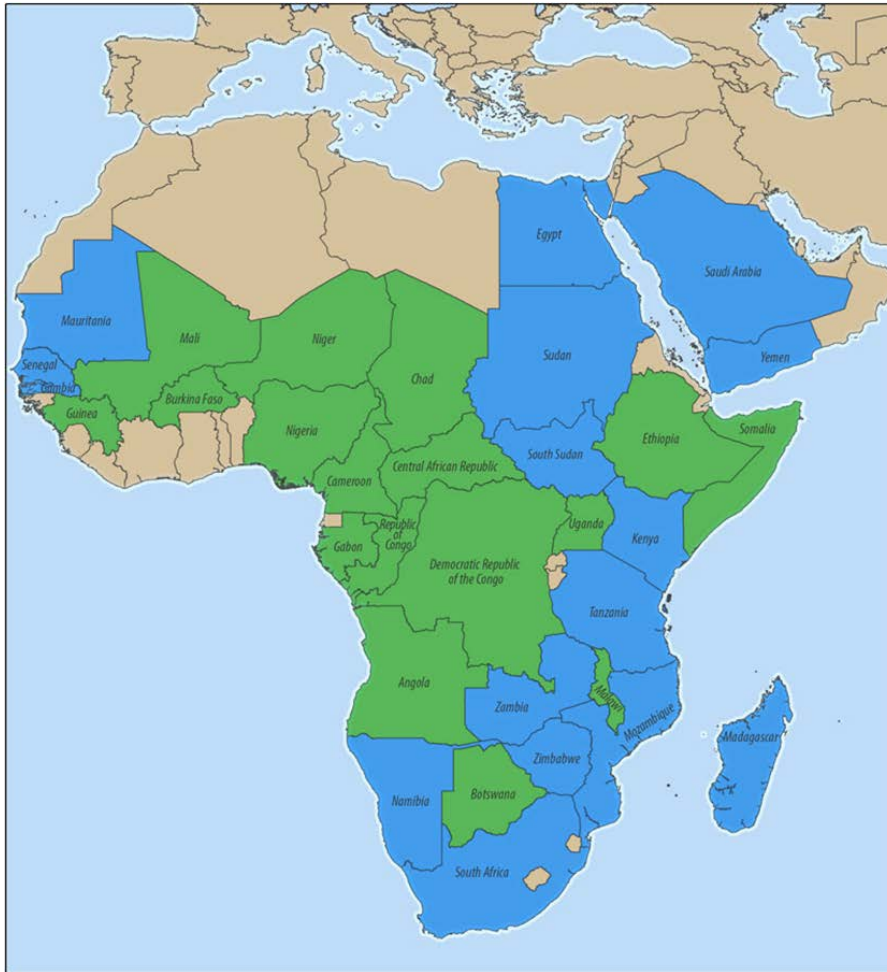


# Prevent Spread

- Prompt detection of yellow fever and emergency vaccination campaigns control outbreaks.
- Vaccination is very effective.
- Avoid mosquito bites:
  - Eliminate potential mosquito breeding sites (standing water).
  - Use insecticide-treated mosquito nets.
  - Wear proper clothing to reduce mosquito bites.
  - Be aware of peak mosquito hours and avoid outdoor activity.

# Rift Valley Fever

# Introduction



**RIFT VALLEY FEVER DISTRIBUTION MAP**

- Countries reporting endemic disease and substantial outbreaks of RVF
- Countries reporting few cases, periodic isolation of virus, or serologic evidence of RVF infection
- RVF status unknown



- Rift valley fever (RVF) is a viral disease that affects humans and domesticated animals (cattle, sheep, goats, camels).
- Outbreaks of RVF in animals can lead to outbreaks in humans.
- Most illness in humans is mild and self-limiting; about 1% of infected humans die of RVF.

# How Do You Get RVF?

- Almost all human infections result from contact with the blood or organs of infected animals during slaughtering or butchering, assisting with animal births, or disposing of carcasses or foetuses.
- Infections can also come from:
  - Drinking uncooked milk, blood, or eating tissue of infected animals.
  - Bites of infected mosquitoes or blood-feeding flies.
- No human-to-human transmission.
- No outbreaks of RVF in urban areas.

# Signs and Symptoms: Mild Form

- Time from infection to symptoms ranges from 2-6 days.
- Sudden start of flu-like fever, muscle pain, joint pain, and headache.
- Some patients develop neck stiffness, sensitivity to light, loss of appetite and vomiting. In these patients, the disease may be mistaken for meningitis.
- Symptoms usually last from 4-7 days.

# Signs and Symptoms: Severe Forms

- Eye disease (0.5-2% of patients)
  - Eye lesions occur 1-3 weeks after first symptoms.
  - Blurred or decreased vision can resolve in 10-12 weeks or be permanent in up to 10% of those affected.
- Meningoencephalitis (<1%)
  - Occurs 1-4 weeks after first symptoms.
  - Intense headache, loss of memory, hallucinations, confusion, vertigo, convulsions, coma.
  - Neurological complications can be permanent.
- Haemorrhagic fever (<1%)
  - Jaundice occur 2-4 days after first symptoms.
  - Bleeding in skin and from nose, gums; blood in stool and vomit.
  - 50% with haemorrhagic fever die 3-6 days later.

# Management

- No specific treatment for mild form of disease.
- Supportive treatment for severe forms.

# Prevent Spread

Encourage people to:

- Wear gloves and protective clothing when handling sick animals or when slaughtering animals.
- Not eat or drink fresh blood, raw milk, or uncooked animal tissue.
- Avoid mosquito bites through:
  - Eliminate breeding sites (standing water).
  - Using insecticide-treated mosquito nets.
  - Wearing protective clothing.
  - Avoiding outdoor activity at peak biting times.



# Lassa Fever

# Introduction

- Lassa fever is a viral haemorrhagic illness that lasts from 1-4 weeks.
- Known to occur in Guinea, Liberia, Sierra Leone, Nigeria, and other West African countries.
- 20% of infections result in severe disease.
- Death rate of patients with severe disease is 15%.
- Lassa is especially serious in late pregnancy, with maternal and or foetal death occurring in >80% of cases during the third trimester.

# How Do You Get Lassa?

- Contact with food or household items contaminated with urine or faeces of the multimammate rat; breathing contaminated dust.
- Eating an infected rat.
- Contact with an infected person's bodily fluids, such as blood, urine, or faeces; sexual contact.
- Time from infection to symptoms ranges from 6-21 days.

# Signs and Symptoms

- Gradual symptoms, starting with fever and weakness.
- After a few days: headache, sore throat, muscle pain, chest and stomach pain, nausea, vomiting, diarrhoea, cough.
- Severe cases: facial swelling, fluid in the chest, bleeding from body openings.
- Late stages: Shock, seizures, tremor, disorientation, coma.
- Deafness occurs in 1 in 3 patients who survive; in half of these cases, hearing returns partially after 1-3 months.
- Death usually occurs within 14 days in fatal cases.

# Management

- Lassa fever is difficult to distinguish from other diseases, such as Ebola, malaria, and yellow fever.
- The antiviral drug, ribavirin, can be effective early in the illness.
- Patients with severe disease should receive supportive care in a hospital.

# Prevent Spread

- Encourage people to:
  - Avoid contact with the rats and minimize their presence around the home.
  - Store food in rodent-proof containers.
  - Keep the home clean to help discourage rats.
  - Not use the rats as a food source.
- Patients should be isolated until the disease runs its course.

# Exercise 1

- Recognizing and dealing with notifiable diseases