primary care 101

Symptom-based integrated approach to the adult in primary care

TB
HIV
Asthma/COPD
Cardiovascular disease
Diabetes
Mental health conditions
Epilepsy
Musculoskeletal disorders
Women's health

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

2013/14

PREFACE

PRIMARY CARE 101 GUIDELINE 2013/14

Commissioned and published by: The National Department of Health Private Bag x828 Pretoria 0001. Developed by the University of Cape Town Lung Institute for the NDoH.

What is Primary Care 101?
Primary Care 101 is a symptom-based integrated clinical management guideline using an algorithmic approach for the management of common symptoms and chronic conditions in adults. The guidelines are intended for use by all health care practitioners working at primary care level in South Africa.

Rationale and ethos of Primary Care 101
The aim is to standardise the approach to adults presenting to primary care with symptoms, or attending for review of their chronic condition or conditions. Primary Care 101 is aimed at assisting primary healthcare practitioners in providing the best evidence-based clinical care for patients whilst being fully cognisant that this is only one element of good quality care. The other key values that must be practised during all interactions with patients are:

- To accept that each person is unique and must be approached with due regard for their multiple roles as individuals, within families and as a member of their community
- To respect your patient's concerns and choices
- To develop a relationship of mutual trust with your patient
- To communicate effectively, courteously and with empathy
- To actively arrange follow-up care especially for patients with chronic conditions
- To link the patient to community-based resources and support
- To ensure continuity of care, if possible.

Development of Primary Care 101
The Primary Care 101 Guideline is an expansion of the Practical Approach to Lung Health and HIV/AIDS in South Africa (PALSA PLUS), which originally drew on the World Health Organisation's Practical Approach to Lung Health. The role of the Knowledge Translation Unit of the University of Cape Town Lung Institute is acknowledged in leading the development of these guidelines under contract from the National Department of Health. Primary Care 101 was finalised through a rigorous process of consultation with health managers in the public sector, clinicians, academics, patient advocacy groups and inputs from the Colleges of Medicine of South Africa, the South African Nursing Council, the South African Pharmacy Council and Medicines Control Council. More details regarding the development and the role of contributors can be found at www.***knowledgetranslation.co.za***.

The Primary Care 101 Guideline is aligned with the following Department of Health policies and clinical protocols:

- Standard Treatment Guidelines and Essential Medicines List for Primary Health Care
- Standard Treatment Guidelines and Essential Medicines List for Hospital Level (Adult) 2012
- Standard Treatment Guidelines and Essential Medicines List for Hospital Level (Paediatric) 2013 - Draft
- South African Antiretroviral Treatment Guidelines 2013
- South African Prevention of Mother to Child Transmission of HIV Guidelines 2013 (Draft)
- Draft National Tuberculosis Management Guidelines 2013
- National Guideline: Comprehensive Management and Control of Sexually Transmitted Infections 2009
- National Infection Prevention and Control Policy and Strategy 2007
- South African Guidelines for Maternity Care in South Africa 3rd edition 2007
- National Contraception Clinical Guidelines 2012
- National Guideline: Updated Management of Type 2 Diabetes in Adults at Primary Care Level 2012 (Draft).

Implementing Primary Care 101
The Primary Care 101 and PALSA PLUS training programmes recognise that guidelines alone are insufficient to improve practice. Active implementation is recommended, and guidelines are combined with short on-site training sessions, repeated over several months to allow primary healthcare practitioners to integrate recommendations into their clinical practice, and feedback experiences. Primary Care 101 is being implemented as part of the ICDM (Integrated Chronic Disease Management), a new model to improve the quality of care and outcomes for patients with chronic diseases. The ICDM integrates chronic disease care at primary care clinics for patients with both communicable and non-communicable conditions, and is aligned with the PHC Re-engineering Framework. The ICDM engages stakeholders at multiple levels to strengthen the quality of care provided at clinics, to assist individuals to assume responsibility for their health, and for communities to participate in screening and health promotion activities.

Using Primary Care 101
Primary Care 101 is divided into two main sections: symptoms and chronic conditions. In patients presenting with symptoms, start by identifying your patient's main symptom. Use the symptoms contents page to find the relevant symptom page in the guideline. Then follow the algorithms to either a management plan for that symptom or to the relevant chronic condition in the second section of the guideline.

In patients presenting with a known chronic condition, use the chronic conditions contents page to find that condition in the guideline. Now go to the routine care pages for that condition to manage your patient using the assess, advise and treat framework. Chronic patients may also have other symptoms – these can be managed using the relevant symptom pages, and will prompt an assessment of the degree of control of the chronic condition, if appropriate.

All drug names are highlighted in either orange or blue.

- Orange-highlighted drugs may be prescribed by a doctor or a nurse according to his/her scope of practice.
- Blue-highlighted drugs may only be prescribed by a doctor.

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

COMMUNICATING EFFECTIVELY

Communicating effectively with your patient during a consultation need not take much time or specialised skills.
Try to use straightforward language and take into account your patient's culture and belief system.

Integrate these four communication principles into every consultation:

LISTEN

Listening effectively helps to build an open and trusting relationship with the patient.

DO	The patient might feel:	DON'T	The patient might feel:
- give all your attention - recognise non-verbal behaviour - be honest, open and warm - avoid distractions e.g. phones	- 'I can trust this person' - 'I feel respected and valued' - 'I feel hopeful' - 'I feel heard'	- talk too much - rush the consultation - give advice - interrupt	- 'I am not being listened to' - 'I feel disempowered' - 'I am not valued' - 'I cannot trust this person'

DISCUSS

Discussing a problem and its solution can help the overwhelmed patient to develop a manageable plan.

DO	The patient might feel:	DON'T	The patient might feel:
- use open ended questions - offer information - encourage patient to find solutions - respect the patient's right to choose	- 'I choose what I want to deal with' - 'I can help myself" - 'I feel supported in my choice' - 'I can cope with my problems'	- force your ideas onto the patient - be a 'fix-it' specialist - let the patient take on too many problems at once	- 'I am not respected' - 'I am unable to make my own decisions' - 'I am expected to change too fast'

EMPATHISE

Empathy is the ability to imagine and share the patient's situation and feelings.

DO	The patient might feel:	DON'T	The patient might feel:
- listen for, and identify his/her feelings e.g. 'you sound very upset' - allow the patient to express emotion - be supportive	- 'I can get through this' - 'I can deal with my situation' - 'My health worker understands me' - 'I feel supported'	- judge, criticise or blame the patient - disagree or argue - be uncomfortable with high levels of emotions and burden of the problems	- 'I am being judged' - 'I am too much to deal with' - 'I can't cope' - 'My health worker is unfeeling'

SUMMARISE

Summarising what has been discussed helps to check the patient's understanding and to agree on a plan for a solution.

DO	The patient might feel:	DON'T	The patient might feel:
- get the patient to summarise - agree on a plan - offer to write a list of his/her options - offer a follow-up appointment	- 'I can make changes in my life' - 'I have something to work on' - 'I feel supported' - 'I can come back when I need to'	- direct the decisions - be abrupt - force a decision	- 'My health worker disapproves of my decisions' - 'I feel resentful' - 'I feel misunderstood'

CONTENTS: SYMPTOMS

Assess and manage the patient using his/her symptoms as a starting point

CONTENTS: CHRONIC CONDITIONS

An approach to the diagnosis and routine care of the patient with a chronic condition

THE UNCONSCIOUS PATIENT

Manage the unconscious patient urgently

Clear airway
- Clear mouth and throat and insert oropharyngeal airway if available.

Give 40% oxygen via face-mask. Intubate if:
- Patient centrally cyanosed (blue tongue/lips) and/or
- Respiratory rate < 10 breaths/minute and/or
- Coma score < 9 (to assess coma score see chart to the right)

If equipment or skills unavailable give mask-bag ventilation.

Establish IV access
- Use as large bore venous access as possible.
- If patient bleeding, give Ringer's lactate; if no bleeding, give sodium chloride 0.9% solution.

Check BP
- If systolic BP < 90, give 500mℓ IV fluids rapidly. Repeat until systolic BP > 90. Stop if patient becomes breathless.

Check glucose
- If glucose < 3.5 or unable to measure, give 50mℓ of dextrose 50% IV.
- If glucose ≥ 15, give sodium chloride 0.9% 1V/ℓ in first hour and then 1ℓ over the next 2 hours *and* 10U short-acting insulin IM.

Assess coma score

Eye opening
- 4 Spontaneous
- 3 To speech
- 2 To pain
- 1 None

Best motor response
- 6 Obeying commands
- 5 Localises purposefully to pain
- 4 Withdraws to pain
- 3 Flexing
- 2 Extending
- 1 None

Best verbal response
- 5 Orientated
- 4 Confused
- 3 Inappropriate words
- 2 Incomprehensible
- 1 None

Add scores to give a single score

Manage according to likely cause:

Temperature ≥ 38°C	Soft tissue swelling of eyes/lips/wheeze	Small pupils and/or history of drug overdose	Signs of trauma	Recent seizure/fit
Pneumonia or **meningitis** likely • Give ceftriaxone[1] 2g IV/IM.	**Anaphylaxis** likely • Give adrenaline[2] 1mℓ (1:1000) IM every 5 minutes until better • Give hydrocortisone 100mg *slow* IV • Give promethazine 50 mg IM/*slow* IV	**Opiate poisoning** likely • Give naloxone 0.4–1.2mg IV	• Stop bleeding • Stabilise cervical spine • Stabilise fractures	→2.

Write a clear referral letter and refer urgently to hospital

Record history from relatives and emergency staff:
- Onset of coma and details of how found.
- Known chronic disease/s and medication. Ask about diabetes, hypertension, asthma, HIV, cancer, epilepsy. Send medication with patient to hospital.
- Known substance abuse or depression. Was a suicide note found?
- Any recent trauma.
- Recent travel to a malaria area and any prophylaxis taken.

Document level of consciousness, blood pressure and pulse and any treatment given.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. If giving ceftriaxone IM, divide dose: 1g into 2 different injection sites. [2] Adrenaline is also known as epinephrine.

SEIZURES/FITS

Manage urgently the patient who is unconscious and fitting:

- Ensure the patient is safe. Place in a lateral lying (recovery) position. Do not place anything in the mouth.
- Give 40% facemask oxygen.
- Check glucose. If < 3.5 or unable to measure, give 50mℓ of dextrose 50% IV. Continue IV dextrose 5% in sodium chloride 0.9% slowly (30 drops per minute).
- If ≥ 20 weeks pregnant up to 1 week postpartum →93 for treatment of fit.
- If < 20 weeks pregnant or not pregnant, give diazepam 10mg IV slow infusion over at least 5 minutes or lorazepam 4mg IM/IV stat.
- Repeat after 10 minutes if fit continues.
- Treat for status epilepticus if:
  - Fits do not respond to 2 doses of diazepam/lorazepam or
  - Fits last longer than 30 minutes *or*
  - Patient does not recover consciousness between fits.

Patient has status epilepticus:

- Give phenytoin 20mg/kg IV in sodium chloride 0.9% over 60 minutes. If dysrhythmia develops, stop infusion.
- If fits continue repeat phenytoin 10mg/kg IV in sodium chloride 0.9% over 30 minutes.
- If IV phenytoin unavailable, give phenytoin 20mg/kg crushed tablet via nasogastric tube.
- Refer urgently to hospital.

Patient does not have status epilepticus and fit stops:

- Temperature ≥ 38°C: give ceftriaxone[1] 2g IM/IV
- Neck stiffness/meningism
- HIV patient
- Reduced level of consciousness more than 1 hour after fit
- Glucose still < 3.5 after one hour or patient on glibenclamide or insulin

Refer patient same day if:

- New weakness, numbness, visual disturbance, facial asymmetry, unable to name 3 out of 3 objects (like hand, nose, pen) or recent headaches
- BP ≥ 180/110 one hour after fit has stopped
- Substance abuse: overdose or withdrawal
- Head injury within past 6 weeks
- Pregnant or up to 1 week postpartum

Approach to patient who is not fitting now and does not need same day referral

Confirm that patient indeed had a fit: jerking movements of part of or the whole body, with/without tongue biting, incontinence, post-fit drowsiness and confusion.

Yes
Is patient known with epilepsy?

Yes

No
Previous TB meningitis, stroke or head trauma?

Yes
Chance of recurrent fit is 50%, even 2 years after the event.

No
Refer for specialist assessment.

Treat for **epilepsy** →87.

No
Episode/s of weakness or disturbance of speech for < 24 hours?

Yes
Stroke or transient ischaemic attack likely →76.

No
Episodes of acute anxiety?

Yes
Panic attack likely →81.

No
Collapse following hot feeling, nausea, prolonged standing or intense pain with rapid recovery?

Blackout likely →7.

Refer for specialist assessment if diagnosis uncertain.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. If giving ceftriaxone IM, divide dose: 1g into 2 different injection sites.

WEIGHT LOSS

Recognise the patient with weight loss needing urgent attention:
- Weight loss in the patient on ART associated with one or more of: nausea, vomiting, sore muscles, shortness of breath, abdominal pain or distension

Management:
- Patient needs same day lactate measurement →63.

- Check that the patient that says s/he has unintentionally lost weight has indeed done so. Compare current weight with previous records and ask if clothes still fit.
- Unintentional weight loss of > 5% of body weight is significant and must be investigated.

First check for TB, HIV *and* diabetes

Exclude TB
- Start workup for TB ↻ 55.
- At the same time test for HIV ↻ 60 and diabetes ↻ 70
- and consider other causes below.

Test for HIV
- If status is unknown, test for HIV ↻ 60.
- The HIV patient with unexplained weight loss and/or BMI < 18.5 is stage 3 and needs ART →61.

Check for diabetes
- Check random finger-prick blood glucose
- To interpret result ↻ 70.

Ask about symptoms of common cancers:

Abnormal vaginal discharge/ bleeding	Breast lump/s or nipple discharge	Urinary symptoms in man	Change in bowel habit	Cough ≥ 2 weeks, blood-stained sputum, long smoking history
Consider cervical cancer. Do a speculum examination →27.	Consider breast cancer. Examine breasts/axillae for lumps →18.	Consider prostate cancer. Hard and nodular prostate on rectal examination →31.	Consider bowel cancer. Mass on abdominal or rectal examination, occult blood positive.	Consider lung cancer. Do chest X-Ray.

If food intake inadequate, look for a cause:

Nausea and/or vomiting	Loss of appetite	Ask, 'Are you stressed?	No money for food	Sore mouth or difficulty swallowing
→20.	• Eat small frequent meals. • Drink high energy drinks (milk, maas, mageu, soup, sweetened fruit juice). • Increase energy value of food by adding sugar, milk powder, peanut butter or oil.	If yes, →52.	If available, refer to nutrition scheme.	**Oral/oesophageal thrush** likely →14

Check thyroid function (TSH) if none of the above and patient has any of pulse > 80, tremor, irritability, dislike of hot weather or thyroid enlargement.

Refer within 1 month for further investigation the patient with persistent documented weight loss and no obvious cause.

FEVER

A patient with a fever has an axillary temperature ≥ 38ºC or had a fever in the past 4 days.

Recognise the patient with fever needing urgent attention:

One or more of the following:
- Confusion or agitation
- Respiratory rate ≥ 30 breaths/minute
- Unable to walk unaided
- Unable to drink
- Jaundice
- Renal angle tenderness
- Seizures
- BP < 90/60
- Easy bleeding/bruising/blood in urine

Management:
- Establish IV access and give 5% dextrose in ½ strength Darrows or Ringer's lactate. If unavailable give oral rehydration solution.
- Give ceftriaxone[1] 2g IM/IV stat.
- Refer same day to hospital.

Approach to the patient with fever not needing urgent attention

Ask about associated symptoms
If cough →16; sore throat →14; blocked/ runny nose →13; vaginal discharge →23, burning urine →31, painful skin →40, headache →9, diarrhoea →21.

If above symptoms are not present, has patient visited in the past 12 weeks a malaria endemic area?

Yes

- Refer for malaria test and treatment.
- Consider other cause especially TB ↩ 55.

No

- **Exclude TB in the patient with fever ≥ 2 weeks ↩ 55.**
- If status unknown, test for HIV ↩ 60.
- The HIV patient with fever > 1 month and weight loss ≥ 10% has AIDS and needs ART ↩ 61.

Refer the patient with persistent fever and no obvious cause.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. If giving ceftriaxone IM, divide dose: 1g into 2 different injection sites.

LYMPHADENOPATHY (enlarged lymph node/s)

Approach to patient with enlarged lymph nodes

- Lymphadenopathy is common in HIV. If status unknown, test for HIV ↴ 60 *and*
- Ask about associated symptoms, especially TB symptoms (weight loss, cough ≥ 2 weeks, chest pain, night sweats) and manage on relevant page.

Are nodes equally enlarged < 2cm *or* 1 or more ≥ 2cm?

All lymph nodes enlarged equally but < 2cm in size

Check for secondary syphilis with RPR or if unavailable, look for signs: rash especially palms and soles, mouth ulcers, genital wart-like lesions.

RPR positive or signs of secondary syphilis	HIV positive	HIV and/or RPR negative
Treat syphilis →28.	Give routine HIV care →61.	• Advise repeat test after 3 month window period. • If asymptomatic, reassure and advise to return if symptoms occur.

Refer for further investigation if after 2 weeks patient is unwell with lymphadenopathy and no obvious cause.

How to aspirate lymph node for TB and cytology

- Clean skin over largest node with alcohol or povidone iodine.
- Insert 16 or 18 gauge needle into node, partially withdraw and reinsert at different angles several times.
- Withdraw needle, attach to syringe filled with 2–3mℓ air, and gently spray needle contents over glass slide.
- Thinly spread material across slide with a second slide.
- Fix one slide for cytology with cytology spray.
- Allow second slide to air-dry (TB).
- If the aspirate is unsuccessful, repeat. If again unsuccessful, refer to surgeon.

1 or more lymph node/s ≥ 2cm in size

Is there a nearby infection (skin, throat) or Kaposi's sarcoma lesion?

Yes

- Sore throat →14
- Skin infection →40
- Kaposi's sarcoma lesion →44

No

Inguinal/groin swelling

No

- Patient needs lymph node aspirate for TB and cytology.
- If patient is coughing, also exclude TB with sputa →55.

Yes

Confirm that this is a lymph node: discrete, movable and rubbery.

No

Refer to exclude hernia, aneurysm.

Yes

Swelling hot, painful and/or red?

No

- Patient needs lymph node aspirate for TB and cytology.
- If patient is coughing, also exclude TB with sputa →55.

Yes

Treat patient and partner for bubo

First assess and advise the patient and partner ↴ 23.

- Doxycycline 100mg 12 hourly for 14 days *and*
- Ciprofloxacin 500mg 12 hourly for 3 days
- Pregnant/breastfeeding: erythromycin 500mg 6 hourly for 14 days instead of doxycycline *and* ciprofloxacin
- Paracetamol 1g 6 hourly for pain
- Look for genital ulcer. If present →23.
- Aspirate fluctuant lymph node through intact skin.

WEAKNESS and/or TIREDNESS

Recognise the patient with weakness and/or tiredness needing urgent attention:

- Possible stroke or TIA: sudden onset of weakness on 1 or both sides perhaps with vision problems, dizziness, difficulty speaking or swallowing →76.
- Difficulty breathing →16.
- Chest pain →15.
- Patient on ART with other signs of lactic acidosis: nausea, abdominal pain or swelling, weight loss, fatigue, shortness of breath →63.
- Diarrhoea and/or vomiting with reliable signs of dehydration:
  - Postural hypotension (systolic BP drop > 20mmHg between lying and standing)
  - Poor urine output
  - Confusion

Management:

- If dehydrated give oral or IV rehydration. Reassess after 2 hours and refer if no improvement.

Approach to patient with weakness and/or tiredness not needing urgent attention:

- Tiredness is a problem when it persists so that the patient is unable to complete routine tasks and it disrupts work, social and family life.
- Look for a cause of the patient's weakness/tiredness:

First check patient's temperature.

- If ≥ 38ºC ↻ 4.

Then exclude TB, HIV, pregnancy and stress.

- Ask about TB symptoms. Exclude TB ↻ 55.
- If status unknown, test for HIV ↻ 60. The HIV patient needs routine HIV care ↻ 61.
- Exclude pregnancy. If pregnant →93.
- Ask 'Are you stressed?' If yes ↻ 52.
- If patient has difficulty sleeping ↻ 54.

If none of the above, test for anaemia, diabetes, kidney and thyroid disease.

- Check Hb for anaemia: if < 11 (woman) or < 12 (man), refer to doctor same week.
- Exclude diabetes with random finger prick blood glucose. To interpret result ↻ 70.
- Look for kidney disease on urine dipstick: check eGFR if patient has proteinuria, diabetes, hypertension, or is > 60 years.
- Check TSH if any of weight gain, dry skin, constipation, cold intolerance. If TSH abnormal refer to doctor.

Refer the patient with persistent weakness/tiredness and no obvious cause.

COLLAPSE

Recognise the patient who has collapsed needing urgent attention:

- Unconscious →1
- Fit →2
- Sudden onset of weakness which may not have resolved on 1 or both sides →76
- Difficulty breathing →16
- Chest pain →15
- Loss of consciousness for > 2 minutes
- Pulse rate < 40
- BP < 90/60
- Recent trauma
- Family history of collapse or sudden death
- Abnormal ECG
- Known heart problem

Management:

- Check blood glucose: if < 3.5mmol/ℓ, give oral glucose if conscious, or if unconscious, 40–50mℓ dextrose 50% IV. If known with diabetes →71.
- Refer same day to hospital.

Approach to the patient who has collapsed but not needing urgent attention

- Ensure patient has had an ECG. Refer same day if abnormal.
- Screen for substance abuse if > 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks/session or misuse of illicit or prescription drugs ↩ 83.
- Check for postural hypotension: Measure BP lying and repeat after standing for 3 minutes.

Systolic BP drops by ≥ 20mmHg.

- This is common if elderly or pregnant ↩ 93.
- Measure pulse on standing: if > 100/minute, patient is dehydrated. Give oral rehydration solution.
- Check Hb: if <11 (woman) or <12 (man), refer doctor same week.
- Review medications to identify likely drug or drug interactions.
- Advise patient to stand up slowly.

No change in systolic BP or change < 20mmHg
Ask patient to breathe rapidly for 2–3 minutes. Are symptoms reproduced?

Yes

Hyperventilation likely

- Advise re-breathing into a brown paper bag.
- Assess and manage patient's stress →52.

No

- Before the collapse did patient experience flushing, light-headedness, nausea?
- Did patient recover rapidly following collapse?

Yes

Simple faint likely

- There may be twitching of limbs, face, eyes that last < 12 seconds (not a fit).
- Advise to avoid overheating and prolonged standing.

No
Was collapse associated with coughing, swallowing, head turning?

Yes

Refer for medical specialist assessment.

No
Is there known epilepsy or diabetes?

Yes

- Epilepsy care →87.
- Diabetes care →71.

No

Refer the patient > 70 years with possible heart disease, or who collapses repeatedly, or where no cause for collapse is obvious.

DIZZINESS

Recognise the patient with dizziness needing urgent attention:

- Dehydration due to vomiting/diarrhoea (systolic BP drop ≥ 20mmHg between lying and standing) with poor response to IV or oral rehydration
- Consider stroke if sudden onset of dizziness is associated with vision problems, weakness on 1 or both sides, difficulty speaking or swallowing →76.
- BP < 90/60
- Pulse < 40 and/or irregular

Management:

- Refer same day to hospital.

Approach to the patient with dizziness not needing urgent attention

- Ask about ear symptoms. If present ↩ 12.
- Screen for substance abuse: if > 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks/session or misuse of illicit or prescription drugs ↩ 83.
- Review patient's medication. Anti-hypertensives, sedatives, efavirenz, oral hypoglycaemics, anti-convulsants can all cause dizziness. Refer to doctor.
- If diabetic, check finger prick blood glucose for hypoglycaemia ↩ 71.
- Check for anaemia with Hb. If < 11 (woman) or < 12 (man), refer doctor same week.
- Check BP. If > 130/80 ↩ 73 to interpret result. Assess for postural hypotension: Measure BP lying and repeat after standing for 3 minutes.

Systolic BP drops ≥ 20mmHg between lying and standing

Postural hypotension likely

- This is common if elderly or pregnant ↩ 93.
- Advise patient to stand up slowly.
- Doctor must review if patient on any medication.

No drop or drop in systolic BP < 20mmHg

Ask patient to breathe rapidly for 2–3 minutes. Are symptoms reproduced?

Yes

Hyperventilation likely

- Advise re-breathing into a brown paper bag.
- Assess and manage patient's stress →52.

No

Ask about associated features

Dizziness precipitated by sudden head movements

Positional vertigo likely

- Patient needs Epley manoeuvre. Refer to doctor.

Recent flu-like illness

Vestibular neuronitis likely

- Mobilize as soon as possible.
- Refer to ENT if:
  - Symptoms > 2 weeks
  - Tinnitus
  - New deafness

- If none of the above, check TSH. If abnormal, refer to doctor.
- **Refer if no cause is found or dizziness persists.**

HEADACHE

The patient with headache and one or more of the following needs urgent attention:

- Sudden onset of severe headache
- New onset, persistent, different to usual headache
- Headache that wakes or is worse in the morning
- Vomiting
- Temperature ≥ 38°C
- Neck stiffness/meningism
- BP ≥ 180/110, or if pregnant, diastolic BP ≥ 90.
- Decreased level of consciousness
- Confusion
- Vision problems (e.g. double vision, photophobia)
- Following a first seizure
- Sudden weakness on one or both sides
- Speech disturbance
- Pupils different in size

Management:

- If temp ≥ 38°C and neck stiffness, treat for meningitis. Give ceftriaxone[1] 2g IM/IV.
- If BP ≥ 180/110 and not pregnant, give amlodipine 10mg orally stat. If unavailable, give enalapril 10mg orally stat[2]. If pregnant ↻ 93.
- Refer same day to hospital

Approach to the patient with headache not needing urgent attention

Is headache recurrent with nausea and/or vomiting and/or visual disturbance that resolves completely?

Yes

Migraine likely

- Give immediately and then as needed paracetamol 1g 6 hourly or ibuprofen[3] 400mg 8 hourly with food up to 5 days *and* metoclopramide 10mg 8 hourly up to 3 doses and refer if no better.
- Advise patient to recognise and treat migraine early, rest in a dark, quiet room, avoid precipitants like loud noise, stress, flashing lights, missing meals, alcohol, chocolate, cheese.
- Avoid oestrogen-containing contraceptives ↻ 91.
- If ≥ 2 attacks/month, refer/discuss for medication to prevent migraines.
- Refer if poor response to treatment.

No: Pain or pressure over forehead or cheek/s worse on bending forwards, recent common cold, runny nose?

Yes

Sinus infection likely

- Give paracetamol 1g 6 hourly.
- If nasal discharge for > 6 days, give amoxicillin 500mg 8 hourly for 5 days. If penicillin allergic, give erythromycin 500mg 6 hourly for 5 days.
- Refer if poor response to treatment, meningism, tooth infection, swelling over sinus or around eye.
- If patient has recurrent sinusitis, test for HIV →60.

No

- Check patient's medication
  - ART: Look for meningitis. Refer if headache persists for more than 6 weeks after starting ART.
  - Overuse of analgesics can cause headaches. Advise to avoid regular use and to cut down on amount used.
- If patient not on above medication consider tension headache, temporal arteritis or neck pain:

Tightness of scalp
Tension headache likely

- Give paracetamol 1g 6 hourly.
- Discuss stress →52.

Pain mainly in neck with muscle stiffness.

- Go to neck pain page →35.

> 50 years, pain over temples
Temporal arteritis likely

- Check CRP.
- Give paracetamol 1g 6 hourly.
- Review next day: if CRP > 5, give prednisone 40mg & refer same day.

- Warn patient to avoid overusing analgesics.
- Refer if the diagnosis is uncertain or headaches are not responding to treatment.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. If giving ceftriaxone IM, divide dose: 1g into 2 different injection sites. [2] Do not give short-acting nifedipine unless pregnant, as it may drop the blood pressure too quickly, causing a stroke. [3] Avoid ibuprofen if peptic ulcer, asthma, hypertension, heart failure, kidney disease.

EYE/VISION SYMPTOMS

Recognise the patient with eye or vision symptoms needing urgent attention:

- Single painful red eye
- Shingles involving the eye (or if eyelid swollen closed, the tip of the nose)
- Sudden loss or change in vision, including blurred or reduced vision
- Consider stroke if sudden onset of vision problems is associated with dizziness, weakness on 1 or both sides, difficulty speaking or swallowing →76.
- Metallic foreign body or foreign body associated with welding or grinding
- Chemical burn to one or both eyes: wash the eye continuously for at least 20 minutes with clean water or saline.
- Whole eyelid swollen, red and painful: possible orbital cellulitis. Give ceftriaxone[1] 2g IV/IM stat

Management:

- If painful red eye associated with coloured haloes around light, dilated oval pupil, headache, nausea and vomiting, acute glaucoma likely. Give acetazolamide oral 500mg immediately and then 250mg 6 hourly and pilocarpine1% eye drops every 15 minutes for 4 doses.
- Refer same day to hospital.

Approach to patient with eye/vision symptoms not needing urgent attention

Both eyes are discharging/watery
Is there prominent itch?

Yes
Associated with hayfever, allergic rhinitis?

No

Localised cause (makeup) likely

- Wash out eye with clean water.
- Remove the cause.
- Treat with oxymetazoline eye drops 6 hourly for 3 days.

Yes

Allergic conjunctivitis likely

- Treat with oxymetazoline eye drops 1–2 drops 6 hourly for 7 days.
- If symptoms persist > 4 weeks, give cetirizine 10mg at night as needed. Avoid steroid eye drops.
- Refer if no better after 2 weeks.

No
Is the discharge clear or pus?

Pus

Bacterial conjunctivitis likely

- Give chloramphenicol 1% ointment 6 hourly for 7 days.
- Advise patient to avoid rubbing eyes and to wash hands regularly.

Clear

Viral conjunctivitis likely

- Give 0.9% saline eye washes.
- Give oxymetazoline eye drops 1–2 drops 6 hourly for 7 days. Avoid using > 7 days as this may result in rebound conjunctivitis.

Refer to eye OPD if symptoms do not improve within 2 days.

Gradual change in vision

- Exclude diabetes ↴ 70.
- Exclude hypertension ↴ 73.
- If status unknown, test for HIV ↴ 60.

- Refer for next available eye OPD appointment.
- Refer HIV patient same week.

Red or swollen eyelids

- Give chloramphenicol 1% ointment 6 hourly for 7 days.
- Wash crusts on lid margin twice a day with warm water.

Refer to eye OPD if symptoms do not improve with treatment.

Foreign body

- Wash the eye with clean water or saline.
- Remove foreign body with cotton-tipped stick or bud.

Refer to eye OPD if:

- Damage to eye
- Abnormal vision or movement of eye
- No improvement after 2 days

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. If giving ceftriaxone IM, divide dose: 1g into 2 different injection sites.

FACE SYMPTOMS

Recognize the patient needing urgent attention:

- Possible stroke/TIA: sudden onset of one sided facial weakness with minimal or no involvement of the forehead usually with weakness of arm/leg →76.
- Facial swelling and difficult breathing: check urine dipstick:
  - Abnormal urine dipstick: kidney disease likely
  - Normal urine dipstick: anaphylaxis likely: give adrenaline[1] 1mℓ (1:1000) IM every 5 minutes until better and hydrocortisone 100mg *slow* IV and promethazine 50 mg IM/*slow* IV
- Painful facial swelling and temperature ≥ 38°C: facial cellulitis likely

Refer urgently same day.

Approach to patient with facial symptoms not needing urgent attention

Face pain

Pain of cheek or jaw with/without swelling and on tapping involved tooth

Gum/tooth infection likely

- Give paracetamol 1g 6 hourly
- Give amoxicillin 500mg 8 hourly for 5 days. If penicillin allergic, give erythromycin 500mg 6 hourly for 5 days *and* metronidazole 400mg 8 hourly for 5 days.
- Refer to dentist same week.

Pain over forehead or cheek/s worse on bending forwards *and/or* pressure over sinuses *and/or* purulent nasal or post nasal discharge

Sinus infection likely

- Give paracetamol 1g 6 hourly
- If symptoms for > 6 days, give amoxicillin 500mg 8 hourly for 5 days. If penicillin allergic, give erythromycin 500mg 6 hourly for 5 days.
- Salt water washes or steam inhalation may relieve symptoms.
- Refer if:
  - Associated tooth infection
  - Poor response to treatment
  - Swelling over sinus or around eye
  - Meningism
  - If sinusitis is recurrent and status unknown test for HIV ↻ 60.
  - Recurrent sinusitis is a stage 2 HIV diagnosis. Patient needs routine HIV care →61.

Sudden weakness of 1 side of face

Unable to wrinkle forehead; cannot close eye fully

Idiopathic (Bell's) palsy likely

- Rarely may be painful.
- Sagging mouth, dribbling, taste impairment, watering or dry eyes
- Patient cannot wrinkle forehead, blow forcefully, whistle or pout out cheek.

- Protect eye by closing eyelid with surgical tape if cornea is exposed.
- Reassure patient that most people recover completely within 10 days.
- Refer if:
  - No improvement after 10 days
  - Patient has otitis media
  - Any change in hearing
  - Recent head trauma
  - Damage to cornea
  - Unsure of diagnosis

Swelling of face

Ensure patient has no difficult breathing, RR < 30, otherwise manage urgently as above.

Is patient on enalapril?

Yes

Patient has angioedema and must stop enalapril *and never start it again*.

- Give chlorpheniramine 4mg 8 hourly for 1–2 days until swelling resolved.
- Refer to doctor for review of medication.
- Advise patient to return urgently should difficult breathing occur.

No

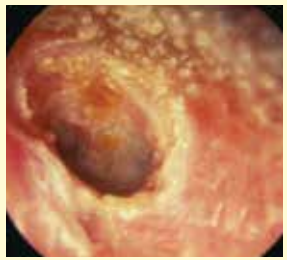
Refer to doctor for review.

[1] Adrenaline is also known as epinephrine.

EAR SYMPTOMS

Itchy ear

Redness *and/or* pus of ear canal



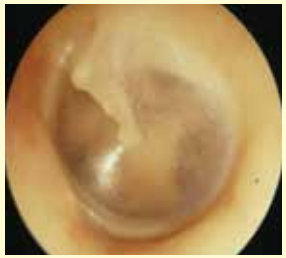
Otitis externa likely

- Give pain relief.
- Clean ear[1].
- Instill 1% acetic acid in alcohol 4 drops in ear 4 times a day for 5 days.
- If severe pain or temperature ≥ 38°C, give flucloxacillin 500mg 6 hourly for 5 days. If penicillin allergic give erythromycin 500mg 6 hourly for 5 days instead.

Refer if infected and no response to treatment within 48 hours

Painful ear

Normal drum and canal

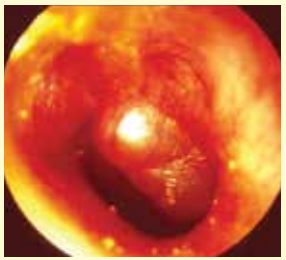


Referred pain likely

Check teeth, temporo-mandibular joint and throat.

Discharge from ear

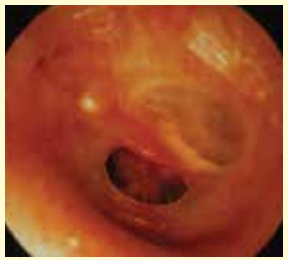
Symptoms < 2 weeks
Red or bulging eardrum



Acute otitis media likely

- Give pain relief
- Clean ear if discharge is present.[1]
- Amoxicillin 500mg 8 hourly for 5 days. If penicillin allergic give erythromycin 500mg 6 hourly for 5 days instead.
- Refer if:
  - No response to antibiotics after 5 days.
  - Recurrent otitis media
  - Painful swelling behind ear
  - Neck stiffness/meningism

Symptoms ≥ 2 weeks
Perforated eardrum



Chronic otitis media likely

- Clean ear[1]. The ear can heal only if dry.
- Refer if:
  - No improvement after 4 weeks
  - Foul-smelling discharge
  - A large hole in eardrum
  - Hearing loss
  - Pain in or behind ear
  - Consider TB and HIV in chronic otitis media that responds poorly to treatment.

Difficulty hearing

- If wax in ear, syringe ear with warm soapy water.
- If patient on streptomycin or kanamycin, stop this medication and refer same week for doctor to review TB treatment.
- Refer unless hearing improves on removal of wax.

[1] Cleaning the ear: Make a wick by twisting a tuft of cotton wool, paper towel or absorbent cloth onto a thin wooden stick. If using cotton wool, it should adhere tightly onto the stick but be fluffy and absorbent on the other end. Insert into ear and remove once wet, continue until wick is dry. Never leave wick or other object inside the ear.

NOSE SYMPTOMS

Runny or blocked nose

Ask about duration and associated symptoms.

Sore throat *and/or* fever

Common cold likely

- Advise the patient with influenza:
  - bed rest
  - avoid contact with others to prevent spread
  - use tissues when sneezing/coughing and dispose of these carefully.
- Pain and fever relief (paracetamol 1g 6 hourly)
- Regular oral fluids
- Reassure patient that antibiotics are not necessary. Use antibiotics only if pus on examination.
- Colds and flu should improve within 3–7 days.

Body aches/muscle pains *and/or* fever *and/or* cold chills

Influenza (flu) likely

Purulent nasal *and/or* post nasal discharge *and/or* headache worse on bending forward *and/or* pressure over sinuses

Sinusitis likely

- Give paracetamol 1g 6 hourly
- If pus from nose or symptoms > 6 days: give amoxicillin 500mg 8 hourly for 5 days. If penicillin allergic, erythromycin 500mg 6 hourly for 5 days instead.
- Salt water washes or steam inhalation may relieve symptoms.
- Refer if:
  - Associated tooth infection
  - Poor response to treatment
  - Swelling over a sinus or around eye
  - Meningism
- If sinusitis is recurrent and status unknown, test for HIV ↴ 60.
- Recurrent sinusitis is a stage 2 HIV diagnosis. Patient needs routine HIV care ↴ 61.

Recurrent episodes of sneezing and itchy nose most days for > 4 weeks

Allergic rhinitis likely

- Chlorpheniramine 4mg 6–8 hourly for up to 5 days only when symptoms worsen (side effect is sedation).
- Refer if no improvement with above treatment and symptoms debilitating.
- If persistant (≥ 4 days per week), give beclomethasone nasal spray long term 2 sprays in each nostril daily and cetirizine 10mg at night.

Bleeding nose

- Pinch nose wings together for 10 minutes.
- Check BP.
  - If < 90/60, elevate legs and give IV sodium chloride 0.9%.
  - If ≥ 130/80 ↴ 73.
- If still bleeding:
  - Insert nasal tampons or BIPP stripping into bleeding nostril/s.
  - Refer for further management if bleeding persists.
- If patient has recurrent episodes:
  - Advise patient to avoid nose-picking, contact sport and trauma to nose.
  - Educate patient to pinch the soft nose wings when bleeding.

MOUTH AND THROAT SYMPTOMS

Recognise the patient needing urgent attention:
- Unable to open mouth
- Unable to swallow at all

Management:
- Refer same day

Examine the mouth and throat for redness, white patches, blisters or ulcers.

Red throat

Are there pus or white patches on tonsils?

No
Viral pharyngitis likely

- Give paracetamol 1g 6 hourly
- Salt water mouthwash
- Reassure patient that antibiotics are not necessary.

Yes
Bacterial tonsillitis likely

- Give paracetamol 1g 6 hourly
- Salt water mouthwash
- Give benzathine penicillin 1.2MU IM single dose or phenoxymethylpenicillin 500mg 12 hourly for 10 days. If penicillin allergic give erythromycin 500mg 6 hourly for 10 days instead.

Refer for ENT assessment if > 4 episodes per year.

White patches on cheeks, gums, tongue, palate, may have angular cheilitis (cracks in corners of mouth).

Oral thrush/candida likely

- Nystatin suspension 1ml orally after eating for 7 days. Keep in mouth as long as possible.

If patient uses inhaled corticosteroids, ensure s/he uses spacer and rinses mouth after use ↻ 65.
If status unknown, test for HIV ↻ 60.
- For routine HIV care →61.
- Oral thrush is a stage 3 HIV disease. Patient needs co-trimoxazole.
- The HIV patient with difficulty or painful swallowing (oesophageal thrush likely) needs fluconazole 200mg daily for 14 days and ART.

Painful blisters on lips/mouth

Herpes simplex likely

- Apply tetracaine 0.5% on blisters 6 hourly.
- If HIV give aciclovir 400mg 8 hourly for 7 days if:
  - Ulcers are extensive or recurrent
  - Severe pain
  - Ulcers present for > 1 month

If status unknown, test for HIV ↻ 60.
- For routine HIV care →61.
- Herpes > 1 month is a stage 4 HIV disease. Patient needs ART →61.

Painful ulcer/s in mouth/ throat

Aphthous ulcer/s likely

- Apply tetracaine 0.5% on ulcers 6 hourly. until healed.
- Refer if:
  - Not healed within 2 weeks
  - Larger than 1 cm in diameter

- Advise the patient with a sore mouth/throat to avoid spicy, hot, sticky, dry or acidic food and to eat soft, moist food or to soften food with margarine or gravy, or dip in tea/coffee or soup.
- Advise to keep mouth and teeth clean by brushing and rinsing regularly.

CHEST PAIN

Recognise the patient with chest pain needing urgent attention:

- Respiratory rate ≥ 30 breaths/minute
- BP ≥ 180/110 or < 90/60
- Pulse irregular, > 100 or < 60
- Severe pain
- New onset of central chest pain
- Pain spreads to the neck, arm or back
- Sweating, nausea, vomiting
- Pale
- At risk of heart attack (diabetes, smoker, hypertension, known CVD risk > 10%)
- Known with ischaemic heart disease

Management:

- If unconscious ↻ 1. If conscious, sit patient up.
- Give 40% face mask oxygen.
- If BP < 90/60, give 200mℓ sodium chloride 0.9% IV.
- Manage according to temperature:

≥ 38°C

Chest infection likely
- Give ceftriaxone[1] 1g IV/IM stat.
- If BP still < 90/60, give 500mℓ sodium chloride 0.9% IV over 30 minutes.
- Repeat if BP persists < 90/60. Stop fluids if respiratory rate increases.
- Refer patient same day.

< 38°C

Do an ECG

ECG normal or unavailable or uncertain
Is chest pain worse on lying down, palpation or breathing deeply?

- Yes → Heart attack unlikely: refer urgently.
- No → **Heart attack** likely →77

ECG abnormal → **Heart attack** likely →77

Approach to the patient with chest pain not needing urgent attention

First exclude pain related to heart and lungs.

Recurrent episodes of central chest pain, brought on by exertion and relieved by rest: **angina** likely →77.

Pain on coughing and breathing deeply: →16.

Once heart and lung conditions excluded, consider heartburn, musculoskeletal problem or shingles.

Retrosternal or epigastric pain with eating, hunger or lying down: **heartburn or indigestion** likely
- Avoid spicy/acidic food, fizzy drinks, eat small frequent meals and prop up head of bed.
- If waist circumference > 88cm (woman), 102cm (man), assess patient's CVD risk ↻ 68.
- Give omeprazole 20mg daily for 14 days.
- Refer same week if any of: no better after 7 days of omeprazole, new onset and > 45 years, pain on swallowing, vomiting, weight loss, loss of appetite, feeling of early fullness, occult blood positive, abdominal mass.

Tender at costochondral junction, no fever or cough
Musculoskeletal problem likely
- Give ibuprofen 400mg 8 hourly with food for up to 5 days.
- Refer if pain persists > 4 weeks.

Burning pain on 1 side with or without rash for 1–2 days
Shingles likely
→41.

Refer same week if uncertain of diagnosis.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone.

COUGH AND/OR DIFFICULT BREATHING

Recognise the patient with cough needing urgent attention:

The patient with cough and/or difficult breathing and 1 or more of the following signs has respiratory distress:

- Breathlessness at rest or while talking
- Respiratory rate ≥ 30 breaths/minute
- Prominent use of breathing muscles
- Coughing up ≥ 1 tablespoon of fresh blood
- Agitation or confusion
- BP < 90/60

Management:

If available, give oxygen (40% face mask or 4L/min nasal prong; if known with COPD, give 24–28% face mask)

Temperature ≥ 38°C
- Give single dose of ceftriaxone[1] 1g IM/IV.
- Refer urgently with continuous oxygen.

Wheeze and difficult breathing, no leg swelling, if 1st episode of wheeze, patient < 50 years
- Treat wheeze →17

Difficult breathing worse on lying flat especially with leg swelling or 1st episode of wheeze in patient ≥ 50 years
- Heart failure likely →75.

Assess the patient with cough and/or difficult breathing not needing urgent attention

Cough and/or difficult breathing < 2 weeks

Sputum, chest pain and fever

Treat for **chest infection**:
- Bed rest and regular fluid intake.
- Give antibiotic if sputum is new, increased or changed in colour:

Is patient at risk of severe infection (HIV, > 65 years, known severe lung, heart, liver disease, diabetes or alcohol abuse)?

Yes
- Give amoxicillin/clavulanic acid[2] 875/125mg 12 hourly for 5 days. Advise to return immediately if worse or if no better after 3 days.

No
- Give benzylpenicillin[2] 2MU IM stat and amoxicillin[2] 1g 8 hourly for 5 days.
- If no better after 2 days add erythromycin 500mg 6 hourly for 5 days if not already on it or refer same day.

Leg swelling or 1st episode of wheeze in patient ≥ 50 years

Heart failure likely →**75**.

Wheezing, no leg swelling, if 1st episode of wheeze, patient < 50 years

Treat wheeze →17.

Cough and/or difficult breathing ≥ 2 weeks

Exclude TB ↻ 55.
While looking for TB, consider other cause for cough and/or difficult breathing.

HIV patient with dry cough, worsening breathlessness on exertion, CD4 < 200

PCP likely
- Doctor to diagnose on history and X-Ray: give co-trimoxazole 320/1600mg 6 hourly for 21 days.
- Start workup for ART ↻ 61.
- Review weekly to assess clinical response and TB culture result: if positive, treat for TB while completing PCP treatment ↻ 57.
- Refer if X-ray not typical, patient was adherent to co-trimoxazole prophylaxis and/or ART, or if no improvement on treatment.

Smoker

Weight loss

Consider **lung cancer.**

Productive cough most days of at least 3 months for ≥ 2 years, no difficult breathing or weight loss

Chronic bronchitis

Advise patient to stop smoking.

If TB, lung cancer and chronic bronchitis are excluded

Leg swelling or 1st episode of wheeze in patient ≥ 50 years

Heart failure likely.

If heart failure and TB excluded

Recent upper respiratory tract infection, no difficulty breathing

Post-infectious cough likely. Advise patient that the cough should resolve within 8 weeks.

Cough persists > 8 weeks, TB excluded.

If above conditions excluded, consider asthma or COPD →65.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. [2] If penicillin allergic, give erythromycin 500mg 6 hourly for 5 days.

WHEEZE/TIGHT CHEST

Initial Management

- Give salbutamol (beta-agonist) via:
  - Large-volume spacer: 4–8 puffs every 20 minutes for 1 hour then reassess, *or*
  - Nebuliser (oxygen-driven nebuliser is preferable)[1]: 1 or 2mℓ of 0.5% salbutamol solution in 3mℓ of sodium chloride 0.9% solution every 20 minutes for 1 hour.
- Give first dose of oral prednisone[2] 40mg if no immediate response, or is currently taking oral prednisone. If prednisone unavailable or patient unable to take it, give hydrocortisone 100mg IV.

After 1 hour assess if patient has respiratory distress ↩ 16.

Worse

Refer immediately. While waiting for transport:

- Add 2mℓ ipratropium bromide to salbutamol nebuliser solution.
- Continue nebulisation every 20 minutes with oxygen in between.[3]

No change

- Add 2mℓ ipratropium bromide to salbutamol solution.
- Continue nebulisation or large volume spacer every 20 minutes with oxygen in between.[3]
- Refer immediately if no response within 3 hours of arrival.
- If improved, follow discharge plan below.

Better or no symptoms

- If stable after 1 hour, follow discharge plan below.

Discharge plan for the patient who has responded to treatment

- Start, or increase dose and frequency of inhaled salbutamol to a maximum of 2 puffs 4 times a day until condition improves. Check inhaler technique ↩ 65.
- If patient received oral prednisone or IV hydrocortisone above, give oral prednisone 40mg daily for 6 more days.
- If patient has fever, increased sputum production or a change in sputum colour give amoxicillin 1g 8 hourly for 5 days. If penicillin allergic, give erythromycin 500mg 6 hourly for 5 days instead.
- Ask about allergic rhinitis/hayfever (sneezing, itchy or runny nose): treating hayfever effectively improves asthma symptoms ↩ 13.
- People are more likely to stop smoking if advised to do so by a health professional. Urge your patient to stop smoking. For tips on communicating effectively see Preface.
- Book follow-up visits before medicines are expected to run out.

Treat according to known diagnosis (see below). If the cause of wheezing is not known →65.

Known asthma

- Start inhaled corticosteroid ↩ 66 if 2nd emergency visit for asthma in 6 months or previously using inhaled corticosteroid.
- If already on inhaled corticosteroid, adjust dose →66.
- Give oral prednisone 40mg daily for 7 days if:
  - Recent/frequent emergency visits or previous hospital admission for asthma.
  - Worsening of symptoms in the months or weeks leading up to the exacerbation.
- Refer same week to doctor if: no response to 7 days of oral prednisone in past 4 weeks, more than 2 courses of oral prednisone in the last 6 months, or exacerbation occurs in spite of maximum level of chronic treatment.
- Follow up the asthma patient →66.

Known COPD

- Give oral prednisone 40mg daily for 7 days if:
  - Breathlessness has improved but remains worse than usual.
  - Patient has been on long-term daily oral prednisone.
- Refer same month to doctor if 2 or more exacerbations in 6 months.
- Follow up the COPD patient →67.

Tell patient to return before follow-up appointment if no improvement after completing a short course of oral prednisone.

[1] If an oxygen-driven nebuliser is not available, use an air-driven nebuliser instead and give facemask oxygen between nebulisation. [2] Oral prednisone is an important component in the management in all but the mildest exacerbations.
[3] Continuous nebulisation is better if there is an inadequate response to initial treatment.

BREAST SYMPTOMS

Approach to the patient with a breast symptom *who is not* breast feeding

Breast lump/s
One or both breasts?

Both breasts

This is likely to be cyclical.
- Reassure
- Change hormonal contraception to non-hormonal method →91.

One breast

Patient > 35 years or a family history of breast cancer?

No	Yes
Re-examine breast on day 7 of menstrual cycle. Refer same week if lump persists.	Refer same week to breast clinic.

Breast Pain

- Reassure patient that breast cancer rarely causes pain.
- Advise a well-fitting bra.
- If pregnant, reassure and give antenatal care →94.
- Give paracetamol 1g 6 hourly as needed.
- May be a side effect of hormonal contraceptive. If no better after 3 months on contraception, change method →91.

Nipple Discharge

Is the discharge blood stained, on 1 side, in patient > 50 years, or in a man?

Yes	No
Refer same week to breast clinic.	• If pregnant, reassure and give antenatal care →94. • If on hormonal contraceptive, reassure. Change to non-hormonal method if distressing →91.

Breast enlargement

One sided

Refer same week to breast clinic.

Both breasts

- Confirm that this is not obesity. If BMI > 25 assess CVD risk →68.
- Look for drugs that cause breast enlargement: efavirenz (reassure patient that it often resolves by 2 years), cimetidine, nifedipine, amlodipine, fluoxetine. Discuss with doctor.

Approach to the patient with a breast symptom *who is* breast feeding

Painful/cracked nipple/s
Usually in first few days of breastfeeding due to poor latching.

- Avoid soap on washing nipples.
- Help patient to latch properly.
- Advise patient to apply breastmilk onto nipples and areola after feeding and expose to the air.
- Advise HIV patient to stop feeding from the breast, express and heat-treat[1] the milk, and cup-feed baby until cracks have healed.

Painful breast/s
Is temperature ≥ 38°C?

No	Yes
Engorgement likely	**Mastitis** likely
Advise frequent breastfeeding and cold compresses.	• Give flucloxacillin 500mg 6 hourly for 5 days. • Paracetamol 1g 6 hourly • Advise HIV patient to stop feeding from the breast, express and heat-treat[1] the milk, and cup-feed baby until mastitis resolves. • Refer if no better after 2 days

Breast lump
Is temperature ≥ 38°C?

Yes	No
Breast abscess likely	**Blocked duct** likely
• Refer same day for incision and drainage. • Advise HIV patient to stop feeding from the breast, express and heat-treat[1] the milk, and cup-feed baby until abscess resolves.	Advise frequent breastfeeding, warm compresses and to massage lump.

[1] Heat-treat milk to rid it of HIV and bacteria: place breastmilk in sterilized peanut butter jar. Close lid and place in pot. Fill pot with water 2cm above level of milk and heat water. Remove jar when water is rapidly boiling.

ABDOMINAL PAIN WITH OR WITHOUT SWELLING (NO DIARRHOEA)

Recognise the patient with abdominal pain needing urgent attention:

- Peritonitis (guarding, rebound tenderness or rigidity of abdomen)
- Jaundice
- Temperature ≥ 38°C
- No stool or flatus for last 24 hours and vomiting
- Nausea, vomiting, fatigue, sore muscles or difficulty breathing, consider acidosis. Check blood glucose ↻ 70. If on ART, check lactate ↻ 63.
- No urine passed for last 12 hours and swelling of abdomen →31.
- Pregnant woman with lower abdominal pain
- Chest pain →15

Refer same day.

Approach to the patient with abdominal pain not needing urgent attention

- If women with lower abdominal pain and/or vaginal discharge, treat for likely pelvic infection →23.
- If the patient has urinary symptoms →31.
- If the patient is constipated →22.

If patient has none of the above, try to identify cause of pain: is the pain in the upper abdomen and related to eating?

Yes - **dyspepsia** likely

Refer same week if any warning signs:

- Weight loss
- Loss of appetite
- Early fullness
- Blood in stool or occult blood positive
- Abdominal mass
- Persistent vomiting or vomiting blood
- New episode in patient ≥ 55 years

Approach to the patient with no warning signs

- If associated with chest pain on exertion →15.
- Assess patient's CVD risk ↻ 68.
- Advise patient who smokes and drinks alcohol to stop ↻ 83.
- Avoid spicy, hot or acidic foods, carbonated drinks.
- Stop non-steroidal anti-inflammatory drugs, aspirin.
- If pregnant, give antenatal care →93.
- Give omeprazole 20mg daily for 14 days.
- Refer if no response after 7 days of omeprazole.

No
Has patient lost weight?

Yes
Is there fever, night sweats, cough and/or HIV?

Yes
Exclude TB →55.

No
Consider **cancer**. Refer same week.

No
Does patient have difficulty breathing, abdominal or leg swelling?

Yes
Heart failure likely →75.

No
Does the patient report worms?

Yes
- Tapeworm: give albendazole 400mg daily for 3 days.
- Other worm or unsure: give single dose mebendazole 500mg.
- Educate on personal hygiene.

No
If the pain is recurrent with constipation and/or diarrhoea and bloating, **irritable bowel syndrome** likely. Refer to doctor.

- Give paracetamol 1g 6 hourly.
- Review regularly until pain resolves or a cause is found.

VOMITING

Recognise the patient needing urgent attention:

Vomiting with 1 or more of the following:
- Reliable signs of dehydration:
  - Postural hypotension (systolic BP drop > 20mmHg between lying and standing)
  - Poor urine output
  - Confused or drowsy
- Peritonitis (guarding, distension or rigidity of abdomen)
- Vomiting blood
- Jaundice
- Abdominal pain and no stools or flatus/wind
- Headache →9
- Patient on ART with other signs of lactic acidosis: nausea, abdominal pain or swelling, weight loss, fatigue, shortness of breath

Management:
- Oral or IV rehydration
- Check blood glucose ↻70.
- If on ART with signs of lactic acidosis, stop ART →63.
- Refer same day to hospital.

Approach to the patient with vomiting not needing urgent attention:

Exclude pregnancy. If pregnant ↻93.

What is duration of vomiting?

< 24 hours

- Most vomiting is due to a viral infection and resolves within 24 hours.
- If ≥ 21 drinks/week (man), 14 drinks/week (woman) and/or > 5 drinks/session →83.
- If patient is dizzy ↻8.
- Give oral rehydration.
- Advise the patient to eat small frequent meals, avoid lying down after meals, avoid hot greasy food and to eat lightly salted dry food before getting out of bed.
- Review in 24 hours if still vomiting.

Vomiting continuously for ≥ 24 hours

Is patient on TB medication or ART?

No

- Give oral rehydration solution.
- Review in 2 days if still vomiting.

If still vomiting, refer same day.

Yes

- Assess for dehydration as above.
- Stop all medication and refer same day.

DIARRHOEA

Recognise the ill patient with diarrhoea needing urgent attention:

Diarrhoea and 1 or more of the following:
- Reliable signs of dehydration
  - Postural hypotension (systolic BP drop > 20mm Hg between lying and standing)
  - Poor urine output
  - Altered mental state (confused or drowsy)

Management:
- Oral rehydration (IV if unable to keep fluids down)
- If patient has had diarrhoea for ≥ 2 weeks send stool sample for 'ova, cysts and parasites'. Indicate on the request form if the patient has HIV.
- Refer same day.

Approach to the patient with diarrhoea not needing urgent attention:

- Confirm that this is in fact diarrhoea: 3 or more watery stools per day.
- Routine antibiotics are unnecessary and increase the likelihood of antibiotic resistance and side effects.
- Knowing the patient's HIV status helps in the management. If status unknown, test for HIV ↴ 60.
- Advise patient to increase fluid intake, eat small frequent meals and avoid milk products, caffeinated drinks and high-fat, high-fibre foods.
- Ask about duration of diarrhoea.

Diarrhoea for < 2 weeks

- Give oral rehydration.
- Record current weight in patient notes.
- Is the temperature ≥ 38°C and/or is there blood and/or mucus in the stool?

Yes

Treat with ciprofloxacin 500mg 12 hourly for 3 days.

No

Give loperamide 4mg initially, then 2mg after each loose stool, maximum 12mg/day.

Review in 2 weeks if diarrhoea still present.

Diarrhoea for ≥ 2 weeks

- Give oral rehydration solution to prevent dehydration.
- Send stool for 'ova, cysts and parasites'. Indicate on request form if patient has HIV.
- Knowing the patient's HIV status helps in the management. If status unknown, test for HIV ↴ 60.

HIV positive

- Give routine HIV care ↴ 61.
- ddI and lopinavir/ritonavir can cause ongoing loose stools.
- Review symptoms and stool result in 1 week.

Isospora belli
- Give co-trimoxazole 320/1600mg (4 tablets) 12 hourly for 10 days.
- Patient needs ART ↴ 61.

Cryptosporidium
Patient needs ART ↴ 61.

Stool negative

Give loperamide 2mg as needed up to 12mg/day.

Stool positive

Treat according to result.

HIV negative

Give metronidazole 2g daily for 3 days to treat empirically for giardiasis. Advise patient to avoid alcohol for 48 hours after last dose.

Review stool result.

If diarrhoea persists despite treatment, refer for specialist review.

CONSTIPATION

Recognise the patient with constipation needing urgent attention:
- No stools or wind in the last 24 hours plus abdominal pain and vomiting

Refer same day to hospital.

Approach to the patient who is constipated and not needing urgent attention:
- Review diet, fluid intake and medication (amitriptylline, codeine/morphine and antacids can cause constipation). Ask about chronic use of enemas or laxatives.
- Exclude pregnancy. If pregnant ↴93.
- Try non drug approaches before prescribing laxatives:
  - Advise a high fibre diet (vegetables, fruit, coarse mielie meal, bran and cooked died prunes) and adequate fluid intake.
  - Advise moderate regular exercise (20 minutes walk daily).
  - Stop chronic use of laxatives or enemas.

No response	Resolved
• Give sennosides A and B 7.5mg 2 tablets at night for 3 days. • If no improvement increase to 4 tablets. • Refer if no response after 1 week, recent change in bowel habits or uncertain cause for constipation.	Advise to continue with diet and exercise and avoid chronic use of laxatives and enemas.

ANAL SYMPTOMS

Recognise the patient with an anal symptom needing urgent attention:
- Unable to sit because of anal symptoms
- Unable to pass stool because of anal symptoms

Refer same day

Anal pain and/or bleeding			Anal Itch		
Crack/s or lump/pile	Red/raw skin in patient with chronic diarrhoea	Ulcer/s	Perianal warts	Worms	Dermatitis
• Treat constipation as above. • Apply bismuth subgallate compound ointment 2–4 times a day or lignocaine 2% cream after each bowel action. • Refer if pile cannot be reduced or is thrombosed.	• Apply zinc and castor oil ointment. • To manage diarrhoea →21.	• Treat as for genital ulcer →26. • Refer if no improvement.	Treat as for genital warts →27.	Give mebendazole 500mg stat.	• Advise good hygiene • Wash with aqueous cream. • Apply 1% hydrocortisone cream twice a day for 5 days.

GENITAL SYMPTOMS

Assess the patient with genital symptoms and his/her partner/s

Assess	Note
Symptoms	Ask about genital discharge, rash, itch, lumps, ulcers and manage as below. Manage other symptoms as on symptom pages.
Abuse	Ask about rape/sexual assault or if patient unhappy in relationship. If yes ↴ 53. Manage and refer the recently raped/sexually assaulted patient urgently ↴ 53.
Safe sex	Ask if patient or regular partner has new or multiple partners, uses condoms unreliably or has substance abuse ↴ 83.
Family planning	Assess patient's family planning needs ↴ 91. Exclude pregnancy. If pregnant ↴ 93.
Examination	Woman: look for abdominal masses, discharge, rash or lumps, cervical tenderness or pelvic masses. Man: look for discharge, inguinal lymph nodes, ulcers, scrotal swelling and/or masses.
HIV	If status unknown test for HIV ↴ 60. The HIV patient needs routine HIV care ↴ 61.
RPR	Check RPR/VDRL if patient has an STI, is pregnant or was raped or whose partner has an STI or is RPR positive. If positive ↴ 28.
Pap smear	Do a Pap smear if indicated ↴ 27 once an abnormal discharge has been treated ↴ 25. If cervix looks abnormal/suspicious of cancer, refer same week.

Advise the patient with genital symptoms and his/her partner/s

- Educate patient about the cause of symptoms and if a sexually transmitted infection (STI), that this increases the risk of HIV transmission.
- Urge the patient to adhere to treatment and to abstain from penetrative sex for the duration of treatment.
- Stress the importance of partner treatment and issue 1 notification slip with the patient's diagnosis in code (as below) for each partner.
- Discuss safe sex: provide male and female condoms, advise patient to stick to one partner at a time and offer referral for medical male circumcision if available.

Treat the patient with genital symptoms

Discharge		Dysuria		Scrotal swelling	Itch			Ulcer/s	Lump/s	
Man →24	Woman →25	Man →24	Woman →31	→24	Discharge in woman →25	Glans penis →24	Pubic area →27	→26	Groin →5	Skin →27

Treat the patient's partner/s according to the patient's diagnosis *as well as* the partners' symptoms (if any)

Patient's diagnosis (code)	Partner treatment
Vaginal discharge (VDS)	Cefixime 400mg orally stat and doxycycline 100mg 12 hourly for 7 days and metronidazole 2g stat[1]
Lower abdominal pain in woman (LAP)	Cefixime 400mg orally stat and doxycycline 100mg 12 hourly for 7 days and metronidazole 2g stat[1]
Male urethritis (MUS)	Cefixime 400mg orally stat and doxycycline 100mg 12 hourly for 7 days and metronidazole 2g stat[1]
Scrotal swelling (SSW)	Cefixime 400mg orally stat and doxycycline 100mg 12 hourly for 7 days and metronidazole 2g stat[1]
Genital ulcer (GUS)	Benzathine penicillin 2.4MU IM stat and erythromycin 500mg 6 hourly for 7 days and aciclovir 400mg 8 hourly for 7 days
RPR positive	Benzathine penicillin 2.4MU IM stat
Balanitis (BAL)	Clotrimazole vaginal pessary 500mg inserted stat or clotrimazole vaginal cream inserted 12 hourly for 6 days
Pubic lice (PL)	Benzyl benzoate 25%
Bubo	Doxycycline 100mg 12 hourly for 14 days and ciprofloxacin 500mg 12 hourly for 3 days[2]

[1] If pregnant or breastfeeding, give amoxicillin 500mg 8 hourly for 7 days instead of doxycycline and avoid metronidazole in the 1st trimester. [2] If pregnant or breastfeeding, give erythromycin 500mg 6 hourly for 14 days instead of doxycycline and ciprofloxacin.

GENITAL SYMPTOMS IN A MAN

First assess and advise the man with genital symptoms ↴ 23 and his partner/s.

Urethral discharge or dysuria/burning urine

Treat for **male urethritis syndrome (MUS)**:
- Cefixime[1] 400mg orally stat *and*
- Doxycycline 100mg 12 hourly for 7 days.
- Treat patient's partner/s ↴ 23.

Advise patient to return in 7 days if symptoms persist.

If ongoing urethral discharge or dysuria, ask if possible reinfection or poor adherence.

Yes
Repeat treatment:
- Cefixime[1] 400mg orally stat *and*
- Doxycycline 100mg 12 hourly for 7 days

No
- Give metronidazole 2g orally stat. (Avoid alcohol for 24 hours)

Refer if not resolved

Scrotal swelling or pain

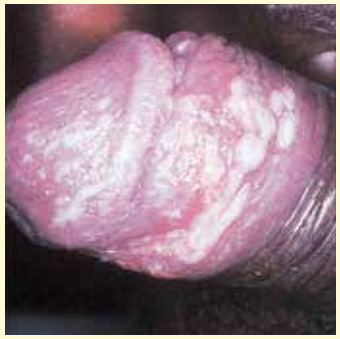
Does patient have any of:
- Sudden onset of severe pain
- Affected testicle is higher
- A history of trauma

Yes
Torsion of testicle likely. Refer to doctor same day.

No
Treat for **scrotal swelling (SSW)**:
- Ceftriaxone 250mg IM stat. If penicillin allergic give ciprofloxacin 500mg 12 hourly for 3 days *and*
- Doxycycline 100mg 12 hourly for 14 days.
- Treat patient's partner/s ↴ 23.

Refer if no improvement after 7 days.

Pain or itchiness of glans or inability to retract or reduce foreskin



Foreskin can be moved easily on examination.

Yes
Treat for **balanitis (BAL)**
- Wash with weak salt solution, avoid soap.
- Retract foreskin while washing.
- Prescribe clotrimazole cream twice daily.
- If no response after 7 days:
  - Repeat treatment.
  - Test for diabetes ↴ 70 and HIV ↴ 60.
  - Treat female partner ↴ 23.
  - If still no better, refer to doctor.

No
Phimosis or paraphimosis likely.

Refer same week to doctor.

[1]Gonococcal resistance to ciprofloxacin is common. If severe penicillin allergic (angioedema, anaphylactic shock or bronchospasm) replace cefixime with ciprofloxacin 500 mg oral stat. Refer if no improvement within 48 hours.

VAGINAL DISCHARGE

- It is normal for women to have a vaginal discharge. Abnormal discharges are itchy or different in colour or smell. Not all women with a discharge have an STI.
- First assess and advise the patient with vaginal discharge and her partner/s ↻ 23.

Is there lower abdominal pain or cervical tenderness?

No

Patient sexually active in last 3 months?

No

Treat for **bacterial vaginosis**:
- Metronidazole 2g orally stat. Avoid in 1st trimester of pregnancy. No alcohol for 24 hours after metronidazole.

Yes

- Treat for **vaginal discharge syndrome (VDS)**:
  - Cefixime[1] 400mg orally stat *and*
  - Doxycycline 100mg 12 hourly for 7 days (If pregnant or breastfeeding, use amoxicillin[1] 500mg 8 hourly for 7 days instead) *and*
  - Metronidazole 2g orally stat. Avoid in 1st trimester of pregnancy. No alcohol for 24 hours after metronidazole.
- Treat the patient's partner/s ↻ 23.
- Treat the baby with pus in eyes born to mother with VDS →97.

If the vulva is red, scratched and inflamed, also treat for **thrush**:
- Clotrimazole vaginal tablet 500mg inserted stat *and*
- Clotrimazole vaginal cream applied twice a day for 6 days after symptoms resolve.
- Avoid washing with soap.

Advise patient to return in 7 days if symptoms persist.

Persistent thrush:
- Repeat clotrimazole.
- Test for diabetes ↻ 70 and HIV ↻ 60.

Ongoing discharge, no thrush:
Ask if possible re-infection or poor adherence to treatment.

Yes
Repeat treatment. If still no improvement, refer to doctor same week.

No
Refer to doctor same week.

Yes

Recognise the patient needing urgent attention

Refer same day if any of the following are present:
- Recent miscarriage/delivery/abortion
- Pregnant or missed or overdue period
- Peritonitis (guarding or rigidity on examination)
- Abnormal vaginal bleeding
- Temperature ≥ 38°C
- Abdominal mass

Management:
- If dehydrated or shocked: give IV fluids
- If temp ≥ 38°C, give ceftriaxone[2] 1g IV/IM stat and metronidazole 400mg orally stat.

Refer same day.

Treat for **lower abdominal pain (LAP)**:
- Ceftriaxone 250mg IM stat. If penicillin allergic give ciprofloxacin 500mg 12 hourly for 3 days *and*
- Doxycycline 100mg 12 hourly for 14 days (If breastfeeding, use amoxicillin 500mg 8 hourly for 14 days instead) *and*
- Metronidazole 400mg 12 hourly for 14 days (Avoid alcohol for 48 hours after stopping treatment).
- Treat the patient's partner/s ↻ 23.

Review within 2–3 days.

No improvement

Refer to doctor same week.

Improved

[1] If severe penicillin allergic (angioedema, anaphylactic shock or bronchospasm) replace cefixime with ciprofloxacin 500 mg oral stat. If severe penicillin allergic and pregnant or breastfeeding, replace cefixime and amoxicillin with erythromycin 500 mg 6 hourly for 7 days. Refer if no improvement within 48 hours. [2] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone.

GENITAL ULCER SYNDROME

First assess and advise the patient with genital ulcer and his/her partner/s ↴ 23.

The patient may have a blister, sore, ulcer, and/or swollen inguinal (groin) lymph nodes that might be tender or fluctuant and/or vaginal/urethral discharge.

First treat for **herpes**
- Give pain relief if necessary.
- Keep lesions clean and dry.
- Give aciclovir 400mg 8 hourly for 7 days.
- Explain that herpes infection is lifelong and that herpes transmission can occur even when asymptomatic. The likelihood of HIV transmission is increased when there are ulcers.
- HIV patients with genital herpes > 1 month have stage 4 HIV and need co-trimoxazole and ART ↴ 61.

If patient sexually active in the past 3 months also treat for **genital ulcer syndrome (GUS)**:
- Benzathine penicillin 2.4MU IM stat *and*
- Erythromycin 500mg 6 hourly for 7 days

If penicillin-allergic replace benzathine penicillin with doxycycline 100mg 12 hourly for 14 days and replace erythromycin with ciprofloxacin 500mg 12 hourly for 3 days.
If pregnant and penicillin allergic, give erythromycin 500mg 6 hourly for a total of 14 days.

Check if patient also has swollen nodes and/or a discharge.

Swollen node/s

Treat patient and partner/s for **bubo:**
Omit erythromycin above and give:
- Doxycycline 100mg 12 hourly for 14 days *and*
- Ciprofloxacin 500mg 12 hourly for 3 days

If pregnant or breastfeeding, replace both with erythromycin 500mg 6 hourly for 14 days.
If nodes painful and swollen:
- Aspirate through healthy skin any fluctuant lymph node every 3 days as needed.
- Give pain relief if needed.
- Review after 14 days. If no better, refer to doctor same week.

Vaginal or urethral discharge

Treat patient and partner/s for **gonorrhoea and chlamydia:**
Omit erythromycin above and give:
- Cefixime[1] 400mg orally stat *and*
- Doxycycline 100mg 12 hourly for 7 days (if pregnant or breastfeeding use amoxicillin[2] 500mg 8 hourly for 7 days instead)
- Also give to woman patient metronidazole 2g orally stat (avoid alcohol for 24 hours).
- Review after 7 days. If no better, refer to doctor same week.

[1]Gonoccocal resistance to ciprofloxacin is common. If severe penicillin allergic (angioedema, anaphylactic shock or bronchospasm) replace cefixime with ciprofloxacin 500mg orally stat. Refer if no improvement within 48 hours.
[2]If severe penicillin allergic and pregnant or breastfeeding, replace cefixime and amoxicillin with erythromycin 500mg 6 hourly for 7 days. Refer if no improvement within 48 hours.

OTHER GENITAL SYMPTOMS

First assess and advise patient and partner/s ↩ 23.

Lumps

Genital warts
If warts are soft, involve the skin, and < 10mm:
- Protect surrounding skin with petroleum jelly and apply 20% tincture of podophyllin solution. Do not apply internally.
- Wash solution off after 4 hours.
- Repeat weekly for 4 weeks.
- Do a Pap smear.
- Check RPR →28.

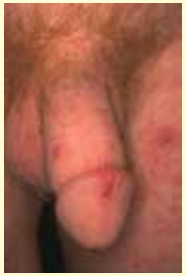
Refer if:
- No response or
- If warts are > 10mm, hard, on mucosal surfaces or
- Pregnant *or*
- Podophyllin not available

Molluscum contagiosum
- Papules with central dent
- Paint with tincture of iodine.
- If HIV, should resolve with ART.

Itchy rash in pubic area

Pubic lice
Treat patient and partner/s:
- Apply benzyl benzoate 25% from the neck down for 24 hours. Advise patient to avoid mucous membranes, urethral opening and raw areas as it may sting. Repeat after 7 days if lice or nits are seen.
- Wash clothes and linen.

Scabies
Treat patient:
- Apply benzyl benzoate 25% from the neck down for 24 hours. Advise patient to avoid mucous membranes, urethral opening and raw areas as it may sting.
- Repeat after 1 week if necessary.
- Wash clothes and linen.
- Treat partner/s even if asymptomatic.



CERVICAL SCREENING

- Papanicolaou (Pap)/cervical smears detect cervical abnormalities which occur before cancer develops. Cervical cancer is caused by certain types of human papilloma virus (HPV). HPV is usually transmitted sexually.
- Women who smoke are more likely to have cervical abnormalities. Advise smokers to stop.
- An asymptomatic HIV-negative woman should receive 3 smears in her lifetime from age 30, with a 10-year interval between each smear.
- An HIV-positive woman should receive a Pap smear on diagnosis, regardless of her age. If the result is normal, she needs a Pap smear every year.
- In pregnancy, Pap smears can be performed safely up to 30 weeks' gestation.
- If the patient has an abnormal vaginal discharge, treat the discharge first and then take a Pap smear at a follow-up visit.

Manage according to the Pap result

- Unsatisfactory smear: repeat within 3 months.
- ASC-US: repeat within one year.
- 2 consecutive ASC-US *and* HIV positive: refer colposcopy.
- 3 consecutive ASC-US *and* HIV negative: refer colposcopy.
- ASC-H (ASC-US ?HSIL) or AGUS – refer colposcopy.
- Suspicious of cancer: Refer urgent colposcopy.
- LSIL: repeat after one year.
- 2 consecutive LSIL: refer colposcopy.
- HSIL: refer for colposcopy.
- Normal: arrange repeat Pap date according to HIV status.

Inform patient of symptoms of cervical cancer (abnormal bleeding, vaginal discharge) and instruct her to return should they occur.

ASC-US: Atypical squamous cells of undetermined significance; LSIL: Low-grade squamous intraepithelial lesions; HSIL: High-grade squamous intraepithelial lesions; ASC-H: Atypical cells - cannot exclude HSIL; AGUS: Atypical glandular cells of undetermined significance

POSITIVE SYPHILIS RESULT

- First assess and advise the patient with a positive syphilis result and his/her partner/s ↩ 23.
- Do a RPR/VDRL test in those who are pregnant, sexually assaulted, with a sexually transmitted infection (STI), genital warts, signs of secondary or tertiary syphilis[1] or recently treated for early syphilis, as well as those whose partners have an STI or positive RPR result.
- If RPR checked before 20 weeks' gestation, recheck at 34 weeks. Do a rapid VDRL if patient is unbooked in labour or after delivery before discharge.
- RPR and VDRL tests reflect disease activity but do not necessarily indicate syphilis infection. They are useful to measure successful response to treatment.
- TPHA or FTA tests are specific for syphilis and confirm its diagnosis. They usually remain positive for life.

RPR/VDRL positive

Not pregnant
Is RPR titre from last 2 years available?

No

Does patient have a genital ulcer or signs of secondary syphilis[1]?

No
- Treat for late syphilis.
- Treat partner/s →23.

Yes
- Treat for early syphilis.
- Treat partner/s →23.

Yes

New titre is either:
- ≤ 1:8 and unchanged *or*
- at least 4 times lower (eg was 1:32, now 1:8)

No
- New syphilis infection likely.
- Treat for early syphilis.
- Treat partner/s →23.

Yes
- No further treatment needed.
- Discharge.
- If not already treated, treat partner/s →23.

Repeat RPR/VDRL after 3 months.

Pregnant

- Treat for late syphilis
- Treat partner/s →23.

- *If penicillin allergic* give erythromycin 500mg 6 hourly for 28 days. Once she has stopped breastfeeding, repeat treatment with doxycycline 100mg 12 hourly for 28 days[3].

Early syphilis:
- Benzathine penicillin 2.4MU IM stat
- *If penicillin allergic* give doxycycline 100mg 12 hourly for 14 days.

Late syphilis:
- Benzathine penicillin 2.4MU IM weekly for 3 weeks
- *If penicillin allergic* and not pregnant give doxycycline 100mg 12 hourly for 28 days.

Treat the newborn of the RPR positive mother:
- Examine the baby.
  - Well baby: benzathine penicillin 50 000u/kg IM stat.
  - Signs of congenital syphilis[2]: procaine penicillin 50 000u/kg IM daily for 10 days.

[1]The signs of secondary syphilis occur 6–8 weeks after the primary ulcer and include a generalized rash (including palms and soles), flu-like symptoms, flat wart-like genital lesions, mouth ulcers and patchy hair loss. Tertiary syphilis occurs many years later and affects skin, bone, heart and nervous system. [2]Signs of congenital syphilis are rash (red/blue spots or bruising especially on soles and palms), jaundice, pallor, distended abdomen due to enlarged liver or spleen, low birthweight, respiratory distress, large, pale placenta, hypoglycaemia. [3]Erythromycin does not reliably cure syphilis in either the mother or the baby.

ABNORMAL VAGINAL BLEEDING

Recognise the patient with vaginal bleeding needing urgent attention:

- BP < 90/60
- Exclude pregnancy. If pregnant →93.
- Following abortion or miscarriage

Management:

- Give IV sodium chloride 0.9% and refer same day.

Approach to the patient with abnormal vaginal bleeding not needing urgent attention

- Refer within 2 weeks the patient with vaginal bleeding who is menopausal (no periods for at least one year).
- In patient who is not menopausal determine the type of bleeding problem.

Heavy regular bleeding with/without pain (bleeding > 7 days, passing clots)

Any bleeding elsewhere (gums, easy bruising, rash)?

Yes

- Check full blood count.
- Refer to doctor same week.

No

- If Hb < 11 give ferrous sulphate compound BPC 170mg 8 hourly after food for at least 3 months until Hb > 11.
- During period, give ibuprofen 400mg 8 hourly with food for 2-3 days to decrease pain and blood loss.
- If newly started on injectable contraceptive, give levonorgestrel/ethinyl oestradiol 0.15/0.03mg for 3 cycles.
- Refer the patient if:
  - Same week if abdominal mass
  - No better after 3 months
  - Following IUCD insertion

Periods have irregular pattern (< 24 days or > 35 days between periods)

Does patient have hot flushes, mood swings and/or difficulty sleeping?

Yes

Patient is perimenopausal.

→98

No

- If there is weight gain, tiredness, feeling cold all the time, check TSH. Refer to doctor if abnormal.
- Give levonorgestrel/ethinyl oestradiol 0.15mg/0.03mg for 6 months ↻ 91.
- Refer to gynaecologist if patient wanting to be pregnant.

Spotting between periods

- If STI symptoms: ↻ 23.
- Do pap smear ↻ 27.

Bleeding after sex

- If STI symptoms: ↻ 23.
- If assault or abuse ↻ 53.

If on hormonal contraception: manage according to method

Oral contraceptive

- Ensure correct use.
- If diarrhoea and vomiting, advise condom use until diarrhoea, vomiting and spotting resolve.
- If on phenytoin, carbamazepine, rifampicin or lopinavir/ritonavir, change to IUCD or injectable.

Injectable contraceptive

- Common in first 3–6 months.
- Give levonorgestrel/ethinyl oestradiol 0.15/0.03mg for 7 days. Give ibuprofen 400mg 8 hourly for 3 days instead if breast feeding, smoker > 35 years, BP ≥140/90, migraine with focal symptoms, DVT or pulmonary embolus.

Refer the patient within 2 weeks if:

- Unsure of diagnosis
- Menopausal (no periods for at least 1 year)
- Bleeding persists: > 1 week after STI treatment, after diarrhoea and vomiting stop or for > 3 months
- Abnormal cervix on speculum examination (suspicious of cancer)

SEXUAL PROBLEMS

Problem with erections

Was the onset of the problem gradual or sudden?

Gradual onset
Partial or poorly sustained erections

- Assess cardiovascular disease risk ↴ 68.
- Screen for substance abuse: if > 21 drinks/week or > 5 drinks per session or misusing prescription or illicit drugs ↴ 83.
- Atenolol, furosemide, HCTZ, fluoxetine, amitriptyline, phenytoin, carabmazepine, cimetidine may cause erection problems. Doctor can consider changing medication but needs to balance disease control with possible improvement in erections.
- Advise the patient who smokes to stop.
- Ask: 'Are you stressed?' If yes ↴ 52.
- Refer to urologist if no improvement once treatment optimised and chronic condition stable.

Sudden onset
Has erections in morning, but not during sex

- Ask: 'Are you stressed?' If yes ↴ 52.
- Ask about sexual assault or abuse ↴ 53 and anxiety/fear about sex and fertility. Refer to available counselor.
- Assess patient's family planning needs ↴ 91.
- Discuss condom use. Ensure patient knows how to use condoms correctly.

Woman who has pain with sex

Is the pain superficial or deep?

Superficial pain

- Look for STI: if vaginal discharge or ulcers ↴ 23.
- Ask about vaginal dryness. If there is vaginal atrophy or has other menopausal symptoms like flushes, problems sleeping, mood changes, headaches ↴ 98.
- Advise use of lubricant with sex, but to avoid using Vaseline® with condoms.

Deep pain

- Look for STI: if vaginal discharge or lower abdominal pain ↴ 23.
- Ask about irritable bowel syndrome: recurrent abdominal pain with constipation and/or diarrhoea and bloating ↴ 19.
- Severe spasm of vagina during sex: ask about sexual assault or abuse ↴ 53.
- Refer to gynaecologist if mass in abdomen or periods have become heavy and painful.

Loss of libido

- Ask: 'Are you stressed?' If yes ↴ 52.
- Ask about sexual assault or abuse ↴ 53.
- If low mood or sadness, loss of interest or pleasure, feeling tense or worrying a lot or not coping as well as before, consider depression/anxiety ↴ 81.
- Screen for substance abuse: if > 21 drinks/week (man) or > 14 drinks/week (woman) or > 5 drinks/session or misusing prescription or illicit drugs ↴ 83.
- Ask the woman patient about pain with sex.
- Ask about anxiety/fear about sex and fertility. Refer to available counselor.
- Assess patient's family planning needs ↴ 91.

Refer if sexual problems do not resolve.

URINARY SYMPTOMS

Recognise patient with urinary symptoms needing urgent attention:

- Unable to pass urine with lower abdominal discomfort

Management:

- Insert urethral catheter.
- Refer same day.

Approach to patient with urinary symptoms not needing urgent attention

Blood in urine

Has patient been in bilharzia area[1]?

Yes

- Give single dose praziquantel 40mg/kg.
- To prevent re-infection advise patient to boil water before use and avoid swimming in contaminated water.

No

Does patient have burning urine?

No

Leucocytes and nitrites on urine dipstick?

No

Refer for investigation of cause of blood in urine.

Yes

Burning urine

Woman

- If patient has a vaginal discharge →23.
- If no vaginal discharge, is patient pregnant, catheterised, known with diabetes or urinary tract problem?

No

Patient has a simple urinary tract infection.

- Give ciprofloxacin 500mg 12 hourly for 3 days.
- Encourage patient to drink plenty of fluids and to empty bladder after sex.

Yes

Patient has a complicated urinary tract infection.

- Give ciprofloxacin 500mg 12 hourly for 7 days or if pregnant, amoxicillin/clavulanic acid[2] 875/125mg 12 hourly for 7 days.
- Encourage patient to drink plenty of fluids.
- Educate female patient to empty bladder after sex.

Man

Look for discharge

No discharge

Are there leucocytes and nitrites on *midstream* urine?

Yes

Patient has a complicated urinary tract infection.

- Give ciprofloxacin 500mg 12 hourly for 7 days or if pregnant, amoxicillin/clavulanic acid[2] 875/125mg 12 hourly for 7 days.
- Encourage patient to drink plenty of fluids.
- Educate female patient to empty bladder after sex.

No

Patient has an STI →23.

Patient has discharge

Patient has an STI →23.

Do a urine microscopy, culture and sensitivity if symptoms do not resolve or patient has recurrent urinary tract infections.

Flow Problem

Leakage of urine

- Check dipstick to exclude urinary tract infection.
- Doctor to review use of furosemide.
- Look for vaginal atrophy ↻ 98.
- Ask about constipation ↻ 22.
- Advise patient to cut down alcohol and caffeine and to do Kegal exercises.
- Refer to physiotherapist if available.
- Refer if patient has vaginal prolapse or no response to above measures.

Poor stream or difficulty passing urine

- Doctor to review use of amitriptyline.
- Refer for assessment, same week if patient has weight loss or hard and nodular prostate on rectal examination.

[1] Bilharzia areas include Limpopo, North West, Mpumalanga, KwaZulu-natal and isolated areas in Eastern Cape (Transkei) [2] If penicillin allergic, give erythromycin 500mg 6 hourly for 7 days.

BODY/GENERAL PAIN

Approach to the patient who aches all over
- Check patient's temperature and weight.
- Ask about a sore throat or runny/blocked nose.

Normal

Do a musculoskeletal screen to check if problem is in the joint. Ask the patient to:
- Place hands behind head; then behind back.
- Make a fist and open hand.
- Press palms together with elbows lifted.
- Walk. Sit and stand up with arms folded.

- If temperature ≥ 38°C →4 *and/or*
- If weight loss ≥ 5% of body weight in past 4 weeks →3.
- If sore throat →14.
- If runny/blocked nose →13.

Unable to do all actions comfortably.

Able to do all actions comfortably

Examine the joints.

Joints are warm, tender, swollen or have limited movement.

→33

Joints are normal.

- If status is unknown, test for HIV ↻ 60.
- Ask patient: 'Are you stressed?' If yes ↻ 52.
- If patient has experienced recent trauma or abuse ↻ 53.
- Ask about duration of generalised pain.

< 4 weeks

- Give paracetamol 1g 6 hourly.
- Patient to return if no better in 2 weeks.

≥ 4 weeks

- Give paracetamol 1g 6 hourly.
- Take blood for CRP, creatinine, random blood glucose and finger-prick Hb.
- If patient has weight gain, low mood, dry skin or constipation, check TSH.
- Review in 2 weeks.

Blood results all normal

Consider fibromyalgia →90.

Blood results abnormal

Refer to doctor for further assessment.

JOINT SYMPTOMS

Recognise the patient with a joint symptom needing urgent attention:

Short history of single, warm swollen, extremely painful joint and:
- Temperature ≥ 38°C. If known with gout →89, otherwise refer same day.
- Known haemophiliac – possible bleed into the joint
- Trauma in the past 48 hours

Refer same day.

Approach to the patient with a joint symptom not needing urgent attention

Do a musculoskeletal screen to check if problem is in the joint. Ask the patient to:
- Place hands behind head; then behind back. Make a fist and open hand. Press palms together with elbows lifted.
- Walk. Sit and stand up with arms folded.

Able to do all actions comfortably.

Joint problem unlikely

- If general body pain ↻ 32.
- If localised pain see relevant page.

Unable to do all actions comfortably.
Recent trauma?

Yes

- Rest and elevate joint.
- Apply ice.
- Apply pressure bandage.
- Give ibuprofen 200mg 3 a day with food for 5 days. Avoid if peptic ulcer, asthma, hypertension, heart failure, kidney disease.
- X-Ray to exclude fracture if no better after 5 days.

No
Ask about duration of joint pain.

≥ 8 weeks

Chronic arthritis

→88

< 8 weeks
Does patient have a genital discharge?

Yes

→23

No
Painful big toe, knee or ankle with warm red overlying skin?

No

- Give ibuprofen 400mg 8 hourly with food for up to 1 month. Avoid if peptic ulcer, asthma, hypertension, heart failure, kidney disease.
- If status unknown test for HIV ↻ 60.
- Review after 1 month, sooner if joint pain worsens.

If no better, refer to specialist.

Yes

Acute gout likely
- Might have had similar episode previously.
- For treatment of acute gout attack and routine gout care →89.

BACK PAIN

Recognise the patient with back pain needing urgent attention

- Bladder or bowel disturbance
- Sudden onset of leg weakness
- Recent trauma with severe pain and X-Ray unavailable or abnormal
- Temperature ≥ 38°C *and* vomiting, pulse rate > 80, respiratory rate > 17, BP < 90/60, diabetes, pregnancy, menopause or male patient: **pyelonephritis** likely.
- Severe stabbing flank pain (one sided) with cramp-like radiation to groin and blood in urine: **kidney stone** likely.

Management:

- Pyelonephritis: give IV sodium chloride 0.9% and ceftriaxone[1] 1g IM/IV.
- Kidney stone: give IV sodium chloride 0.9% and morphine 10–15mg IM single dose.
- Refer urgently to hospital.

Approach to patient with back pain not needing urgent attention

- If patient is a non-pregnant woman of reproductive age with temperature ≥ 38°C *and*:
  - Vaginal discharge with/without lower abdominal pain: **pelvic inflammatory disease** is likely →23.
  - Flank pain: **uncomplicated pyelonephritis** is likely. Give ciprofloxacin oral 500mg 12 hourly for 7 days and paracetamol 1g 6 hourly as needed.
- Next, ask about TB symptoms: cough, weight loss, night sweats, feeling unwell.

Yes

Exclude TB ↩ 55 *and*

- Do back X-Ray.
- Refer to doctor.

No TB symptoms

Is there any of: < 20 years, > 55 years, pain progressive or for > 6 weeks, previous cancer or oral steroid use, HIV or deformity?

Yes

No

What is the nature of the back pain?

- Sleep not usually disturbed by pain *and*
- No stiffness or stiffness on waking lasts < 30 minutes *and*
- Pain is worse with activity and improves with rest.

Yes

Mechanical back pain likely

- Measure waist circumference: if > 80cm (woman) or 94cm (man) assess CVD risk ↩ 68.
- Assess and manage patient's stress ↩ 52.
- Advise patient to be as active as possible, continue to work and avoid resting in bed.
- Give paracetamol 1g 6 hourly.
- If poor response after 1 week add ibuprofen 400mg 8 hourly for up to 5 days. Avoid if peptic ulcer, asthma, hypertension, heart failure, kidney disease.
- If still a poor response add tramadol 50mg 4–6 hourly.
- Refer to physiotherapy if pain persists > 2 weeks, or unable to cope with daily activities/work.
- Refer to specialist if pain persists > 6 weeks, urgently if bladder disturbance or leg weakness.

No / Unsure

Inflammatory back pain likely

- Check CRP.
- Do back X-Ray.
- Refer to specialist.

[1]Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone.

NECK PAIN

Recognise the patient with neck pain needing urgent attention:

- Neck stiffness with temperature ≥ 38°C: give ceftriaxone[1] 2g IV/IM stat.
- New onset of hand or arm symptoms (weakness or numbness) or gait disturbance (leg weakness, stiffness or loss of balance)
- Trauma with neurological symptoms or abnormal X-Ray: immobilise neck with hard collar or sandbags on either side of the neck.

Refer same day.

Approach to the patient with neck pain not needing urgent attention

Is there any of < 20 years, > 55 years, pain progressive or for > 6 weeks, previous TB, cancer or oral steroid use, feeling unwell or weight loss?

Yes	No	
Do X-Ray and refer.	Neck pain with arm pain • Give paracetamol 1g 6 hourly. Avoid NSAIDs like ibuprofen. • Do not refer for physiotherapy.	Neck pain without arm pain • Give paracetamol 1g 6 hourly. Avoid NSAIDs like ibuprofen. • Refer for physiotherapy.
	Refer if no response after 1 month or hand weakness develops.	Refer if no response after 3 months.

ARM SYMPTOMS

Recognise the patient with arm symptoms needing urgent attention:

- Pain and limitation of movement following injury: refer
- Arm, elbow or hand pain with swelling and temperature ≥ 38°C: refer
- Left arm pain with chest pain: exclude ischaemic heart disease →15.
- Sudden onset of weakness of arm perhaps with vision problems, dizziness, difficulty speaking or swallowing: consider stroke/T/A →76.

Approach to the patient with arm symptoms not needing urgent attention

Screen if problem is in the joint: Place hands behind head; then behind back. Make a fist and open hand. Press palms together with elbows lifted. Walk. Sit and stand up with arms folded.

Cannot do screen comfortably.	Can do screen comfortably. Check for associated symptoms.			
Joint problem likely	Painful shoulder **Referred pain** likely	Wrist pain worse at night and if arm hangs down. May be pins and needles in 1st, 2nd and 3rd fingers.	Elbow pain worse on gripping **Tennis or golfer's elbow** likely	Pain at base of thumb relieved by rest **De Quervains tenosinovitis** likely
→33.	Ask about chest pain, difficult breathing, cough, abdominal pain, pregnancy. See relevant page.	**Carpal tunnel syndrome** likely Refer	• Advise rest. • Give ibuprofen 400mg 3 times a day with food for 5 days. • Refer if no better.	• Rest and splint joint. • Give paracetamol 1g 6 hourly. • Refer if no better.

[1]Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. If giving ceftriaxone IM, divide dose: 1g into 2 different injection sites.

LEG SYMPTOMS

- If the problem is in the joint →33.
- If the problem is in the foot →37.

Recognise the patient with leg symptoms needing urgent attention:

- Unable to bear weight following injury
- Swelling and localised pain in calf : DVT likely especially if > 35 years, BMI > 25, smoker, immobile, pregnant, on oestrogen, recent surgery, TB or cancer
- Muscle pain in legs or buttocks on exercise associated with pain at rest, gangrene or ulceration: critical limb ischemia
- Sudden onset of weakness of leg perhaps with vision problems, dizziness, difficulty speaking or swallowing: consider stroke/T/A →76.

Refer same day.

Approach to the patient with leg symptoms not needing urgent attention

Is there leg swelling?

No

Pain in buttock radiating down back of leg

Irritation of sciatic nerve likely

Refer same week.

Muscle pain in legs or buttocks on exercise

Claudication likely

- Leg pulses are weak or absent.
- Skin is cool, shiny and hairless.

Manage for peripheral vascular disease →79.

Yes

Both legs swollen

Is there cough/wheeze/difficult breathing?

Yes

→16.

No

- Exclude pregnancy. If pregnant →93.
- Check for kidney disease on urine dipstick: if blood or protein, check BP ↻ 73 and refer to doctor.

If none of the above or unsure of diagnosis, refer same week.

One leg swollen

Has there been a recent injury?

Yes

Soft tissue injury likely

- Ensure patient can bear weight on leg, otherwise refer same day.
- Apply firm supportive bandage.
- Advise patient to use leg within limits of pain.
- Give ibuprofen 400mg 3 times a day with food up to 5 days, or if peptic ulcer, hypertension or asthma, paracetamol 1g 4 times a day.
- Review if no better after 2 weeks or if symptoms worsen.

No

Examine skin for discolouration, ulcers or lumps.

Discolouration, ulcers or breaks in skin

Venous stasis likely

- Advise patient to exercise daily and raise the leg periodically.
- If ulcer →46.

Purple lumps on legs or elsewhere on body

Kaposi's sarcoma likely

- If status unknown test for HIV ↻ 60.
- Patient needs ART within 2 weeks →61.
- Refer to KS clinic.

FOOT SYMPTOMS

- If the problem is in the joint →33.

Give urgent attention to the patient with foot symptoms:

- Unable to bear weight following injury
- On ART with signs of lactic acidosis: nausea, abdominal pain or swelling, weight loss, fatigue, shortness of breath. Check lactate →63.
- On ART and symptoms rapidly worsening over a few weeks, sensation decreased, and/or arms involved: stop ART.
- Muscle pain in legs or buttocks on exercise associated with foot pain at rest, gangrene or ulceration: critical limb ischemia

Refer same day.

Approach to the patient with foot symptoms not needing urgent attention

Generalised foot pain

Constant burning pain, pins/needles and/or numbness of feet worse at night
Peripheral neuropathy likely

- If status unknown, test for HIV ↻ 60. HIV patient needs routine care ↻ 61.
- Exclude diabetes ↻ 70.
- Give amitriptyline 25–75mg at night and paracetamol 1g 6 hourly.
- If no response, add ibuprofen 400mg 8 hourly with food up to 5 days.
- Refer same week if one-sided, other neurological signs, or loss of function.

On IPT or TB treatment: give pyridoxine 75mg daily for 3 weeks, then 25mg daily for duration of treatment.
Refer if no response within 1 week of treatment.

- If on d4T switch to TDF 300mg daily. Check eGFR: if < 50 refer ↻ 63.
- If on AZT or ddI refer.

If no response to treatment, refer.

Foot pain on exercise with muscle pain in legs and buttocks
Peripheral vascular disease likely

→79.

Localised pain

Ensure that shoes fit properly.

Heel pain
Plantar fasciitis likely if pain is worse on waking

- Advise patient to avoid standing and to apply ice.
- Give ibuprofen 400mg 3 times a day with food up to 5 days, or if peptic ulcer, hypertension or asthma, paracetamol 1g 6 hourly.
- Refer to physiotherapist.

Foot deformity

Bony lump at base of big toe with/without callus, inflammation, ulcer
Bunion likely

- Encourage patient to go barefoot when possible.
- If severe pain or ulceration, refer for surgery.
- Refer other foot deformity.

In the patient with diabetes and/or PVD identify the foot at risk to prevent ulcers and amputation

- Skin: callus, corns, cracks, wet soft skin between toes, ulcers. Refer the patient with ulcers for specialist care.
- Foot deformity: most commonly bunions (see above). Refer the patient with foot deformity for specialist care.
- Sensation: light prick sensation abnormal after 2 attempts
- Circulation: claudication (muscle pain in legs or buttocks on exercise with/without rest pain), absent foot pulses. Refer the patient with claudication for specialist care.

Advise patient with diabetes and/or PVD to care for feet daily to prevent ulcers and amputation

- Inspect and wash feet daily and carefully dry between the toes. Do not soak your feet.
- Moisten dry cracked feet daily with aqueous cream. Do not moisturise between toes.
- Tell your health worker at once if you have any cuts, blisters or sores on the feet.
- Avoid walking barefoot or wearing shoes without socks. Inspect inside shoes daily.
- Clip nails straight across. Do not cut corns/calluses yourself or use chemicals/plasters to remove them.
- Avoid testing water temperature with feet or using hot water bottles or heaters near feet.

INJURED PATIENT

Recognise the injured patient needing urgent attention:

- Unconscious →1
- BP < 90/60: give IV Ringer's lactate. Check Hb.
- Difficulty breathing – may need a chest drain. Doctor to assess.
- Blood in urine
- Enlarging or pulsating swelling
- Fracture: see below
- Head injury: see below

Refer patient urgently.

Bruising

- Elevate and apply ice.
- Apply supportive bandage if severe.
- If bruising extensive check for blood in urine.
- Give paracetamol 1g 6 hourly.
- If blood in urine give IV sodium chloride 0.9% and refer same day.

Fracture/s

- Immobilise the limb.
- Patient should be assessed same day by a doctor.
- Refer urgently if:
  - Poor perfusion below a limb fracture: poor capillary refill, limb colder or pale below injury
  - Loss of function or weakness
  - Loss of sensation
  - Overlying open wound
  - Fractures of femur or pelvis
  - Suspected spinal fracture
  - Deformity

Laceration/s

- Clean with saline and suture if needed.
- Avoid suturing stab wounds > 12 hours on body, > 24 hours on face/head; bullet wounds, crush injuries, chest stabs
- Give paracetamol 1g 6 hourly as needed.
- Remove sutures after 7 days except:
  - Face and neck: 4–5 days
  - Leg: 10 days
  - Below knee: 2 weeks
  - Wound under tension like amputation: 2 weeks

Head injury

Recognise the patient with a head injury needing urgent referral:

- Skull fracture
- Amnesia
- Loss of consciousness or fit after injury
- Increasing restlessness, confusion, aggression
- Nausea and/or vomiting
- Double vision
- Blood or serous fluid from nose or ear
- Haematoma around eye or behind eardrum
- Limb weakness
- Drunk patient
- Pupils respond slowly to light or are different size.

Approach to patient with head injury not needing urgent referral

- Clean any wound and suture if needed.
- Give paracetamol 1g 6 hourly for pain relief. Advise patient to avoid sleeping tablets and tranquilizers.
- On discharge home ensure a responsible person is available to keep an eye on the patient for 24 hours.
- Advise patient to avoid drinking alcohol for 24 hours.
- Patient to go to hospital if any of the following occur: vomiting, visual disturbances, headache not relieved by paracetamol, balance problem, difficult to wake.

- If patient has been assaulted ↩ 53.
- Ask about substance abuse ↩ 83.
- Give the patient with a wound tetanus toxoid 0.5mℓ IM if not had in last 5 years.
- Advise patient to return if no improvement.

BURNS

Attend urgently to the patient with a burn

- Remove smouldering, hot and/or constrictive clothing and rings and immerse burnt area in cold water for 30 minutes.
- Clean burn gently with clean water or sodium chloride 0.9%.
- Assess the percentage of body surface burnt (see adjacent guide) and depth of the burn:
  - Full thickness burns: complete skin loss, dry, charred, whitish/brown/black, painless
  - Partial thickness burns: moist white/yellow slough, red, mottled, only slightly painful
- Cover full thickness and extensive burns with an occlusive dressing, other burns with paraffin gauze and dry gauze on top. If infected apply povidone iodine 5% cream daily.
- If inhalation burn with black sputum, difficulty breathing, hoarse voice or stridor apply face mask oxygen.
- Ensure hydration: if < 10% burns give oral fluids; if ≥ 10% burns, give sodium chloride 0.9% IV [burn x weight (kg) x 4mℓ]: give half volume in first 8 hours.
- Give tetanus toxoid 0.5mℓ IM if not had in last 5 years.
- Give paracetamol 1g 6 hourly as needed.
- Ask about abuse ↻ 53 and substance abuse ↻ 83.

Calculate % of body surface burnt:

- Head 9%
- Neck 1%
- Arm 9%
- Leg 18%
- Front torso 18%
- Back 18%

Refer same day the patient with:

- Full thickness burns
- Partial thickness burns > 10% of total body surface
- Burns of hands/face/feet/genitalia/perineum/major joints
- Circumferential burns of limbs/chest
- Electrical or chemical burns
- Inhalation injury

BITES

Recognise the patient with a bite needing urgent attention:

- Snake bite even if bite marks not seen
- Insect bite/s and weakness, drooping eyelids, difficulty swallowing & speaking, double vision
- Suspected rabid animal (animal with strange behaviour)
- Deep and large wound needing surgery

Management:

- Give tetanus toxoid 0.5mℓ IM if not had in last 5 years
- Snake bite: do not apply a tourniquet or attempt to squeeze or suck out the venom. Discuss with poison help line ↻ back page.
- If rabies suspected give rabies immunoglobulin 10IU/kg injected in and around wound *and* 10IU/kg IM.
- Refer same day.

Approach to the patient with a bite not needing urgent attention

Human or animal bite/s

- Remove any foreign bodies and encourage bleeding.
- Irrigate with warm water and chlorhexidine 0.05% solution or povidone iodine 10% solution.
- Do not close the wound.
- Give tetanus toxoid 0.5mℓ IM if not had in last 5 years.
- Give paracetamol 1g 6 hourly as needed.
- Give antibiotic if human bite/s *or* animal bite/s to hand *or* extensive bite: amoxicillin/clavulanic acid 875/125mg 12 hourly or if penicillin allergy, erythromycin 500mg 6 hourly *plus* metronidazole 400mg 8 hourly all for 5 days, or for 10 days if infected.

Insect bites

- If very painful scorpion sting, inject lignocaine 2% 2mℓ around site.
- Give chlorpheniramine 4mg 8 hourly up to 5 days.
- Apply calamine lotion.
- Give paracetamol 1g 6 hourly as needed.

SKIN SYMPTOMS

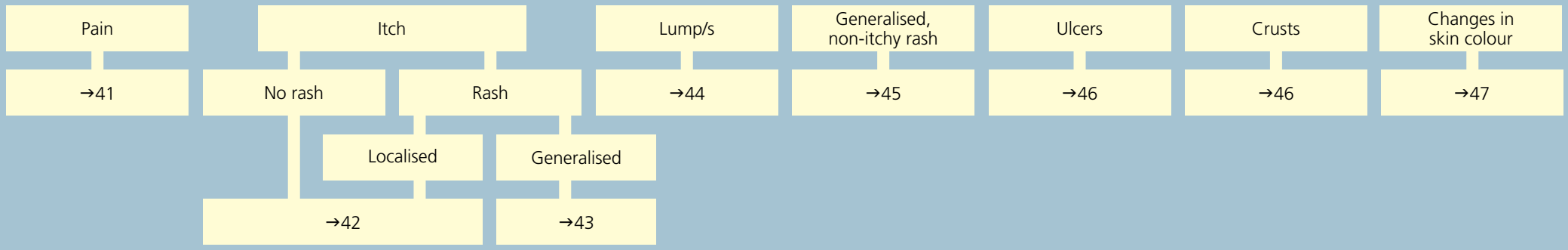
This is the starting page for the patient with skin symptom/s.

Recognise the patient with skin symptom/s needing urgent attention:

Refer urgently:
- Purple rash with headache, vomiting: give ceftriaxone[1] 2g IM/IV.
- Rash with BP < 90/60: give Ringer's lactate IV.
- Diffuse itchy rash with respiratory rate ≥ 30 breaths/minute: treat for anaphylaxis.

Refer same day:
- Extensive blistering
- Shingles involving the eye
- If on any medication like ART, TB drugs, co-trimoxazole or anticonvulsants, with 1 or more of the following, **stop all drugs**:
  - Temperature ≥ 38°C
  - Systemically unwell (vomiting/headache)
  - Any mucosal involvement (look in the mouth)
  - Blistering or raw areas
  - Diffuse purple discolouration of the skin
  - Jaundice

Approach to the patient with skin symptom/s not needing urgent attention

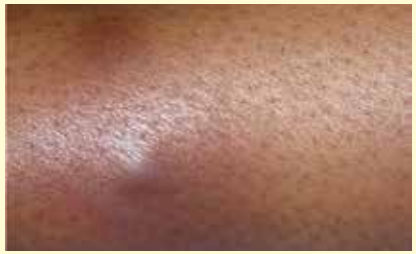


If status unknown, test for HIV, especially if rash is extensive, recurrent and/or difficult to treat.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. If giving ceftriaxone IM, divide dose: 1g into 2 different injection sites.

PAINFUL SKIN

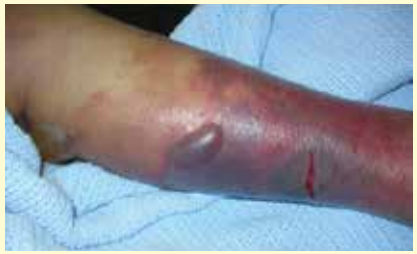
Firm, red lump which softens in the centre to discharge pus.



Boil/abscess likely
Skin is swollen, red, hot and tender to the touch.

- Advise patient to wash with soap and water, keep nails short, and avoid sharing clothing or towels.
- Give paracetamol 1g 6 hourly for pain relief as needed.
- Incise and drain if larger or fluctuant. Refer if on face or perianal region.
- If enlarged lymph nodes or temperature ≥ 38°C, give flucloxacillin 500mg 6 hourly for 5 days. If penicillin allergic, give erythromycin 500mg 6 hourly for 5 days.
- If recurrent boils: test for HIV ↴ 60 and diabetes ↴ 70. Wash body daily for 1 week with antiseptic wash.

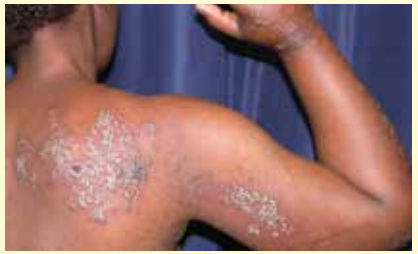
Sudden onset sharply demarcated redness of skin.



Cellulitis likely
There may be blistering.

- Give paracetamol 1g 6 hourly for pain relief.
- Give flucloxacillin 500mg 6 hourly for 5 days. If penicillin allergic, give erythromycin 500mg 6 hourly for 5 days.
- Refer if symptoms worsen or no better after 4 days.

Blisters with crusting in a band along one side of the body or face for 3 days or less.



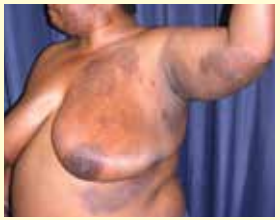
Shingles likely
If status is unknown test for HIV →60

- Treat rash topically with povidone iodine cream.
- If blisters are fresh, give aciclovir 800mg 4 hourly (miss the middle of the night dose) for 7 days.
- Shingles is very painful. Give regular analgesia:
  - Paracetamol 1g 6 hourly.
  - If no response, add tramadol 50mg 4 times a day.
  - If poor response or pain persists after rash has healed, give amitriptyline 25mg at night, increase by 25mg every 2 weeks if needed to 75mg.
- If infected, add flucloxacillin 500mg 6 hourly for 5 days. If penicillin allergic, give erythromycin 500mg 6 hourly for 5 days.
- A stage 2 HIV diagnosis. HIV patient needs routine HIV care →61.

- Refer same day if:
  - Eye involvement
  - Features of meningitis
  - Blisters elsewhere on the body

ITCH WITH LOCALISED RASH

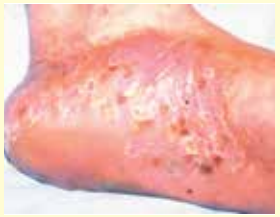
Slow growing ring-like patch/patches



Ringworm likely
A clearly-demarcated active, scaly or blistering edge is characteristic. If multiple or large lesions, test for HIV ↴ 60.

- Give clotrimazole cream twice a day for 2 weeks after lesion has cleared.
- Advise patient to avoid sharing towels/clothes.
- Give routine HIV care to the HIV patient →61.
- Refer if rash is extensive, recurrent or responds poorly to clotrimazole cream.

Scaling moist lesions between toes and on soles of feet



Athlete's foot likely

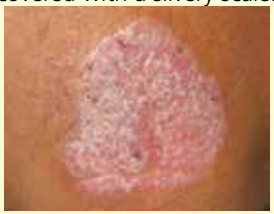
- Give clotrimazole cream twice a day for 2 weeks after lesion has cleared.
- Advise patient to wash and dry feet well.
- Encourage open shoes/sandals.

Itchy rash on back of neck

Lice likely
Look for nits/eggs on hair.

- Dip comb in vinegar and fine comb the hair.
- Give permethrin 1% cream rinse: apply after washing and rinse after 10 minutes or benzyl benzoate: apply to scalp overnight and wash off in morning.
- Repeat after 1 week if necessary.

Well demarcated pink raised plaques covered with a silvery scale.



Psoriasis likely
Confirm diagnosis with doctor

- Apply emulsifying ointment.
- Expose skin to sunlight.
- Apply LPC cream daily.
- Refer if extensive or not responding or LPC cream unavailable.

ITCH WITH NO RASH

- Confirm there is no rash, especially scabies or insect bites.
- Is the skin very dry?

No
Review patient's medication.

All TB drugs can cause itch with no rash.

- Continue TB treatment.
- Chlorpheniramine 4mg at night, or up to 8 hourly, for up to 5 days (may cause sedation).
- Advise patient to return if rash develops or if no better after 5 days.

- If not on any medication, refer for assessment of underlying cause.

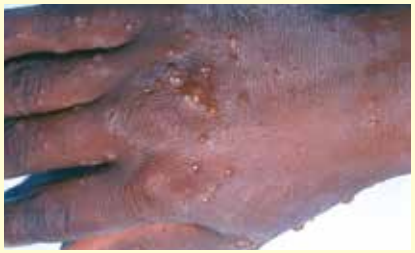
Yes
Dry skin/ichthyosis likely

- Use emulsifying ointment, petroleum jelly or aqueous cream as moisturiser.
- Use aqueous cream instead of soap to wash.

GENERALISED ITCHY RASH

If status unknown, test for HIV, especially if rash is extensive, recurrent and difficult to treat ↴ 60.

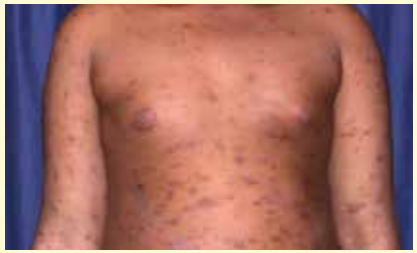
A widespread very itchy rash with burrows



Scabies likely
Commonly involves web-spaces of hands and feet, axillae and genitalia.

- Prescribe 25% benzyl benzoate lotion.
- Apply, leave to dry, wash off after 24 hrs, repeat after 1 week (repeat once only).
- Treat all household members and clean linen/clothes.
- For itch: chlorpheniramine 4mg at night up to 10 days.

Very itchy bumps.
Skin often hyper-pigmented

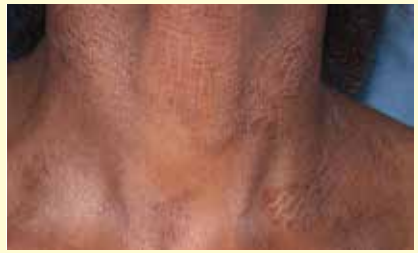


Papular-pruritic eruption likely

- Often co-exists with scabies.
- Usually seen in HIV patients ↴ 60.
- May temporarily worsen on starting ART.
- A stage 2 HIV condition. HIV patient needs routine HIV care →61.

- First treat as for scabies in adjacent column.
- If no response, give emulsifying ointment and 1% hydrocortisone cream.
- For itch: chlorpheniramine 4mg 8 hourly up to 5 days.
- If poor response doctor to give betamethasone 0.1% ointment twice a day for 7 days (do not apply to face).

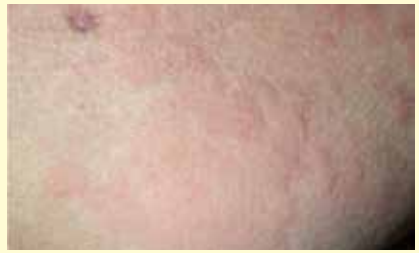
Patches of dry, scaly skin with/without itch that may be localised



Eczema likely

- Use emulsifying ointment instead of soap.
- Prescribe 1% hydrocortisone cream.
- Use aqueous cream as a moisturiser.
- For itch: chlorpheniramine 4mg 8 hourly up to 5 days *or* cetirizine 10mg at night long term as needed..
- If infected, treat with flucloxacillin 500mg 6 hourly for 5 days. If penicillin allergic give erythromycin 500mg 6 hourly for 5 days.
- If poor response doctor to give betamethasone 0.1% ointment twice a day for 7 days (do not apply to face).
- Refer if no better with above treatment.

Very itchy red raised wheals that appear suddenly, disappear and then reappear elsewhere



Urticaria likely
Commonly due to allergy

- Try to identify and remove allergen.
- Stop offending drug and prescribe alternative if necessary.
- Calamine lotion directly on rash as needed.
- Chlorpheniramine 4mg 8 hourly until 72 hours after resolution of wheals.
- Refer if no better in 24 hours.

If no response to treatment, refer for specialist review.

LUMPS

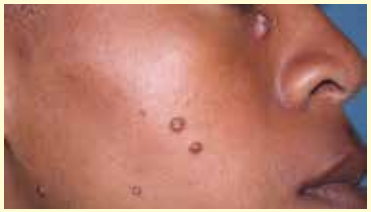
Refer same week the patient with a lump that:
- Bleeds easily
- Is a new or changed mole
- If the diagnosis is uncertain to exclude skin cancer

Raised nodules or papules

Warts likely
- Common on hands in young adults.
- Plantar warts on the soles of the feet are thick and hard with a black central point.

- Reassure patient that warts often disappear spontaneously.
- Apply podophyllin resin 20% and salicylic acid 25% ointment under a plaster at night.
- Protect surrounding skin with petroleum jelly.
- Refer if warts are extensive.

Small, skin-coloured bumps with pearly central dimples



Molluscum contagiosum likely
- May be extensive in HIV.
- If status is unknown test for HIV →60.

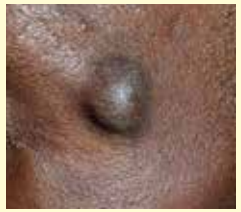
- Reassurance (may disappear quickly with ART).
- If distressing to patient, try local destructive treatment (open molluscum with sterile blade/needle and paint with tincture of iodine).
- Refer if no response to ART or local destructive treatment.

Purple lumps on skin or in mouth

Kaposi's sarcoma likely
- These can vary from isolated lumps to florid tumours.
- If status is unknown test for HIV →60.

- This is an AIDS-defining illness.
- Patient needs routine HIV care and ART →61.

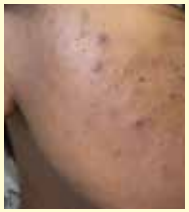
Small, firm lump beneath the skin, may discharge white material



Epidermal cyst likely

- If not infected no treatment needed.
- If warm, tender and red, the cyst is infected:
  - Incise and drain if large or fluctuant. Refer if on face or perianal region.
  - If enlarged lymph nodes or temperature ≥ 38°C give flucloxacillin 500mg 6 hourly for 5 days. If penicillin allergic give erythromycin 500mg 6 hourly for 5 days.
- Refer if large, symptomatic, recurrent infection or diagnosis uncertain.

Red papules, pustules and blackheads on face and perhaps on upper back, arms, buttocks and chest



Acne likely

- Steroids, anticonvulsants, isoniazid can all worsen acne.
- Advise to avoid squeezing lesions and greasy cosmetics. Diet will not affect acne.
- Apply benzoyl peroxide 5% gel at night to inflamed pustules and discuss with doctor to give doxycycline 100mg daily for at least 3 months. Doxycycline interferes with oral contraceptive. Advise to use condoms as well.
- If woman needs contraception, advise oestrogen-containing oral contraceptive ↩ 91.
- Response to treatment is usually slow.
- Refer if severe or not responding to treatment.

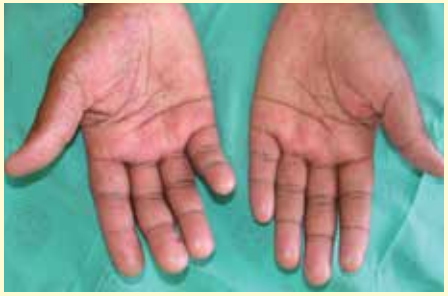
GENERALISED NON ITCHY RED RASH

Is patient taking any medication?

Yes

Drug reaction likely

- Presentation is variable, from mild, patchy spots on the trunk to widespread skin damage (like burns).
- Hand involvement is characteristic.
- May occur within 6 weeks of starting or restarting antiretrovirals especially nevirapine, TB drugs, anticonvulsants, penicillin or co-trimoxazole.



Does the patient have any of the following markers of severity:

- Temperature ≥ 38°C
- Vomiting or nausea
- Headache
- Jaundice
- Painful mouth, eyes or genitals
- Blistering or 'raw' areas
- Diffuse purple discolouration of skin
- Abdominal pain

Yes
Patient is severely ill.

- Stop *all* drugs.
- Refer to hospital same day.

No
Patient is not severely ill.

- Patient must continue with medication. Do not increase nevirapine if still on once daily dose until rash has resolved and ALT is normal.
- Check ALT.
  - If ≥ 200 refer same day.
  - If 50–199 and patient is well, repeat ALT after 1 week.
- Apply emulsifying ointment.
- Chlorpheniramine 4mg at night if itchy up to 5 days.
- Review daily until rash resolves.
- Advise patient to return urgently if markers of severity develop.

No

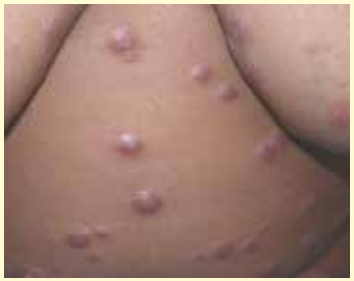
- Most likely due to infection.
- Patient may have fever, headache, lymphadenopathy, muscle pain.
- Ensure patient is not severely ill ↩ 40.

Treatment of patient who is not severely ill

- Give pain relief if needed. Paracetamol 1g 6 hourly.
- Check for syphilis.
- If status unknown, test for HIV ↩ 60.

Syphilis test positive or unavailable
About one third of patients with untreated primary syphilis develop secondary syphilis.

Rash is often on soles and palms.
There may also be condylomata lata and patchy hairloss.



Treat patient for early syphilis →28.

HIV negative
Rash may be an HIV seroconversion illness.

Advise patient to repeat HIV test after 3 months.

HIV positive

Patient needs routine HIV care →61.

ULCERS AND CRUSTS

Ulcer/s
Is ulcer/s on the leg?

No

- If genital ulcer →23.
- If elsewhere on body and no obvious cause like trauma, refer to exclude skin cancer.

Yes

Check if foot pulses are present and if patient has muscle pain in legs or buttocks on exercise.

Foot pulses are present and *no* muscle pain in legs or buttocks on exercise.

Is there darkening of skin around the ulcer, varicose veins and/or chronic swelling of the leg?

No

- If patient has weight loss, cough or sweats, exclude TB →55.
- Refer for further assessment.

Yes

Venous stasis ulcer likely

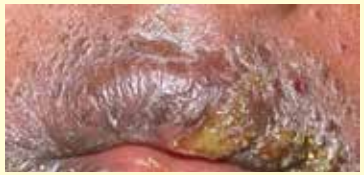
- Apply dressing under compression (ideally hydrocolloid dressing or silver sulfadiazine cream).
- Assess CVD risk ↻ 68.
- Refer if patient has diabetes or ulcer no better after 1 month of treatment.

Foot pulses not present and/or muscle pain in legs or buttocks on exercise

Peripheral vascular disease likely

- Patient needs specialist assessment.
- Do not apply compression bandage to ulcer/s.
- →79.

Blisters which dry to form honey coloured crusts.



Impetigo likely

- Usually starts on face, spreads to neck, hands, arms and legs. May complicate bites or grazes.
- May be extensive in HIV. If status is unknown test for HIV ↻ 60.

- Use aqueous cream to remove crusts.
- Apply povidone iodine 5% cream 3 times a day.
- Give amoxicillin 500mg 8 hourly for 5 days if extensive infection. If no response give flucloxacillin 500mg 6 hourly for 5 days. If penicillin allergic give erythromycin 500mg 6 hourly for 5 days. If rash does not resolve completely, give antibiotics for 5 days more.
- Refer if no better after 10 days.

CHANGES IN SKIN COLOUR

Yellow skin

Jaundice likely

Recognise and refer same day the jaundiced patient if:
- Pregnant
- Temperature ≥ 38°C
- Confusion
- Easy bruising or bleeding
- Persistent vomiting
- Severe abdominal pain
- Fingerprick Hb < 10
- On any medication

Approach to jaundiced patient who does not need same-day referral:
- If patient takes > 21 drinks/week (man), > 14 drinks/week (woman) and/or > 5 drinks/session, assess for alcohol abuse ↪ 83.
- Check ALT and ALP/GGT.
- Review with blood results.

ALT ≥ 120

Do hepatitis B screen.

ALP/GGT ≥ 3 times upper limit

Refer for ultrasound liver and further management.

- Review weekly.
- Repeat fingerprick Hb.
- Refer if Hb falls < 10, patient develops markers of severity above or jaundice persists > 6 weeks.

Darkening of skin

Is skin smooth or scaly?

Smooth

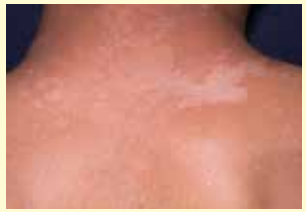
Dark brown patches on cheeks and upper lip

Melasma likely

- Avoid use of skin-lightening agents.
- Encourage sun avoidance and use of sunscreen.
- Change oral contraceptive to alternative contraception ↪ 91.
- Ask about symptoms of menopause ↪ 98.
- Stop all topical preparations like cosmetics, perfumes, perfumed soap and moisturisers.
- This is often difficult to treat.

Scaly

Scaly dark or light patches usually occur on the trunk – they may coalesce.



Tinea versicolor likely

- Apply selenium sulphide shampoo to affected areas overnight once a week.
- Advise that colour may take months to return to normal, but that absence of scale indicates adequate treatment.
- Recurrence is common.

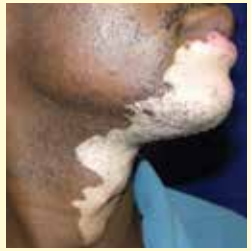
Absence of colour

Is skin smooth or scaly?

Smooth

Is absence of colour generalised or patchy?

Patchy



Vitiligo likely

- Advise use of camouflage cosmetics.
- Skin colour may return but seldom does on hands, feet, lips and genitalia.
- Refer to dermatologist if extensive.

Generalised

Present from birth, hair and eyes are involved.

Albinism likely

- Encourage sun avoidance and use of sunscreen.
- Monitor for the development of skin cancers.

Refer if diagnosis is uncertain.

NAIL SYMPTOMS

Disfigured nail with swollen nail bed

Chronic Paronychia likely

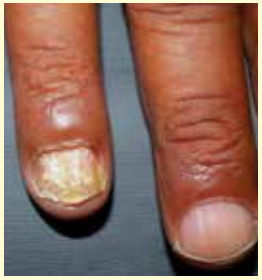
- Often associated with working with water. Advise patient to wear gloves and keep hands dry.
- Apply betamethasone 0.1% ointment to nailfold at night.
- If no better after 2 weeks, add clotrimazole cream 8 hourly.

Painful, red, swollen area around the nail.

Acute Paronychia likely

- Often associated with trauma like nail biting or pushing the cuticle. Advise patient to stop.
- Give flucloxacillin 500mg 6 hourly for 10 days.
- Refer for incision and drainage if no response after 5 days.

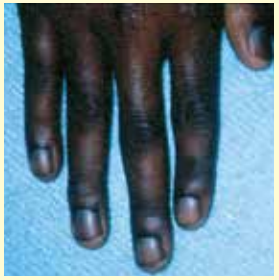
White/yellow disfigured nails



Fungal infection

Refer for management if very troublesome.

Diffuse blue/black discolouration of nails.



HIV or drug side effect

If status is unknown test for HIV →60.

SUICIDAL PATIENT

Recognise the patient who has attempted or had thoughts of suicide/self harm needing urgent attention:

- Unconscious →1.
- If aggressive or violent ↴ 50.
- Intent to attempt suicide: suicidal thoughts; ongoing wish to commit suicide; plans have been made for suicide
- Suicide attempt was serious: planned, took care against discovery; violent or potentially lethal; perhaps preceded by 'final acts' like leaving a note or new will.
- Overdose of medication like paracetamol or ferrous sulphate or other potentially harmful substance
- Exposure to carbon monoxide

Management:

- If patient took an oral overdose of medication within past 2 hours and is fully conscious give 500mℓ water added to 100g activated charcoal via nasogastric tube.
- Avoid activated charcoal if patient ingested paraffin, petrol, corrosive poisons, iron, lithium or alcohol.
- If patient took opioid like codeine or morphine: give naloxone 0.4–2mg IV. If no immediate effect, repeat every 5 minutes until pupils dilate (maximum 10mg).
- If exposed to carbon monoxide: give 100% face mask oxygen.
- Contact local poison centre for advice ↴ backpage.
- If the patient has signs of mental illness (see below) and refuses treatment or admission, consider admitting under the Mental Health Care Act ↴ 80.
- Refer same day.

Assess the patient who has no suicidal intent *and* has not had a serious suicide attempt not needing urgent attention

Screen for mental illness

- If low mood or sadness, loss of interest or pleasure, feeling anxious or worrying a lot or not coping as well as before, consider depression/anxiety ↴ 81.
- If hallucinations, delusions and abnormal behaviour, consider psychosis ↴ 84.
- If memory problems, screen for dementia ↴ 86.
- If patient takes > 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks per session or misuses illicit or prescription drugs ↴ 83.

Explore possible stressors

- Ask 'Are you stressed?' If yes ↴ 52.
- Ask 'Are you unhappy in your relationship? Has anything happened to you which changed your life?' If yes to either ↴ 53.

Make discharge and follow-up plans according to the following factors:

If *any* 1 of the following are present:

- Male *and/or*
- ≥ 45 years *and/or*
- Socially isolated *and/or*
- Adolescent *and/or*
- Family hitory of suicide *and/or*
- Previous attempts at suicide *and/or*
- Known mental illness *and/or*
- Substance abuse *and/or*
- Functioning impaired *and/or*
- Chronic medical illness like HIV, cancer

Refer same week to community psychiatric nurse or social worker.

If *all* of the following are present:

- Female *and*
- < 45 years *and*
- Adequate social support *and*
- First suicide attempt *and*
- Suicide attempt was an impulsive act in context of a crisis now resolved *and*
- No evidence of mental illness or substance abuse *and*
- Functioning not impaired *and*
- Otherwise well

- Discharge to family/carers.
- Review within 1 week:
  - Reassess for suicidal intent, mental illness, stressors.
  - Consider referral to community psychiatric nurse.

AGGRESSIVE/VIOLENT PATIENT

Approach to the aggressive or violent patient

Ensure the safety of yourself, the patient and those around you:
- Ensure enough security personnel are present, call the police if necessary. They should disarm patient if s/he has a weapon.
- Assess patient in a safe room in the presence of other staff. Handle the patient in a calm authoritative manner. Try to talk the patient down.
- Restrain only if absolutely necessary.

Check for confusion: try to avoid sedation before assessing confusion ⮌ 51.
- Varying levels of drowsiness and alertness
- Unaware of surroundings/disorientated
- Talking incoherently
- Unsure of the day in the week, the time of day, own name
- Poor attention span
- Change in sleep pattern

Look for mental illness and substance abuse:
- Take a history from the escort for known mental illness or substance abuse.
- Consider psychosis if hallucinations, delusions, incoherent speech ⮌ 84.
- Consider substance withdrawal or intoxication if alcohol on breath or history of alcohol or illicit drug use ⮌ 83.

If the patient fulfils *all 3* of the following, consider admitting under the Mental Health Care Act ⮌ 80 before sedation:
- Has signs of mental illness *and*
- Refuses treatment or admission *and*
- Is a danger of harm to self, others, own reputation or financial interest/property

Is sedation needed?

No

Yes

Give lorazepam 2mg and haloperidol 2–5mg IM or orally if patient accepts oral medication.

- Monitor and record BP, pulse and level of consciousness every 15 minutes.
- Reassess for mental illness.
- Is patient's behaviour still aggressive after 60 minutes?

No

Yes
Repeat haloperidol 2–5mg IM or orally if patient accepts oral medication

- Monitor and record BP, pulse and level of consciousness every 15 minutes.
- If necessary, repeat haloperidol to a maximum of 10mg in 24 hours.

- **Refer the mentally ill aggressive patient same day to hospital.**
- **Document history, details of Mental Health Care Act, and time and dose of medication given.**

CONFUSED PATIENT

- The confused patient may be disorientated for place and time, unsure of his/her own name, and may have a poor attention span and altered sleep pattern.
- If the confused patient is also aggressive, try to assess and manage confusion before sedating the patient ↻ 50.

Recognise the confused patient needing urgent attention:

- *Sudden onset* of confusion or disturbed speech or behaviour, perhaps with weakness, visual disturbance that may have resolved: **stroke** likely →76
- Had a fit →2
- Sudden onset over hours or days of confusion with impaired awareness, varying levels of alertness and drowsiness and change in sleep pattern: **delirium** likely
- Temperature ≥ 38°C
- Head injury within past 6 weeks
- Finger prick blood glucose ≤ 3.5

Management:

- Give face mask oxygen.
- If glucose ≤ 3.5, give oral glucose or 40–50mℓ dextrose 50% IV. If confusion resolves, refer only if on glibenclamide, gliclazide or insulin. If diabetic →71.
- If temperature ≥ 38°C: give ceftriaxone[1] 2g IM/IV immediately.
- Alcohol withdrawal (known alcohol user who has taken less alcohol for 12 hours): give thiamine 100mg IM and diazepam 10mg orally and oral rehydration.
- Drunk (smells of alcohol, recent drinking): give 1ℓ sodium chloride 0.9% with thiamine 100mg IV over 4 hours. Refer only if still confused when drip complete ↻ 83.
- Refer same day to hospital unless confusion resolves when sober or with glucose not on glibenclamide, gliclazide or insulin.

Approach to the confused patient not needing urgent attention

Is the patient psychotic?
Lack of insight with 1 or more of hallucinations (hearing voices), delusions (fixed false beliefs) and disorganized speech and behaviour.

- Yes → **Psychosis or mania** →84
- No → Has patient had memory problems and been disoriented for at least 6 months?
  - Yes → **Dementia** likely →86
  - No → Refer same day for assessment.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. If giving ceftriaxone IM, divide dose: 1g into 2 different injection sites.

STRESSED OR MISERABLE PATIENT

Recognise the stressed/miserable patient needing urgent attention

- Assess the patient with suicidal thoughts ↴ 49.

Assess the stressed/miserable patient

- The patient may have headache, dizziness, fatigue, abdominal pain. S/he may have poor eye contact, cry easily, be agitated or communicate poorly.

Screen for mental problem

- If low mood or sadness, loss of interest or pleasure, feeling tense, worrying a lot or not coping as well as before, consider depression/anxiety ↴ 81.
- If > 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks/session or misuses illicit or prescription drugs consider substance abuse ↴ 83.
- If hallucinations, delusions and abnormal behaviour, consider psychosis →84.
- If memory problems, screen for dementia →86.

Identify the traumatised/abused patient

- Ask 'Are you unhappy in your relationship? Has anything happened to you which changed your life?' If yes to either ↴ 53.

Try to identify a cause to focus on a solution

- Ask about financial difficulty, bereavement, post-natal ↴ 97, menopause ↴ 98 or chronic ill-health (is HIV status known? ↴ 60).
- Review medication: oral corticosteroids, oestrogen-containing oral contraceptives (↴ 91), theophylline, efavirenz can cause mental side effects. Reassure patient on efavirenz that low mood is usually self-limiting and resolves within 6 weeks on ART. If > 6 weeks doctor to change to NVP 200mg 12 hourly.

Advise the stressed/miserable patient

- Encourage patient to take time to relax:
  - Do a relaxing breathing exercise each day.
  - Find a creative or fun activity to do.
  - Spend time with supportive friends or family.
- Regular exercise might help.
- Advise patient to get adequate sleep. If patient has difficulty sleeping ↴ 54.
- Link patient to available psychosocial services: counsellor, psychologist, support group, social worker, helpline ↴ back page.
- Deal with negative thinking
  - The patient may often predict the worst, generalise, exaggerate the problem, inappropriately take the blame, or take things personally.
  - Encourage the patient to question his/her way of thinking (like changing 'I am a failure' to 'I am not a failure, I have achieved many good things in the past'), examine the facts realistically and look for strategies to get help and cope.
- See communicating effectively see Preface.

Offer to review the patient in 1 month.

TRAUMATISED/ABUSED PATIENT

Recognize the traumatised/abused patient needing urgent attention

- Injuries need attention ↴ 38
- Immediate risk of being harmed and in need of shelter
- At risk of harm to self ↴ 49
- Recent rape/sexual assault:
  - Arrange doctor assessment ideally at a designated facility for management of rape and sexual assault (same day if patient wishes to lay a charge).
  - All documentation and patient's notes must be correctly completed and labelled. Record in a register and keep locked away all forensic specimens.
  - Aim to prevent HIV, STIs and pregnancy as soon as possible after the abuse:

Prevent HIV
- If status unknown, test for HIV ↴ 60.
- If HIV negative or unknown, start post-exposure prophylaxis *for 1 month* within 72 hours of rape: AZT 300mg 12 hourly *and* 3TC 150mg 12 hourly. Add lopinavir/ritonavir 400/100mg 12 hourly if high risk rape: anal penetration, multiple perpetrators, perpetrator known with HIV, or obvious genital trauma.

Prevent STIs
- If asymptomatic give cefixime 400mg orally single dose and doxycycline 100mg 12 hourly for 7 days and metronidazole 2g orally single dose.
- If symptomatic, treat symptoms ↴ 23.
- Advise patient to use condoms with regular partner for 3 months.

Prevent syphilis
- Offer RPR:
  - If RPR negative, repeat after 1 month.
  - If RPR positive ↴ 28.
- Advise patient to use condoms with regular partner for 3 months.

Prevent pregnancy (if not on contraceptive and of child-bearing age):
- Within 5 days of rape: give as soon as possible ideally within 24 hours levonorgestrel 0.75mg 2 tablets once or norgestrel/ethinyl oestradiol 0.5/0.05mg 2 tablets and repeat 12 hours later ↴ 91.
- Within 5 days: intrauterine device can be inserted ↴ 91.
- After 5 days: check pregnancy test 6–8 weeks after last period. If pregnant ↴ 93.

Also assess and support the patient needing urgent attention as below.

Approach to the traumatized/abused patient

Listen and support see preface
- Interview the patient in a private room, supported by a trusted friend/relative if the patient wishes.
- Clearly record the patient's story in his/her own words. Include the nature of the assault and the identity of the perpetrator.
- Help the patient to identify strengths and support structures. Do not give up if the patient fails to follow your advice.
- Offer to see the patient again. A supportive relationship with the same health practitioner helps to contain frequent visits for multiple problems.

Screen for mental problem
- If low mood or sadness, loss of interest or pleasure, feeling tense, worrying a lot or not coping as well as before, consider depression/anxiety ↴ 81.
- Ask 'Are you stressed?' If yes ↴ 52.
- If > 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks/session or misuses illicit or prescription drugs consider substance abuse ↴ 83.

Exclude pregnancy and STIs
- Check for pregnancy. If pregnant ↴ 93.
- If status unknown, test for HIV ↴ 60. The HIV patient needs routine HIV care ↴ 61.
- Ask about symptoms of sexually transmitted infections. If present ↴ 23.

Refer to available supportive resource
- Refer to available trauma counselor, psychiatric nurse, psychologist, social worker, helpline ↴ back page.
- Encourage patient to file a J88 form and to report case to the police. Respect the patient's wishes if s/he declines to do so.
- Encourage patient to apply for protection order at local magistrate's court. Refer to police Victim Empowerment office, family violence NGOs for assistance.

DIFFICULTY SLEEPING

Assess the patient with difficulty sleeping

- Check that the patient really is getting insufficient sleep. Adults need on average 6–8 hours sleep per night. This decreases with age.
- Determine the type of sleep difficulty: waking too early or frequently, difficulty falling asleep, insufficient sleep.

Exclude medical problems

- Ask about pain, difficulty breathing, urinary problems. See relevant symptom pages.

Check medication

- Over-the-counter decongestants, oral steroids, theophylline, fluoxetine, efavirenz may cause sleep problems. Discuss with doctor.
- Reassure patient that sleep disturbance from efavirenz is usually self-limiting and resolves within 6 weeks on ART. If > 6 weeks change to NVP 200mg 12 hourly.

Screen for substance abuse

- If patient takes > 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks/session or misuses illicit or prescription drugs ↻ 83.

Screen for mental problem

- If low mood or sadness, loss of interest or pleasure, feeling tense, worrying a lot or not coping as well as before, consider depression/anxiety ↻ 81.
- Consider psychosis if hallucinations, delusions, incoherent speech ↻ 84.
- Consider dementia if memory problems ↻ 86.
- Ask 'Are you stressed?' If yes ↻ 52.

Ask about associated loud snoring

- Refer the patient with difficulty sleeping who snores for further assessment.

Advise the patient with difficulty sleeping

- Encourage patient to adopt sensible sleep habits. These often help to resolve a sleep problem without the use of sedatives.
  - Get regular exercise (but not before bedtime).
  - Avoid caffeine (coffee, tea) and smoking before bedtime.
  - Avoid day-time napping.
  - Encourage routine: try to get up at the same time each day (even if tired) and go to bed the same time every evening.
  - Wind down/relax before bed.
  - Use bed only for sleeping and sex. Spend only 6–8 hours a night in bed.
  - Once in bed do not clock-watch. If not asleep after 20 minutes, do a low energy activity out of bed, like a short walk around the house.
  - Keep a sleep diary. Review this at each visit.
- Review the patient regularly. A good relationship between practitioner and patient can help.

If problems with daytime functioning, daytime sleepiness, irritability, anxiety or headaches that do not improve with 1 month of sensible sleep habits, refer patient for further assessment.

TB: DIAGNOSIS

Exclude TB in the patient with cough ≥ 2 weeks, weight loss, drenching night sweats, fever ≥ 2 weeks, chest pain on breathing, blood-stained sputum.

Give urgent attention to the TB suspect with one or more of the following:

- Respiratory rate of ≥ 30 breaths/minute
- Breathlessness at rest or while talking
- Prominent use of breathing muscles
- Confusion or agitation

- Give 1 dose of ceftriaxone[1] 1g IM/IV.
- Give oxygen (40% face-mask oxygen or at 4ℓ/minute via nasal prongs).
- Refer same day to hospital.

Start the workup to diagnose TB

- If status unknown test for HIV ↻ 60.
- Check sputum for TB: send 1 spot sputum specimen for Xpert. Xpert detects Mycobacterium tuberculosis and only rifampicin sensitivity.
- If patient has chest pain on breathing or is coughing frank blood, also arrange chest X-Ray and doctor review (see below).
- Ask patient to return for results after 2 days.

Review results

MTB detected

Rifampicin resistant

Diagnose drug resistant TB
Refer to DR-TB unit.

Rifampicin susceptible

Diagnose TB

- Give routine TB care and start TB treatment same day →57.
- Send spot sputum specimen for smear microscopy.
- Register as smear negative or positive depending on microscopy result.

Rifampicin unsuccessful

Diagnose TB

- Give routine TB care and start TB treatment same day →57.
- Send spot sputum specimen for LPA[2] (or culture and DST[3] if LPA[2] unavailable).
- Send spot sputum specimen for smear microscopy.
- Register as smear negative or positive depending on the microscopy result.

MTB not detected

- Manage further according to HIV status.
- Encourage patient who has not tested to do so ↻ 60.

HIV positive

- Send spot sputum specimen for LPA[2] (or culture and DST[3] if LPA[2] unavailable).
- Give amoxicillin[4] 1g 8 hourly for 5 days if chest X-Ray and doctor review not available same day.

HIV negative

- Give amoxicillin[4] 1g 8 hourly for 5 days.
- Review in 1 week.

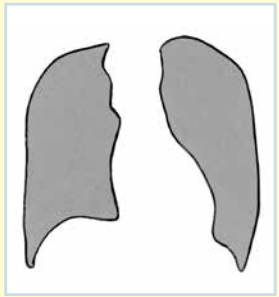
No or partial response

Resolved.
Advise to return if symptoms recur.

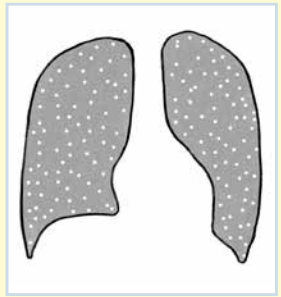
Arrange chest X-Ray and doctor review.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. [2] Line Probe Assay detects TB drug resistance and is quicker than culture and DST. [3] Drug susceptibility testing. [4] If penicillin-allergic: erythromycin 500mg 6 hourly for 5 days.

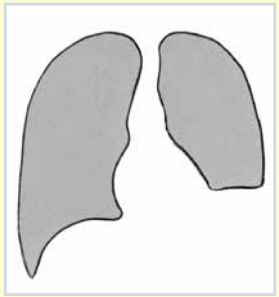
Doctor to review chest X-Ray



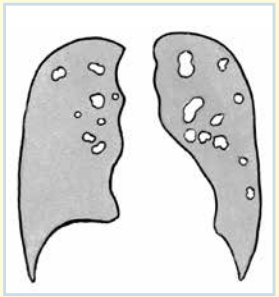
Intrathoracic lymphadenopathy



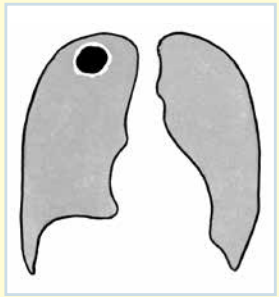
Miliary TB



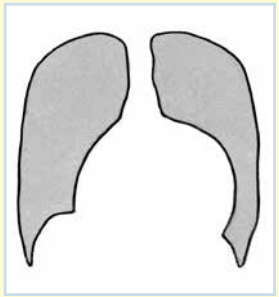
Pleural effusion
Confirm with tap.



Any lung opacification/s can be TB in HIV patient



Upper lobe cavitation



Pericardial effusion

Doctor decision about chest X-Ray

Chest X-Ray similar to X-Ray above

Diagnose TB on basis of chest X-Ray.
- Give routine TB care and start TB treatment same day →57.
- Send one spot sputum specimen for smear microscopy.
- Register as smear negative or positive depending on microscopy result.

Chest X-Ray normal

- Look for extra-pulmonary TB. If diagnosed, give routine TB care →57:
  - If patient has abdominal pain, swelling or diarrhoea refer for abdominal ultrasound.
  - If patient has headache, refer for lumbar puncture.
  - If patient has lymphnode ≥ 2cm, aspirate for TB and cytology ↻ 5.
- Look for other cause of cough ↻ 16.

Chest X-Ray different to above or unsure

- Give antibiotics if not yet given: amoxicillin[3] 1g 8 hourly for 5 days.
- Ask patient to return in 1 week for review and LPA[1] or DST[2] results if taken.

Drug sensitive

Diagnose TB
- Give routine TB care and start TB treatment same day →57.
- Send one spot sputum specimen for smear microscopy.
- Register as smear negative or positive depending on microscopy result.

Drug resistant (DR)

Diagnose DR-TB
Refer to DR-TB unit.

Culture negative or still pending

- If symptoms persist: Refer for experienced TB clinician review.
- If culture negative and symptoms resolve: advise to return if symptoms recur.

Do not discharge from workup until TB excluded.

[1]Line Probe Assay detects TB drug resistance and is quicker than culture and DST. [2]Drug susceptibility testing.
[3]If penicillin-allergic: erythromycin 500mg 6 hourly for 5 days.

TB: ROUTINE CARE

Assess the patient with TB at diagnosis, at 2 weeks and then once a month throughout TB treatment.

Assess	When to assess	Note
Symptoms	Each visit	• If respiratory rate ≥ 30 breaths/minute, prominent use of breathing muscles, breathless at rest or while talking or confused or agitated, give urgent attention ↩ 55. • Expect gradual improvement on TB treatment. **Refer for doctor review if symptoms worsen or do not improve**.
Contacts	At diagnosis and if symptomatic	Screen household contacts who are symptomatic, < 5 years or have HIV.
Family planning	At diagnosis and each visit	Assess contraceptive needs ↩ 91. No need to change interval between injectable doses. Avoid oral contraceptives, use instead injectable or IUCD *plus* condoms.
Adherence	At diagnosis and each visit	• Request patient brings all medication to each visit. Check adherence with the community care worker, on the TB card and/or with a pill count. • Manage the patient who interrupts TB treatment ↩ 58.
Side effects	At diagnosis and each visit	On starting TB treatment, advise patient about possible side effects ↩ 58 and to report these promptly.
Substance abuse	At diagnosis; if adherence poor	If > 21 drinks/week (man), > 14 drinks/week (woman) and/or > 5 drinks/session or misuses illicit or prescription drugs ↩ 83.
Weight	At diagnosis and each visit	• Expect gradual weight gain on treatment. Adjust TB treatment dose with weight gain ↩ 58. **Refer same week for doctor review if losing weight on treatment**. • BMI is weight(kg)/[height (m) x height (m)]. If < 18.5, refer for nutritional support.
Chest X-Ray	Not routinely, but only if needed	Do chest X-Ray at 2 months if patient diagnosed with pleural effusion. Do chest X-Ray same day if patient deteriorates or coughs ≥ 1 tablespoon of blood.
Smear microscopy result	At diagnosis	Register as smear negative or smear positive depending on result.
LPA[1] or DST[2] result	If sent during diagnostic workup	If LPA[1] or DST[2] sent during diagnostic workup show drug sensitivity, continue treatment. If any drug resistance, refer to doctor.
1 spot sputum specimen for smear microscopy[3]	• Week 7: response to treatment • Week 23: treatment outcome	Check smear microscopy regardless of smear result at diagnosis and interpret result: • If smear negative at 7 weeks change to continuation phase at end of week 8. • If smear positive at 7 weeks manage as per 7 week algorithm ↩ 59. • Use 23 week sputum result to determine treatment outcome below.
Treatment outcome	6 months	• If smear negative at 23 weeks, stop treatment at the end of week 24 and register treatment outcome: - If smear positive at diagnosis and smear negative at 7 weeks (or if taken, 11 weeks) and smear negative at 23 weeks, register as **cured**. - If smear negative at diagnosis, register as **treatment completed**. - If smear positive at 11 weeks and smear negative at 23 weeks register as **treatment completed**. • If smear positive at 23 weeks manage as per 23 week algorithm ↩ 59.
HIV	If status unknown	Test for HIV ↩ 60. Give the HIV patient routine HIV care and ART irrespective of CD4 or stage ↩ 61.
CD4 to decide timing of ART in HIV	HIV patient not on ART: at diagnosis	If not already on ART, start ART once tolerating TB treatment: • If CD4 ≤ 50 start ART within 7 days. • If CD4 > 50 *and* stage 3, start ART within 2–8 weeks of starting TB treatment. • If patient has TB meningitis, start ART within 4–6 weeks of TB treatment.

Advise the patient with TB

- Refer for TB/HIV education and adherence support. Arrange clinic DOT for the first 2 weeks of treatment and then arrange for community care worker or workplace support.
- Educate patient about TB treatment side effects ↩ 58 and to report these promptly should they occur.
- Advise patient on when to return to work: if on drug-sensitive TB treatment, after 2 weeks; if on drug-resistant TB treatment when culture is negative.
- Advise the patient abusing alcohol and/or illicit or prescription drugs to stop. Substance abuse can interfere with recovery and adherence to treatment. Urge the patient who smokes to quit.

Treat the patient with TB →58.

[1]Line Probe Assay detects TB drug resistance. [2]Drug susceptibility testing. [3]Make every effort to obtain sputum, even if early morning or by nebulisation.

Treat the patient with TB

- Treat the patient with TB (whether a new or retreatment case) 7 days a week for 6 months:
  - Give intensive phase RHZE for 2 months. (Prolong for 1 month if 7 week smear positive ↴ 59).
  - Change to continuation phase RH to complete 6 months of TB treatment.
  - If TB meningitis, TB spine or a TB pus collection, treat for at least 9 months, guided by a specialist.

- Give pyridoxine 25mg daily. Stop on completion of TB treatment.
- If HIV give co-trimoxazole and ART ↴ 61.
- If HIV on lopinavir/ritonavir, doctor to increase LPV/r dose:
  - After 1 week of TB treatment, increase to 3 tablets LPV/r (600/150mg) 12 hourly for 1 week.
  - Then increase to 4 tablets LPV/r (800/200mg) 12 hourly until 2 weeks after TB treatment has finished.
  - Monitor for liver problem (jaundice, abdominal pain, vomiting) and check ALT monthly ↴ 62.

Treat according to weight. Adjust dose as weight increases.

	Intensive phase: 2 months RHZE (150/75/400/275)	Continuation Phase: 4 months RH
30–37kg	2 tablets	2 tablets (150,75)
38–54kg	3 tablets	3 tablets (150,75)
55–70kg	4 tablets	2 tablets (300,150)
≥ 71kg	5 tablets	2 tablets (300,150)

R – rifampicin H – isoniazid Z – pyrazinamide E – ethambutol

Discuss TB treatment side effects

Jaundice and vomiting	Most TB drugs	Stop all drugs and refer to hospital same day.
Skin rash/itch	Most TB drugs	Assess and manage ↴ 40.
Loss of colour vision	Ethambutol	Refer
Ringing in ears/deafness	Streptomycin	Stop streptomycin immediately.

Nausea/poor appetite	Rifampicin	Take treatment at night.
Joint pain	Pyrazinamide	Ibuprofen 400mg 8 hourly up to 5 days
Orange urine	Rifampicin	Reassure.
Burning feet	Isoniazid	Give pyridoxine ↴ 37.

Review the TB patient at 2 weeks and then monthly until discharge.

Manage the patient who interrupts TB treatment

- Trace the patient and look for explanation for treatment interruption. Ask about substance abuse ↴ 83, stress ↴ 52 and side effects.
- Give increased adherence support and educate the patient about the risks of poor adherence.
- Manage treatment interruption according to duration of interruption:

Interrupts for < 1 month

- Continue TB treatment.
- Extend treatment phase by the number of missed doses.

Interrupts for 1–2 months

- Send 1 spot sputum specimen for LPA[1] or Xpert.
- Continue TB treatment and review results.

Drug sensitive

- Continue TB treatment.
- Extend treatment phase by the number of missed doses.

Drug resistant (DR)

- Stop TB treatment.
- Register as **treatment failure**.
- Refer to DR-TB unit.

Interrupts for ≥ 2 months

- Send 1 spot sputum specimen for LPA[1] or Xpert.
- Do not continue with TB treatment until results available.

Drug sensitive

- Stop TB treatment and register as **treatment default**.
- Re-register as **re-treatment after default** and restart full course of TB treatment.

[1]Line Probe Assay detects TB drug resistance

Manage the patient with a positive 7 week sputum smear
- Check patient's TB symptoms and weight gain.

TB symptoms improving and patient has gained weight.
- Was patient taking treatment regularly?

Yes
Continue intensive phase for 1 month more.

No
Send 1 spot sputum specimen for Xpert.

TB symptoms not improving or worse and/or patient has lost weight.
- Send 1 spot sputum specimen for LPA, or if unavailable culture and DST.

Continue intensive phase and review results.

Drug susceptible TB

- At 11 weeks send 1 spot sputum specimen for smear microscopy.
- If drug susceptible and/or smear negative, change to continuation phase at end of week 12.
- If sputum positive, send sputum for LPA if not already sent. If drug resistant, refer to DR-TB unit.

Drug resistant TB

- Stop TB treatment.
- Register as **treatment failure**.
- Refer to DR-TB unit.

Manage the patient with a positive 23 week sputum smear
- Collect sputum specimen for LPA or if unavailable, culture and DST.
- Continue treatment.
- Review LPA results after 1 week.

Drug sensitive TB
- Has the patient missed any doses of TB treatment?

No

- Stop TB treatment.
- Register as **treatment failure**.
- Re-register as **re-treatment after failure**.
- Restart full course of TB treatment.

Yes

< 2 months TB treatment missed

- Extend continuation phase by number of missed doses.
- At the end of extension period, send 1 spot sputum specimen for microscopy.

Smear negative
- Stop treatment.
- Register as **treatment completed**.

Smear positive
- Stop TB treatment.
- Register as **treatment failure**.
- Re-register as **re-treatment after failure**.
- Restart full course of TB treatment.

≥ 2 months TB treatment missed

- Stop TB treatment.
- Register as **treatment default**.
- Re-register as **re-treatment after default**.
- Restart full course of TB treatment.

Drug resistant TB

- Stop TB treatment.
- If registered smear positive at diagnosis, register patient as **treatment failure**.
- Refer patient for DR-TB treatment.

HIV: DIAGNOSIS

Encourage your patient and partner and children to test for HIV.

Obtain informed consent

- Educate patient about HIV and AIDS, methods of HIV transmission, risk factors and benefits of knowing one's HIV status.
- Explain test procedure and that it is completely voluntary.
- Children < 12 years need parental/guardian consent. If consent is granted, proceed to testing immediately.

Test

Do first rapid HIV test on finger-prick blood.

Positive

Do a second rapid HIV test on finger-prick blood.

Positive

Patient has HIV.

- Give routine HIV care at this visit →61.

Negative

Discordant results: do an ELISA test.

Positive

Patient has HIV.

- Give routine HIV care at this visit →61.

Negative

HIV test result negative

- A rapid test detects HIV antibodies which may take up to 3 months to be formed.
- Was patient at risk of HIV infection in the past 3 months?

Yes

Repeat HIV test after the 3 month window period.

No

- Patient does not have HIV.
- Encourage patient to remain negative.
- Offer to refer for male circumcision to diminish risk of HIV infection.

Negative

HIV test result negative

- A rapid test detects HIV antibodies which may take up to 3 months to be formed.
- Was patient at risk of HIV infection in the past 3 months?

Yes

Repeat HIV test after the 3 month window period.

No

- Patient does not have HIV.
- Encourage patient to remain negative.
- Offer to refer for male circumcision to diminish risk of HIV infection.

Support

Ensure patient understands test result and knows where and when to access further care.

HIV: ROUTINE CARE

Assess the patient with HIV

Assess	When to assess	Note
Symptoms	Every visit	Manage patient's symptoms according to symptom pages. Ask especially about TB symptoms ↴ 55 and genital symptoms ↴ 23.
TB	Look for TB at every visit	• Check for TB if cough ≥ 2 weeks, weight loss, night sweats, chest pain or blood-stained sputum →55. Do not start ART until TB excluded. • If TB and not on ART, start ART once tolerating TB treatment: within 7 days if CD4 ≤ 50 or stage 4; 4–6 weeks if TB meningitis, otherwise within 2–8 weeks.
Adherence	Every visit	• Check patient's adherence with pill counts and record of attendance. Remember to give patient a follow-up date. Delay starting ART if adherence to other medications or attendance is poor. • More than 95% of ART doses must be taken to avoid resistance to ART. If adherence poor, give adherence support ↴ 63.
ART side effects	Every visit after starting ART	• Ask about ART side effects ↴ 64. Manage side effects as on symptom page. Refer if "self-limiting" side-effects persist after 6 weeks ↴ 64. • Consider lactic acidosis in adherent woman who gains > 10kg 6–24 months after starting d4T, AZT, 3TC or TDF ↴ 62. • Switch d4T to TDF if woman with weight gain > 10kg or BMI > 28, peripheral neuropathy ↴ 37, pregnancy or change in body shape.
Mental health	At diagnosis and if adherence poor	• Screen for depression if patient has low mood or not coping as well as in the past ↴ 81. • If patient takes > 21 drinks/week (man), > 14 drinks/week (woman) and/or > 5 drinks/session or misuses drugs, assess for substance abuse ↴ 83. • If patient has problems with memory and perhaps coordination for > 6 months, consider dementia ↴ 86.
Safe sex	Every visit	Ask if patient or regular partner has new or multiple partners, uses condoms unreliably or has substance abuse ↴ 83.
Pregnancy status	Every visit	• If needed, advise reliable contraception (IUCD, subdermal implant, injectable or sterilisation *plus* condoms) ↴ 91. • If pregnant, give antenatal care ↴ 93 and if not on ART, start ART **same day**. If on ART, check viral load ↴ 62.
Weight	Every visit	• Record weight. Investigate weight loss ≥ 5% of body weight in 4 weeks ↴ 3. • BMI is weight (kg)/[height (m) x height (m)]. If < 18.5, refer for nutritional support. • If weight gain on ART > 10kg or to BMI > 28, switch woman on d4T to TDF to avoid lactic acidosis.
Stage	Every visit	Check weight, mouth, skin, previous and current problems. Apply the most advanced stage even after recovery from the illness that determined the stage. • Stage 2, 3 and 4: give co-trimoxazole ↴ 63. • Stage 3 or 4: patient needs ART ↴ 63.

Stage 1	Stage 2	Stage 3	Stage 4: AIDS
• No symptoms • Painless swollen glands	• Recurrent sinusitis, tonsillitis, otitis media • Pruritic papular eruption • Fungal nail infections • Shingles • Recurrent mouth ulcers • Angular cheilitis • Unexplained weight loss < 10% body weight	• Current pulmonary TB or within past year • Oral thrush • Oral hairy leukoplakia • Unexplained weight loss ≥ 10% body weight and/or BMI < 18.5 • Diarrhoea > 1 month • Fever > 1 month • Severe recurrent bacterial infections (pneumonia, meningitis) • Unexplained anaemia < 8, neutropaenia <0.5 or chronic thrombocytopaenia < 50	• Current extrapulmonary TB • Oesophageal thrush (pain on swallowing) • Weight loss ≥ 10% and diarrhoea or fever > 1 month • Cryptococcal meningitis • Herpes simplex of mouth or genital area > 1 month • Kaposi's sarcoma • HIV associated dementia • Recurrent severe pneumonia, PCP • Invasive cervical cancer • Cryptosporidium or *isospora belli* diarrhoea

Continue to assess the patient with HIV →62.

Continue to assess the patient with HIV

Assess	When to assess	Note
IPT screen	If no TB symptoms and never had IPT	• Do TST[1]: clean arm with alcohol swab, pull skin taut and inject 2 units PPD-RT23 or 5 units PPD-S into skin to see weal develop. • Measure swelling after 48–72 hours. ≥ 5mm is a positive TST. Give IPT according to result and whether on ART or not →63.
Pap smear	At diagnosis and if normal yearly	↻ 27
CD4	• Pre-ART: at diagnosis, then 6 monthly • On ART: at 12 months on ART	• If CD4 ≤ 200, give co-trimoxazole ↻ 63. Stop after 1 year if CD4 > 200 and patient is well on ART. • If CD4 ≤ 350 give ART ↻ 63.
ART bloods	At baseline and on ART	Check blood according to ART regimen and review result as below.

Baseline 1st regimen	Baseline 2nd regimen	3 months on ART	6 months on ART	1 year on ART	Yearly
TDF: eGFR[2] NVP: ALT	• If starting TDF: eGFR[2] • If currently on TDF: HepBsAg • AZT: Hb + diff	AZT: Hb+diff TDF: eGFR[2] LPV/r: fasting cholesterol & triglycerides	Viral load AZT: Hb +diff TDF: eGFR[2]	TDF: eGFR[2] Viral load CD4	TDF: eGFR[2] Viral load

ALT	• If baseline ALT ≥ 100, refer to doctor: refer if signs of liver failure. If well, doctor to start ART (avoid NVP) and repeat ALT after 1 week. • Check ALT if non-severe rash develops on NVP. (Refer same day the patient with a severe rash →40). - If ALT 50–199 and patient well: continue NVP once a day, repeat ALT in 1 week. - If ≥ 200 or unwell: stop ART and refer same day. - If ALT < 50 and rash resolved increase NVP to 12 hourly.
eGFR (creatinine clearance)	• Estimated glomerular filtration rate reflects kidney function. Request eGFR on request form and give age, weight and sex. • If baseline eGFR < 60, doctor to review: avoid TDF and adjust doses of ART and co-trimoxazole ↻ 64. • On ART, if eGFR < 60 and patient unwell, refer same day. If well and eGFR < 60, doctor to switch TDF to AZT/d4T, stop NSAIDs/streptomycin, check BP and for proteinuria and discuss with specialist.
Creatinine if pregnant	If creatinine at baseline or on ART is > 85, discuss/refer.
Hb and diff	• If baseline Hb < 8, doctor to investigate anaemia and avoid AZT. • Once on ART, if Hb < 8 or neutrophils < 0.75, switch to TDF or d4T.
HepBsAg	If hepBsAg positive, do not stop TDF or start regimen 2, and refer to doctor.
Fasting cholesterol, triglycerides	Refer urgently same day if triglycerides >15 (risk of pancreatitis). If cholesterol > 8 or triglycerides > 8.5, refer to specialist.
Viral load • Viral load on ART should be < 400	• Viral load 400–1000: Give increased adherence support ↻ 63 and repeat viral load in 6 months. • Viral load > 1000 for the 1st time: Give increased adherence support ↻ 63 and repeat viral load after 2 months. • Viral load > 1000 for the 2nd time: If getting increased adherence support ↻ 63 and adherence > 80%, doctor to switch to regimen 2 ART →63. If failing regimen 2, refer.
CD4	Decide when to stop co-trimoxazole and fluconazole prophylaxis ↻ 64.
Lactate • Check rapid/on-site venous blood lactate (uncuffed).	• If lactate < 2.5: if > 1 of weight loss, nausea, vomiting, abdominal pain, shortness of breath and fatigue, refer for laboratory lactate. Look for other cause. Repeat after 1 week. • If lactate ≥ 5: refer same day to hospital. • If lactate 2.5–4.9 and respiratory rate ≥ 20 breaths/minute: refer same day to hospital. • If lactate 2.5–4.9 and respiratory rate < 20 breaths/minute: switch d4T to TDF and recheck lactate after 3 days. If lactate falls and symptoms improve, recheck weekly until normal. If symptoms worse and/or lactate is increasing, stop ART and discuss with specialist.

Advise and treat the patient with HIV →63 and 64.

[1] Tuberculin Skin Test (Mantoux®) [2] If patient is pregnant, use creatinine instead of eGFR.

Advise the patient with HIV

- Support by encouraging disclosure and referring to counselor/support group. Advise patient's partner/s and children be tested for HIV.
- Encourage patient to have 1 partner at a time. Advise safe sex even if partner has HIV or patient on ART. Demonstrate and give male/female condoms.
- Educate patient that treatment for HIV requires lifelong adherence.
- Ensure the patient about to start ART attends drug-readiness training.
- Give **increased adherence support** to the patient with < 80% adherence, poor attendance or viral load > 400:
  - Educate on the importance of adherence and dangers of resistance.
  - Plan with patient how to take treatment. Consider adherence aids (pillboxes, diaries).
  - Refer for support: adherence counselor, support group, treatment buddy, CCW.
  - See the patient more frequently (weekly instead of monthly).

Treat the patient with HIV

- Give co-trimoxazole 960mg daily (2 single strength tablets) if stage 2, 3 or 4 or CD4 ≤ 200. Adjust dose if eGFR 10–50: 480mg daily; if eGFR < 10: 480mg 3 times a week.
- Give IPT: isoniazid 5mg/kg (up to 300mg) daily. Do not give if TB symptoms, on TB treatment, previous IPT, liver disease or alcohol abuse. If needing ART, start ART before IPT. Decide when to stop IPT ↴ 64.
- Give pyridoxine 25mg daily while on TB treatment or IPT.
- If on ART, continue ART lifelong unless on maternal ART prophylaxis – decide when to stop maternal ART prophylaxis using step 6 ↴ 64.
- If not on ART, start ART if CD4 ≤ 350 or stage 3 or 4 or if pregnant or breastfeeding (regardless of CD4 or stage) using steps 1–4:

1. Decide which ART regimen the patient needs

Has patient had 2 or 3 ARVs for longer than 1 month in the past?

No

Choose regimen 1 ART

TDF *and* 3TC *and* EFV *or* fixed dose combination (FDC) TDF/FTC/EFV if available unless:

- Depression or psychosis: use NVP instead of EFV. If CD4 > 250 (woman) or > 400 (man), refer/discuss.
- If pregnant with depression, psychosis, known kidney disease, diabetes, hypertension or ≥ 2+ proteinuria, start AZT 300mg 12 hourly instead of regimen 1 ART and refer to doctor.

Yes

Doctor review: Patient previously adherent on standard regimen 1 ART, did not have ART side effects and currently well?

Yes

Viral load previously < 400 or unavailable

Choose regimen 1 ART

TDF *and* 3TC *and* EFV *or* fixed dose combination (FDC) TDF/FTC/EFV if available unless:

- Depression or psychosis: use NVP instead of EFV. If CD4 > 250 (woman) or > 400 (man), refer/discuss.
- If pregnant with depression, psychosis, known kidney disease, diabetes, hypertension or ≥ 2+ proteinuria, start AZT 300mg 12 hourly instead of regimen 1 ART and refer to doctor.

Viral load previously > 1000 on 2 occasions

Choose regimen 2 ART

LPV/r *and* 3TC *and*:

- AZT if currently using TDF or
- TDF if currently using AZT or d4T

Do not stop TDF if hepBsAg positive.

No

Discuss with an experienced ART clinican if unwell, not adherent, had an ART side effect or previous ART was not FTC/3TC, TDF/d4T, EFV/NVP

2. Check baseline bloods according to regimen ↴ 62:

- If patient not pregnant, review patient with results within 2 weeks.
- If patient pregnant, start ART same day and review baseline blood results within 1 week.

3. Decide when to start ART:

- If patient pregnant, start ART same day. If pregnant and starting TB treatment, give AZT 300mg 12 hourly and switch to ART after 2 weeks.
- If patient has TB and CD4 ≤ 50, start ART within 7 days. If CD4 50–350 start ART within 2–8 weeks of starting TB treatment once tolerating TB treatment. If CD4 > 350 start ART at 8 weeks of TB treatment
- If TB meningitis or cryptococcal meningitis, start ART after 4–6 weeks of treatment.
- If patient does not have TB, start ART within 7 days if CD4 < 200 or stage 4, otherwise within 2 weeks.

4. Start ART:

- Give 3 ARVs from table below according to chosen ART regimen ↩ 63. If starting regimen 1, give fixed dose combination (FDC) TDF/FTC/EFV 1 tablet daily if available.
- Delay ART and refer to doctor if blood results abnormal ↩ 63, poor adherence, TB symptoms or depression or psychosis.

Antiretroviral	Dose	Frequency	If eGFR < 50	Side effects (refer if "self-limiting" side-effects persist after 6 weeks)
Lamivudine (3TC)	150mg	12 hourly	eGFR 10–50: 150mg daily	Uncommon
	300mg	Once daily	eGFR < 10: 50mg daily	
Tenofovir (TDF)	300mg	Once daily	Avoid TDF	Nausea, vomiting, diarrhoea, kidney failure
Stavudine (d4T)	30mg	12 hourly	eGFR 10–50: 15mg 12 hourly eGFR < 10: 15mg daily	Lactic acidosis ↩ 62, burning toes, body shape change (switch to TDF)
Zidovudine (AZT)	300mg	12 hourly	eGFR < 10: 300mg daily	Lactic acidosis, vomiting, nausea (self limiting, take with food), headache, fatigue (self limiting, if Hb < 7 ↩ 62), body shape change (switch to TDF)
Emtricitabine (FTC)	200mg	Once daily		Uncommon
Efavirenz (EFV)	600mg	24 hourly - the same time every night	Same dose	Dizziness, sleep problems, depression (all self limiting), gynaecomastia
Nevirapine (NVP)	200mg	Once daily for 2 weeks, then 12 hourly to reduce risk of skin rash and hepatitis.	Same dose	Skin rash, nausea (self limiting, take with food), abdominal pain, jaundice or vomiting may be hepatitis – advise patient to return urgently and refer same day.
Lopinavir/ritonavir (LPV/r)	400/100mg 2 tablets	12 hourly. On TB treatment, doctor to double dose gradually.	Same dose	Diarrhoea, change in body shape (switch to TDF). If also on TB treatment, abdominal pain, jaundice or vomiting may be hepatitis – refer same day.

5. Decide when to review the HIV patient on ART:

- If pregnant: review patient and baseline blood results 1 week after starting ART, and then monthly.
- If not pregnant: review 2 weeks after starting ART, then monthly until stable.
- If stable (patient has CD4 > 350, VL < 400, normal routine ART blood results, is adherent and well on ART): review 3 monthly.

6. Decide when to stop the following treatments in the HIV patient:

- Co-trimoxazole: stop after 1 year if CD4 > 200 and patient well on ART.
- Fluconazole for cryptococcal meningitis: stop after 1 year if CD4 > 200 and patient well on ART.
- Pyridoxine: Stop when patient finishes TB treatment or isoniazid preventive therapy.
- Maternal ART prophylaxis in the mother with baseline CD4 >350 and stage 1 or 2:
  - Check stage, hepBsAg, and CD4 result from past 12 months.
  - Stop ART 1 week after last breastfeed if still stage 1 or 2, hepBsAg negative and CD4 > 350.
- Nevirapine in the baby exposed to HIV: ↩ 97.
- IPT: stop isoniazid depending on baseline TST[1] result and if on ART:

TST[1] not done	TST[1] negative < 5mm		TST[1] positive ≥ 5mm
	CD4 > 350, not on ART	On ART	
Stop IPT after 6 months.		Stop IPT after 12 months.	Stop IPT after 36 months.

[1] Tuberculin Skin Test (Mantoux®)

ASTHMA AND COPD: DIAGNOSIS

- The patient with chronic cough may have more than one disease.
- In the patient with chronic cough, first exclude TB, PCP, lung cancer, chronic bronchitis, heart failure and post infectious cough ↴ 16.
- Then consider asthma or chronic obstructive pulmonary disease (COPD) which both present with cough, difficult breathing, tight chest or wheezing.
- If the cause of wheezing is not known, distinguish COPD and asthma as follows:

• Onset before 20 years of age • Associated hayfever, eczema, allergic conjunctivitis, allergies • Intermittent symptoms with normal breathing in between • Symptoms worse at night, early morning, with cold or stress • Patient or family have a history of asthma	• Onset after 40 years of age • Symptoms are persistent and worsen slowly over time • Cough with sputum starts long before difficult breathing • Patient is or was a heavy smoker (tobacco/cannabis) • Previous doctor diagnosis of COPD
Asthma likely. • Confirm diagnosis with doctor. • Give routine asthma care →66.	**COPD** likely. • Confirm diagnosis with doctor. • Give routine COPD care →67.

If unsure of diagnosis, treat as asthma →66 and refer to doctor within 1 month.

USING INHALERS AND SPACERS

- Incorrectly using an inhaler leads to poor delivery of medication into the lungs and poor control of symptoms.
- Add a spacer if the patient is unable to use an inhaler correctly to increase drug delivery to the lungs and/or if using inhaled corticosteroids to prevent oral thrush.

Check that patient can use inhaler and spacer correctly

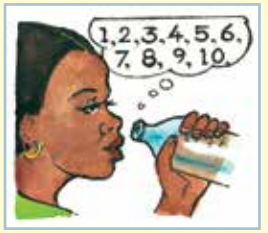
Shake inhaler.

Remove inhaler cap.

Fit inhaler into spacer. Check the seal is tight.

Exhale first and then form a seal with lips around mouthpiece.

Press pump once and take a deep breath from spacer. Do not pump inhaler more than once for each breath.



Hold that breath and count up to 10.

Breathe out.

- Rinse mouth after using inhaled corticosteroid.
- Wash the spacer with soapy water once a week. Allow it to drip dry. Do not rinse with water after each use.
- Prime the spacer with two puffs after washing before use.

ASTHMA: ROUTINE CARE

- Ensure that a doctor confirms the diagnosis of asthma within 1 month of diagnosis.

Assess the patient with asthma

Assess	When to assess	Note
Asthma symptoms to determine if asthma is controlled	Every visit	• Any of the following in the past month indicate uncontrolled asthma: - Daytime cough, difficulty breathing, tight chest or wheezing > twice a week - Nighttime or early morning waking due to asthma symptoms - Limitation of daily activities due to asthma symptoms • Peak flow measurement can be unreliable and need not be used routinely to assess asthma control. Asthma symptoms are more useful.
Other symptoms	Every visit	• Manage symptoms as on symptom pages. • Ask about hayfever: sneezing, itchy or runny nose. Treating hayfever may improve asthma control ↴ 13. • Ask the patient using inhaled corticosteroids about a sore mouth ↴ 14. See advice below. • Ask about heartburn or upper abdominal pain after eating. Treating gastro-oesophageal reflux may improve asthma control ↴ 19.
Medication use	Every visit	• Ensure patient is adherent to treatment before adjusting or adding treatment. • Check that patient can use inhaler and spacer correctly ↴ 65.

Advise the patient with asthma

- Ask about smoking. If yes, urge patient to stop.
- Ensure the patient understands the need for medication received:
  - Beta-agonist (eg salbutamol) inhaler only relieves symptoms and does not control asthma.
  - Inhaled corticosteroid (eg budesonide) prevents symptoms and controls asthma, but does not give instant relief. It is the mainstay of treatment.
- Check that patient can use inhaler and spacer correctly ↴ 65.
- Inhaled corticosteroids can cause oral thrush: advise patient to rinse and gargle after each dose of inhaled corticosteroid.

Treat the patient with asthma

- Give inhaled salbutamol 2 puffs as needed up to 4 times a day.
- Before adjusting treatment ensure patient is adherent and can use inhaler and spacer correctly ↴ 65.
- If asthma is uncontrolled:
  - Start inhaled corticosteroid budesonide 200µg 12 hourly if patient not already on it.
  - If patient already on inhaled corticosteroid, doctor to double the dose of inhaled corticosteroid budesonide to maximum 400µg 2 puffs 12 hourly.
  - If still uncontrolled, add slow release theophylline 200mg 12 hourly. Increase to 300mg if still uncontrolled. Stop theophylline if no better after 1 month.
- If asthma is controlled:
  - Continue inhaled corticosteroid at the same dose.
  - If controlled for at least 6 months, decrease inhaled corticosteroid dose by 200µg.
  - Stop inhaled corticosteroid if controlled for at least 6 months on 200µg daily.
  - Inhaled corticosteroids are not needed for the patient with controlled exercise-induced asthma who has had no emergency visits for asthma in the past 6 months.
- Oral prednisone is only used for emergency visits for asthma. Refer to doctor if needing more than 2 courses of prednisone in 6 months.

Review the controlled patient 3 monthly, the patient whose asthma is uncontrolled after 1 month.
Advise patient to return before next appointment if no improvement or worsening of symptoms.

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD): ROUTINE CARE

- Ensure that a doctor confirms the diagnosis of COPD within 1 month of diagnosis.

Assess the patient with COPD

Assess	When to assess	Note
COPD symptoms: persistent cough and difficult breathing	Every visit	• Assess disease severity: difficulty breathing occurs with strenuous activity like climbing stairs (mild COPD), at normal pace like walking (moderate COPD) or with activities of daily living like dressing (severe COPD). • In patient with cough: - Treat for chest infection as below if sputum increases or changes in colour to yellow/green. - Investigate for TB only if patient has other TB symptoms like weight loss, sweats ↴ 55.
Other symptoms	Every visit	• Manage symptoms as on symptom pages. • Ask the patient using inhaled corticosteroids about a sore mouth ↴ 14. See advice below. • If patient has leg swelling, refer to doctor for assessment.
Medication use	Every visit	• Ensure patient is adherent to treatment before adjusting or adding treatment. • Check that patient can use inhaler and spacer correctly ↴ 65.
CVD risk assessment	At diagnosis	• The patient with COPD is at increased risk of cardiovascular disease. • Assess the patient's CVD risk ↴ 68.

Advise the patient with COPD

- Ask about smoking. If yes, urge patient to stop. This is the mainstay of COPD care.
- Exercise: encourage the patient to take a walk daily and to increase activities of daily living like gardening, housework and using stairs instead of lifts.
- Help the patient to manage his/her CVD risk ↴ 69.
- Check that patient can use inhaler and spacer correctly ↴ 65.
- Inhaled corticosteroids can cause oral thrush: advise patient to rinse and gargle after each dose of inhaled corticosteroid.

Treat the patient with COPD

- Ensure patient can use inhaler and spacer correctly before adjusting treatment ↴ 65.
- Give bronchodilator inhaled salbutamol 2 puffs when needed (up to 4 times a day).
- Give influenza vaccination yearly and pneumococcal vaccination every 5 years.
- Add bronchodilator inhaled ipratropium bromide 2 puffs when needed (up to 4 times a day) if moderate or severe COPD.
- Add slow release theophylline 200–300mg twice a day long-term if severe COPD.
- Treat for chest infection if sputum increases or changes in colour to yellow/green:
  - Give amoxicillin 500mg 8 hourly for 10 days or doxycycline 100mg 12 hourly for 10 days.
  - If increased breathlessness, give oral prednisone 40mg daily for 7 days if severe COPD.
  - Doctor to give inhaled corticosteroid budesonide 400µg 12 hourly if severe COPD and > 2 chest infections per year.

Review every 3–6 months if stable.

CARDIOVASCULAR DISEASE (CVD) RISK: DIAGNOSIS

Cardiovascular disease (ischaemic heart disease, peripheral vascular disease, stroke) is preventable and treatable.

Identify the patient with established cardiovascular disease:

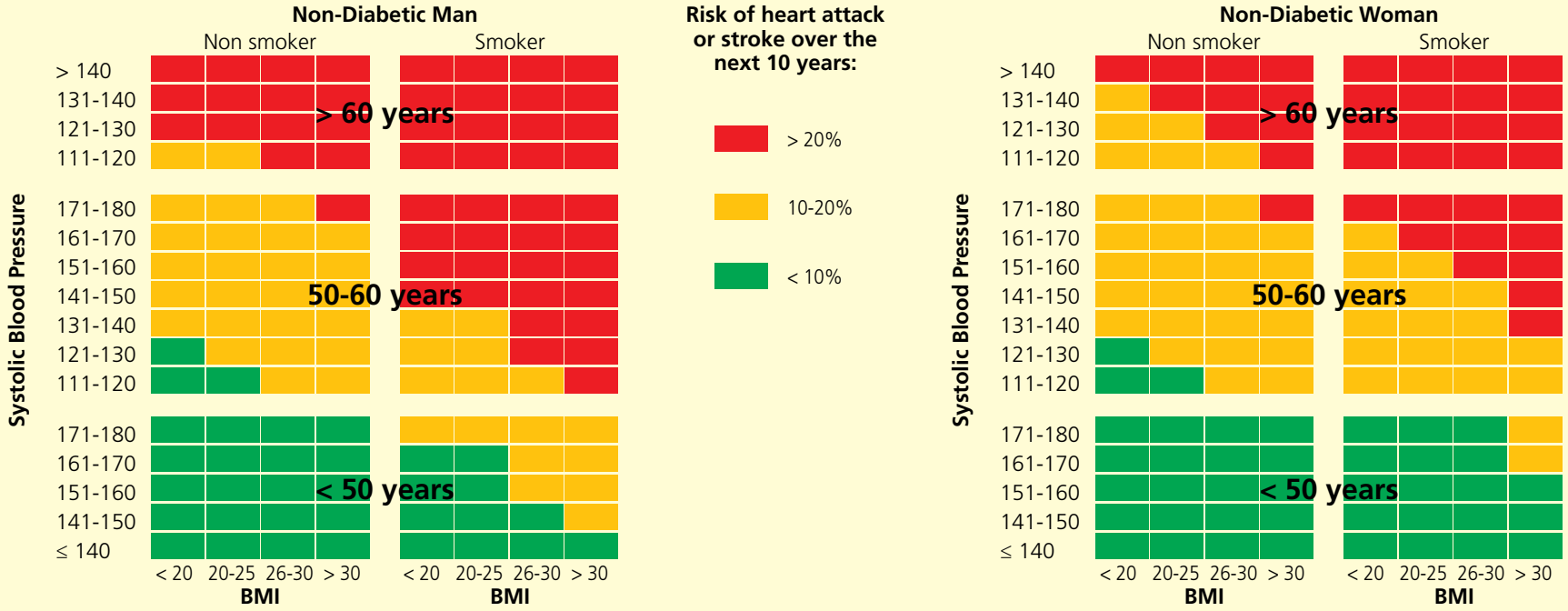
- If patient has or has had chest pain, screen for ischaemic heart disease →15.
- If patient has or has had leg pain, screen for peripheral vascular disease →36.
- If patient has had sudden weakness of limb/s or face, visual disturbance, difficulty speaking or understanding, dizziness, or severe new headache, screen for stroke →76.

Look for risk factors for cardiovascular disease:

- Ask about smoking.
- Look for hypertension. Hypertension is diagnosed at different BP levels depending on risk factors. Check BP ↻ 73.
- Check random finger prick glucose for diabetes and interpret result ↻ 70.
- Calculate BMI (weight (kg)/[height (m) x height (m)]). More than 25 is a risk factor.
- Measure waist circumference on breathing out, midway between lowest rib and top of iliac crest. More than 80cm (woman) or 94cm (man) is a risk factor.

Calculate the patient's risk of a heart attack or stroke over the next 10 years:

- Plot the patient's risk on the charts below using age, BMI and systolic BP in the columns for sex and smoking status.
- Do not use these charts if the patient is known to have diabetes and/or CVD as s/he is already at high risk.



Manage the CVD risk in the patient with CVD or a CVD risk ≥ 10% and/or CVD risk factors →69.

CARDIOVASCULAR DISEASE (CVD) RISK: ROUTINE CARE

Assess the patient with CVD risk

Assess	When to assess	Note
Symptoms	Every visit	Manage symptoms on symptom page. Ask about chest pain ↴ 15, difficulty breathing ↴ 16, leg pain ↴ 36 and symptoms of stroke/TIA ↴ 76.
Risk factors	Every visit	Ask about smoking, diet, exercise and activities of daily living.
BMI	Every visit	BMI is weight (kg)/[height (m) x height (m)]. Aim for < 25.
Waist circumference	At diagnosis, yearly or 3 monthly if trying to lose weight	Measure waist circumference on breathing out midway between lowest rib and top of iliac crest. Aim for < 80cm (woman), 94cm (men).
BP	Every visit	Diagnose and treat hypertension depending on CVD risk ↴ 73. If known hypertension give routine hypertension care ↴ 74.
CVD risk	At diagnosis, then 5 yearly	If CVD risk ≤ 20%, show the patient what his/her risk might be in 10 years using current BP, BMI and smoking status.
Glucose	At diagnosis, then depending on risk ↴ 70	Timing of repeat diabetes screen depends on risk factors ↴ 70. If known diabetes give routine diabetes care ↴ 71.
Total cholesterol	At diagnosis if CVD risk > 20%	Check random total cholesterol. If ≥ 7.5, refer to specialist. No need to repeat.

Advise the patient with CVD risk

- Discuss CVD risk: explore the patient's understanding of CVD risk and the need for a change in lifestyle.
- Invite patient to address 1 lifestyle CVD risk factor at a time: help plan how to fit the lifestyle change into his/her day. Explore what might hinder or support this. Together set reasonable target/s for next visit.

Physical activity

- Aim for at least 30 minutes brisk exercise at least 5 days/week.
- Increase activities of daily living like gardening, housework, walking instead of taking transport, using stairs instead of lifts.
- Exercise with arms if unable to use legs.

Smoking

- Urge patient who smokes to stop.

Weight

- Aim for BMI < 25, and waist circumference < 80cm (woman) and < 94cm (man). Any weight reduction is beneficial, even if targets not met.

Diet

- Eat a variety of foods in moderation. Reduce portion sizes.
- Increase fruit, vegetables and low fat dairy.
- Reduce fatty foods: eat low fat food, cut off animal fat, replace brick margarine/ butter with soft tub margarine.
- Reduce salty processed foods like gravies, stock cubes, packet soup. Avoid adding salt to food.
- Use less sugar.

Manage stress

- Perform a relaxing breathing exercise each day.
- Find a creative or fun activity to do.
- Spend time with supportive friends or family.
- If patient is stressed ↴ 52.

Screen for alcohol/substance misuse

- Limit alcohol intake to 2 drinks/day (man) and 1 drink/day (woman). 1 drink is 1 tot of spirits, a small glass of wine or 1 can of beer.
- If patient exceeds these limits or abuses illicit or prescription drugs ↴ 83.

- Identify support to maintain lifestyle change: health education officer or dietician/nutritionist, friend, partner or relative to attend clinic visits, a healthy lifestyle group, helpline ↴ back page.
- Be encouraging and congratulate any achievement. Avoid judging, criticising or blaming. It is the patient's right to make decisions about his/her own health. For tips on communicating effectively ↴ preface.

Treat the patient with CVD risk

Give the patient with CVD risk > 20% simvastatin 10mg for life.

DIABETES: DIAGNOSIS

Recognise the patient with glucose ≥ 15 needing urgent attention:

- Nausea and/or vomiting
- Abdominal pain
- Deep sighing breathing
- Temperature ≥ 38°C
- Drowsiness
- Confusion
- Unconsciousness →1
- Dehydration: systolic BP drop > 20mmHg between lying and standing *and* poor urine output

Management:

- Rehydrate urgently: give sodium chloride 0.9% IV 1ℓ in first hour then 1ℓ over next 2 hours.
- Give 10IU short-acting insulin IM[1] (*not IV*).
- Refer urgently to hospital.

If the patient does not need urgent attention, interpret random glucose result as follows:

Random glucose normal: 4–7.7

Look for risk factors:
- family history of diabetes
- history of diabetes in pregnancy
- BMI > 25
- a diagnosis of hypertension
- waist circumference > 80cm (woman), > 94cm (man)

- No risk factors → Recheck glucose in 5 years.
- Risk factors are present → • May be at risk for diabetes. • Do cardiovascular disease risk assessment →68. • Repeat finger-prick blood glucose in 1 year.

Random glucose: 7.8–11

Is patient pregnant?

- No → • May be at risk for diabetes. • Do cardiovascular disease risk assessment →68. • Repeat finger-prick blood glucose in 1 year.
- Yes → Patient needs antenatal care and fasting glucose →94.

Random glucose 11.1–25

Is patient pregnant?

- No → Does patient have urinary frequency, thirst, or weight loss?
  - No → Repeat finger prick blood glucose after 8-hour fast.
    - < 7 → • May be at risk for diabetes. • Do cardiovascular disease risk assessment →68. • Repeat finger-prick blood glucose in 1 year.
    - ≥ 7 → Diagnose diabetes
  - Yes → Diagnose diabetes
- Yes → • Ensure patient does not need urgent attention above. • Check urine for ketones. • Refer patient same day.

Diagnose diabetes

- < 15 → • Start routine diabetes care →71. • Refer if patient < 30 years
- ≥ 15: • Ensure patient does not need urgent attention above. • Check urine ketones.
  - No/trace ketones → • Start routine diabetes care →71. • Refer if patient < 30 years
  - 1+ or more ketones: • Give sodium chloride 0.9% IV 1ℓ 4 hourly *and* • If referral delay > 2 hours give 10IU short-acting insulin IM[1] (*not IV*). • Refer same day.

Random glucose > 25

• Ensure patient does not need urgent attention above. • Check urine for ketones. • Refer patient same day.

[1] Do not give IV insulin without checking electrolytes, as it may cause low potassium and heart dysrhythmia.

DIABETES: ROUTINE CARE

Assess the patient with diabetes

Assess	When to assess	Note
Symptoms	Every visit	Manage symptom as on symptom page. Ask about chest pain ↴ 15 and leg pain ↴ 36.
BP	Every visit	Diagnose hypertension if > 140/80 on 2 days. Treat to target: 120/70–140/80 ↴ 74.
BMI	At diagnosis, yearly or 3 monthly if trying to lose weight	BMI is weight (kg)/[height (m) x height (m)]. Aim for BMI < 25.
Waist circumference	At diagnosis, yearly or 3 monthly if trying to lose weight	Aim for < 80cm in woman and < 94cm in man.
Pregnancy status	Every visit	Discuss family planning needs ↴ 91. Refer for specialist care if pregnant.
Eyes for retinopathy	At diagnosis, yearly and if visual problems develop	Refer if new diabetes diagnosis, visual problems, cataracts or retinopathy.
Feet	At diagnosis, 3 months, then yearly, more often if high risk	Check for pain, pulses, sensation, deformity, skin problems. For foot screen and foot care education ↴ 37.
Random glucose	Every visit	Finger prick sample is adequate. See below: aim for < 8.
Protein on urine dipstick	At diagnosis and yearly	• If no protein on dipstick, send urine to lab for microalbuminuria. • If albuminuria or proteinuria: start enalapril 10mg daily regardless of BP. Doctor to increase to 20mg after 1 month.
Ketones on urine dipstick	If glucose ≥ 15	If glucose ≥ 15 and ≥ 1+ ketones, see below.
HbA_{1c}	6 monthly if HbA_{1c} < 7% but 3 months after treatment change	Aim for HbA_{1c} < 7%. HbA_{1c} reflects glucose control over past 3 months. See below.
eGFR	At diagnosis and yearly	Give patient's age and sex on form. If eGFR < 60, refer to doctor.
Fasting total cholesterol, triglycerides	At diagnosis if not already done.	Refer to specialist if total cholesterol ≥ 7.5 or triglycerides ≥ 15.

Check random finger prick glucose at every visit and HbA_{1c} 6 monthly if HbA1c ≤ 7% but 3 months after change in glucose-lowering treatment.

Glucose < 4
With/without hunger, palpitations, sweating, tremors, fatigue, headache, mood changes, fits, confusion, drowsiness, coma.

- Give sugar water orally or if coma give 50mℓ dextrose 50% IV. Repeat if glucose < 4.
- Identify cause and educate about meals and doses →72.
- Refer same day if incomplete recovery or on glibenclamide or long-acting insulin. Continue 5% dextrose water 1ℓ 6 hourly IV.

Glucose 4–14.9
Review HbA_{1c} result from within past 3 months.

HbA_{1c} ≤ 7% or not done in past 3 months

Glucose < 8

- Review in 6 months.
- Check HbA_{1c} yearly.

Glucose 8–14.9

No HbA_{1c} < 3 months	HbA_{1c} ≤ 7%
Check HbA_{1c}. Review in 1 month.	Review in 3 months.

HbA_{1c} > 7%

- Not adherent: educate and review in 1 month.
- Adherent: step up treatment and review in 1 month →72.

Glucose ≥ 15
Is there any of nausea, vomiting, abdominal pain, hyperventilation, difficult breathing, dehydration, fever, drowsiness, confusion, coma?

No - check urine for ketones

No/≤ 1 ketones

> 1+ ketones:

- Give sodium chloride 0.9% 1ℓ 4 hourly IV and 10IU short-acting insulin IM[1] (*not IV*).
- Refer same day.

Yes

- Rehydrate urgently: sodium chloride 0.9% IV (1.5ℓ in first hour, 1ℓ over next 2 hours and continue 1ℓ every 2 hours).
- Give 10IU short-acting insulin IM[1] (*not IV*).
- Refer urgently to hospital: avoid delay.

[1] Do not give IV insulin without checking electrolytes, as it may cause low potassium and heart dysrhythmia.

Advise the patient with diabetes

- Help the patient to manage his/her CVD risk ↴ 69.
- Encourage the patient to adhere to medication and to eat regular meals.
- Ensure patient can recognise and manage hypoglycaemia:
  - If palpitations, sweats, headache or tremors, drink milk with sugar or eat a sweet or sandwich. Always carry something sweet. If fits, confusion or coma, rub sugar inside mouth.
  - Identify and manage the cause: increased exercise, missed meals, inappropriate dosing of glucose-lowering drugs, alcohol, intercurrent illness like diarrhoea.
- Educate the patient to care for his/her feet to prevent ulcers and amputation ↴ 37.

Treat the patient with diabetes

- Give aspirin 150mg daily if CVD or a family history thereof, hypertension, smoking, dyslipidaemia, albuminuria or > 40 years. Avoid if < 30 years, previous peptic ulcer or dyspepsia or BP ≥ 180/110.
- Give simvastatin 10mg regardless of cholesterol if patient has CVD, hypertension, smoking, obesity, and/or > 40 years.
- Give enalapril 10mg up to 20mg daily if albuminuria/proteinuria, and first line for hypertension. Avoid in pregnancy, angioedema or renal artery stenosis.
- Give glucose-lowering drugs in a stepwise fashion. Ensure patient is adherent before increasing treatment:

Step	Drug/s	Breakfast	Lunch	Supper	Bed	Note
1	Start metformin	500mg				• Avoid in pregnancy, kidney or liver disease, recent heart attack, heart failure, alcoholism.
		500mg	500mg			• Take with meals.
		850mg	850mg			• Increase every 2 weeks if random glucose > 8 and patient is adherent.
		850mg	850mg	850mg		• If after 3 months on maximum dose, HbA1c > 7%, move to step 2.
2	Add sulphonyurea:	2.5mg				• Continue metformin.
	• glibenclamide if < 65 years *or*	5mg				• Take with meals.
		5mg		2.5mg		• Avoid in pregnancy, severe kidney and liver disease, co-trimoxazole allergy.
		5mg		5mg		• Increase every 2 weeks if random glucose > 8 and patient is adherent.
		7.5mg		5mg		• If after 3 months on maximum dose, HbA1c > 7%, move to step 3.
		7.5mg		7.5mg		
	• gliclazide if ≥ 65 years	40mg				
		80mg				
		80mg		40mg		
		80mg		80mg		
		120mg		80mg		
		120mg		120mg		
		160mg		120mg		
		160mg		160mg		
3	Dr Add basal insulin (intermediate or long acting)				Start dose: 8IU. Increase by 2IU. Max dose: 20IU.	• Continue metformin and sulphonylurea. • Patient to check fasting glucose on waking once a week. If ≥ 7 and patient is adherent, increase dose by 2 units. • Educate about insulin: injection technique and sites (abdomen, thighs, arms recommended), store insulin in fridge or a cool dark place, meal frequency, recognition of hypoglycaemia and hyperglycaemia, sharps disposal at clinic. • If after 3 months on maximum dose, HbA1c > 7%, move to step 4.
4	Dr Substitute with biphasic insulin	10IU		10IU		• Continue with metformin.
		14IU		10IU		• Stop sulphonylurea and bedtime basal insulin.
		14IU		14IU		• Patient to check fasting glucose on waking once a week. If ≥ 7 and patient is adherent, increase dose by 4 units.
		18IU		14IU		• Educate about insulin as in step 3 above. • Refer if HbA1c > 7% and > 30 units per day are needed.

HYPERTENSION: DIAGNOSIS

Check blood pressure (BP)

- Seat patient with arm supported at heart level for 5 minutes.
- Use a standard cuff or larger cuff if mid-upper arm circumference is > 33cm.
- Record systolic BP (SBP) and diastolic BP (DBP): SBP is the first appearance of sound. DBP is the disappearance of sound.
- If raised, recheck until a reading is repeated. Use this reading to determine the patient's BP.
- **Do not diagnose hypertension on the basis of one reading alone.**

< 180/110

- If patient has diabetes diagnose hypertension if BP > 140/80 on 2 days →71.
- Is there ischaemic heart disease, peripheral vascular disease, stroke, heart failure or kidney disease?

No

< 140/90

- Review in 5 years if all readings normal.
- Review in 1 year if any raised readings.

140/90–179/109

Check BP on 2 further occasions at least 2 days apart.

140/90–159/99

Assess CVD risk ⮌ 68.
Is CVD risk > 20%?

No

Patient is at risk for hypertension.

- Manage patient's CVD risk →69.
- Recheck BP in 3 months.

< 140/90

- Continue CVD risk management →69.
- Check BP in 1 year.

≥ 140/90

Yes

160/100–179/109

- Diagnose hypertension. **Do not diagnose hypertension on the basis of one reading alone.**
- Start routine hypertension care →74.
- Refer if patient is < 30 years or pregnant.

Yes

130/80–179/109

Check BP on 2 further occasions at least 2 days apart.

BP confirmed 130/80–179/109

- Diagnose hypertension. **Do not diagnose hypertension on the basis of one reading alone.**
- Start routine hypertension care →74.
- Refer if patient is < 30 years or pregnant.

< 130/80

Repeat BP at routine care visits.

≥ 180/110

Does patient have any of the following: headache, difficult breathing, visual disturbances, chest pain, confusion, leg swelling?

No

- Diagnose hypertension.
- Start routine hypertension care →74.
- Start drug treatment at step 1 *and* step 2 anti–hypertensive treatment →74.
- Review in 2 weeks.

Yes

Patient needs urgent care

- Only treat BP if no sign of stroke: sudden onset of weakness on 1 or both sides, vision problems, dizziness, difficulty speaking or swallowing.
- Give amlodipine 10mg orally stat. If unavailable, give enalapril 10mg orally stat.
- Avoid short-acting nifedipine as it may drop the BP too quickly, causing a stroke.
- If dizzy or faint after treatment, check BP: if more than 25% drop or < 160/100, lie patient down with legs raised.
- Refer same day to hospital.

HYPERTENSION: ROUTINE CARE

Assess	When to assess	Note
Symptoms	Every visit	Manage symptoms on symptom page. Ask about symptoms of stroke or transient ischaemic attack (TIA).
BP	Every visit	BP is controlled if < 140/90 (or 120/70–140/80 if diabetes, or <130/80 if CVD, heart failure or kidney disease).
BMI	At diagnosis, yearly or 3 monthly if trying to lose weight	BMI is weight (kg)/[height (m) x height (m)]. If BMI > 25, calculate target weight: 25 x height (m) x height (m).
Waist circumference	At diagnosis, yearly or 3 monthly if trying to lose weight	Aim for < 80cm (woman), < 94cm (man).
CVD risk	At diagnosis and every 5 years	If CVD or diabetes no need to check. It reflects the risk of a heart attack or stroke over the next 10 years ↩ 68.
Glucose	Yearly and if glucose on urine dipstick	Check random finger-prick glucose ↩ 70 to interpret result. Check every visit if patient diabetic.
eGFR	Yearly	Estimated glomerular filtration rate reflects kidney function. Give age and sex on form. If < 60 refer to doctor.
Urine dipstick	Yearly	Refer to doctor if blood or protein on repeat dipstick. If glucose on dipstick, screen for diabetes ↩ 70.
Cholesterol	At diagnosis	Refer to specialist if total cholesterol ≥ 7.5.

If patient on treatment, check if BP is controlled: < 140/90 (or 120/70–140/80 if diabetes, or <130/80 if CVD, heart failure or kidney disease).

BP controlled on treatment

- Continue current treatment.
- Review 6 monthly.

BP not controlled on treatment

- If ≥ 180/110: check for symptoms needing urgent attention →73.
- Adherent: Step up treatment (to at least step 3 if ≥ 180/110) and review in 1 month.
- Not adherent: Advise patient to take current treatment reliably. Review in 1 month.

Advise the patient with hypertension

- Help the patient to manage his/her CVD risk ↩ 69.
- Advise patient to avoid non-steroidal anti-inflammatory drugs (like ibuprofen), oestrogen-containing oral contraceptives ↩ 91.
- Educate the patient on enalapril to stop it immediately should angioedema (swelling of tongue, lips, face, difficulty breathing) develop.
- Explain that patient will need lifelong hypertension care to prevent stroke (brain attack) and kidney disease.

Treat the patient with hypertension

- Give simvastatin 10mg daily if patient has CVD *or* a CVD risk > 20%. Avoid in pregnancy, liver disease.
- Give aspirin 150mg daily if patient has CVD and/or diabetes. Avoid if < 30 years, previous peptic ulcers or dyspepsia or if BP ≥ 180/110.
- Treat hypertension stepwise as in table below along with CVD risk management ↩ 69. If BP is not controlled after 1 month on treatment and patient is adherent, proceed to the following step:

Step	Drugs all once a day	Note
1	Start hydrochlorothiazide (HCTZ) 12.5mg	Avoid in pregnancy (refer), liver or kidney disease, gout. Use enalapril first instead in diabetes, kidney disease, heart failure.
2	Add enalapril 10mg	Avoid/stop in pregnancy, angioedema or renal artery stenosis: use amlodipine 5mg daily instead. If eGFR < 60 and/or peripheral vascular disease, check eGFR and potassium within 4 weeks of starting/changing dose.
3	Add amlodipine 5mg and increase enalapril to 20mg.	Avoid amlodipine in heart failure if possible.
4	Add atenolol 50mg; increase HCTZ to 25mg and amlodipine to 10mg.	Avoid atenolol in pregnancy, asthma, COPD, heart failure. **Refer for specialist assessment if BP not controlled on step 4 treatment**.

HEART FAILURE: ROUTINE CARE

- The patient with heart failure has difficulty breathing especially on lying down/with effort as well as leg swelling. **A doctor must confirm the diagnosis**. Dr

Recognise the patient with heart failure needing urgent attention:

- Respiratory rate > 30 breaths/minute
- Fainting/blackouts
- Irregular pulse
- Temperature ≥ 38°C

- Sit patient up and give 100% oxygen via face mask to deliver 40% oxygen.
- Give furosemide slowly IV. 1st dose 40mg. If respiratory rate does not improve after 30 minutes, add 80mg; if still no better after 20 minutes give another 40mg.
- Give morphine IV: dilute 15mg with 14mℓ of water for injection or sodium chloride 0.9%. Give 1mℓ/min to a maximum of 5mg even if there is no pain.
- Give sublingual isosorbide dinitrite 5mg. Repeat 4 hourly even if there is no pain.
- Refer urgently

Assess the patient with heart failure

Assess	When to assess	Note
Symptoms	Every visit	Manage symptom as on symptom page. If cough and difficult breathing ↴ 16 and refer to doctor.
Pregnancy status	Every visit	Discuss family planning needs ↴ 91. If pregnant, refer for specialist care.
Substance abuse	At diagnosis	> 21 drinks/week (man) or >14 drinks/week (woman) and/or > 5 drinks/session or misuse of illicit or prescription drugs →83.
Weight	Every visit	Assess changes in fluid balance by comparing with weight when patient as asymptomatic as possible.
BP	Every visit	If BP ≥ 130/80 ↴ 73. Aim to treat hypertension to < 130/80. Avoid atenolol.
Blood tests	At diagnosis	Check Hb, glucose, eGFR, TSH, HIV if status unknown ↴ 60.

Advise the patient with heart failure

- Advise patient to adhere to treatment even if asymptomatic.
- Help the patient to manage his/her CVD risk ↴ 69. Advise regular exercise within limits of symptoms.
- Restrict fluid intake to less than 1 litre/day if marked leg or abdominal swelling.

Dr Treat the patient with heart failure

- Give drugs as in table below. If symptoms not resolved after 1 month on treatment and patient is adherent, proceed to the following step:

Step	Drug	Dose	Note
1	Enalapril *and either* HCTZ *or* furosemide	Up to 10mg twice a day 25–50mg daily 40–80mg daily	• Avoid enalapril in pregnancy, previous angioedema or renal artery stenosis. If eGFR < 60 and/or PVD, check eGFR and potassium within 4 weeks of starting/changing dose. • Use HCTZ if mild heart failure symptoms and eGFR ≥ 60. Avoid in gout, liver, kidney disease. • Use furosemide if significant heart failure symptoms or eGFR < 60. Monitor eGFR and electrolytes.
2	Add spironolactone	25mg daily	Monitor serum potassium. Avoid with potassium supplements and in kidney failure.
3	Add carvedilol	3.125mg twice daily. Double dose 2 weekly up to 25mg twice daily.	Avoid in cardiogenic shock, severe fluid overload, BP < 90/60, asthma. Avoid or decrease dose if pulse < 60.
4	Add digoxin	0.125mg daily	Also refer patient for further assessment.

STROKE: ROUTINE CARE

Sudden onset of any of the following suggests a stroke (or a transient ischaemic attack (TIA) if symptoms lasted < 24 hours and resolved completely):
- Weakness, numbness or paralysis of the face, arm or leg on one or both sides of the body
- Blurred or decreased vision in one or both eyes or double vision
- Difficulty speaking or understanding
- Dizziness, loss of balance, any unexplained fall or unsteady gait
- Severe new headache

Dr **A doctor must confirm the diagnosis of stroke.**

Recognise the patient with stroke needing urgent attention:

Stroke/TIA is a brain attack. Quick treatment within 48 hours of onset of symptoms of a minor stroke or TIA reduces the risk of a major stroke.
- Give face mask oxygen.
- Nil by mouth until swallowing is formally assessed.
- Check blood glucose: if ≤ 3.5 give up to 50mℓ dextrose 50% IV.
- Do not treat raised BP as this may worsen stroke and can be managed at referral hospital.
- Give aspirin 150mg stat if patient unable to reach hospital within 24 hours of onset of symptoms.
- Refer urgently for thrombolysis (to a specialist stroke unit if available) if the patient can reach the unit/hospital within 4 hours of onset of symptoms.
- Otherwise refer same day to nearest hospital if symptoms of stroke/TIA > 4 hours but < 48 hours.

Assess the patient with stroke/TIA

Assess	When to assess	Note
Symptoms	Every visit	Ask about symptoms of another stroke/TIA. Also ask about chest pain ↴ 77 or leg pain ↴ 79.
Depression	Every visit	Screen for depression if patient has low mood or not coping as well as in the past ↴ 81.
Rehabilitation needs	Every visit	Refer to appropriate therapist: physiotherapy for mobility, physiotherapy/occupational therapy for self care, speech therapist for swallowing, coughing after eating, speaking and drooling.
BP	Every visit	Aim for BP < 130/80. Start treatment only 48 hours after a stroke ↴ 73.
Glucose	At diagnosis and yearly	Check random finger-prick glucose ↴ 70 to interpret result.
Fasting cholesterol and triglycerides	At diagnosis if not already done	Refer to specialist if total cholesterol ≥ 7.5 or triglycerides ≥ 5.
HIV	At diagnosis if status unknown especially if patient < 50 years	Test for HIV ↴ 60. The HIV patient needs routine HIV care ↴ 61.

Advise the patient with stroke/TIA
- Help patient to manage cardiovascular disease risk ↴ 69. Refer patient to available helpline/s ↴ backpage.
- If patient is < 55 years (man) or < 65 years (woman), advise the first degree relatives to have CVD risk assessment ↴ 68.
- Avoid oral contraceptives containing oestrogen. Advise other method such as IUCD, injectable, progesterone-only pill ↴ 91.

Treat the patient with stroke/TIA
- Give aspirin 150mg daily for life. Avoid if < 30 years, haemorrhagic stroke, previous peptic ulcers or dyspepsia.
- Refer for warfarin instead of aspirin if patient has prosthetic heart valve, valvular heart disease or atrial fibrillation.
- Give simvastatin 10mg daily for life if patient had an ischaemic stroke.

ISCHAEMIC HEART DISEASE (IHD): DIAGNOSIS

- Angina due to IHD is typically central burning or crushing chest pain that may spread to jaw, left shoulder, down left arm and is suggested by:
  - Pain lasting for 5 minutes or less, usually brought on by exercise, effort or anxiety and relieved by rest *and*
  - Pain occurring consistently at same distance or level of effort *and*
  - 9 out of 10 times occurring with effort and 1 out of 10 times at rest.

Dr • **A doctor must make or confirm the diagnosis of ischaemic heart disease.**

Recognise the patient with possible unstable angina or heart attack needing urgent attention:

- Chest pain at rest or minimal effort.
- Chest pain lasting more than 10 minutes.
- If known IHD: pain worsening, lasting longer than usual, not relieved by sublingual nitrates.
- Patient may be sweating, nauseous, vomiting, breathless.
- ECG may show ST segment depression or elevation, but a normal ECG does not exclude diagnosis of angina or heart attack.
- BP < 90/60

Arrange urgent ambulance transfer to hospital and manage as follows:

- Give 40% face mask oxygen.
- If BP < 90/60 give 200mℓ sodium chloride 0.9% IV.
- Give aspirin 150mg single dose.
- Isosorbide dinitrate sublingual 5mg every 5-10 minutes until pain relieved to a maximum of 5 tablets.
- Morphine 15mg diluted with 14mℓ of water for injection or sodium chloride 0.9%. Give 1mℓ/min IV until pain relieved.
- Doctor to confirm unstable angina or heart attack and assess patient for streptokinase:
  - Give if within 6 hours of onset of pain and ST segment elevation above baseline or new LBBB on ECG.
  - Avoid if active bleeding or known bleeding disorder, stroke within the last 6 months or any previous haemorrhagic stroke, gastrointestinal bleeding within the last 3 months or peptic ulcer, streptokinase given within the past year or known allergy to it, or recent major trauma, surgery or head injury.
  - Doctor to give streptokinase 1.5 million IU diluted in 100mℓ dextrose 5% or sodium chloride 0.9% IV over 30–60 minutes.
- Refer urgently to hospital.

For routine care of the patient with IHD →78.

ISCHAEMIC HEART DISEASE: ROUTINE CARE

Assess the patient with ischaemic heart disease

Assess	When to assess	Note
Symptoms	At diagnosis and every visit	• Ask about angina and treat as below. Refer if angina persists on full treatment or interferes with daily activities. • Screen for depression if patient has low mood or not coping as well as in the past ↴ 81.
BP	At diagnosis and every visit	If BP ≥ 130/80 ↴ 73. Aim to treat hypertension to < 130/80 ↴ 74.
Glucose	At diagnosis and yearly	Check random finger-prick glucose ↴ 70 to interpret result.
Fasting cholesterol and triglycerides	At diagnosis if not already done	Refer to specialist if total cholesterol ≥ 7.5 or triglycerides ≥ 5.

Advise the patient with ischaemic heart disease

- Help the patient to manage his/her CVD risk ↴ 69.
- Patient can resume sexual activity 1 month after heart attack and when symptom free.
- Emphasize the importance of lifelong adherence to medication. Ensure patient knows how to use isosorbide dinitrate as below.
- Patient should avoid non steroidal anti-inflammatory drugs like ibuprofen and diclofenac, as they may precipitate angina.
- If patient is < 55 years (man) or < 65 years (woman), advise the first degree relatives to have CVD risk assessment ↴ 68.

Treat the patient with ischaemic heart disease

- Give aspirin 150mg daily for life. Avoid if < 30 years, a history of peptic ulcers or dyspepsia.
- Give atenolol 50mg daily, even if no angina. Avoid in pregnancy, asthma, COPD, heart failure, peripheral vascular disease.
- Give simvastatin 10mg daily for life. No need to monitor cholesterol.
- If patient has had a heart attack, give enalapril 2.5mg twice a day and increase slowly to 10mg twice a day. Avoid if pregnancy, angioedema or renal artery stenosis.
- Dr If patient has angina, treat in a step-wise fashion as in table below:
  - If angina persists, increase dose to maximum, then add next step.

Step	Drug	Start dose	Maximum dose	Note
1	Isosorbide dinitrate with angina and before exertion *and* Atenolol	5mg sublingual with angina 50mg daily	3 doses of 5mg with 1 episode of angina 100mg daily	If angina starts, do not walk through the pain, stop and take 1st dose. If angina persists, take a further 2 doses 5 minutes apart. If no improvement 5 minutes after 3rd dose, contact emergency services. Avoid atenolol in pregnancy, asthma, COPD, heart failure, peripheral vascular disease and use amlodipine instead or if side effects (impotence, fatigue, depression) occur.
2	Amlodipine	5mg in the morning	10mg daily	Avoid in heart failure.
3	Isosorbide mononitrate or Isosorbide dinitrate	10mg at 8am and 2pm 20mg at 8am and 2pm	20mg at 8am and 2pm 40mg at 8am and 2pm	

Refer if angina persists on full treatment or interferes with daily activities.

PERIPHERAL VASCULAR DISEASE (PVD)

- Peripheral vascular disease is characterised by claudication: muscle pain in legs or buttocks on exercise.
- Refer the patient newly diagnosed with peripheral vascular disease for specialist assessment.

Recognise the patient with peripheral vascular disease needing urgent attention:

Claudication with any one of:
- Pain at rest
- Gangrene
- Ulceration
- Suspected abdominal aortic aneurysm: pulsatile mass in abdomen

Refer same day to hospital.

PERIPHERAL VASCULAR DISEASE: ROUTINE CARE

Assess the patient with peripheral vascular disease

Assess	When to assess	Note
Symptoms	At diagnosis and every visit	•Document the walking distance before onset of claudication. •Ask about chest pain ↴ 77 and symptoms of stroke/TIA ↴ 76. •Manage symptoms as per symptom pages.
BP	At diagnosis and every visit	If BP ≥ 130/80 ↴ 73. Aim to treat hypertension to < 130/80 ↴ 74.
Femoral pulses	At diagnosis and every visit	Refer if weak or absent.
Abdomen	At diagnosis and every visit	If a pulsatile mass felt, refer for assessment for possible aortic aneurysm.
Random glucose	At diagnosis and yearly	Check random finger-prick glucose ↴ 70 to interpret result. Check every visit if patient diabetic.
Fasting cholesterol and triglycerides	At diagnosis if not already done	Refer to specialist if total cholesterol ≥ 7.5 or triglycerides ≥ 5.

Advise the patient with peripheral vascular disease

- Help the patient to manage his/her CVD risk ↴ 69.
- Walking an hour a day for at least 6 months can increase by 50% the walking distance. Advise patient to pause and rest whenever claudication develops.
- If patient is < 55 years (man) or < 65 years (woman), advise the first degree relatives to have CVD risk assessment ↴ 68.

Treat the patient with peripheral vascular disease

- Give simvastatin 10mg daily for life regardless of cholesterol level.
- Give aspirin 150mg daily for life if no history of peptic ulcers or dyspepsia. Avoid if under 30 years.

Refer if unacceptable symptoms occur despite adherence to advice and drug treatment.

MENTAL HEALTH CARE ACT (MHCA)

Approach to the mentally ill patient in need of hospital admission

- Before sedating the patient (if needed) fully inform patient *in his/her own language* about reasons for admission and treatment.
- Can patient give informed consent: the patient understands that s/he is ill, is needing treatment and can communicate his/her choice to receive treatment?

Yes: Does patient agree to admission?

Yes

Admit the patient voluntarily
- Record everything clearly in patient notes and referral letter.

No

Does patient meet *all* of the following?
- Mental illness or severe or profound mental disability *and*
- Refusing treatment *and*
- Danger of harm to self, others, own reputation, financial interest or property

No

Manage as an outpatient.

Yes

- Applicant[1] must complete **MHCA 04** form.
- Mental health practitioner must complete **MHCA 05** form *and* doctor must complete another **MHCA 05** form (at same or other facility).
- Completion of the 2 **MHCA 05** forms should be done independently of one another.

The 2 **MHCA 05** forms agree to admit the patient under the Mental Health Care Act.

- Head of facility must complete **MHCA 07** form.
- Admit patient under Mental Health Care Act.

The 2 **MHCA 05** forms disagree.

Third mental health practitioner must complete a third **MHCA 05** form independently.

Third MHCA 05 form agrees to admit the patient under the Mental Health Care Act.

- Head of facility must complete **MHCA 07** form.
- Admit patient under Mental Health Care Act.

Third MHCA 05 form does not agree to admit the patient under the Mental Health Care Act.

Manage as outpatient.

No: Does patient oppose admission?

Yes

Does patient meet *all* of the following?
- Mental illness or severe or profound mental disability *and*
- Refusing treatment *and*
- Danger of harm to self, others, own reputation, financial interest or property

No

Manage as an outpatient.

Yes

- Applicant[1] must complete **MHCA 04** form.
- Mental health practitioner must complete **MHCA 05** form *and* doctor must complete another **MHCA 05** form (at same or other facility).
- Completion of the 2 **MHCA 05** forms should be done independently of one another.

The 2 **MHCA 05** forms agree to admit the patient under the Mental Health Care Act.

- Head of facility must complete **MHCA 07** form.
- Admit patient under Mental Health Care Act.

The 2 **MHCA 05** forms disagree.

Third mental health practitioner must complete a third **MHCA 05** form independently.

Third MHCA 05 form agrees to admit the patient under the Mental Health Care Act.

- Head of facility must complete **MHCA 07** form.
- Admit patient under Mental Health Care Act.

Third MHCA 05 form does not agree to admit the patient under the Mental Health Care Act.

Manage as outpatient.

No

Admit as an assisted patient under the Mental Health Care Act.
- A staff member must accompany the patient to hospital.
- Request police assistance *only* if the patient is too dangerous to be transferred in a staff vehicle or is likely to abscond.
- All police transport of mentally ill patients must be accompanied by **form 22**.

[1]The applicant is the patient's spouse, next-of-kin, associate, partner, parent or guardian or health care provider. For a patient < 18 years, the applicant must be a parent or guardian.

DEPRESSION AND ANXIETY: DIAGNOSIS

Ask the following 2 questions to assess for depression:

Question 1: For at least 2 weeks, has the patient had at least 2 of the core features of depression?
- Depressed mood most of the day, almost every day
- Loss of interest or pleasure in activities that are normally pleasurable
- Decreased energy or increased fatigue

Question 2: For at least 2 weeks, has the patient had any 3 other features of depression?
- Reduced concentration and attention
- Reduced self-esteem and self confidence
- Ideas of guilt and unworthiness
- Bleak and negative view of future
- Ideas or acts of self-harm or suicide
- Disturbed sleep
- Decreased appetite

Yes to both Question 1 *and* Question 2

Does the patient have difficulties carrying out ordinary work, domestic or social activities?

Yes

Diagnose **moderate-severe depression**.

No

Diagnose **mild depression**.

Yes to *only* Question 1 *or* Question 2

Is the patient feeling tense/nervous and/or worrying a lot?

No

Give routine depression and/or anxiety care →82.

Yes

The patient has **anxiety**.

Does the anxiety have one or more of the following features?
- Induced by a situation
- Sudden fear, no obvious cause
- Follows a traumatic event

No

- If the patient has depression *and* anxiety, treat for depression as treating the depression usually improves the anxiety.
- If there is no depression, treat anxiety as for mild depression.

Yes

The patient may have phobia, panic or post-traumatic stress disorder.

Refer same week for specialist assessment.

No to *both* Question 1 *and* Question 2

- The patient is not depressed.
- Is the patient feeling tense/nervous and/or worrying a lot?

Yes

Assess the patient on stressed patient page →52.

No

DEPRESSION AND/OR ANXIETY: ROUTINE CARE

Assess the patient with depression and/or anxiety

Assess	When to assess	Note
Symptoms	Every visit	• Assess for symptoms of depression and/or anxiety ↴ 81. Refer if no improvement after 8 weeks of treatment or if patient deteriorates. • If patient has hallucinations, delusions and abnormal behaviour, consider psychosis →84. If memory problems, screen for dementia →86. • Assess and treat other symptoms on symptom pages. • Ask about side effects of antidepressant medication (see below).
Suicide	Every visit	If patient has suicidal thoughts or plans, refer same day ↴ 49.
Mania	Every visit	Refer if mania (being abnormally happy, energetic, talkative, irritable or reckless) at diagnosis or develops on antidepressant medication.
Stressors	Every visit	Help identify the domestic, social and work factors contributing to depression and/or anxiety. If patient is being abused ↴ 53.
Substance abuse	Every visit	> 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks per session or misuse of illicit or prescription drugs ↴ 83.
Family planning	Every visit	Discuss patient's contraceptive needs ↴ 91. If patient is pregnant refer for specialist care.
Chronic disease	Every visit	• Ensure other chronic diseases are adequately treated. • Discuss with specialist if patient is on medication that might cause depression like oral steroids, efavirenz and atenolol.
Thyroid function	At diagnosis	Check TSH if weight change, dry skin, constipation, intolerance to cold or heat, pulse > 80, tremor, or thyroid enlargement. Refer to doctor if result abnormal.

Advise the patient with depression and/or anxiety

- Devise with patient a strategy to cope when thoughts of self harm, suicide or substance misuse occur.
- Deal with negative thinking: encourage patient to question his/her way of thinking, examine the facts realistically and look for strategies to get help and cope.
- Encourage patient to do activities that used to give pleasure, to engage in regular social activity and to exercise for at least 30 minutes 5 days a week.
- Discuss sleep hygiene ↴ 54 and relaxation techniques.
- Refer patient to available helpline and/or support group ↴ back page.
- The best treatment for mild depression and/or anxiety is cognitive behavioural therapy. Antidepressants work best for those with moderate-severe depression.

Treat the patient with depression and/or anxiety

- Refer patient for counselling, ideally cognitive behavioural therapy, with counsellor, social worker or psychologist.
- Treat the patient with moderate-severe depression with an antidepressant. Refer the patient who is pregnant, breastfeeding or bipolar for specialist care.
- Emphasise the importance of adherence even if feeling well and to stop antidepressants only with the guidance of a clinician.
- Antidepressants can take 4–6 weeks to start working. Review 2 weekly until stable, then monthly. Refer if no response after 8 weeks.

Drug	Dose	Note
Fluoxetine	Start 20mg daily (or 10mg if > 65 years or if very anxious). If partial or no response after 4 weeks increase to 40mg daily.	Avoid in kidney or liver disease. Monitor glucose in diabetes and for fits in epilepsy. Side effects: headache, nausea, diarrhoea, sexual dysfunction.
Amitriptyline	Start 50mg at night (or 25mg if > 65 years). Increase by 25mg/day every 3-5 days (or 7–10 days if > 65 years). Maximum dose: 150mg/day (or 75mg if > 65 years).	Use if fluoxetine contraindicared. Avoid if suicidal thoughts (can be fatal in overdose), heart disease, urinary retention, glaucoma, epilepsy. Side effects: dry mouth, sedation.

Dr • Doctor to consider stopping antidepressant when patient has had no or minimal depressive symptoms and has been able to carry out routine activities for 9–12 months: reduce dose gradually over at least 4 weeks (more gradually if withdrawal symptoms develop: irritability, dizziness, sleep problems, headache, nausea, fatigue).

SUBSTANCE ABUSE

Identify the patient with substance abuse if 1 or more of:

- The misuse of drugs or alcohol causes serious problems for patient, the family and perhaps even the community *and/or*
- > 21 drinks/week (man); > 14 drinks/week (woman); or > 5 drinks/session. 1 drink is 1 tot of spirits, or 1 small glass of wine or 1 can of beer and/or
- Yes to 2 or more[1]: Ever felt you should Cut down on drinking? Annoyed if criticized about drinking? Ever felt Guilty about drinking? Ever drink first thing to steady your nerves or treat a hangover? (Eye-opener) *and/or*
- Any use of illicit drugs or misuse of prescription drugs.

SUBSTANCE ABUSE: ROUTINE CARE

Assess the patient with substance abuse

Assess	Note
Symptoms	Restlessness, confusion, sweating, sleeplessness, hallucinations, agitation, weakness, tremor, headache, nausea - may be withdrawal: refer same day.
Harmful use	Alcohol: > 35 drinks/week (man); > 20 drinks/week (woman); > 5 drinks/session and/or any use of illicit or prescription drugs can become harmful.
Dependence	Much time and energy spent on getting and using substance *and* withdrawal symptoms above occur on stopping or cutting down.
Trauma/abuse	If patient reports recent trauma or emotional or sexual abuse ↩ 53.
Chronic disease	Chronic use of alcohol and/or drugs can have a long term impact on physical health. Assess and manage according to symptoms and chronic disease.
Mental illness	If low mood or sadness, loss of interest or pleasure, feeling tense or anxious or worrying a lot about things, consider depression/anxiety ↩ 81.

Advise the patient with substance abuse

- Educate patient about effects of substance abuse. Explore patient's willingness to cut down or stop. Encourage patient to use helpline ↩ back page. For communicating effectively see Preface.
- Alcohol: Advise abstinence or moderate use (≤ 21 drinks/week (man); ≤ 14 drinks/week (woman) and avoid binges). Advise the pregnant woman to abstain.
- Advise patient to stop using illicit or prescription drugs.

Dr Doctor to treat the *dependant* patient with substance abuse

- Enrol the dependant patient in a rehabilitation programme starting with detoxification. Ensure patient is motivated to adhere and has the support of a relative/friend.
- Admit the patient who refuses help under the Mental Health Care Act only if there is an accompanying mental disorder and patient is causing harm to self or others ↩ 80.
- For inpatient detoxification if previous withdrawal delirium, fits, psychosis, suicidal, liver disease, failed prior detoxification, no home support, opioid abuse, or if legally committed or detained.
- Doctor to provide outpatient detoxification if none of the above inpatient criteria and patient is abusing alcohol, cannabis, mandrax, cocaine, tik or benzodiazepines:

Substance	Detoxification programme
Alcohol	• Thiamine 100mg twice a day for 14 days *and* • Diazepam orally 10mg immediately; then 5mg 6 hourly for 3 days; then 5mg 12 hourly for 2 days; then 5mg daily for 2 days, and then stop. If withdrawal symptoms occur, refer or discuss.
Cannabis/Mandrax/Cocaine/Tik	• Treatment not always needed. Review after 1 day of abstinence. • Treat anxiety or sleep problems with diazepam 5mg 1–3 times a day tapering over 3–7 days or promethazine 25–50mg orally 8 hourly.
Benzodiazepines	• Avoid suddenly stopping benzodiazepines after long-term use. • Replace patient's benzodiazepine with diazepam. If on lorazepam 0.5mg–1mg give diazepam 5mg (for other benzodiazepines, refer to SAMF or MIC hotline ↩ back page). • Adjust diazepam according to symptoms, then decrease diazepam by 2.5mg every 2 weeks. On reaching 20% of initial dose taper by 0.5–2mg/week.

[1] CAGE questions

PSYCHOSIS AND/OR MANIA

PSYCHOSIS AND/OR MANIA: DIAGNOSIS

- Psychosis is likely in the patient who has difficulty carrying out ordinary work, domestic or social activities and any of:
  - Hallucinations: hearing voices or seeing things that are not there
  - Delusions: unusual/bizarre beliefs, not shared by society; beliefs that thoughts are being inserted or broadcast
  - Abnormal behaviour: incoherent or irrelevant speech, unusual appearance, self neglect, withdrawal, disturbance of emotions
  - Manic symptoms: several days of being abnormally happy, energetic, talkative, irritable or reckless.
- Consider bipolar disorder if patient has manic symptoms on some occasions, and depressed mood and energy on others.

Dr • **The patient with psychosis and/or mania must be assessed initially by a doctor.**

Recognise the patient with psychosis and/or mania needing same-day referral:

- Suicidal thoughts or attempt →49
- If aggressive or violent →50
- First episode psychosis or mania
- Pregnant or breastfeeding
- Muscle spasms (may be painful) within 48 hours of initiating antipsychotic medication

Management:

- Consider admitting under the Mental Health Care Act if refusing treatment or admission and a danger of harm to self, others, own reputation or financial interest/property →80.
- For acute dystonic reactions (painful muscle spasms in patient on anti-psychotics), give biperiden 2mg IM. Repeat every 30 minutes to a maximum of 4 doses in 24 hours.
- Refer patient same day.

PSYCHOSIS AND/OR MANIA: ROUTINE CARE

Assess the patient with psychosis and/or mania

Assess	When to assess	Note
Symptoms	Every visit	• Ask about symptoms of psychosis and mania above. If symptomatic despite treatment refer. • Assess for symptoms of depression and/or anxiety ↴ 81. If memory problems, screen for dementia ↴ 86. If present refer. • Assess and treat other symptoms on symptom pages.
Suicide	Every visit	If patient has suicidal thoughts or plans, refer same day ↴ 49.
Stressors	Every visit	Help identify the psychosocial stressors that may exacerbate symptoms. If patient is being abused ↴ 53.
Substance abuse	Every visit	> 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks/session or misuse of illicit or prescription drugs ↴ 83.
Family planning	Every visit	Discuss patient's contraceptive needs ↴ 91. If patient is pregnant or breastfeeding refer for specialist care.
Chronic disease	Every visit	• Refer the patient with other chronic diseases. Give routine chronic disease care as per chronic diseases pages. • Discuss with specialist if patient is on medication that might cause psychosis like oral steroids, efavirenz and antidepressants.
Medication	Every visit	• Ask about side effects of antipsychotic medication ↴ 85. Refer if these are present. • If non adherent re-commence medication. Consider changing from oral to depot medication.
Dr HIV, RPR	First visit	• If status unknown, test for HIV ↴ 60. Give routine HIV care to HIV patient ↴ 61. • If RPR positive, refer.

Advise the patient with psychosis

- Educate the patient and carer/family about the condition: the patient with psychosis often lacks insight into the illness and may be hostile towards carers and health care workers. S/he may have difficulty functioning, especially in high stress environments.
- Emphasize the importance of adherence with medication.
- Encourage patient to resume social, educational and work activities as appropriate. Work with local agencies to find educational or employment opportunities.
- Explore housing/assisted living support if needed and available.
- Refer for support group and cognitive behavioural therapy if available.
- Liaise with available health and social resources to provide support for the family and refer for family therapy if available.
- People with psychosis are often discriminated against. Always consider protection of the patient's human rights and the need to avoid institutional care.

Dr Treat the patient with psychosis

- Refer the patient with bipolar disorder to a psychiatrist for care.
- Initiation, titration and withdrawal is best done by a psychiatrist.
- Use intramuscular antipsychotic medication if patient is not adherent to oral medication and needs long term treatment.

Drug	Starting dose	Maintenance dose	Note
Haloperidol	1.5–10mg oral as a single dose or in 2 divided doses. If > 60 years start at lower dose and increase more gradually.	Usually 2–10mg per day.	Minimal anticholinergic side effects.
Chlorpromazine	25mg oral twice daily	Usually 75–300mg daily but 1000mg may be needed. Once symptoms are controlled, give as a single bedtime dose.	One of the most sedating antipsychotics.
Fluphenazine decanoate	12.5mg deep intramuscular injection	Usually 25–50mg every 4 weeks.	Full response can take 2 months Fewer anticholinergic side effects than chlorpromazine.
Flupenthixol decanoate	20mg deep intramuscular injection	Usually 60mg every 4 weeks.	Full response can take 2 months. Fewer anticholinergic side effects than chlorpromazine.
Zuclopenthixol decanoate	100mg deep intramuscular injection	Usually 200–400mg every 4 weeks.	Full response can take 2 months. Fewer anticholinergic side effects than chlorpromazine.

Refer if any side effects develop on antipsychotic medication

- Anticholinergic side effects: dry mouth, blurred vision, constipation, urinary retention, worsening of closed angle glaucoma
- Extrapyramidal side effects:
  - Acute dystonic reactions (often painful muscle spasms) may appear within 24-48 hours of starting medication. Give biperiden 2mg IM, repeat every 30 minutes to maximum 4 doses in 24 hours. Refer patient same day for further management.
  - Parkinsonian signs (bradykinesia, tremor, rigidity) may occur after weeks or months on treatment, more commonly in elderly patients. Give orphenadrine 50mg up to 3 times a day.
  - Akathisia (motor restlessness) may occur after days or weeks of treatment.
  - Tardive dyskinesia (persistent involuntary movements) may occur after months (usually more than 6 months) of treatment.

DEMENTIA

DEMENTIA: DIAGNOSIS

Dr • **Ensure a doctor confirms the diagnosis of dementia.** Consider dementia in the patient who for at least 6 months:
- Has problems with memory. Test by asking patient to repeat 3 common words immediately and then again after 5 minutes.
- Is disoriented for time (unsure what day/season it is) and place (unsure of shop closest to home or where the consultation is taking place).
- Experiences difficulty with speech and language – unable to name parts of the body.
- Struggles with simple tasks, decision making and carrying out daily activities.
- Is less able to cope with social and work function.
- If patient has HIV, has difficulty with coordination.

DEMENTIA: ROUTINE CARE

Assess the patient with dementia

Assess	When to assess	Note
Symptoms	At diagnosis, every visit	• Check for new symptoms and manage as per symptom pages. • If recent change in mood, energy/interest levels, sleep or appetite, consider depression and refer. Assess risk for self-harm ↴ 49. • If patient has hallucinations, delusions, agitation, aggression or wandering refer to psychiatrist.
Vision/hearing problems	At diagnosis, every visit	Manage poor vision or hearing with proper devices.
Nutritional status	At diagnosis, every visit	Ask about food and fluid intake. Arrange nutritional support if BMI < 18.5.
Cardiovascular disease	At diagnosis	Assess CVD risk ↴ 68. Ask about previous stroke/TIA, chest or leg pain.
HIV	At diagnosis	• HIV-associated dementia may improve on ART. If status unknown, test for HIV ↴ 60. • If HIV give routine care ↴ 61 and test for coordination problems: with non-dominant hand as quickly as possible (allow patient to practice twice): - Open and close the first 2 fingers widely. - On a flat surface, clench a fist, then place palm down, then on the side of the 5th digit.
Syphilis	At diagnosis	Refer the RPR positive patient with dementia.
Thyroid	At diagnosis	Refer if result is abnormal.

Advise the patient with dementia and his/her carer

- Discuss what can be done to support the patient, carer/s and family. Identify local resources, social worker, counsellor, NGO, helpline ↴ back page.
- Discuss with carer if respite or institutional care is needed. Advise the carer/s to:
  - Give regular orientation information (day, date, weather, time, names)
  - Try to stimulate memories with newspaper, radio, TV, photos.
  - Use simple short sentences.
  - Avoid changes in routine.
  - Plan daily activities that assist the person to be independent.
  - Remove clutter in the environment.
  - Regulate fluid intake to deal with incontinence.
  - Maintain physical activity.

Treat the patient with dementia

- HIV-associated dementia often responds well to ART ↴ 61.
- Treat aggressive or violent behaviour towards self or others ↴ 50.
- Treat agitation, distressing behaviour, psychotic symptoms with haloperidol 0.5–1mg up to twice daily.

EPILEPSY

- If the patient is fitting →2 to control the fit. If the patient is not known with epilepsy and has had a fit →2 to assess and manage further.

Dr • Epilepsy is a doctor diagnosis in the patient who has had at least 2 definite fits with no identifiable cause or 1 fit following TB meningitis, stroke or head trauma.

EPILEPSY: ROUTINE CARE

Assess the patient with epilepsy

Assess	When to assess	Note
Symptoms	Every visit	Manage symptoms as on symptom page.
Fit frequency	Every visit	Review fit diary. Assess if fits prevent patient from leading a normal lifestyle.
Adherence	Every visit, if fits occur	Assess attendance, pill counts and if still fitting on treatment, drug level (doctor decision).
Side effects	Discuss at diagnosis, every visit	Side effects often explain poor adherence. Patient may need to weigh side effects with fit control.
Other medication	If fits occur	Check if patient has started other medication like TB treatment, ART or oral contraceptive. See below.
Substance abuse	At diagnosis, if fits occurs or adherence poor	> 21 drinks/week (man) or > 14 drinks/week (woman) and/or > 5 drinks/session or misuse of illicit or prescription drugs ↴ 83.
Family planning	Every visit	• Refer if patient is pregnant or planning to be, for epilepsy and antenatal care. • Assess family planning needs: avoid oral contraceptives on carbamazepine or phenytoin ↴ 91.
Drug level	Only if needed	Doctor to check drug level if unsure about adherence or on higher than maximum dose of phenytoin.

Advise the patient with epilepsy

- Educate about epilepsy and stress the importance of adherence to treatment. Advise patient to keep a fits diary to record frequency dates and times of fits.
- Refer for social support if necessary (Epilepsy South Africa) and help patient to get a Medic Alert bracelet ↴ back page.
- Advise avoiding sleep deprivation, alcohol and drug use, dehydration, flashing lights and video games. These may trigger a fit.
- Avoid dangers like heights, fires, swimming alone, cycling on busy roads, operating machinery. Avoid driving until fit free for 1 year.
- Advise patient there are many drugs that interfere with anti-convulsant treatment (see below) and to discuss with doctor when starting any new medication.

Treat the patient with epilepsy

- A single drug is best. Giving 2 anti-convulsant drugs together is a specialist decision.
- If still fitting on treatment increase dose only if patient is adherent and there is no substance abuse.
- If still fitting after 4 weeks on maximum dose or side effects intolerable, add new drug and increase 2 weekly until fit free. Then taper off old drug over 1 month.

Drug	Dose	Note
Phenytoin	Starting dose and usual dose: 300mg daily. If not controlled, increase by 50mg 2 weekly and check drug level.	Avoid in women as it can cause facial hair/coarse facial features. Side effects: skin rash, slurred speech, drowsiness. Drug interactions: isoniazid, warfarin, furosemide, oral contraceptive, ART.
Carbamazepine	Start 100mg 12 hourly. Increase daily dose by 100mg every week until controlled. Usual dose: 300–600mg 12 hourly.	Side effects: skin rash, blurred or double vision, ataxia, nausea. Drug interactions: isoniazid, warfarin, fluoxetine, theophylline, amitriptyline, oral contraceptives, ART.
Lamotrigine	25mg daily for 2 weeks, then 50mg daily for 2 weeks. Then increase by 50mg 2 weekly until controlled. Usual dose: 100–200mg/day as single dose.	Use in HIV. Increase dose if fits on TB treatment or lopinavir/ritonavir. Side effects: skin rash, blurred or double vision. Drug interactions: paracetamol, rifampicin, ART.

- If fit free review 6 monthly. Doctor should review monthly the patient who is fitting until fit frequency improves. Refer if still fitting after maximum doses of 2 drugs for 4 weeks each.
- Doctor can consider with patient stopping treatment if no fits for 2 years: gradually withdraw 1 drug at a time over 2–3 months.

CHRONIC ARTHRITIS

CHRONIC ARTHRITIS: DIAGNOSIS

- If patient has discrete episodes of joint pain and swelling that completely resolve in between, consider gout →89.
- The most common chronic arthritis (lasting > 8 weeks) is osteoarthritis. Rheumatoid arthritis is the most common form of chronic inflammatory arthritis:

Osteoarthritis
- Affects joints only.
- Weight-bearing joints and maybe hands and feet
- Joints may be swollen but not warm.
- Stiffness on waking lasts less than 30 minutes.
- Pain is worse with activity and improves with rest.

Inflammatory arthritis
- Can be systemic: weight loss, fatigue, poor appetite, muscle wasting.
- Hands and feet are mainly involved.
- Joints are swollen and warm.
- Stiffness on waking lasts more than 30 minutes.
- Pain and stiffness improve with activity.

Refer the patient with probable inflammatory arthritis or an unclear diagnosis for specialist assessment.

CHRONIC ARTHRITIS: ROUTINE CARE

Assess the patient with chronic arthritis

Assess	When to assess	Note
Symptoms	Every visit	Manage symptoms as on symptom pages.
Activities of daily living	Every visit	Ask if patient can walk as well as before, can cope with buttons and use knife and fork properly.
Sleep	Every visit	If patient has problems sleeping ↴ 54.
Depression	Every visit	If low mood or sadness, loss of interest or pleasure, feeling tense, worrying a lot or not coping as well as before, consider depression/anxiety ↴ 81.
Joints	Every visit	Look for warmth and tenderness of joints.
BMI	At diagnosis	Calculate BMI: weight (kg)/[height (m) x height (m)]. > 25 is overweight and puts stress on weight-bearing joints. Assess patient's CVD risk ↴ 68.
Blood monitoring	If on disease modifying anti-rheumatic drugs	Ensure the patient using disease modifying drugs knows to have regular blood monitoring depending on the prescribed drugs from the specialist clinic.

Advise the patient with chronic arthritis
- If BMI > 25 advise to reduce weight to decrease stress on weight-bearing joints like knees and feet. Help patient to manage CVD risk ↴ 69.
- Encourage the patient to be as active as possible, but to rest with acute flare-ups.
- Refer patient and carer for education about chronic arthritis, to available support group and helpline ↴ back page.

Treat the patient with chronic arthritis
- Refer to physiotherapist or occupational therapist if rheumatoid arthritis and/or difficulty with activities of daily living.
- Give paracetamol 1g 6 hourly. If no response and inflammation is present in the patient with osteoarthritis, give ibuprofen 200–400mg 8 hourly after meals only as needed up to 1 month.
- Give amitriptyline 25mg night, 10mg if patient > 65 years.
- Rheumatoid arthritis must be treated early with disease modifying anti-rheumatic drugs to control symptoms, preserve function, and minimise further damage.
- If inflammatory arthritis likely, start prednisone 7.5mg daily and refer for hospital outpatient appointment.

Review monthly till symptoms controlled, then 3–6 monthly. Refer patient to a specialist if poor response to treatment.

GOUT

- Gout is a metabolic disease where uric acid crystals are deposited in the joints. It occurs most commonly in men over 40 years and post-menopausal women.
- Acute gout tends to affect 1 joint (often big toe, knee or ankle) and to recover completely.
- In chronic gout, many joints may be affected and they may not be very painful, but there is incomplete recovery in between.

GOUT: ROUTINE CARE

Assess the patient with gout

Assess	When to assess	Note
Symptoms	Every visit	Manage symptoms as per symptom pages.
Substance abuse	At diagnosis	> 21 drinks/week (man) or >14 drinks/week (woman) and/or > 5 drinks/session or misuse of illicit or prescription drugs →83.
Medication	Acute attacks	Hydrochlorothiazide, ethambutol, pyrazinamide and aspirin can all induce acute gout attacks. Discuss with doctor.
Joints	Every visit	• Recognise the acute gout attack: Sudden onset of 1–3 hot, extremely painful, swollen joints with red, shiny overlying skin (often big toe, knee or ankle). • Tophaceous gout appears as painless yellow hard irregular lumps around the joints (picture).
CVD risk	At diagnosis	Assess cardiovascular disease risk ↴ 68. If BMI < 25 or < 40 years, refer within 1 month to exclude possible cancer cause for gout.
eGFR	At diagnosis	If eGFR < 50, refer.
Urate	At diagnosis and with allopurinol	Normal is ≤ 0.3. The patient needs allopurinol if urate > 0.5. Adjust allopurinol dose until urate < 0.3.

Advise the patient with gout

- Help the patient to manage his/her cardiovascular disease risk ↴ 69.
- Give dietary advice:
  - Avoid fizzy drinks, alcohol, red meat, liver, kidneys, turkey, crayfish, sardines and anchovy.
  - Avoid fasting.
  - Drink at least 2ℓ of fluids a day.
- Advise bed rest until the pain subsides.
- Advise patient there are drugs that may induce a gout attack, like aspirin and to discuss with doctor when starting any new medication.

Treat the patient with gout

Treat the patient with an acute gout attack

- Give ibuprofen 800mg after food 8 hourly for 1–2 days. Then ibuprofen 400mg 8 hourly until pain and swelling are improved.
- If patient has peptic ulcer, asthma, hypertension, heart failure or kidney disease, give prednisone 40mg daily for 3–5 days instead of ibuprofen.
- If patient is already using allopurinol, do not stop it during the acute attack.

Treat the patient with chronic gout

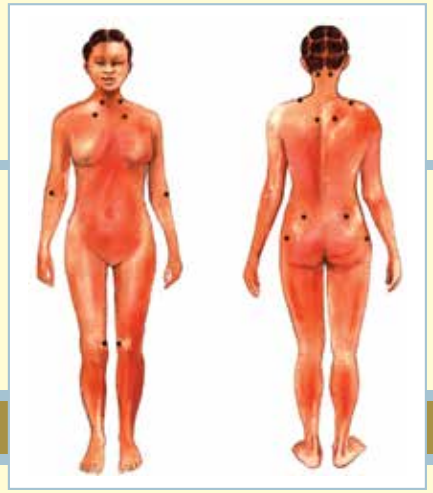
- Patient needs allopurinol if: > 2 attacks per year, chronic tophaceous gout (picture), kidney stones, kidney disease, serum urate > 0.5.
- Give allopurinol 100mg once daily. Do not start allopurinol during or for 3 weeks after an acute attack.
- Increase by 100mg monthly until serum urate < 0.3 or the maximum dose of 400mg.

Refer patient to specialist if no response to treatment or unsure about diagnosis.

FIBROMYALGIA

FIBROMYALGIA: DIAGNOSIS

Consider fibromyalgia if the patient has had general body pain that waxes and wanes for more than 3 months associated with the following:
- Multiple tender points (see picture)
- The pain is often worsened by lack of sleep, stress, cold, fatigue, physical exertion.
- There may be stiffness, fatigue, poor sleep (sleeping lightly and waking frequently), depression, tender skin, irritable bowel, poor memory, headaches, Raynaud's phenomenon, dizziness, restless legs, easy bruising, urinary frequency, numbness, tingling or swelling of hands.
- The patient may be sensitive to food and medication.



Dr A doctor must confirm the diagnosis of fibromyalgia
- Press the tender points in the picture with the pressure that would blanch a fingernail. Compare with a control site on forehead.
- Check temperature and weight. If temperature ≥ 38ºC →4 or weight loss →3 and consider another diagnosis.
- Screen for a joint problem: patient to place hands behind head; then behind back. Bury nails in palm and open hand. Press palms together with elbows lifted. Walk. Sit and stand up with arms folded. If unable to do screen comfortably →33.
- Check CRP, glucose ↴ 70, TSH, Hb, eGFR, and HIV if status unknown ↴ 60.
- Refer to consider another diagnosis if joint problem, HIV positive, blood results abnormal or unsure of diagnosis.

FIBROMYALGIA: ROUTINE CARE

Assess the patient with fibromyalgia

Assess	When to assess	Note
Symptoms	Every visit	• Manage symptoms as on symptom pages. Ask patient to identify the 3 symptoms that bother her/him most and focus on these. • Do not dismiss all symptoms as fibromyalgia: exclude treatable and serious illness. If unsure, refer.
Sleep	Every visit	If patient has problems sleeping ↴ 54.
Depression	Every visit	If low mood or sadness, loss of interest or pleasure, feeling tense or anxious or worrying a lot about things, consider depression/anxiety ↴ 81.
Stressors	Every visit	Help identify the psychosocial stressors that may exacerbate symptoms. If patient is being abused ↴ 53.

Advise the patient with fibromyalgia
- Educate patient about fibromyalgia as above. Fibromyalgia tends to wax and wane over years.
- Advise patient to keep as active as possible.
- Encourage patient to involve the family and refer to available support group and helpline ↴ back page.
- Encourage the patient to adopt sensible sleep habits ↴ 54.

Treat the patient with fibromyalgia
- Give paracetamol 1g 6 hourly as needed.
- Give amitriptyline 25mg taken at 6pm every night for 3 months. If still symptomatic, increase dose to 50mg.
- If still symptomatic after 3 months, add fluoxetine 20mg in the morning. If still symptomatic after 3 months, add ibuprofen 200mg 3 times a day with food.

A supportive relationship with the same health practitioner can contain frequent visits for multiple problems. Review patient 6 monthly once stable.

CONTRACEPTION

Give emergency contraception if patient had unprotected sex *in past 5 days* and does not want pregnancy:

- First exclude pregnancy. If pregnant do not give emergency contraception →93.
- Give ideally within 24 hours of unprotected sex: levonorgestrel 0.75mg 2 tablets once or norgestrel/ethinyl oestradiol 0.5/0.05mg 2 tablets and repeat after 12 hours. Offer to start injectable/oral contraceptive at same visit.
- If patient chooses, insert emergency CuT 380A intrauterine device instead.

Help patient to choose contraception method

- Recommend dual contraception: one method below *plus* condoms to protect from STIs and HIV.
- In the menopausal patient: if < 50 years, give contraception for 2 years after last period; if ≥ 50 years, for 1 year after last period ↩ 98.

Intrauterine device (IUCD) | **Subdermal implant** | **Injectable contraceptive** | **Oral contraceptive** | **Sterilisation**

Method	Help patient to choose method	Instructions for use	Side effects
Intrauterine device (IUCD) • CuT 380A	• Effective for 10 years • Fertility returns on removal. • Avoid if patient has multiple partners, had an STI in past 3 months or heavy periods	• Insert within first 12 days of cycle. If later, exclude pregnancy first. • Must be inserted/removed by trained staff. • Avoid if abnormal cervix/uterus.	• Periods may be heavier, longer or more painful. Refer if excessive bleeding occurs after insertion, or if tired and Hb < 10.
Subdermal implant (if available) • Etonorgestrel (one-rod: 3 years) • Levonorgestrel (two-rods: 5 years)	• Lasts for 3–5 years depending on implant type. • Fertility returns without delay after removal. • Avoid if current or past breast cancer or if on certain medications[1].	• Small plastic rod placed just under skin of upper arm. • Must be inserted/removed by trained staff. • Use condoms for 7 days after insertion. • Choose one-rod implant for 3 years in women ≥ 80kg (if unavailable replace two-rod implant sooner after 4 years instead of 5 years).	• Wound pain, bleeding, swelling or discharge: refer. • Irregular bleeding or amenorrhoea: reassure this is common. • Mild headaches, nausea, dizziness, breast tenderness: reassure that these should resolve. • Moodiness: reassure that this should resolve. • Abdominal pain – refer if pain severe or persists.
Progesterone injection • Medroxyprogesterone acetate IM 150mg 12 weekly or • Norethisterone enanthate IM 200mg 8 weekly	• 8 or 12 weekly injection • Fertility returns 4–6 months after last injection. • Avoid if current or past breast cancer	• Can start any time in menstrual cycle: if after day 5 of cycle, need to use condoms for 7 days • No need to adjust dosing interval for HIV, TB or epilepsy treatment. • Remind patient to use condoms to prevent HIV and STIs.	• Amenorrhoea: reassure that this is common. • Abnormal vaginal bleeding: common in first 3 months ↩ 29 to assess and manage. • Severe headaches and blurred vision: switch to non-hormonal method. • Weight gain • Acne: switch to non-hormonal method.
Combined progesterone/ oestrogen pill • Monophasic: levonorgestrel/ ethinyl oestradiol 0.15/0.03mg • Triphasic: levonorgestrel/ethinyl oestradiol (varying doses)	• If motivated to take pill daily at the same time. • Fertility returns once pill is stopped. • Avoid if unlikely to take pill reliably, on certain medications[1], current or previous breast cancer, heart or liver disease. • Choose progesterone-only pill if patient is breast feeding, smoker > 35 years, BP ≥ 140/90, has migraine with focal symptoms or DVT or pulmonary embolus.	• Must be taken every day at the same time. • Use condoms for 7 days if started after day 5 of cycle. • Advise patient with diarrhoea/vomiting or on antibiotics to use condoms during illness and for 7 days thereafter.	• Nausea, dizziness: reassure that this will resolve. • Tender breasts: exclude pregnancy, then reassure. • Moodiness: reassure that this should resolve. If patient has low mood or not coping as well as before screen for depression/anxiety ↩ 83 and change method. • Amenorrhoea: exclude pregnancy then reassure. • Slight weight gain • Abnormal bleeding: common in first 3 months ↩ 29 to assess and manage. • Severe headaches: switch to non-hormonal method and ↩ 9.
Progesterone only pill • Levonorgestrel 0.03mg		• Take **same time** every day (no more than 3 hours late). • Start any time in cycle, use condoms for next 7 days. • If breastfeeding, start 6 weeks postpartum	• Abnormal bleeding: common in first 3 months ↩ 29 to assess and manage. • Mild headaches, nausea, breast tenderness: reassure that these should resolve.
Sterilisation • Woman: tubal ligation • Man: vasectomy	• Permanent contraception • Surgical procedure	• Refer for assessment • Written informed consent required	• Wound pain, swelling or bleeding: refer.

[1]Phenytoin, carbamazepine, rifampicin, lopinavir/ritonavir may reduce the efficiency of contraceptive.

CONTRACEPTION: ROUTINE CARE

Assess the patient starting and using contraception

- Follow up the patient on pill after 3 months, thereafter 6 monthly. Follow up patient with IUCD, 6 weeks after insertion to check strings, thereafter yearly.

Assess	When to assess	Note
Symptoms	First and every visit	• Ask about side effects of contraceptive method ↴ 91. • Check for symptoms of STIs: vaginal discharge, ulcers, lower abdominal pain. If present ↴ 23. If sexual problems ↴ 30. • If > 45 years ask about menopausal symptoms: flushing, irregular periods, irritability, tiredness, mood changes ↴ 98. • Manage other symptoms as on symptom pages.
Adherence	Every visit	• Ask about concerns and satisfaction with method. • If patient has missed injections or pills, see below to manage.
Safe sex	First and every visit	Ask about risky sexual behaviour: patient or regular partner has new or multiple partner/s, uses condoms unreliably or has substance abuse ↴ 83.
Medication changes	First and every visit	If started TB treatment or anticonvulsants switch to IUCD or injectable contraceptive *plus* condoms.
Vaginal bleeding	First and every visit	• Before starting contraception: exclude pregnancy if missed period. If abnormal vaginal bleeding ↴ 29. • If on contraception exclude pregnancy if missed period if using IUCD or combined pill. • IUCD and hormonal methods may cause abnormal bleeding. See method to manage ↴ 29.
Breast check	First visit and yearly on pill	If any lumps found in breasts or axillae, refer same week to breast clinic.
Weight	First and every visit	If BMI > 25 assess CVD risk ↴ 68. If using two-rod implant and weight ≥ 80kg, replace implant after 4 years instead of 5 years.
BP	First and every visit on pill	If BP ≥ 130/80 ↴ 73 to interpret result. If BP ≥ 140/90 avoid/change from combined pill.
HIV	First and every visit	If status unknown test for HIV ↴ 60. The HIV patient needs routine HIV care ↴ 61.
Pap smear	When needed	If HIV negative, 3 smears 10 years apart from age 30. The HIV patient needs smear at diagnosis then yearly if normal ↴ 27.

Advise the patient starting and using contraception

- Advise patient to discuss concerns, problems with contraceptive method and find an alternative, rather than just stopping it and risking an unwanted pregnancy.
- Demonstrate and give male/female condoms. Recommend dual contraception: one method of contraception *plus* condoms to protect from STIs and HIV.
- Educate about the availability of emergency contraception ↴ 91 and termination of pregnancy ↴ 94 to prevent unwanted pregnancy.
- Encourage patient to have 1 partner at a time and if HIV negative to test for HIV between partners. Advise partner/s to be tested for HIV.
- Advise patient on pill to tell clinician if starting TB or epilepsy treatment: may interfere with pill effectiveness. If diarrhoea/vomiting or on antibiotics use condoms during illness and for 7 days thereafter.
- Educate patient to use contraception reliably. If patient has missed pills or injections:

Late injection

- < 2 weeks late: give injection, there is no loss of protection.
- ≥ 2 weeks late: exclude pregnancy. If pregnant →93. If not pregnant, give injection and use condoms for 7 days.
- If unable to exclude pregnancy give progesterone-only pill and condoms for 2 weeks, then give injection if pregnancy test negative.

Missed/late progesterone only pill

- Pill missed or > than 3 hours late: take pill as soon as possible and continue pack and use condoms for 48 hours.
- If ≤ 5 days since unprotected sex, give emergency contraception ↴ 91.

Missed combined oral contraceptive pill

- 1 active pill missed: take pill as soon as remembered and take next 1 at usual time.
- 2 active pills missed: take last missed pill as soon as remembered and next 1 at usual time. Use condoms or abstain for next 7 days.
- 2 or more pills missed in last 7 active pills of pack: omit the inactive tablets and immediately start first active pill of next pack.
- 2 or more pills missed in first 7 active pills of pack and patient has had sex: give emergency contraception ↴ 91, restart active pills 12 hours later and use condoms for next 7 days.

THE PREGNANT PATIENT

Recognise the pregnant patient needing urgent attention:

- Fitting
- Diastolic BP ≥ 110 and proteinuria: treat as pre-eclampsia
- Diastolic BP ≥ 90 and headache, blurred vision or abdominal pain: treat as imminent eclampsia
- Temperature ≥ 38°C and headache, weakness or back pain
- Difficulty breathing
- Swollen red calf
- Vaginal bleeding
- Decreased/no fetal movements
- Preterm labour: painful contractions, 3 per 10 minutes < 37 weeks
- Preterm prelabour rupture of membranes < 34 weeks

Management:

- If fitting or having difficulty breathing give 40% face mask oxygen. See below.
- If BP < 90/60 give IV sodium chloride 0.9% rapidly until BP > 90/60.
- If temperature ≥ 38°C give ceftriaxone[1] 1g IM/IV, if unavailable amoxicillin 1g orally. If also a vaginal discharge in 2nd or 3rd trimester, give metronidazole 400mg orally as well.
- Manage further according to problem and **refer same day:**

Preterm labour
Determine duration of pregnancy.

- < 26 weeks → Refer into MOU.
- 26–33+ weeks →
  - Give betamethasone 12mg IM, record time given in referral letter.
  - Give sodium chloride 0.9% 300mℓ IV.
  - Then give nifedipine 20mg oral, then 10mg after 30 minutes, then 10mg 4 hourly until transferred.
  - Refer same day.
- ≥ 34 weeks → Allow labour to continue.

Preterm prelabour rupture of membranes

- Confirm amniotic fluid leak with sterile speculum, liquor is alkaline.
- Avoid digital vaginal examination.
- Give betamethasone 12mg IM, record time given in referral letter.
- Refer same day.

Severe pre-eclampsia/ imminent eclampsia

- Give sodium chloride 0.9% 200mℓ slowly IV.
- If diastolic BP still ≥ 110, give nifedipine 10mg to swallow (not chew).
- Repeat BP after 30 minutes. If diastolic BP still ≥ 110, repeat nifedipine 10mg.
- If imminent eclampsia: give magnesium sulphate loading dose and infusion before referral.

Fitting

- Place patient in a lateral lying position.
- Avoid placing anything in the mouth.
- Give 40% facemask oxygen.
- Check glucose. If < 3.5 or unable to measure, give 50mℓ of 50% dextrose IV.
- Give dextrose 5% in sodium chloride 0.9% IV slowly (30 drops per minute).
- Manage further according to gestation:
  - ≥ 20 weeks - up to 1 week post partum: Patient has **eclampsia.**
  - < 20 weeks → →2

- Give magnesium sulphate 4g in 200mℓ sodium chloride 0.9% IV over 20 minutes *and* 5g IM in each buttock. Repeat 5g IM 4 hourly in alternate buttocks till transferred to hospital.
- Insert urethral catheter.
- Stop magnesium sulphate if urine output < 100mℓ in 4 hours or respiratory rate < 16 breaths/minute.
- Refer urgently.

Provide routine antenatal care to the pregnant patient not needing urgent attention →94.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone.

THE PREGNANT PATIENT

Does the patient want the pregnancy?

No or unsure
- Discuss the options around continuing with pregnancy, choosing adoption or termination of pregnancy (TOP). Refer to social worker.
- Discuss future contraception ↴91.
- Determine gestational age by dates and on examination.

Yes
Give routine antenatal care.

Patient requests a TOP.

< 20 weeks
- < 13 weeks: book for an on-demand TOP < 13 weeks.
- ≥ 13 weeks: book for assessment for TOP as soon as possible < 20 weeks.

≥ 20 weeks
- TOP not an option.
- Discuss possibility of adoption.
- Give routine antenatal care.

- Patient decides to continue with pregnancy.
- Give routine antenatal care.

Identify the pregnant patient who needs secondary level antenatal care:
- Current medical problems: diabetes, heart/kidney disease, asthma, epilepsy, on TB treatment, substance abuse, diastolic BP > 90
- Current pregnancy problems: rhesus negative, multiple pregnancy, currently < 16 or > 36 years, vaginal bleeding or pelvic mass
- Previous pregnancy problems: stillbirth or neonatal loss, > 3 consecutive spontaneous abortions, birth weight < 2500g or > 4500g, admission for pre-eclampsia
- Previous admission for hypertension or reproductive tract surgery

If not needing secondary level antenatal care, plan patient's routine antenatal care in primary care facility →95.

ROUTINE ANTENATAL CARE

Assess the pregnant patient at booking visit and 4 follow-up visits at 20, 26–28, 32–34, 38 weeks.

Assess	When to assess	Note
Symptoms	Every visit	Manage symptoms as per symptom page.
Estimated delivery date	Booking visit	• Plot on antenatal card. • If patient ≥ 42 weeks, confirm EDD and symphysis-fundal measurement and refer for fetal evaluation and possible induction of labour.
TB	Every visit	• If cough ≥ 2 weeks, weight loss, poor weight gain or anaemia, check for TB ⮌ 55. • If patient has TB refer for secondary hospital antenatal care.
Mental health	Every visit	• If 2 or more of: a difficult major life event in last year, unhappy about pregnancy, absent or unsupportive partner, previous depression or anxiety, or experiencing violence at home, screen for depression/anxiety ⮌ 81. See also traumatised/abused patient ⮌ 53. • > 14 drinks/week, > 5 drinks/session or misusing illicit or prescription drugs, screen for substance abuse ⮌ 83. Refer for secondary hospital antenatal care.
Mid upper arm circumference	Booking visit	• MUAC < 23cm: exclude TB and HIV, check weight at every visit, refer for nutritional support. • MUAC > 33cm: continue routine antenatal care but deliver at secondary hospital. Assess and manage CVD risk ⮌ 68.
Abdominal examination	Every visit	• If mass other than uterus in abdomen or pelvis, refer for assessment. • Measure symphysis-fundal distance and plot on antenatal card. Refer for assessment if discrepancy with EDD, <10th or > 90th centiles, or multiple pregnancy likely. • Look for breech presentation. If present at 32/34 and 38 weeks, refer to high risk clinic.
Vaginal discharge	Every visit	• If abnormal discharge, treat for STI ⮌ 23. If discharge is runny, suspect premature rupture of membranes ⮌ 93.
BP	Every visit	BP is normal if < 140/90. If raised, repeat after 1 hour rest. If 2nd BP normal: repeat BP after 2 days. If 2nd BP still raised: check urine dipstick for protein: • No proteinuria: start methyldopa 250mg 8 hourly and refer same week to high risk clinic. • ≥ 1+ proteinuria: refer patient same day. If abdominal pain, blurred vision, headache, treat for pre-eclampsia ⮌ 93.
Urine dipstick: test clean, midstream urine	Every visit	• If leucocytes and nitrites in urine treat for complicated urinary tract infection ⮌ 31. • If protein in urine and BP < 140/90: if dysuria, frequency, treat for complicated urinary tract infection ⮌ 31. Repeat urine dipstick for protein after 2 days - if still 1+ proteinuria and BP < 140/90, refer to the nearest doctor's clinic same week. If BP raised see above. • If glucose in urine, check random blood glucose.
Random blood glucose	If glucose in urine	• If random blood glucose ≥ 11: refer to high risk clinic same day. If glucose > 15 and ketones in urine, give sodium chloride 0.9% IV 1ℓ 4 hourly and short-acting insulin 10IU IM. • If random blood glucose 8–11, repeat blood glucose after an 8 hour fast. - Fasting blood glucose 6–8: assess and manage CVD risk ⮌ 68. Refer to high risk clinic for next antenatal visit. - Fasting blood glucose ≥ 8: refer to high risk clinic same day.
Haemoglobin	Booking visit and if patient pale	• Refer to high risk clinic if < 34 weeks and Hb < 8, or ≥ 34 weeks and Hb < 10. • Treat if Hb < 10 ⮌ 96. Repeat Hb monthly.
Rapid rhesus	Booking visit	If rhesus negative refer to high risk clinic.
Rapid syphilis	Booking visit	If positive do RPR and give benzathine penicillin 2.4MU IM single dose and see in 1 week for result ⮌ 28.
HIV	Booking visit, 3 monthly and at 32 weeks if negative	• If status unknown test for HIV ⮌ 60. If patient refuses, offer at each visit, even in early labour. • If HIV give routine HIV care ⮌ 61. If not on ART, do baseline bloods (CD4 and creatinine) and start ART **same day** ⮌ 63. Review within 1 week.
CD4, stage	Booking visit if HIV not on ART	• If CD4 > 350 and stage 1 or 2: continue ART as prophylaxis through antenatal, delivery and postnatal care until 1 week after last breastfeed. • If CD4 ≤ 350 or stage 3 or 4: continue ART as lifelong treatment.
Viral load	• If on ART: at booking visit.	• If patient already on ART, check viral load at booking visit. If patient starting ART, check viral load at 6 months and then yearly. • If viral load ≥ 400, discuss with specialist same day to consider switching ART regimen.

Advise the pregnant patient

- Advise to stop smoking and to stop drinking alcohol.
- Discuss safe sex. Advise patient to use condoms throughout pregnancy and have only 1 partner at a time.
- Complete antenatal card and give to patient, remind patient to bring it to every visit and when in labour.
- Ensure patient knows the signs of a pregnancy emergency ↴ 93 and of early labour.
- Discuss contraception following delivery ↴ 91.
- Regardless of HIV status, encourage exclusive breastfeeding for 6 months: baby gets only breast milk (no formula, water, cereal) and if HIV-exposed, NVP and co-trimoxazole prophylaxis.
- If mother has HIV consider exclusive formula feeding only if affordable, feasible, acceptable, safe and sustainable. Check correct mixing. Discourage mixed feeding.
- From 6 months, introduce food while continuing with feeding choice. If HIV, continue breastfeeding until 1 year if mother on ART or baby on NVP and until 2 years if baby diagnosed HIV positive.

Treat the pregnant patient

- Give folic acid 5mg daily.
- Give iron according to Hb. Avoid tea within 2 hours of taking iron tablets.
  - If Hb ≥ 10 give ferrous sulphate compound BPC 170mg daily with food.
  - If Hb < 10 give ferrous sulphate compound BPC 170mg 8 hourly with food, continue for 3 months after Hb > 11, then continue once daily for duration of pregnancy.
- Give elemental calcium 500mg twice a day to reduce the risk of pre-eclampsia.
- Give the HIV patient:
  - Influenza vaccine.
  - If on ART, do not stop it.
  - If not on ART: start ART **same day** ↴ 63 and review in 1 week. Give TDF/FTC/EFV (FDC) 1 tablet daily if available. Avoid if depression, psychosis, known kidney disease, diabetes, hypertension or ≥ 2+ proteinuria: start AZT 300mg 12 hourly instead and refer to doctor.
    - › If CD4 >350 and stage 1 or 2: continue ART as prophylaxis through antenatal, delivery and postnatal care until 1 week after last breastfeed.
    - › If CD4 ≤ 350 or stage 3 or 4: continue ART as lifelong treatment.

Treat the HIV patient in labour

HIV positive on ART	HIV patient on PMTCT AZT	HIV positive not on treatment
Continue ART throughout delivery.	• Give together during early labour: one tablet of nevirapine 200mg *and* one tablet of combined TDF/FTC 300mg/200mg. • Continue AZT 300mg 3 hourly until delivery and then stop.	

- Give **baby born to HIV positive mother** or to the mother whose HIV status is unknown nevirapine syrup (10mg/mℓ) as soon as possible after birth according to weight[1]. If baby vomits within 1 hour, repeat once only at least 1 hour before discharge. Give nevirapine daily for 6 weeks.
- If baby born to mother whose HIV status is unknown, check rapid HIV test and if positive continue nevirapine for 6 weeks.

Give postnatal care to patient and baby →97.

[1] Nevirapine (10mg/ml) syrup daily dose: 2–2.4kg: 0.5mℓ, 2.5–2.9kg: 0.6mℓ, 3–3.9kg: 0.7mℓ; 4–5.9kg: 1mℓ

POSTNATAL CARE

Assess the mother and her baby 6 hours, 6 days, and 6 weeks after delivery. If HIV, baby needs PMTCT follow-up within 2 weeks.

Assess	When to assess	Note
Symptoms	Every visit	• Manage mother's symptoms as on symptom page. Manage baby's symptoms with IMCI guide. • If baby born with swollen eyelids and pus in eyes, give ceftriaxone 50mg/kg IM stat, saline washes hourly and refer urgently. Treat mother and partner for vaginal discharge ↻ 23.
Mental health	Every visit	• If patient not interacting with baby and/or 2 or more of: a difficult major life event in last year, unhappy about pregnancy, absent or unsupportive partner, previous depression or anxiety, or experiencing violence at home, screen for depression/anxiety ↻ 81. See also traumatised/abused patient ↻ 53. • If > 14 drinks/week or > 5 drinks/session or misusing illicit or prescription drugs, screen for substance abuse ↻ 83.
Family planning	Every visit	Assess patient's family planning needs ↻ 91.
Infant feeding	Every visit	• Monitor baby's weight as per IMCI guideline. • If breastfeeding, check for problems ↻ 18. If formula feeding ensure correct mixing and that it is affordable, feasible, acceptable, safe and sustainable.
Uterus	Every visit	If painful abdomen, smelly vaginal discharge, temperature ≥ 38˚C, give ceftriaxone[1] 1g IV/IM *plus* metronidazole 400mg orally and refer same day.
BP	Every visit	If diastolic ≥ 90, recheck after 1 hour rest, if still raised or any of headache, abdominal pain, blurred vision, refer urgently.
BMI	Every visit	Mother's BMI is weight (kg)/[height (m) x height (m)]. If < 18.5, arrange nutritional support.
HIV in mother	If not done	If positive, give routine HIV care ↻ 61. If not on ART and breastfeeding, start ART **same day** ↻ 63.
HIV PCR in baby	4-6 weeks	• If PCR positive, explain baby has HIV and needs ART urgently. • If PCR negative, repeat PCR 6 weeks after last breastfeed (no need to repeat if not breastfed) and confirm HIV negative with rapid HIV test at 18 months.
Syphilis	If not done	If mother positive and not already treated, assess, advise and treat ↻ 28. Treat baby as on page 28.
Pap smear	6 weeks	Check pap smear if > 30 years and not done in past 10 years. If HIV, check pap smear at diagnosis and yearly if normal ↻ 27.

Advise the mother

- Encourage mother to become active soon after delivery, rest frequently and eat well. Advise on perineal and wound care. Arrange support for the mother who has little support at home.
- Advise to return urgently if excessive vaginal bleeding, sepsis, dizziness, severe headache, blurred vision, severe abdominal pain occur or baby is unwell.
- Encourage exclusive breastfeeding for 6 months: baby gets only breast milk (no formula, water, cereal). Refer to an infant feeding support group.
- Suggest exclusive formula feeding if mother has HIV and formula is affordable, feasible, acceptable, safe and sustainable. Check correct mixing. Discourage mixed feeding.
- From 6 months, introduce food while continuing with feeding choice. If HIV, continue breastfeeding until 1 year if mother on ART or baby on NVP and until 2 years if baby diagnosed HIV positive.

Treat the mother

- Continue ferrous sulphate compound BPC 170mg daily with food for 6 weeks after delivery. If Hb < 10 continue until Hb > 11 for 3 months.
- If not on ART and breastfeeding, start ART same day ↻ 63. If mother has HIV and is on lifelong ART continue with it, if on maternal ART prophylaxis decide when to stop ↻ 64.

Treat the baby of the mother with HIV

- Give nevirapine syrup daily from birth for 6 weeks, irrespective of feeding choice: dose according to age and weight[2]. Decide when to stop NVP:
  - If breastfeeding and mother was on ART for < 4 weeks before delivery, stop NVP at 12 weeks.
  - If breastfeeding and mother was on ART for ≥ 4 weeks before delivery, stop NVP at 6 weeks. If mother's 6 month viral load ≥ 400, discuss with specialist.
  - If formula feeding, stop NVP at 6 weeks.
  - If baby diagnosed HIV positive at any time, stop NVP and refer urgently for ART
- Give co-trimoxazole prophylaxis daily from 6 weeks: < 5kg: 2.5ml; 5–13.9kg: 5ml. Stop when confirmed PCR negative.

[1] Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. [2] Nevirapine (10mg/ml) syrup daily dose from age **birth–2 weeks**: 2–2.4kg: 0.5mℓ, 2.5–2.9kg: 0.6mℓ, 3–3.9kg: 0.7mℓ; 4–5.9kg: 1mℓ. Nevirapine (10mg/ml) syrup daily dose from age **2–12 weeks**: 2–2.4kg: 0.8mℓ, 2.5–2.9kg: 1mℓ, 3–3.9kg: 1.5mℓ; 4–4.9kg: 2mℓ, 5–5.9kg: 2.5mℓ.

MENOPAUSE

Menopause is the cessation of menstruation for at least 1 year. Most women have menopausal symptoms and irregular periods during the perimenopause.

MENOPAUSE: ROUTINE CARE

Assess the menopausal patient

Assess	When to assess	Note
Symptoms	Every visit	• Ask about menopausal symptoms: flushes, sexual problems ↴ 30, sleeping problems ↴ 54, headache ↴ 9, mood changes. • If other TB symptoms like weight loss and cough ≥ 2 weeks, exclude TB ↴ 55. • If low mood or sadness, loss of interest or pleasure, feeling tense, worrying a lot or not coping as well as before, consider depression/anxiety ↴ 81. • Manage other symptoms as on symptom pages.
Vaginal bleeding	Every visit	Refer within 2 weeks if bleeding between periods, after sex or after being period-free for 1 year.
CVD risk	First visit BP 3 monthly on HRT	• Assess CVD risk ↴ 68. • Interpret BP result ↴ 73.
Osteoporosis risk	First visit	If < 60 years with loss of > 3cm in height and fractures of hip, wrist or spine; previous non-traumatic fractures; oral steroid treatment for > 6 months; onset of menopause < 45 years; BMI < 19; heavy alcohol user; heavy smoker
Family planning	First visit	If < 50 years, give contraception for 2 years after last period; if ≥ 50 years switch to progesterone only pill, subdermal implant , IUCD and/or condoms until 1 year after last period ↴ 91. If amenorrheoa on implant or progesterone pill, continue until 55 years. If ≥ 55 years and still menstruating, refer for investigation.
Breast check	First visit, yearly on HRT	If any lumps found in breasts or axillae, refer same week to breast clinic.
Pap smear	When needed	If HIV negative, 3 smears 10 years apart from age 30. The HIV patient needs smear at diagnosis then yearly if normal ↴ 27.

Advise the menopausal patient

- To cope with the flushes, advise patient to dress in layers and to decrease alcohol and caffeine intake.
- Help patient to manage CVD risk if present ↴ 69.
- If patient is having mood changes and/or not coping as well as in the past, refer to counselor, support group or helpline ↴ back page.
- Educate the patient about the risks, contraindications and benefits of HRT and that it can be used to treat menopausal symptoms for up to 5 years. Risk of breast cancer, DVT and cardiovascular disease increase with increasing age. 6–12 months after discontinuation risk is equivalent to rest of population.

Dr Treat the menopausal patient

- Treat with hormone replacement therapy (HRT) to relieve menopausal symptoms and to prevent osteoporosis in the patient at risk. Avoid if abnormal vaginal bleeding, cancer of uterus or breast, previous deep vein thrombosis or pulmonary embolism, recent myocardial infarction, uncontrolled hypertension, liver disease or porphyria: give oestradiol 0.5–1mg daily or conjugated oestrogens 0.3mg–0.625mg. If patient has a uterus also give medroxyprogesterone oral 5mg daily. Adjust dose to control menopausal symptoms with minimal side effects.
- Treat vaginal dryness and pain with sex with lubricants (avoid Vaseline® with condoms). Refer if no better with HRT or HRT contraindicated.
- Review the menopausal patient 3 monthly once settled on HRT. Decrease and stop HRT for menopausal women within 5 years, or before 60 years of age.

PREP ROOM ASSESSMENT OF THE PATIENT

Recognise the patient needing urgent attention:

- Decreased level of consciousness
- Fitting
- Aggressive, confused or agitated
- Recent sudden weakness
- Chest pain
- Difficulty breathing, breathless while talking
- Unable to walk unaided
- If checked, BP ≥ 180/110 or < 90/60 or if pregnant diastolic ≥ 90
- Headache with vomiting
- Overdose of drugs/medication

Assess the patient not needing urgent attention in the prep room

Has the patient been coughing ≥ 2 weeks?

- Assign the patient with cough to the fast track/coughing queue.
- Collect first sputum for TB →55.

Does the patient know his/her HIV status?

- If no, urge patient to test for HIV.
- If yes and patient negative, encourage patient to test once a year. Record year last tested in patient notes.

If the patient is a woman:

- Exclude pregnancy. If late menstrual period do a pregnancy test.
- Check if patient needs a Pap smear: if HIV negative, 3 Pap smears in a lifetime, 1 every 10 years from age 30; if HIV positive Pap smear at diagnosis and then if normal yearly. If abnormal smear →27 for next date.

Avoid unnecessary urine and BP checks. Do prep room tests according to condition:

Is patient pregnant or known to have diabetes, hypertension, stroke, ischaemic heart disease or peripheral vascular disease?

Patient has hypertension, stroke, ischaemic heart disease and/or peripheral vascular disease.

Check at every visit:
- BP
- Weight

- At first visit also check height to calculate BMI.

Check once a year:
- Fingerprick glucose
- Urine dipstick
- Waist circumference

Patient has diabetes.

Check at every visit:
- BP
- Finger prick glucose
- Weight
- Urine dipstick *only if* glucose ≥ 15

Check once a year:
- Urine dipstick
- Waist circumference

Patient is pregnant.

Check at every visit:
- Weight
- BP
- Urine dipstick

Also check at booking visit:
- MUAC
- Hb if pale
- Rapid rhesus
- Rapid syphilis

None of the above

The patient over 40 years needs a cardiovascular disease risk calculated every 5 years →68:
- Weight
- Height
- BP
- Finger prick glucose
- Waist circumference

PROTECT YOURSELF FROM OCCUPATIONAL INFECTION

Adopt measures to diminish your risk of occupational infection

Protect yourself

Adopt hygienic practices
- Wash hands regularly with soap and water. Use alcohol-based hand-cleaner regularly.
- Adopt universal precautions in your approach to all patients.
- Wear gloves when handling specimens.
- Dispose of sharps in the correct manner.

Get vaccinated
- Get vaccinated against hepatitis B.
- All frontline health workers must be vaccinated against influenza.

Know your HIV status
- If status unknown, test for HIV ↴ 60. ART and INH prophylaxis can decrease the risk of TB.
- If HIV positive, you are entitled to work in an area of the facility where exposure to TB is limited.

Wear a face mask
- Wear a N95 respirator when in contact with TB suspects.
- Wear a surgical facemask when in contact with influenza suspects.

Protect your facility

Clean the facility
- Wash all surfaces (including door handles, telephones, keyboards) daily with chlorine disinfectant.

Ensure adequate ventilation
- Regularly clean extractor fans.
- Open windows and use fans to increase air exchange.

Organise waiting areas
- Prevent overcrowding in waiting areas.
- Fast track influenza and TB suspects.

Manage sharps safely
- Ensure sharps containers are easily accessible and regularly replaced.

Manage infection control in the facility
- Appoint an infection control officer for the facility to coordinate and monitor infection control policies.

Approach to possible occupational exposure

TB

Identify TB suspects promptly
- The patient with cough ≥ 2 weeks is a TB suspect.
- Separate TB suspects from others in the facility.
- Educate TB suspect about cough hygiene.
- Provide a surgical face mask or tissues to cover mouth and nose to protect others from infection.

Diagnose TB rapidly
- Aim to complete TB workup within 3 to 4 visits.

Protect yourself from TB
- Wear an N95 respirator (not a surgical mask) when in contact with an infectious TB patient.

HIV
- If status unknown, test for HIV ↴ 60.
- If HIV negative or unknown, start PEP for 1 month as soon as possible (ideally within 1–2 hours):
  - Give AZT 300mg and 3TC 150mg 12 hourly. Check Hb prior to starting AZT and after 4 weeks. Refer to doctor if Hb < 8.
  - Add LPV/r 400/100mg 12 hourly if high risk: deep injury, large bore or biopsy needle, obvious blood on device, source with AIDS or VL > 100 000.
- Repeat HIV test at 6 weeks, 3 and then 6 months.
- Advise condom use for 6 months with regular partner.

H1N1 influenza
- Wash hands with soap and water.
- Wearing a surgical face mask over the mouth and nose may be protective when performing procedures on patient suspected of influenza.
- Encourage patient who coughs and sneezes to cover mouth/nose with a tissue, to ensure used tissues are disposed of correctly and to wash hands regularly with soap and water.
- Advise patient with symptoms of influenza to stay indoors and avoid close contact with others.

ROUTINE CARE SUMMARY

CVD RISK

Assess

Assess at least every 5 years

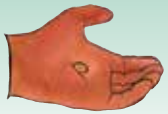
Advise

Urge patient to stop smoking

Assess Advise Treat

Control BP to prevent stroke/ heart attack

Treat



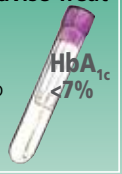
Give statin

DIABETES

Assess Advise Treat

Control BP to prevent stroke/ heart attack

Assess Advise Treat



Control glucose to save eyes, kidneys, feet

Assess

Screen for complications

HYPERTENSION

Assess Advise Treat

Control BP to prevent stroke/ heart attack

Advise

Assess at least every 5 years

STROKE

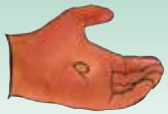
Assess Advise Treat

Control BP to prevent another stroke

Advise

Urge patient to stop smoking

Treat



Give statin

TB

Assess

Test for HIV

Advise

Urge adherence to prevent resistance

HIV

Assess

Screen for TB

Treat

Start ART as soon as needed

PREGNANCY

Assess Advise Treat

Start routine antenatal care early

DEPRESSION

Assess

Screen for substance abuse

Assess

Identify depression

CHRONIC RESPIRATORY DISEASE

Advise

Urge patient with COPD to stop smoking

Treat

Control asthma with inhaled steroids

HELPLINE NUMBERS

Helpline	Services provided	Contact number/s
General counselling		
Lifeline National Counselling Line	Counselling for any life crisis and referral to relevant services	0861 322 322 (24 hour national helpline)
Child line SA (ages 0 – 16 years)	For children and young adolescents who are in crises, abuse or at risk of abuse and violence	0800 055 555 (24 hour toll free)
Abuse		
Stop Gender Violence	Support for children, women and men experiencing domestic violence	0800 150 150 (24 hour toll free)
Safeline	Abuse counselling, court preparation, anti-abuse awareness campaigns and group therapy	0800 035 553 (24 hour crisis line 0723674588)
Rape Crisis	Counselling and court support for rape survivors > 13 years	021 447 97 62 (24 hour service)
Chronic condition		
Arthritis Foundation	Education and monthly support groups for patient with arthritis and/or fibromyalgia	0861 30 30 30 (National helpline)
Epilepsy South Africa	Education, counselling and support groups for patient with epilepsy and his/her family	0860 37 45 37 (National helpline)
Diabetes South Africa	Education, dietary plans, support groups and workshops for patient with diabetes	086 111 3913 (National helpline)
Heart & Stroke Foundation	Education and support groups for patient with stroke, any heart condition or CVD risk.	0860 143 278 (National helpline) · www.heartfoundation.co.za
National AIDS helpline	Counselling and information for patient who has HIV or thinking of testing	0800 012 322 (24 hour national helpline)
Mental health		
S A Depression and Anxiety group	Counselling and support for patient with mental illness and/or family with suicide crisis line	0800 567 567 (Toll free service 8am–8pm)
Substance abuse	Counselling for patient and family with substance abuse, referral to rehabilitation centre	0800 12 13 14 (24 hour toll free)
Alzheimer's South Africa	Information, training and support groups for carers	0860 102 681 (National helpline) · www.alzheimers.org.za
Alcoholics Anonymous	Counselling, education and support groups for patient with alcohol abuse	0861 435 722
Health worker		
Drug and Poisoning	Advice on the management of exposure to or ingestion of poisonous substances	021 689 5227 and 021 931 6129 both 24 hours a day, 7 days a week
National HIV & TB Health Care Worker Hotline	For HIV and TB related clinical queries	0800 212 506 (08:30–16:30 Monday to Friday)
Medicines Information Centre	Advice on medicine related query like drug interactions, side effects, dosage, treatment failure	021 4066829 (08:30–16:30 Monday to Friday)
Nutrition Information Centre (NICUS)	For all nutrition related queries for health workers and the public.	021 9331408 (08:30–16:30 Monday to Friday) www.sun.ac.za/nicus
Administration		
Legal Aid Advice line	Information and guidance on any legal matter. They will return messages left after hours.	0800 110 110 (07:00–19:00 Monday to Friday) (National helpline)
Medic Alert	Assistance with application for Medic Alert disc or bracelet	086 111 2979 (09:00–16:00 Monday to Friday) (24 hour emergencies 021 4610000)
Your helplines		