



Key Changes and Enhancement

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Contents: Symptoms and Long-term Conditions

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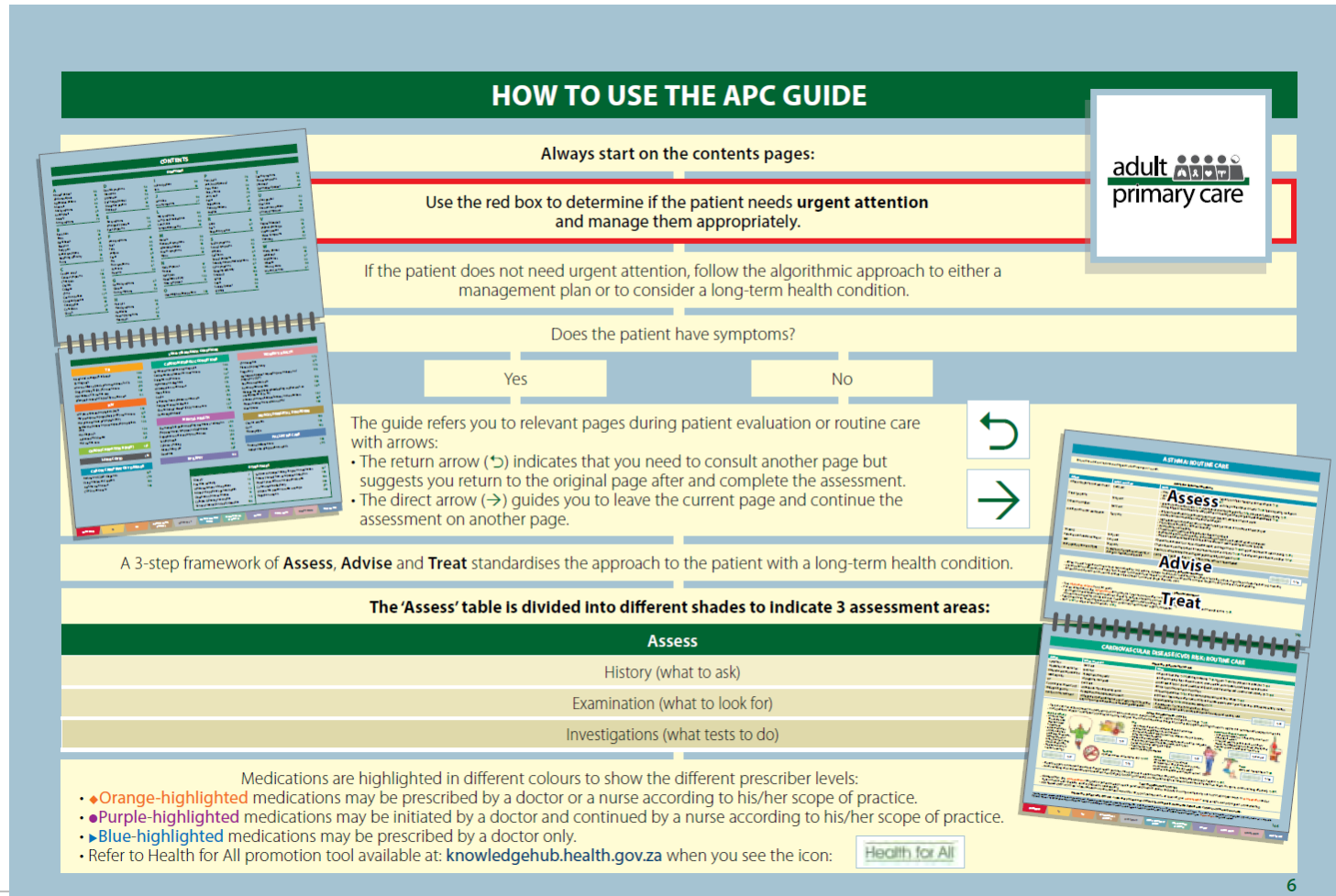
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How to use the guide



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Long-term conditions	Diabetes Hypertension Cardiovascular risk Overweight/Obesity Cancer
Woman's Health	HPV-based cervical screening Breast symptoms Family planning and TOP
TB	Diagnostic tests and Interpretation of results Updates to BPAL regimen
HIV	Lenacapavir as PrEP Advanced HIV disease
Communicable diseases	Mpox Malaria



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Non-Communicable Diseases

LIFESTYLE
Staff Writer
22 Sep 2026

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The biggest killers in South Africa



Stats SA has published its latest Mortality Report for South Africa, revealing that the main causes of deaths in the country in 2024 were due to diabetes, hypertension and strokes.

Diabetes, hypertension and stroke have replaced infectious diseases to become our top 3 killers

Source: <https://businesstech.co.za/news/lifestyle/876629/the-biggest-killer-in-south-africa/>

Non-Communicable Diseases

CARDIOVASCULAR DISEASE (CVD) RISK: ROUTINE CARE

Assess the patient with CVD risk

Assess	When to assess	Note
Symptoms	Every visit	Ask about chest pain $\hookrightarrow$ 24, difficulty breathing $\hookrightarrow$ 23, leg pain $\hookrightarrow$ 80 and symptoms of stroke/TIA $\hookrightarrow$ 152.
Modifiable CVD risk factors	Every visit	Ask about smoking, diet, substance misuse, stress, exercise, and activities of daily living. Manage below.
BMI and waist circumference	At diagnosis, then yearly	Aim for BMI of 18 to $<$ 25 and a waist circumference $<$ 80cm in woman and $<$ 94cm in man. If BMI $\geq$ 25 $\hookrightarrow$ 156.
Waist-hip ratio	At diagnosis, then yearly	Aim for $<$ 0.85 if woman and $<$ 0.90 if man.
BP	Every visit	If known hypertension $\hookrightarrow$ 149. If not known hypertension, and BP $\geq$ 140/90 $\hookrightarrow$ 148.
CVD risk (if no known CVD*)	At diagnosis, then depending on risk	If CVD risk $<$ 10% reassess after 5 years. If CVD risk 10-20%, reassess after 1 year. If CVD risk $>$ 20%, reassess after 6 months.
Fingerprick glucose	At diagnosis, then depending on result	If known diabetes $\hookrightarrow$ 145. If not known diabetes $\hookrightarrow$ 19.
Random total cholesterol	At diagnosis if patient/family has any of: early onset CVD, yellow fatty lumps under skin/tendons, or familial hyperlipidaemia	• If cholesterol $>$ 7.5, check TSH and refer to doctor. • If yellow fatty lumps under skin (excluding around the eyes) and tendons, refer.

Health for All $\hookrightarrow$ 92

• Discuss CVD risk: explore patient's understanding of CVD risk and need for a change in behaviour. Support the patient to change $\hookrightarrow$ 199.

• Invite patient to address 1 modifiable CVD risk factor at a time: help plan how to fit the behavioural change into his/her day. Explore what might hinder or support this. 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.

Diet

- Eat a variety of foods in moderation. Reduce portion sizes.
- Increase fruit, vegetables, nuts and legumes.
- Choose whole wheat bread, brown rice, sorghum, samp or potatoes rather than white bread/rice.
- Replace brick margarine/butter with vegetable oil or soft tub margarine.
- Reduce salty processed foods like gravies, stock cubes, packet soup. Avoid adding salt to food.
- Avoid/use less sugar.
- Refer to dietician (if available).

Screen for substance misuse

- Limit alcohol intake to $<$ 2 drinks/day if man and 1 drink/day if woman.
- In the past year, has patient drunk $>$ 4 drinks/ session, used illegal drugs or missed prescription/ over-the-counter medications? If yes to any $\hookrightarrow$ 165.

Weight

Aim for BMI 18 to $<$ 25, and waist circumference $<$ 80cm if woman and $<$ 94cm in man. If BMI $\geq$ 25 $\hookrightarrow$ 156. Any weight reduction is beneficial, even if targets not met.

Stress

Assess and manage stress $\hookrightarrow$ 98.

Smoking

If patient smokes, encourage to stop $\hookrightarrow$ 164.

Identify support to maintain behavioural change: health promoter, friend, partner or relative to attend clinic visits, a healthy lifestyle group, helpline $\hookrightarrow$ 200.

• 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 $\hookrightarrow$ 198.

Treat the patient with CVD risk

- If known CVD*: give $\bullet$ rosuvastatin 10mg daily. If patient develops muscle pain/cramps, reduce dose to 5mg daily. If no improvement and not on LPVr/ATVr/DRVr switch to $\bullet$ simvastatin 10mg at night or discuss with specialist. Avoid if pregnant or breastfeeding.
- If no known CVD*: If CVD risk $>$ 20%, diabetes $>$ 10 years, diabetes with eGFR $<$ 60, type 2 diabetes and $>$ 40 years old, give $\bullet$ simvastatin* 10mg at night. Avoid if pregnant or breastfeeding.

Review the patient with CVD risk $<$ 10% every 5 years and CVD risk 10-20% yearly. Review the patient with CVD risk $>$ 20% every 6 months.

*Cardiovascular disease (CVD) includes ischaemic heart disease, peripheral vascular disease and stroke/TIA. *CVD that develops in men $>$ 55 years or in women $<$ 65 years. *One drink is 110g of spirits or 1 small glass (125mL) of wine or 1 can/bottle (330mL) of beer. *If HIV positive and on LPVr/ATVr switch to dolutegravir. If unable to switch to dolutegravir, switch to continue ATVr. If on ATVr/DRVr, avoid simvastatin, give $\bullet$ rosuvastatin 10mg daily instead.

Advise the patient with diabetes

Adherence

- Explain importance of taking medication every day and eating regular meals.
- Advise patient to know what medication they are taking and educate about side-effects.
- Use a pill box or a pill diary to help remember to take medication every day.
- Give adherence support if needed $\hookrightarrow$ 195 and refer to community health worker, if available.

Diet

- Eat a variety of foods in moderation.
- Avoid/limit foods with added fats, sugars, or salt (e.g. takeaway meals, deep-fried foods, pies, doughnuts, cakes, biscuits, white bread).
- Increase fruit, vegetables, nuts and legumes.
- Choose brown bread/brown rice or potatoes rather than white bread/white rice.
- Avoid/use less sugar and salt.
- Drink water instead of sugary drinks.
- Eat small portions of food 3-5 times per day.
- Avoid snacks between meals.
- Eat one portion of fruit twice a day and about half a plate of vegetables every day.
- Choose lean cuts of meat.
- Avoid deep-frying foods.

Better food and drinks choices

- Educate how to read food labels to make better food and drinks choices when shopping.
- Avoid ultra-processed food with additives (complicated names, E-numbers).
- Avoid if front-of-package label warning.
- Check ingredient list for items that are high in sugar, salt and fat.
- Check nutritional information table for actual amounts of sugar, salt, fat and fibre. Use table below to guide on limits:

Total sugar	$<$ 5g per 100g food/ $<$ 2.5g per 100mL drink
Saturated fat	$<$ 2.5g per 100g food or drink
Total sodium	$<$ 120mg per 100g food or drink
Dietary fibre	$>$ 3g per 100g food or drink

Exercise and 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.

Glucose levels and HbA1c

- Explain the importance of monitoring glucose levels at every visit.
- Educate about how glucose levels change with meals and advise what levels patient should aim for.
- Explain why HbA_{1c} testing is done and encourage patient to reach target.

Hypoglycaemia

- Blood sugar can drop if patient does not take medication correctly, misses meals, uses alcohol or becomes ill.
- Educate on signs of low blood sugar: palpitations, sweating, headaches, weakness, shaking and hunger.
- Advise to eat or drink something sweet immediately.
- Always carry something sweet.
- If patient uses insulin, advise to always wear a Medic Alert tag.

CVD risk factors

- Ask about CVD risk factors and calculate patient's CVD risk $\hookrightarrow$ 142.
- Help patient to manage CVD risk $\hookrightarrow$ 144.
- If BMI $\geq$ 25 $\hookrightarrow$ 156. Advise patient any weight reduction is beneficial, even if targets not met.
- Advise to avoid/limit alcohol intake to $<$ 2 drinks/day if man and 1 drink/day if woman.
- If smoking, encourage to stop $\hookrightarrow$ 164.

Foot care

- Advise foot care is important to prevent ulcers and amputations.
- Examine and wash feet daily, carefully dry between toes.
- Avoid testing water temperature with feet or using hot water bottles/heaters near feet.
- If cuts/blisters/sores, keep wound clean and return to clinic if not healing.
- Cut nails straight with nail cutter and file sharp edges.
- Moisturise skin with lotion/cream.
- Wear comfortable shoes. Avoid high heels, shoes with pointed toes or wearing open shoes.
- Wear loose absorbent socks and change socks daily.
- Avoid walking on hot surfaces or walking barefoot.
- Examine shoes daily for any foreign objects.

Insulin

If on/starting insulin:

- Discuss injection technique/sites (abdomen, thighs, arms), storage of insulin (fridge/cool dark place), meal frequency, symptoms of low/high blood sugar, disposal of sharps.
- Advise that if unwell and vomiting/not eating as usual to increase fluid intake, check glucose 3 times a day if possible and adjust insulin dose if necessary (avoid stopping insulin).

- Focus on prevention of NCDs and management of CVD risk factors
- Advice includes Dietary advice, Physical activity, Mental health, Smoking, Substance use and Obesity management
- For diabetes: also included dietary advice, how to make better food choices (food package labelling), adherence, significance of HbA1c, symptoms of hypoglycaemia



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Hypertension



Between April 2025 and March 2026, Gauteng recorded 69,125 new hypertension cases, with 26,088 (38%) diagnoses among adults aged 18 to 44.



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Source: <https://iol.co.za/saturday-star/news/2026-05-18-gauteng-records-sharp-rise-in-hypertension-among-adults-under-45/>



Hypertension

HYPERTENSION: DIAGNOSIS

- **Position patient:** ask patient to remove tight clothing covering upper arm. Sit with back against chair, both feet flat on floor and arm supported at heart level. Patient to avoid talking during reading.
- **Position cuff** correctly and ensure appropriate size. If obese (mid-upper arm circumference ≥ 33 cm), use a large BP cuff.
- **Measure and record** systolic BP (SBP) and diastolic BP (DBP). Take at least two readings 1-2 minutes apart.
 - If first time BP measurement, or readings differ by > 5 mmHg, or if BP $\geq 180/110$, take a third reading. Use average of last 2 readings to interpret BP measurement.
 - If taking BP manually, SBP is the first appearance of sound. DBP is the disappearance of sound.
 - If patient is pregnant, interpret reading $\rightarrow 177$.

Give urgent attention to the patient with systolic BP ≥ 180 and/or diastolic BP ≥ 110 and symptoms:

Sudden onset of: severe headache, weakness on 1 or both sides, seizure/s, visual disturbances, dizziness, difficulty speaking or swallowing, stroke likely $\rightarrow 152$

Hypertensive emergency likely if SBP ≥ 180 and/or DBP ≥ 130 and any of:

- Severe headache
- Known kidney failure (eGFR < 15)
- Chest pain/unstable angina $\rightarrow 24$
- Shortness of breath/severe heart failure

Manage and refer urgently:

- Give **amlodipine** 10mg.
- If shortness of breath/severe heart failure, also give single dose **furosemide** 40mg IV and face mask oxygen at 6-8 L/minute.

Hypertensive urgency likely if SBP ≥ 180 and/or DBP ≥ 110 and any of:

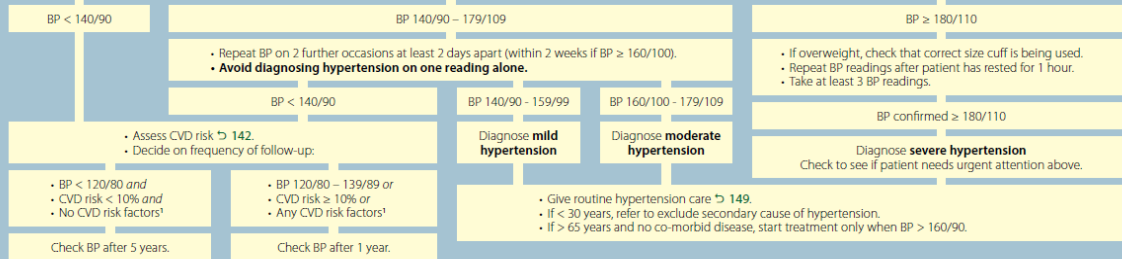
- Severe headache
- Known kidney impairment (eGFR < 60)
- Difficulty breathing worse on lying flat or leg swelling, heart failure likely

Manage and refer same day:

- If normal kidney function and no heart failure, give **amlodipine** 5mg or **enalapril** 10mg followed by **hydrochlorothiazide** (HCTZ) 12.5mg to lower BP slowly.
- If eGFR < 60 or heart failure likely, give instead **amlodipine** 5mg followed by **furosemide** 40mg orally or **hydrochlorothiazide** (HCTZ) 12.5mg

Approach to interpreting a BP in a patient not needing urgent attention.

If systolic BP and diastolic BP fall into 2 different categories, use the higher blood pressure reading to classify further.

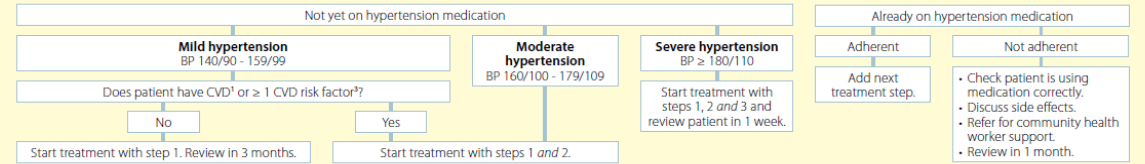


¹CVD risk factors include smoking, diabetes, BMI ≥ 25 , waist circumference ≥ 80 cm if woman or ≥ 94 cm if man, or waist-hip ratio ≥ 0.85 if woman or ≥ 0.90 if man.

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Treat the patient with hypertension

- Give **influenza vaccine** 0.5mL IM yearly.
- If **known CVD**¹:
 - Give **rosuvastatin** 10mg daily. If patient develops muscle pain/cramps, reduce dose to 5mg daily. If no improvement and not on LPVr/ATVr/DRVr switch to **simvastatin** 10mg at night or discuss with specialist. Avoid if pregnant or breastfeeding.
 - Give **aspirin** 150mg daily. Avoid if peptic ulcer, dyspepsia, kidney or liver disease.
- If **no known CVD**¹: if CVD risk $> 20\%$, give **simvastatin**² 10mg at night. Avoid if pregnant or breastfeeding.
- If BP **controlled**, continue current treatment step and review 6 monthly. If BP **not controlled**, decide treatment for hypertension using algorithm and table below. If already on step 7, refer instead.



Medication	Note
Step 1 Address modifiable CVD risk factors.	Manage CVD risk $\rightarrow 144$. If BP not controlled after 3 months, add step 2.
Step 2 Add hydrochlorothiazide (HCTZ) 12.5mg daily	• Avoid if pregnant, gout, severe liver disease or eGFR < 30. • Use with caution if personal/family history of skin cancer. • If diabetes or known left ventricular hypertrophy on ECG start enalapril 10mg daily instead of HCTZ. Then if needed, add HCTZ as next step once on maximum dose of enalapril. • If heart failure, treat $\rightarrow 151$. If ischaemic heart disease (IHD), treat $\rightarrow 153$.
Step 3 Add either amlodipine or enalapril	Amlodipine: • Choose if: isolated systolic hypertension, asymptomatic severe hypertension. • Avoid if untreated heart failure.
Step 4 Increase amlodipine to 10mg daily	Enalapril: • Choose if: previous stroke. • Avoid if: pregnant, potassium > 5.5, bilateral renal artery stenosis or stenosis of an artery to a dominant/single kidney, aortic valve stenosis, or history of angioedema. • If eGFR < 30, discuss with specialist. • Advise to stop enalapril and return immediately if swelling of tongue/lips/face develops, angioedema likely $\rightarrow 49$.
Step 5 Add enalapril 10mg daily	
Step 6 Increase enalapril to 20mg daily	
Step 7 Add spironolactone 25mg daily and increase HCTZ to 25mg daily.	Only use spironolactone if potassium can be monitored. Avoid spironolactone if pregnant or eGFR < 30 .

Review the patient with hypertension monthly until BP controlled. Once controlled, review 6 monthly. If BP not controlled after 1 month on step 7, refer.

¹Cardiovascular disease (CVD) includes ischaemic heart disease, peripheral vascular disease and stroke/TIA. ²If HIV positive and on LPVr/ATVr switch to dolutegravir. If unable to switch to dolutegravir, switch to/continue ATVr. If on ATVr/DRVr, avoid simvastatin, give **atorvastatin** 10mg daily instead. ³CVD risk factors include smoking, diabetes, BMI ≥ 25 , waist circumference ≥ 80 cm if woman or ≥ 94 cm if man, or waist-hip ratio ≥ 0.85 if woman or ≥ 0.90 if man.

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Added the specific clinical criteria for a hypertensive emergency and a hypertensive urgency, difference in management but both are in red box. Revised 7 steps for starting and adding on HT treatment, there is now a choice between 2 agents in step 3- amlodipine or enalapril



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Overweight and Obesity

News

Myths and stigma fuel SA's obesity epidemic

More than half of South Africans are now overweight or obese, raising alarm among health experts, as myths and stigma continue to prevent many from seeking treatment for a complex and costly medical condition.

July 02, 2026 Manna Maurice 2 minutes read



REKORD

Image for illustration. Image: Shutterstock

The Association for Diabetics in South Africa (ADSA) stated recently that more than 50% of South Africans are overweight or living with obesity, the highest figure on the continent.

The medical condition affects 68% of women and 31% of men, while overweight and obesity rates among children also remain among the highest in Africa.

Obesity affects 68% of women and 31% of men.

Myth: Obesity is simply a result of laziness

Fact: Obesity is a complex disease influenced by genetics, hormones, metabolism, environmental factors, medications, and lifestyle choices. It is not simply a matter of willpower.

Myth: People with obesity just need to eat less and exercise more

Fact: While healthy eating and physical activity are important, many patients struggle with biological factors that make long-term weight loss difficult. Medical and surgical interventions may be necessary for sustainable results.

Source: <https://www.citizen.co.za/rekord/news-headlines/2026/07/02/myths-and-stigma-fuel-sas-obesity-epidemic/>

Overweight and Obesity

OVERWEIGHT/OBESITY

Screen for overweight/obesity and assess risk

- Calculate Body Mass Index (BMI): $BMI = \text{weight (kg)} \div \text{height (m)}^2$. A patient with BMI ≥ 25 is overweight; a patient with BMI ≥ 30 is obese.
- If BMI ≥ 25 , **also** measure waist circumference (WC)¹ and waist-hip ratio (WHR)². Patient has an increased risk of cardiovascular disease, type 2 diabetes and obesity-related conditions if:
 - Waist circumference ≥ 94 cm if man and ≥ 80 cm if woman.
 - Waist-hip ratio ≥ 0.90 if man and ≥ 0.85 if woman.

Assess the patient who is overweight/obese

Assess	When to assess	Note
Symptoms	Every visit	If joint pain $\hookrightarrow$ 77, back pain $\hookrightarrow$ 78. Manage other symptoms on symptom pages.
Diet	Every visit	- Assess eating habits: frequency of meals, volumes eaten and if patient eats sugary snacks, sweetened drinks and fast food. Ask what patient has eaten in the past 24 hours. Ask about patient's readiness for change, and offer behaviour change support $\hookrightarrow$ 157. - If no improvement in condition after behaviour change support, refer to dietitian for dietary management.
Physical activity	Every visit	Assess frequency and intensity of physical activity as planned exercise or as part of daily work/domestic activities.
Sleep	Every visit	If difficulty sleeping and/or persistent snoring interrupts sleep $\hookrightarrow$ 99.
Mental health	Every visit	If stress, anxiety or low mood $\hookrightarrow$ 98.
Long-term health conditions	At diagnosis	Ask about diabetes $\hookrightarrow$ 145, hypertension $\hookrightarrow$ 149, cardiovascular disease $\hookrightarrow$ 144, osteoarthritis $\hookrightarrow$ 188, and give routine care.
Cancer risk	Yearly and if indicated/needed	Check for symptoms/signs suggestive of cancer or if eligible for cancer screening $\hookrightarrow$ 194.
Medication	Every visit	Review medication: steroids, antiepileptic medication, antipsychotics, antidepressants, diabetes medication, oral contraceptives and some antiretroviral therapy are associated with weight gain. Discuss with doctor.
Abuse	Every visit	Assess for past or current abuse. This may affect eating behaviours and obesity management. If patient is being abused $\hookrightarrow$ 33.
Substance use	Every visit	In the past year, has patient drunk ≥ 4 drinks/session, used illegal drugs or misused prescription/over-the-counter medications? If yes to any $\hookrightarrow$ 165. Ask about smoking. If patient smokes, encourage to stop $\hookrightarrow$ 164.
Weight (BMI)	Weight: every visit BMI: 3 monthly	Aim for gradual decrease in weight.
Waist circumference (WC), Waist-hip ratio (WHR)	WC: monthly WHR: 3 monthly	- Waist circumference (WC) and waist-hip ratio can show weight loss before changes in BMI are seen. - Aim for gradual decrease in waist circumference and waist-hip ratio.
BP	Every visit	Use a larger cuff if mid-upper arm circumference > 32 cm. If known hypertension $\hookrightarrow$ 149. If not, and BP $\geq 140/90 \hookrightarrow$ 148.
CVD risk	At diagnosis, then depending on risk	Assess and manage CVD risk $\hookrightarrow$ 142.
Cause of obesity	At diagnosis	Check thyroid (goitre), skin (acne, hirsutism, purple stretchmarks), moon-shaped face and shoulders/hips for muscle weakness. If any, refer.
Fingerprick glucose	At diagnosis, then depending on risk	If known diabetes $\hookrightarrow$ 145. If not known diabetes $\hookrightarrow$ 19.
Random total cholesterol	At diagnosis	If cholesterol > 7.5 , check TSH and refer to doctor.
TSH	At diagnosis if needed	If low mood, dry skin, constipation, fatigue or cold intolerance, check TSH. If abnormal, refer to doctor.

¹Waist circumference: while standing and breathing out, measure at the narrowest part of the torso (upper body), usually just above the navel. ²Waist-hip ratio: waist circumference $\div$ hip circumference (measure at the widest part of the hips and buttocks). ³One drink is 1. tot of spirits, or 1 small glass (125ml) of wine or 1 can/bottle (330ml) of beer.

- Anthropometric measures to diagnose overweight/obesity- BMI, waist circumference and waist-hip ratio (added)**
- Related symptoms- NCDs, MCS, sleep apnoea**
- CVD risk assessment**

Approach to the patient who is overweight/obese

Ask permission first

- Do not assume patient wants to discuss weight. For tips on communicating effectively $\hookrightarrow$ 198.
- To build trust, ask if patient is comfortable/willing to discuss his/her weight. For example: "Would it be okay if we take a few minutes to discuss your weight and how it might impact your overall health?"
- If patient declines, be respectful. Encourage patient to return whenever s/he feels comfortable to discuss further. Focus on the presenting symptom/condition instead.
- If patient willing to discuss weight:

Assess the patient's readiness to change

- Assess patient's understanding of his/her current health risks and discuss benefits of healthy behaviour and weight loss.
- Educate patient about risks of being overweight/obese (e.g. cardiovascular disease, type 2 diabetes, joint pain) and the advantages of losing weight.
- Advise that weight loss is not the only important outcome. Also consider quality of life, improvements in health (e.g. lower blood pressure, decreased joint pain, improved energy levels), fitness, patient's sense of confidence/self-esteem/well-being.
- Ask the patient to rate how confident s/he feels about making a change:

Not at all important/not at all confident	1	2	3	4	5	6	7	8	9	10	Very important/very confident
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- If the patient is not ready to change:
 - Respect the patient's decision.
 - Invite patient to identify the pros and cons of behaviour change.
 - Acknowledge patient's concerns about change and explore ways of overcoming the difficulties preventing change.
 - Offer more information or support if the patient would like to consider the issue further.
- If the patient is ready to make behavioural changes:

Advise the patient

- Advise to avoid smoking and limit alcohol intake, and discuss physical activity and healthy eating:
- Physical activity:
 - Advise patient to limit time spent being inactive while awake, and to gradually become more physically active. Encourage patient to do at least 30 minutes of brisk physical activity (such as walking) at least 5 days a week (150 minutes/week). Increase activities of daily living like gardening, housework, walking instead of taking transport, using stairs instead of lifts. Refer to physiotherapy if available.
 - Give healthy eating advice:
 - Eat a variety of foods in moderation and reduce portion sizes.
 - Increase fruit, vegetables, nuts and legumes (beans, lentils, split peas, soya). Choose whole wheat bread, brown rice, potatoes, sump or sorghum rather than white bread/rice.
 - Replace brick margarine/butter with vegetable oil or soft tub margarine.
 - Reduce salty processed foods like gravy, stock cubes, packet soup. Avoid adding salt to food and eating less healthy food (e.g. takeaways, deep-fried food, pies, doughnuts, cakes, biscuits, sugary drinks).

Agree on patient goals

- Agree on goals that are specific and realistic and that the patient feels capable of achieving in a specific time.
- Document decision and goals set by the patient.

Assist the patient to make behaviour changes

- Identify possible motivating factors that can support the patient to make a change.
- Ask the patient what might stop them from reaching their goals (e.g. cost of food, unsafe environment for walking, stress/emotional eating, lack of time).
- Refer to dietitian and offer referral to physiotherapist, occupational therapist, counsellor, psychologist, and available support services (social worker, health promoter, community care worker, helpline $\hookrightarrow$ 200).
- Identify a friend, partner, or relative to support the patient and if possible to attend clinic visits.

The 5As:
Ask permission first
Assess the patient's readiness to change
Advise the patient
Agree on patient goals
Assist the patient to make behaviour changes



health

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Cancer screening and early detection

Cancer cases in SA almost double in last 20 years - can our healthcare system cope?

PL

Paula Luckhoff

24 June 2025 | 16:48

Experts are pointing to the rise in cancer diagnoses as South Africa's next major public health emergency.

John Maytham

Afternoon drive with John Maytham

Cancer

Healthcare



Why?

- Increase in awareness, screening, diagnostics and reporting

But also:

- Increase in specific exposure: lifestyle, environment, behaviours

What we are seeing:

- Increase in incidence of certain cancers (breast, prostate, lung)
- Increase in cancer diagnoses in younger people (breast, cervical, Kaposi sarcoma, colorectal)

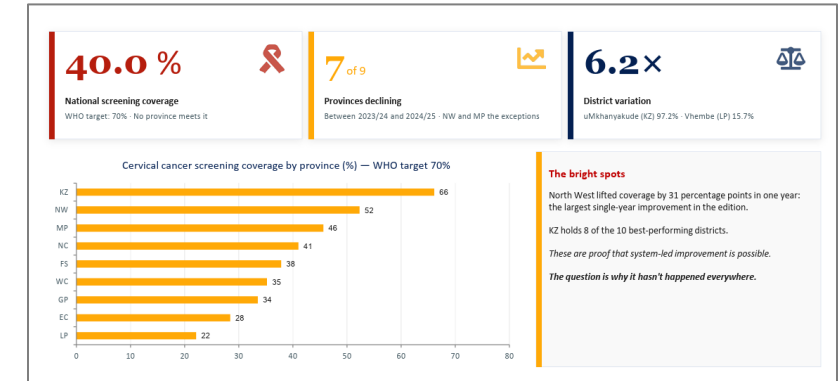
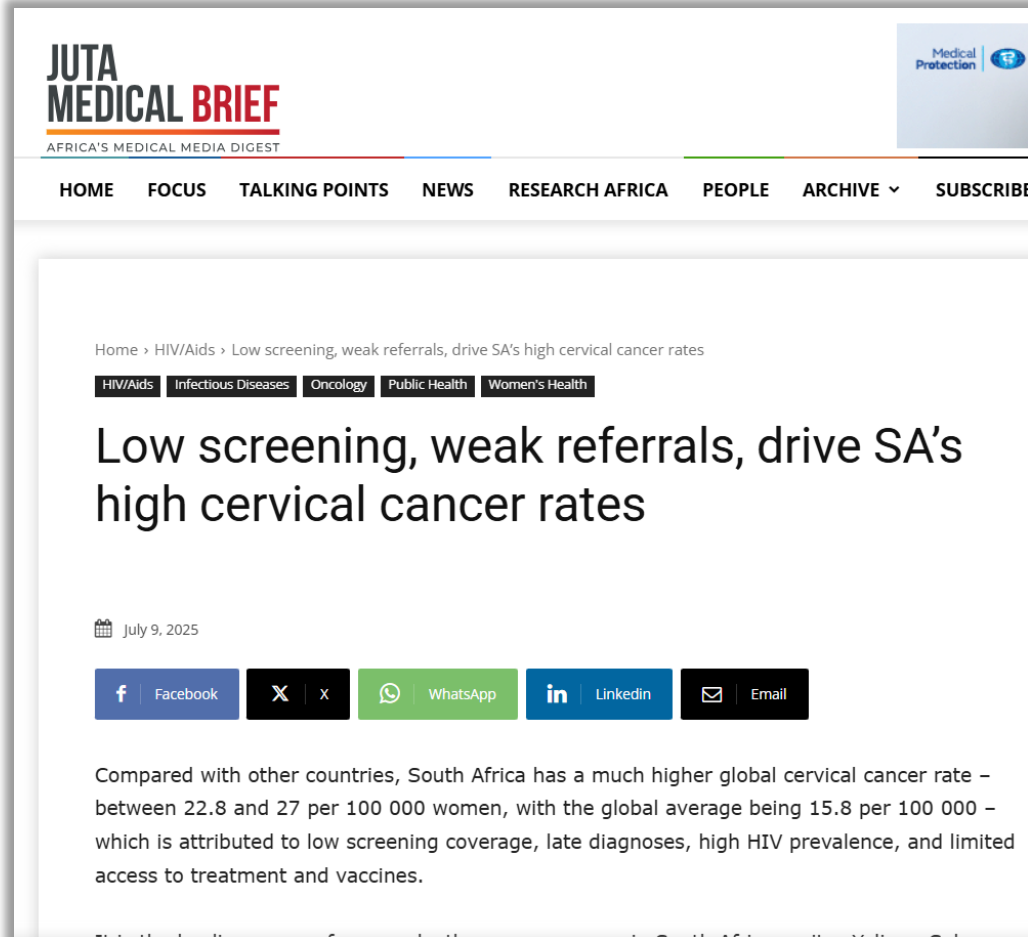
Cancer screening and early symptom detection

CANCER SCREENING AND EARLY DETECTION				
	Ask about risk factors	Advise screening	Assess for early signs	Assist with early referral
 Breast cancer	- Age > 40 years - Family history of breast cancer especially if sister/mother or carrier of genetic mutations - Previous breast cancer - Obesity, inactivity, poor nutrition - Smoking - Excessive alcohol use - On hormonal replacement therapy > 5 years	- Advise to do monthly Breast Self-Examination (BSE), check for changes in size/shape/feel of breast, or skin changes - Offer Provider-initiated Screening Clinical Breast Exams (PISCBE) twice a year for women 40-70 years old	Do Clinical Breast Exam to check for: - New lump or thickening in breast or armpit - Nipple inversion or discharge (other than milk) - Dimpling, redness, or puckering of breast skin	Refer to Specialist Breast Clinic (SBU) if: - Woman > 20 years old with new lump - Nipple changes (inversion or discharge) or skin change (dimpling, redness or puckering, regardless of age) - Family history of breast cancer in sister or mother, or known familial genetic mutation for screening mammogram
 Cervical cancer	- HPV positive/previous abnormal cervical screening results - HIV positive especially if not yet on ART - Early sexual activity - Early sexual debut/multiple previous sexual partners - Smoking	- If HIV negative start screening at 25 years. Repeat every 10 years if HPV DNA test negative - If HIV positive start screening at 25 years, regardless of when ART was started. Repeat every 5 years if HPV DNA test negative	- Abnormal vaginal bleeding (between periods or after sex) - Persistent, foul-smelling vaginal discharge - Pelvic pain or discomfort during intercourse	- If a cervical lesion is visible on speculum examination, avoid HPV DNA screening. Instead, perform a punch biopsy of the lesion (if trained provider available) or discuss/refer same day - If eligible, do HPV screening and manage according to results → 70
 Colorectal cancer	- Personal history of colorectal cancer, polyps, ulcerative colitis, Crohn's disease - Family history of colorectal cancer, multiple polyps or Lynch syndrome - Age > 50 years - Obesity, inactivity, poor nutrition - Excessive alcohol use or smoking	Screening not routinely done	- Change in bowel habits (diarrhoea/constipation lasting weeks) - Visible blood in the stool or rectal bleeding - Unexplained weight loss and persistent abdominal discomfort	If early signs, discuss/refer
 Prostate cancer	- Age > 50 years - Smoking - African descent - Family history of prostate or breast cancer	Screening not routinely done	- Difficulty starting urination, weak urine flow, increased frequency of urine (especially at night), blood in urine/semen - Enlarged, hard or nodular prostate on digital rectal exam	If urinary symptoms, blood in urinesemen or enlarged prostate, discuss/refer
 Lung cancer	- Tobacco use, second-hand smoke - Occupational exposure (radiation, pesticide use, steel manufacturing, mining) - Environmental exposure (smoke, mining waste, pesticides) - HIV or autoimmune disease - Chronic lung disease: COPD, bronchiectasis, post-TB lung disease - Family history of lung cancer	- Screening is not routinely recommended - Advise patient to stop smoking.	- Persistent, worsening cough - Coughing up blood (haemoptysis) - Unexplained shortness of breath and chest pain - Recurrent chest infections - Difficulty swallowing, hoarse voice - Loss of appetite - Persistent tiredness or lack of energy - Unexplained weight loss	- Test for TB and review with chest X-ray - If solitary nodule/mass, one-sided hilar/mediastinal lymphadenopathy/effusion, lesions in rib bones, refer same day

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Who is at risk?
Who is eligible for screening?
What are early signs?
How to assist early referral?

HPV-based Cervical screening



Source: District Health Barometer 2024/25

- SA has 22.8 - 27 cases per 100 000 compared to global average of 15.8 per 100 000
- Close to 80% of all cervical cancer cases are linked to one or a mix of three high-risk types, which include HPV 16, 18, and 45

HPV-based Cervical screening

CERVICAL SCREENING

- Cervical screening is done using human papillomavirus (HPV) DNA testing to detect high risk HPV subtypes.
- Send one cervical sample per patient and request HPV PCR screen on the laboratory form.
- Reflex liquid-based cytology (LBC) is done by the laboratory on a sample only if a cervical sample tests positive for high-risk HPV subtypes other than HPV 16, 18 or 45.
- Manage HPV DNA results according to the cervical screening results page 71.

Decide when patient needs a cervical screen

Patient has no symptoms

- If HIV negative:** start screening at age 25. Repeat every 10 years if HPV DNA test stays negative. Do last screening at age 55.
- If HIV positive:** start screening at age 25, regardless of when ART was started. Repeat every 5 years if HPV DNA test stays negative. Continue beyond age 55 for as long as patient remains in HIV care.

Patient has symptoms

- If irregular/heavy vaginal bleeding > 73, bleeding/pain with sex > 74, or abnormal vaginal discharge > 64.
- Do routine HPV DNA screen if able to visualise cervix and there are no visible lesions.
- If a cervical lesion is visible on speculum examination, avoid HPV DNA screening.
- If extensive ulceration, irregularity, or large lesion, refer same day.
- If lesion not extensive, trained provider to perform punch biopsy of lesion for histology. If trained provider not available, refer for colposcopy and histology/LLETZ to receive treatment within 4 weeks.
- If patient has symptoms not responding to treatment, discuss/refer.

Assess the patient needing a cervical screen

Assess	Note
Symptoms	If abnormal vaginal bleeding > 73. If abnormal vaginal discharge > 64. If burning urination/frequency/urgency > 69. If routine cervical screen is due, delay until after treatment of symptoms. If abnormal vaginal discharge/bleeding not responding to treatment, do cervical screen at same visit. Manage other symptoms on symptom pages.
Family planning	- Assess patient's contraceptive needs > 170. Check for pregnancy > 174. - If pregnant, do cervical screen before 20 weeks gestation. - If pregnant and HPV positive with no visible cervical lesion or local swollen lymph nodes, defer treatment to 6 weeks postpartum. - If any visible lesions or invasive cancer suspected, discuss/refer same day.
Examination	- Do pelvic examination to check for pain on moving cervix and for pelvic masses. If pain on moving cervix, treat for lower abdominal pain (LAP) syndrome > 64. If mass, refer. - Do speculum examination to look at cervix. If any lesion seen, avoid HPV DNA screening. - If extensive ulceration, irregularity, or large lesion, refer same day. - If lesion not extensive, perform a punch biopsy of lesion for histology (only if trained provider available) or refer for colposcopy/LLETZ to receive treatment within 4 weeks.
HIV	- Test for HIV > 124. - If HIV positive or known HIV, give routine HIV care > 126. - If HIV negative, assess need for PrEP > 119.

Advise the patient needing a cervical screen

- Educate that cervical cancer is a disease that affects the mouth of the womb and is caused by certain types of HPV. HPV is passed on through sex and can stay in the body for years.
- Advise safer sex to lower risk of HPV and other sexually transmitted infections. Encourage consistent condom use, offer male and female condoms and advise staying with one partner at a time.
- Explain that cervical screening can prevent cervical cancer because it detects HPV infection and cervical changes years before cancer develops. Colposcopy is a closer examination of the cervix to confirm abnormal changes.
- Advise that smoking increases the risk of cervical changes. If patient smokes, encourage to stop > 164.
- If pregnant after 20 weeks gestation, advise patient to return after 6 weeks post-partum to do routine HPV DNA screening.

Review HPV DNA results → 71

CERVICAL SCREENING RESULTS

Check HPV DNA result to decide on further management

HPV DNA positive
Is patient positive for HPV types 16, 18 and/or 45?

Yes

Assess for cervical lesions using VIA
(if unable to perform VIA, refer to nearest facility where VIA available)
Is there a visible cervical lesion on VIA?

No

Is there a trained thermal ablation provider on site?

No → Refer for colposcopy and LLETZ¹.

Yes → Trained provider to perform thermal ablation¹ same day.

Do follow up HPV DNA test in 12 months
Manage according to result

HPV DNA negative
Re-screen in 5 years.

HPV DNA positive (types 16, 18 and/or 45)
Request cytology and refer immediately for colposcopy and LLETZ, regardless of whether cytology is normal.

No

HPV DNA positive for other high-risk types
Reflex cytology will be done by the lab. Manage according to result

Cytology Abnormal

HSIL or ASC-H → Refer for colposcopy and LLETZ to receive treatment within 4 weeks¹.

ASCUS or LSIL

- If trained provider on site, perform VIA and thermal ablation.
- If no trained provider, refer for colposcopy and LLETZ to receive treatment within 4 weeks¹.

Cytology Normal

Do follow up HPV DNA test in 12 months

Manage according to results (see adjacent column).

HPV DNA negative

- Explain that patient does not currently have the virus that can cause cancer changes.
- Re-screen, depending on HIV status:
 - If HIV negative, re-screen in 10 years
 - If HIV positive, re-screen in 5 years.

How to do a Visual Inspection with Acetic Acid (VIA)

- Insert speculum fully so that entire cervix can be seen.
- Look at cervix, check for visible lesions or signs of infection.
- Apply dilute acetic acid solution to cervix.
- Wait 1 minute for solution to be absorbed.
- Look at cervix again and note any acetowhite reactions.




© WHO Cervical Screening at IARC

VIA - Visual Inspection with Acetic Acid
LLETZ - Large Loop Excision of the Transformation Zone
ASC-H - atypical squamous cells - cannot exclude high-grade squamous intraepithelial lesion
HSIL - high-grade squamous intraepithelial lesion
LSIL - low-grade squamous intraepithelial lesion
ASCUS - atypical squamous cells of undetermined significance

¹If pregnant, defer until 6 weeks post-partum.

- Approach to asymptomatic versus symptomatic patient
- Eligibility for routine screening: from 25 years
- Procedures: VIA, thermal ablation, cytology, LLETZ, colposcopy, punch biopsy
- Prioritisation of referral: same day, within 4 weeks, next appointment

Breast symptoms

Breast cancer on the rise among South African women in their 30s

Younger women are being diagnosed with more aggressive forms of the disease, underscoring the need for early detection.

October 05, 2024

The North Coast Courier 3 minutes re

Facebook X LinkedIn Tumblr Pinterest Share via Email Print



The breast changes throughout the menstrual cycle and it is important to always self-examine at the same time of the month.

Breast cancer, the most prevalent cancer among South African women, is increasingly being detected in women

- This is a global trend.
- Increase in rate of advanced cancer in women <40 years.

Breast symptoms

BREAST SYMPTOMS

Give urgent attention to the patient with breast symptoms and temperature $\geq 38^{\circ}\text{C}$ or body pain with painful lump in breast/s which may be fluctuant: **breast abscess** likely.

- Give **paracetamol** 1g and **tramadol** 50mg. Refer urgently to surgical unit for incision and drainage.

Approach to the patient with breast symptoms not needing urgent attention

Carefully examine both breasts including nipples and axillae. If any of the following warning signs, refer to breast clinic/Regional Breast Unit same week:

- Skin changes: dimpling, ulceration, indentations or pulling ("orange peel" appearance)
- Breast lump/s with any of: patient > 25 years, family history of breast cancer, irregular fixed lump, skin/nipple changes, nipple discharge, axillary lump
- Axillary lump/s with any of: skin/nipple changes, nipple discharge, breast lump/s
- Nipple discharge/retraction with any of: patient ≥ 50 years, blood-stained or one-sided discharge, male, skin changes (crusts/ulcers), breast/axillary lump

If none of above, continue to assess the patient below:

Is the patient breastfeeding?

Breastfeeding and painful/cracked nipples

- Usually due to poor latching. Help to latch baby properly.
- Avoid using soap on nipples.
- Advise to apply breastmilk to nipples after feeding and expose to air. Apply **zinc and castor oil** ointment between feeds. Assess and manage baby for oral thrush.

- If HIV negative, advise to continue breastfeeding.
- If HIV positive and only one breast affected, express and discard milk from affected side. Continue breastfeeding from other side.
- If both breasts affected, temporarily stop feeding from breasts, express and discard breast milk. Replace feeds with formula until cracks/mastitis resolved.

Breastfeeding and painful breast/s with or without lump/s Does patient have temperature $\geq 38^{\circ}\text{C}$ or body pain?

Yes. **Mastitis** likely

- Give **flucloxacillin** 500mg 6 hourly for 5 days.
- Give **paracetamol** 500mg-1g 4-6 hourly (up to 4g in 24 hours) as needed up to 5 days.
- Advise warm compresses. If no better after 2 days or breast abscess develops, refer same day.

No. **Engorgement/blocked duct** likely

- Advise frequent breastfeeds, warm compresses and to gently massage breast.
- Advise to return if fever/body pain (mastitis) develops.
- If symptoms persists, consider other causes and discuss/refer.

Refer to breastfeeding counsellor/lactation consultant or support group. If HIV positive, give routine HIV care $\rightarrow$ 126 and prevent transmission to baby $\rightarrow$ 186.

Symptoms not related to breastfeeding

Axillary lump/s

- Ask about other symptoms. If recent fever with cough/sore throat $\rightarrow$ 23. If skin rash/itch $\rightarrow$ 82.
- If reactive node from infection or skin cause, manage as on symptom pages. Reassure that lymphadenopathy should resolve with treatment.
- Review in 2-4 weeks. If lymph node persists, refer.

Breast enlargement

- If only one breast enlarged, refer to breast clinic/Regional Breast Unit.
- If BMI $\geq 25 \rightarrow$ 156.
- Review medication: antipsychotics, antidepressants, efavirenz, nifedipine, amlodipine can cause breast enlargement. Discuss with doctor. If on efavirenz, doctor to consider switch to dolutegravir $\rightarrow$ 132.

Breast lump/s Re-examine breast on day 7 of menstrual cycle. If lump persists, refer according to age:

If patient < 25 years, refer to breast clinic/Regional Breast Unit within 60 days.

If patient > 25 years, refer to breast clinic/Regional Breast Unit within 21 days.

Painful breast/s

- Check for pregnancy $\rightarrow$ 174. May be a side effect of hormonal contraception. If no better after 3 months, change contraceptive method $\rightarrow$ 170.
- If breast exam normal, **mastalgia** likely.

- Reassure this is common and advise a well-fitting bra. Give **paracetamol** 500mg-1g 4-6 hourly (max 4g/24 hours) for up to 5 days.
- If symptoms change/worsen, refer to breast clinic/Regional Breast Unit within 60 days.

Nipple discharge

- If pregnant and no other symptoms, reassure and give antenatal care $\rightarrow$ 178.
- Review medication: antipsychotics, antidepressants, COC and metoclopramide can cause nipple discharge. Discuss with doctor.
- If cause uncertain, refer.

[†]If penicillin allergy (history of anaphylaxis, urticaria or angioedema), give instead **azithromycin** 500mg daily for 3 days.

55

- Aim for early detection and timely referral
- Symptoms of breast abscess in red box
- Included criteria for referral of breast lumps for all ages to breast clinic or regional breast unit with time range: < 25 years: within 60 days; > 25 years: within 21 days
- Cancer page: Advises monthly self-screening and provider-initiated examination twice per year for women 40-70 years old



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Family Planning and TOP

Gauteng sees a high need for abortion services as contraceptive use remains low

By Mapaballo Borotho



Image @istock images

- The Gauteng Department of Health says low contraceptive uptake remains a concern among women of reproductive age.
- The department says this is contributing to unintended pregnancies and a high need for Choice on Termination of Pregnancy services.

- Unplanned pregnancy is a big challenge, leads to high demand for legal and illegal TOPs.
- Need to provide contraceptive options, pregnancy planning advice and access to safe TOPs.

Family Planning and TOP

PLANNING A PREGNANCY

Assess the patient planning a pregnancy

Assess	When to assess	Note
Symptoms	Every visit	If vaginal discharge, ulcer, lower abdominal pain → 62.
Long-term health conditions	Every visit	• Assess control on long-term condition pages. If not well controlled, advise to delay pregnancy until control achieved. • If on any of: tretinoin, doxycycline, enalapril, hydrochlorothiazide, statins, NSAIDs, sodium valproate, phenytoin or warfarin, doctor to review medications.
Substance use	Every visit	Ask about alcohol/drug use, assess for dependence and support to stop → 165. If patient smokes, encourage to stop → 164.
Menstruation	Every visit	If heavy, prolonged or irregular periods → 73. If irregular periods with hot flushes, night sweats, vaginal dryness, mood changes, difficulty sleeping, menopause likely → 187.
Family planning	First visit	• Ask about contraception use: if previously on injectables, advise fertility should return within 9 months. If previously on oral contraceptives, advise fertility should return within 3 months. If patient or partner with previous sterilisation, refer. • Ask about previous pregnancies. If ≥ 3 consecutive miscarriages, refer.
Psychosocial risk	First visit	Patient at risk of mental health problem if any of: difficult life event in last year, unsupportive partner, violence at home, no social/family support, previous depression/anxiety, < 20 years, no money for food, patient is a refugee or has long-term health conditions. Refer to social worker.
BP	First visit	• If not known hypertension and BP ≥ 140/90 → 148. • If known hypertension or on enalapril, discuss with doctor to switch.
BMI ¹	First visit	• If BMI < 18.5, test for TB → 102 and HIV → 124 and refer for nutritional support. If unintentional weight loss ≥ 5% of body weight in 4 weeks → 37. • If BMI ≥ 25, advise to lose weight → 156.
Examination	First visit	• Do pelvic examination. If pelvic mass, refer. If scar from previous pelvic surgery, discuss, refer. • Do speculum examination to look for abnormalities of cervix.
HIV	If status unknown, 3 monthly	• Test for HIV → 124. If positive, give routine HIV care → 126 and advise to use contraception until viral load undetectable. • If negative, assess for HIV PreP → 119.
Haemoglobin	First visit	If Hb < 12, anaemia likely. Investigate cause and manage further → 44.
Cervical screen	If needed	• If HIV negative: start screening at 25 years. Repeat every 10 years if HPV DNA test stays negative. Stop screening at 55 years → 70. • If HIV positive: start screening at 25 years, regardless of when ART was started. Repeat every 5 years if HPV DNA test stays negative → 70.
Thyroid	If needed	If weight change, pulse ≥ 100, tremor, weakness/tiredness, dry skin, constipation or intolerance to cold/heat, check TSH. If abnormal, refer to doctor.

Advise the patient planning a pregnancy

- Advise patient to track menstruation in diary or app. Advise condomless sex during ovulation window:
 - Ovulation usually occurs in the middle of the cycle. The ovulation window is 4 days before and 4 days after ovulation (e.g. if cycle is 28 days, ovulation window will be day 10-18 of cycle).
- Advise patient and partner to avoid smoking and alcohol/drug/anabolic steroid use, as these can affect fertility. Also advise male partner to avoid hot baths and tight fitting underwear.
- Educate patient/partner to report STI symptoms, test for HIV regularly, and continue safe sex practices (use condoms when not in ovulation window, avoid new partners outside of current relationship).
- If patient/partner HIV positive, advise to delay pregnancy until VL undetectable, ideally for 6 months, before trying to conceive. If only one partner known with HIV, offer PreP to uninfected partner.

Treat the patient planning a pregnancy

Give **•folic acid** 5mg daily, and continue up to 13 weeks gestation. If on antiepileptic medication, family history or previous baby with neural tube defect, continue folic acid throughout pregnancy.

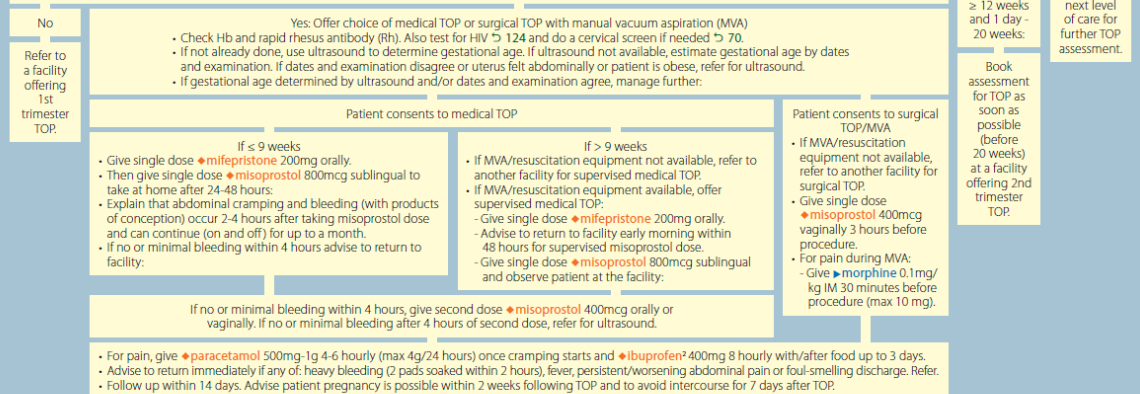
¹Body Mass Index (BMI) = weight (kg) / height (m)²

MANAGE THE PATIENT REQUESTING A TERMINATION OF PREGNANCY (TOP)

Does patient have any of: heart disease, hypertension, asthma, diabetes, anaemia, bleeding disorder, epilepsy, substance abuse or large fibroids?

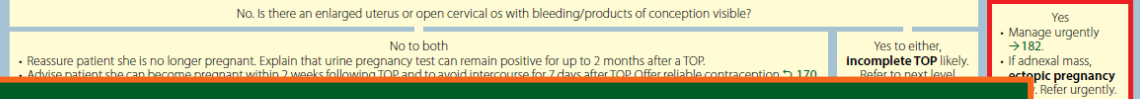
No. Arrange TOP booking as soon as possible (within 2 weeks) according to gestation

Gestation ≤ 12 weeks and 0 days. Is current facility a 24 hour maternity unit and/or are staff appropriately trained to offer TOP¹?



Review the patient who had a TOP within the past 14 days

Are there any of: adnexal mass (closed cervix and small uterus), guarding/rebound abdominal tenderness, foul-smelling discharge, temperature ≥ 38°C, SBP < 80, pulse ≥ 100, Hb < 6 or respiratory rate ≥ 30?



¹peptic ulcer, asthma,

- New page on planning a pregnancy, so that you can initiate this important conversation with women.
- Links to appropriate screening, testing and management of long-term conditions.
- Updated the page on TOP, so that management and referral is more clear, especially for facilities that don't offer services.



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TB: Interpretation of results



- New tests enables earlier diagnosis of TB
- Early detection of drug resistance means starting on correct regimen
- Improves TB outcomes

Source: <https://www.news.uct.ac.za/article/-2024-08-08-tb-diagnosis-and-drug-resistance-testing-can-be-reduced-to-just-23-hours>



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TB: Interpretation of results

TUBERCULOSIS (TB): DIAGNOSIS

Check for TB if the patient has any TB symptoms: current cough, weight loss, drenching night sweats or fever. Also test for TB, even in the absence of symptoms, if:

- DS-TB in last 2 years: check for TB yearly for 2 years after completing TB treatment
- PLHIV: at diagnosis, at re-engagement if interrupted ART > 90 days, yearly (when viral load checked) and if pregnant at first antenatal visit
- TB contact¹
- Abnormal findings on digital CXR + computer aided detection (CAD) screening

Give urgent attention to the patient with suspected TB and any of:

- Respiratory rate ≥ 30
- Pulse > 120
- Temperature > 39°C
- Breathlessness at rest or while talking
- Prominent use of breathing muscles
- Coughs up ≥ 1 tablespoon of fresh blood
- Drowsy/confused
- Neck stiffness
- Persistent vomiting
- New weakness of arm/leg
- Unable to walk unaided
- Severe malnutrition or wasted

Manage and refer urgently:

- If breathing difficulty, give face mask oxygen to keep saturation $\geq 92\%$ and • ceftriaxone 1g IV/IM to treat for suspected severe pneumonia.

Start the workup to diagnose TB in the patient not needing urgent attention

- Determine whether the patient has been on TB treatment and interrupted treatment for > 2 months: if DS-TB → 110; if INH-resistant TB or RR-TB, refer to doctor or discuss with PCAC/NCAC → 200.
- Send 1 sputum sample for TB NAAT: demonstrate how to give sputum sample → 105. If unable to produce sputum, induce sputum → 105 and refer for chest x-ray → 104. Doctor to review chest x-ray.
- Ensure specimen type, site and patient details clearly indicated on request form. Indicate on the request form: patient's HIV status and whether the patient had TB in past 2 years.
- Test for HIV → 124.
- If HIV and TB symptoms and CD4 ≤ 200 or WHO stage 3 or 4 disease, also do urine LAM test:
- If LAM positive, **diagnose TB on urine LAM**, start DS-TB treatment same day → 106 and follow up TB NAAT result. If LAM negative, manage according to TB NAAT results below.
- Ask the patient to return for results after 2 days and manage further according to results below. If TB NAAT unsuccessful, send repeat sputum sample for TB NAAT.

MTB detected: TB NAAT positive

Was the patient treated for TB in the last 2 years?

Yes

No

Check current DST result:

Rifampicin sensitive or unsuccessful

- Send sputum:
- If rifampicin sensitive, do baseline smear and record result.
- If rifampicin unsuccessful do smear, culture and DST.

Start DS-TB treatment same day → 106 and review culture and DST results → 104.

Rifampicin sensitive and INH-resistant

Diagnose INH-resistant TB:
Send sputum for DR-TB reflex test.

Start INH-resistant TB treatment → 107 and review reflex test results → 104.

Rifampicin resistant or both rifampicin and INH-resistant

Send a 2nd sputum sample for DR-TB reflex test.

Diagnose RR-TB:
• Refer or start RR-TB treatment → 111.
• Review reflex test results → 104.

MTB detected: TB NAAT trace

Was the patient treated for TB in the last 2 years?

Yes

No

- Send sputum for culture and DST.
- TB symptoms and signs present?

No

Yes

Continue routine care.

TB symptoms and signs present and/or abnormal CXR suggestive TB?

Yes

No

Send sputum for culture and DST.

Continue routine care.

Start DS-TB treatment

Check current DST result and previous TB treatment history:

Rifampicin sensitive

Send sputum for smear, culture and DST.

TB symptoms: start DS-TB treatment → 106.

No TB symptoms: defer starting TB treatment.

Rifampicin unsuccessful

Send sputum for culture and DST.

Previous DS-TB

• If TB symptoms: start DS-TB treatment → 106.

• If no TB symptoms: defer starting treatment.

Rifampicin sensitive and INH-resistant

Send sputum for culture and DST.

Previous DR-TB

• If no TB symptoms: defer starting treatment.

• If TB symptoms: discuss with TB expert/PCAC/NCAC → 200.

Rifampicin resistant or both rifampicin and INH-resistant

Send sputum for DR-TB reflex DST.

Previous DS-TB or INH-resistant TB

Diagnose RR-TB:
Refer to DR-TB treatment initiation site/start RR-TB treatment → 111.

Previous RR-TB

Refer to DR-TB treatment initiation site or if DR-TB treatment initiation site, discuss with PCAC/NCAC → 200.

Review culture and DST results → 104.

TB NAAT negative (MTB not detected)

Does the patient have symptoms and signs of TB and/or abnormal CXR suggestive of TB?

Yes

- Send sputum for TB culture and DST.
- Start DS-TB treatment same day → 106.
- Review culture and DST results → 104.

No

Continue to assess and manage according to HIV status:

HIV positive

- Send sputum for TB culture and DST.
- Continue to assess for TPT eligibility → 100.
- Review culture and DST results → 104.

HIV negative

TB unlikely:
Continue to assess for TPT eligibility → 100.

¹A TB contact refers to any person who shared an enclosed space (at school, socially, or in a household setting), for ≥ 1 night or for frequent/extended periods before the index patient started their TB treatment. ²Do not mix Ringer's lactate and IV ceftriaxone. If severe penicillin allergy (previous anaphylaxis) consider alternative.

• TB NAAT Tests

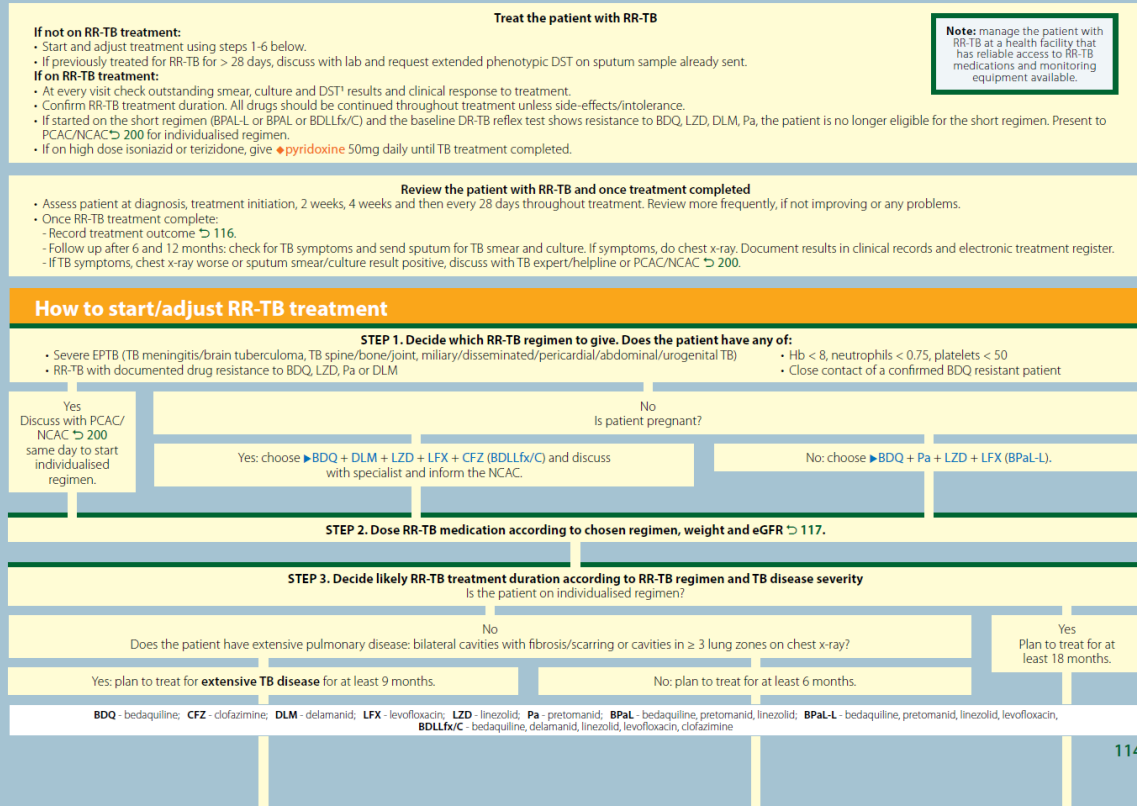
- Xpert MTB RIF: RIF
- Roche, BD max: RIF, INH

• Results in 24-48 hours

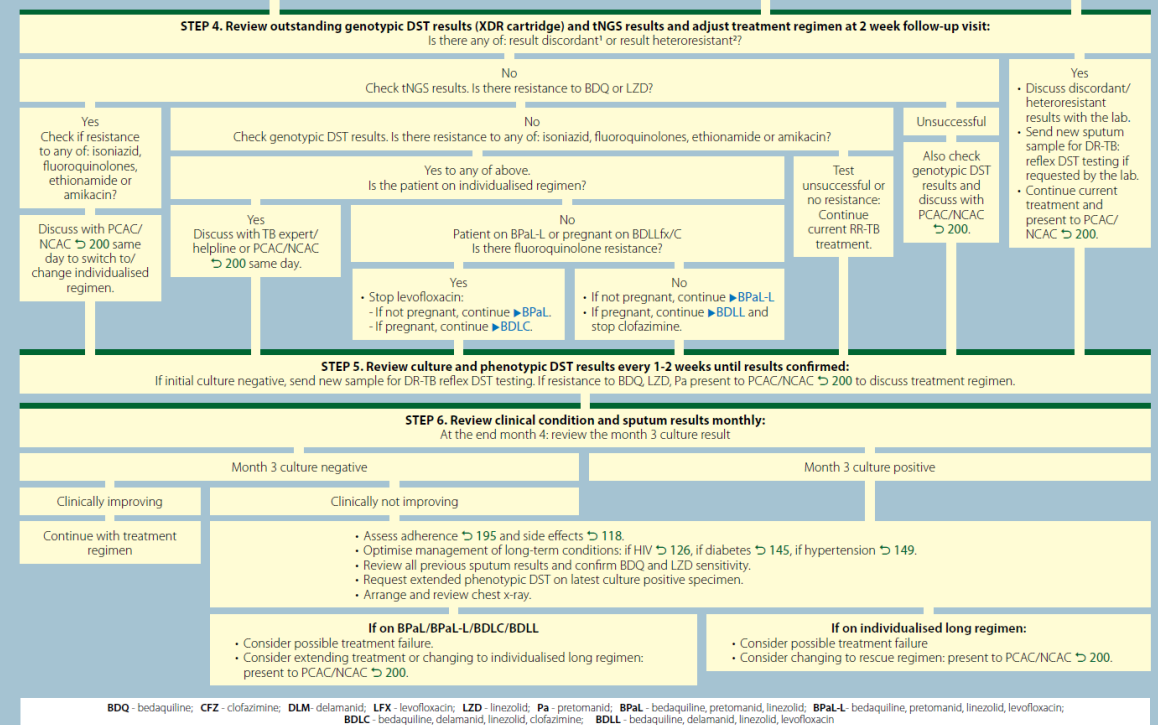
• Interpret based on no previous TB or TB in previous year

• How to manage trace results

RR-TB: Interpretation of results



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¹Discordance refers to instance where TB NAAT result is rifampicin-resistant and DST result is rifampicin-sensitive. ²Heteroresistance refers to both rifampicin-sensitive and rifampicin-resistant strains of TB in the same sputum sample.

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- Reflex Xpert XDR: INH, FLQ, Eto, Amikacin (3-7 days)
- tNGS: BDQ, LZD (10-14 days)
- Check results at 2-week follow-up



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DR-TB: new regimens

The infographic is titled "DRUG RESISTANT TB CAN BE CURED" and features a man's face in the background. It is from the Department of Health, Republic of South Africa. The main heading is "NEW REGIMEN for MDR-TB" with the subtext "BPaL – L is better for you!". It lists four advantages: "ONLY 6 months of treatment" (with a calendar icon), "3 to 4 medicines" (with a pill bottle icon), "90% cure rate" (with a person icon), and "Simplified regimen" (with a bar chart icon). Below this, a visual equation shows "BPaL-L" followed by an equals sign, then "Bedaquiline", a plus sign, "Pretomanid", a plus sign, "Linezolid", a plus sign, and "Livofloxacin". At the bottom, it states "The new regimen for MDR-TB patients has many advantages, including:" followed by three bullet points: "Fewer pills required – only 23 pills per week", "Shorter treatment – only 6 months", and "Fewer facility visits, which means a lower costs for you to get treated". A call to action at the bottom says "Speak to your healthcare worker today to find out if you are eligible!". Logos for the Department of Health, South African National Defence Force, and various social media handles are at the very bottom.

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DRUG RESISTANT TB CAN BE CURED

NEW REGIMEN for MDR-TB BPaL – L is better for you!

- ONLY 6 months of treatment
- 3 to 4 medicines
- 90% cure rate
- Simplified regimen

BPaL-L = Bedaquiline + Pretomanid + Linezolid + Livofloxacin

The new regimen for MDR-TB patients has many advantages, including:

- Fewer pills required – only 23 pills per week
- Shorter treatment – only 6 months
- Fewer facility visits, which means a lower costs for you to get treated

Speak to your healthcare worker today to find out if you are eligible!

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- RR-TB treatment for just 6 months?
- Even for pregnant women?

DR-TB: new regimens

If not on RR-TB treatment:

- Start and adjust treatment using steps 1-6 below.
- If previously treated for RR-TB for > 28 days, discuss with lab and request extended phenotypic DST on sputum sample already sent.

If on RR-TB treatment:

- At every visit check outstanding smear, culture and DST¹ results and clinical response to treatment.
- Confirm RR-TB treatment duration. All drugs should be continued throughout treatment unless side-effects/intolerance.
- If started on the short regimen (BPAL-L or BPAL or BDLLfx/C) and the baseline DR-TB reflex test shows resistance to BDQ, LZD, DLM, Pa, the patient is no longer eligible for the short regimen. Present to PCAC/NCAC > 200 for individualised regimen.
- If on high dose isoniazid or terizidone, give **pyridoxine** 50mg daily until TB treatment completed.

Note: manage the patient with RR-TB at a health facility that has reliable access to RR-TB medications and monitoring equipment available.

Treat the patient with RR-TB

Review the patient with RR-TB and once treatment completed

- Assess patient at diagnosis, treatment initiation, 2 weeks, 4 weeks and then every 28 days throughout treatment. Review more frequently, if not improving or any problems.
- Once RR-TB treatment complete:
 - Record treatment outcome > 116.
 - Follow up after 6 and 12 months: check for TB symptoms, chest x-ray worse or sputum smear.

How to start/adjust RR-TB treatment

- Severe EPTB (TB meningitis/brain tuberculoma)
- RR-TB with documented drug resistance to BDQ

Yes
Discuss with PCAC/
NCAC > 200
same day to start
individualised
regimen.

Yes: choose

New standardised dosing: Bedaquiline (BDQ) dosing for all patients initiating:

- Loading dose: 400mg daily for first 2 weeks
- Then 100mg daily until treatment completed
- If already on regimen with loading dose of 200mg daily for 8 weeks, continue.
- If already on individualised regimen with bedaquiline dosing 200mg 3 days per week (M/W/F), continue.

STEP 3. Decide likely RR-TB treatment duration according to RR-TB regimen and TB disease severity

Is the patient on individualised regimen?

Does the patient have extensive

Yes: plan to treat for **extensive TB disease**

BDQ - bedaquiline; CFZ - clofazimine; DLM -

How to manage missed doses

- If interrupted treatment after initial 2 weeks loading phase (in any regimen):
 - If interrupted < 1 week: no reloading needed. Continue 100mg daily.
 - If interrupted 1-4 weeks, reload with 400mg daily for 3 days then continue with 100mg daily.
 - If interrupted 4-26 weeks, reload with 400mg daily for 7 days then continue with 100mg daily.
 - If interrupted ≥ 26 weeks, reload with 400mg daily for 14 days then continue with 100mg daily.

STEP 4. Review outstanding genotypic DST results (XDR cartridge) and TNGS results and adjust treatment regimen at 2 week follow-up visit:

Is there any of: result discordant¹ or result heteroresistant²?

No
Check TNGS results. Is there resistance to BDQ or LZD?

Yes
Check if resistance to any of: isoniazid, fluoroquinolones, ethionamide or amikacin?

No
Check genotypic DST results. Is there resistance to any of: isoniazid, fluoroquinolones, ethionamide or amikacin?

Yes to any of above.
Is the patient on individualised regimen?

Test unsuccessful or no resistance: Continue

Unsuccessful

Also check genotypic DST results and discuss with PCAC/NCAC

- Discuss discordant/heteroresistant results with the lab.
- Send new sputum sample for DR-TB: reflex DST testing if requested by the lab.
- Continue current treatment and present to PCAC/NCAC > 200.

- Optimise management of long-term conditions: if HIV > 126, if diabetes > 145, if hypertension > 149.
- Review all previous sputum results and confirm BDQ and LZD sensitivity.
- Request extended phenotypic DST on latest culture positive specimen.
- Arrange and review chest x-ray.



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HIV Prevention: Lenacapavir as PrEP



- PrEP injection given once every 6 months
- Hailed as a “game-changer”- a step closer to an HIV-free generation?

HIV Prevention: Lenacapavir as PrEP

HIV PRE-EXPOSURE PROPHYLAXIS (PREP): ROUTINE CARE

Assess the patient starting HIV PrEP at baseline, within 28 days, then 3 monthly (oral PrEP) or 6 monthly (LEN PrEP).		
Assess	When to assess	Note
Symptoms	Every visit	Manage symptoms as on symptom pages. If cough or fever ≥ 2 weeks, unexplained weight loss or night sweats, exclude TB ↗ 102.
STI symptoms	Every visit	Screen for STIs. If discharge, rash, itch, lump/s, ulcer/s ↗ 62.
Adherence	Every visit	Ask about pill taking pattern and missed doses. If difficulty with adherence ↗ 195. If possible, align HIV PrEP visit with other visits (e.g. contraceptive visits).
Side effects	Every visit	Ask about side effects of medication (see below). Reassure these usually resolve within a few weeks.
Substance use	Every visit	In the past year, has patient: drunk ≥ 4 drinks/session, used illegal drugs or misused prescription or over-the-counter medications? If yes to any ↗ 165.
Sexual health	Every visit	If risky sexual behaviour: new or multiple partner/s, uses condoms unreliably, has sex under influence of alcohol/drugs, give safe sex advice.
Drug interactions	Every visit	Review other medications that patient may be on: • Avoid starting LEN PrEP if using rifabutin, rifampicin, rifapentine, antiepileptic medication (carbamazepine, phenytoin), ketamine or medicines used for erectile dysfunction e.g. sildenafil. • Avoid starting oral PrEP if using medications that affect the kidneys (e.g. amikacin, gentamicin).
Family planning	Every visit	Check for pregnancy ↗ 174. Assess patient's contraceptive needs ↗ 170. There are no interactions between HIV PrEP and hormonal contraception.
HIV test	Baseline ¹ , at 1 month, then 3 monthly (oral PrEP) or 6 monthly (LEN PrEP)	If positive, stop HIV PrEP and give routine HIV care ↗ 126. If negative, continue HIV PrEP.
HbsAg	Baseline if using oral PrEP	If positive, continue oral PrEP and refer. If negative, continue oral PrEP, consider giving hepatitis B vaccine ↗ 135.
Creatinine (eGFR)	• At baseline: - If using oral PrEP - If using LEN PrEP and ≥ 50 years • For both: - If diabetes/hypertension: baseline then yearly - If pregnant: baseline, at 3 and 6 months.	• If using oral PrEP and not pregnant: - If eGFR < 30, refer same day. If eGFR < 60, stop PrEP and repeat eGFR after two weeks. - If repeat eGFR ≥ 60, continue PrEP. If repeat eGFR still < 60, discuss with experienced ART clinician or HIV hotline ↗ 200. • If using LEN PrEP and not pregnant: - If eGFR < 15, refer same day. If eGFR ≥ 15, continue LEN PrEP. • If pregnant: if creatinine > 85, repeat creatinine on a separate day; if repeat creatinine ≤ 85, continue PrEP. - If repeat creatinine still > 85, stop PrEP and discuss with experienced ART clinician or HIV hotline ↗ 200.
Syphilis	At baseline	Test for syphilis ↗ 66.

- **Check creatinine at baseline**
 - If using oral PrEP
 - If using LEN PrEP and ≥ 50 years
 - If diabetes/hypertension (any PrEP): baseline then yearly
 - If pregnant (any PrEP): baseline, at 3 and 6 months.

Treat the patient starting/on HIV PrEP

Complete PrEP Clinical Form at each visit.

Medication	Dose	When to avoid	Notes	Side effects
• Tenofovir/emtricitabine	300/200mg once daily	Avoid if < 35kg or eGFR < 60	• Effective after taking it for at least 7 days. Ensure condom use, especially for first 7 days. • If starting, give medication for 1 month. If already on HIV PrEP give medication for 3 months. • Advise that oral PrEP must be taken every day for it to be effective in preventing HIV infection. • If missed pill, advise to take it as soon as patient remembers (within 24 hours) and not to take more than 1 pill in one day.	• Side effects: nausea, headache, tiredness, diarrhoea, vomiting, rash, changes in appetite. • Urgent side effects: kidney failure
• Lenacapavir	Initiation: • Day 1: give 2 x 464mg SC injections PLUS 2 x 300mg oral tablets. • Day 2: take 2 x 300mg oral tablets at home. Continuation: give 2 x 464mg SC injections every 26 weeks (6 monthly)	Avoid if < 35kg or eGFR < 15	• Effective against HIV on day 3. Ensure condom use, especially for first 2 days. • Advise that LEN PrEP requires 6-monthly injections to be effective. • If a patient stops LEN PrEP, start oral PrEP within 28 weeks of last injection or use condoms reliably for 6 months to prevent drug resistance¹. • Continuation dose may be given 2 weeks before or up to 2 weeks after last injection. If missed injection: - If 24-28 weeks since last injection, give continuation dose. - If > 28 weeks since last injection restart initiation dosing. • If a patient starts rifampicin while using LEN, repeat the initiation dosing (the day 1 injections plus oral tablets and the day 2 oral tablets) 2 days after starting rifampicin, continue scheduled doses. If unsure discuss with doctor/HIV hotline ↗ 200.	Side effects: nodules, pain, swelling or redness at injection site common. Advise to alternate injection site at every visit: abdomen (preferred), thigh, back of upper arm or buttocks

Review after 1 month, or sooner if side effects develop. Then review 3 monthly if oral PrEP and 6 monthly if LEN PrEP. Repeat HIV test and provide PrEP medication at each visit.

Decide when to stop HIV PrEP

- If patient is no longer at risk of HIV and wishes to stop PrEP, plan with patient to stop:
 - If patient on oral PrEP, stop at least 7 days after last potential HIV exposure. If HbsAg positive, avoid stopping oral PrEP and refer instead.
 - If patient on LEN PrEP, advise to start oral PrEP within 28 weeks of last injection or use condoms reliably and continue for up to 6 months to prevent drug resistance¹.

¹LEN PrEP offers protection from HIV for up to 6 months, but remains in the body at low levels for up to 12 months after last injection. If patient is infected with HIV during this time, they are at risk for developing drug resistance.



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- If a patient stops LEN PrEP, start oral PrEP within 28 weeks of last injection or use condoms reliably for 6 months to prevent drug resistance
- If a patient starts rifampicin while using LEN, repeat the initiation dosing (the day 1 injections plus oral tablets and the day 2 oral tablets) 2 days after starting rifampicin, continue scheduled doses.

Management of Advanced HIV Disease

 **News** | About HIV | About

Retention & linkage to care

Growing number of people re-engaging with HIV care in South Africa have advanced HIV

Roger Pebody | 6 April 2023 | Estimated reading time 4 minutes



meunier/Shutterstock.com

While rates of advanced HIV (previously known as AIDS) are declining, the proportion of people coming back to medical care who have advanced HIV is increasing and deaths in this group are increasing. These findings from the large public sector programme in the township of Khayelitsha

- The term 'AIDS' is being replaced with that of 'advanced HIV disease'.
- People have advanced HIV if they have a CD4 cell count below 200 or symptomatic HIV disease (WHO stages 3 or 4).
- People in these categories have a very high risk of further disease progression or death, often due to tuberculosis (TB) or cryptococcal meningitis.

Management of Advanced HIV Disease

Advanced HIV disease (AHD)

Any patient newly diagnosed or returning to care, may have advanced HIV disease if CD4 cell count ≤ 200 or if WHO clinical stage 3 or 4. Patients with advanced HIV disease may appear well but may deteriorate and remain at higher risk for death. If advanced HIV disease suspected, follow these steps:

- Give urgent attention to the patient with any danger signs:**
- Respiratory rate ≥ 30
 - Breathlessness at rest or while talking
 - Unable to walk unaided
 - Drowsy/confused
 - Seizures
 - Pulse rate ≥ 120
 - Coughs up ≥ 1 tablespoon of fresh blood
 - Aggressive or agitated
 - Neck stiffness
 - New sudden weakness/numbness or visual disturbance
- Step 1 If danger signs, manage and refer to hospital for admission**
- If oxygen saturation $< 92\%$, respiratory rate ≥ 30 or difficulty breathing, give face mask oxygen to keep saturation $\geq 92\%$ and $\blacklozenge$ ceftriaxone¹ 1g IV/IM for suspected severe pneumonia.
 - If neck stiffness, drowsy/confused or purple/red rash: meningitis likely. Give $\blacklozenge$ ceftriaxone¹ 2g IM. Avoid injecting $> 1g$ IM at one injection site.
- Step 2 If hospital admission not needed, identify patients at high-risk of AHD**
- Newly diagnosed
 - On ART with VL > 1000
 - Unstable/clinically unwell
 - Known with opportunistic infection
 - Returning to care after > 90 days, regardless of symptoms
- Step 3 If starting treatment, assess and treat any HIV-associated conditions**
- Do CD4 count on all patients suspected of AHD to confirm diagnosis. If cryptococcal antigen (CrAg) positive, recall and refer for lumbar puncture. If headache, confusion or pregnant, refer urgently.
 - Do TB-NAT. Ask about TB symptoms: cough, weight loss, night sweats or fever. If symptomatic, also do urine LAM test $\rightarrow$ 102 and arrange chest X-ray $\rightarrow$ 104. If generalised lymphadenopathy $\rightarrow$ 42.
 - If recent hospital admission, known with TB, cryptococcal disease or any opportunistic infection, ensure correct treatment was started.
 - Ask about symptoms of cancer: unexplained weight loss, anal symptoms $\rightarrow$ 61, abnormal vaginal discharge/bleeding $\rightarrow$ 70, purple/brown skin lumps $\rightarrow$ 89.
- Step 4 Prevent opportunistic infections**
- Provide co-trimoxazole preventive therapy (CPT) $\rightarrow$ 128. Provide TPT if TB has been excluded and patient never had TPT. If patient is a TB contact, give TPT even if already had TPT $\rightarrow$ 100.
- Step 5 Provide ART**
- Start ART same day unless TB/cryptococcal disease. Check if reason to delay ART $\rightarrow$ 130. If using metformin, antiseizure medication or already on TB treatment, check for drug interactions $\rightarrow$ 133.
 - If already on ART and VL ≥ 50 , manage the patient with an unsuppressed viral load $\rightarrow$ 134.
- Step 6 Provide other care**
- Ensure patient is receiving routine care for all other long-term health conditions. Support patient to use medications correctly.
 - Align other visits such as TB treatment visit with HIV routine care visit, if possible.
- Step 7 Provide adherence support**
- Offer intensified adherence support. Patients with AHD and other infections/long-term health conditions may struggle with increased pill burden, medication side-effects or difficulty attending multiple clinic visits. Counsel about IRIS², warning signs, medication side-effects and when to return to clinic. Involve patient's family/support person in treatment and follow-up plan.
- Step 8 Ensure continuity of care between hospital and clinic**
- Patients with AHD have an increased risk of complications and death. Follow the hospital discharge plan and ensure hospital follow-up appointments are attended. Maintain a low threshold to refer back to hospital for re-admission if patient deteriorates clinically.
- Step 9 Provide intensified follow up**
- Patients with AHD need to be reviewed more frequently for the first 3 months. Review *two-weekly* if recent hospital admission, opportunistic infection, limited family/social support. Review monthly if clinically well, difficulties in getting to clinic, good family/social support. These can include telephonic check-in or CHW home visits. Ensure correct contact details and plan for follow up recorded.

Continue to provide routine care $\rightarrow$ 126

¹If severe penicillin allergy (previous angioedema, anaphylaxis or urticaria), discuss with doctor. Do not mix Ringer's lactate and IV ceftriaxone. ²Immune Reconstitution Inflammatory Syndrome (IRIS) occurs when the immune system begins to recover after starting/restarting ART. As the immune system gets stronger it might start fighting infections already in the body. IRIS is not drug side effects, it is not a reason to stop/change ART. Counsel patient if feeling worse/new symptoms (cough, fever, headache, losing weight, skin changes), to not stop medication but to return to clinic, even if it is not their appointment date.

- Look for danger signs, admit if necessary
- Opportunistic infections
- Opportunistic cancers
- ART plus Adherence support
- Intensified follow-up- patient-centred



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Communicable Diseases: Mpox



- **Current outbreak**
- **Imported cases- travel-related**
- **Now established local transmission**

Source: <https://iol.co.za/news/south-africa/2026-09-23-mpox-cases-in-south-africa-rise-to-22/>

Communicable Diseases: Mpox

MPOX: DIAGNOSIS AND MANAGEMENT



Source: Mayo Clinic and WHO

- Suspect mpox if patient is a contact of a probable/confirmed mpox case in the 21 days before symptom onset, or presents with new unexplained lesion/s of the skin (face, palms of hands/soles of feet, genitals, anus, rectum, mouth or eyes) and any of: headache, temperature $> 38.5^{\circ}\text{C}$ in the last 2 days, sore throat/nasal congestion/ cough, swollen lymph nodes, body pain/muscle aches, backache, severe weakness/tiredness.
- While looking for other cause of rash/lesions/symptoms: wear N95/FFP2 mask, gloves, gown and eye protection. If possible, isolate patient and provide surgical mask.

Give urgent attention to the patient with suspected mpox and any of:

- Shock/systolic BP < 80
- Respiratory rate ≥ 30 , difficulty breathing at rest/while talking or oxygen saturation $< 90\%$
- Foreskin retracted over glans and unable to reduce to normal position with swollen, painful glans, **paraphimosis** likely
- Immunocompromised or at risk of severe disease: HIV not on ART/virologically unsuppressed, cancer, organ transplant, pregnant, diabetes, hypertension, chronic lung/skin disease, obesity, age > 65
- Thirst, dry mouth, poor skin turgor, BP $< 90/60$, **dehydration** likely
- Unable to swallow
- Persistent nausea and vomiting
- Eye lesion/s and vision changes, **corneal infection** likely
- Decreased consciousness or confusion $\rightarrow 18$
- Unable to pass urine or stool
- Severe bleeding, pain, or discharge from the anus, **proctitis** likely
- Chest pain, irregular pulse, swollen legs, **myocarditis** likely
- Extensive skin lesions
- Severe pain

Manage and refer urgently:

- If oxygen saturation $< 90\%$, give oxygen 1-4L/min via nasal prongs or 6-10L/min via facemask.
- If dehydration likely, give **oral rehydration solution (ORS)** and observe. Encourage small frequent sips. Aim for at least 1-2L in 2 hours. If unable to drink or shock/SBP < 80 , give **sodium chloride 0.9%** 500mL IV over 30 minutes, repeat until SBP > 80 . Continue 1L 6 hourly. Stop if breathing worsens.
- If severe pain, give **morphine** 5-10mg IM or diluted **morphine** 3-10mg slow IV. Stop if BP drops $< 90/60$.
- If persistent nausea or vomiting, give single dose **metoclopramide** 10mg oral/IM/IV.
- If **paraphimosis** likely: if glans blue/black: refer urgently. If not, attempt manual reduction: wrap glans in gauze and apply increasing pressure for 10-15 minutes until foreskin can be replaced over glans. If unsuccessful, refer urgently.
- If unable to pass urine, insert urinary catheter.

Approach to the patient with suspected mpox not needing urgent attention

- If status unknown, test for HIV $\rightarrow 124$. Also send blood for syphilis serology and review result within 7 days $\rightarrow 66$.
- Ask about anal $\rightarrow 61$ and genital symptoms $\rightarrow 62$. If patient has anal sex and anal bleeding/pain/discharge, **proctitis** likely $\rightarrow 61$.
- If rash or lesions all look similar and change or progress at a similar pace (figure 1), mpox is more likely.
- Look for other cause of rash/lesions according to the distribution of rash/lesions and presence or absence of itchiness.

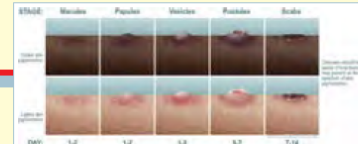


Figure 1 ©2022 Emory University, used with permission.

Generalised rash or lesion/s

Localised rash or lesion/s

- | Generalised rash or lesion/s | Localised rash or lesion/s |
|---|--|
| <ul style="list-style-type: none"> • If crops of vesicles at different stages of healing and no swollen lymph nodes, chickenpox likely. • If advanced HIV disease and hyperpigmented papules, papular pruritic eruption likely $\rightarrow 84$. • If burrows in web spaces or scabies likely $\rightarrow 84$. • If new medication in past 3 months, drug eruption likely $\rightarrow 84$. | <ul style="list-style-type: none"> • Non-itchy • If conjunctivitis, cough, runny nose and flat red rash spreading from face to body, measles likely. Notify. • If firm, dome-shaped papules with central dimple, molluscum contagiosum likely $\rightarrow 89$. • If painful, grouped vesicles on red base especially around mouth, herpes simplex likely $\rightarrow 89$. |
| <ul style="list-style-type: none"> • Itchy • If crops of vesicles at different stages of healing and no swollen lymph nodes, chickenpox likely. • If advanced HIV disease and hyperpigmented papules, papular pruritic eruption likely $\rightarrow 84$. • If burrows in web spaces or scabies likely $\rightarrow 84$. • If new medication in past 3 months, drug eruption likely $\rightarrow 84$. | <ul style="list-style-type: none"> • Itchy • If honey-coloured crusts especially around mouth, impetigo likely $\rightarrow 89$. |

If unsure, consider:

*If SBP < 80 , pulse ≥ 100 , respiratory rate ≥ 30 , refer urgently.

- Signs and symptoms, criteria for suspected infection
- High-risk groups: Immunocompromised or at risk of severe disease: HIV not on ART/virologically unsuppressed, cancer, organ transplant, pregnant, diabetes, hypertension, chronic lung/ skin disease, obesity, age > 65
- Differential diagnosis
- Most cases are not serious- discuss management if unsure
- Contact tracing and management (who is at risk, what to advise, vaccination)- discuss with NICD
- Reporting

- Discuss every patient with suspected mpox with NICD hotline on 0800 212 552 to guide infection prevention control (IPC) and contact tracing process and vaccination of close contacts: all sexual contacts, household contacts (including pregnant/breastfeeding women and children) and healthcare workers managing the patient.
- Follow steps 1-5 to notify and manage patient further:

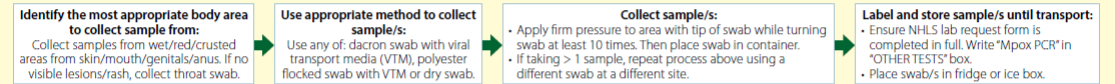


Mpox case investigation form

STEP 1. Complete the mpox case investigation form:

- If hard copy unavailable, access electronically at www.nicd.ac.za/wp-content/uploads/2023/03/mpox-CIF_version_08092022_update115032023.pdf or scan QR code.
- Email the completed form to: jacqueline@nicd.ac.za, haazneem@nicd.ac.za and outbreak@nicd.ac.za.
- Submit completed form with sample/s (see Step 2 below) to NICD.

STEP 2. Collect and prepare sample/s for mpox testing while wearing N95 mask, gloves, gown and eye protection:



STEP 3. Advise the patient with suspected mpox:

- Explain that the virus can spread to close contacts until all symptoms have resolved and all lesions healed completely (scabs fall off and healthy layer of skin is visible where scabs used to be).
- Advise that rash/lesions usually heal within 2-4 weeks.
- If breastfeeding, avoid contact between baby and infected lesions. If lesions on areola, avoid breastfeeding from affected side. If expressing, only give baby milk from unaffected side and discard milk from infected side. Resume breastfeeding once all lesions are completely healed.
- Avoid physical and sexual contact until all lesions healed. Advise that wearing condoms does not protect against infection.
- Advise that staying in a separate bedroom and using a separate bathroom limits the spread of infection. Wear a surgical mask if in a shared space.
- Avoid sharing personal items like cups, eating utensils, clothes, linen and towels. Advise to wash these items separately from other people's items.
- Encourage to eat regular nutritious meals, maintain hydration and rest.
- Advise to keep lesions dry and uncovered unless in shared space and not to break blisters or scratch lesions; allow these to heal naturally to prevent spread.
- Advise regular hand washing with soap and water, especially before and after touching lesions. Wash frequently touched surfaces with soap and water.
- Advise to disinfect frequently touched surfaces with 70% alcohol or chlorine-based disinfectant.
- Advise to return if no improvement or symptoms worsen.

STEP 4. Treat the patient with suspected mpox:

- For pain and fever: give **paracetamol** 500mg-1g 4-6 hourly (up to 4g in 24 hours) as needed for 5 days. If no better, also give **ibuprofen** 400mg 8 hourly as needed with/after food for up to 5 days. If pain severe, add **tramadol** 50-100mg 6 hourly (up to 400mg in 24 hours).
- Manage other symptoms as on symptoms pages.
- If lesions in mouth, advise to gargle with salt water at least four times a day. If lesions on lower body (including anus), advise sitz baths with baking soda or Epsom salts until lesions healed.
- If red, warm, swollen, painful skin around lesions, **secondary infection** likely: give **cefalexin** 500mg 6 hourly for 5 days or **flucloxacillin** 500mg 6 hourly for 5 days. If severe penicillin allergy (previous angioedema, anaphylaxis, urticaria) give instead **azithromycin** 500mg daily for 3 days.
- Discuss need for admission with referral centre if any of: unable to isolate, breastfeeding, shares space with children/immunocompromised persons, or requires emotional support.



NMC notification process

Communicable Diseases: Malaria



Risk increased after heavy rains/ floods



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Source: https://mg.co.za/the-green-guardian/2026-08-04-climate-change-redrawing-africa-s-malaria-map-raising-risk-in-south-africa/#google_vignette



Communicable Diseases: Malaria

MALARIA

Suspect malaria if patient in a malaria area¹ in the past 3 months and now presents with temperature $\geq 38^{\circ}\text{C}$, severe headache, fatigue, shivering episodes, joint/muscle pain, flu-like symptoms, dry cough, nausea and vomiting or diarrhoea.

Give urgent attention to the patient with suspected malaria and any of:

- Decreased consciousness $\rightarrow$ 18, drowsy/confused
- Severe general body weakness
- Jaundice
- Respiratory rate > 30 or difficulty breathing
- Glucose < 3 (< 4 if diabetes) $\rightarrow$ 19
- Easy bleeding or bruising
- Black urine or no urine passed in past 12 hours
- Seizure or just had a seizure $\rightarrow$ 20
- Shock/systolic BP < 80
- Hb < 7
- Persistent vomiting

Manage as suspected severe malaria and refer urgently to reach referral hospital within 6 hours:

- If hook/systolic BP < 80 , give **sodium chloride 0.9%** 500mL IV over 30 minutes, repeat until systolic BP > 90 . Continue 1L hourly. Stop if breathing worsens.
- Test for malaria with rapid test² if available.
- If positive, give **artesunate 2.4mg/kg IM** before referral. Indicate dose and route in referral letter.
- If referral delayed, give second dose **artesunate 2.4mg/kg IM** 12 hours later. Notify³ within 24 hours.

Approach to the patient with suspected malaria not needing urgent attention

Test for malaria with rapid test², if available. If not available or rapid test negative, send blood sample to laboratory for microscopy.

Malaria test positive

- Notify⁴ within 24 hours.
- If malaria treatment not available, refer same day.

Malaria rapid test not available/negative

- For pain and fever, give **paracetamol** 500mg-1g 4-6 hourly (up to 4g in 24 hours) as needed for 5 days.
- If nausea or vomiting, give **metoclopramide** 10mg orally 8 hourly as needed for 2 days.
- Advise patient to keep hydrated and to return immediately if symptoms worsen (vomiting, drowsy, confused, jaundiced).

Review patient in 2 days and check laboratory test results

- If positive, manage in adjacent column.
- If negative, assess for other causes of fever $\rightarrow$ 38.

Any of: > 65 years, pregnant/postpartum, long-term health conditions (e.g. PLHIV, diabetes, TB), impaired immunity⁵, previous splenectomy?

Yes

- Give **artemether/lumefantrine** 80/480mg with fatty food/milk. If referral delayed, give second dose after 8 hours.
- If patient vomits within 1 hour of taking treatment, give **metoclopramide** 10mg orally/IM.
- Repeat **artemether/lumefantrine** 80/480mg.
- Ensure adequate oral hydration.
- Refer same day.

No

- Give **artemether/lumefantrine** 80/480mg at 0, 8, 20, 32, 44 and 56 hours (total of 6 doses) with fatty food/milk.
- Give first dose in health facility and monitor patient for 1 hour.
- If patient vomits within 1 hour of taking first dose, give **metoclopramide** 10mg orally/IM.
- Repeat **artemether/lumefantrine** 80/480mg. If patient vomits again, refer.
- Explain importance of completing prescribed doses, even if patient feels better.
- For pain and fever, give **paracetamol** 500mg-1g 4-6 hourly (up to 4g in 24 hours) as needed for 5 days.
- Advise patient to keep hydrated.
- Advise to return immediately if symptoms worsen (vomiting, drowsy, confused, jaundiced) and refer urgently.
- Review patient in 2 days. If no improvement in symptoms, refer.

¹Check NICD: South African malaria risk map 2024: www.nicd.ac.za/wp-content/uploads/2025/12/National_Risk_Map-02-Dec-2025.pdf. ²If systolic BP < 80 , pulse ≥ 100 , respiratory rate > 30 , confusion/restlessness, weakness, shock likely. ³Rapid tests may stay positive for up to one month after successful treatment. A negative test does not exclude malaria, request a second test. ⁴Notify via NMC App (download from NICD website/app store) or www.nicd.ac.za/nmc-overview/notification-process. ⁵Known, cancer, receiving chemotherapy or long-term corticosteroids.

Advise the patient about his/her general health

- Ask the patient about his/her concerns and expectations from this visit, and try to address these.
- Educate patient that not all tests, treatments and procedures help prevent or treat disease. Some provide little or no benefit and may even cause harm (like doing x-rays or giving antibiotics unnecessarily).
- Help the patient to choose behavioural changes to improve and maintain his/her general health. Support the patient to change $\rightarrow$ 199.

Smoking

Alert patient to the risks and encourage to stop $\rightarrow$ 164.



Stress

Assess and manage stress $\rightarrow$ 98.



Be sun safe

- Avoid sun exposure, especially between 10h00 and 15h00.
- Use sunscreen and protective clothing (e.g. hat) when outdoors.
- If albinism $\rightarrow$ 94.



Have safe sex

- Have only 1 partner at a time.
- If HIV negative, test for HIV between partners and consider male medical circumcision.
- Advise partner/s and children to test for HIV.
- Always use condoms.



Road safety

- Use pedestrian crossings to cross the road.
- Use a seat belt.



Physical activity

- Aim for at least 30 minutes of moderate exercise (e.g. brisk walking) 5 days a 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.



Avoid substance use

- Limit alcohol intake to ≤ 2 drinks/day if man and 1 drink/day if woman.
- If concern $\rightarrow$ 165.



Breast self-awareness

- Educate that breast cancer is common in women and treatable if found early. Although uncommon, men can still get breast cancer.
- Advise patient to be aware of changes breast.
- Encourage patient to look and feel for changes:
 - Check in mirror, when washing, and when lying on back.
 - Check skin, under arms, each breast and nipples.
- Advise to seek care if: painless hard lump in breast/under arm, nipple discharge, nipple retraction (pulled in), skin changes (rash, dimpling).



Diet

- Eat a variety of foods in moderation. Reduce portion sizes.
- Increase fruit, vegetables, nuts and legumes.
- Choose whole grain bread/rice or potatoes rather than white bread/rice.
- Replace brick margarine/butter with vegetable oil or soft tub margarine. Remove skin and fat from meat.
- Reduce salty processed foods like gravies, stock cubes, packet soup. Avoid adding salt to food.
- Avoid/Use less sugar.



Advise the patient on ways to prevent malaria

- Advise the patient living in or travelling to a malaria area² to use preventative measures against mosquito bites from sunset to sunrise:



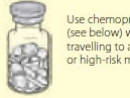
Sleep under an insecticide-treated mosquito net.



Apply insect repellent (30% DEET) to exposed skin and clothing. Avoid contact with lips, eyes and breaks in skin.



Wear long sleeves, long trousers and socks if outside.



Use chemoprophylaxis (see below) when travelling to a moderate or high-risk malaria area³.

- If travelling to a moderate or high-risk malaria area² within South Africa between September to May or outside South Africa during malaria season:

- Try to plan travel during the dry season instead and avoid travel if pregnant or impaired immunity⁵.
- Give chemoprophylaxis, **doxycycline** 100mg daily. Start 2 days before entering malaria area and continue for 4 weeks after leaving malaria area. Avoid if pregnant or breastfeeding.

Treat preventively to maintain the patient's general health

Vaccine	When	Note
Influenza	If health worker, > 65 years, HIV positive, hypertension, stroke, diabetes, asthma, COPD, cancer, pregnant/postpartum	- Give influenza vaccine 0.5mL IM yearly. Severe egg allergy is not a contraindication. - Observe patient for adverse events following vaccination $\rightarrow$ 14.
Hepatitis B	If working in a health facility (medical and non-medical staff)	- If not given before, give hepatitis B vaccine 1mL IM immediately, at 4 weeks and 6 months (3 doses in total). - Observe patient for adverse events following vaccination $\rightarrow$ 14.

¹One drink is 1 tot of spirits, or 1 small glass (125mL) of wine or 1 can/bottle (330mL) of beer. ²Check NICD: South African malaria risk map 2024: www.nicd.ac.za/wp-content/uploads/2025/12/National_Risk_Map-02-Dec-2025.pdf. ³Known PLHIV, diabetes, cancer, previous splenectomy, or receiving chemotherapy or long-term corticosteroids.

- New separate page for malaria
- Criteria in red box for patients needing urgent attention
- Use of Rapid test where available
- Artesunate dosing if test positive
- Management of symptoms- pain, fever, nausea/vomiting, keep hydrated



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