adult primary care

Symptom-based integrated approach to the adult in primary care

EMERGENCIES
SYMPTOMS
TB
HIV
ASTHMA/COPD
CARDIOVASCULAR DISEASE
DIABETES
MENTAL HEALTH CONDITIONS
EPILEPSY
MUSCULOSKELETAL DISORDERS
WOMEN'S HEALTH
PALLIATIVE CARE

2019/2020

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

2030 NDP

PREFACE

ADULT PRIMARY CARE (APC) 2019/2020

Commissioned and published by: The South African National Department of Health.

What is APC?

The Adult Primary Care (APC) clinical tool is a comprehensive approach to the primary care of the adult 18 years or older. APC has been developed using approved clinical policies and guidelines issued by the National Department of Health and is intended for use by all health care practitioners working at primary care level in South Africa as a clinical decision-making tool.

Along with guiding the delivery of sound clinical care, APC aims to uphold its key values:

- Acknowledgement of each patient's uniqueness and multiple roles within a family and community
- Respect for a patient's concerns and choices
- The development of a trusting relationship with a patient
- Communication with a patient should be effective, courteous and empathic
- The delivery of follow-up care especially for patients with chronic conditions
- Linking the patient to community-based resources and support
- Ensuring continuity of care, where possible.

A training package that consists of short on-site sessions using simulated case scenarios accompanies this tool. APC is being implemented as part of the Integrated Clinical Services Management (ICSM), a key focus within the Ideal Clinic Realisation and Maintenance (ICRM) initiative to improve the quality of care delivered, and is complemented by the Health for All health promotion tool to promote healthy lifestyles and health education.

APC 2019/2020 aligns with National Department of Health policies and clinical protocols:

- Standard Treatment Guidelines and Essential Medicine List for South Africa, Primary Healthcare Level, 2018 Edition
- Standard Treatment Guidelines and Essential Medicine List for South Africa, Adult Hospital Level, 2019 Edition (draft)
- 2019 ART Clinical Guidelines for the Management of HIV in Adults, Pregnancy, Adolescents, Children, Infants and Neonates, 2019
- Guideline for the Prevention of Mother-To- Child Transmission of communicable infections, 2019
- National Guidelines for the management of Viral Hepatitis, 2019
- National Department of Health HIV Testing Services Policy, 2016
- National Tuberculosis Management Guidelines, 2014
- Management of Rifampicin-Resistant TB Tuberculosis: A Clinical Reference Guide, September 2019
- Comprehensive STI clinical management guidelines. Review version for provincial dissemination and consultation meetings, May 2017
- National Contraception Clinical Guidelines, 2012 (including circular updates)
- Guidelines for Maternity Care in South Africa (4th edition), 2016
- Basic Antenatal Care Plus Handbook, 2nd edition, 2016
- Cervical cancer prevention and control policy, 2017
- South African guidelines for the prevention of Malaria, 2019
- Guidelines for the treatment of Malaria in South Africa, 2018
- Adherence guidelines for HIV, TB and NCDs. Policy and service delivery guidelines for linkage to care, adherence to treatment and retention in care, 2016

What are the APC 2019/2020 updates?

This APC 2019/2020 edition includes improvements to algorithm and checklist design.

New pages and extensively revised sections include:

- Address the patient's general health
- Emergency section including CPR, anaphylaxis and glucose management.
- Revised HIV section reflects policy changes on TB Preventive Therapy, Universal Test and Treat, same-day ART initiation and dolutegravir-based ART regimens.
- Revised maternal section reflects latest PMTCT changes.
- Revised rifampicin-resistant TB (RR-TB) section reflects the latest policy changes.
- Revised mental health section including management of aggressive patient, abnormal thoughts/behaviour and depression.
- New palliative care section including support for the dying patient.
- New pages: How to collect a good sputum specimen for TB testing; Pallor or anaemia; Gums/teeth symptoms; Menstrual symptoms; Scalp problems; Hair loss; Tobacco smoking; Support the patient to make a change

How to use APC?

APC is designed to reflect the process of conducting a clinical consultation with an adult patient in primary care:

- It is divided into three main sections: Address the patient's general health, Symptoms and Chronic Conditions.
  - In the stable patient start by addressing the patient's general health then address the patient's symptom/s and/or chronic conditions.
  - In the patient presenting with one or more symptoms, start by identifying the patient's main symptom. Use the Symptoms contents page to find the relevant symptom page in the clinical tool. Decide if the patient needs urgent attention (indicated in the red box) and if not, follow the algorithm to either a management plan or to consider a chronic condition in the chronic condition section of the clinical tool.
  - In the patient known with a chronic condition, use the Chronic Conditions contents page to find that condition in the clinical tool. Go to the colour-coded Routine Care pages for that condition to manage the patient's chronic condition using the 'Assess, Advise and Treat' framework.
- Arrows refer you to another page in the clinical tool:
  - The return arrow (⮌) indicates that you need to consult another page once you have completed the current page. We suggest you make a note of additional pages to consult.
  - The direct arrow (→) guides you to leave the current page and continue on another page.
- The assessment tables on the Routine Care pages are arranged in 3 tones to reflect those aspects of the history, examination and investigations to consider.
- All medications have been colour coded in either orange, blue or purple to indicate prescriber level for that particular indication and at that dose:
  - Orange-highlighted medications may be prescribed by a **doctor or a nurse** according to his/her scope of practice.
  - Purple-highlighted medications are **doctor-initiated** medications. This means a doctor needs to start the medication and a nurse can continue it according to his/her scope of practice.
  - Blue-highlighted medications are **doctor-prescribed** medications. This means that these medications may only be prescribed by a doctor.
- Refer to the Health for All health promotion tool when you see the icon below.

Health for All

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APC and its preceding versions have been developed, tested and refined over 18 years by the Knowledge Translation Unit (KTU), University of Cape Town Lung Institute, in consultation with the South African National Department of Health, particularly the National Essential Medicines List Committee and Clinical Programmes, and a wide range of clinicians, policy makers and end-users. This work has been funded over its various iterations by National Department of Health and PEPFAR through its implementing agencies of USAID and CDC. Find more details about the development and role of contributors at www.knowledgetranslation.co.za.

NEMLC/Affordable Medicines Directorates endorse all recommendations in APC approved through the NEMLC process as published in the STGs and EML.

Feedback: APC is revised and improved based on feedback from end-users. Send us your feedback: www.knowledgetranslation.co.za/feedback

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SEIZURES/FITS

Give urgent attention to the patient who is unconscious and fitting:

- If current head injury ⮌14.
- Place in left lateral lying (recovery) position and give 100% face mask oxygen.
- Establish IV access.
- If glucose <3 or unable to measure, give dextrose 10%[1] 5mL/kg IV. If known alcohol user, give thiamine 100mg IM/IV before dextrose. Recheck glucose after 15 minutes: if still < 3, give further dextrose 10%[1] 2mL/kg IV. Once glucose ≥ 3, continue dextrose 5% 1L 6 hourly.
- If ≥ 20 weeks pregnant up to 1 week postpartum →138.
- If not pregnant or < 20 weeks pregnant, give diazepam 10mg IV over at least 2 minutes or midazolam 10mg IM/buccal[2]. If still fitting after 5 minutes, repeat diazepam/midazolam dose.
- If still fitting 5 minutes after second dose of diazepam/midazolam *or* patient does not recover consciousness between fits, refer urgently. If available, doctor to give phenytoin 20mg/kg IV in sodium chloride 0.9% (not dextrose) in a different line to diazepam, over 60 minutes with BP and ECG monitoring. If dysrhythmia develops, interrupt infusion and restart slowly. Refer urgently.

Approach to the patient who is not fitting now

Confirm that patient indeed had a fit: jerking movements of part of or the whole body, usually lasting < 3 minutes. May have had tongue biting, incontinence, post-fit drowsiness and confusion.

Yes

Refer patient same day if any of:

- Temperature ≥ 38°C, headache, neck stiffness or purple/red rash, **meningitis** likely: give ceftriaxone 2g IV[3]/IM.
- If patient was in malaria area and malaria test[4] positive, also give artesunate 2.4mg/kg IM. If artesunate unavailable, give quinine as slow IV infusion over 4 hours: dilute quinine 20mg/kg in dextrose 5% 5-10mL/kg. If IV not possible, give IM[5] diluted in sodium chloride 0.9%.
- New/different headache or headache getting worse/more frequent
- Patient with HIV and no known epilepsy
- Decreased consciousness > 1 hour after fit
- Glucose < 4 one hour after treatment or patient on glimepiride/insulin
- Glucose ≥ 11.1 →13
- New sudden asymmetric weakness or numbness, difficulty speaking or visual disturbance
- BP ≥ 180/130 more than 1 hour after fit has stopped
- Alcohol/drug use: overdose or withdrawal
- Recent head injury
- Pregnant or up to 1 week postpartum. If ≥ 20 weeks pregnant and just had fit →138.

No

New sudden asymmetric weakness or numbness of face, arm or leg; difficulty speaking or visual disturbance

Stroke or **TIA** likely →118.

Collapse with twitching lasting < 15 seconds following flushing, dizziness, nausea, sweating and with rapid recovery

Common faint likely →24.

If diagnosis uncertain, refer.

Approach to the patient who had a fit but does not need same day referral

Is the patient known with epilepsy?

Yes

Give routine **epilepsy** care →131.

No

- Doctor to check full blood count, creatinine (eGFR), urea, sodium, calcium and review results.
- If focal seizures or new fits after meningitis, stroke or head injury, discuss with specialist.
- If patient had ≥ 2 definite fits with no identifiable cause, doctor to consider epilepsy and give routine care →131.

[1]If dextrose 10% unavailable: mix 1 part dextrose 50% to 4 parts water for injection to make dextrose 10% solution. [2]Buccal: use 5mL syringe to draw up correct dose, remove needle and give midazolam between the cheek and gum. [3]Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. [4]Test for malaria with rapid diagnostic test if available, and parasite slide microscopy. [5]To give IM quinine: first calculate volume of sodium chloride 0.9% in mL: weight x 20 ÷ 100. Then add this volume of sodium chloride 0.9% to quinine 20mg/kg and inject half the volume into each thigh.

HEADACHE

Give urgent attention to the patient with headache and any of:

- Decreased consciousness →12
- BP ≥ 180/130 and not pregnant →114
- Pregnant or 1 week postpartum, and BP ≥ 140/90 →138
- Sudden weakness/numbness of face/arm/leg or speech problem →118
- New vision problems or eye pain →27
- Sudden severe headache or dizziness
- Headache that is getting worse and more frequent
- Headache that wakes patient or is worse in the morning
- Neck stiffness, drowsy/confused or purple/red rash: **meningitis** likely
- Persistent nausea/vomiting
- Persistent headache since starting ART
- Following a first seizure
- Recent head injury
- Unequal pupils

Manage and refer urgently:

- If temperature ≥ 38°C or **meningitis** likely: give ceftriaxone 2g IV[1]/IM.
- If in a malaria area in past 3 months and malaria test[2] positive: give artesunate 2.4mg/kg IM. If artesunate unavailable, give quinine as slow IV infusion over 4 hours: dilute quinine 20mg/kg in 5% dextrose 5-10mL/kg. If IV not possible, give IM[3] diluted in sodium chloride 0.9%.

Approach to the patient with headache not needing urgent attention

Has patient had recent common cold and now any of: thick nasal/postnasal discharge, pain when pushing on forehead/cheeks, headache worse on bending forward?

Yes

Sinusitis likely

- Give paracetamol 1g 6 hourly as needed for up to 5 days.
- Give sodium chloride 0.9% nose drops as needed.
- Give oxymetazoline 0.05% 2 drops in each nostril 8 hourly for up to 5 days. Advise against overuse which may worsen blocked nose.
- If symptoms ≥ 10 days, fever ≥ 38°C, purulent nasal discharge, facial pain or symptoms worsen after initial improvement, give amoxicillin 500mg 8 hourly for 5 days. If severe penicillin allergy[4], give instead azithromycin 500mg daily for 3 days.
- If recurrent, test for HIV ⮌95.
- If tooth infection or swelling over sinus/around eye, refer same day.

No: does patient have fever and body pain?

Yes

- If in a malaria area in past 3 months, arrange same day malaria test[2]. If positive, **malaria** likely →20.
- If patient has a tick bite (small dark brown/black scab) or tick present, **tick bite fever** likely →20.

Influenza likely

- Advise on cough/sneeze hygiene and to wash hands regularly.
- Give paracetamol 1g 6 hourly as needed for up to 5 days.
- Explain antibiotics are not needed.
- Advise to return if symptoms persist > 7 days, or if fever returns and any of:
  - Cough →34
  - Ear pain →29
  - Pain over cheeks, **sinusitis** likely (see adjacent)
- Advise yearly influenza vaccination if > 65 years, pregnant, HIV, chronic heart/lung disease.

No: does patient get recurrent headaches that are throbbing, disabling with nausea or light/noise sensitivity, that resolve completely within 72 hours?

Yes: **migraine** likely

- Give immediately and then as needed paracetamol 1g 6 hourly or ibuprofen[5] 400mg 8 hourly with food for up to 5 days.
- If nausea, also give metoclopramide 10mg 8 hourly up to 3 doses.
- Advise to recognise and treat migraine early, rest in dark, quiet room.
- Advise regular meals, keep hydrated, regular exercise, good sleep hygiene.
- Keep a headache diary to identify triggers like lack of sleep, hunger, stress, caffeine, chocolate, cheese. Avoid if possible.
- Avoid oestrogen-containing contraceptives ⮌136.
- If ≥ 2 attacks/month, refer/discuss for medication to prevent migraines.

No

- Check BP. If ≥ 140/90 ⮌114.
- Ask about type and site of pain:

Tightness around head or generalised pressure-like pain

Tension headache likely

- Give paracetamol 1g 6 hourly as needed for up to 5 days.
- Assess for stress and anxiety ⮌75.
- Advise regular exercise.

Constant aching pain, tender neck muscles

Muscular neck pain likely →55.

Patient > 50 years, pain over temples

Giant cell arteritis likely

- Check CRP.
- Give paracetamol 1g 6 hourly for up to 5 days.
- Review next day: if CRP > 5, discuss with specialist same day.

Advise to only use analgesia when necessary. Overuse may cause headaches: if using analgesia > 2 days/week for ≥ 3 months, advise to reduce amount used. Headache should improve within 2 months.

If diagnosis uncertain or poor response to treatment, discuss/refer.

[1]Do not mix Ringer's lactate and IV ceftriaxone. Flush IV line with sodium chloride 0.9% before and after IV ceftriaxone. [2]Test for malaria with rapid diagnostic test if available, and parasite slide microscopy. [3]To give IM quinine: first calculate volume of sodium chloride 0.9% in mL: weight x 20 ÷ 100. Then add this volume of sodium chloride 0.9% to quinine 20mg/kg and inject half the volume into each thigh. [4]History of anaphylaxis, urticaria or angioedema. [5]Avoid ibuprofen if peptic ulcer, asthma, hypertension, heart failure, kidney disease.

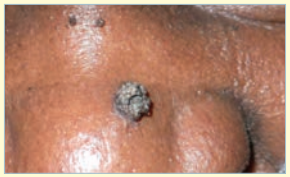
SKIN LUMP/S

Refer same week the patient with a mole that:

- Is irregular in shape or colour
- Changed in size, shape or colour
- Differs from surrounding moles
- Is > 6mm wide
- Bleeds easily
- Itches

If painful, firm, red, warm lump which softens in the centre to discharge pus, **boil**/**abscess** likely →59.

Round, raised papules with rough surfaces



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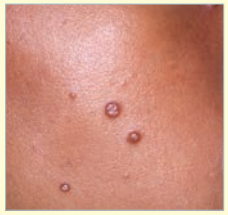
Warts likely

- Usually on hands, knees or elbows but can occur anywhere.
- Plantar warts on the soles of the feet are thick and hard with black dot/s.

- Reassure that warts often resolve spontaneously.
- If treatment desired:
  - Soften wart/s by soaking in warm water for 5 minutes at night and scrub gently with clean nail file.
  - After drying well, apply salicylic acid 15-30% to wart and cover with plaster.
  - Repeat every night and continue for a week after wart has come off.
- If extensive warts, refer.

Small, skin-coloured pearly bumps with central dimples



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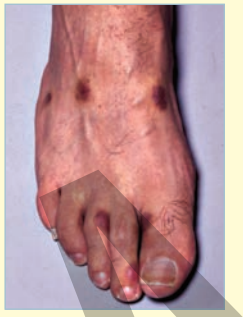
Molluscum contagiosum likely

- Test for HIV ↩95.
- Reassure that lesions often resolve spontaneously after several years or with ART.
- If treatment desired: open molluscum with sterile needle and apply tincture of iodine BP to center of each lesion.
- Refer if:
  - Extensive
  - Lesions on eyelid
  - Intolerable and not responding to treatment

Painless, purple/brown lumps on skin



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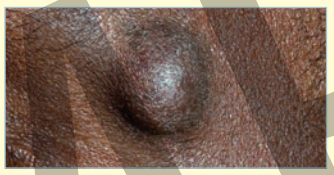
Kaposi's sarcoma likely

- Lesions vary from isolated lumps to large ulcerating tumours.
- May also appear in mouth and on genitals.

- Test for HIV ↩95.
- Refer for biopsy to confirm diagnosis and for further management.

Smooth, well defined lump beneath skin

Round, firm lump. May have central hole and discharge white substance.



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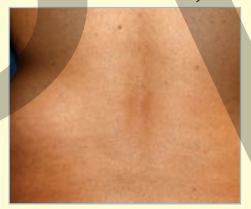
Epidermoid cyst likely
Usually found on face and trunk, uncommon on limbs.

- If not infected, reassure there is no need to treat.
- If infected (skin red, warm, painful):
  - If fluctuant, arrange incision and drainage. If on face, refer instead.
  - Give flucloxacillin 500mg 6 hourly *or* cephalexin 500mg 6 hourly for 5 days.
  - If severe penicillin allergy[1], give instead azithromycin 500mg daily for 3 days.
- If intolerable or recurrent infections, arrange for excision once infection resolved.

Soft, doughy lump which is painless and moves easily.



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Lipoma likely
Usually found on trunk or upper limb.

- Reassure lump will not become cancer and usually does not need removal.
- Refer if:
  - > 3cm
  - Causing pain or discomfort
  - Getting bigger
  - Firm or deep beneath skin
  - New lump that persists > 1 month
  - Intolerable

Red papules, pustules, nodules and blackheads, usually on face.
May involve chest, back and upper arms

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Acne likely

- Advise to wash skin with mild soap twice a day and to avoid picking, squeezing and scratching.
- Advise to avoid oily cosmetics and hair products.
- If blackheads only:
  - Apply tretinoin 0.05% cream sparingly at night until better, for at least 6 weeks. Avoid if pregnant or breastfeeding and limit sun exposure. Acne may worsen before improving.
- If red and swollen areas:
  - Apply instead benzoyl peroxide 5% gel to affected areas in morning. Wash off in evening. If no better and tolerating gel, apply twice daily and give doxycycline[2] 100mg daily for 3 months.
- If woman needing contraception, advise combined oral contraceptive ↩136.
- Advise that response may take several weeks to months.
- If severe or poor response, refer.

If diagnosis uncertain, refer.

[1]History of angioedema, anaphylaxis or urticaria. [2]Doxycycline may interfere with oral contraceptive, advise patient to use condoms as well. Avoid if pregnant or breastfeeding.

HIV: DIAGNOSIS

- Encourage patient and his/her partner/s to test for HIV.
- If HIV self-screening test done, confirm results with routine tests below.

Obtain informed consent

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

Test

Do first rapid HIV test on fingerprick blood.

Positive

Do a confirmatory[1] rapid HIV test on fingerprick blood.

Positive

Repeat both first and confirmatory[1] rapid HIV tests above.

Both tests positive

Patient has HIV.

- Give routine HIV care at this visit ↩96.
- Encourage HIV testing for partner/s and children. Use HIV index testing forms, if available.

One positive and one negative[2]

- Send blood for an HIV ELISA test.
- Advise patient to return for result within 7 days.

ELISA positive

Laboratory will do repeat ELISA test on the same specimen.

2nd ELISA positive

Patient has HIV.

- Give routine HIV care at this visit ↩96.
- Encourage HIV testing for partner/s and children. Use HIV index testing forms, if available.

2nd ELISA negative

ELISA results inconclusive

- HIV cannot be confirmed or excluded.
- Advise patient to repeat rapid HIV tests in 6 weeks.

Both tests negative

ELISA negative

HIV test result negative

Was patient at risk of HIV infection in past 6 weeks (new or multiple sexual partners and/or unprotected sex)?

Yes

Repeat HIV test after 6 weeks.

No

- Patient does not have HIV.
- Encourage patient to remain negative and advise when to re-test:
  - If sexually active: 6-12 monthly
  - If pregnant: at every antenatal visit. If breastfeeding, retest 3 monthly.
- Offer referral for male circumcision to diminish risk of HIV infection.

Negative

Support

- Ensure patient understands test result and knows where and when to access further care.
- Encourage patient to follow safe sex practices. Demonstrate and give male/female condoms.

[1]Use a different rapid test for the confirmatory test. [2]If pregnant in labour, manage baby as high-risk until mother's status confirmed.

CARDIOVASCULAR DISEASE (CVD) RISK: ROUTINE CARE

Assess the patient with CVD risk

Assess	When to assess	Note
Symptoms	Every visit	Ask about chest pain ⮌33, difficulty breathing ⮌34, leg pain ⮌56 and symptoms of stroke/TIA ⮌118.
Modifiable CVD risk factors	Every visit	Ask about smoking, diet, alcohol/drug misuse, stress, exercise and activities of daily living. Manage as below.
BMI	At diagnosis, yearly or 3 monthly if trying to lose weight	BMI = weight (kg) ÷ height (m) ÷ height (m). Aim for < 25.
Waist circumference	At diagnosis, yearly or 3 monthly if trying to lose weight	Measure while standing, on breathing out, midway between lowest rib and top of iliac crest. Aim for < 80cm (woman) and < 94cm (man).
BP	Every visit	If known hypertension ⮌115. If not, check BP: if ≥ 140/90 ⮌114.
CVD risk (if no known CVD[1])	At diagnosis, then depending on risk	If < 10% with CVD risk factors or 10-20%, reassess after 1 year. If > 20%, reassess after 6 months.
Diabetes risk	At diagnosis, then depending on result	If known diabetes ⮌112. If not known with diabetes, check glucose ⮌13.
Random total cholesterol	If early onset[2] CVD in patient/family: at diagnosis	• If early onset[2] CVD in patient or family history of early onset[2] CVD or familial hyperlipidaemia, check cholesterol. • If cholesterol > 7.5, check TSH and refer to doctor.

Health for All ⮌92

Advise the patient with CVD risk

- Discuss CVD risk: explore the patient's understanding of CVD risk and the need for a change in lifestyle. Support the patient to change ⮌154.
- Invite patient to address 1 modifiable CVD risk factor at a time: help plan how to fit the lifestyle change into his/her day. Explore what might hinder or support this. Together set reasonable target/s for next visit.

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

Health for All ⮌27

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.

Health for All ⮌19

Smoking
If patient smokes, encourage to stop ⮌123.

Health for All ⮌33

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

Health for All ⮌23

Screen for alcohol/drug misuse
- Limit alcohol intake to ≤ 2 drinks[1]/day and avoid alcohol on at least 2 days of the week.
- In the past year, has patient: 1) drunk ≥ 4 drinks[3]/session, 2) used illegal drugs or 3) misused prescription or over-the-counter medications? If yes to any ⮌124.

Health for All ⮌37 and 41

Stress
Assess and manage stress ⮌75.

Health for All ⮌100

- Identify support to maintain lifestyle change: health education officer or dietician/nutritionist, friend, partner or relative to attend clinic visits, a healthy lifestyle group, helpline ⮌155.
- 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 ⮌153.

Treat the client with CVD risk

- If known CVD[1]: give simvastatin[4] 40mg daily. If on amlodipine, give instead simvastatin[4] 10mg daily. Avoid if pregnant or liver disease.
- If no known CVD: if CVD risk > 20%, give simvastatin[4] 10mg daily. Avoid if pregnant or liver disease.

Review the patient with CVD risk ≤ 20% yearly. Review the patient with CVD risk >20% 6 monthly. If trying to lose weight, review 3 monthly.

[1]Cardiovascular disease (CVD) includes ischaemic heart disease, peripheral vascular disease and stroke/TIA. [2]CVD that develops in a woman < 55 years or in a man < 65 years. [3]One drink is 1 tot of spirits, or 1 small glass (125mL) of wine or 1 can/bottle (330mL) of beer. [4]If on lopinavir/ritonavir or atazanavir/ritonavir, avoid simvastatin, give instead atorvastatin 10mg daily.

EPILEPSY: ROUTINE CARE

- If fitting now →15. If not known with epilepsy and has had a recent fit →15 to assess further.
- A doctor must confirm the diagnosis of epilepsy and start long term anticonvulsant medication.

Assess the patient with epilepsy

Assess	When to assess	Note
Symptoms	Every visit	Ask about fit frequency and review fit diary. Manage other symptoms as on symptom pages.
Adherence	Every visit	Ask if takes treatment every day. If not, explore reasons, support adherence and refer to community health worker.
Side effects	Every visit	Ask about side effects of treatment ⮌132. If side effects intolerable, switch anticonvulsant.
Other medication	Every visit	If patient on any other medication (especially TB treatment, ART or contraceptive), consider possible interactions: check SAMF or discuss with MIC hotline ⮌155.
Family planning	Every visit	• Assess patient's contraceptive needs ⮌136. • If pregnant or planning pregnancy: discuss/refer to specialist. Give routine antenatal care ⮌138 and give folic acid 5mg daily. - Avoid sodium valproate in pregnancy as may cause birth abnormalities. Explain this risk[2] to patient. If on sodium valproate, avoid stopping suddenly as fits may recur, continue sodium valproate and advise reliable contraception[3]. If pregnant, refer to high risk antenatal clinic within 2 weeks.
Depression	Every visit	In the past month, has patient: 1) felt down, depressed, hopeless or 2) felt little interest or pleasure in doing things? If yes to either ⮌125.
Alcohol/drug use	Every visit	In the past year, has patient: 1) drunk ≥ 4 drinks[1]/session, 2) used illegal drugs or 3) misused prescription or over-the-counter medications? If yes to any ⮌124.

Advise the patient with epilepsy

Health for All ⮌124

- If newly diagnosed, refer to community health worker and Epilepsy South Africa for support ⮌155. Help to get a MedicAlert® bracelet ⮌155.
- Advise to keep a fit diary to record frequency and duration of fits, triggers and changes in medication. Educate about the need for adherence and to continue treatment even if no fits.
- Help identify and avoid triggers like lack of sleep, alcohol/drug use, dehydration, flashing lights and video games.
- Help reduce chance of injury: advise to avoid dangers like heights, fires, swimming alone, walking/cycling on busy roads, operating machinery. Advise to avoid driving until fit free for 1 year.
- Advise patient there are many medications that may interact with anticonvulsants (see table ⮌132) and to discuss with doctor before starting any new medication.

Treat the patient with epilepsy

- **If not on treatment:**
  - Choose an anticonvulsant based on if patient is a man or woman, child-bearing potential and other medication ⮌132.
  - Start a single anticonvulsant at low dose and increase until fits stop or side effects intolerable.
- **If already on treatment:**
  - If woman of child-bearing potential on sodium valproate, discuss risks[2] and explain the need to switch anticonvulsant.
  - If no further fits, continue same dose.
  - If still having fits:
    - If poor adherence: support adherence, continue same dose and review patient in 2 weeks.
    - If medication interactions: adjust medications as needed and review patient in 2 weeks.
    - If none of above: increase anticonvulsant dose ⮌132. If already on maximum dose for 4 weeks, switch anticonvulsant once ⮌132. If already on second anticonvulsant, avoid switching and refer instead.
- **If switching medication:** add new anticonvulsant and increase as needed. Continue old anticonvulsant for first 2 weeks, then slowly reduce dose over 6-8 weeks, until old anticonvulsant stopped.

Continue to treat the patient with epilepsy →132.

[1]One drink is 1 tot of spirits, or 1 small glass (125mL) of wine or 1 can/bottle (330mL) of beer. [2]If woman on sodium valproate becomes pregnant, risks to baby include problems with development of spine, brain and other learning problems. [3]Reliable contraception includes copper intrauterine contraceptive device (IUCD), subdermal implant, injectable or sterilisation.

Medication	Dose	Notes	Side effects
Lamotrigine	• **Starting dose:** 25mg daily for 2 weeks, then 50mg daily for 2 weeks. Then increase by 50mg every 2 weeks until controlled (usually 50mg 12 hourly). • **Usual maintenance dose:** 50-100mg 12 hourly (or 100-200mg daily) • **Maximum dose:** 250mg 12 hourly **If switching from sodium valproate:** • Continue sodium valproate while starting lamotrigine. • Start lamotrigine on alternate days and increase more slowly. • Once on full dose of lamotrigine, slowly reduce sodium valproate dose over 4-6 weeks until stopped.	• Preferred anticonvulsant if on ART. • No significant interactions with dolutegravir. • If on lopinavir/ritonavir: doctor to double the dose of lamotrigine. • May also interact with paracetamol, rifampicin, other anticonvulsants, oral contraceptive: check SAMF or discuss with MIC ⮌155. • If known liver or kidney disease, discuss with specialist. • If lamotrigine not suitable or not tolerated, refer.	• **Urgent:** rash ⮌64 • **Self-limiting:** nausea, vomiting, blurred or double vision, dizziness, drowsiness, insomnia, fatigue
Carbamazepine	• **Starting dose:** 100mg 12 hourly for 1 week, then 200mg 12 hourly for 1 week. If needed, increase every week by 100-200mg/day. • **Usual maintenance dose:** 300-600mg 12 hourly • **Maximum dose:** 600mg 12 hourly	• Avoid if on/needing ART. • May interact with dolutegravir, isoniazid, rifampicin, warfarin, fluoxetine, amitriptyline, theophylline, other anticonvulsants, oral/subdermal contraceptive: check SAMF or discuss with MIC hotline ⮌155.	• **Urgent:** rash ⮌64 • **Self-limiting:** drowsiness, dry mouth, dizziness, nausea
Phenytoin	• **Starting dose:** 200mg at night (this is equivalent to 4.5–5mg/kg lean body mass daily). If needed, increase up to 300mg daily (or 150mg 12 hourly). • **Maximum dose:** 300mg daily	• Avoid if a woman or on/needing ART. • May interact with isoniazid, rifampicin, warfarin, fluoxetine, fluconazole, theophylline, folate, other anticonvulsants, oral/subdermal contraceptive: check SAMF or discuss with MIC hotline ⮌155. • If on > 300mg daily, monitor drug levels regularly.	• **Urgent:** - Rash ⮌64 - If unsteady on feet, blurred/double vision or slurring, doctor to check phenytoin level for toxicity. If doctor not available, refer same day. • **Self-limiting:** drowsiness • **Other:** large gums; facial hair/course features in women: switch medication.

Review the patient with epilepsy

- If no further fits, review 6 monthly.
- If still fitting, doctor to review monthly until fits stop.
- Refer if any of:
  - Newly diagnosed for CT scan
  - Seizures other than generalised tonic-clonic seizures (e.g. absence and focal seizures)
  - Fits increasing in frequency or changing in type
  - No fits for ≥ 2 years, for possible treatment withdrawal
  - Patient has switched anticonvulsant once and is adherent but still fitting after 4 weeks on maximum dose of second anticonvulsant.