PACK Adult

Practical Approach to Care Kit

Primary Care Guideline

PACK
Practical Approach to Care Kit

2015

ADULT

Contents: symptoms

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

Contents: chronic conditions

Diagnose and give routine care to the patient with a chronic condition

Weight loss

❶ Give urgent attention to the patient with weight loss on ART:

- Weight loss in the patient on ART associated with one or more of: nausea, vomiting, abdominal pain, difficulty breathing or tiredness: **lactic acidosis** likely.

Management:

- Patient needs same day lactate measurement →62.

❷ • Check that the patient who says s/he has unintentionally lost weight has indeed done so. Compare current weight with previous records and ask if clothes still fit.
❸ • Investigate unintentional weight loss of ≥ 5% of body weight in last 6 months..

First check for TB, HIV *and* diabetes

Exclude TB

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

❺ Test for HIV

- If status unknown, test for HIV ⮌60.
- The HIV patient with weight loss ≥ 10% and diarrhoea or fever > 1 month needs ART →61.

❻ Check for diabetes

- Check glucose if thirst, urinary frequency.
- To interpret result ⮌70.

Ask about symptoms of common cancers:

Abnormal vaginal discharge/bleeding	Breast lump/s or nipple discharge	Urinary symptoms in man	Change in bowel habit	Cough ≥ 2 weeks, blood-stained sputum, long smoking history
❼ Consider **cervical cancer**. Do a speculum examination →28.	❽ Consider **breast cancer**. Examine breasts/axillae for lumps →19.	❾ Consider **prostate cancer**. Hard and nodular prostate on rectal examination →32.	❿ Consider **bowel cancer**. Mass on abdominal or rectal examination, occult blood positive.	⓫ Consider **lung cancer**. Do chest x-ray.

If food intake inadequate, look for a cause:

Nausea and/or vomiting	⓬ Loss of appetite	⓭ Ask, 'Are you stressed?	No money for food	⓮ The patient has a life-limiting illness and you would not be surprised if s/he died within the next 2 years.	⓯ Sore mouth or difficulty swallowing
→21.	• Eat small frequent meals. • Advise patient to eat nutrient dense foods (soya, meat, fish, nuts and seeds, beans, lentils, potatoes, rice, barley, wheat, maize).	If yes, →52.	If available, refer to social worker.	Give palliative care →100.	**Oral/oesophageal thrush** likely →16

⓰ • Check thyroid function (TSH) if none of the above and patient has any of pulse ≥ 100, tremor, irritability, dislike of hot weather or thyroid enlargement.
⓱ • If yes to ≥ 1, ⮌81: 1) During the past month, have you felt down, depressed, hopeless? 2) During the past month, have you felt little interest or pleasure in doing things?
⓲ • If ≥ 1 of: drinks alcohol every day, > 14 drinks[1]/week, ≥ 5 drinks[1]/session, loses control when drinking, uses illegal drugs or misuses prescription drugs, ⮌83.

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

[1]One drink is 1 tot of spirits, or 1 small glass (125mL) of wine or 1 can/bottle (330mL) of beer.

Tuberculosis (TB): diagnosis

❶ Check for TB in the patient with any of the following: cough ≥ 2 weeks, weight loss, drenching night sweats, fever ≥ 2 weeks, chest pain on breathing, blood-stained sputum.

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

- Respiratory rate of > 30
- Breathless at rest or while talking
- Confusion or agitation
- Coughing up ≥ 1 tablespoon of fresh blood

Management

❸ • Give single dose of ceftriaxone[1] 1g IV/IM. If unavailable, discuss with doctor.
❹ • Give oxygen (40% face-mask oxygen or at 4L /min via nasal prongs).
❺ • Take 1 spot sputum specimen for Xpert MTB/RIF and arrange follow-up.
• Refer same day to hospital.

1st VISIT

Start the workup to diagnose TB

❻ • If status unknown, test for HIV ⮌60.
❼ • Send 1 spot sputum specimen for Xpert MTB/RIF, and ask patient to return for result within 2 days.
❽ • If patient has chest pain on breathing or coughs blood without sputum, also arrange chest x-ray and doctor visit (see below).

2nd VISIT

Xpert negative (MTB not detected)

❾ • If fever or coughing sputum, give amoxicillin[3] 1g 8 hourly for 5 days and
• Manage further according to HIV status. If status unknown, test for HIV ⮌60.

HIV positive

HIV negative
• TB is unlikely

❿ Advise patient to return if no better or symptoms worsen.

⓫ Send 2nd (ideally early morning) sputum specimen for Xpert MTB/RIF.

Xpert positive (MTB detected)

Rifampicin resistant

⓮ Send a 2nd sputum specimen for smear, culture and DST[2].

Diagnose Drug-Resistant TB
Refer for DR-TB treatment.

Rifampicin sensitive

⓯ Diagnose Drug-Sensitive TB
• Give routine DS-TB care and start DS-TB treatment same day →57.
• Register as a bacteriologically confirmed TB case.

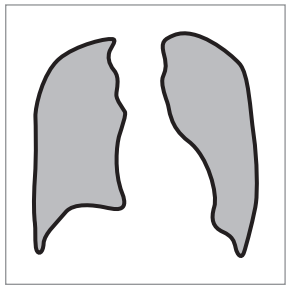
Xpert negative (MTB not detected)

⓬ • Send for chest-x-ray and doctor visit.
⓭ • If HIV positive, also send sputum specimen for culture and DST[2].

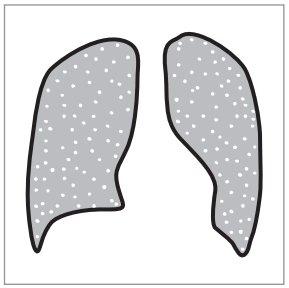
[1]If severe penicillin allergy (angio-oedema, anaphylactic shock or bronchospasm), discuss with doctor. [2]Drug susceptibility testing. [3]If penicillin allergic give erythromycin 500mg 6 hourly for 5 days instead.

3rd VISIT: DOCTOR

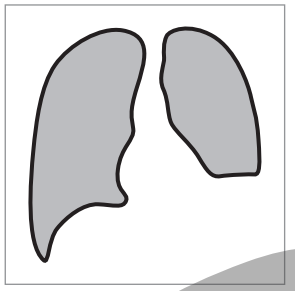
❶ Doctor to review chest x-ray.



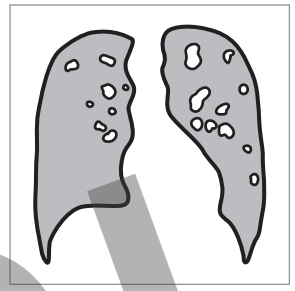
Intrathoracic lymphadenopathy



Miliary TB



Pleural effusion
Confirm with tap.



Any lung opacification/s in HIV patient

Pericardial effusion
Confirm on ultrasound.

Doctor decision about chest x-ray

Chest x-ray similar to x-ray above

❷ **Diagnose TB on chest x-ray.**
Give routine TB care and start TB treatment same day →57.

Chest x-ray normal *or* different to above *or* unsure

❸ • Look for extra-pulmonary TB. If diagnosed, give routine TB care ⮌57:
❹ - If patient has abdominal pain, swelling or diarrhoea refer for further investigation.
❺ - If patient has headache, refer for lumbar puncture.
❻ - If patient has lymphnode ≥ 2cm, aspirate for TB and cytology ⮌7.
• Look for other cause of cough, especially for PCP in the HIV patient ⮌18.

Review culture result if sent.

Culture positive (MTB confirmed)

Drug sensitive

Diagnose DS-TB
- Doctor to review patient if chest x-ray normal.
- Give routine DS-TB care and start DS-TB treatment same day →57.

Drug resistant

Diagnose DR-TB
Refer for DR-TB treatment.

Culture negative or pending

- If symptoms persist, refer for specialist review.
- If culture negative and symptoms resolve, advise to return if symptoms recur.

Drug-sensitive (DS) TB: routine care

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

Assess	When to assess	Note
Symptoms	Each visit	❶ • If respiratory rate > 30, breathless at rest or while talking or confused/agitated, give urgent attention ⮌55. • Expect gradual improvement on TB treatment. **Refer to doctor if symptoms worsen or do not improve.**
Contacts	❷ At diagnosis and if symptomatic	• Screen symptomatic household and work contacts for TB. ❸ • Exclude TB. If asymptomatic contact is < 5 years, give 6 months IPT. If HIV positive ⮌62.
Family planning	At diagnosis and each visit	Assess contraceptive needs to avoid pregnancy during treatment ⮌91. ❹ Avoid oral contraceptive and use subdermal implant[1] with caution while on TB treatment.
Adherence	❺ Each visit	❻ Check adherence on the TB card. Manage the patient who interrupts TB treatment ⮌59.
Side effects	Each visit	Ask about side effects on treatment ⮌58.
❼ Risky alcohol/drug use	At diagnosis; if adherence poor	If ≥ 1 of: drinks alcohol every day, > 14 drinks[2]/week, ≥ 5 drinks[2]/session, loses control when drinking, uses illegal or misuses prescription drugs ⮌83.
❽ Weight	At diagnosis and each visit	• Expect weight gain on treatment and adjust TB treatment dose ⮌58. **Refer same week to doctor if losing weight.** • BMI is weight (kg) ÷ height (m) ÷ height (m). If < 18.5, refer for nutritional support.
❾ Chest x-ray	Not routinely, only if needed	Repeat chest x-ray at 2 months if Xpert negative and diagnosed on x-ray, patient deteriorates or coughs blood.
Culture and DST[3]	If sent during diagnostic workup	• If culture confirms MTB (Mycobacterium tuberculosis) check DST: - If drug sensitive, continue treatment. - If drug resistant, diagnose DR-TB and refer for DR-TB treatment. • If culture does not confirm MTB, discuss with doctor.
❿ Send 1 early morning sputum specimen for smear	Week 8, end of month 5 and month 6	• If smear negative at 8 weeks, change to continuation phase. • If smear positive at 8 weeks, manage as on 8 week smear positive algorithm ⮌59.
Treatment outcome	6 months	⓫ • If month 5 and month 6 sputa were smear negative, stop TB treatment and register as **cured**. ⓬ • If month 5 or month 6 sputum was smear positive, repeat sputum smear. - If repeat smear positive, register as **treatment failure** and refer for doctor review. - If repeat smear negative, discuss with TB doctor. ⓭ • If unable to produce sputum, register as **treatment completed**.
HIV status	If status unknown	⓮ Test for HIV ⮌60. If HIV positive, give routine HIV care and start ART once tolerating TB treatment and ready for ART ⮌61: ⓯ • If CD4 ≤ 50 cells/mm³ or stage 4 (other than TB meningitis), start ART at 2 weeks of TB treatment. ⓰ If TB meningitis, start ART between 2-8 weeks of TB treatment. ⓱ • If CD4 > 50 cells/mm³ and not stage 4, start ART between 2-8 weeks of TB treatment.
⓲ Glucose	At diagnosis	If able, check fasting glucose after an 8-hour overnight fast. If not, check random glucose. Interpret result ⮌70.

Advise and treat the patient with TB ⮌58.

[1]If patient already has subdermal implant, advise to use condoms consistently and offer switch to IUD. [2]One drink is 1 tot of spirits, or 1 small glass (125mL) of wine or 1 can/bottle (330mL) of beer. [3]Drug susceptibility testing.

Advise the patient with TB

❶ • Arrange TB/HIV education and refer for community or workplace adherence support.
• Support the patient with poor adherence. Educate on adherence and the dangers of resistance and arrange adherence support. If treatment interrupted ⮌59.
❷ • Educate patient about TB treatment side effects below and to report these promptly if they occur.
❸ • Advise patient s/he can return to work after 2 weeks.
• Advise the patient abusing alcohol and/or illegal or prescription drugs to stop. Alcohol/drug abuse interferes with recovery and adherence ⮌83. Urge the patient who smokes to quit.

Treat the patient with TB

❹ • Treat patient with TB 7 days a week for 6 months:
❺ - Give intensive phase RHZE for 8 weeks.
❻ - Change to continuation phase RH at 8 weeks to complete 6 months of TB treatment. If sputum smear positive at 8 weeks, manage further ⮌59.
❼ • If TB meningitis, TB spine or tuberculous pus collection, treat for at least 9 months, guided by a specialist.
• Dose TB treatment according to weight and adjust as weight increases. **Refer to doctor if losing weight**.
❽ • Give pyridoxine 25mg daily until treatment completed.

	Intensive phase: 8 weeks	Continuation phase: 4 months
Weight	RHZE (150/75/400/275)	RH
30-37kg	2 tablets	2 tablets (150/75)
38-54kg	3 tablets	3 tablets (150/75)
55-70kg	4 tablets	2 tablets (300/150)
≥ 71kg	5 tablets	2 tablets (300/150)

R - rifampicin **H** - isoniazid **Z** - pyrazinamide **E** - ethambutol

Look for and manage DS-TB treatment side effects

❾ Jaundice and vomiting	Most TB medications	Stop all medications and refer to hospital same day.
❿ Skin rash/itch	Most TB medications	Assess and manage ⮌41.
⓫ Loss of colour vision	Ethambutol	Refer.

⓬ Nausea/poor appetite	Rifampicin	Take treatment at night. Give metoclopramide 10mg 8 hourly up to 5 days.
⓭ Joint pain	Pyrazinamide	Give ibuprofen 400mg 8 hourly up to 5 days.
⓮ Orange urine	Rifampicin	Reassure.
⓯ Burning feet	Isoniazid	Give high dose pyridoxine ⮌38.

Manage the TB/HIV patient's HIV

⓰ • Give co-trimoxazole 160/800mg (2 tablets) and routine HIV care throughout TB treatment ⮌61.
• If HIV patient not already on ART, start ART once tolerating TB treatment and ready for ART:
⓱ - If CD4 ≤ 50cells/mm³ or stage 4, start ART at 2 weeks of TB treatment. ⓲ If patient has TB meningitis, start ART between 2-8 weeks of TB treatment.
⓳ - If CD4 > 50cells/mm³ and not stage 4, start ART between 2-8 weeks of TB treatment.
⓴ • If patient on lopinavir/ritonavir, doctor to increase LPV/r and monitor for liver problem:
- Increase LPV/r dose to 3 tablets 12 hourly and check ALT.
- After 1 week increase to 4 tablets 12 hourly if ALT < 50U/L. Recheck ALT and then monthly thereafter:
• Refer or discuss same day if ALT ≥ 200U/L or if patient has nausea, vomiting, abdominal pain or jaundice. Experienced TB doctor to consider switch to rifabutin-based TB regimen.
• If patient is well and ALT 50-199U/L, repeat ALT after 1 week.
- On completion of TB treatment, stop ALT checks and reduce LPV/r dose to 2 tablets 12 hourly.
㉑ • If patient on atazanavir/ritonavir, experienced TB doctor to treat TB with rifabutin-based TB regimen.

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

Manage the patient with a positive 8 week sputum smear:

❶• Look for explanation for result: ask about alcohol/drug abuse ↩83, stress ↩52 and side effects. Give increased adherence support and educate the patient about the risks of poor adherence ↩58.
❷• Send 1 sputum specimen for rapid DST[1]. Indicate on the request form that the patient's 8 week sputum is smear positive. Review results in 5 days:

Drug sensitive or rapid DST not available

• Change to continuation phase.
❸• At 12 weeks, send 1 sputum specimen for smear.

Smear positive

❹• Send 1 sputum specimen for culture and DST[1].
• Refer to TB doctor.

Smear negative
Continue DS-TB treatment continuation phase.

❺At the end of month 5 and month 6, send 1 sputum specimen for smear.

Smear positive
Repeat sputum smear.

❼Positive
Register as **treatment failure**.

Discuss with TB doctor.

Negative

❻Smear negative
• Stop treatment at 6 months.
• Register as **cured**.

Drug resistant

Diagnose DR-TB
Refer for DR-TB treatment.

Manage the patient who interrupts TB treatment

❽• Trace the patient and look for explanation for treatment interruption. Ask about alcohol/drug abuse ↩83, stress ↩52 and side effects.
• Give increased adherence support and educate the patient about the risks of poor adherence ↩58.
❾• Manage treatment interruption according to duration of interruption:

❿Interrupted for < 1 month

• Continue TB treatment.
• Patient to make up missed doses.

⓫ Interrupted for 1-2 months

• Send sputum for Xpert MTB/RIF.
• Continue treatment while awaiting results.

⓬Sensitive

• Continue TB treatment.
• Patient to make up missed doses.

Resistant

Refer for DR-TB treatment

Interrupted for ≥ 2 months

⓭• Register patient as **lost to follow up**.
⓮• Send sputum for smear, culture and DST[1].
• Start TB treatment only if patient is unwell, otherwise wait for results.

⓯Positive smear or culture

• Restart full course of DS-TB treatment.
• Review DST result.

Sensitive

Complete full course of DS-TB treatment.

Resistant

Refer for DR-TB treatment.

Negative smear *and* culture and patient well

Doctor to decide if to restart treatment or to give no more TB treatment and monitor monthly.

[1]Drug susceptibility testing.

Diabetes: diagnosis

Decide which glucose test to do:

1 • If patient is well and able to return for screening, check *fasting/plasma* glucose after an 8-hour overnight fast. If patient is pregnant and well, interpret result 2 →95.
• Only check 3 finger prick 4 *random* glucose if patient is unwell *or* has symptoms of diabetes (thirst, urinary frequency, weight loss) *or* is unable to return easily for fasting glucose.

Random glucose < 6.1mmol/L

5 Check if patient has risk factors:
BMI ≥ 25 *and* 1 or more of:
- Hypertension
- Cardiovascular disease
- Physical inactivity
- Family history diabetes
- High risk ancestry
- Previous gestational diabetes or big baby
- Previous impaired glucose tolerance or impaired fasting glucose

No → 6 Recheck glucose 3-5 yearly once over 45 years.

Yes → 7 Check fasting plasma glucose after an 8-hour fast.

- **< 6.1mmol/L** → 8 • Assess and manage CVD risk ⮌68. 9 • Repeat fasting glucose after 3 years, or 10 if CVD or hypertension, 1 year.
- **6.1-6.9mmol/L** → 12 • Patient has impaired fasting glucose • Do an oral glucose tolerance test[1]
  - **< 7.8mmol/L** → 13 • Assess and manage CVD risk ⮌68. 14 • Repeat fasting glucose after 1 year.
  - **7.8-11mmol/L** Impaired glucose tolerance → 13 • Assess and manage CVD risk ⮌68. 14 • Repeat fasting glucose after 1 year.
  - **15 > 11mmol/L** → 16 Confirm with another test: fasting glucose or if available, HbA_{1c}.
    - Fasting glucose ≤ 6.9mmol/L → 13 • Assess and manage CVD risk ⮌68. 14 • Repeat fasting glucose after 1 year.
    - HbA_{1c} < 6.5% → Discuss with specialist.
    - 18 Fasting glucose > 6.9mmol/L or HbA_{1c} ≥ 6.5% → **Diagnose diabetes** 19 • Refer if < 35 years as type 1 diabetes more likely. • If ≥ 35 years, give routine diabetes care →71.
- **> 6.9mmol/L** → 17 → 16 Confirm with another test: fasting glucose or if available, HbA_{1c}.

Random glucose 6.1-11mmol/L

11 → Check fasting plasma glucose after an 8-hour fast.

Random glucose > 11mmol/L

20 **Check if patient needs urgent attention:**
- Nausea and/or vomiting
- Abdominal pain
- Rapid deep breathing
- Drowsiness
- Confusion
- Temperature ≥ 38°C
- Unconsciousness →3
- Chest pain →17
- Dehydration: dry mucous membranes, poor skin turgor, sunken eyes, BP < 90/60, pulse ≥ 100

No → Check urine for ketones.
- No ketones → Check for symptoms of diabetes: thirst, urinary frequency, weight loss
  - No → 21 → Check fasting plasma glucose after an 8-hour fast.
  - Yes → 22 → 16 Confirm with another test: fasting glucose or if available, HbA_{1c}.
- Ketones present → 23 • Give sodium chloride 0.9% 1L IV over 2 hours then 1L 4 hourly. • Refer urgently.

Yes → 23 • Give sodium chloride 0.9% 1L IV over 2 hours then 1L 4 hourly. • Refer urgently.

[1]Do an oral glucose tolerance test after an 8-hour fast, give 75g oral glucose in 250mL water to drink and check glucose 2 hours later.

Diabetes: routine care

Give urgent attention to the patient with diabetes with any of the following:

- Decreased consciousness, drowsiness
- (1) Confusion or unusual behaviour
- Fitting
- Shaking
- Sweating
- Palpitations
- Weakness
- Rapid deep breathing
- Nausea or vomiting
- Abdominal pain
- Thirst or hunger
- Temperature ≥ 38°C
- Chest pain
- Dehydration: dry mucous membranes, poor skin turgor, sunken eyes, BP < 90/60, pulse ≥ 100

Check random fingerprick glucose:

(2) Glucose < 3.5mmol/L with/without symptoms

(3)
- Give oral glucose orally. If decreased consciousness or glucose ≤ 2.8mmol/L, give 50mL 50% glucose IV over 1-3 minutes instead.
- Repeat if glucose < 3.5mmol/L after 15 minutes.
- Give the patient food as soon as s/he can eat safely.
- Identify cause and educate about meals and doses ⮌72.
- Refer same day if incomplete recovery. Continue 5% glucose 1L 6 hourly IV.
- Discuss referral if on gliclazide or insulin.

(4) Glucose > 11mmol/L with symptoms

- Give sodium chloride 0.9% 1L IV over 2 hours then 1L 4 hourly.
- Refer urgently to hospital.

Glucose > 11mmol/L without symptoms

(5) Check urine for ketones.

Ketones in urine	No ketones in urine
	Give routine diabetes care below.

Assess the patient with diabetes

Assess	When to assess	Note
Symptoms	Every visit	Manage symptom as on symptom page. (6) Ask about chest pain ⮌17 (7) and leg pain ⮌37.
(8) CVD risk	At diagnosis and yearly	Assess CVD risk ⮌68. Start simvastatin if CVD risk > 20% ⮌72.
Family planning	Every visit	Assess patient's contraceptive needs ⮌91. If pregnant or planning pregnancy, refer for specialist care.
(9) BP	Every visit	(10) If BP ≥ 140/90 ⮌73. Aim to treat hypertension to < 140/90 (< 150/90 if ≥ 60 years) ⮌74.
(11) Eyes for retinopathy	At diagnosis, yearly and if visual problems	Refer if new diabetes diagnosis, visual problems, cataracts or retinopathy.
(12) Feet	• Visual: every visit • Comprehensive: at diagnosis and yearly, more often if problems	(13) • Visual assessment: look for ulcers, callus, redness, warmth, deformity. (14) • Comprehensive assessment: visual assessment as above, foot pulses, reflexes, sensation in toes and feet (15) • Refer for specialist care if ulcers, severe infection or other abnormalities.
Random glucose	Only if symptoms or adjusting glucose-lowering medication	If random glucose < 3.5mmol/L or > 11mmol/L give urgent attention above.
(16) HbA_{1c}: aim for < 7%.	(17) • 6 monthly if HbA_{1c} < 7% • 3 monthly if HbA_{1c} ≥ 7% or after treatment change	• If HbA_{1c} < 7%: continue same treatment for diabetes ⮌72 and repeat HbA_{1c} in 6 months. • If HbA_{1c} 7-10% and adherent: step up treatment ⮌72 and repeat HbA_{1c} after 3 months. • If HbA_{1c} 7-10% and not adherent: educate on importance of adherence and repeat HbA_{1c} after 3 months. • If HbA_{1c} > 10%: discuss with doctor.
(18) Random total cholesterol	(19) • At diagnosis then yearly • 3 months after starting simvastatin	(20) • If cholesterol > 8mmol/L, start simvastatin as below and refer for further assessment. (21) • If repeat cholesterol > 5mmol/L increase simvastatin as below. If already on 40mg daily discuss with specialist.
(22) Urine albumin creatinine ratio (ACR)	At diagnosis and yearly if not on enalapril	If ACR raised, exclude urine infection, repeat ACR twice to confirm diabetic nephropathy and start enalapril ⮌72.
(23) eGFR[1]	At diagnosis and yearly	If eGFR < 60mL/min/1.73m³, refer to doctor.

[1]Calculate estimated creatinine clearance rate if laboratory eGFR unavailable: eCcr = (140 - age) x weight (in kg) x constant /creatinine (µmol/l) where constant is 1.23 for man and 1.04 for woman.

Advise the patient with diabetes

1 • Help the patient to manage his/her CVD risk ⮌69.
2 • Encourage the patient to adhere to medication and to eat regular meals. If newly diagnosed, poor adherence and/or attendance, refer for community care worker support.
3 • Ensure patient can recognise and manage hypoglycaemia (shaking, sweating, palpitations, weakness, hunger):
4 - Drink sugar water or eat a sweet/sandwich. Always carry something sweet. If fits, confusion/coma, rub sugar inside mouth.
5 - Identify and manage the cause: increased exercise, missed meals, inappropriate dosing of glucose-lowering medications, alcohol, illnesses like infections.
6 • Encourage the patient to eat a healthy, balanced, low-fat diet including lots of vegetables. Eat fewer sweet foods.
7 • Educate the patient to care for his/her feet to prevent ulcers and amputation: avoid walking barefoot or without socks, wash feet in lukewarm water and dry well especially between the toes, do not cut calluses or corns, use care when cutting nails. Look at feet every day and see health care worker if any problem or injury.

Treat the patient with diabetes

8 • Give simvastatin if ≥ 40 years, CVD risk > 20%, established CVD or cholesterol > 8mmol/L[9]. Start simvastatin 20mg daily. If repeat cholesterol > 5mmol/L increase to 40mg daily. If already on 40mg daily discuss with specialist.
10 • Start aspirin 150mg daily if patient has CVD[11]. Avoid if peptic ulcer, dyspepsia, kidney or liver disease[12].
13 • Give enalapril 5mg daily if diabetic nephropathy confirmed with urine albumin creatinine ratio (ACR), even if no hypertension. Increase gradually to 20mg daily if systolic BP remains > 100mmHg. Avoid in angio-oedema.
14 • Give glucose-lowering medication in a stepwise fashion below. Ensure patient is adherent before increasing treatment. If not adherent, refer for community care worker support[15]. If HbA_{1c} ≥ 7% after 3 months on maximum dose then move to next step.

Step	Medication	Start dose	Maximum dose	Note
16 1	Metformin	500mg daily	1g twice a day	• Take with or after meals. 17 • Increase by 500mg/day every week if random glucose ≥ 10mmol/L and patient is adherent. • Avoid in kidney or liver disease, or heart failure.
18 2	Add gliclazide	40mg daily	320mg daily	• Continue metformin. • Take with breakfast. 19 • Increase by 40mg/day every week if random glucose ≥ 10mmol/L and patient is adherent. • If total daily dose > 160mg then give in 2 divided doses. • Avoid in kidney or liver disease.
20 3	Add basal insulin	0.1 units/kg/dose subcutaneously	30 units daily	• Take at bedtime. • Continue metformin. Decrease gliclazide gradually until stopped. • Increase by 2 units every 3 days until morning fasting blood glucose is between 5.0 and 7.2mmol/L. • Educate patient on home blood glucose monitoring and issue meter. • Once stable, patient to check fasting glucose on waking once a week. 21 • Educate about insulin: - Injection technique and recommended sites: abdomen, thighs, upper arms. - Store insulin in fridge or a cool dark place. - Recognition of hypoglycaemia and hyperglycaemia. - Sharps disposal at clinic. • Once on maximum basal insulin, refer if: fasting blood glucose > 7.2mmol/L *or* HbA_{1c} > 7% after 3 months.

22 Review the patient with diabetes 6 monthly once stable.

PACK Global: Adult

This **PACK Global: Adult** is a clinical practice tool designed for use in AREA FOR IMPLEMENTATION public sector primary care consultations with adults. It uses a symptom-based approach to the patient's problem and a standardised integrated approach to the routine care of the patient with one or more chronic conditions, covering 40 symptoms and 20 chronic conditions including HIV, TB, cardiovascular risk and disease, mental health, chronic respiratory diseases, epilepsy, contraception, pregnancy and postnatal care and musculoskeletal disorders.

PACK Global: Adult complies with and integrates AREA FOR IMPLEMENTATION policies including recent updates for TB, HIV, diabetes and contraception. Prescribing provisions are displayed clearly for each drug, its dose and indication to capacitate staff to manage patients with common chronic conditions.

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This **PACK Global: Adult** forms part of a pack of clinical tools for use in primary care that includes a **Community Care Worker guide** to assist CCWs to provide support to the patient with a chronic condition and **Patient Information Leaflets** designed to reinforce treatment adherence and care-seeking messages for the patient with a chronic condition. These clinical tools are supported by PACK CCW and adult guideline **Training Manuals** and an **Implementation Toolkit** to ensure the programme is embedded in the health system.

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