



Hypertension and Type 2 Diabetes — Treatment Protocol Cards

The WHO HEARTS and PEN simplified protocols for primary care: diagnose, treat, titrate, refer — one card each

HYPERTENSION

Diagnose BP $\geq 140/90$ on two visits (or $\geq 180/110$ once). Measure seated, rested 5 min, correct cuff, twice, average.

Assess Age, smoking, diabetes, kidney disease, prior CVD, cholesterol if available → cardiovascular risk.

Lifestyle — everyone Salt < 5 g/day, stop smoking, 150 min activity/week, weight, alcohol.

Step 1 Amlodipine 5 mg or a thiazide-like diuretic (or both at low dose if $\geq 160/100$). Review in 4 weeks.

Step 2 Add the other; or add an ACE inhibitor / ARB (first choice if diabetes or kidney disease; not in pregnancy).

Step 3 Triple therapy: CCB + ACEi/ARB + thiazide. Check adherence before adding.

Target $< 140/90$; $< 130/80$ if diabetes, CVD or kidney disease and tolerated.

Refer BP $\geq 180/110$ with symptoms · pregnancy · under 40 · secondary cause suspected · uncontrolled on 3 drugs · kidney disease.

TYPE 2 DIABETES

Diagnose Fasting glucose ≥ 7.0 mmol/L (126 mg/dL) twice, or HbA1c $\geq 6.5\%$, or random ≥ 11.1 with symptoms.

Lifestyle — everyone Diet (less sugar and refined carbohydrate), weight, 150 min activity/week, stop smoking.

Step 1 Metformin 500 mg daily with food, increase over 2–4 weeks to 1,000 mg twice daily. Not if eGFR < 30 .

Step 2 Add a sulfonylurea (gliclazide) — warn about hypoglycaemia; or, where available and affordable, an SGLT2 inhibitor if CVD or kidney disease.

Step 3 Add basal insulin at night, 10 units, titrate by 2 units every 3 days to fasting 4–7 mmol/L.

Target HbA1c $< 7\%$ ($< 8\%$ if elderly or frail); BP $< 130/80$; statin if over 40 or CVD.

Every visit Feet (sensation, pulses, ulcers); BP; weight; adherence; hypoglycaemia.

Yearly HbA1c $\times 2$ –4; kidney function and urine protein; eyes (retinal exam); lipids.

Refer Type 1 suspected · pregnancy · foot ulcer or infection · vision change · eGFR < 45 · HbA1c $> 10\%$ despite step 3.

Confirm against the national protocol. Drug names, availability and thresholds must be checked by the clinic's lead clinician against the national essential medicines list and guidelines before this card is used. Note the changes on the card.

Adapted from WHO HEARTS technical package (2020) and the WHO Package of Essential Noncommunicable Disease Interventions (PEN, 2020).

ASF standards: PHC Standard 4 — chronic-disease protocols