

Article title: Cost-Effectiveness of Population Level and Individual Level Interventions to Combat Non-communicable Disease in Eastern Sub-Saharan Africa and South East Asia: A WHO-CHOICE Analysis

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Supplementary file 2. Costing Inputs for NCD Interventions

Number	Disease /Intervention	Costing inputs			
		Patient level costs	Inpatient Bed days	Outpatient visits	Staff
1	Combination therapy for prevention of CVD in those with 30%+ risk ⁹	Combination of: Hydrochlorothiazide, tablet, 25 mg; Enalapril, tablet, 20 mg; Atenolol, tablets, 50 mg; Amlodipine, tablet, 10 mg; Simvastatin, 15 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		4 visits	10 minutes with doctor. 20 minutes with nurse for 7% of population with comorbid diabetes
2	Blood pressure lowering treatment for those with SBP > 160 mmHG and total CVD risk < 30% ⁹	Hydrochlorothiazide, tablet, 25 mg; Enalapril, tablet, 20 mg; Atenolol, tablets, 50 mg; Amlodipine, tablet, 10 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		3 visits	10 minutes with doctor. 20 minutes with nurse.

3	Blood pressure lowering treatment for those with SBP > 140 mmHG and total CVD risk < 30% ⁹	Hydrochlorothiazide, tablet, 25 mg; Enalapril, tablet, 20 mg; Atenolol, tablets, 50 mg; Amlodipine, tablet, 10 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		3 visits	10 minutes with doctor. 20 minutes with nurse.
4	Cholesterol lowering treatment for those with Chol > 8 mmol/L and total CVD risk < 30% ⁹	Simvastatin, 15 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		3 visits	10 minutes with doctor. 20 minutes with nurse.
5	Cholesterol lowering treatment for those with Chol > 6 mmol/L and total CVD risk < 30% ⁹	Simvastatin, 15 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		3 visits	10 minutes with doctor. 20 minutes with nurse.
6	Combination therapy for prevention of CVD in those with 20%+ risk ⁹	Combination of: Hydrochlorothiazide, tablet, 25 mg; Enalapril, tablet, 20 mg; Atenolol, tablets, 50 mg; Amlodipine, tablet, 10 mg; Simvastatin, 15 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		4 visits	10 minutes with doctor. 20 minutes with nurse for 7% of population with comorbid diabetes
7	Blood pressure lowering treatment for those with SBP > 160 mmHG and total CVD risk < 20% ⁹	Hydrochlorothiazide, tablet, 25 mg; Enalapril, tablet, 20 mg; Atenolol, tablets, 50 mg; Amlodipine, tablet, 10 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		3 visits	10 minutes with doctor. 20 minutes with nurse.
8	Blood pressure lowering treatment for those with SBP > 140 mmHG and total CVD risk < 20% ⁹	Hydrochlorothiazide, tablet, 25 mg; Enalapril, tablet, 20 mg; Atenolol, tablets, 50 mg; Amlodipine, tablet, 10 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		3 visits	10 minutes with doctor. 20 minutes with nurse.

9	Cholesterol lowering treatment for those with Chol > 8 mmol/L and total CVD risk < 20% ⁹	Simvastatin, 15 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		3 visits	10 minutes with doctor. 20 minutes with nurse.
10	Cholesterol lowering treatment for those with Chol > 6 mmol/L and total CVD risk < 20% ⁹	Simvastatin, 15 mg; Blood glucose level test; Cholesterol test; Urine sugar analysis		3 visits	10 minutes with doctor. 20 minutes with nurse.
11	Treatment of new cases of acute myocardial infarction with acetylsalicylic acid ⁹	Acetyl salicylic acid (aspirin), tablet, 75 mg; Oxygen, 1000 litres, primarily with oxygen cylinders; IV line; Saline solution	2 days immediately post event	5 visits	20 minutes with doctor. 4 visits of 10 minutes with nurse.
12	Combination treatment of new cases of acute myocardial infarction ⁹	Acetyl salicylic acid (aspirin), tablet, 75 mg; Enalapril, tablet, 20 mg; Atenolol, tablets, 50 mg; Simvastatin, 15 mg; Prednisolone, tablet, 5 mg; Blood glucose level test; Cholesterol test; Urine analysis		6 visits	6 times 10 minutes with doctor. 4 visits with nurse.
13	Combination treatment of new cases of stroke ⁹	Acetyl salicylic acid (aspirin), tablet, 75 mg; Enalapril, tablet, 20 mg; Atenolol, tablets, 50 mg; Simvastatin, 15 mg; Prednisolone, tablet, 5 mg; Blood glucose level test; Cholesterol test; Urine analysis	2 days immediately post event	5 visits 4 additional outpatient visits with physiotherapist or nurse for 20% of patients	6 times 10 minutes with doctor. 4 times 20 minutes with physiotherapy nurse for 20% of population.
	Diabetes				
14	Standard glycaemic control ⁹	Insulin in 1/3 of patients Home glucose monitoring; Glibenclamide, 5 mg tab; Metformin, 850 mg tab; HbA1c test; Blood test: Test for fasting lipid profile ; Urine test: Test for urine albumin excretion and albumin to creatinine ratio		4 visits	4 times 10 minute nurse visits, 1 GP visit per year, for 10% of patients 1 specialist visit per year

15	Intensive glycaemic control ⁹	Insulin for 1/2 of patients; Home glucose monitoring; Glibenclamide, 5 mg tab; Metformin, 850 mg tab; HbA1c test; Blood test: Test for fasting lipid profile; Urine test: Test for urine albumin excretion and albumin to creatinine ratio		4 visits	4 times 10 minute nurse visits, 2 GP visit per year, 1 specialist visit per year
16	Retinopathy Screening + photocoagulation ⁹	Fluorescein drops; Portable slit lamp; Laser Photocoagulation; Tetracaine drops; Antireflective lens		1 visit for screening, 2 visits for follow up care in 5% of patients	1 specialist visit for screening, 2 longer specialist visits for the 5% of patients requiring treatment
17	Neuropathy screening and preventive foot care ⁹	Gloves, exam, latex, disposable, pair; Monofilament, 10 g; Protective shoes; Insoles		1 visit for screening, 3 visits for follow up care in 10% of patients	1 specialist visit for screening, 3 longer specialist visits for the 10% of patients requiring treatment
	Asthma				
18	Inhaled short acting beta agonist (SABA) for intermittent asthma ⁹	Salbutamol inhaler, 100 mcg		3 visits	1 GP visit, 2 nurse visits
19	Low dose inhaled beclomethasone plus SABA ⁹	Salbutamol inhaler, 100 mcg; Beclomethasone 100mg		3 visits	1 GP visit, 2 nurse visits
20	High dose inhaled beclomethasone +SABA ⁹	Salbutamol inhaler, 100 mcg; Beclomethasone 100mg		3 visits	1 GP visit, 2 nurse visits
21	Theophylline + High dose inhaled beclomethasone +SABA ⁹	Salbutamol inhaler, 100 mcg; Beclomethasone 100mg; Theophylline 200mg SR		3 visits	1 GP visit, 2 nurse visits
22	Oral Prednisolone + Theophylline + High dose inhaled beclomethasone +SABA ⁹	Salbutamol inhaler, 100 mcg; Beclomethasone 100mg; Theophylline 200mg SR; Prednisolone, tablet, 20 mg		3 visits	1 GP visit, 2 nurse visits
	COPD				
23	Smoking cessation brief intervention by a GP ⁹			1 visit	1 GP visit

24	Inhaled salbutamol ⁹	Salbutamol inhaler, 100 mcg		3 visits	1 GP visit, 2 nurse visits
25	Low-dose oral theophylline ⁹	Theophylline 200mg SR		3 visits	1 GP visit, 2 nurse visits
26	Ipratropium inhaler ⁹	Ipratropium Bromide 20 mcg inhaler		3 visits	1 GP visit, 2 nurse visits
27	Antibiotics ⁹	Amoxicillin, 500 mg tab	7 days		7 GP visits, 14 nurse visits
28	Oral prednisolone ⁹	Prednisolone, tablet, 20 mg	8 days		7 GP visits, 14 nurse visits
29	Oxygen, concentration 24-28% ⁹	Oxygen, 1000 litres, primarily with oxygen cylinders	9 days		7 GP visits, 14 nurse visits
	Cervical Cancer				
30	Basic palliative care for Cervical cancer ²⁹	Ibuprofen, 400 mg tab; Paracetamol, tablet, 500 mg; Morphine injection (5mL); Morphine oral liquid (10mg/mL); Dexamethasone (4mg tablets); Docusate (100mg tablet); Senna, 7.5 mg tab; Amitriptyline 25 mg tablets; Loperamide 2 mg; Metoclopramide (10mg tablet); Morphine slow release tablet (10mg)	15 days	2 visits	1 visit from Pharmaceutical technician 15 visits with a nurse 1 long 2 hr visit from a specialist 15 visits with a GP

31	Diagnosis & treatment of cervical cancer stages I and II ²⁹	Formalin, 1 litre; H and E staining; Ultrasound gel; Ultrasound probe cover; X-ray film; X-ray film chemistry; Vaginal estrogen; Dexamethasone, 4 mg, 1 ampoule; Ondansetron (4mg tablets); Cotton swab; Gauze pad, 10 x 10 cm, sterile; Gauze pad, 10X4 cm; Specimen container; Cidex 2-4% glutaraldehyde (cl), 100ml; Lidocaine HCl (in dextrose 7.5%), ampoule 2 ml; Needle, spinal, 22g (disposable); Syringe, 10 cc with needle; Syringe, 5 cc with needle; Syringes, single use, 20 ml; Skin preparatory solution, 500 ml vial; Sponges; Sutures; Scalpel blade, disposable; Electrosurgical pen; Gloves, exam, latex, disposable, pair; Syringe, needle + swab; Perthodine (cl); Cannula, IV, 22G, sterile, disposable ; Definitive radiotherapy (50Gy in 25 fractions); Cisplatin (50 mg tab); IV giving/infusion set, with needle; Cannulae; Complete blood count; Blood collecting tube, 5 ml; Total bilirubin; Alkaline phosphatase reagents; Electrolytes test; BUN test; Serum creatinine	2days	5 visits	Nurses - 5 visits Ob\Gyns - 5 visits Laboratory technicians/assistants - 2 hrs Assistant nurses and midwives 2 visits Pharmaceutical technicians/assistants 2 visits Other specialist doctors 2 visits Radiographers/X-ray technicians 2 extra-long consults
32	HPV vaccination (2 doses) for preventing cervical cancer ²⁹	Syringe, auto-disposable, 0.5 ml, with needle Safety box for used syringes/needles, 5 litre HPV vaccine		2 visits	Nurse

33	Prevention of cervical cancer through screening with HPV DNA test ²⁹	Pipettes, fixed, 50 uL; Pipette, repeater; Pipette tips; Repeater tip; Gloves, exam, latex, disposable, pair; Cotton swab; Specimen container; CareHPV Test Kit; IEC materials; Data collection forms; Azithromycin, 500 mg; Ceftriaxone, powder for infection, 250 ml vial; Syringe, needle + swab		1 visit	Community health worker and nurse
34	Prevention of cervical cancer through screening with PAP ²⁹	Gloves, exam, latex, disposable, pair; Applicator sticks; Microscope slides with frosted end, pack of 50; Cervical cytology brush/scraper; Stable chlorine disinfectant, pack of 100 tablets; Fixing chemicals; IEC materials; Data collection forms; Azithromycin, 500 mg; Ceftriaxone, powder for infection, 250 ml vial; Syringe, needle + swab		1 visit	Community health worker, assistant nurse, nurse and physician
35	Prevention of cervical cancer through screening with VIA ²⁹	Gloves, exam, latex, disposable, pair; Acetic acid, 5% dilute, 5 ml; Cotton wool; Applicator sticks; KY jelly packet; Condom, male; Gauze pad, 10 x 10 cm, sterile; Stable chlorine disinfectant, pack of 100 tablets; 70 isopropyl alcohol, 10 ml; Soap or hand sanitizer, 1L; IEC materials; Data collection forms; Azithromycin, 500 mg; Ceftriaxone, powder for infection, 250 ml vial; Syringe, needle + swab		1 visit	Community health worker and nurse
	Colorectal Cancer				

36	Basic palliative care for Colorectal Cancer ²⁹	Ibuprofen, 400 mg tab; Paracetamol, tablet, 500 mg; Morphine injection (5mL); Morphine oral liquid (10mg/mL); Dexamethasone (4mg tablets); Docusate (100mg tablet); Senna, 7.5 mg tab; Amitriptyline 25 mg tablets; Loperamide 2 mg; Metoclopramide (10mg tablet); Morphine slow release tablet (10mg)	15 days	2 visits	1 visit from Pharmaceutical technician 15 visits with a nurse 1 long 2 hr visit from a specialist 15 visits with a GP
37	Diagnosis & treatment of colorectal cancer stages I and II ²⁹	Formalin, 1 litre; H and E staining; Ultrasound gel; Ultrasound probe cover; X-ray film; X-ray film chemistry; Vaginal estrogen; Dexamethasone, 4 mg, 1 ampoule; Ondansetron (4mg tablets); Cotton swab; Gauze pad, 10 x 10 cm, sterile; Gauze pad, 10X4 cm; Specimen container; Cidex 2-4% glutaraldehyde (cl), 100ml; Lidocaine HCl (in dextrose 7.5%), ampoule 2 ml; Needle, spinal, 22g (disposable); Syringe, 10 cc with needle; Syringe, 5 cc with needle; Syringes, single use, 20 ml; Skin preparatory solution, 500 ml vial; Sponges; Sutures; Scalpel blade, disposable; Electrosurgical pen; Gloves, exam, latex, disposable, pair; Syringe, needle + swab; Perthodine (cl); Cannula, IV, 22G, sterile, disposable ; Definitive radiotherapy (50Gy in 25 fractions); Cisplatin (50 mg tab); IV giving/infusion set, with needle; Cannulae; Complete blood count;	2days	5 visits	Nurses - 5 visits Specialist doctor - 5 visits Laboratory technicians/assistants - 2 hrs Assistant nurses and midwives 2 visits Pharmaceutical technicians/assistants 2 visits Other specialist doctors 2 visits Radiographers/X-ray technicians 2 extra-long consults

		Blood collecting tube, 5 ml; Total bilirubin; Alkaline phosphatase reagents; Electrolytes test; BUN test; Serum creatinine			
	Breast Cancer				
38	Basic palliative care for Breast Cancer: ²⁹	Ibuprofen, 400 mg tab; Paracetamol, tablet, 500 mg; Morphine injection (5mL); Morphine oral liquid (10mg/mL); Dexamethasone (4mg tablets); Docusate (100mg tablet); Senna, 7.5 mg tab; Amitriptyline 25 mg tablets; Loperamide 2 mg; Metoclopramide (10mg tablet); Morphine slow release tablet (10mg)	15 days	2 visits	1 visit from Pharmaceutical technician 15 visits with a nurse 1 long 2 hr visit from a specialist 15 visits with a GP

39	Diagnosis & treatment of breast cancer stages I and II ²⁹	X-ray film; X-ray film chemistry; Aspirating needle; Aspirating syringe; Syringe, needle + swab; Specimen container; Lidocaine HCl (in dextrose 7.5%), ampoule 2 ml; Scalpel blade, disposable; Biopsy needle; Saline solution; Formalin, 1 litre; H and E staining; Hormone receptor testing (immunoanalyzer); Complete blood count; Blood collecting tube, 5 ml; Total bilirubin; Alkaline phosphatase reagents; Electrolytes test; BUN test; Serum creatinine; Electrodes, electrocardiographic; Gel, electrode; Paper, Recording ECG; Ultrasound gel; Ultrasound probe cover; Sponges; Sutures; Wound drainage kit; Electrosurgical unit (monopolar pen, pad); Skin preparatory solution, 500 ml vial; Cefazolin, 1g; Doxorubicin, 50 mg vial; Doxorubicin, 10 mg vial; Cyclophosphamide, 1 g; Paclitaxel; Cannulae; Intravenous administration set; Tamoxifen, 20 mg tablet; Filgastrim; Dexamethasone, 4 mg, 1 ampoule; Ondansetron (4mg tablets); Alendronate, 10 mg tab	8 days	2 visits	Nurses - 8 visits Specialist Doctor - 8 visits Laboratory technicians/assistants - 2 hrs Assistant nurses and midwives 2 visits Pharmaceutical technicians/assistants 2 visits Other specialist doctors 2 visits Radiographers/X-ray technicians 2 extra-long consults
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40	Screening with mammography ²⁹	Mammography film; Mammography film chemistry; Ultrasound gel; Ultrasound probe cover; Scalpel blade, disposable; Biopsy needle; Saline solution; Syringe, needle + swab; Specimen container; Lidocaine HCl (in dextrose 7.5%), ampoule 2 ml; Wire localization needle; Soft tissue marker/fiducial clip; Aspirating needle; Aspirating syringe; Formalin, 1 litre; H and E staining		1 visit	Specialist doctor Nurse Generalist Doctor X-Ray technician
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