

Supplementary material

Table S1: Assessment and definition of chronic conditions

Chronic condition	Assessment	Definition
Anemia	1. Hemoglobin point-of-care test 2. Self-report of smoking	Hb < 12 mg/dl; threshold adjustments for smoking (+0.3 mg/dl) and African origin (-1 mg/dl)
Signs of alcohol problems	CAGE questionnaire for problem drinking and potential alcohol problems	CAGE score ≥ 2
Signs of cognitive problems	1. Self-rated present memory 2. Immediate and delayed word recall of 10 nouns, date, and president naming; scoring of correct answers; adapted from US Health and Retirement Study	Present memory rated as fair or poor, score ≤ 1.5 standard deviation of population mean
Chronic cough, no TB	Self-reported coughing	Self-report of usually coughing and not having TB as a chronic condition
Signs of depression	10-item Centre for Epidemiological Studies Depression Scale (CES-D-10)	CES-D-10 score ≥ 10
Diabetes	1. Blood glucose point-of-care test 2. Self-report of current treatment	Blood glucose ≥ 200 mg/dl, fasting blood glucose ≥ 126 mg/dl, or currently on treatment for diabetes with diet, weight loss, pills, or insulin injection
Kidney disease	Self-reported diagnosis	Ever diagnosed with kidney disease or low kidney function
HIV	Self-reported diagnosis	Ever tested HIV positive
High cholesterol	Self-reported diagnosis	Ever diagnosed with high cholesterol
Hypertension	1. Blood pressure was measured up to three times, between the second and the third time was a delay of two minutes; the mean of all measurements was calculated 2. Self-report of current treatment	Systolic pressure ≥ 140 mmHg, diastolic pressure ≥ 90 mmHg or currently on treatment for hypertension
Ischemic heart disease	1. Self-reported diagnosis of angina, heart failure, or heart attack 2. Modified Rose Angina Questionnaire	Rose Angina Questionnaire criteria, ever received diagnosis of angina, or ever received diagnosis of heart attack
Obesity	Measured weight and height; BMI was calculated	BMI > 30 kg/m ²
Stroke	1. Self-reported diagnosis 2. Self-reported treatment	Ever diagnosed with stroke, mini-stroke, transient ischemic attack; suddenly lost half vision, or ever received treatment for stroke
Tuberculosis (TB)	1. Self-reported diagnosis 2. Self-reported treatment	Ever diagnosed with TB, but never received treatment, or currently on TB treatment
Underweight	Measured weight and height; BMI was calculated	BMI < 18.5 kg/m ²

Self-reported diagnoses were obtained by asking: Have you ever been told by a doctor, nurse, or other healthcare worker that you have had ... ? Rose Angina Questionnaire criteria were: Experienced any pain or discomfort in the chest or pain going to the left arm or neck when walking uphill or hurrying during the last 12 months; stopping, slowing down, or carrying on after taking a pain-relieving medicine that dissolves in the mouth (e.g., a nitro spray or tablet) when getting pain or discomfort while walking; and pain or discomfort is relieved when standing still.

Table S2: Prevalence of comorbidities among middle-aged and elderly women in peri-urban Tanzania (women aged 40+ years)

Prevalence % [95% CI]	Index condition														
	Hyper-tension	Obese	Anemia	CES-D-10 score ≥10	Diabetes	Ischemic heart disease	Cognitive problems	HIV	High cholesterol	CAGE Score 2+	Tuber-culosis	Stroke	Under-weight	Chronic cough (no TB)	Kidney disease
Hypertension	49.8 (47.2 to 52.3)	57.0 (53.0 to 61.0)	43.3 (38.1 to 48.6)	48.8 (44.3 to 53.2)	52.9 (46.9 to 58.8)	55.6 (49.0 to 62.2)	62.1 (52.4 to 71.8)	44.4 (34.6 to 54.1)	66.3 (56.3 to 76.3)	51.3 (40.3 to 62.2)	41.1 (30.0 to 52.1)	53.8 (42.6 to 65.1)	45.9 (32.7 to 59.1)	54.7 (41.5 to 67.9)	63.3 (49.8 to 76.8)
Anemia	45.6 (42.0 to 49.3)	39.9 (37.3 to 42.4)	32.7 (27.6 to 37.8)	40.0 (35.6 to 44.5)	44.6 (38.7 to 50.5)	44.4 (37.8 to 51.1)	26.6 (17.5 to 35.8)	32.1 (22.9 to 41.3)	64.6 (54.5 to 74.8)	44.2 (33.2 to 55.1)	32.9 (22.4 to 43.5)	26.3 (16.2 to 36.4)	0	38.4 (25.3 to 51.4)	43.4 (29.4 to 57.3)
Obese	32.1 (27.3 to 37.0)	30.3 (25.1 to 35.5)	36.9 (33.3 to 40.5)	41.6 (35.2 to 48)	34.4 (28.0 to 40.9)	45.4 (35.9 to 54.8)	46.0 (33.1 to 58.8)	51.5 (38.5 to 64.6)	27.5 (14.5 to 40.6)	36.1 (22.6 to 49.6)	49.9 (33.2 to 66.6)	56.3 (40.5 to 72)	56.9 (39.5 to 74.4)	26.0 (7.7 to 44.3)	37.7 (18.1 to 57.4)
Signs of depression	31.9 (28.5 to 35.2)	32.7 (28.9 to 36.5)	36.6 (31.5 to 41.8)	32.5 (30.2 to 34.9)	30.5 (25.0 to 36.1)	56.4 (49.8 to 62.9)	46.7 (37 to 56.5)	37 (27.5 to 46.5)	23.3 (14.3 to 32.2)	32.5 (22.2 to 42.8)	55.0 (43.9 to 66)	35.7 (24.9 to 46.5)	41.8 (28.9 to 54.8)	35.0 (22.3 to 47.6)	35 (21.6 to 48.3)
Diabetes	32.8 (28.2 to 37.4)	34.6 (29.3 to 39.8)	28.8 (23.5 to 34.2)	29.0 (23.2 to 34.8)	30.9 (27.6 to 34.2)	32.1 (23.4 to 40.8)	34.6 (22.5 to 46.7)	34.3 (21.4 to 47.2)	39.7 (26.5 to 52.9)	34.8 (21.7 to 48)	23.5 (7.4 to 39.5)	48.3 (32.7 to 64)	23.0 (8.5 to 37.5)	49.1 (28.6 to 69.6)	34.6 (15.3 to 53.8)
Ischemic heart disease	16.1 (13.5 to 18.7)	16.1 (13.1 to 19.0)	17.8 (13.7 to 21.8)	25.0 (21.2 to 28.8)	15 (10.8 to 19.2)	14.4 (12.7 to 16.2)	20.1 (12.4 to 27.8)	11.9 (5.6 to 18.2)	29 (19.4 to 38.6)	22.4 (13.3 to 31.6)	33.0 (22.6 to 43.3)	27.7 (17.6 to 37.7)	13.6 (4.6 to 22.5)	20.0 (9.4 to 30.6)	20.3 (9.1 to 31.6)
Cognitive impairment symptoms	8.6 (6.6 to 10.6)	4.6 (2.8 to 6.4)	8.6 (5.8 to 11.4)	9.9 (7.2 to 12.6)	7.7 (4.8 to 10.7)	9.6 (5.7 to 13.5)	6.9 (5.6 to 8.2)	3 (-0.3 to 6.4)	2.4 (-0.9 to 5.8)	3.8 (-0.4 to 8.1)	7.7 (1.8 to 13.6)	7.7 (1.5 to 13.9)	22.4 (11.3 to 33.6)	15.4 (5.7 to 25.1)	8.6 (0.6 to 16.5)
HIV	5.9 (4.2 to 7.6)	5.3 (3.5 to 7.1)	9.3 (6.4 to 12.1)	7.5 (5.2 to 9.9)	7.4 (4.3 to 10.4)	5.5 (2.5 to 8.5)	2.9 (-0.3 to 6.1)	6.6 (5.4 to 7.9)	8.1 (2.3 to 13.9)	15.9 (7.7 to 24.1)	21.4 (12.4 to 30.4)	7.9 (1.8 to 14.0)	13.4 (4.7 to 22.1)	5.4 (-0.5 to 11.4)	4.1 (-1.5 to 9.8)
High cholesterol	7.5 (5.6 to 9.4)	9.2 (6.9 to 11.5)	4.2 (2.1 to 6.4)	4.0 (2.3 to 5.8)	7.3 (4.5 to 10.1)	11.4 (7.2 to 15.6)	2 (-0.7 to 4.7)	6.9 (2 to 11.9)	5.7 (4.5 to 6.8)	6.2 (0.9 to 11.5)	7.6 (1.7 to 13.4)	9.2 (2.7 to 15.7)	1.8 (-1.7 to 5.2)	5.5 (-0.5 to 11.5)	16.2 (5.9 to 26.5)
Signs of alcohol problems	5.4 (3.8 to 7.0)	5.8 (4.0 to 7.7)	5.1 (3.0 to 7.3)	5.3 (3.3 to 7.2)	5.9 (3.4 to 8.5)	8.2 (4.5 to 11.8)	2.9 (-0.3 to 6.2)	12.6 (6.0 to 19.2)	5.8 (0.9 to 10.7)	5.3 (4.1 to 6.4)	6.3 (1 to 11.6)	7.9 (1.8 to 14.0)	5.1 (-0.5 to 10.8)	12.6 (3.9 to 21.4)	2.1 (-2 to 6.2)
Tuberculosis	4.3 (2.8 to 5.8)	4.3 (2.7 to 5.9)	7.0 (4.3 to 9.8)	8.8 (6.3 to 11.3)	3.9 (1.2 to 6.7)	11.9 (7.6 to 16.2)	5.8 (1.3 to 10.3)	16.8 (9.5 to 24.1)	7 (1.6 to 12.4)	6.2 (0.9 to 11.5)	5.2 (4.1 to 6.3)	9.3 (2.7 to 15.9)	8.9 (1.5 to 16.3)	0	6.2 (-0.6 to 12.9)
Stroke	5.4 (3.8 to 7.0)	3.3 (1.9 to 4.7)	7.6 (5.0 to 10.3)	5.5 (3.5 to 7.5)	7.8 (4.9 to 10.7)	9.6 (5.7 to 13.5)	5.6 (1 to 10.1)	6.0 (1.3 to 10.6)	8.1 (2.4 to 13.9)	7.5 (1.7 to 13.3)	9.0 (2.6 to 15.3)	5 (3.9 to 6.1)	5.8 (-0.5 to 12.2)	18.2 (8 to 28.3)	14.3 (4.5 to 24.1)
Underweight	3.7 (2.3 to 5.1)	0	6.2 (3.8 to 8.5)	5.1 (3.1 to 7.2)	3.0 (1.0 to 5.0)	3.8 (1.1 to 6.4)	13.0 (6.0 to 20.0)	8.1 (2.7 to 13.4)	1.3 (-1.2 to 3.7)	3.9 (-0.4 to 8.2)	6.8 (1.1 to 12.6)	4.7 (-0.4 to 9.7)	4.0 (3.0 to 5.0)	3.2 (-2.3 to 8.7)	6.7 (-0.5 to 14)
Chronic cough, no TB	4.0 (2.6 to 5.4)	3.5 (2.0 to 5.0)	2.6 (0.7 to 4.5)	3.9 (2.2 to 5.7)	5.8 (3.0 to 8.5)	5.1 (2.1 to 8)	8.1 (2.8 to 13.5)	3.0 (-0.3 to 6.3)	3.5 (-0.4 to 7.4)	8.8 (2.6 to 15)	0	13.2 (5.6 to 20.9)	2.9 (-2.1 to 8.0)	3.6 (2.7 to 4.6)	8.3 (0.5 to 16.1)
Kidney disease	4.1 (2.7 to 5.5)	3.5 (2.0 to 5.0)	3.3 (1.4 to 5.2)	3.5 (1.9 to 5.1)	3.6 (1.4 to 5.8)	4.6 (1.8 to 7.3)	4 (0.2 to 7.9)	2.0 (-0.8 to 4.8)	9.3 (3.1 to 15.4)	1.3 (-1.2 to 3.8)	3.8 (-0.4 to 8.1)	9.3 (2.7 to 15.8)	5.5 (-0.5 to 11.4)	7.4 (0.4 to 14.3)	3.2 (2.3 to 4.1)

N = 1528 after multiple imputation of missing data. Top-left to bottom-right diagonal values represent the unconditional prevalence of the chronic condition.

Table S2: Prevalence of comorbidities among middle-aged and elderly women in peri-urban Tanzania (continued for women aged 40–49 years)

Prevalence % [95% CI]	Index condition														
	Hyper-tension	Obese	Anemia	CES-D-10 score ≥10	Diabetes	Ischemic heart disease	Cognitive problems	HIV	High cholesterol	CAGE Score 2+	Tuber-culosis	Stroke	Under-weight	Chronic cough (no TB)	Kidney disease
Hypertension	38.0 (34.4 to 41.5)	47.2 (41.4 to 52.9)	32.4 (25.9 to 38.9)	37.8 (31.2 to 44.3)	40.3 (31.6 to 49.0)	41.8 (30.7 to 52.8)	52 (27 to 77)	43.4 (30.6 to 56.1)	50.1 (30.8 to 69.3)	39.7 (24.1 to 55.3)	41 (23.1 to 58.9)	37.7 (20.9 to 54.5)	31.4 (10.8 to 52)	30.6 (11.7 to 49.4)	50.2 (25.7 to 74.7)
Anemia	49.9 (43.9 to 55.9)	40.2 (36.6 to 43.8)	33.1 (26.4 to 39.7)	44 (37.3 to 50.7)	43.5 (34.7 to 52.4)	45.5 (34.3 to 56.6)	40.3 (15.6 to 65)	34.8 (22.5 to 47.2)	57.7 (38.6 to 76.7)	44.8 (29 to 60.7)	35.1 (17.6 to 52.5)	21.2 (6.5 to 35.9)	0	52.8 (31.6 to 74)	39.6 (14.9 to 64.3)
Obese	34.2 (26.7 to 41.6)	33.0 (25.7 to 40.3)	40.1 (35.1 to 45.1)	43.8 (34.7 to 52.8)	39.6 (30.1 to 49.1)	44.9 (31.2 to 58.6)	37.8 (8.2 to 67.3)	48.7 (33 to 64.3)	31.4 (8.1 to 54.6)	40.1 (20 to 60.2)	54.3 (31.3 to 77.3)	52.7 (31.3 to 74.1)	60.7 (34.3 to 87.2)	24.4 (1 to 47.9)	49.5 (17.2 to 81.7)
Signs of depression	29.1 (23.7 to 34.5)	32.0 (26.6 to 37.4)	31.9 (25.4 to 38.5)	29.3 (26 to 32.6)	26.9 (19.2 to 34.7)	51.3 (40.2 to 62.4)	42.1 (18.6 to 65.6)	38.1 (25.6 to 50.6)	26.8 (9.8 to 43.8)	41.9 (26.2 to 57.7)	47.9 (29.7 to 66.1)	28.1 (12.5 to 43.7)	30.5 (10.3 to 50.6)	47.7 (27.3 to 68.2)	43.7 (19.4 to 68)
Diabetes	27.9 (20.9 to 34.8)	28.4 (21.3 to 35.6)	25.9 (19 to 32.8)	24.2 (16.2 to 32.2)	26.3 (21.6 to 30.9)	24.6 (12.4 to 36.7)	23.9 (-1.3 to 49.1)	30.3 (14.7 to 46.0)	22.7 (1.5 to 44.0)	24.1 (6.7 to 41.4)	21.3 (2.4 to 40.2)	40.5 (19.6 to 61.4)	19 (-1.2 to 39.2)	39.3 (12.8 to 65.8)	29.5 (0.2 to 58.8)
Ischemic heart disease	11.7 (7.9 to 15.5)	12 (8.3 to 15.8)	11.9 (7.6 to 16.2)	18.7 (13.4 to 23.9)	10.0 (4.9 to 15)	10.6 (8.4 to 12.9)	0	10.2 (2.5 to 18.0)	34.5 (16.2 to 52.7)	15.7 (4.2 to 27.3)	26.6 (10.8 to 42.5)	24.9 (9.9 to 39.9)	4.8 (-4.4 to 13.9)	17.4 (1.9 to 32.9)	18.7 (-0.4 to 37.8)
Cognitive impairment symptoms	3.2 (1.1 to 5.4)	2.4 (0.6 to 4.2)	2.2 (0.2 to 4.2)	3.4 (0.9 to 5.8)	2.1 (-0.3 to 4.6)	0	2.4 (1.2 to 3.5)	1.7 (-1.6 to 5)	0	0	3.3 (-3.1 to 9.7)	0	5.3 (-4.7 to 15.2)	0	0
HIV	9.1 (5.7 to 12.6)	6.9 (4.0 to 9.9)	9.7 (5.9 to 13.6)	10.4 (6.3 to 14.6)	9.3 (4.1 to 14.4)	7.7 (1.8 to 13.6)	5.8 (-5.3 to 16.8)	8.0 (6.0 to 10.0)	7.7 (-2.6 to 17.9)	19.4 (6.6 to 32.2)	30 (13.5 to 46.4)	12.5 (1 to 23.9)	33.5 (13.1 to 53.9)	13 (-0.7 to 26.8)	6.4 (-5.7 to 18.4)
High cholesterol	4.7 (2.2 to 7.2)	5.1 (2.6 to 7.6)	2.8 (0.5 to 5.1)	3.3 (0.9 to 5.6)	3.1 (0 to 6.2)	11.5 (4.4 to 18.6)	0	3.4 (-1.2 to 8.1)	3.6 (2.2 to 4.9)	2.6 (-2.5 to 7.8)	0	3.1 (-2.9 to 9.1)	0	4.3 (-4 to 12.7)	18.6 (-0.4 to 37.6)
Signs of alcohol problems	5.4 (2.8 to 8.1)	5.8 (3.1 to 8.5)	5.2 (2.2 to 8.2)	7.5 (3.9 to 11)	4.8 (1.1 to 8.5)	7.7 (1.8 to 13.6)	0	12.6 (4 to 21.2)	3.9 (-3.6 to 11.3)	5.2 (3.6 to 6.8)	6.7 (-2.3 to 15.6)	12.6 (1 to 24.1)	9.4 (-3.1 to 21.9)	17.4 (1.9 to 33.0)	6.3 (-5.7 to 18.3)
Tuberculosis	4.4 (2.0 to 6.9)	3.6 (1.4 to 5.7)	5.6 (2.5 to 8.6)	6.7 (3.3 to 10.1)	3.3 (0.2 to 6.5)	10.3 (3.5 to 17.0)	5.8 (-5.3 to 16.8)	15.3 (6.1 to 24.6)	0	5.3 (-1.8 to 12.4)	4.1 (2.7 to 5.5)	3.1 (-2.9 to 9.2)	9.6 (-3.1 to 22.3)	0	12.6 (-3.7 to 28.9)
Stroke	4.3 (1.9 to 6.8)	2.3 (0.5 to 4.1)	5.8 (2.7 to 8.8)	4.2 (1.5 to 6.9)	6.8 (2.6 to 10.9)	10.2 (3.5 to 17.0)	0	6.8 (0.4 to 13.3)	3.8 (-3.5 to 11.2)	10.6 (0.8 to 20.4)	3.4 (-3.1 to 9.8)	4.4 (2.9 to 5.9)	5.4 (-4.8 to 15.6)	8.7 (-2.8 to 20.2)	12.5 (-3.7 to 28.6)
Underweight	2.4 (0.5 to 4.3)	0	4.4 (1.8 to 7)	3.0 (0.7 to 5.4)	2.1 (-0.3 to 4.5)	1.3 (-1.2 to 3.8)	6.5 (-5.8 to 18.8)	12.1 (3.7 to 20.6)	0	5.2 (-1.8 to 12.3)	6.8 (-2.3 to 15.9)	3.6 (-3.3 to 10.4)	2.9 (1.7 to 4.1)	0	6.9 (-6 to 19.8)
Chronic cough, no TB	2.5 (0.7 to 4.4)	4.1 (1.8 to 6.4)	1.9 (-0.1 to 3.9)	5.1 (2.2 to 8.1)	4.7 (1.1 to 8.3)	5.1 (0.2 to 10.0)	0	5.1 (-0.5 to 10.8)	3.8 (-3.5 to 11.2)	10.5 (0.8 to 20.3)	0	6.2 (-2.1 to 14.6)	0	3.1 (1.9 to 4.4)	6.3 (-5.6 to 18.1)
Kidney disease	2.9 (0.9 to 4.9)	2.2 (0.5 to 3.9)	2.7 (0.5 to 4.9)	3.3 (0.9 to 5.7)	2.5 (-0.3 to 5.2)	3.9 (-0.4 to 8.2)	0	1.8 (-1.7 to 5.2)	11.5 (-0.8 to 23.7)	2.7 (-2.5 to 7.8)	6.7 (-2.3 to 15.8)	6.3 (-2.2 to 14.7)	5.2 (-4.6 to 15.1)	4.4 (-4 to 12.8)	2.2 (1.1 to 3.3)

N = 733 after multiple imputation of missing data. Top-left to bottom-right diagonal values represent the unconditional prevalence of the chronic condition.

Table S2: Prevalence of comorbidities among middle-aged and elderly women in peri-urban Tanzania (continued for women aged 50–59 years)

Prevalence % [95% CI]	Index condition														
	Hypertension	Obese	Anemia	CES-D-10 score ≥10	Diabetes	Ischemic heart disease	Cognitive problems	HIV	High cholesterol	CAGE Score 2+	Tuberculosis	Stroke	Underweight	Chronic cough (no TB)	Kidney disease
Hypertension	54.4 (49.3 to 59.5)	59.3 (51.8 to 66.9)	46.8 (35.9 to 57.8)	49.7 (40.8 to 58.6)	55.8 (46.4 to 65.3)	59 (46.7 to 71.4)	67 (41.4 to 92.6)	50.6 (31.4 to 69.9)	67.8 (51.3 to 84.3)	61.2 (42.3 to 80.1)	41.7 (22 to 61.5)	52.7 (30.2 to 75.2)	50.9 (16.5 to 85.2)	63.5 (34.9 to 92.0)	58.2 (30.2 to 86.2)
Anemia	48.6 (41.6 to 55.6)	44.6 (39.5 to 49.7)	36.1 (25 to 47.2)	41.9 (33.1 to 50.6)	51.5 (41.9 to 61.1)	59.1 (46.7 to 71.4)	67.6 (42 to 93.1)	34.2 (16 to 52.4)	66.8 (49.9 to 83.6)	50.0 (30.7 to 69.3)	21.5 (4.9 to 38.1)	36.9 (15.1 to 58.7)	0	27.2 (0.9 to 53.6)	50 (21.6 to 78.4)
Obese	25.8 (17.6 to 34.0)	24.3 (15.2 to 33.4)	30 (23.3 to 36.6)	39.5 (28.1 to 50.9)	27.5 (17.6 to 37.5)	44.3 (28.1 to 60.4)	50.2 (16.8 to 83.6)	59.1 (35.2 to 83.1)	26.2 (6.5 to 45.8)	24.4 (3 to 45.8)	52.0 (24.9 to 79.2)	62.9 (35.5 to 90.4)	42.4 (1.6 to 83.2)	25.6 (-8.4 to 59.6)	0
Signs of depression	30 (23.7 to 36.4)	30.9 (23.8 to 38)	43.4 (32.3 to 54.6)	32.9 (28.1 to 37.7)	29.4 (20.5 to 38.2)	54.1 (41.6 to 66.7)	49.9 (23.7 to 76.2)	37.9 (19.3 to 56.5)	19.4 (5.4 to 33.4)	26.9 (9.8 to 44.0)	59.9 (40.7 to 79.2)	47.4 (24.9 to 69.9)	38.3 (4.9 to 71.7)	18.3 (-4.7 to 41.2)	25.0 (0.4 to 49.6)
Diabetes	39.7 (30.5 to 49.0)	44.7 (34.3 to 55.1)	35.6 (23.4 to 47.8)	34.5 (23.7 to 45.4)	38.7 (31.4 to 46)	42.4 (26 to 58.7)	42.8 (8.4 to 77.2)	40.7 (16.4 to 64.9)	49.6 (28.7 to 70.5)	47.9 (24.3 to 71.5)	28.0 (1.9 to 54.2)	64.8 (37.1 to 92.5)	0	60.8 (20.8 to 100)	38.4 (3.7 to 73.0)
Ischemic heart disease	17.6 (12.3 to 22.8)	21.5 (15.2 to 27.7)	24 (14.6 to 33.3)	26.6 (18.8 to 34.4)	17.7 (10.4 to 25.1)	16.2 (12.5 to 19.9)	28.5 (4.8 to 52.3)	19 (3.9 to 34)	29.1 (13 to 45.1)	26.9 (9.8 to 44.0)	44.0 (24.5 to 63.5)	42.1 (19.8 to 64.4)	0	45.3 (15.8 to 74.8)	8.3 (-7.3 to 24.0)
Cognitive impairment symptoms	4.6 (1.7 to 7.5)	5.6 (2.1 to 9.2)	6.2 (1.1 to 11.4)	5.6 (1.6 to 9.7)	4.1 (0.3 to 7.9)	6.5 (0.3 to 12.8)	3.7 (1.8 to 5.6)	3.8 (-3.5 to 11.1)	6.4 (-2.2 to 15.1)	0	8.0 (-2.7 to 18.6)	5.3 (-4.8 to 15.3)	0	0	0
HIV	6.5 (3.1 to 9.9)	5.3 (1.9 to 8.8)	13.8 (6.5 to 21.2)	8 (3.2 to 12.8)	7.3 (2.4 to 12.2)	8.2 (1.3 to 15.1)	7.1 (-6.4 to 20.7)	7 (4.4 to 9.6)	9.7 (-0.8 to 20.1)	16.8 (1.9 to 31.7)	23.9 (7.1 to 40.6)	10.5 (-3.3 to 24.3)	0	0	8.3 (-7.3 to 24)
High cholesterol	10.2 (6.1 to 14.4)	12.3 (7.3 to 17.3)	7.2 (1.3 to 13.1)	4.8 (1.1 to 8.6)	10.6 (5.1 to 16.0)	14.8 (5.8 to 23.7)	14.3 (-4.1 to 32.6)	11.4 (-0.8 to 23.5)	8.2 (5.4 to 11.0)	7.7 (-2.6 to 18.0)	12.0 (-0.8 to 24.9)	15.9 (-0.6 to 32.4)	11.8 (-10.1 to 33.8)	9.0 (-7.9 to 26.0)	16.6 (-4.5 to 37.8)
Signs of alcohol problems	7.7 (4.1 to 11.4)	7.7 (3.7 to 11.8)	5.6 (0.4 to 10.7)	5.6 (1.6 to 9.7)	8.5 (3.3 to 13.7)	11.4 (3.4 to 19.4)	0	16.5 (2.0 to 31.0)	6.4 (-2.2 to 15.1)	6.9 (4.3 to 9.4)	8 (-2.7 to 18.6)	0	0	9.0 (-7.9 to 26.0)	0
Tuberculosis	5.1 (2 to 8.2)	3.2 (0.5 to 5.9)	11.6 (4.3 to 18.9)	12.1 (6.4 to 17.9)	4.8 (0.1 to 9.4)	18.1 (8.4 to 27.8)	14.3 (-4.1 to 32.6)	22.7 (6.7 to 38.8)	9.7 (-0.8 to 20.2)	7.7 (-2.6 to 18.0)	6.7 (4.1 to 9.2)	15.8 (-0.7 to 32.2)	0	0	0
Stroke	4.9 (1.9 to 7.8)	4.2 (1.1 to 7.2)	10.6 (4.1 to 17.1)	7.3 (2.7 to 11.8)	8.4 (3.4 to 13.5)	13.1 (4.6 to 21.6)	7.1 (-6.4 to 20.7)	7.6 (-2.6 to 17.7)	9.7 (-0.8 to 20.2)	0	11.9 (-0.8 to 24.6)	5.0 (2.8 to 7.3)	0	27.2 (0.9 to 53.6)	16.6 (-4.5 to 37.8)
Underweight	2.1 (0.1 to 4.2)	0	3.2 (-0.6 to 7)	2.6 (-0.3 to 5.6)	0	0	0	0	3.2 (-3.0 to 9.5)	0	0	0	2.3 (0.7 to 3.8)	0	0
Chronic cough, no TB	3.4 (0.9 to 5.9)	1.8 (-0.2 to 3.8)	2.5 (-1.2 to 6.2)	1.6 (-0.6 to 3.9)	4.6 (0.6 to 8.5)	8.2 (1.3 to 15.1)	0	0	3.2 (-3.0 to 9.4)	3.8 (-3.6 to 11.3)	0	15.8 (-0.7 to 32.3)	0	2.9 (1.2 to 4.6)	8.3 (-7.3 to 24)
Kidney disease	3.4 (0.9 to 5.9)	3.6 (0.8 to 6.4)	0	2.4 (-0.3 to 5.1)	3.2 (-0.2 to 6.5)	1.6 (-1.6 to 4.8)	0	3.8 (-3.5 to 11.1)	6.4 (-2.2 to 15.1)	0	0	10.5 (-3.3 to 24.3)	0	9.0 (-7.9 to 26.0)	3.2 (1.4 to 5.0)

N = 378 after multiple imputation of missing data. Top-left to bottom-right diagonal values represent the unconditional prevalence of the chronic condition.

Table S2: Prevalence of comorbidities among middle-aged and elderly women in peri-urban Tanzania (continued for women aged 60+ years)

Prevalence % [95% CI]	Index condition														
	Hyper-tension	Obese	Anemia	CES-D-10 score ≥10	Diabetes	Ischemic heart disease	Cognitive problems	HIV	High cholesterol	CAGE Score 2+	Tuber-culosis	Stroke	Under-weight	Chronic cough (no TB)	Kidney disease
Hypertension	71.2 (66.1 to 76.4)	80.5 (72.5 to 88.5)	67.1 (56.9 to 77.3)	71.3 (62.9 to 79.7)	70.9 (60.1 to 81.6)	70.7 (59.7 to 81.8)	68.2 (56.5 to 80)	40.3 (9.8 to 70.8)	78.3 (61.4 to 95.2)	75.0 (50.4 to 99.6)	44.6 (18.7 to 70.6)	78.9 (60.6 to 97.3)	58.8 (38.9 to 78.7)	73.6 (53.7 to 93.5)	78.9 (60.5 to 97.3)
Anemia	37.2 (30.6 to 43.8)	32.9 (27.5 to 38.3)	27.9 (17.8 to 38)	33.2 (24.3 to 42.2)	38.1 (26.8 to 49.3)	36.7 (24.7 to 48.7)	16.1 (5.6 to 26.5)	0	65 (45.4 to 84.6)	27.6 (1.1 to 54.2)	27.6 (4.4 to 50.8)	25.9 (6.3 to 45.5)	0	26.6 (6.4 to 46.8)	46.8 (24.4 to 69.3)
Obese	35 (25.9 to 44.2)	31.4 (19.9 to 42.9)	37.2 (29.4 to 45)	39.1 (27.0 to 51.2)	34.0 (21.8 to 46.2)	45.1 (29.3 to 60.9)	46.3 (30 to 62.6)	48 (10.5 to 85.4)	22.7 (0.4 to 45.0)	46.3 (13.4 to 79.2)	42.3 (9.4 to 75.3)	48.8 (21.2 to 76.4)	54.9 (28.6 to 81.2)	25.8 (-2.2 to 53.9)	38.2 (9.6 to 66.7)
Signs of depression	38.1 (31.6 to 44.6)	38.4 (28.7 to 48.1)	40.0 (29.3 to 50.7)	38.1 (32.6 to 43.5)	36.4 (25.1 to 47.7)	62.1 (50.4 to 73.9)	43.9 (31.5 to 56.3)	30.4 (1.7 to 59.1)	22.0 (4.9 to 39)	8.8 (-7.6 to 25.2)	60.6 (35.8 to 85.3)	40.6 (19.0 to 62.2)	50.7 (30.7 to 70.8)	22.7 (3.5 to 41.9)	32.2 (11.1 to 53.3)
Diabetes	33.8 (24.4 to 43.2)	39.2 (26.8 to 51.6)	31.0 (19.4 to 42.6)	32.5 (20.6 to 44.4)	33.9 (26.3 to 41.6)	30.0 (15.8 to 44.3)	38.2 (21.8 to 54.6)	38.5 (1.7 to 75.3)	45.5 (20.9 to 70.2)	42.6 (8.9 to 76.3)	0	48.2 (19.6 to 76.8)	29.1 (5.9 to 52.4)	55.1 (25 to 85.1)	37.6 (8.1 to 67.1)
Ischemic heart disease	21.1 (15.7 to 26.5)	23.7 (15.3 to 32.1)	25.8 (16.3 to 35.3)	34.7 (26.0 to 43.3)	18.8 (10.0 to 27.5)	21.2 (16.7 to 25.8)	24.6 (14.1 to 35.1)	0	26.1 (8.1 to 44.0)	41.4 (13.4 to 69.3)	26.9 (4.4 to 49.5)	15.4 (-0.6 to 31.4)	23.1 (6.3 to 39.9)	10.9 (-3.3 to 25)	31.3 (10.5 to 52.2)
Cognitive impairment symptoms	20.3 (14.9 to 25.7)	10.3 (3.6 to 17.0)	26.4 (16.8 to 36.1)	24.4 (16.5 to 32.3)	23.8 (13.9 to 33.7)	24.5 (14.1 to 34.9)	21.2 (16.6 to 25.7)	0	0	17.2 (-4.4 to 38.9)	13.7 (-3.9 to 31.3)	24.1 (4.5 to 43.6)	42.5 (22.8 to 62.1)	43.8 (21.4 to 66.1)	16.8 (-0.3 to 33.9)
HIV	1.8 (0 to 3.6)	0	4.2 (0 to 8.4)	2.6 (-0.3 to 5.5)	3.7 (-0.5 to 7.9)	0	0	3.2 (1.3 to 5.2)	0	0	0	0	3.9 (-3.6 to 11.3)	0	0
High cholesterol	8.1 (4.5 to 11.8)	14.6 (7.7 to 21.5)	4.5 (-0.2 to 9.2)	4.3 (0.6 to 8)	10.0 (3.4 to 16.5)	9.1 (2.1 to 16.1)	0	0	7.4 (4.5 to 10.3)	16.6 (-4.5 to 37.6)	13.1 (-3.9 to 30.2)	14.9 (-0.7 to 30.5)	0	5.3 (-4.8 to 15.4)	15.6 (-0.7 to 32)
Signs of alcohol problems	4.1 (1.5 to 6.7)	3.3 (-0.3 to 6.8)	4.9 (0.5 to 9.2)	0.9 (-0.9 to 2.7)	4.9 (0.1 to 9.6)	7.6 (1.2 to 13.9)	3.2 (-1.2 to 7.5)	0	8.7 (-2.9 to 20.2)	3.9 (1.7 to 6)	0	9.9 (-3.2 to 23)	4.2 (-3.8 to 12.2)	10.3 (-3.3 to 24.0)	0
Tuberculosis	3.1 (0.7 to 5.4)	4.1 (0.2 to 8.0)	5.6 (0.4 to 10.8)	7.8 (2.9 to 12.7)	0	6.2 (0.3 to 12.1)	3.2 (-1.2 to 7.5)	0	8.7 (-2.9 to 20.2)	0	4.9 (2.5 to 7.3)	15.4 (-0.7 to 31.4)	8.6 (-2.8 to 20)	0	5.3 (-4.8 to 15.3)
Stroke	7.2 (3.7 to 10.6)	5.1 (0.8 to 9.5)	8.5 (2.6 to 14.5)	6.9 (2.3 to 11.6)	9.2 (2.7 to 15.8)	4.7 (-0.5 to 9.9)	7.4 (0.8 to 14)	0	13 (-0.8 to 26.8)	16.6 (-4.5 to 37.8)	20.4 (-0.1 to 40.9)	6.5 (3.7 to 9.2)	8.9 (-2.7 to 20.5)	21.0 (2.6 to 39.4)	16.0 (-0.6 to 32.5)
Underweight	7.2 (3.5 to 10.8)	0	12.8 (5.4 to 20.2)	11.6 (5.4 to 17.8)	7.4 (1.2 to 13.6)	9.4 (2 to 16.9)	17.4 (7.4 to 27.5)	10.3 (-8.8 to 29.4)	0	9.4 (-7.9 to 26.7)	15.2 (-3.9 to 34.4)	11.8 (-3.1 to 26.8)	8.7 (5.4 to 12.0)	8.3 (-5.7 to 22.4)	11.4 (-3.3 to 26.2)
Chronic cough, no TB	6.5 (3.2 to 9.8)	5.1 (0.7 to 9.4)	4.4 (-0.7 to 9.4)	3.8 (0.2 to 7.4)	10.2 (3.2 to 17.2)	3.2 (-1.2 to 7.6)	13 (4.6 to 21.4)	0	4.5 (-4.1 to 13.1)	16.7 (-4.5 to 37.9)	0	20.3 (2.5 to 38)	6.1 (-4.4 to 16.5)	6.3 (3.5 to 9.0)	10.8 (-3.3 to 25)
Kidney disease	6.8 (3.5 to 10.2)	8.8 (3.3 to 14.3)	6.3 (1.0 to 11.7)	5.2 (1.1 to 9.3)	6.8 (0.8 to 12.9)	9.1 (2.1 to 16.1)	4.9 (-0.5 to 10.3)	0	13 (-0.8 to 26.8)	0	6.6 (-6 to 19.2)	15.2 (-0.7 to 31)	8.2 (-2.7 to 19.1)	10.7 (-3.3 to 24.6)	6.2 (3.5 to 8.9)

N = 312 after multiple imputation of missing data. Top-left to bottom-right diagonal values represent the unconditional prevalence of the chronic condition.

Table S3: Prevalence and extent of multimorbidity among middle-aged and elderly women in peri-urban Tanzania, by age-group

Number of chronic conditions or health areas affected	Age group	Prevalence of chronic conditions % (95% CI)	Prevalence of health areas affected % (95% CI)
0	40–44	9.7 (6.4 to 12.9)	9.7 (6.4 to 12.9)
	45–49	6.6 (3.5 to 9.7)	6.6 (3.5 to 9.7)
	50–54	4.3 (1.3 to 7.3)	4.3 (1.3 to 7.3)
	55–59	6.7 (2.5 to 10.9)	6.7 (2.5 to 10.9)
	60–64	3.3 (0 to 6.7)	3.3 (0 to 6.7)
	65–69	2.3 (–1.4 to 6.1)	2.3 (–1.4 to 6.1)
	70+	0	0
1	40–44	26.2 (21.6 to 30.8)	54 (49.1 to 58.9)
	45–49	21.9 (16.7 to 27.2)	56.8 (51.2 to 62.5)
	50–54	19.1 (12.9 to 25.3)	51.5 (44.9 to 58.2)
	55–59	15.6 (9.4 to 21.9)	55.7 (47.9 to 63.5)
	60–64	15.5 (8.3 to 22.6)	51.1 (42.3 to 59.8)
	65–69	10.3 (2.1 to 18.5)	47.1 (36.0 to 58.3)
	70+	7.4 (1.6 to 13.3)	27.6 (18.5 to 36.7)
2	40–44	25.9 (21.2 to 30.6)	31.7 (27.4 to 36.1)
	45–49	32.6 (26.7 to 38.6)	31.2 (26.1 to 36.4)
	50–54	26.9 (20.3 to 33.5)	38.0 (31.7 to 44.4)
	55–59	29.1 (21.3 to 37.0)	32.3 (25.2 to 39.5)
	60–64	30.5 (20.9 to 40.1)	42.5 (34.0 to 51.1)
	65–69	29.4 (17.3 to 41.5)	45.4 (34.2 to 56.5)
	70+	17.5 (7.7 to 27.2)	69.2 (59.8 to 78.6)
3	40–44	20.8 (16.4 to 25.2)	4.6 (2.6 to 6.5)
	45–49	21.6 (16.5 to 26.7)	5.3 (2.9 to 7.8)
	50–54	24.7 (18.1 to 31.2)	6.2 (3.0 to 9.3)
	55–59	24.1 (16.5 to 31.7)	5.3 (1.9 to 8.6)
	60–64	23.1 (14.6 to 31.5)	3.1 (0.1 to 6.0)
	65–69	29.3 (17.1 to 41.4)	5.2 (0 to 10.4)
	70+	26.2 (15.0 to 37.5)	3.2 (–0.4 to 6.8)
4	40–44	11.8 (8.4 to 15.2)	
	45–49	10.1 (6.2 to 14.0)	
	50–54	13.8 (8.5 to 19.1)	
	55–59	12.2 (6.3 to 18.0)	
	60–64	14.2 (6.8 to 21.6)	
	65–69	15.2 (5.5 to 24.9)	
	70+	26.9 (16.3 to 37.6)	
5+	40–44	5.6 (3.2 to 8.0)	
	45–49	7.1 (4.1 to 10.1)	
	50–54	11.3 (6.7 to 15.8)	
	55–59	12.2 (6.9 to 17.5)	
	60–64	13.4 (6.8 to 20.1)	
	65–69	13.5 (5.1 to 21.9)	
	70+	21.9 (12.3 to 31.5)	

N = 1528 after multiple imputation of missing data.

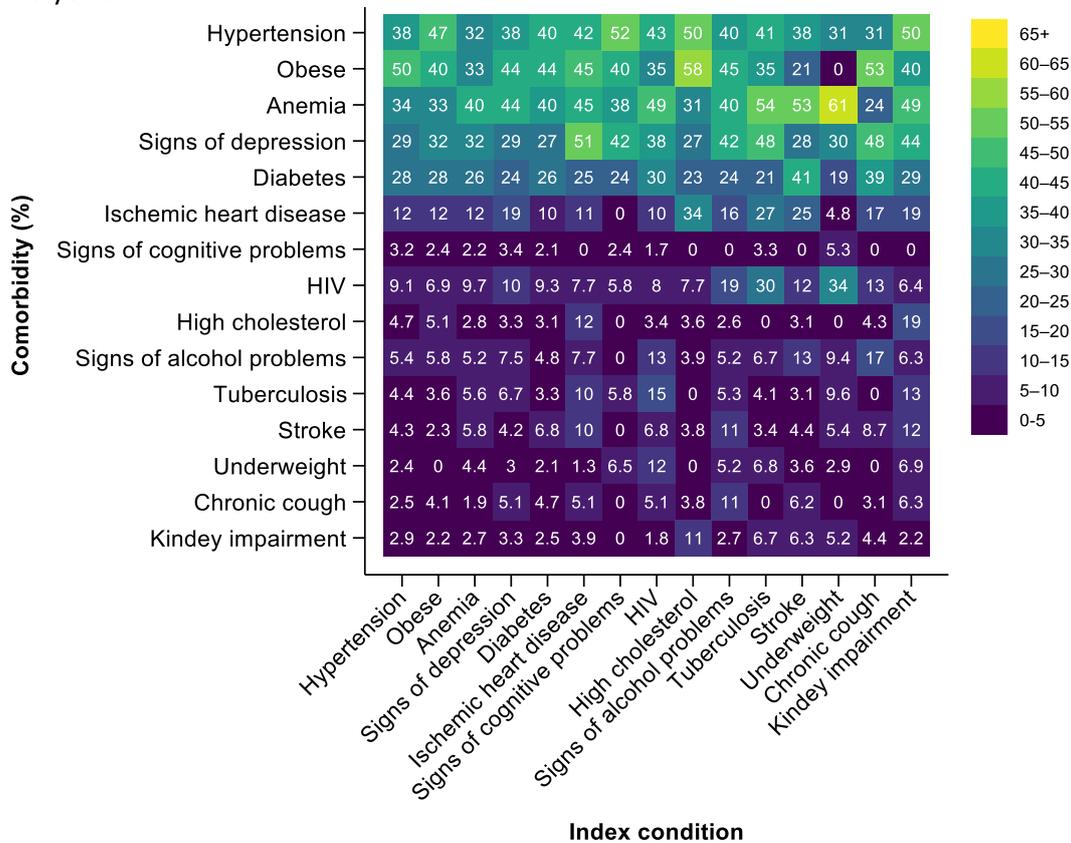
Table S3: Prevalence and extent of multimorbidity among middle-aged and elderly women in peri-urban Tanzania, by age-group (continued)

Number of chronic conditions or health areas affected	Age group	Prevalence of chronic conditions % (95% CI)	Prevalence of health areas affected % (95% CI)
0-1	40-44	35.9 (31.0 to 40.7)	63.7 (59.2 to 68.2)
	45-49	28.5 (22.8 to 34.3)	63.4 (58.2 to 68.7)
	50-54	23.4 (16.9 to 29.8)	55.8 (49.3 to 62.3)
	55-59	22.3 (15.3 to 29.3)	62.4 (55.0 to 69.8)
	60-64	18.8 (11.2 to 26.4)	54.4 (45.8 to 63.0)
	65-69	12.6 (4.0 to 21.3)	49.5 (38.4 to 60.5)
	70+	7.4 (1.6 to 13.3)	27.6 (18.5 to 36.7)
2+	40-44	64.1 (59.3 to 69.0)	36.3 (31.8 to 40.8)
	45-49	71.5 (65.7 to 77.2)	36.6 (31.3 to 41.8)
	50-54	76.6 (70.2 to 83.1)	44.2 (37.7 to 50.7)
	55-59	77.7 (70.7 to 84.7)	37.6 (30.2 to 45.0)
	60-64	81.2 (73.6 to 88.8)	45.6 (37.0 to 54.2)
	65-69	87.4 (78.7 to 96.0)	50.5 (39.5 to 61.6)
	70+	92.6 (86.7 to 98.4)	72.4 (63.3 to 81.5)
0-2	40-44	61.7 (56.8 to 66.7)	
	45-49	61.2 (55.2 to 67.1)	
	50-54	50.3 (43.1 to 57.5)	
	55-59	51.5 (43.1 to 59.8)	
	60-64	49.3 (39.3 to 59.3)	
	65-69	42.1 (29.2 to 54.9)	
	70+	24.9 (14.5 to 35.3)	
3+	40-44	38.3 (33.3 to 43.2)	
	45-49	38.8 (32.9 to 44.8)	
	50-54	49.7 (42.5 to 56.9)	
	55-59	48.5 (40.2 to 56.9)	
	60-64	50.7 (40.7 to 60.7)	
	65-69	57.9 (45.1 to 70.8)	
	70+	75.1 (64.7 to 85.5)	
0-3	40-44	82.6 (78.7 to 86.4)	
	45-49	82.8 (78.2 to 87.4)	
	50-54	74.9 (68.6 to 81.2)	
	55-59	75.6 (68.3 to 82.9)	
	60-64	72.4 (63.7 to 81.0)	
	65-69	71.3 (60.0 to 82.6)	
	70+	51.2 (39.3 to 63.0)	
4+	40-44	17.4 (13.6 to 21.3)	
	45-49	17.2 (12.6 to 21.8)	
	50-54	25.1 (18.8 to 31.4)	
	55-59	24.4 (17.1 to 31.7)	
	60-64	27.6 (19.0 to 36.3)	
	65-69	28.7 (17.4 to 40.0)	
	70+	48.8 (37.0 to 60.7)	

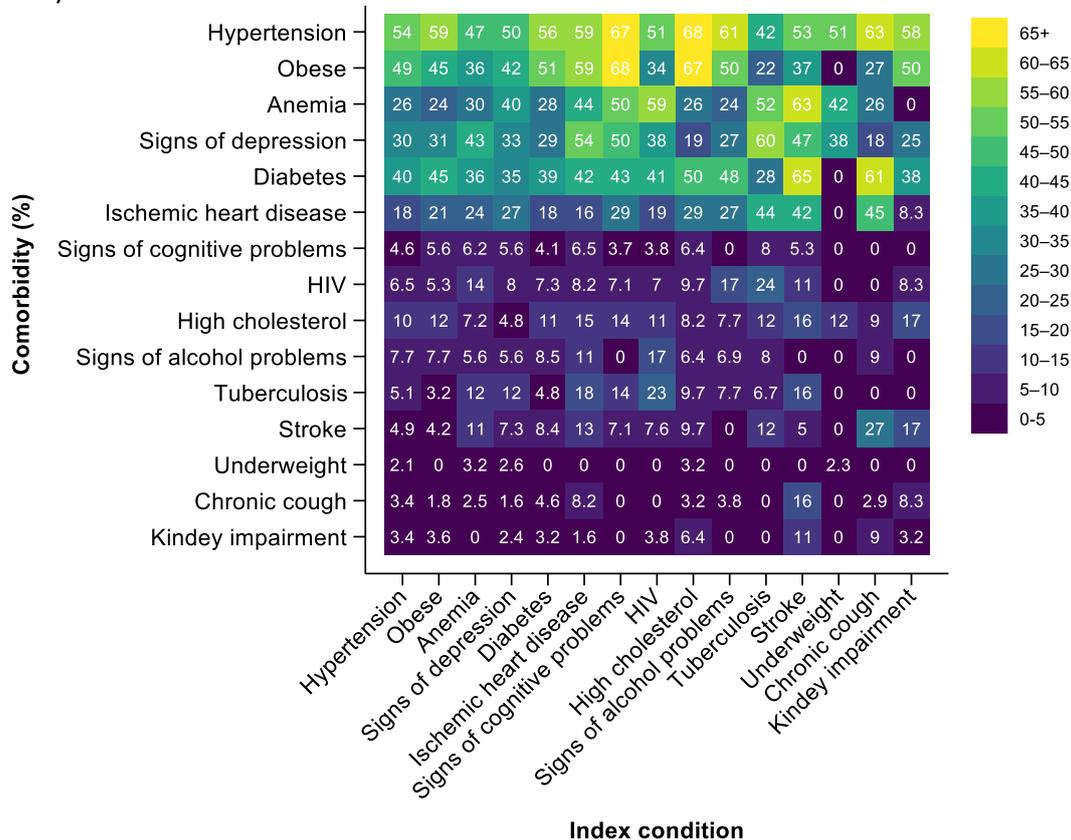
N = 1528 after multiple imputation of missing data.

Figure S1: Comorbidity patterns among middle-aged and elderly women in peri-urban Tanzania, by age group

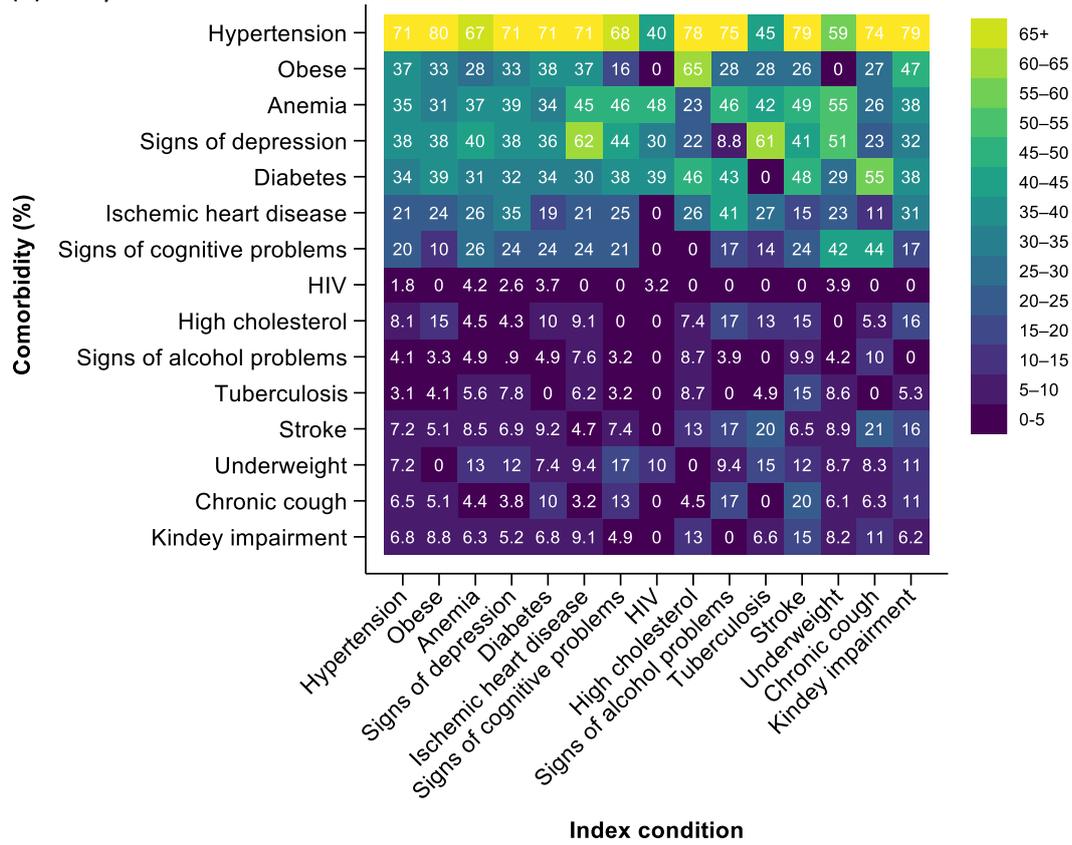
(a) 40–49 years



(b) 50–59 years



(d) 60+ years



N = 733, 378 and 312, respectively, after multiple imputation of missing data. Off-diagonal values represent the conditional prevalence of a comorbidity given the presence of the index condition. Top-left to bottom-right diagonal values represent the unconditional prevalence of the chronic condition. Data with 95% confidence intervals are provided in **supplementary Table S2**.