

THE LANCET

Supplementary appendix

This appendix formed part of the original submission and has been peer reviewed. We post it as supplied by the authors.

Supplement to: Kivuyo S, Birungi J, Okebe J, et al. Integrated management of HIV, diabetes, and hypertension in sub-Saharan Africa (INTE-AFRICA): a pragmatic cluster-randomised, controlled trial. *Lancet* 2023; **402**: 1241–50.

Table of Contents

Table S1: Analysis of primary and secondary binary outcomes in all enrolled participants (i.e. entire cohort including those with HIV and concomitant diabetes or hypertension or both (ITT population)	2
Table S2a. New clinical complications diagnosed at clinics, among those with participants with diabetes, hypertension or both and no complications at baseline (ITT population).	3
Table S2b. New clinical complications diagnosed at clinics in HIV population and no complications at baseline (ITT population).	4
Table S3. Trial outcomes in participants with diabetes, hypertension, or both (PP population).	5
Table S5: Within group comparison of change in blood pressure and fasting blood glucose at the study end in participants with diabetes, hypertension, or both (ITT population).	7
Appendix note on analysis by gender.	8
Methods and results of the provider perspective economic evaluation.	9
Table S6. Resource use by condition	10
Table S7. Diagnostic and medication prices in 2021 local currency units	11
Table S8. Detailed provider cost results by condition and by country (2021 Int\$)	13

Table S1: Analysis of primary and secondary binary outcomes in all enrolled participants (i.e. entire cohort including those with HIV and concomitant diabetes or hypertension or both (ITT population))

Outcomes	Integrated care arm (N=3438)	Standard care arm (N=3590)	Crude risk/mean difference (95%CI), p value*	Adjusted risk/mean difference (95%CI), p value [§]
Retention in care, — no./total no. (%)	3155/3438(91.8)	3332/3590(92.8)	-0.86(-3.81,2.09); p=0.57	-1.35(-4.08,1.37); p=0.33
Plasma viral load <1000 copies/ml — no./total no. (%)	1670/1716(97.3)	1708/1753(97.4)	-0.14(-1.57,1.30); p<0.0001 [£]	-0.09(-1.47,1.30); p<0.0001 [£]
Plasma viral load <400 copies/ml — no./total no. (%)	1608/1716(93.7)	1646/1753(93.9)	-0.81(-4.37,2.74); p=0.65	-0.20(-3.02,2.62); p=0.89
Achieved viral suppression (<1000 copies/ml) while on the trial — no./total no. (%)	58/1654(3.5)	68/1735(3.9)	-0.36(-2.73,2.02); p=0.77	-0.00(-2.38,2.38); p=1.00
Blood pressure <140/90 mmHg — no./total no. (%)	581/1167(49.8)	476/1224(38.9)	9.77(-0.75,20.29); p=0.069	7.97(-1.46,17.40); p=0.098
Change in systolic blood pressure from baseline in mmHg — no.,mean (SD) [¶]	2711,-3.72(19.23)	2837,-1.40(18.93)	-3.11(-3.96,-2.27); p<.0001	-2.60(-4.86,-0.34); p=0.024
Change in diastolic blood pressure from baseline in mmHg, — no.,mean (SD) [¶]	2711,-1.69(12.37)	2837,-1.81(12.15)	-0.79(-1.33,-0.25); p=0.0043	-0.73(-2.15,0.69); p=0.31
Fasting blood glucose ≤6.9mmol/l — no./total no. (%)	62/243(25.5)	113/537(21.0)	4.69(-2.03,11.41); p= 0.17	3.84(-2.37,10.04); p=0.23
Change in fasting blood glucose from baseline, — no.,mean (SD) [¶]	175,-1.31(6.40)	450,-0.19(5.27)	-1.06(-1.84,-0.29); p=0.0070	-1.18(-1.90,-0.46); p=0.0012
Control of blood pressure or of glycaemia — no./total no. (%)	1875/2716(69.0)	1873/2855(65.6)	3.95(-2.09,10.00); p=0.20	4.01(-2.02,10.04); p=0.19
Control of viral load or of blood pressure or of glycemia— no./total no. (%)	2392/2859(83.7)	2416/3055(79.1)	4.55(-0.11,9.21); p=0.056	5.87(1.29,10.46); p=0.012

[¶] Includes 629 participants with HIV co-morbidities: 453 HIV and diabetes, 94 with HIV and hypertension, 82 with HIV, diabetes, and hypertension.

SD=Standard Deviation

* Adjusted for clustering, and also baseline measurement for a continuous outcome.

§ Adjusted for clustering, age, sex, co-morbidity and location (rural, peri-urban, urban), and also baseline measurement for a continuous outcome.

£ p value from non-inferiority test.

¶ Based on paired measurements at baseline and at the end of the study.

Table S2a. New clinical complications diagnosed at clinics, among those with participants with diabetes, hypertension or both and no complications at baseline (ITT population).

Outcomes	Integrated care arm (N=1409)	Standard care arm (N=1623)	Crude risk difference (95%CI); p value	Adjusted risk difference (95%CI);p value [§]
New stroke episodes— no. (%)	5(0.4)	6(0.4)	-0.01(-0.45,0.42); p=0.95	-0.02(-0.45,0.40); p=0.91
Heart attack— no. (%)	6(0.4)	2(0.1)	0.30(-0.11,0.72); p=0.16	0.34(-0.09,0.76); p=0.12
Renal diseases— no. (%)	3(0.2)	14(0.9)	-0.64(-1.88,0.60); p=0.31	-0.48(-1.51,0.54); p=0.36
Non-specific visual problems— no. (%)	22(1.6)	21(1.3)	0.17(-1.53,1.88); p=0.84	0.53(-1.26,2.32); p=0.56
Numbness (hands and feet)— no. (%)	50(3.5)	53(3.3)	-0.25(-5.18,4.67); p=0.92	0.68(-4.38,5.73); p=0.79
Foot ulcer complications— no. (%)	9(0.6)	6(0.4)	0.28(-0.36,0.92); p=0.39	0.34(-0.26,0.93); p=0.27

§ Adjusted for clustering, age, sex, co-morbidity and location (rural, peri-urban, urban).

Table S2b. New clinical complications diagnosed at clinics in HIV population and no complications at baseline (ITT population).

Outcomes	Integrated care arm (N=1700)	Standard care arm (N=1664)	Crude risk difference (95%CI); p value	Adjusted risk difference (95%CI); p value [§]
New stroke episodes— no. (%)	0 (0.0)	1 (0.1)	-0.06(-0.17,0.05); p=0.31	
Heart attack— no. (%)	0 (0.0)	0 (0.0)		
Renal diseases— no. (%)	0 (0.0)	1 (0.1)	-0.06(-0.17,0.05); p=0.30	
Non-specific visual problems— no. (%)	6 (0.4)	5 (0.3)	0.02(-0.59,0.63); p=0.95	0.07(-0.54,0.68); p=0.83
Numbness (hands and feet)— no. (%)	11 (0.6)	16 (1.0)	-0.39(-1.48,0.70); p=0.48	-0.36(-1.35,0.64); p=0.48
Foot ulcer complications— no. (%)	0 (0.0)	1 (0.1)	-0.06(-0.17,0.05); p=0.31	

Table S2b: New clinical complications di 1

§ Adjusted for clustering, age, sex, co-morbidity and location (rural, peri-urban, urban).

Table S3. Trial outcomes in participants with diabetes, hypertension, or both (PP population).

	Integrated care arm (N=1390)	Standard care arm (N=1617)	Crude risk/mean difference (95%CI), p value*	Adjusted risk/mean difference (95%CI), p value [§]
Primary outcome				
Retention in care— no./total no. (%)	1234/1389(88.8)	1449/1615(89.7)	-0.78(-5.97,4.40),0.7671	-0.68(-5.61,4.25),0.7862
Retained in care (transfer and death are treated as not remained): Primary endpoint (sensitivity analysis) — no./total no. (%)	1234/1409(87.6)	1449/1623(89.3)	-1.55(-7.07,3.97),0.5831	-1.26(-6.51,3.98),0.6371
Secondary outcomes				
<i>Blood pressure control among participants with hypertension</i>				
Blood pressure <140/90 mmHg, — no./total no. (%)	495/928(53.3)	414/1009(41.0)	11.63(1.78,21.49),0.0207	10.45(1.69,19.21),0.0194
Change in systolic blood pressure from baseline in mmHg — no.,mean (SD) ^ρ	1044,-5.75(22.39)	1229,-2.69(21.69)	-3.63(-6.83,-0.43),0.0264	-3.67(-6.71,-0.64),0.0177
Change in diastolic blood pressure from baseline in mmHg, — no.,mean (SD) ^ρ	1044,-2.51(12.82)	1229,-2.51(13.41)	-1.37(-3.18,0.44),0.1372	-1.21(-2.96,0.55),0.1775
<i>Blood glucose control among participants with diabetes</i>				
Fasting blood glucose ≤6.9mmol/l, — no./total no. (%)	49/190(25.8)	94/466(20.2)	5.68(-1.44,12.80),0.1178	4.47(-1.61,10.56),0.1495
Change in fasting blood glucose from baseline, — no.,mean (SD) ^ρ	151,-1.15(6.61)	409,-0.10(5.23)	-1.02(-1.87,-0.16),0.0196	-1.12(-1.94,-0.30),0.0077
Either blood pressure <140/90 mmHg or fasting blood glucose ≤6.9mmol/l, — no./total no. (%)	612/1046(58.5)	627/1244(50.4)	8.26(-1.40,17.92),0.0938	8.03(-0.42,16.49),0.0627

Note: the per-protocol analysis excludes participants who transferred out to other health clinics/facilities.

SD=Standard Deviation

* Adjusted for clustering, and also baseline measurement for a continuous outcome.

§ Adjusted for clustering, age, sex, co-morbidity and site, and also baseline measurement for a continuous outcome.

ρ Based on paired measurements at baseline and at the end of the study.

Table S4. Trial outcomes among participants with HIV alone (PP population)

	Integrated care arm (N=1659)	Standard care arm (N=1652)	Crude risk difference (95%CI), p value	Adjusted risk difference (95%CI), p value [§]
Primary outcome				
Plasma viral load <1000 copies/ml — no./total no. (%)	1412/1456(97.0)	1450/1490(97.3)	-0.37(-1.99,1.26)* <0.001 [£]	-0.36(-1.99,1.28)*, <0.001 [£]
Secondary outcomes				
Alive and retained in care — no./total no. (%)	1554/1659(93.7)	1579/1652(95.6)	-2.27(-4.82,0.28), 0.081	-2.46(-4.87,-0.05), 0.045
Plasma viral load <400 copies/ml — no./total no. (%)	1358/1456(93.3)	1399/1490(93.9)	-1.24(-4.72,2.23), 0.486	-0.69(-3.50,2.12), 0.633
Achieved viral suppression (<1000 copies/ml) while on the trial — no./total no. (%)	46/1408(3.3)	58/1482(3.9)	-0.58(-2.69,1.53), 0.666	-0.19(-2.32,1.94), 0.944

Note: the per-protocol analysis excludes participants who transferred out to other health clinics/facilities.

* One-sided 95%CI was calculated.

§ Adjusted for clustering, age, sex, co-morbidity and location (rural, peri-urban, urban).

£ p value from non-inferiority test.

Table S5: Within group comparison of change in blood pressure and fasting blood glucose at the study end in participants with diabetes, hypertension, or both (ITT population).

Outcomes ^p	Integrated care arm (N=1410)			Standard care arm (N=1624)		
	no., mean (SD)	Crude mean change from baseline (95% CI); p-value [*]	Adjusted mean change from baseline (95% CI); p-value [§]	no., mean (SD)	Crude mean change from baseline (95% CI); p-value [*]	Adjusted mean change from baseline (95% CI); p-value [§]
Change in systolic blood pressure	1044,-5.75(22.39)	-6.23(-7.32,-5.14); p<.0001	-6.65(-7.74,-5.57); p<.0001	1229,-2.68(21.70)	-2.28(-3.28,-1.27); p<.0001	-2.70(-3.72,-1.68); p<.0001
Change in diastolic blood pressure	1044,-2.51(12.82)	-3.28(-3.92,-2.63); p<.0001	-3.37(-4.01,-2.72); p<.0001	1229,-2.52(13.41)	-1.86(-2.45,-1.27); p<.0001	-2.05(-2.66,-1.44); p<.0001
Change in fasting blood glucose	151,-1.15(6.61)	-1.14(-1.85,-0.44); p=0.0015	-1.19(-1.89,-0.49); p=0.0009	408,-0.13(5.20)	-0.13(-0.56,0.30); p=0.55	-0.13(-0.56,0.31); p=0.56

^p Based on paired measurements at baseline and at the end of the study.

SD=Standard Deviation

^{*} Adjusted for clustering and baseline measurement of the outcome

[§] Adjusted for clustering, baseline measurement of the outcome, age, sex, co-morbidity, and location (rural, peri-urban, urban).

Appendix note on analysis by gender.

We examined the primary outcomes by gender. Overall, the proportion retained in care among women with diabetes, hypertension or both 975/1092 (89.3%) in the integrated care arm versus 102/1206 (90.5%) in the standard vertical care arm. These figures among men were 279/317 (88.0%) in the integrated care arm versus 365/417 (87.5%) in the standard care arm.

The proportion achieving viral suppression (<1000 copies per ml) among participants with HIV were, among women, 1021/1051 (97.1%) in the integrated care arm versus 994/1023 (97.2%) in the standard vertical care arm. Among men these figures were 391/405 (96.5%) in the integrated care arm versus 457/468 (97.6%) in the standard care arm.

Methods and results of the provider perspective economic evaluation.

We estimated economic costs from the provider perspective over a time horizon of 12 months, equivalent to the duration of study follow-up. We used a combination of top-down and bottom-up costing approaches to estimate average monthly costs per patient receiving standard or integrated care. Costs were estimated using a standardised facility-based tool. Costs were categorised into capital costs (annuitized by 3%) and recurrent costs [1], which included costs associated with personnel, medication, diagnostics and facility overheads (equipment and furniture, rental space and administration). Personnel and overhead costs were estimated using a top-down approach, while an ingredients approach [2] was used to calculate medication and diagnostics costs. A list of resources considered for each condition is provided in Supplement Table S6.

Cost data for personnel and facility overheads were sourced from primary data collected during the MOCCA study [1] for 10 health facilities, which also made up a sub-sample of health facilities participating in INTE-AFRICA. A detailed list of medication and diagnostic prices, along with corresponding sources, are included in Supplement Table S7. All costs were captured in local currency units (Ugandan or Tanzanian Shillings, Ugx or Tsh) and inflated to 2021 prices [3].

To estimate total provider costs by health condition, we combined INTE-AFRICA trial data on the duration of patient enrolment (in months) and number of visits with the average monthly cost to treat a patient's health condition at the type of health facility where they sought care (level 3 or 4). Costs for patients with comorbidities receiving standard care were estimated by summing the average monthly personnel and overhead costs of each health condition. For patients with comorbidities receiving integrated care, personnel and facility overheads were assumed equivalent to the average monthly costs required to treat HIV alone [1].

All costs are reported separately for Uganda and Tanzania in 2021 Ugx or Tsh and in International Dollars (Int\$), following conversion using World Bank exchange rates [3]. International dollars better account for purchasing power parity. To investigate whether or not differences in cost between integrated and standard vertical care are statistically significant, we carried out two-sided t-tests at a 5% significance level. Uncertainty in key cost drivers, such as staff costs and service use were investigated in a two-way sensitivity analysis.

1. Shiri T et al.. Patient and health provider costs of integrated HIV, diabetes and hypertension ambulatory health services in low-income settings—an empirical socio-economic cohort study in Tanzania and Uganda. *BMC medicine*. 2021 Dec;19(1):1-5.

2. Drummond M, Sculpher M. Common methodological flaws in economic evaluations. *Med Care*. 2005;43(7 Suppl):5–14. <https://doi.org/10.1097/01.mlr.0000170001.10393.b7>

3. World Bank open data (Consumer price index): <https://data.worldbank.org/>

Table S6. Resource use by condition

Cost component	Single conditions			Multiple conditions			
	Diabetes (DM)	Hypertension (HTN)	HIV	DM + HTN	DM + HIV	HTN + HIV	DM + HTN + HIV
Staff	Triage, Nurse, Clinician, Pharmacist, Laboratory technician						
Medication	Diabetes drugs	BP drugs	Antiretroviral drugs	Diabetes drugs	Diabetes drugs	BP drugs	Diabetes drugs
				BP drugs	ART + HIV-related complications	ART + HIV-related complications	BP drugs
							ART + HIV-related complications
Laboratory	RBS, FBS, LFT, RFT	LFT, RFT, Lipids, RBS,	CD4 count, VL, FBC	RBS, FBS, LFT, RFT,	RBS, FBS, LFT, RFT,	LFT, RFT, CD4 count	RBS, FBS, LFT, RFT, Lipids,
	HBA1C, Lipids, FBP	Creatinine, FBS,	Haemoglobin, RBS,	HBA1C, Lipids, BUN,	HBA1C, CD4 count, VL,	VL, Lipids	HBA1C, CD4 count, VL
	Creatinine, BUN,	MRDT, Urinalysis	BUN, creatinine,	Urinalysis, creatinine	Lipids,		
	Urinalysis		HBA1C, haemoglobin				
Overheads							
<i>Administration</i>	NCD admin	NCD admin	CTC admin	NCD admin	NCD or CTC admin	NCD or CTC admin	NCD or CTC admin
<i>Rental space</i>	NCD space	NCD space	CTC space	NCD space	NCD or CTC space	NCD or CTC space	NCD or CTC space
<i>Furniture</i>	NCD furniture	NCD furniture	CTC furniture	NCD furniture	NCD or CTC furniture	NCD or CTC furniture	NCD or CTC furniture
<i>Equipment</i>	Glucometers	BP machines	Weighing scales	Glucometers	Glucometers	BP machines	Glucometers
	Weighing scales	Weighing scales	Stethoscopes	Weighing scales	Weighing scales	Weighing scales	Weighing scales
	Stethoscopes	Stethoscopes	BP machines	Stethoscopes	Stethoscopes	Stethoscopes	Stethoscopes
	BP machines			BP machines	BP machines		BP machines

Table S7. Diagnostic and medication prices in 2021 local currency units

Resource item	Uganda (UGX)	Source	Tanzania (TSh)	Source
Laboratory, per test				
Urea/Creatinine	20440	Sinux (Kiruddu) Laboratories	10367	Lancet Laboratories Tanzania
Urinalysis	10220	Sinux (Kiruddu) Laboratories	10367	Lancet Laboratories Tanzania
Full blood count	15330	Sinux (Kiruddu) Laboratories	10367	Lancet Laboratories Tanzania
HIV rapid testing	10220	Sinux (Kiruddu) Laboratories	23740	Lancet Laboratories Tanzania
CD4 count	51100	Sinux (Kiruddu) Laboratories	31100	Lancet Laboratories Tanzania
Viral load	255498	Sinux (Kiruddu) Laboratories	124401	Lancet Laboratories Tanzania
Renal function test	40880	Sinux (Kiruddu) Laboratories	10367	Lancet Laboratories Tanzania
Liver function (ALT) test	40880	Sinux (Kiruddu) Laboratories	88014	Lancet Laboratories Tanzania
Haemoglobin test	66429	Sinux (Kiruddu) Laboratories	14410	Lancet Laboratories Tanzania
Syphilis (VDRL) test	10220	Sinux (Kiruddu) Laboratories	10367	Lancet Laboratories Tanzania
Malaria RDC test	10220	Sinux (Kiruddu) Laboratories	5183	Lancet Laboratories Tanzania
Pregnancy test	45990	Sinux (Kiruddu) Laboratories	18556	Lancet Laboratories Tanzania
H. Pylori test	15330	Sinux (Kiruddu) Laboratories	56913	Lancet Laboratories Tanzania
Hepatitis B test	45990	Sinux (Kiruddu) Laboratories	10367	Lancet Laboratories Tanzania
Gene Xpert	45990	Sinux (Kiruddu) Laboratories	64170	Lancet Laboratories Tanzania
CrAg test	25550	Sinux (Kiruddu) Laboratories	16587	Lancet Laboratories Tanzania
Random blood sugar test	10220	Sinux (Kiruddu) Laboratories	10263	Lancet Laboratories Tanzania
Fasting blood sugar test	10220	Sinux (Kiruddu) Laboratories	10263	Lancet Laboratories Tanzania
HBA1C test	35770	Sinux (Kiruddu) Laboratories	56913	Lancet Laboratories Tanzania

OGTT test	66429	Sinux (Kiruddu) Laboratories	-	
Lipid profile test	40880	Sinux (Kiruddu) Laboratories	56913	Lancet Laboratories Tanzania
Medication				
<i>Antiretroviral therapy per month</i>				
TDF/3TC/DTG 300mg/300mg/50mg, per 30 tablets	33284	National Medical Stores	20595	WHO Global Price Reporting Mechanism
AZT/3TC/NPV 300mg/150mg/200mg, per 60 tablets	38840	National Medical Stores	24033	WHO Global Price Reporting Mechanism
DTG 50mg, per 30 tablets	10518	National Medical Stores	6508	WHO Global Price Reporting Mechanism
EFV 200mg, per 30 tablets	16792	WHO Global Price Reporting Mechanism	10390	WHO Global Price Reporting Mechanism
RTV 100mg, per 30 tablets	18710	National Medical Stores	11577	WHO Global Price Reporting Mechanism
ATV/r 300mg/100mg, per 30 tablets	61950	WHO Global Price Reporting Mechanism	38332	WHO Global Price Reporting Mechanism
TDF/3TC/EFV 300mg/300mg/600mg, per 30 tablets	39557	National Medical Stores	24477	WHO Global Price Reporting Mechanism
TDF/3TC 300mg/300mg, per 30 tablets	22766	National Medical Stores	14087	WHO Global Price Reporting Mechanism
AZT/3TC 300mg/150mg, per 60 tablets	40510	National Medical Stores	25066	WHO Global Price Reporting Mechanism
LPV/r 200mg/50mg, per 120 tablets	133788	National Medical Stores	82783	WHO Global Price Reporting Mechanism
NVP 200mg, per 30 tablets	23596	WHO Global Price Reporting Mechanism	14601	WHO Global Price Reporting Mechanism
<i>Diabetes treatment per month</i>				
Insulin mixtard human 100IU/ML, per 100 vials	18254	National Medical Stores	-	
Glibenclamide 5mg, per 100 tablets	3212	National Medical Stores	-	
Metformin HCL 500mg, per 100 tablets	3655	National Medical Stores	-	
Glimepiride 2mg + Metformin 500mg	-		9123	Medical Stores Department

Glimepiride 1mg + Metformin 500mg	-		6220	Medical Stores Department
Losartan 50mg + Hydrochlorothiazide 12.5mg	-		16379	Medical Stores Department
Losartan 50mg + Hydrochlorothiazide 5mg	-		13062	Medical Stores Department
Hypertension treatment per month				Medical Stores Department
Bendroflumethiazide 5mg, per 100 tablets	25681	National Medical Stores	778	Medical Stores Department
Amlodipine 10mg, per 100 tablets	7064	National Medical Stores	2977	Medical Stores Department
Nifedipine 5mg, per 100 tablets	7154	National Medical Stores	6738	Medical Stores Department
Furosemide 40mg, per 1000 tablets	11957	National Medical Stores	594	Medical Stores Department
Enalapril 10mg, per 28 tablets	9271	National Medical Stores	8501	Medical Stores Department
Atenolol 100mg, per 1000 tablets	26674	National Medical Stores	622	Medical Stores Department
Antibiotics				
Cotrimoxazole 120mg, per 100 tablets	7767	National Medical Stores	-	
Amoxicillin/Ampicillin 250mg capsule, per 20 capsules	542677	National Medical Stores	-	
Other drugs				
Fluconazole 200mg, per 100 tablets	206442	National Medical Stores	-	

Table S8. Detailed provider cost results by condition and by country (2021 Int\$)

UGANDA (2021 Int\$)								
Health condition	Integrated care				Standard care			
	Mean	Std. Err.	[95% Conf. Interval]		Mean	Std. Err.	[95% Conf. Interval]	
HIV ALONE								
Personnel	10.31	0.13	10.05	10.57	10.28	0.12	10.04	10.53
Medication	27.74	0.38	26.99	28.49	29.43	0.48	28.49	30.37
Diagnostics	20.79	0.28	20.23	21.34	21.91	0.24	21.43	22.39
Overheads	8.49	0.1	8.3	8.69	8.71	0.1	8.51	8.91
<i>Administration</i>	5.52	0.06	5.39	5.64	5.61	0.06	5.48	5.73

<i>Equipment and furniture</i>	0.82	0.02	0.78	0.86	0.9	0.02	0.87	0.94
<i>Rental space</i>	2.16	0.03	2.11	2.21	2.2	0.03	2.15	2.25
Total	67.33	0.62	66.11	68.56	70.33	0.67	69.03	71.64
HTN ALONE								
Personnel	13.26	0.33	12.61	13.91	14.62	0.42	13.79	15.45
Medication	25.1	0.37	24.37	25.83	24.44	0.39	23.67	25.21
Diagnostics	0	0	0	0	0	0	0	0
Overheads	17.71	0.34	17.03	18.38	18.19	0.44	17.33	19.06
<i>Administration</i>	10.92	0.27	10.4	11.44	11.97	0.34	11.3	12.64
<i>Equipment and furniture</i>	2.97	0.1	2.78	3.16	2.44	0.07	2.3	2.58
<i>Rental space</i>	3.81	0.07	3.67	3.95	3.78	0.09	3.61	3.95
Total	56.07	0.79	54.52	57.61	57.25	1.05	55.19	59.31
DM ALONE								
Personnel	18.84	0.95	16.95	20.73	15.23	0.78	13.68	16.78
Medication	5.79	0.37	5.05	6.53	6.27	0.37	5.53	7.01
Diagnostics	6.83	0.36	6.11	7.55	5.4	0.28	4.84	5.95
Overheads	18.7	0.9	16.9	20.49	15.61	0.72	14.2	17.03
<i>Administration</i>	12.73	0.63	11.48	13.99	10.39	0.51	9.37	11.41
<i>Equipment and furniture</i>	1.99	0.11	1.77	2.21	1.92	0.11	1.69	2.14
<i>Rental space</i>	3.97	0.19	3.59	4.35	3.31	0.15	3.01	3.61
Total	50.15	2.26	45.66	54.64	42.51	1.84	38.87	46.15
HIV+HTN								
Personnel	10.73	0.29	10.16	11.3	25.9	1.41	23.09	28.7
Medication	42	1.05	39.94	44.07	46.99	2.08	42.86	51.12
Diagnostics	19.31	0.64	18.04	20.59	20.26	0.89	18.5	22.03
Overheads	9.11	0.23	8.65	9.57	27.5	1.47	24.56	30.43
<i>Administration</i>	5.86	0.15	5.57	6.16	17.77	1.03	15.71	19.82
<i>Equipment and furniture</i>	0.95	0.04	0.87	1.04	3.51	0.18	3.16	3.86
<i>Rental space</i>	2.3	0.06	2.18	2.41	6.22	0.32	5.59	6.85
Total	81.16	1.41	78.38	83.94	120.65	4.39	111.92	129.39
HIV+DM								
Personnel	11.63	0.99	9.51	13.75	24.61	3.79	16.49	32.74
Medication	38.94	2	34.64	43.23	41.93	5.93	29.21	54.64
Diagnostics	28.85	2.18	24.16	33.53	22.16	2.89	15.96	28.35
Overheads	10.75	0.91	8.79	12.72	24.13	3.5	16.62	31.65
<i>Administration</i>	6.74	0.57	5.51	7.97	15.37	2.45	10.12	20.63
<i>Equipment and furniture</i>	1.36	0.12	1.11	1.61	3.26	0.32	2.57	3.96
<i>Rental space</i>	2.65	0.23	2.17	3.14	5.5	0.79	3.81	7.19
Total	90.17	3.01	83.71	96.62	112.83	13.76	83.31	142.35
HTN+DM								

Personnel	14.13	0.36	13.42	14.84	34.23	1.25	31.77	36.7
Medication	25.22	0.7	23.85	26.6	22.95	0.63	21.7	24.19
Diagnostics	6.21	0.19	5.85	6.58	5.91	0.25	5.42	6.41
Overheads	12.27	0.31	11.66	12.89	37.6	1.25	35.14	40.07
<i>Administration</i>	7.84	0.2	7.46	8.23	25.49	0.91	23.69	27.29
<i>Equipment and furniture</i>	1.36	0.05	1.26	1.46	4.31	0.16	4.01	4.62
<i>Rental space</i>	3.07	0.08	2.92	3.23	7.8	0.26	7.3	8.3
Total	57.84	1.13	55.61	60.06	100.7	2.83	95.11	106.28
HIV+HTN+DM								
Personnel	13.63	0.88	11.8	15.46	48.34	5.5	36.83	59.84
Medication	55.4	5	44.96	65.83	52.23	3.95	43.97	60.5
Diagnostics	24.87	2.19	20.3	29.44	23.25	1.88	19.31	27.19
Overheads	12.12	0.76	10.53	13.71	50.48	5.51	38.95	62.01
<i>Administration</i>	7.69	0.48	6.69	8.69	33.48	3.85	25.43	41.53
<i>Equipment and furniture</i>	1.41	0.13	1.14	1.69	5.99	0.69	4.54	7.44
<i>Rental space</i>	3.02	0.19	2.63	3.41	11.01	1.18	8.54	13.49
Total	106.02	6.49	92.48	119.56	174.3	13.62	145.79	202.81
Tanzania (2021 Int\$)								
Health condition	Integrated care				Standard care			
	Mean	Std. Err.	[95% Conf. Interval]		Mean	Std. Err.	[95% Conf. Interval]	
HIV ALONE								
Personnel	6.09	0.11	5.87	6.3	5.58	0.11	5.37	5.79
Medication	22.54	0.12	22.29	22.78	22.29	0.14	22.03	22.56
Diagnostics	28.28	0.19	27.9	28.67	28.74	0.21	28.33	29.15
Overheads	3.18	0.06	3.06	3.29	3.01	0.05	2.91	3.11
<i>Administration</i>	1.73	0.03	1.67	1.8	1.59	0.03	1.53	1.65
<i>Equipment and furniture</i>	0.18	0.01	0.17	0.2	0.19	0	0.18	0.2
<i>Rental space</i>	1.26	0.03	1.2	1.32	1.23	0.03	1.18	1.29
Total	60.08	0.32	59.45	60.72	59.62	0.35	58.94	60.3
HTN ALONE								
Personnel	7.63	0.19	7.25	8	6.66	0.17	6.32	6.99
Medication	5.34	0.12	5.11	5.57	5.03	0.1	4.83	5.24
Diagnostics	0	0	0	0	0	0	0	0
Overheads	5.76	0.14	5.47	6.04	4.84	0.12	4.6	5.09
<i>Administration</i>	3.45	0.1	3.26	3.65	2.68	0.08	2.52	2.84
<i>Equipment and furniture</i>	0.11	0.01	0.09	0.13	0.14	0.01	0.12	0.15
<i>Rental space</i>	2.19	0.06	2.07	2.31	2.03	0.06	1.91	2.14
Total	18.72	0.37	17.99	19.45	16.54	0.33	15.88	17.19
DM ALONE								
Personnel	6.97	0.41	6.15	7.79	5.58	0.28	5.01	6.14

Medication	3	0.07	2.87	3.14	3.35	0.12	3.12	3.59
Diagnostics	4.58	0.31	3.96	5.19	3.66	0.21	3.24	4.07
Overheads	5.45	0.32	4.81	6.08	4.36	0.22	3.93	4.79
<i>Administration</i>	3.14	0.21	2.72	3.56	2.52	0.13	2.27	2.78
<i>Equipment and furniture</i>	0.14	0.02	0.09	0.18	0.11	0.01	0.08	0.14
<i>Rental space</i>	2.17	0.15	1.87	2.46	1.73	0.1	1.52	1.93
Total	19.99	1.05	17.9	22.09	16.95	0.74	15.49	18.4
HIV+HTN								
Personnel	6.57	0.28	6.02	7.12	11.93	0.5	10.94	12.92
Medication	24.75	0.35	24.07	25.44	23.94	0.26	23.44	24.44
Diagnostics	27.6	0.39	26.83	28.37	29.57	0.47	28.65	30.5
Overheads	3.66	0.14	3.38	3.94	7.47	0.31	6.86	8.09
<i>Administration</i>	1.86	0.08	1.7	2.02	4.1	0.19	3.73	4.48
<i>Equipment and furniture</i>	0.24	0.01	0.21	0.27	0.32	0.02	0.27	0.37
<i>Rental space</i>	1.56	0.07	1.41	1.7	3.05	0.15	2.75	3.34
Total	62.58	0.82	60.96	64.2	72.92	1.11	70.72	75.12
HIV+DM								
Personnel	6.83	0.63	5.54	8.13	12.65	1.44	9.72	15.57
Medication	23.22	0.42	22.35	24.09	22.59	0.61	21.35	23.82
Diagnostics	29.13	1.78	25.46	32.81	29.35	1.56	26.19	32.51
Overheads	3.7	0.39	2.89	4.51	8.02	0.89	6.22	9.82
<i>Administration</i>	1.94	0.18	1.57	2.31	4.5	0.55	3.38	5.62
<i>Equipment and furniture</i>	0.23	0.04	0.14	0.32	0.33	0.06	0.21	0.44
<i>Rental space</i>	1.52	0.23	1.06	1.99	3.19	0.38	2.41	3.97
Total	62.88	2.41	57.9	67.87	72.61	3.78	64.95	80.27
HTN+DM								
Personnel	10.76	0.49	9.8	11.73	13.96	0.45	13.07	14.86
Medication	8.14	0.28	7.57	8.71	7.72	0.18	7.36	8.07
Diagnostics	4.91	0.26	4.39	5.43	4.75	0.17	4.41	5.09
Overheads	5.16	0.23	4.71	5.61	10.95	0.36	10.24	11.65
<i>Administration</i>	3.08	0.14	2.81	3.36	6.89	0.25	6.4	7.38
<i>Equipment and furniture</i>	0.25	0.02	0.21	0.29	0.15	0.02	0.11	0.18
<i>Rental space</i>	1.83	0.11	1.61	2.05	3.91	0.14	3.64	4.18
Total	28.97	0.99	27.01	30.93	37.38	1.03	35.35	39.41
HIV+HTN+DM								
Personnel	8.03	0.64	6.71	9.36	19.78	2.1	15.51	24.06
Medication	30.08	1.24	27.53	32.64	27.47	0.94	25.55	29.39
Diagnostics	28.79	1.49	25.73	31.85	30.8	1.34	28.08	33.53
Overheads	4.36	0.35	3.63	5.09	13.18	1.37	10.4	15.96
<i>Administration</i>	2.28	0.19	1.9	2.67	7.62	0.94	5.72	9.53

<i>Equipment and furniture</i>	0.27	0.04	0.19	0.35	0.43	0.07	0.28	0.58
<i>Rental space</i>	1.8	0.21	1.37	2.23	5.13	0.53	4.04	6.21
Total	71.26	2.58	65.95	76.57	91.24	4.6	81.89	100.59