

Service Delivery Indicators (SDI)

Development Research Group (DECRG)

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Descriptive Results

Using SDI surveys of 9,712 health facilities and 87,155 healthcare providers in 11 Sub-Saharan countries, this paper provides a descriptive analysis of the healthcare landscape in these Sub-Saharan African countries.

Facility Level Results

Table 1 depicts the number of facilities by country based on the three different facility types. Kenya and Nigeria lead with the largest number of facilities regardless of facility type.

Table 1: Facility Type by Country

	Hospitals	Health Centers	Health Posts	All Health Facilities
	N (%)	N (%)	N (%)	N (%)
Guinea Bissau 2018	6 (4.6)	124 (95.4)	0 (0.0)	130 (100.0)
Kenya 2012	51 (17.8)	139 (48.6)	96 (33.6)	286 (100.0)
Kenya 2018	285 (9.4)	594 (19.6)	2159 (71.1)	3038 (100.0)
Madagascar 2016	37 (8.3)	316 (71.2)	91 (20.5)	444 (100.0)
Malawi 2019	38 (19.5)	9 (4.6)	148 (75.9)	195 (100.0)
Mozambique 2014	101 (9.1)	847 (76.6)	158 (14.3)	1106 (100.0)
Nigeria 2013	16 (6.3)	67 (26.3)	172 (67.5)	255 (100.0)
Niger 2015	411 (17.2)	1458 (61.1)	516 (21.6)	2385 (100.0)
Sierra Leone 2018	30 (5.6)	109 (20.3)	397 (74.1)	536 (100.0)
Tanzania 2014	16 (8.9)	46 (25.6)	118 (65.6)	180 (100.0)
Tanzania 2016	27 (7.1)	83 (21.8)	270 (71.1)	380 (100.0)
Togo 2014	30 (7.8)	91 (23.8)	262 (68.4)	383 (100.0)
Uganda 2013	9 (2.3)	133 (33.8)	252 (64.0)	394 (100.0)
<i>N</i>	1057	4016	4639	9712

Numbers in parenthesis are row percentages

Figure 1 displays the leading facility type within each country and as one can see health centers are the most common type of health facilities across all the countries.

Figure 1: Facility Type by Country

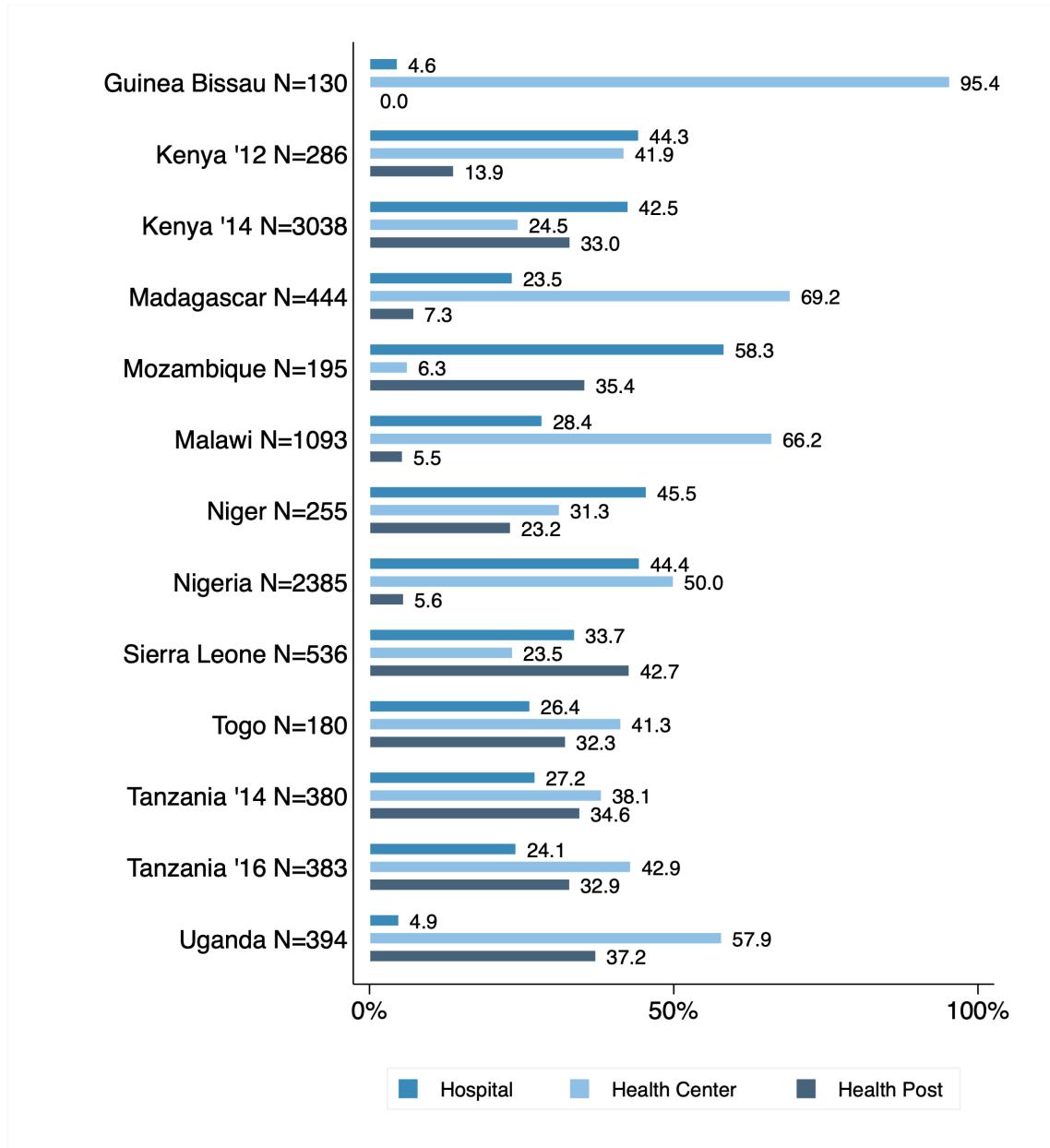
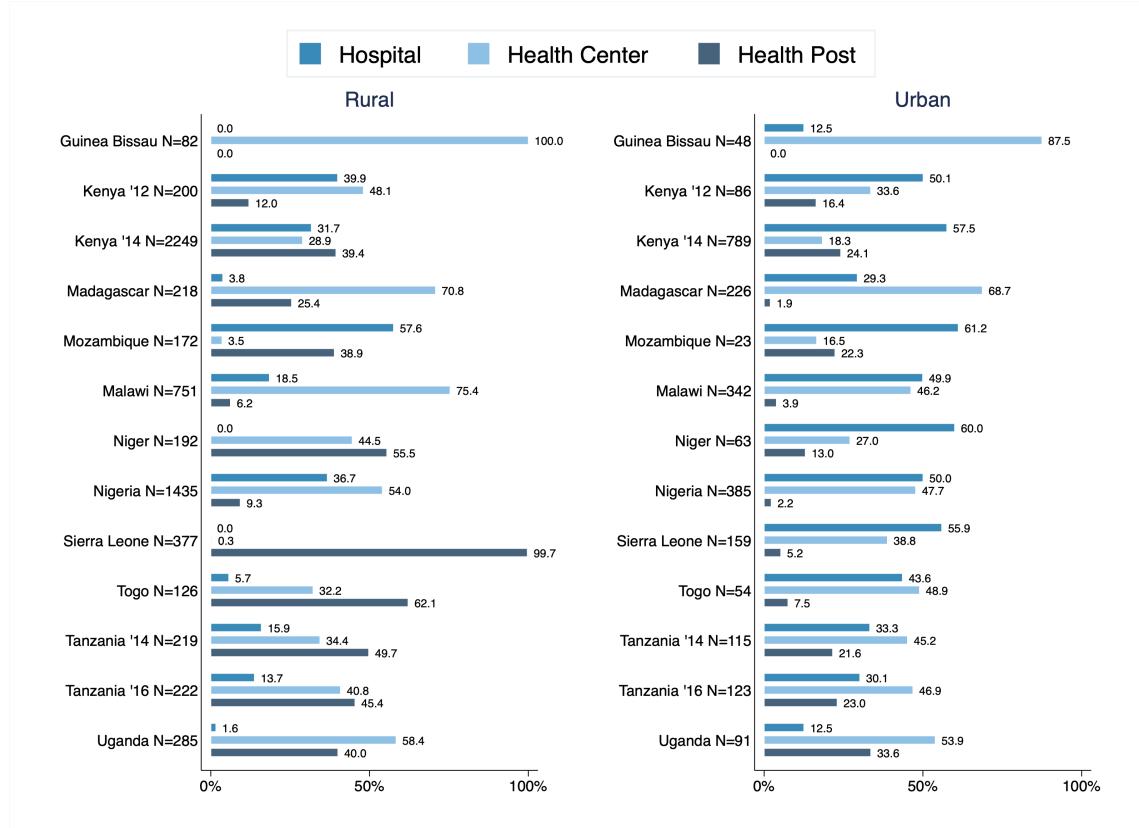


Figure 2 disaggregates facility type by rural and urban regions within each country.

Figure 2: Facility Type by Region



Provider Level Results

The results in this section displays all the descriptive results of all the health providers that the SDI team were able to interview on their visits to rural and urban health facilities across the 11 countries in Sub-Saharan Africa. One will notice that majority of the health providers are female and are predominately nurses or other health care professionals.

0.1 Gender Breakdown

Table 2 shows the gender breakdown of health providers in each country and the average age. Majority of the health providers are below the age of 40 and are mostly female.

Table 2: Provider Gender & Age Descriptive Stats

	Female Providers	Male Providers	All Health Providers	Average Age
	N (%)	N (%)	N (%)	N (min-max)
Guinea Bissau 2018	60 (46.2)	70 (53.8)	130 (100.0)	37.8 (24-63)
Kenya 2012	1922 (61.4)	1209 (38.6)	3131 (100.0)	37.0 (18-73)
Kenya 2018	13697 (56.1)	10706 (43.9)	24403 (100.0)	35.9 (19-85)
Madagascar 2016	1332 (60.5)	868 (39.5)	2200 (100.0)	41.7 (17-73)
Mozambique 2014	1405 (47.3)	1567 (52.7)	2972 (100.0)	33.2 (18-77)
Malawi 2019	5956 (46.2)	6935 (53.8)	12891 (100.0)	37.0 (15-86)
Niger 2015	921 (69.4)	406 (30.6)	1327 (100.0)	35.2 (18-72)
Nigeria 2013	14042 (66.3)	7151 (33.7)	21193 (100.0)	39.5 (15-82)
Sierra Leone 2018	3019 (59.7)	2036 (40.3)	5055 (100.0)	38.4 (16-76)
Togo 2014	695 (51.0)	669 (49.0)	1364 (100.0)	38.8 (17-74)
Tanzania 2014	2881 (64.6)	1578 (35.4)	4459 (100.0)	40.0 (19-85)
Tanzania 2016	3402 (66.2)	1734 (33.8)	5136 (100.0)	38.4 (15-77)
Uganda 2013	1483 (63.3)	859 (36.7)	2342 (100.0)	33.9 (19-76)
<i>N</i>	50815	35788	86603	

Numbers in parenthesis are row percentages

Figure 3 depicts the gender breakdown by facility type.

Figure 3: Staff Occupation by Facility Type

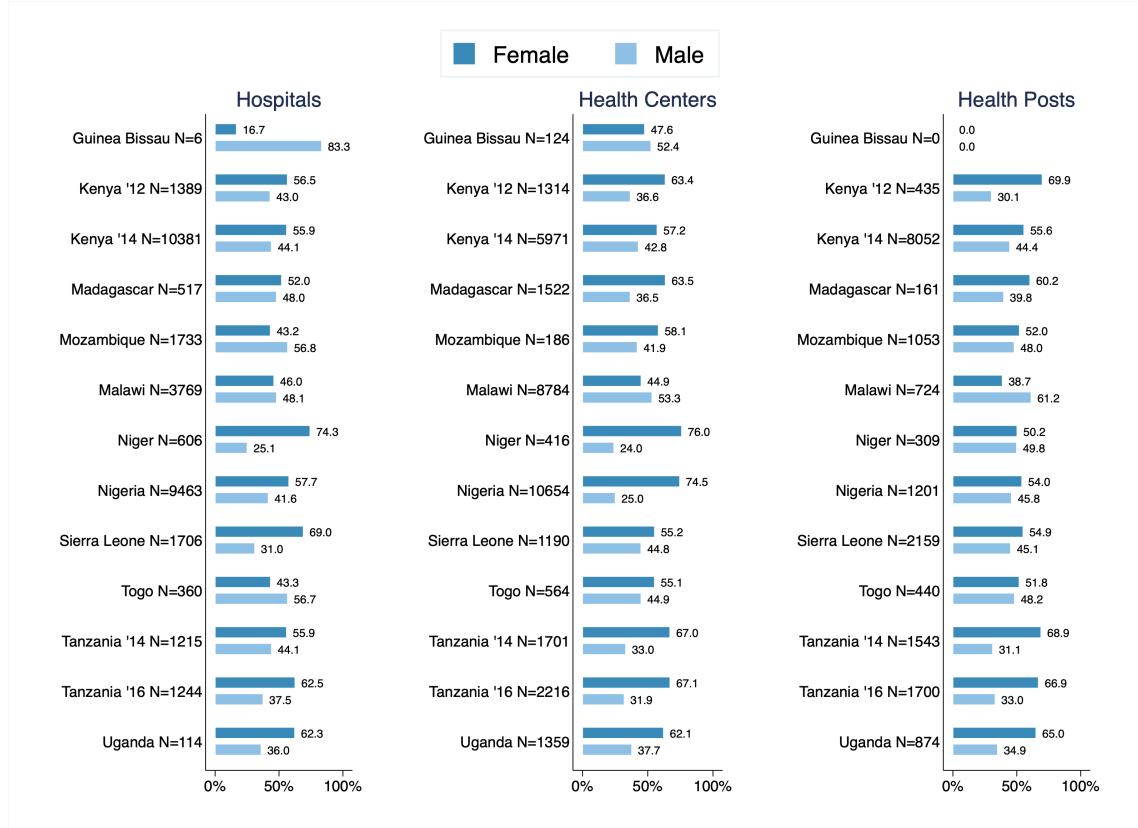


Table 3 displays the gender breakdown at hospitals.

Table 3: Provider Gender & Age Descriptive Stats at Hospitals

	Female Providers	Male Providers	All Health Providers	Average Age
	N (%)	N (%)	N (%)	N (min-max)
Guinea Bissau 2018	1 (16.7)	5 (83.3)	6 (100.0)	37.7 (32-56)
Kenya 2012	785 (56.8)	597 (43.2)	1382 (100.0)	38.4 (20-68)
Kenya 2018	5808 (55.9)	4573 (44.1)	10381 (100.0)	36.3 (20-85)
Madagascar 2016	269 (52.0)	248 (48.0)	517 (100.0)	41.7 (20-70)
Mozambique 2014	749 (43.2)	984 (56.8)	1733 (100.0)	33.3 (18-77)
Malawi 2019	1732 (48.9)	1812 (51.1)	3544 (100.0)	35.4 (18-75)
Niger 2015	450 (74.8)	152 (25.2)	602 (100.0)	35.2 (19-63)
Nigeria 2013	5460 (58.1)	3933 (41.9)	9393 (100.0)	40.7 (17-82)
Sierra Leone 2018	1177 (69.0)	529 (31.0)	1706 (100.0)	37.8 (18-72)
Togo 2014	156 (43.3)	204 (56.7)	360 (100.0)	41.3 (22-63)
Tanzania 2014	679 (55.9)	536 (44.1)	1215 (100.0)	40.3 (19-74)
Tanzania 2016	778 (62.5)	466 (37.5)	1244 (100.0)	41.1 (15-72)
Uganda 2013	71 (63.4)	41 (36.6)	112 (100.0)	35.9 (20-62)
<i>N</i>	18115	14080	32195	

Numbers in parenthesis are row percentages

Table 4 shows the gender breakdown at health centers.

Table 4: Provider Gender & Age Descriptive Stats at Health Centers

	Female Providers	Male Providers	All Health Providers	Average Age
	N (%)	N (%)	N (%)	N (min-max)
Guinea Bissau 2018	59 (47.6)	65 (52.4)	124 (100.0)	37.8 (24-63)
Kenya 2012	833 (63.4)	481 (36.6)	1314 (100.0)	35.9 (18-72)
Kenya 2018	3414 (57.2)	2557 (42.8)	5971 (100.0)	34.8 (20-82)
Madagascar 2016	966 (63.5)	556 (36.5)	1522 (100.0)	41.9 (20-73)
Mozambique 2014	108 (58.1)	78 (41.9)	186 (100.0)	35.4 (22-59)
Malawi 2019	3944 (45.7)	4680 (54.3)	8624 (100.0)	37.5 (15-86)
Niger 2015	316 (76.0)	100 (24.0)	416 (100.0)	35.1 (18-69)
Nigeria 2013	7934 (74.8)	2668 (25.2)	10602 (100.0)	38.6 (15-75)
Sierra Leone 2018	657 (55.2)	533 (44.8)	1190 (100.0)	38.2 (20-75)
Togo 2014	311 (55.1)	253 (44.9)	564 (100.0)	37.8 (20-67)
Tanzania 2014	1139 (67.0)	562 (33.0)	1701 (100.0)	39.7 (19-76)
Tanzania 2016	1486 (67.8)	707 (32.2)	2193 (100.0)	37.0 (20-72)
Uganda 2013	844 (62.2)	513 (37.8)	1357 (100.0)	33.4 (19-72)
<i>N</i>	22011	13753	35764	

Numbers in parenthesis are row percentages

Table 5 shows the gender breakdown at health posts.

Table 5: Provider Gender & Age Descriptive Stats at Health Posts

	Female Providers	Male Providers	All Health Providers	Average Age
	N (%)	N (%)	N (%)	N (min-max)
Guinea Bissau 2018	0 (0)	0 (0)	0 (0)	0 (0)
Kenya 2012	304 (69.9)	131 (30.1)	435 (100.0)	35.8 (20-73)
Kenya 2018	4475 (55.6)	3576 (44.4)	8051 (100.0)	36.2 (19-85)
Madagascar 2016	97 (60.2)	64 (39.8)	161 (100.0)	39.5 (17-72)
Mozambique 2014	548 (52.0)	505 (48.0)	1053 (100.0)	32.7 (20-72)
Malawi 2019	280 (38.7)	443 (61.3)	723 (100.0)	39.4 (20-65)
Niger 2015	155 (50.2)	154 (49.8)	309 (100.0)	35.5 (19-72)
Nigeria 2013	648 (54.1)	550 (45.9)	1198 (100.0)	38.9 (19-70)
Sierra Leone 2018	1185 (54.9)	974 (45.1)	2159 (100.0)	39.1 (16-76)
Togo 2014	228 (51.8)	212 (48.2)	440 (100.0)	38.0 (17-74)
Tanzania 2014	1063 (68.9)	480 (31.1)	1543 (100.0)	40.3 (19-85)
Tanzania 2016	1138 (67.0)	561 (33.0)	1699 (100.0)	38.4 (19-77)
Uganda 2013	568 (65.1)	305 (34.9)	873 (100.0)	34.2 (19-76)
<i>N</i>	10689	7955	18644	

Numbers in parenthesis are row percentages

0.2 Age Ranges

Figures 4,5, 6 & 7 depicts histograms of the ages of doctors and nurses within in each country.

Figure 4: Age of Staff Occupation by Country

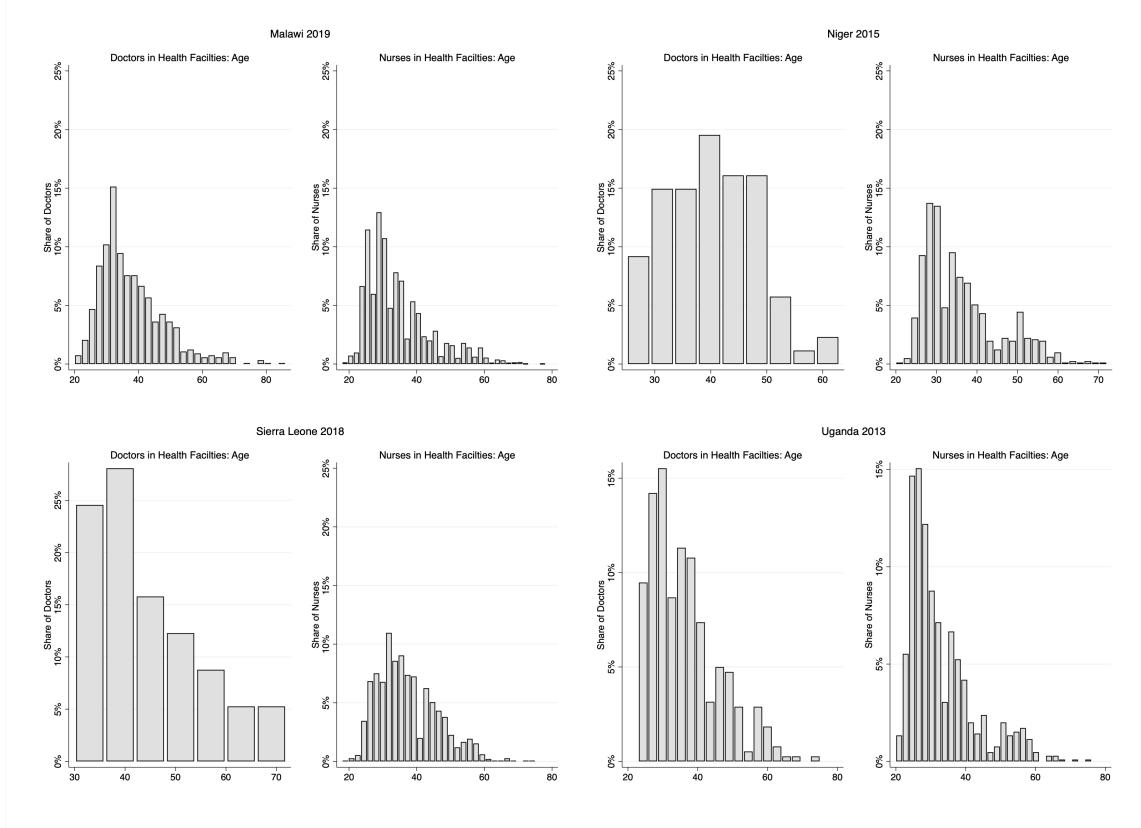


Figure 5: Age of Staff Occupation by Country

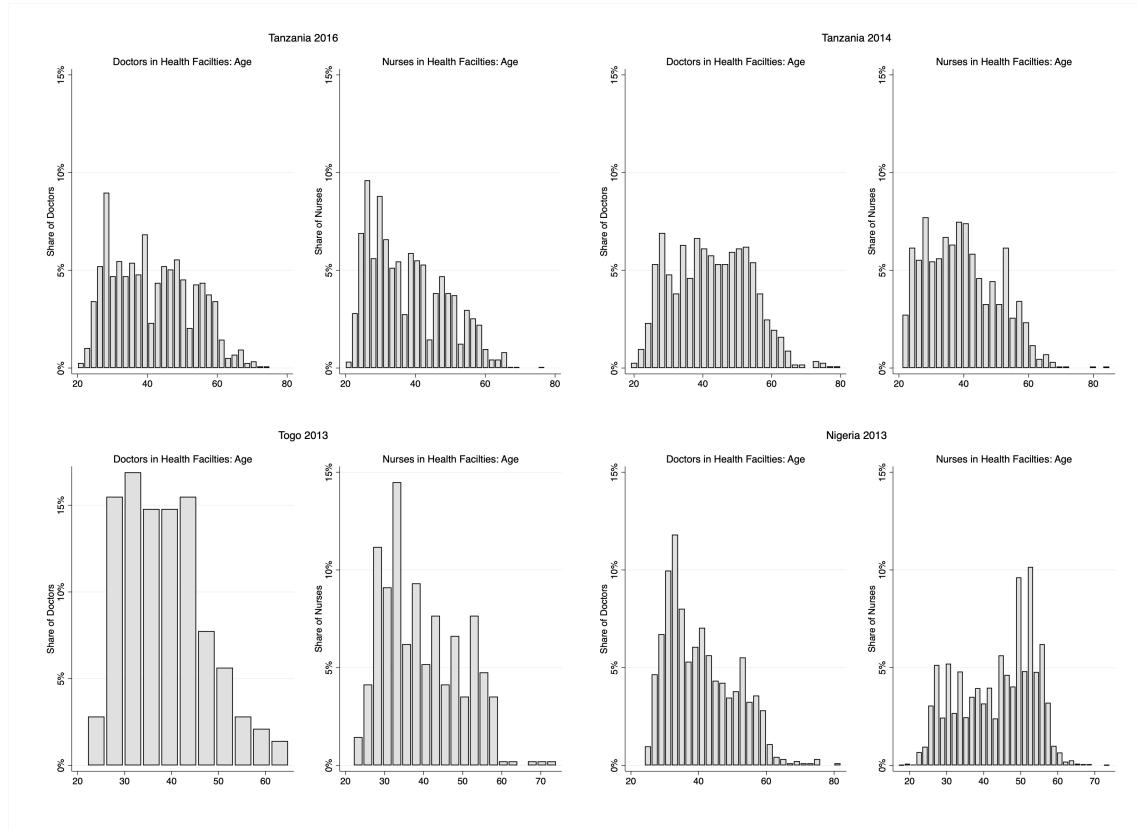


Figure 6: Age of Staff Occupation by Country

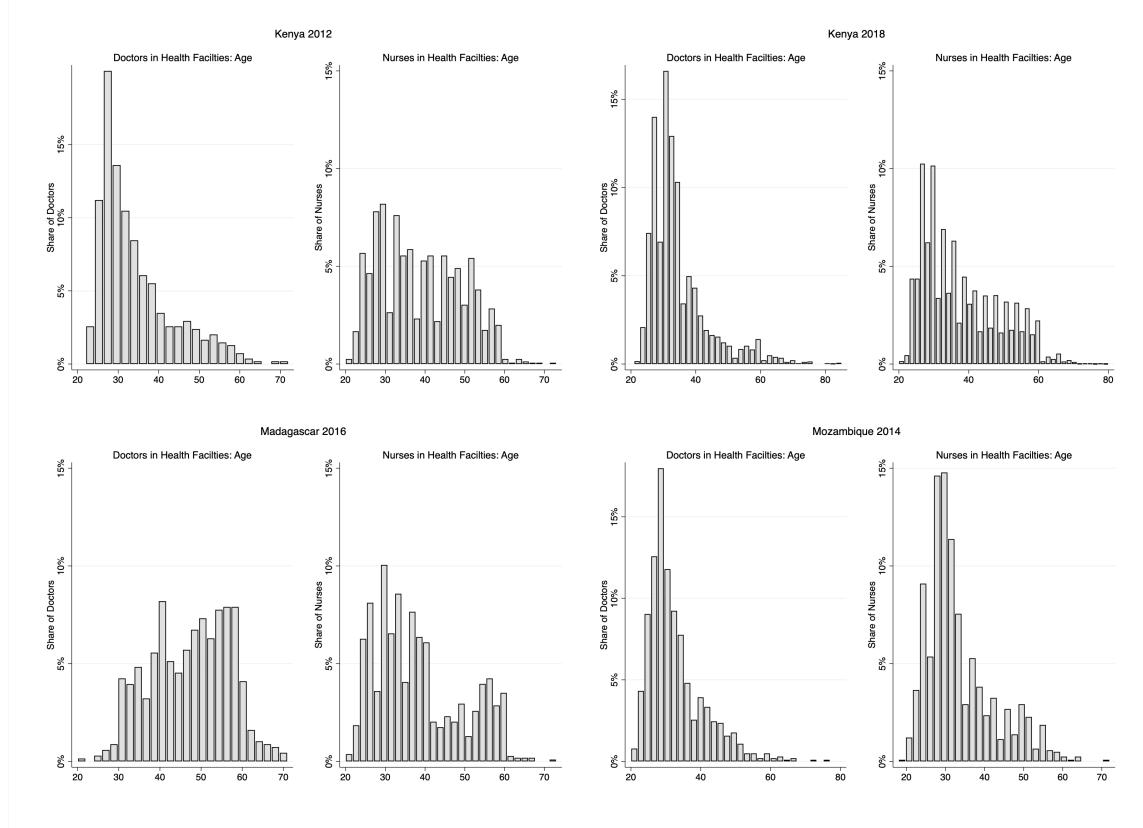


Figure 7: Age of Staff Occupation by Country

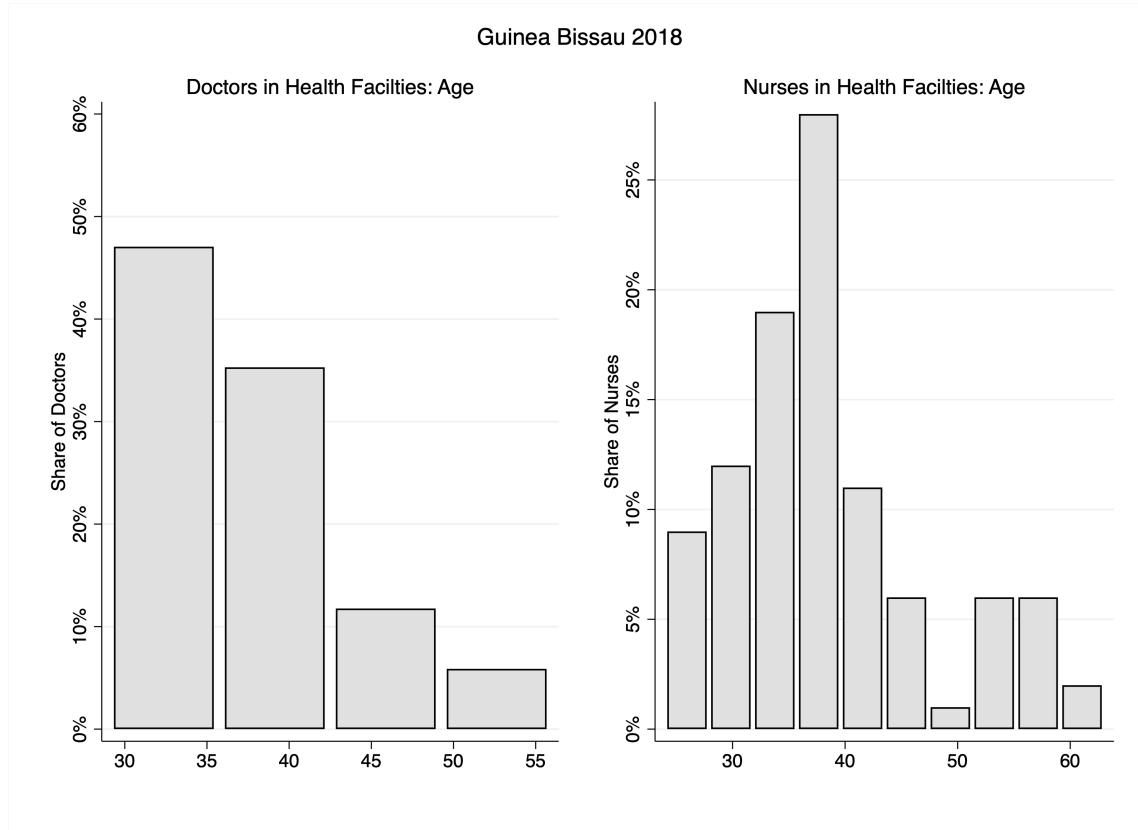


Figure 8: Age of Providers by Gender

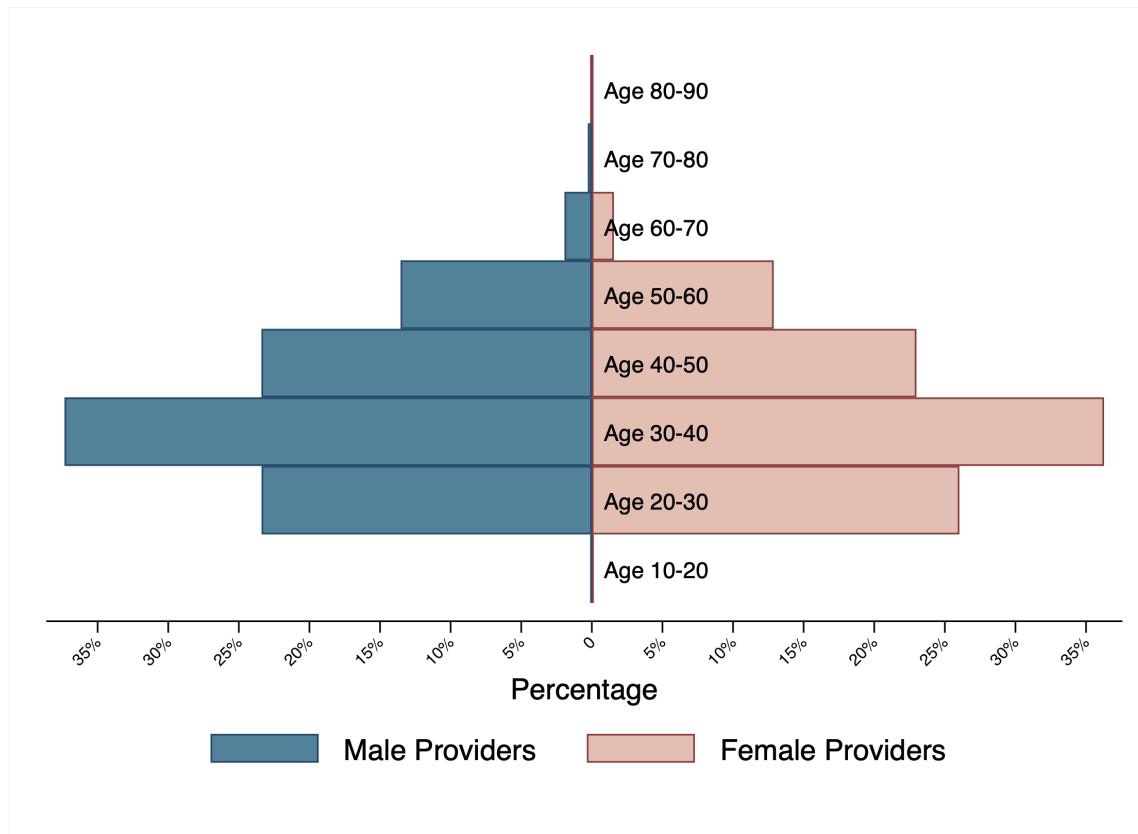


Figure 9: Age of Providers by Gender and Region

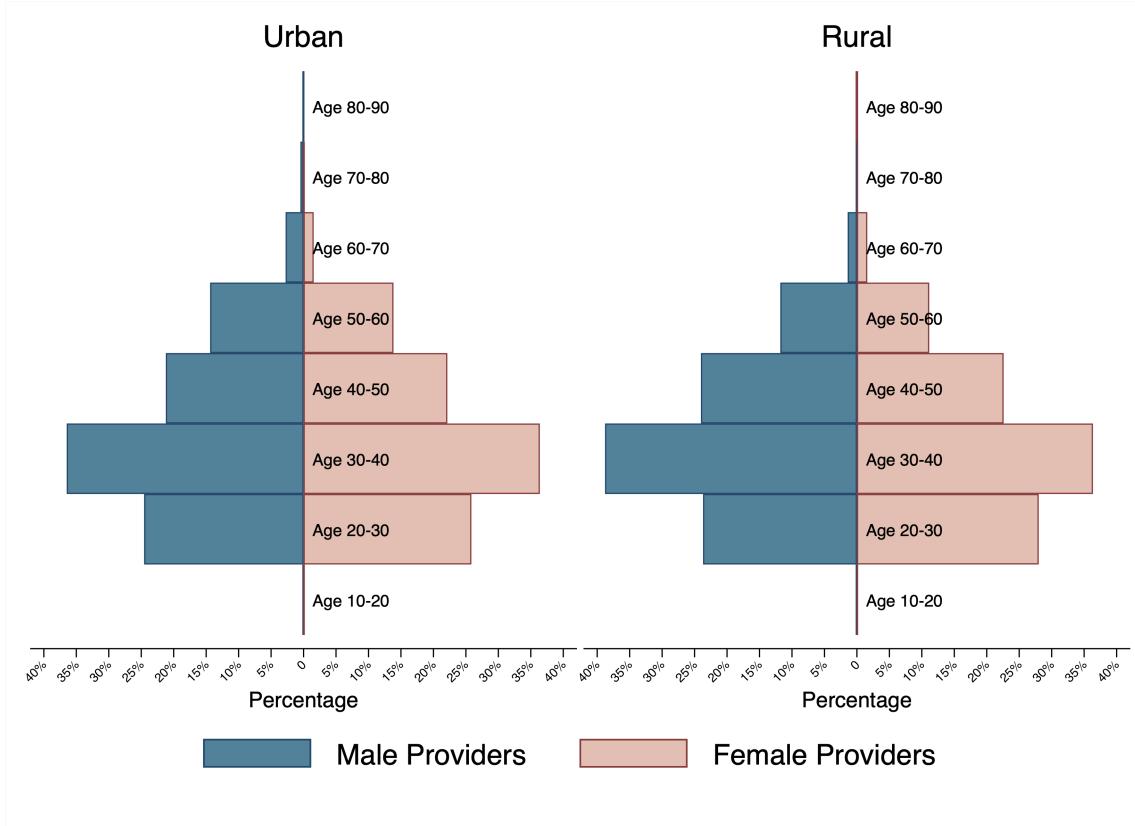


Figure 10: Age of Providers by Gender and Occupation

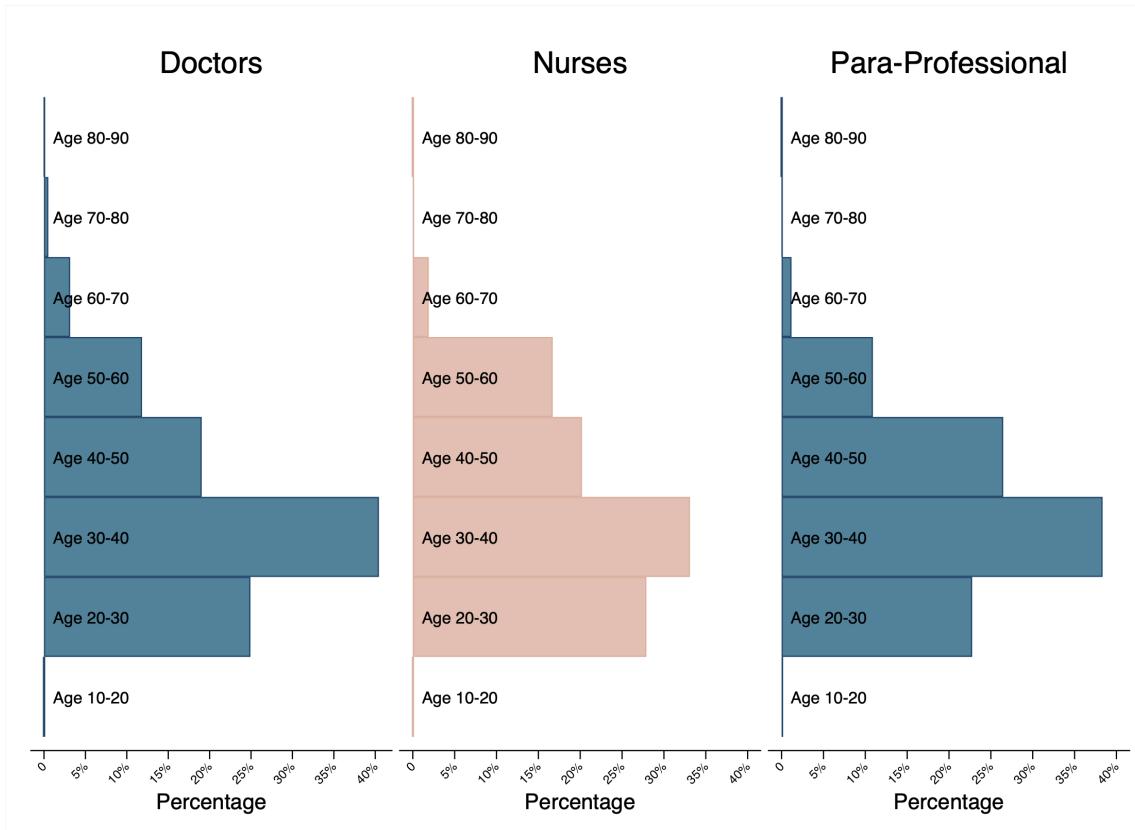


Figure 11: Fraction of Female Doctors by Age

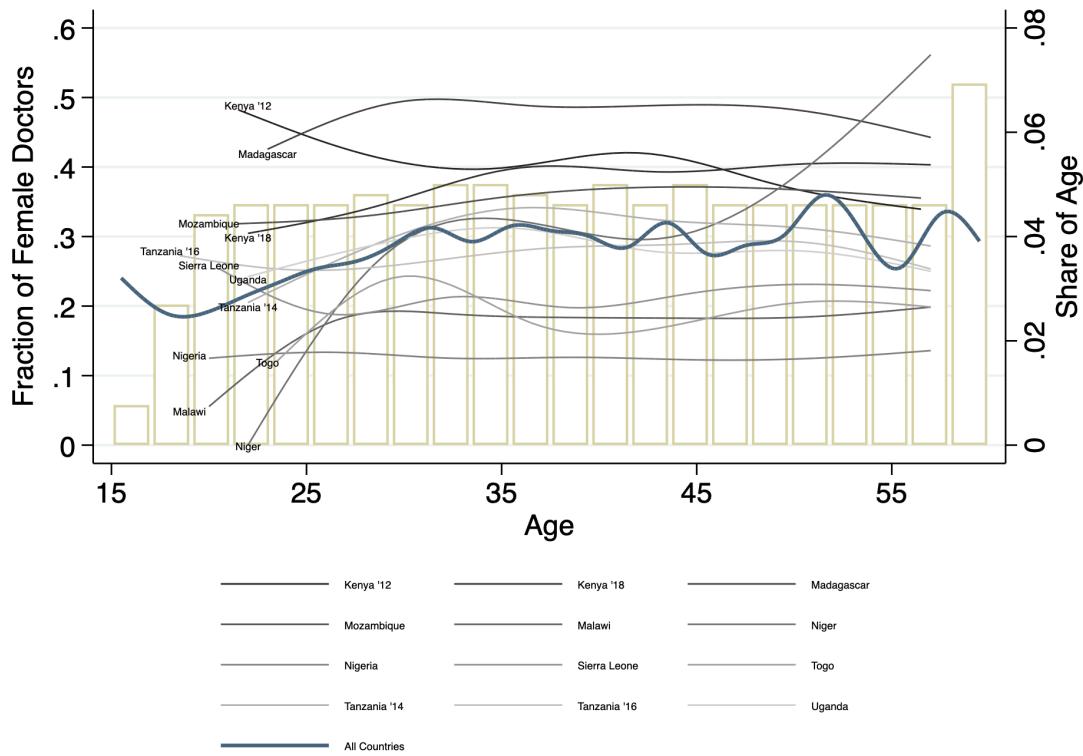
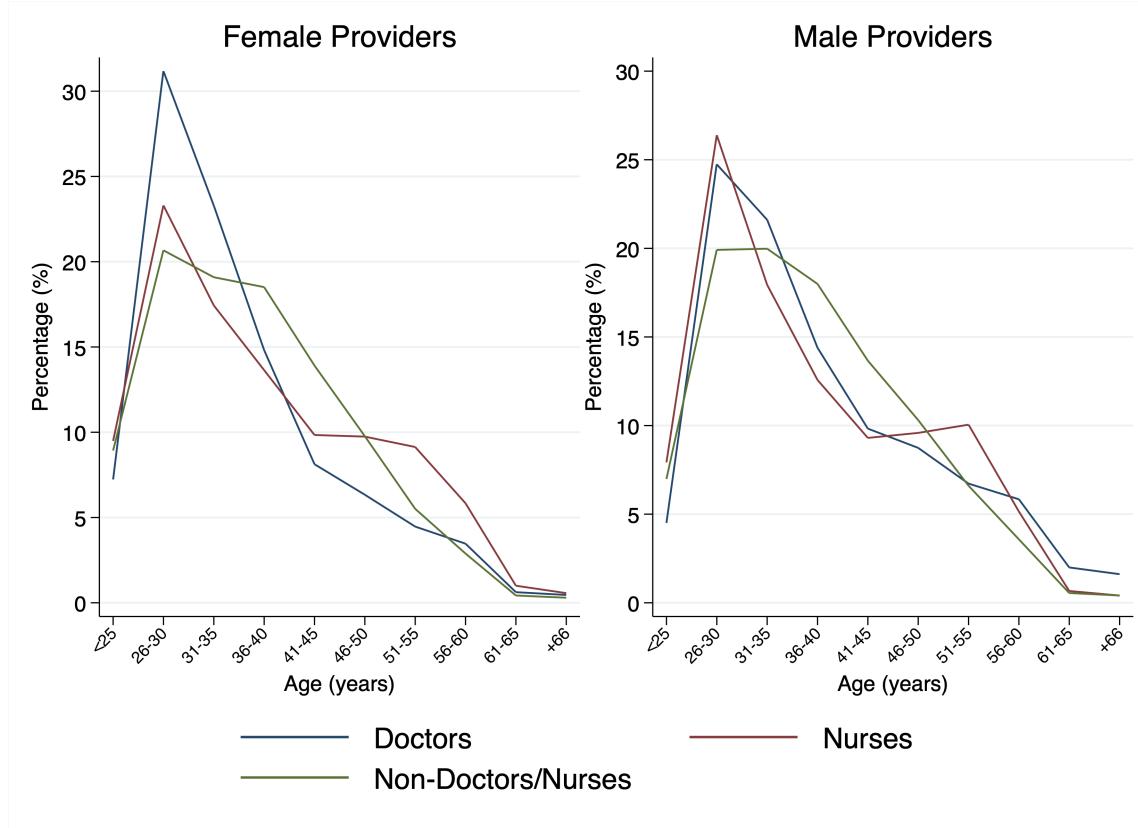


Figure 12: Occupation by Age



Occupation Results

The results in this section shows the primary occupation status of all the health providers that were interviewed in each country. There are three occupation categories; doctors, nurses, and other. The other category encompasses medical (nursing) assistants, patient aides, matrons, medical aides, radiographers, physiotherapists, environmental health officers, health surveillance assistants, and pharmacists

Table 6 displays the occupation status of health providers by country.

Table 6: Provider Occupation

	Doctors	Nurses	Other	All Health Providers
	N	N	N	N
	(%)	(%)	(%)	(%)
Guinea Bissau 2018	17 (13.1)	100 (76.9)	13 (10.0)	130 (100.0)
Kenya 2012	615 (19.6)	1671 (53.3)	849 (27.1)	3135 (100.0)
Kenya 2018	4408 (18.1)	11134 (45.6)	8861 (36.3)	24403 (100.0)
Madagascar 2016	683 (31.0)	1084 (49.3)	433 (19.7)	2200 (100.0)
Mozambique 2014	1023 (34.4)	1242 (41.8)	707 (23.8)	2972 (100.0)
Malawi 2019	1228 (9.5)	4327 (33.5)	7371 (57.0)	12926 (100.0)
Niger 2015	94 (7.1)	821 (61.7)	416 (31.3)	1331 (100.0)
Nigeria 2013	960 (4.5)	4790 (22.6)	15445 (72.9)	21195 (100.0)
Sierra Leone 2018	62 (1.2)	1553 (30.7)	3440 (68.1)	5055 (100.0)
Togo 2014	142 (10.4)	483 (35.4)	739 (54.2)	1364 (100.0)
Tanzania 2014	1140 (25.6)	1310 (29.4)	2009 (45.1)	4459 (100.0)
Tanzania 2016	1181 (23.0)	1874 (36.4)	2090 (40.6)	5145 (100.0)
Uganda 2013	381 (16.3)	1067 (45.6)	893 (38.1)	2341 (100.0)
<i>N</i>	11934	31456	43266	86656

Numbers in parenthesis are row percentages

Table 7 shows the occupation status of all female health providers by country

Table 7: Provider Occupation - Female Providers Only

	Doctors N (%)	Nurses N (%)	Other N (%)	All Female Providers N (%)	Average Age N (min-max)
Guinea Bissau 2018	2 (3.3)	51 (85.0)	7 (11.7)	60 (100.0)	37.6 (26-61)
Kenya 2012	246 (12.8)	1255 (65.3)	420 (21.9)	1921 (100.0)	37.0 (18-73)
Kenya 2018	1583 (11.6)	7753 (56.6)	4361 (31.8)	13697 (100.0)	35.8 (19-81)
Madagascar 2016	333 (25.0)	734 (55.1)	265 (19.9)	1332 (100.0)	40.2 (17-69)
Mozambique 2014	370 (26.3)	761 (54.2)	274 (19.5)	1405 (100.0)	33.2 (20-72)
Malawi 2019	220 (3.7)	2972 (50.0)	2756 (46.3)	5948 (100.0)	36.1 (17-78)
Niger 2015	25 (2.7)	630 (68.4)	266 (28.9)	921 (100.0)	33.7 (18-69)
Nigeria 2013	167 (1.2)	3347 (23.8)	10526 (75.0)	14040 (100.0)	39.2 (15-77)
Sierra Leone 2018	15 (0.5)	1292 (42.8)	1712 (56.7)	3019 (100.0)	38.7 (18-76)
Togo 2014	31 (4.5)	209 (30.1)	455 (65.5)	695 (100.0)	37.7 (17-74)
Tanzania 2014	355 (12.3)	1067 (37.0)	1459 (50.6)	2881 (100.0)	39.4 (19-79)
Tanzania 2016	339 (10.0)	1513 (44.5)	1546 (45.5)	3398 (100.0)	38.1 (16-77)
Uganda 2013	102 (6.9)	831 (56.1)	549 (37.0)	1482 (100.0)	33.7 (19-76)
<i>N</i>	3788	22415	24596	50799	

Numbers in parenthesis are row percentages

Table 8 depicts the occupation status of all male health providers by country

Table 8: Provider Occupation - Male Providers Only

	Doctors N (%)	Nurses N (%)	Other N (%)	All Male Providers N (%)	Average Age N (min-max)
Guinea Bissau 2018	15 (21.4)	49 (70.0)	6 (8.6)	70 (100.0)	37.9 (24-63)
Kenya 2012	369 (30.6)	416 (34.5)	422 (35.0)	1207 (100.0)	36.9 (21-68)
Kenya 2018	2825 (26.4)	3381 (31.6)	4500 (42.0)	10706 (100.0)	36.1 (19-85)
Madagascar 2016	350 (40.3)	350 (40.3)	168 (19.4)	868 (100.0)	44.1 (20-73)
Mozambique 2014	653 (41.7)	481 (30.7)	433 (27.6)	1567 (100.0)	33.2 (18-77)
Malawi 2019	1007 (14.5)	1350 (19.5)	4574 (66.0)	6931 (100.0)	37.9 (15-86)
Niger 2015	67 (16.5)	189 (46.6)	150 (36.9)	406 (100.0)	38.7 (19-72)
Nigeria 2013	793 (11.1)	1443 (20.2)	4914 (68.7)	7150 (100.0)	40.2 (19-82)
Sierra Leone 2018	47 (2.3)	261 (12.8)	1728 (84.9)	2036 (100.0)	38.1 (16-75)
Togo 2014	111 (16.6)	274 (41.0)	284 (42.5)	669 (100.0)	40.0 (22-69)
Tanzania 2014	785 (49.7)	243 (15.4)	550 (34.9)	1578 (100.0)	41.1 (20-85)
Tanzania 2016	842 (48.6)	354 (20.4)	536 (30.9)	1732 (100.0)	39.3 (15-77)
Uganda 2013	279 (32.5)	236 (27.5)	343 (40.0)	858 (100.0)	34.2 (19-75)
<i>N</i>	8143	9027	18608	35778	

Numbers in parenthesis are row percentages

Figure 8 indicates the leading occupation status by country.

Figure 13: Staff Occupation by Country

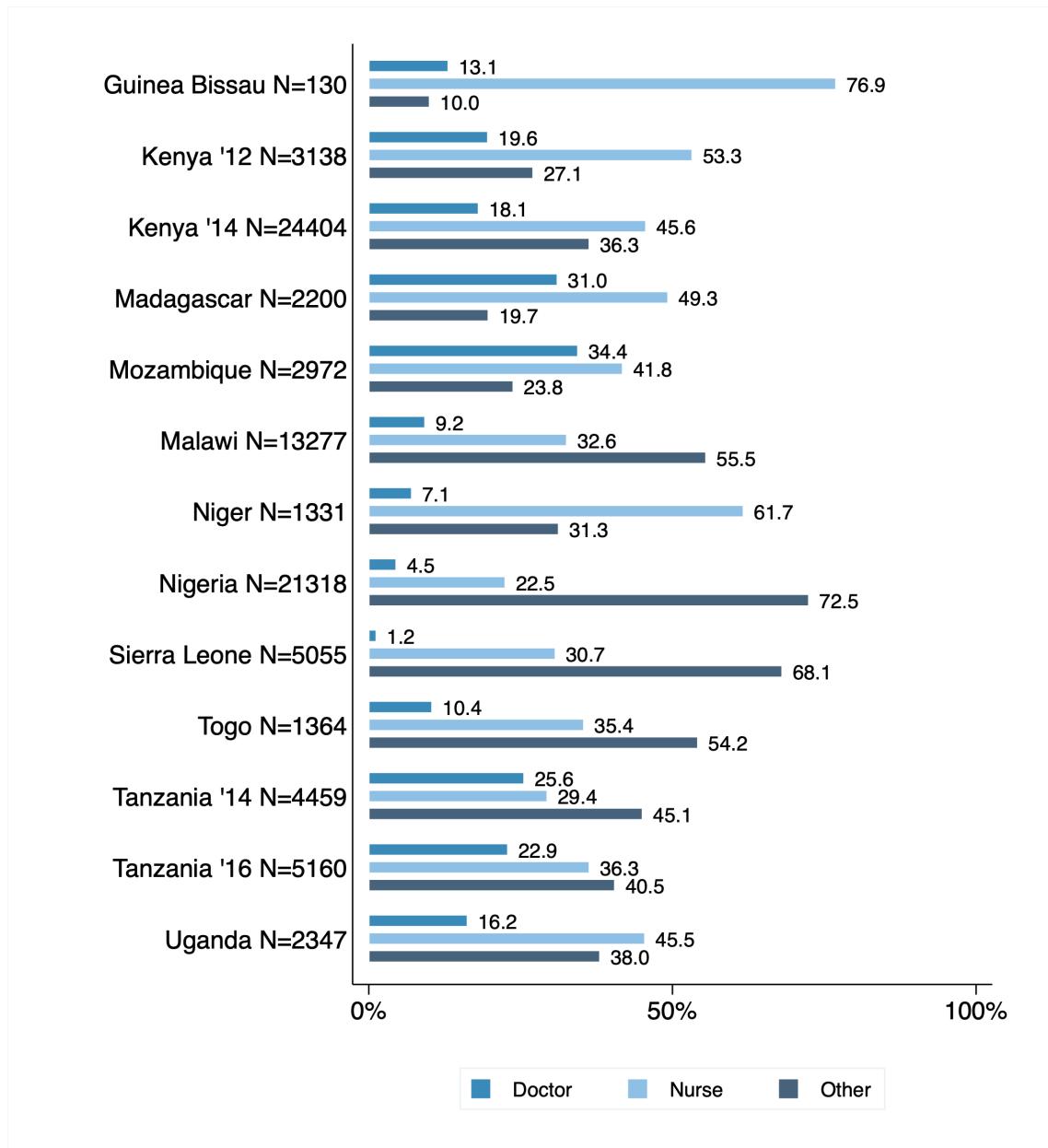


Figure 9 depicts the occupation status of health providers by region within each country.

Figure 14: Staff Occupation by Region

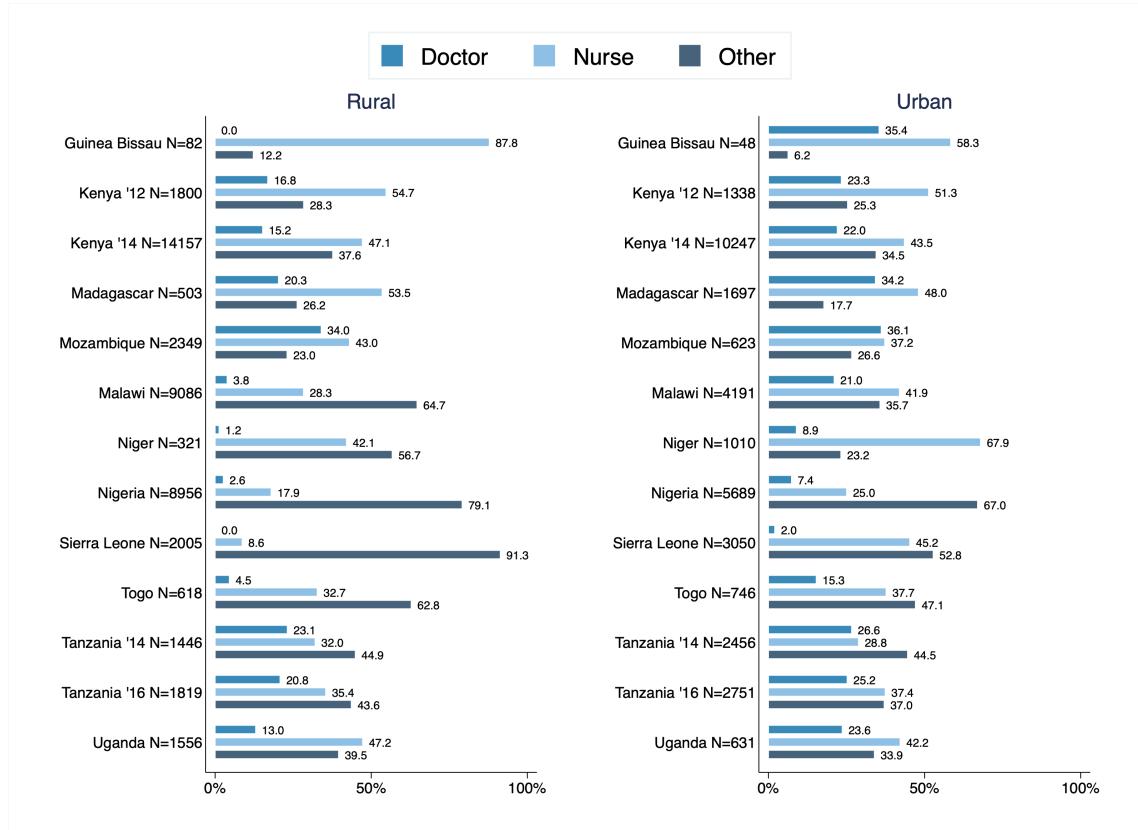
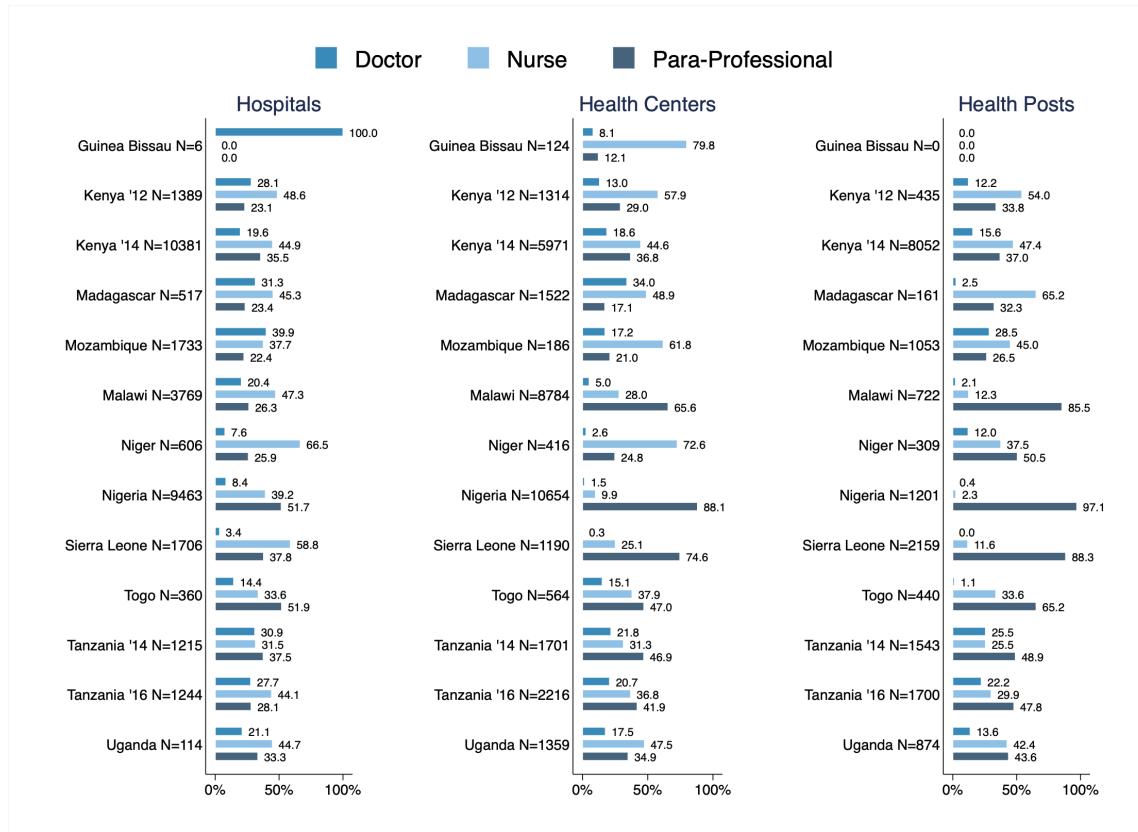


Figure 10 depicts the occupation status of health providers by region within each country.

Figure 15: Staff Occupation by Facility Type



Poverty Rate Estimates

Figure 16: Share of Clinics that have a Medical Officer

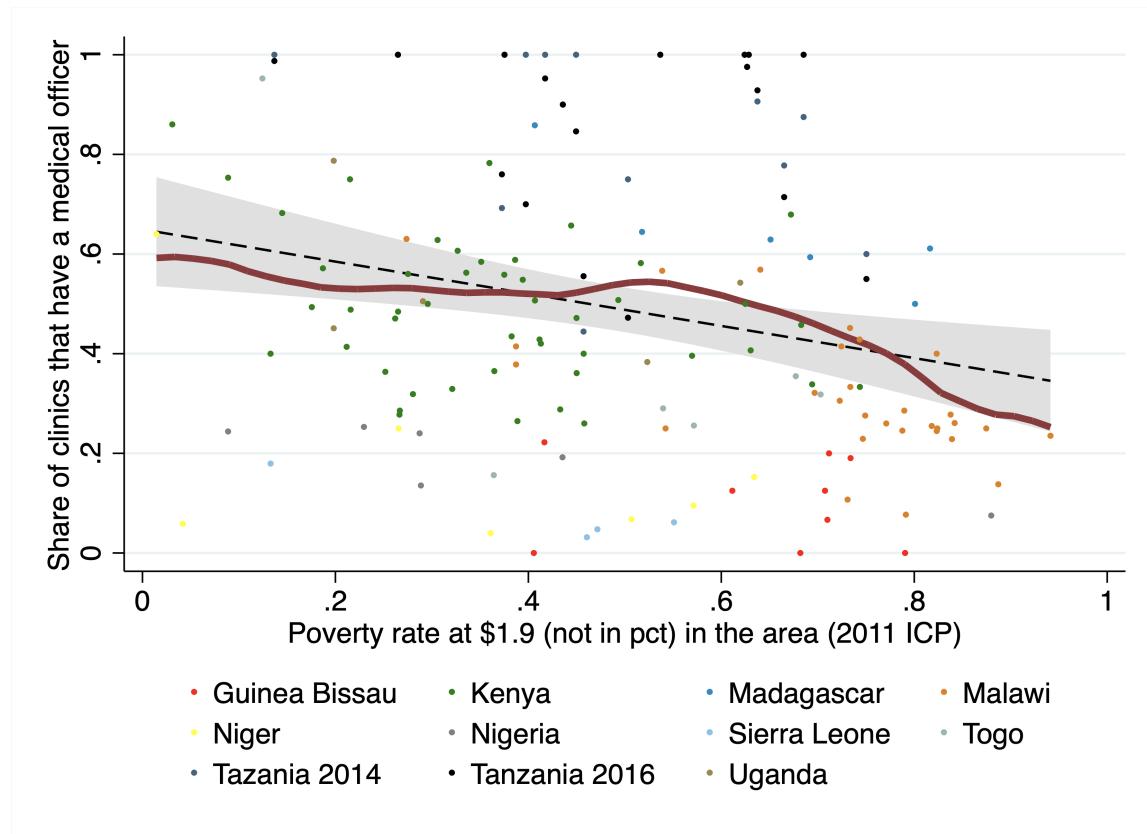
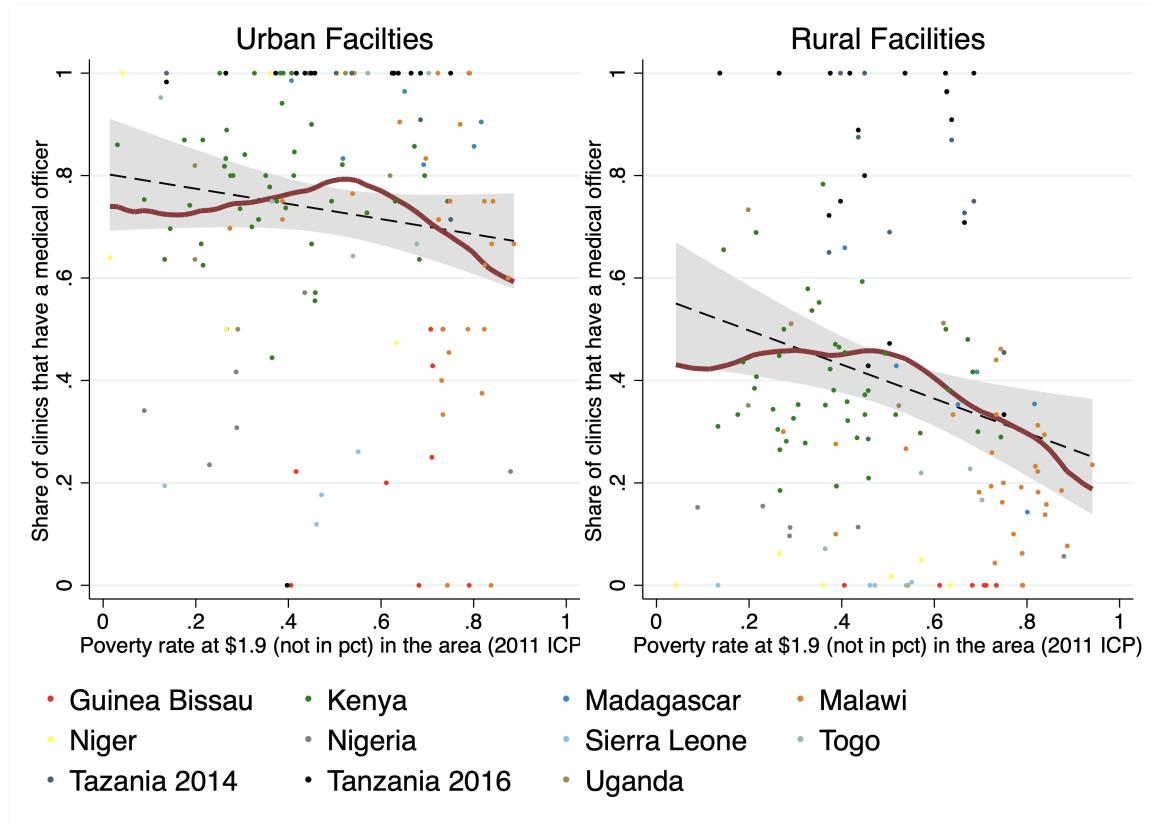


Figure 17: Share of Clinics that have a Medical Officer by Region



The figures below indicate the correlation between poverty rate and the share of clinics that have a medical officer.

Figure 18: Share of Clinics that have a Medical Officer by Country

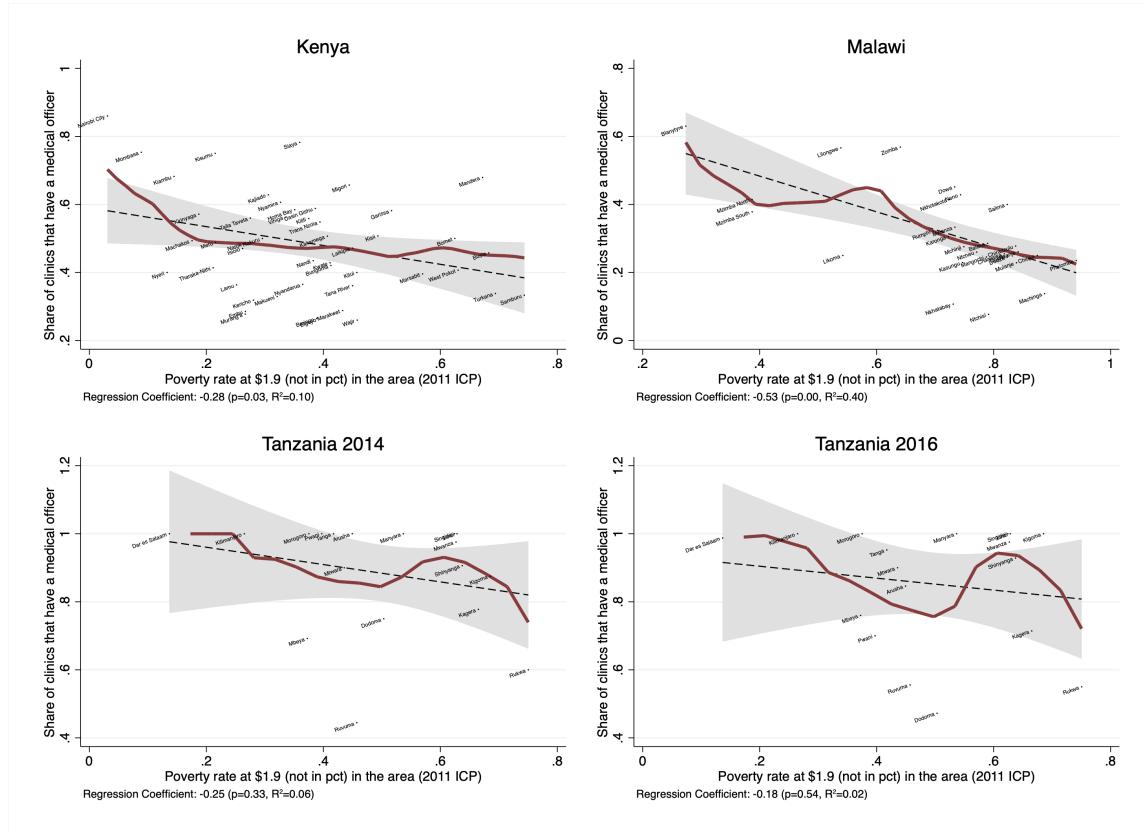


Figure 19: Share of Clinics that have a Medical Officer by Country

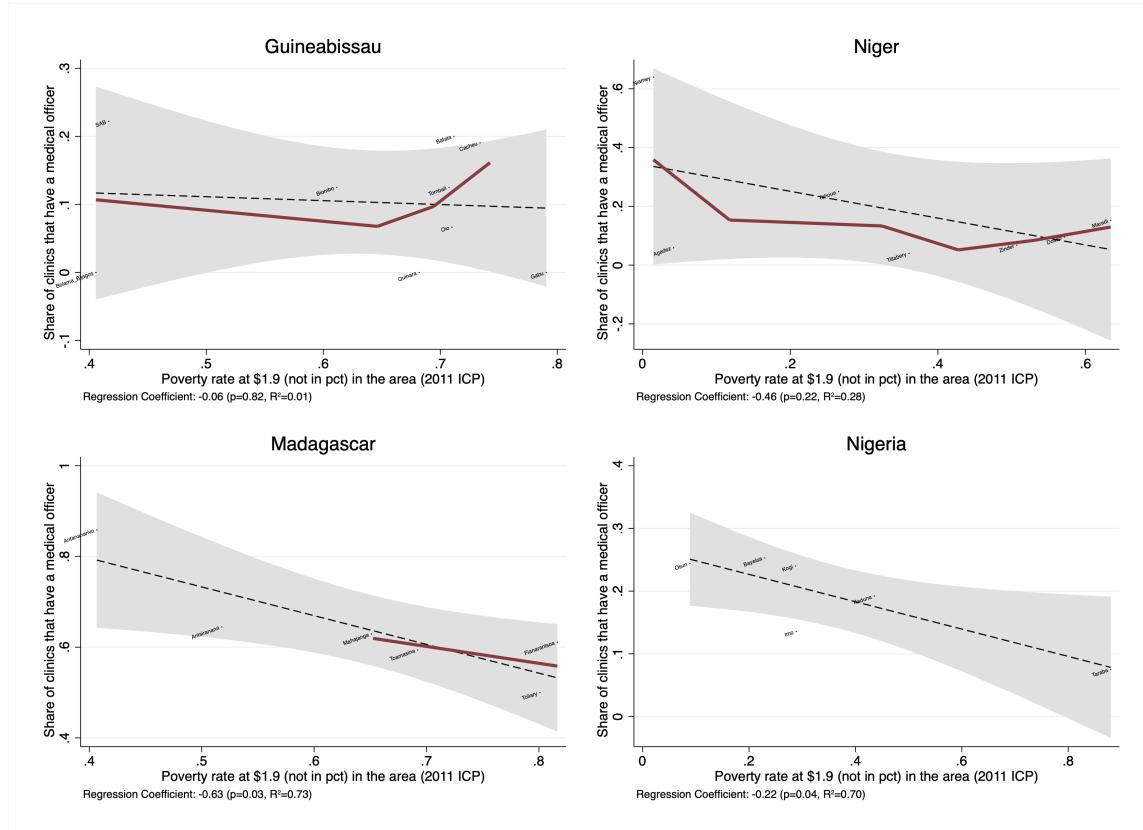
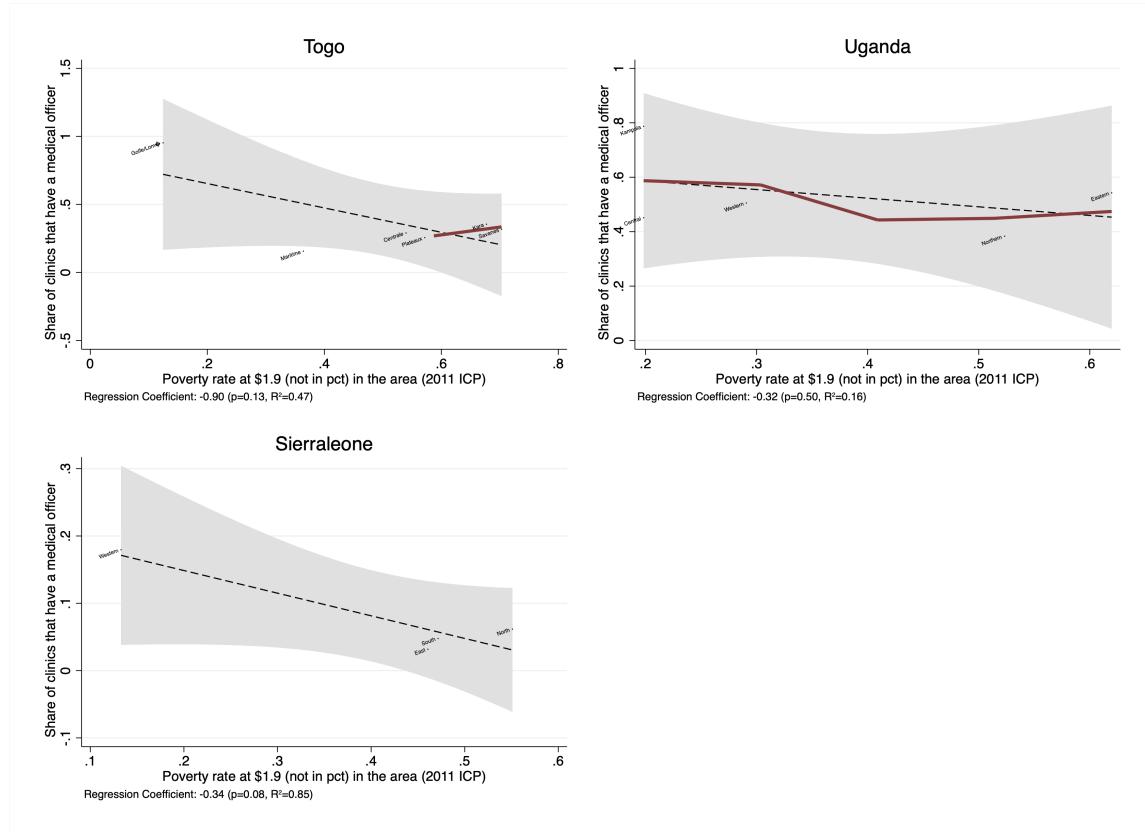


Figure 20: Share of Clinics that have a Medical Officer by Country



The figures below indicate the correlation between poverty rate and the share of clinics that have a nurse or paramedical staff.

Figure 21: Share of Clinics that have a Nurse by Country

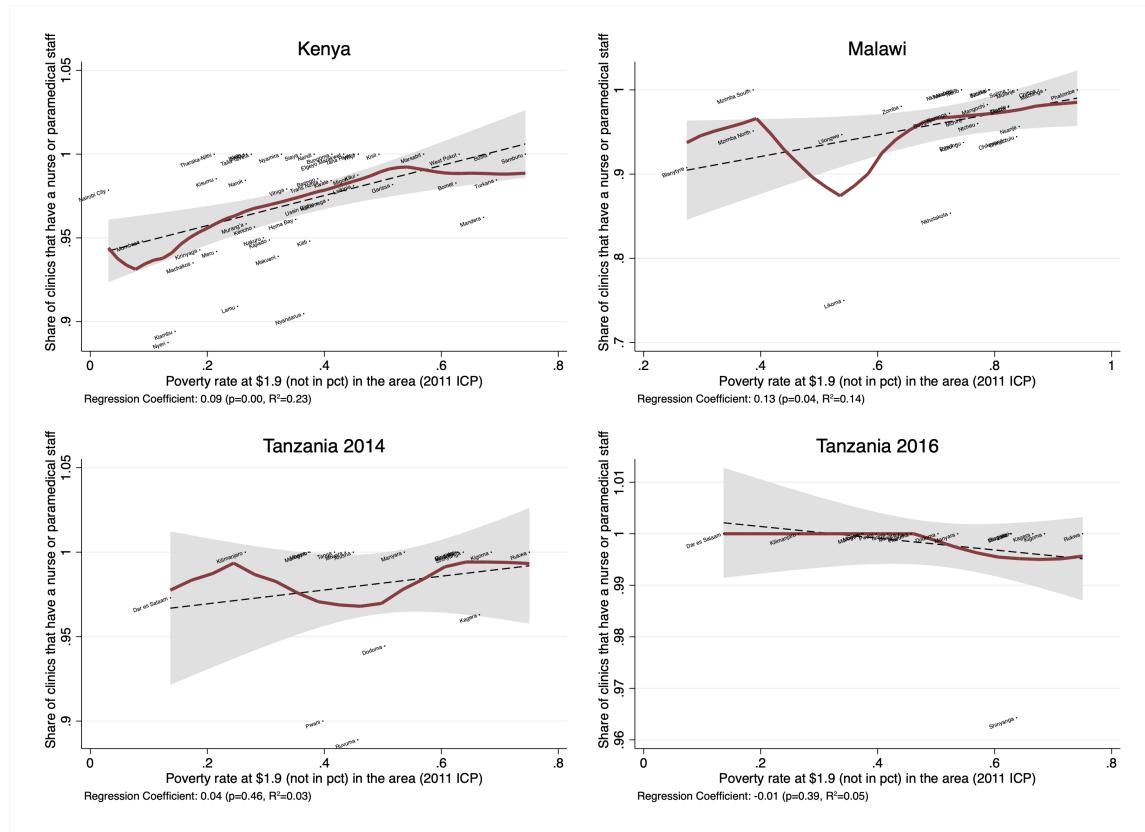


Figure 22: Share of Clinics that have a Nurse by Country

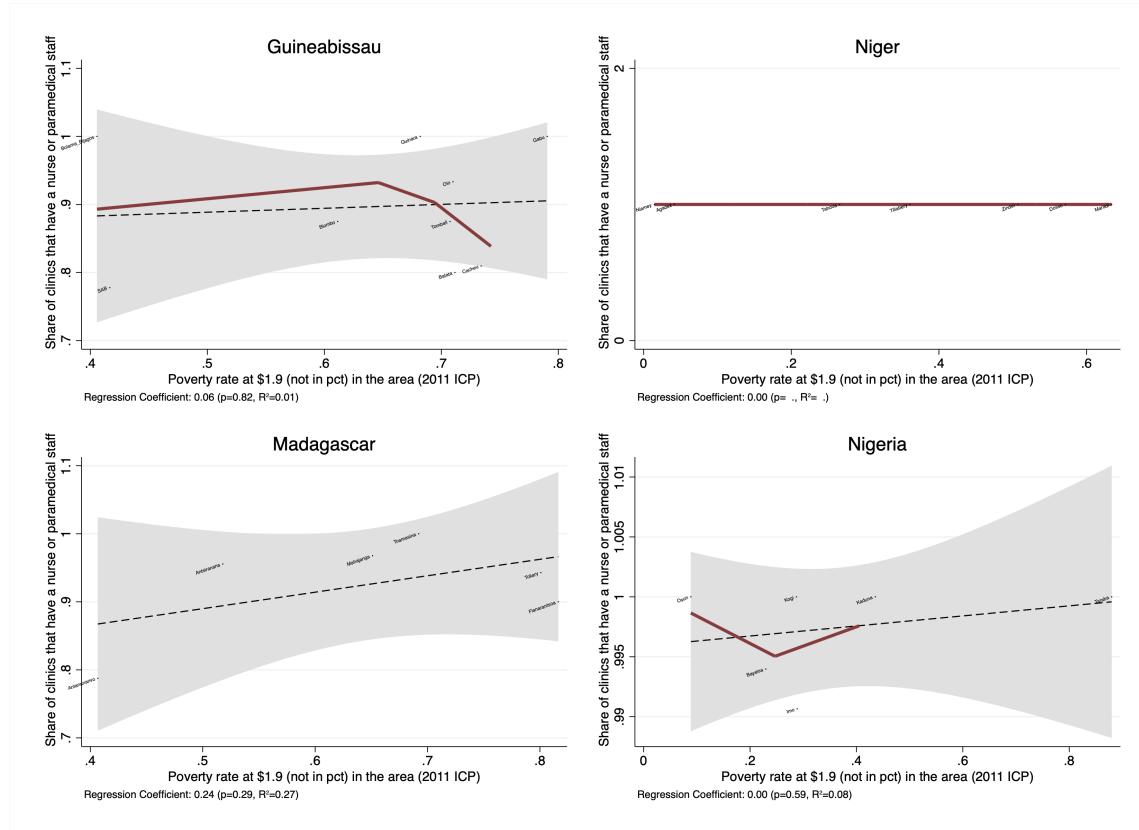
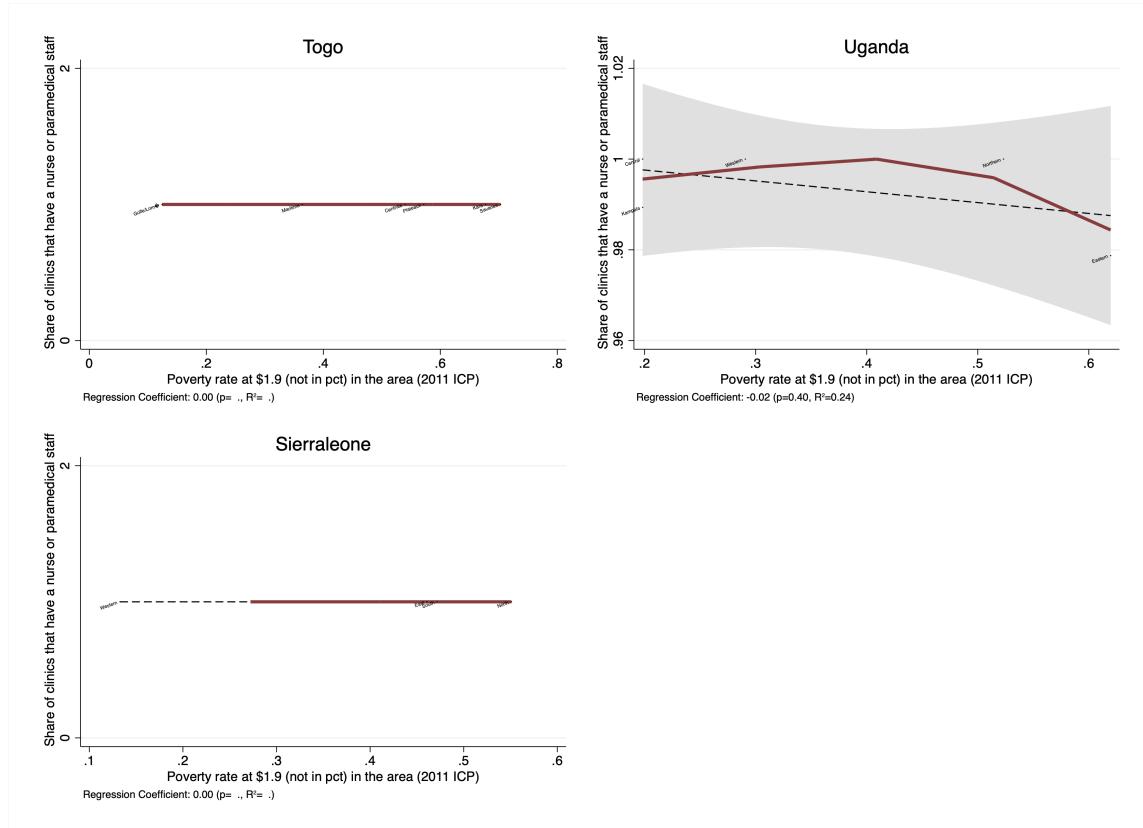


Figure 23: Share of Clinics that have a Nurse by Country



The figures below indicate the correlation between poverty rate and the share of medical providers per facility in each country.

Figure 24: Share of Medical Providers by Country

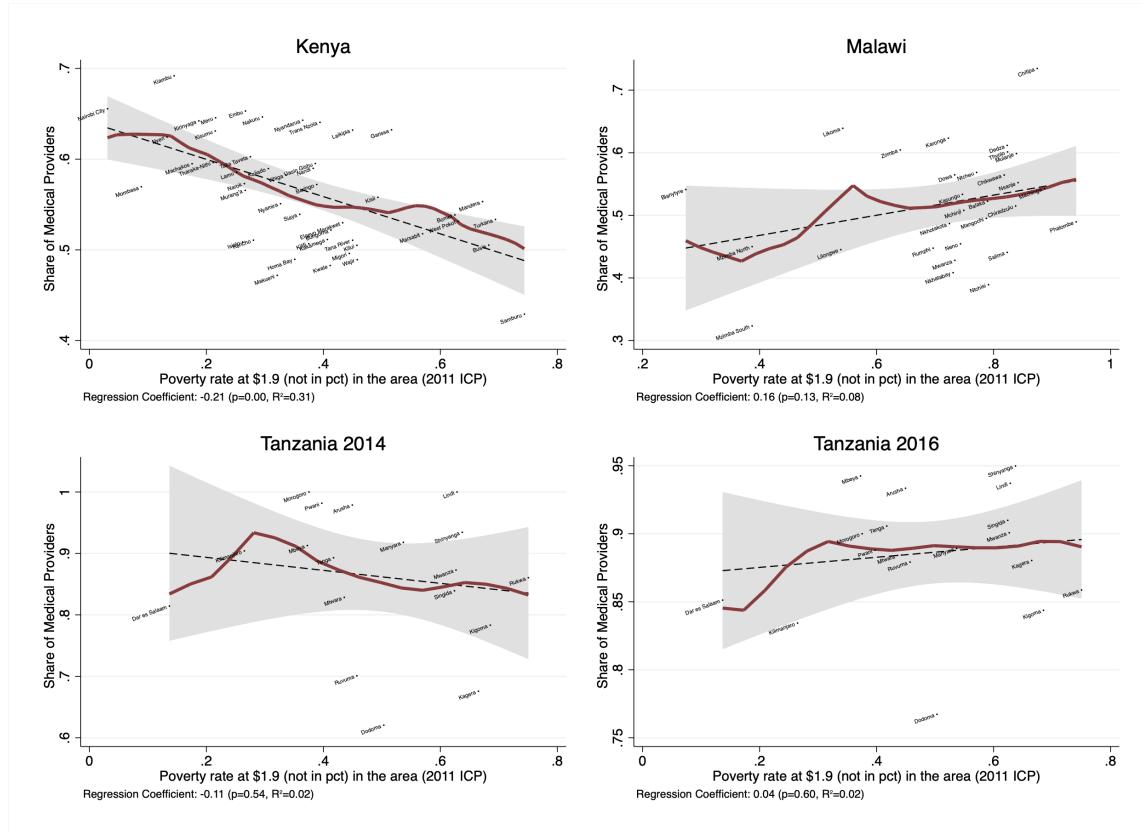


Figure 25: Share of Medical Providers by Country

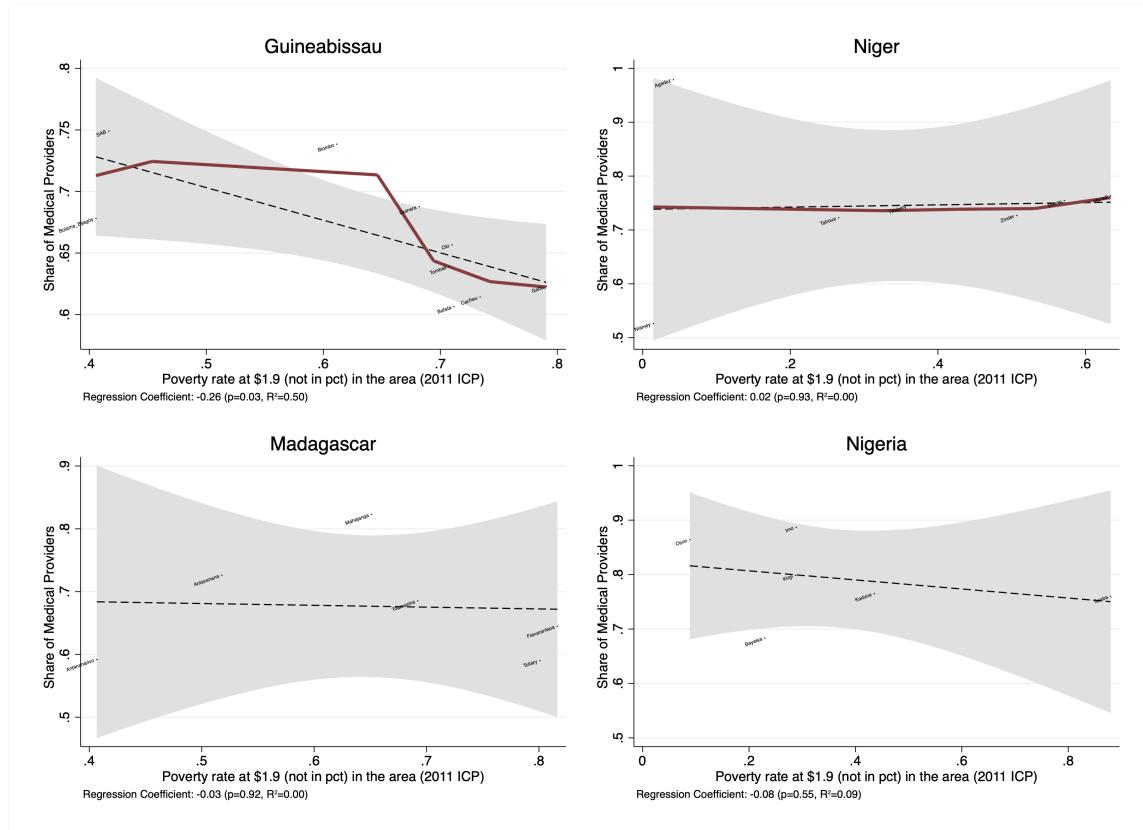
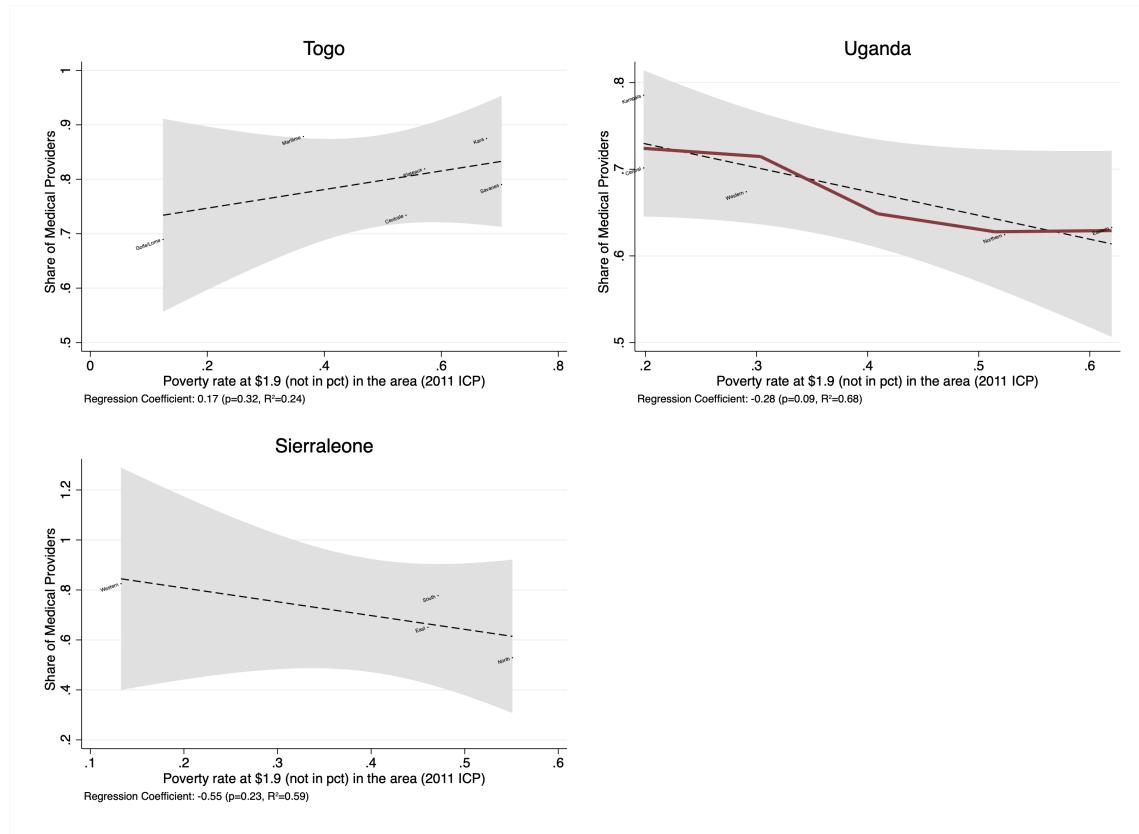


Figure 26: Share of Medical Providers by Country



The figures below indicate the correlation between poverty rate and the share of medical officers per facility in each country.

Figure 27: Share of Medical Officers by Country

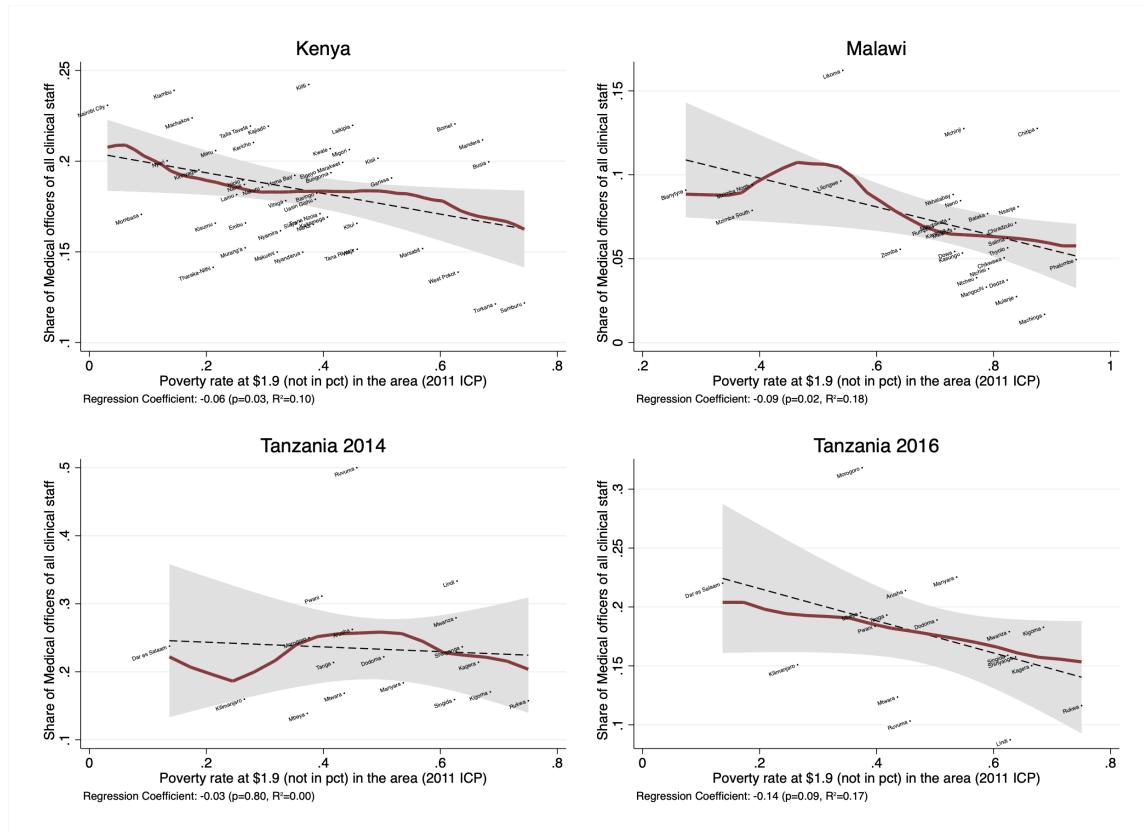


Figure 28: Share of Medical Officers by Country

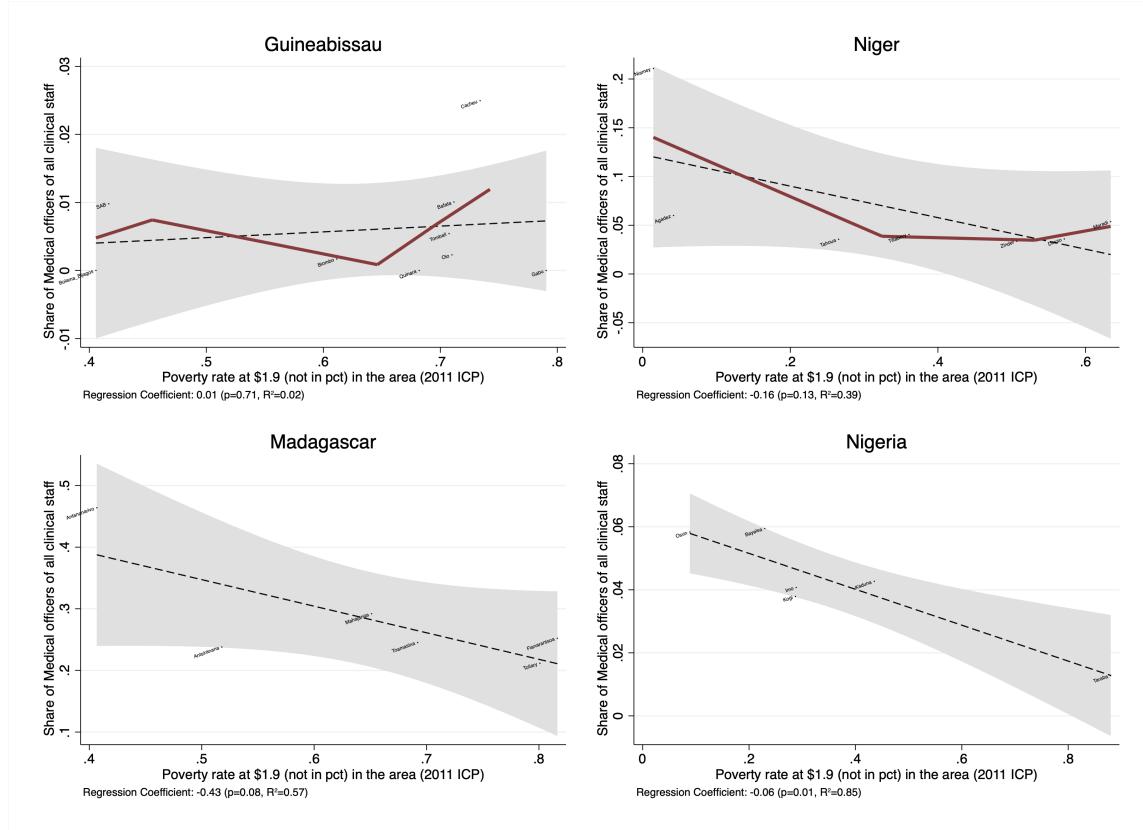
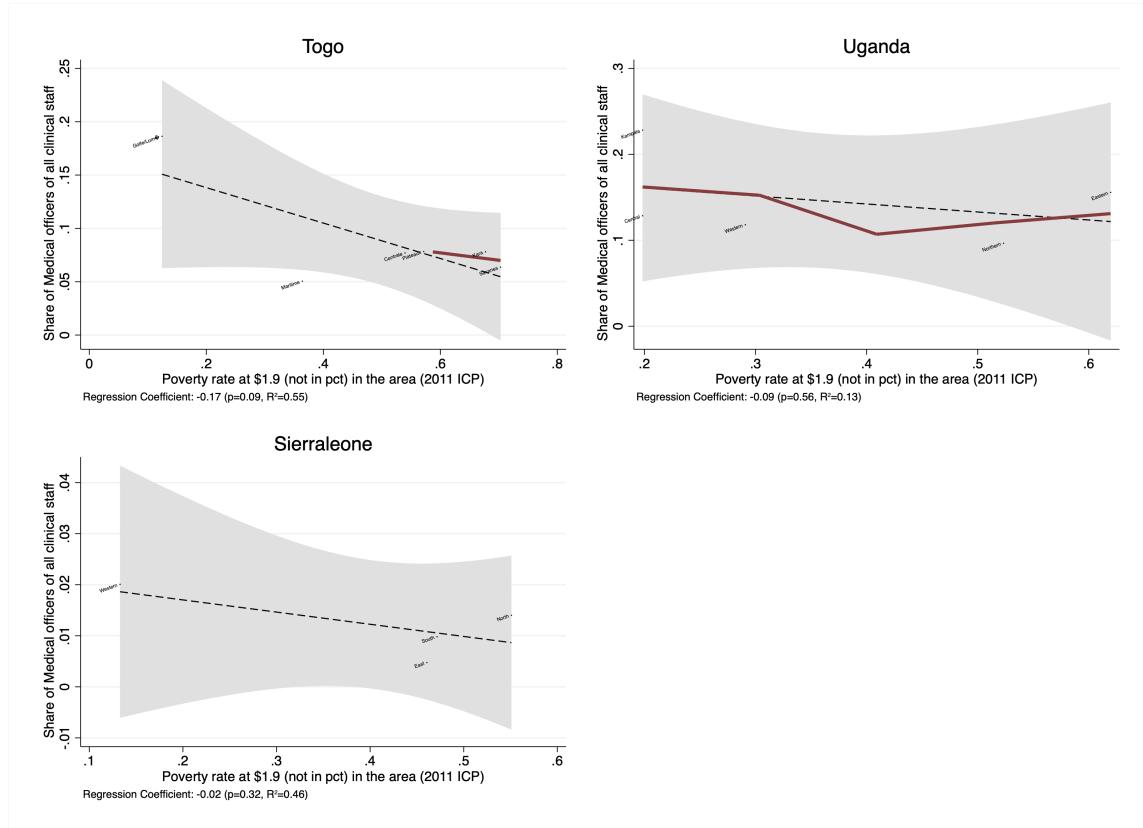


Figure 29: Share of Medical Officers by Country



Regression Estimates

The regression tables below report the OLS regression estimates of poverty rate at the \$1.9 rate on the share of health facilities that have a medical officer in a given health facility.

Table 9: Regression Estimates of Poverty Rate on Share of Health Facilities with a Medical Officer
- All Countries

	(1) Simple	(2) Fixed Effects	(3) Rural/Urban	(4) All Effects
Poverty rate at 1.9	-0.172** (0.068)	-0.101 (0.067)	-0.183*** (0.060)	-0.047 (0.061)
Hospitals			0.318*** (0.024)	0.349*** (0.023)
Urban/Rural Facilities (1=Rural)			-0.186*** (0.026)	-0.206*** (0.021)
Observations	744	744	682	682
R-squared	0.01	0.27	0.24	0.51

Table 10: Regression Estimates of Poverty Rate on Share of Health Facilities with a Medical Officer

	(1)	(2)
	Simple	Rural/Urban
Guinea Bissau		
Poverty rate at 1.9	0.451 (0.469)	-0.165 (0.374)
Hospitals		0.698*** (0.165)
Urban/Rural Facilities (1=Rural)		-0.142** (0.068)
Observations	23	23
R-squared	0.02	0.71
Kenya		
Poverty rate at 1.9	-0.004 (0.124)	0.089 (0.113)
Hospitals		0.216*** (0.035)
Urban/Rural Facilities (1=Rural)		-0.229*** (0.032)
Observations	249	249
R-squared	0.00	0.25
Madagascar		
Poverty rate at 1.9	-0.378 (0.540)	-0.269 (0.459)
Hospitals		0.543*** (0.111)
Urban/Rural Facilities (1=Rural)		-0.153 (0.141)
Observations	32	32
R-squared	0.02	0.37

Table 11: Regression Estimates of Poverty Rate on Share of Health Facilities with a Medical Officer

	(1)	(2)
	Simple	Rural/Urban
Malawi		
Poverty rate at 1.9	-0.258 (0.206)	-0.213* (0.128)
Hospitals		0.558*** (0.048)
Urban/Rural Facilities (1=Rural)		-0.290*** (0.052)
Observations	129	129
R-squared	0.01	0.62
Niger		
Poverty rate at 1.9	-0.242 (0.370)	-0.066 (0.098)
Hospitals		0.614*** (0.065)
Urban/Rural Facilities (1=Rural)		-0.339*** (0.068)
Observations	25	25
R-squared	0.02	0.94
Nigeria		
Poverty rate at 1.9	-0.185 (0.142)	-0.177* (0.096)
Hospitals		0.638*** (0.048)
Urban/Rural Facilities (1=Rural)		-0.152*** (0.043)
Observations	47	32
R-squared	0.02	0.90

Table 12: Regression Estimates of Poverty Rate on Share of Health Facilities with a Medical Officer

	(1)	(2)
	Simple	Rural/Urban
Sierra Leone		
Poverty rate at 1.9	0.257 (0.696)	0.067 (0.038)
Hospitals		0.876*** (0.042)
Urban/Rural Facilities (1=Rural)		-0.019 (0.012)
Observations	13	13
R-squared	0.01	0.99
Togo		
Poverty rate at 1.9	0.101 (0.523)	0.284 (0.439)
Hospitals		0.459*** (0.130)
Urban/Rural Facilities (1=Rural)		-0.217 (0.171)
Observations	25	25
R-squared	0.00	0.35
Uganda		
Poverty rate at 1.9	0.237 (0.335)	0.215 (0.434)
Hospitals		0.366*** (0.110)
Urban/Rural Facilities (1=Rural)		-0.131 (0.155)
Observations	29	21
R-squared	0.01	0.13

Table 13: Regression Estimates of Poverty Rate on Share of Health Facilities with a Medical Officer

	(1)	(2)
	Simple	Rural/Urban
Tanzania 2014		
Poverty rate at 1.9	-0.192 (0.128)	-0.309** (0.151)
Hospitals		0.065** (0.029)
Urban/Rural Facilities (1=Rural)		-0.080* (0.041)
Observations	88	67
R-squared	0.03	0.15
Tanzania 2016		
Poverty rate at 1.9	-0.103 (0.130)	-0.008 (0.119)
Hospitals		0.059 (0.042)
Urban/Rural Facilities (1=Rural)		-0.048 (0.055)
Observations	84	66
R-squared	0.01	0.04

Vignettes

Table 14: Facility Demography Summary

	Urban vs. Rural		Private vs. Public		Facility Level			Total Facilities
	Urban	Rural	Private	Public	Hospital	Health Center	Health Post	
Guinea Bissau	48(37%)	82(63%)	1(1%)	129(99%)	6(5%)	124(95%)	0(0%)	130
Kenya 2012	86(30%)	200(70%)	128(45%)	157(55%)	51(18%)	139(49%)	96(34%)	286
Kenya 2018	789(26%)	2249(74%)	1276(42%)	1762(58%)	285(9%)	594(20%)	2159(71%)	3038
Madagascar	226(51%)	218(49%)	155(35%)	289(65%)	37(8%)	316(71%)	91(20%)	444
Mozambique	23(12%)	172(88%)	2(1%)	193(99%)	38(19%)	9(5%)	148(76%)	195
Malawi	342(31%)	749(69%)	525(48%)	566(52%)	100(9%)	838(77%)	153(14%)	1091
Niger	63(25%)	192(75%)	35(14%)	220(86%)	16(6%)	67(26%)	172(67%)	255
Nigeria	385(21%)	1435(79%)	182(8%)	2203(92%)	411(17%)	1458(61%)	516(22%)	2385
Sierra Leone	159(30%)	377(70%)	43(8%)	493(92%)	30(6%)	109(20%)	397(74%)	536
Togo	54(30%)	126(70%)	37(21%)	143(79%)	16(9%)	46(26%)	118(66%)	180
Tanzania 2014	115(34%)	219(66%)	119(31%)	261(69%)	27(7%)	83(22%)	270(71%)	380
Tanzania 2016	123(36%)	222(64%)	117(31%)	266(69%)	30(8%)	91(24%)	262(68%)	383
Uganda	91(24%)	285(76%)	158(40%)	236(60%)	9(2%)	133(34%)	252(64%)	394

Certain facilities contained missing data for the above categories

Table 15: Provider Demography Summary

	Urban vs. Rural		Private vs. Public		Facility Level			Total Providers
	Urban	Rural	Private	Public	Hospital	Health Center	Health Post	
Guinea Bissau	48(37%)	82(63%)	1(1%)	129(99%)	6(5%)	124(95%)	0(0%)	130
Kenya 2012	1338(43%)	1800(57%)	1121(36%)	2012(64%)	1389(44%)	1314(42%)	435(14%)	3138
Kenya 2018	10247(42%)	14157(58%)	8692(36%)	15712(64%)	10381(43%)	5971(24%)	8052(33%)	24404
Madagascar	1697(77%)	503(23%)	968(44%)	1232(56%)	517(24%)	1522(69%)	161(7%)	2200
Mozambique	623(21%)	2349(79%)	57(2%)	2915(98%)	1733(58%)	186(6%)	1053(35%)	2972
Malawi	4191(32%)	9084(68%)	4716(36%)	8559(64%)	3769(28%)	8784(66%)	722(5%)	13275
Niger	1010(76%)	321(24%)	153(11%)	1178(89%)	606(46%)	416(31%)	309(23%)	1331
Nigeria	5689(39%)	8956(61%)	1535(7%)	19783(93%)	9463(44%)	10654(50%)	1201(6%)	21318
Sierra Leone	3050(60%)	2005(40%)	590(12%)	4465(88%)	1706(34%)	1190(24%)	2159(43%)	5055
Togo	746(55%)	618(45%)	326(24%)	1038(76%)	360(26%)	564(41%)	440(32%)	1364
Tanzania 2014	2456(63%)	1446(37%)	1789(40%)	2670(60%)	1215(27%)	1701(38%)	1543(35%)	4459
Tanzania 2016	2751(60%)	1819(40%)	2035(39%)	3125(61%)	1244(24%)	2216(43%)	1700(33%)	5160
Uganda	631(29%)	1556(71%)	842(36%)	1505(64%)	114(5%)	1359(58%)	874(37%)	2347

Certain providers contained missing data for the above categories

Table 16: Provider Demography Summary

	Medical Education				Profession			Gender		Total Providers
	None	Certificate	Diploma	Masters+	Doctor	Nurse	Para-Professional	Female	Male	
Guinea Bissau	0(0%)	101(78%)	27(21%)	2(2%)	16(12%)	99(76%)	15(12%)	61(47%)	69(53%)	130
Kenya 2012	n/a	n/a	n/a	n/a	615(20%)	1671(53%)	849(27%)	1922(61%)	1209(39%)	3138
Kenya 2018	657(3%)	3414(14%)	17575(72%)	2737(11%)	4408(18%)	11134(46%)	8861(36%)	13697(56%)	10706(44%)	24404
Madagascar	148(7%)	155(7%)	1125(53%)	705(33%)	683(31%)	1084(49%)	433(20%)	1332(61%)	868(39%)	2200
Mozambique	7(0%)	96(4%)	2192(87%)	233(9%)	1023(34%)	1242(42%)	707(24%)	1405(47%)	1567(53%)	2972
Malawi	11(1%)	684(46%)	784(52%)	24(2%)	1228(10%)	4327(33%)	7369(57%)	5956(46%)	6933(54%)	13275
Niger	6(0%)	159(12%)	248(19%)	904(69%)	94(7%)	821(62%)	416(31%)	921(69%)	406(31%)	1331
Nigeria	3263(18%)	8264(45%)	1557(8%)	5455(29%)	960(5%)	4790(23%)	15445(73%)	14042(66%)	7151(34%)	21318
Sierra Leone	1434(29%)	2993(60%)	491(10%)	96(2%)	62(1%)	1553(31%)	3440(68%)	3019(60%)	2036(40%)	5055
Togo	481(36%)	130(10%)	353(26%)	376(28%)	142(10%)	483(35%)	739(54%)	695(51%)	669(49%)	1364
Tanzania 2014	175(4%)	2528(57%)	1577(35%)	176(4%)	1140(26%)	1310(29%)	2009(45%)	2881(65%)	1578(35%)	4459
Tanzania 2016	128(2%)	2919(57%)	1855(36%)	231(5%)	1181(23%)	1874(36%)	2090(41%)	3402(66%)	1734(34%)	5160
Uganda	n/a	n/a	n/a	n/a	381(16%)	1067(46%)	893(38%)	1483(63%)	859(37%)	2347

Certain providers contained missing data for the above categories

Table 17: Diagnostic Knowledge Summary

	Guinea Bissau	Kenya 2012	Kenya 2018	Madagascar	Mozambique	Malawi	Niger	Nigeria	Sierra Leone	Togo	Tanzania 2014	Tanzania 2016	Uganda
Child Diarrhea	Number of Observations	104	619	4485	618	694	1510	514	5005	829	302	520	498
	Did Not Do Vignette	2	0	0	1	0	0	80	12	0	225	0	0
	Mean Questions	35.88	39.08	27.45	28.35	30.70	56.44	23.30	27.38	26.46	25.56	38.35	43.07
Child Pneumonia	Mean Exams	21.38	30.65	19.50	16.05	15.05	48.87	13.50	15.61	19.11	20.01	19.08	21.45
	Number of Observations	104	619	4481	616	694	1499	514	4994	828	302	520	498
	Did Not Do Vignette	2	0	4	3	0	0	80	23	1	225	0	0
(Type II)	Mean Questions	35.88	39.08	27.47	28.41	30.70	56.77	23.30	27.43	26.49	25.56	38.35	43.07
	Mean Exams	21.38	30.65	19.51	16.09	15.05	49.16	13.50	15.65	19.14	20.01	19.08	21.45
	Number of Observations	104	617	4479	616	693	1446	514	4859	828	303	520	498
Diabetes	Did Not Do Vignette	2	2	6	3	1	0	80	158	1	224	0	0
	Mean Questions	35.88	39.14	27.48	28.43	30.71	57.29	23.30	27.90	26.49	25.56	38.35	43.07
	Mean Exams	21.38	30.70	19.52	16.11	15.07	49.70	13.50	15.96	19.14	20.01	19.08	21.45
Tuberculosis	Number of Observations	104	619	4472	616	694	1418	514	4925	828	303	520	498
	Did Not Do Vignette	2	0	13	3	0	0	80	92	1	224	0	0
	Mean Questions	35.88	39.08	27.49	28.43	30.70	57.02	23.30	27.70	26.49	25.56	38.35	43.07
Malaria	Mean Exams	21.38	30.65	19.54	16.11	15.05	49.73	13.50	15.81	19.14	20.01	19.08	21.45
	Number of Observations	103	619	n/a	694	1473	514	4977	828	303	520	498	729
	Did Not Do Vignette	3	0	n/a	4	0	0	80	40	1	224	0	1
Post-Partum Hemorrhage	Mean Questions	36.05	39.08	n/a	28.44	30.70	56.78	23.30	27.43	26.49	25.56	38.35	43.07
	Mean Exams	21.47	30.65	n/a	16.12	15.05	49.29	13.50	15.64	19.14	20.01	19.08	21.45
	Number of Observations	103	619	4467	613	692	1415	594	4877	828	521	520	498
Neonatal Asphyxia	Did Not Do Vignette	3	0	18	6	2	0	0	140	1	0	6	25
	Mean Questions	35.88	39.12	27.50	28.46	30.74	57.21	21.55	27.69	26.49	15.66	38.35	43.07
	Mean Exams	21.38	30.74	19.55	16.14	15.09	49.92	13.22	15.83	19.14	14.26	19.08	21.45
Neonatal Asphyxia	Number of Observations	104	616	4466	576	688	1390	594	4711	828	519	520	498
	Did Not Do Vignette	2	3	19	43	6	0	0	306	1	8	0	92
	Mean Questions	35.88	39.12	27.50	28.54	30.69	57.62	21.55	28.05	26.49	15.63	38.35	43.07
	Mean Exams	21.38	30.74	19.55	16.14	15.06	50.36	13.22	16.15	19.14	14.24	19.08	21.45
Certain countries have missing data for some of the vignettes													

Table 18: Treatment Knowledge Summary

	Guinea Bissau	Kenya 2012	Kenya 2018	Madagascar	Mozambique	Malawi	Niger	Nigeria	Sierra Leone	Togo	Tanzania 2014	Tanzania 2016	Uganda
Child Diarrhea	Correct Diagnosis	45.6%	78.1%	59.7%	52.7%	55.3%	65.8%	46.0%	40.4%	62.7%	44.0%	63.6%	68.0%
	Correct Treatment	32.8%	48.9%	54.5%	42.8%	33.3%	63.2%	37.0%	23.8%	51.7%	43.3%	44.4%	53.3%
	Gave In. Antibiotics	4.3%	47.8%	30.4%	19.2%	24.6%	45.4%	14.5%	32.6%	20.5%	31.0%	27.1%	23.4%
Child Pneumonia	Number of Tests Ordered	5.33	7.86	6.19	3.69	6.98	15.90	6.49	5.41	5.00	6.35	7.54	7.95%
	Correct Diagnosis	45.6%	78.1%	59.8%	52.8%	55.2%	66.1%	46.0%	40.4%	62.8%	44.0%	63.6%	68.0%
	Correct Treatment	32.8%	48.9%	54.5%	42.7%	33.3%	63.4%	37.0%	23.8%	51.7%	43.3%	44.4%	53.3%
(Type II)	Gave In. Antibiotics	4.3%	47.8%	30.4%	19.1%	24.6%	45.5%	14.5%	32.6%	20.5%	31.0%	27.1%	23.4%
	Number of Tests Ordered	5.33	7.88	6.20	3.70	6.98	16.30	6.49	5.54	5.00	6.35	7.54	7.95
	Correct Diagnosis	45.6%	78.1%	59.8%	52.9%	55.2%	66.1%	46.0%	40.7%	62.8%	44.2%	63.6%	68.0%
Diabetes	Correct Treatment	32.8%	48.9%	54.5%	42.7%	33.3%	63.5%	37.0%	24.1%	51.7%	43.2%	44.4%	53.3%
	Gave In. Antibiotics	4.3%	47.8%	30.4%	19.1%	24.6%	46.1%	14.5%	32.8%	20.5%	30.9%	27.1%	23.4%
	Number of Tests Ordered	5.33	7.88	6.20	3.70	6.98	16.30	6.49	5.54	5.00	6.35	7.54	7.95
Tuberculosis	Correct Diagnosis	45.6%	78.1%	59.8%	52.9%	55.2%	66.1%	46.0%	40.7%	62.8%	44.2%	63.6%	68.0%
	Correct Treatment	32.8%	48.9%	54.5%	42.7%	33.3%	62.7%	37.0%	23.9%	51.7%	43.2%	44.4%	53.3%
	Gave In. Antibiotics	4.3%	47.8%	30.3%	19.1%	24.6%	46.9%	14.5%	32.6%	20.5%	30.9%	27.1%	23.4%
Malaria	Number of Tests Ordered	5.33	7.86	6.20	3.70	6.98	16.41	6.49	5.49	5.00	6.35	7.54	7.95
	Correct Diagnosis	45.5%	78.1%	59.9%	53.0%	55.2%	66.4%	46.0%	40.4%	62.8%	44.2%	63.6%	68.0%
	Correct Treatment	32.7%	48.9%	n/a	42.7%	33.3%	62.8%	37.0%	23.8%	51.7%	43.2%	44.4%	53.3%
Post-Partum Hemorrhage	Gave In. Antibiotics	4.4%	47.8%	n/a	19.1%	24.6%	45.8%	14.5%	32.5%	20.5%	30.9%	27.1%	23.4%
	Number of Tests Ordered	5.28	7.86	n/a	3.70	6.98	16.07	6.49	5.42	5.00	6.35	7.54	7.95
	Correct Diagnosis	45.5%	78.1%	59.9%	53.0%	55.2%	66.4%	46.0%	40.7%	62.8%	44.2%	63.6%	68.0%
Neonatal Asphyxia	Correct Treatment	32.7%	48.9%	54.5%	42.8%	33.3%	62.5%	32.0%	24.0%	51.7%	24.7%	44.4%	53.3%
	Gave In. Antibiotics	4.4%	47.8%	30.3%	19.2%	24.6%	46.6%	14.5%	32.7%	20.5%	31.0%	27.1%	23.4%
	Number of Tests Ordered	5.28	7.86	6.20	3.70	6.98	16.46	6.43	5.49	5.00	3.79	7.54	7.95
Neonatal Asphyxia	Correct Diagnosis	45.6%	78.2%	59.9%	53.5%	55.2%	66.7%	50.0%	41.2%	62.8%	44.6%	63.6%	68.0%
	Correct Treatment	32.8%	48.9%	54.5%	43.1%	33.4%	62.6%	32.0%	24.3%	51.7%	24.6%	44.4%	53.3%
	Gave In. Antibiotics	4.3%	47.8%	30.3%	19.6%	24.5%	46.9%	14.5%	33.3%	20.5%	31.0%	27.1%	23.4%
	Number of Tests Ordered	5.33	7.88	6.20	3.64	6.99	16.61	6.43	5.58	5.00	3.78	7.54	7.95
Certain countries have missing data for some of the vignettes													