

Strengthening the health system for improved performance using the empirical quantification for implementing partners tool, Kwara State, North Centra, Nigeria

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Background: Empirical quantification for implementing partners (EQUIP) is a tool developed by United States Agency for international Development for quantifying, reviewing, improving the human resources for health for improved services. In Kwara State, under the project, accelerating control of the HIV epidemic in Nigeria cluster 4, there were 60 ad hoc staff for HIV testing and diagnosis in December 2022. Prior to the introduction of the EQUIP tool, the efficiency of the team was sub-optimal below the daily and weekly targets. In view of the suboptimal achievements, the State team thought of engaging an additional 28 staff to meet the weekly and monthly targets. With the introduction of the EQUIP tool for review of human resources, there was remarkable improvement in the achievement. The purpose of the study is to evaluate the effect of the EQUIP tool in improving the effectiveness and efficiency of health care services in Kwara State.

Method: The tool was used to review and re-position the human resources for HIV testing and diagnosis. Strengths, weaknesses, opportunities, and threats (SWOT) analysis was also conducted. Corrective actions were instituted comprising tailored capacity building to staff with capacity gaps, task sharing and shifting factoring in their peculiarities. Staff who are overworked had their tasks lightened to make them more efficient. They were all re-trained in their assigned tasks and on cultural and religious norms to enable them to blend well with the communities where they work. The achievements and efficiency of the staff two months prior to the introduction of the EQUIP tool and two months afterwards were evaluated to demonstrate the effect of the tool.

Results: The achievements of the team two months prior to the introduction of the tool showed a total of 19,388 people were tested for HIV, with 208 positives identified (86 males; 122 females), a yield of 1.1%, while two months after the introduction of the tool, a total of 10,393 people were tested for HIV, with 249 positives identified (98 males; 151 females), an impressive yield of 2.4%. A total of 36 pediatrics and adolescent subpopulations were among the positives clients identified. In summary, the testing volume was significantly reduced by 46.4% after the introduction of the tool, also positive identification had significant increment of 16.5% demonstrating a more efficient and effective testing because of the tool. Also, there was no longer a need to engage additional ad hoc staff as the ones on the ground are working optimally.

USAID Empirical Quantification for Implementation Partners' (EQUIP) Calculator															
Case Finding (Adults)															
Implementation Unit	Performance Period(Days)	Level of effort					Commodities			HRH		Personnel costs		Logistic costs	
		(HTS_TST_POS)	Expected Daily performance (HTS_TST_PO S)	Yield(%)	HTS_TST(total)	HTS_TST (Daily)	Determine	Unigold	Stat Pak	Test per CT_day	Number of CT required	Cost of CT_Month(Naira)	Cost of CT_Year(Naira)	Cost of Linkage	Logistics Cost_month
Kwara	200	3018	15	1.0%	301800	1509	304818	6036	60	15	101	5,030,000	60,360,000	3,018,000	1,006,000
Asa	200	108	1	0.8%	13878	69	13986	216	4	15	5	231,300	2,775,600	108,000	46,260
Baruten	200	204	1	2.0%	10253	52	10557	408	8	15	3	172,560	2,070,600	204,000	34,510
Fidu	200	311	2	1.9%	15991	80	16302	622	12	15	5	266,510	3,198,177	311,000	53,302
Fidu	200	91	0	1.0%	5720	29	5811	182	4	15	2	95,333	1,144,000	91,000	19,067
Helodun	200	108	1	0.8%	2952	145	29160	216	4	15	10	484,200	5,810,400	108,000	96,840
Norin East	200	249	1	1.2%	20169	101	20418	498	10	15	7	336,150	4,033,800	249,000	67,230
Norin South	200	966	5	1.0%	98854	494	99820	1932	39	15	33	1,647,567	19,770,800	966,000	329,513
Norin west	200	242	1	0.8%	47017	235	47259	484	10	15	16	783,619	9,403,429	242,000	156,224
Ipedun	200	231	1	0.4%	62139	311	62370	462	9	15	21	1,035,650	12,427,800	231,000	207,130
Iun	200	109	1	0.9%	11908	60	12017	218	4	15	4	198,471	2,381,650	109,000	39,684
Kalama	200	189	1	0.9%	21000	105	21189	378	8	15	7	350,000	4,200,000	189,000	70,800
Moro	200	234	1	1.1%	20504	103	20788	468	9	15	7	341,738	4,100,850	234,000	68,348
Ofia	200	338	2	0.7%	45999	230	46337	676	14	15	15	766,445	9,199,745	338,000	153,829
Ofia Ero	200	73	0	0.4%	18542	93	18615	146	3	15	6	309,033	3,708,400	73,000	61,807
Opes	200	138	1	0.6%	32022	160	32157	270	5	15	11	533,700	6,404,400	138,000	106,740
Patigi	200	184	1	0.8%	22207	110	22211	368	7	15	7	367,124	4,405,486	184,000	73,425
Total		3772	19		475175	2376	478947	7544	151		158	7,919,590	95,035,076	3,772,000	1,583,918

Empirical Quantification for Implementation Partners' (EQUIP) Calculator															
Case Finding															
Implementation Unit	Performance Period(Days)	Level of effort					Commodities			HRH		Current HR	Cost of CT_Mo		
		(HTS_TST_PO S)	Expected Daily performance (HTS_TST_PO S)	Yield(%)	HTS_TST(total)	HTS_TST (Daily)	Determine	Unigold	Stat Pak	Test per CT_day	Number of CT required				
Kwara	200	3018	15	1.0%	301800	1509	304818	6036	60	15	101	5,030,000	60,360,000	3,018,000	1,006,000
Katigi General Hospital	200	8	0	1.0%	827	4	836	17	0	15	0	0	0	0	
Lapai General Hospital	200	21	0	1.0%	2065	10	2085	41	1	15	1	0	0	0	
Makera Modal Primary Health Centre	200	5	0	1.0%	487	2	492	10	0	15	0	0	0	0	
Maternity and Child Health Gulu	200	5	0	1.0%	508	3	513	10	0	15	0	0	0	0	
Molwa General Hospital	200	25	0	1.0%	2500	13	2525	50	1	15	1	0	0	0	
New Bussa General Hospital	200	22	0	1.0%	2219	11	2242	44	1	15	1	0	0	0	
Rural Hospital Auna	200	3	0	1.0%	313	2	316	6	0	15	0	0	0	0	
Rural Hospital Sarkin Pawa	200	3	0	1.0%	328	2	331	7	0	15	0	0	0	0	
Rural Hospital Wushishi	200	4	0	1.0%	404	2	408	8	0	15	0	0	0	0	
Shehu Shagari Specialist Hospital	200	9	0	1.0%	906	5	915	18	0	15	0	0	0	0	
Tungu Magajaya General Hospital	200	13	0	1.0%	1290	6	1303	26	1	15	0	0	0	0	
Total		541	3		54100	271	54641	1082	22	15	16	18			

Conclusion and Recommendation: The EQUIP tool was invaluable and impactful in re-positioning the human resources for improved efficiency and effectiveness of health care services. We therefore recommend the tool to other regions in Nigeria and other countries for re-positioning their human resources for improved healthcare services.