UNDERSTANDING THE EFFECTIVENESS OF THE FOUNDATION YEAR PROGRAMME

Understanding the effectiveness of the Foundation Year Programme in producing a new generation of female health workers in northern Nigeria

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Background

The principle of health equity implies that all citizens should have an equal opportunity to be healthy. However, wide disparities in health status exist within many countries worldwide.

In 2014, Nigeria has a total population of 178,516,904 people with about 94,717,499 living in rural areas[i]. Disparities exist between the health statuses of Nigerians residing in rural areas compared with those in urban areas and between the Northern and the Southern regions of the country (Table 1)[ii].

These disparities have been linked to numerous barriers that hamper access to essential health services. Such barriers include distance from the household to health care facilities due to inadequate number, or poor distribution of health care facilities; cost of services; lack of equipment, drugs and supplies; inadequate number and poor distribution of health workers; and for Northern Nigeria in particular, inadequate number of female health workers (Table 1)[iiiivv]. Lack of access to quality female health care providers has been identified as one of the primary root causes of health inequity and is disproportionately experienced by people living in remote and rural communities.

To improve the health status of Nigerian women, there is a need to, amongst other strategies, increase the numbers and ensure equitable distribution of female health workers in rural areas. This brief describes an innovative approach to increase female health workers in five Northern Nigeria states, its effectiveness and challenges.

Increasing the number of female health workers in rural Northern Nigeria

Many rural northern Nigerian women and girls are unable to access higher education at Health Training Institutions (HTIs) to be trained as health care workers. They do not have the secondary school qualifications required for entry. This lack of students from rural locations has been identified as a major factor responsible for understaffing of rural health facilities, as qualified students from urban areas often refuse deployment to rural areas.

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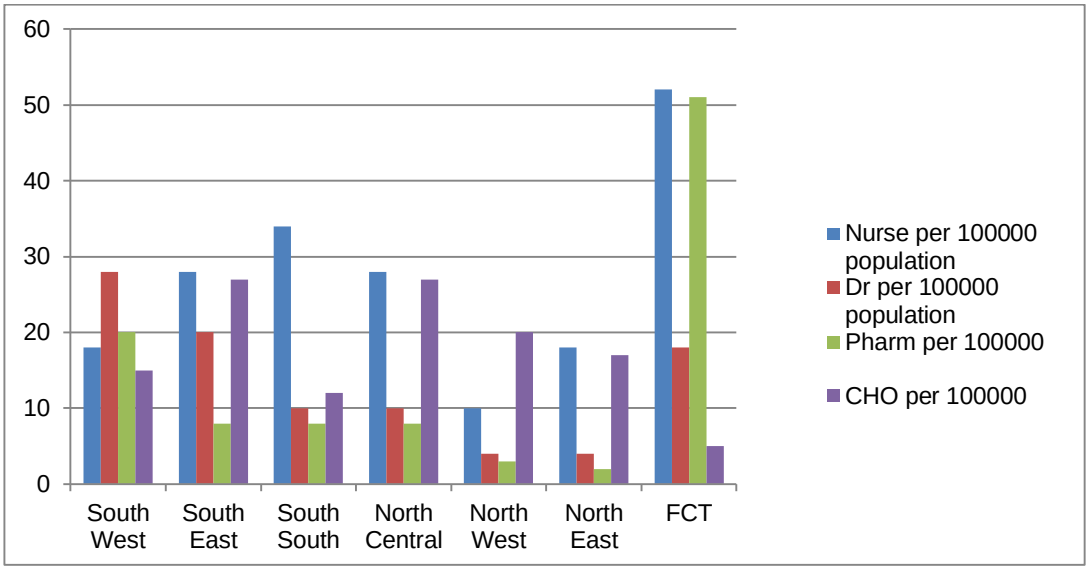
FIGURE 1: ZONAL DISTRIBUTION OF KEY HEALTH PROFESSIONALS



Source: Federal Republic of Nigeria. National Human Resources for Health Strategic Plan- 2008 to 2012. 2008. Abuja, Nigeria.

In order to increase the access of rural women and girls to health training, the UK aid-funded Women for Health (W4H) programme established the Foundation Year Programme (FYP). The FYP prepares rural women and girls to be trained as health workers and enables a new vision for them to improve women's and children's health. The W4H Programme works in five Northern Nigerian states of Jigawa, Kano, Katsina, Yobe and Zamfara.

The FYP provides rigorous support to augment entry requirements to enable students to pass entrance examinations into HTIs. It has two pathways: the Bridging pathway for young women who do not hold the qualifications to enter directly into a health training programme; and the Preparatory pathway which gives support to students who have the prescribed entry requirements (5 credits), but would benefit from further support in order to pass the entrance examination into HTI and the 'weeding', or selection, examination that takes place at the end of the introductory period in Schools of Nursing and Midwifery.

Table 1: Disparities between Urban and Rural Health Indicators in Nigeria							
Indicator	**National**	**Urban**	**Rural**	**Northern Region**	**Southern Region**		
				North East	**North West**	**South East**	**South West**
Total Fertility Rate	5.5	4.7	6.2	6.3	6.7	4.7	4.6
Contraceptive Prevalence Rate	15.1	26.8	8.5	3.2	4.3	29.3	38.0
Literacy Rate: Men	75.2	90.8	63.1	51.0	62.2	91.2	88.8
Literacy Rate: Women	53.1	77.2	35.5	28.3	25.8	84.2	82.0
Antenatal Care	60.6	86.0	46.5	49.3	41.0	90.6	90.4
Skilled Birth Attendance	38.1	67.0	22.7	19.9	12.3	82.2	82.5
Delivery at health facility	35.8	61.7	21.9	19.5	11.5	78.1	75
Delivery at home	63.1	37.4	76.9	79.3	87.5	19.9	24.2
Post natal care: Mother	41.9	62.2	30.8	34.3	18.3	62.6	76.1
Post natal care: Newborn	16.1	28.4	9.4	11.6	7.5	16.6	41.9
Mortality Rates: Infant	69	60	86	77	89	82	61
Mortality Rates: Under-5	128	100	167	160	185	131	90

Source: Federal Republic of Nigeria. National Human Resources for Health Strategic Plan- 2008 to 2012. 2008. Abuja, Nigeria.

Effectiveness of FYP in increasing rural girls and women's access to HTIs

With support from the W4H programme, each state established and implemented the FYP with four states (Jigawa, Katsina, Yobe and Zamfara) implementing both bridging and preparatory pathways while Kano state implemented only the preparatory pathway. The decision on the type of FYP pathway implemented was made by state policy makers based on the needs and context of each state. Although Jigawa started the two FYP pathways, this approach was changed following the findings of the first FYP annual review, which showed the availability of more rural girls in Jigawa with the pre-entry requirements.

Selecting the right student: Recruiting rural girls and women

Recruitment of FYP students was community led which generated a high level of community acceptance, commitment and ownership. This also ensured that the right candidates were identified and recruited for the FYP. Many beneficiaries of the FYP are young married women whose families reside in the community and where they are expected to return to provide health care after training. It is hoped that this will reduce the likelihood of trained beneficiaries migrating to work in urban areas. The FYP recruitment process was further strengthened through the development and use of clear guidelines and training of FYP facilitators who worked with the community.

To date, a total of 679 FYP students have been recruited. Of these, the majority (65.4%, n=444) were recruited as first FYP cohort and 235 (34.6%) were in the second cohort (Table 2).

Table 2: Total number of FYP students' recruited by pathways by state in 2013-2014

State	No. Recruited by pathways		Total (%)
	Bridging (%)	Preparatory (%)	
First Cohort			
Katsina	40 (40.0)	60 (60.0)	100 (100.0)
Zamfara	60 (66.7)	30 (33.3)	90 (100.0)
Jigawa	54 (81.8)	12 (18.2)	66 (100.0)
Kano	70 (68.6)	32 (31.4)	102 (100.0)
Yobe	56 (65.1)	30 (34.9)	86 (100.0)
Sub-Total	**280 (63.1)**	**164 (36.9)**	**444 (100.0)**
Second Cohort			
Katsina	35 (50.0)	35 (50.0)	70 (100.0)
Zamfara	30 (38.6)	46 (91.3)	76 (100.0)
Jigawa	0 (0.0)	55 (100.0)	55 (100.0)
Kano	0 (0.0)	34 (100.0)	34 (100.0)
Yobe	0 (0.0)	0 (0.0)	0 (0.0)
Sub-Total	**65 (27.6)**	**170 (72.3)**	**235 (100.0)**
Total	**345 (50.1)**	**334 (49.2)**	**679 (100.0)**

FYP preparatory students' progression to HTIs

Table 3 shows progression of FYP preparatory students to HTIs. Of the 164 FYP students prepared for HTI entrance examination from the first FYP cohort, 136 gained admission to HTIs (82.3%; n=135/164). Of the 22 students in Katsina who did not pass the HTI entrance examination, 9 were able to secure admission into other training institutions, while one of the seven students from Kano who did not gain entrance into HTI secured admission into another training institution.

Of the 170 students in the second cohort, 106 (62.4%) have already gained admission to HTIs. This consists of 100% of the enrolled students in Jigawa and Kano, and 49% (n=17) of the enrolled students in Katsina state. The 46 students from Zamfara are yet to write the entrance examinations to HTIs (Table 4). While the remaining 18 students from Katsina state have remained for further support in the preparatory programme.

FYP Preparatory students' progression by type of health training

With the support of W4H staff the HTIs ensured that students' placement took cognizance of students' areas of interest and future career aspirations. Table 4 shows the distribution of FYP preparatory student who passed the entrance examinations by type of HTI. The majority of the student from the First Cohort were admitted into Schools of Midwifery (53.3%, n=72/135), while more students in the Second Cohort gained admission into Schools of Nursing. Overall, more students were admitted into Schools of Nursing and Midwifery than other health programmes (77.5%, n=187).

Students who are enrolled into Schools of Nursing and Midwifery are expected to write a selection examination after the introductory training, before they are indexed by the Nursing and Midwifery Council (NMC). To date, 75 of the students who gained admission to the Schools of Nursing and Midwifery have passed the selection examination and have been indexed by the NMC, while the remaining students are still in the introductory stage.

Table 3: FYP preparatory students' progression and transition into the HTIs			
State	**Total No. of students recruited**	**Total number presented for HTI entrance exams.**	**Total No. who gained admission into HTI (%)**
First Cohort			
Katsina	60	60	38 (65.0)
Zamfara	30	30	30 (100)
Jigawa	12	12	12 (100)
Kano	32	32	25 (78.1)
Yobe	30	30	30 (100)
Sub-Total	**164**	**164**	**135 (82.3)**
Second Cohort			
Katsina	35	35	17 (49.0)
Zamfara	46	46	NA*
Jigawa	55	55	55 (100)
Kano	34	34	34 (100)
Yobe	0	0	0
Sub-Total	**170**	**170**	**106 (62.4)**
Total	**334**	**334**	**241 (72.2)**

*NA= Not Applicable-Students yet to write entrance examinations.

Progression of FYP Bridging Students

The entry requirement to enrol into Schools of Nursing, Schools of Midwifery and the CHEW programme is a minimum of 5 credits, while the entry requirement for the Community Midwifery and the JCHEW programmes is 5 passes. The FYP bridging programme supports students to achieve 5 credits required to enrol in a Nursing, Midwifery and CHEW programme. However, FYP students who do not make the 5 credits but have 5 passes are supported to enrol in other programmes such as Community Midwifery and JCHEW programmes if they had the required 5 passes to avoid students going back to their villages with no placement or being regarded as "a failure" by their community.

Table 5 shows the number of FYP bridging students who achieved the required 5 credits after the bridging programme. Of the 345 students in the FYP bridging programme, 143 (41.4%) achieved the required 5 credits. There is a significant improvement in the pass rate of the Second Cohort (63.1%), with more students achieving the required 5 credits compared with the First Cohort (36.4%) and in the first sitting (May/June). Of note also is the number of students in the Second Cohort from Katsina state, although there were 35 students in the Second Cohort, only 15 students wrote the May/June examination, 13 of which passed in one sitting, the remaining 20 joined the FYP shortly after the May/June examination started.

Some of the students who achieved the required 5 credits were either directly entered to an HTI where possible or entered into the FYP preparatory programme. Some students were recommended to retake the WAEC/NECO exams if they did not have sufficient credits or passes.

Table 4: Number of FYP Preparatory students by type of health training institution						
State	**Distribution of students by HTIs**					
	Schools of Nursing	**Schools of Basic Midwifery**	**Schools of Health Technology**	**Community Midwifery**	**Other health courses**	**Total**
First Cohort						
Katsina	22	4	7	2	3	38
Zamfara	2	19	4	5	0	30
Jigawa	5	2	2	0	3	12
Kano	3	17	5	0	0	25
Yobe	0	30	0	0	0	30
Sub-Total	**32 (23.7%**	**72 (53.3%)**	**18 (13.3%)**	**7 (5.2%)**	**6 (4.4%)**	**135 (100%)**
Second Cohort						
Katsina	7	5	0	3	2	17
Zamfara	NA*	NA*	NA*	NA*	NA*	NA*
Jigawa	42	0	13	0	0	55
Kano	16	13	5	0	0	34
Yobe	NA	0	0	0	0	NA
Sub-Total	**65 (61.3%)**	**18 (17.0%)**	**18 (17.0%)**	**3 (2.8%)**	**2 (1.5%)**	**106 (100%)**
Total	**97 (40.2%)**	**90 (37.3%)**	**36 (15.0%)**	**10 (4.1%)**	**8 (3.3%)**	**241 (100%)**

*NA= Not Applicable-The 46 students enrolled in Zamfara are yet to write entrance examinations.

Discussion

The current severe shortage of health workers in rural Northern Nigeria has called for an innovative approach to rapidly and effectively increase the number of female health care providers who are able to work in rural areas.

Admission of students from rural areas has been identified as "the single most important factor associated with rural practice"[viviiviiiixx]. Evidence from many countries has shown that a rural background increases the chance of graduates returning to practice in rural communities[xixiixiiixiv]. Several longitudinal studies of physicians in the USA have found that students with a rural background continue to practice in rural areas for an average of 11–16 years after graduation[xvxvi]. In South Africa, students from rural backgrounds are three times more likely to practice in a rural location compared with their urban counterparts[xvii]

Table 6: FYP Bridging students' who made 5 credits after the FYP Bridging programme		
State	**Total No. of students' enrolled**	**No. of students with 5 credits after the FYP bridging programme (%)**
First Cohort		
Katsina	40	21 (52.5)
Zamfara	60	21 (35.0)
Jigawa	54	12 (22.2)
Kano	70	31 (44.3)
Yobe	56	10 (17.9)
Sub-Total	280	102 (36.4)
Second Cohort		
Katsina	35	13 (37.1)
Zamfara	30	28 (93.3)
Sub-Total	**65**	**41 (63.1)**
Total	**345**	**143 (41.4)**

The approach used by W4H recognises and builds on this body of evidence that health professionals raised within a community are more likely to consider serving in that community, and this is especially true of female health workers. Although it does not necessarily provide immediate healthcare workers that can enter the current labour force, it is instead, a long-term strategy that gets women into the health workforce pipeline and enables rural communities to more effectively address their healthcare workforce needs in years to come. So far, the W4H FYP has recruited 679 rural girls and women who otherwise would not have had the opportunity back into education and have given them a "second chance". Offering them support and opportunity to further their education, improve their lives and fulfil a life-long career in health, which will in turn help them to contribute to their communities and improve the health status of women and children.

Table 6: Students gaining 5 credits in the 2014 WAEC exams (in any subject but including English & Maths)				
State	**Place of 37**	**% Female with 5 credits**	**% Male with 5 credits**	**% pass 5 credit**
Yobe	37th	6.0 (256 of 4261)	4.4 (487 of 11,049)	4.9
Zamfara	33rd	8.3 (617 of 7391)	6.1 (1337 of 21,975)	6.7
Jigawa	31st	9.1 (386 of 4247)	7.0 (944 of 13,546)	7.5
Katsina	29th	12.7 (1681 of 13,245)	9.5 (2868 of 30,298)	10.5
Kano	17th	31.7 (7611 of 23990)	25.9 (10892 of 42089)	28.0

The effectiveness of the FYP can be seen in the progression of students into HTIs. Overall, more than 72% of students enrolled in the FYP preparatory programme were able to gain admission to HTIs, which consists of more than 82% of the First Cohort and more than 62% of the Second Cohort. Although the figures from the Second Cohort shows a drop in transition rate from FYP to HTIs, it is important to state that about 46 students from the Zamfara state FYP preparatory programme are yet to write the entrance examination. More than 77% of students who entered HTIs with the support of W4H are studying to become Midwives and Nurses which are the two priority areas of health workforce need in Northern Nigeria.

Of the 345 students in the FYP bridging programme, 143 (41.4%) achieved the required 5 credits. There was a significant improvement in the pass rate of the Second Cohort of the FYP bridging students, with more students achieving the required 5 credits compared with the First Cohort (63.1%, n=41/65). An overall pass rate of 41% achieving 5 credits may be considered not good enough, however, it is important that this pass rate is interpreted based on the context. Table 6 below shows the proportion of students who sat and passed the 2014 West African Examination Certificate in the five states during the same period. In comparison to boys the number of girls sitting for this examination each year is generally very low. It is important to also state that the table below shows the total number of students irrespective of subjects. The number who sat for science subjects will be a much smaller proportion of this.

The inequity in Northern Nigeria is not only limited to health, but cuts across every facet including education. For most of the five W4H states, it was very difficult to find sufficient candidates with the required three credits in science subjects to enrol in the Bridging FYP. This is because most rural areas lack schools offering science subjects and most rural areas do not have qualified teachers who can teach science subjects. Even when teachers are available, schools in rural areas lack required facilities for students to effectively learn, resulting in low performance.

Low performing disadvantaged schools often lack the internal capacity or support to improve, as school leaders and teachers and the environments of schools, classrooms and neighbourhoods frequently fail to offer a quality learning experience for the most disadvantaged.

The long-term solution to eradicating inequity in education in Nigeria is for the government to improve the quality of primary and secondary education in remote and rural areas. However, as a short and medium term solution, the W4H programme has shown that a bridging programme developed for rural disadvantaged students can be used effectively to ensure their transition into higher education.

The current higher education policies in Nigeria consistently discriminate against disadvantaged students from rural areas. Health training institutes and Universities should take steps to ensure that students from all socio-economic backgrounds have fair access to health care careers. This can involve the use of targeted admission policies to enrol students with a rural background in education programmes for various health disciplines, which will also increase the likelihood of graduates choosing to practice in rural areas.

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