

**Evaluation of the roles of doctors and the functionality of the  
healthcare system in Nigeria**

**ABSTRACT**

*Background:* A comprehensive medical care system is required for effective healthcare delivery to people who need it. Even though exact configuration of healthcare services varies from country to country, a sturdy mechanism comprising of a robust financing, a well-trained and adequately paid workforce; research, policy recommendation and implementation is needed for a well-maintained system to deliver effective healthcare services.

*Methods:* This is a descriptive study conducted on 100 Nigerian trained doctors with at least 1-year practice experience. The online questionnaire was administered to participants through social media platforms such as WhatsApp, Facebook and twitter. Data analysis was done using Microsoft excel 2010 version.

*Result:* The response rate was 100%. Ninety six percent (96%) and 99% of surveyed doctors think their monthly salary and the amount of money budgeted to the health sector is grossly inadequate. It was also noted that poor enumeration and/or low income 82/330 (25%) and poor medical facilities 70/330 (21%) are the commonest reasons they believe doctors emigrate from Nigeria while problem identification (20.2%), provision of leadership, healthcare service delivery (13.5%), policy making and implementation (12.9%) and research and development (10.4%) are the commonest roles for doctors identified by study participants.

*Conclusion:* The Nigerian doctor is poorly enumerated, and the healthcare budget is poor. This accounts to large part why doctors leave Nigeria. There is need for better funding of the

24 healthcare system in Nigeria and more involvement of doctors in leadership, research and policy  
25 development.

26 Keywords: Doctors, roles, healthcare system, Nigeria.

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## 28 **INTRODUCTION**

29 The components of a well-functioning health system respond in a balanced way to a population's  
30 needs and expectations by improving the health status of individuals, families and communities  
31 defending the population against what threatens its health, protecting people against the financial  
32 consequences of ill-health and providing equitable access to people-centered care.<sup>1</sup> For these to  
33 be achieved there is need for a strong primary health care sector as the cornerstone of health  
34 systems. In addition to a strong primary healthcare system, a well-motivated manpower and  
35 material resources are also vital to achieving the universal basic health care for the population.<sup>1</sup>  
36 While many developed countries have to a large extent achieved the sustainable development  
37 goal in the provision of basic and affordable health care for its population, the reverse is the case  
38 in many developing countries especially in sub-Saharan Africa. Little wonder why these  
39 countries have over the years recorded very poor vital statistics in mortality, morbidity and life  
40 expectancy. Due to poor budgets and planning, Africa has witnessed a relentless emigration of its  
41 health profession to industrial nations where working conditions and wages are considerably  
42 better. In Nigeria for instance it was estimated that of the 72,000 medical doctors registered with  
43 the Medical and Dental Council of Nigeria, only approximately 35,000 (48.6%) practice in  
44 Nigeria<sup>2</sup> The Federal Ministry of Health in a 2006 survey reported that there were a total of 39  
45 210 doctors (0.3 per 1000 population), 124 629 nurses (1.03 per 1000 population), 88 796  
46 midwives (0.67 per 1000 population), 2482 dentists (0.02 per 1000 population) and 12 072

47 pharmacists (0.05 per 1000 population) for the year 2004 which are all less than the minimum  
48 recommended by the World Health Organization.<sup>3</sup> This has led to poor functioning and poor  
49 state of health of Nigerians. We sought to evaluate from the perspective of the medical  
50 practitioners in Nigeria, the reason for the continued increase in emigration of doctors for several  
51 decades and the roles doctors should play in the improvement and functionality of the Nigerian  
52 health care system.

### 53 **METHODOLOGY**

54 This was an online survey conducted on medical doctors who are Nigerians and have practiced  
55 medicine for at least 1 year in the Nigerian healthcare setting. For a doctor to practice medicine  
56 in Nigeria, s/he must undergo a 6 years basic medical undergraduate education in one of the  
57 accredited universities in Nigeria. Foreign trained doctor who wishes to practice in Nigeria must  
58 pass the Medical and Dental Council of Nigeria licensing examinations. Following successful  
59 completion, medical graduate undergoes a one-year mandatory internship training and followed  
60 by another one-year mandatory rural practice experience for doctors who are 30 years or  
61 younger. Residency training is a 4-6 years postgraduate program commenced after passing the  
62 primary postgraduate medical college examination in the respective faculties. It is not a  
63 mandatory training program and not required to practice as a general medical officer in Nigeria.

64 Data collection was done through online social media such as WhatsApp, Facebook and twitter.  
65 Electronic consent letters were sent to the potential participants. For those that agree to  
66 participate in the survey, a weblink generated from <https://www.surveymonkey.com/> was posted  
67 to them electronically. The participants were assured on confidentiality by non-collection of  
68 personal information that could serve as identifier. Participants were requested to answer four  
69 questions on the online questionnaires to the best of their abilities. These questions included

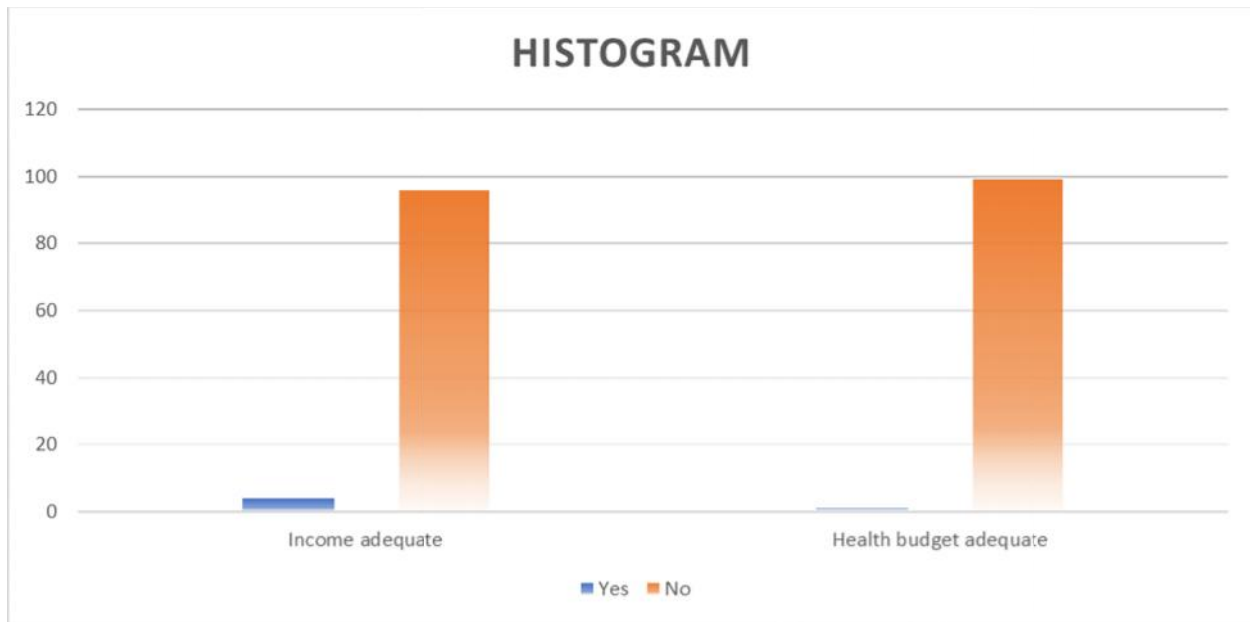
70 information on the adequacy of their monthly salary, national health budget, reason they believe  
71 doctors leave to practice medicine outside Nigeria and what they believe are the role of doctors  
72 in the healthcare system of Nigeria. The number of doctors enrolled was calculated based on a  
73 doctor-population ratio of 0.03%,<sup>3</sup> a 5% precision degree and a non-response rate of 50% to  
74 accommodate possible sample loss due to attrition. Data collected was cleaned and analyzed  
75 using Microsoft excel statistical software (2010 version). Results were presented in percentages  
76 and charts.

77 Ethical approval was obtained from the Ethics and Research Committee of the Ben Carson  
78 Senior School of Medicine, Babcock University. Online consent form was sent to all potential  
79 participants prior to the online questionnaire link sent. Identifiers were not collected in the  
80 questionnaire forms.

## 81 **RESULT**

82 A total of 100 doctors participated in the survey through the online monkey survey and response  
83 rate was 100%. Ninety six percent (96%) think their monthly salary or income is inadequate or  
84 does not match the time and effort they put in the medical job. Almost all (99%) except one are  
85 of the opinion that the amount of money budgeted into the health sector is grossly inadequate.

86 Fig 1



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88 **Figure 1- Histogram showing responses to the adequacy of monthly salary and health**  
 89 **budget in Nigeria healthcare system.**

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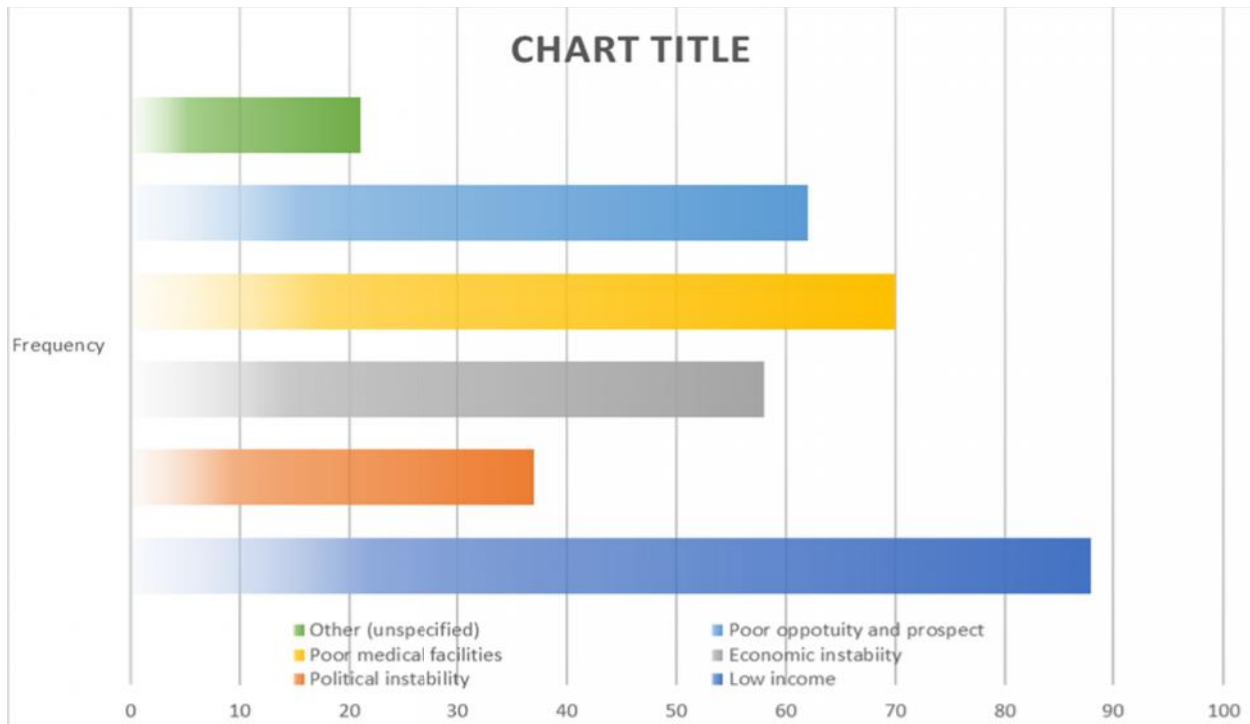
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93 When asked about reason doctors are leaving Nigeria, 330 responses were obtained giving an  
 94 average of 3 responses per participants. Poor enumeration and/or low income 82/330 (25%) and  
 95 poor medical facilities 70/330 (21%) were the commonest reasons indicated by the respondents.

96 Other reasons included reduced job opportunity 62/330 (19%), economic instability 58/330  
 97 (18%), political instability 37/330 (11%) and other unspecified reasons 21/330 (6%). Participants

98 listed in their opinion what the main responsibility of doctors should be in the Nigerian  
 99 healthcare system. One hundred and sixty-three responses were seen and some respondents gave

100  $\geq 2$  responses. Fig 2



**Figure 2- Bar chart showing responses on the reasons medical doctors leave Nigeria**

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Based on the responses given, ten patterns of responses were identified, and these were thematized into major categories as shown in Table 1. About one-fifth (20.2%) of the responses by the surveyed doctors believed that the main roles of doctors should be problem identification in the healthcare sector and proffering solution/recommendation to the government on how to tackle same. Provision of leadership and/or coordination of the healthcare system was the second most common (14.7%) responsibility supposed to be performed by the Nigerian doctor. Others included healthcare service delivery (13.5%), policy making and implementation (12.9%) and research and development (10.4%) The least expected role of the Nigerian doctor according to respondents included Public health promotion (4.9%) and utilization and advancement of medical innovations (3.7%). Four unspecified (2.5%) responses reported in the survey included

114 the role of the Nigerian doctor in the healthcare system is “vital”, “a lot”, “pivotal” and “the  
115 doctor has no role”.

116 **Table 1: Doctor’s opinion on the main responsibilities of the doctor in the Nigerian**  
117 **healthcare system**

S/N	Thematic categories	Frequency (N)	Percentage (%)
	Main responsibilities of the doctors in Nigeria		
1.	Healthcare service delivery	22	13.5
2.	Problem(s) identification, recommendation of solution and development of guidelines	33	20.2
3.	Research and development	17	10.4
4.	Advocacy, reformer and activist for the health system	13	8.0
5.	Utilization and advancement of medical innovations	6	3.7
6.	Public health and health promotion development	8	4.9
7.	Leadership and coordination of the health system	24	14.7
8.	Provision of training, medical curriculum and continuing medical education	15	9.2
9.	Policy making and implementation	21	12.9
10.	Others (unspecified)	4	2.5
<b>Total Responses</b>		163	100

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## 120 **DISCUSSION**

121 This survey shows that majority of the surveyed doctors believe that the monthly take home pay  
122 for the Nigerian doctors is inadequate. This is hardly surprising as an entry level doctor earns an  
123 average of ₦100,000 ~ US\$ 276.62 (based on 02/2019 exchange rate on [www.xe.com](http://www.xe.com): at  
124 exchanger rate of \$361.507) while an average middle-level medical doctor earns an average of

125 ₦250,000~US\$691.56 per month. This sum in most cases includes allowances and before tax  
126 deductions. According to the consolidated medical salary scale 2009, the total salary of the  
127 highest paid medical professional (i.e. specialist consultants) in Nigeria on level 7 and grade 9 is  
128 roughly 5, 128, 200 naira per annum including all allowances.<sup>4</sup> This translates to approximately  
129 USD\$14,185.62 per annum (based on 02/2019 exchange rate on [www.xe.com](http://www.xe.com): at exchanger rate  
130 of \$361.507). This is less than half of the annual salary of a sitting senator (N12, 902, 360.00)  
131 and members of house of representatives (N9,525,985.50).<sup>5</sup> This is even more abysmal when  
132 compared to annual salary of doctors in other countries.<sup>6</sup> This explains a recent NOI Polls which  
133 showed that 8 in 10 Nigerian doctors are seeking to emigrate to practice medicine in other part of  
134 the world due to poor wages and work conditions.<sup>7</sup>

135 Similarly, our study showed that almost all doctors surveyed believed that the national health  
136 budget is grossly inadequate in comparison to other less important sector of the Nigeria economy  
137 and health budget in other countries. According to the National bureau of statistics, Nigeria  
138 allocates less than 5% of its total revenue to the health sector.<sup>8</sup> Between 2012 to 2018, the  
139 percentage allocated to the health sector declined from 5.97% to a paltry 4.0%.<sup>9</sup> Even more  
140 distressing is the fact that over 70% of this sum is allocated to recurrent expenditure such as  
141 salaries, administrative travels etc. with less than 30% on important expenditures such as  
142 research, capital projects etc.<sup>9</sup> An ecological study conducted by the World Health Organization  
143 in 2009 showed that the life-expectancy is directly and significantly correlated to the national  
144 annual health spending ( $r=0.629$ ).<sup>10</sup> This may partly explain why there is poor health outcome in  
145 many middle to low income countries with comparatively low life-expectancy in these countries.  
146 Relatedly, most doctors believe that poor income, poor facilities and poor prospect with  
147 opportunity are the commonest reason doctors leave Nigeria to practice medicine. It is fair to



148 state that this may be related to the poor health budget and implementation in the Nigerian health  
149 sector.

150 Additionally, our survey reported that doctors believe that problem identification, leadership,  
151 healthcare delivery, policy recommendation and research should be the main roles of doctors in  
152 the healthcare system of Nigeria. These are some of the documented roles of doctors in  
153 healthcare system around the world.<sup>11, 12</sup> Except healthcare delivery, the engagement of the  
154 Nigerian doctor in other identified roles is debatable and were specified has been grossly  
155 suboptimal. In authors opinion, while doctor should be encouraged to get involved in politics to  
156 help drive policies issues, their involvement in leadership and headship of hospital around the  
157 country should be strengthened. By training, doctors are meant to be leaders in the health sector  
158 based on their rigorous and comprehensive training. It will however be vitally expedient that  
159 those going into administration should acquire further certification in administration. Such that  
160 their holistic and comprehensive knowledge of the health sector with further professional  
161 administrative training will translate to a robust economic engagement of the health industry in  
162 the country. This, we believe will further strengthen the leadership qualities of a doctor  
163 translating into a more robust economic management of the limited money, material and  
164 manpower in the Nigerian healthcare sector with minimal conflicts and overlapping functions  
165 that lead to recurrent fights and unnecessary strike actions among the three tier levels of health  
166 care team.

167 Finally, as indicated by surveyed doctors, medical research is a key area that needs to be  
168 advanced for development of the healthcare system to be achieved. This is an under-explored  
169 area in the Nigeria healthcare system as studies have shown that most doctors globally have little  
170 interest and/or are not involved in research. This reason for this trend may be related to the poor

171 health research funding<sup>13</sup> and/or poor training of doctors in research methods. In a report  
172 evacuating major professional activities of medical graduates from various countries, Nigeria  
173 trained doctors were significantly noted to be less involved in research (0.6%) and administrative  
174 activities (0.5%) compared to counterparts from other regions of the world.<sup>14</sup>

## 175 **Conclusion**

176 We conclude that the Nigerian doctor is poorly remunerated, and the healthcare budget is poor.  
177 These, together with the resultant poor work conditions are some of the contributors to the poor  
178 health state and reasons doctors are emigrating from Nigeria. Continued and strengthening of the  
179 training and involvement in research and policy development by Nigerian doctors may help  
180 improve the healthcare system in Nigeria.

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UNDER PEER REVIEW