

## Total health for all in Nigeria 2050 and beyond: Strategies for reforming health professionals' education

TA Lawal<sup>1,2</sup>, AO Ogunbiyi<sup>2,3</sup> and EO Olapade-Olaopa<sup>1,4</sup>

*Department of Surgery<sup>1</sup>, Medical Education Unit<sup>2</sup>, Medicine<sup>3</sup>, and Provost's Office<sup>4</sup>,  
College of Medicine, University of Ibadan, Nigeria*

### Abstract

The health indices of a country are influenced by the number and quality of trained healthcare professionals available and their ability to respond to the challenges of societal change. Nigeria, with numerous challenges, which include population explosion, insecurity, changing epidemiology of diseases, and climate change, is in need of reforms in Health Professionals' Education (HPE). These reforms in HPE should be geared towards producing healthcare workers who are fit-for-purpose and fit-of-purpose. Such health professionals are needed to address historic and current inadequacies in the health system as well as future challenges. This review highlights the basis of the problems, consequences and reforms needed in HPE in Nigeria to address the changing needs of the society, changing health conditions, and globalization to contribute to the goal of achieving 'Total Health for All' as a strategy towards health security by the year 2050 and beyond.

**Keywords:** *Health professionals' training, health professionals' education, health security, educational reform, inter professional training*

### Abstrait

Les indices de santé d'un pays sont influencés par le nombre et la qualité des professionnels de la santé formés disponibles et par leur aptitude à faire face aux défis du changement sociétale. Le Nigéria, confronté à de nombreux défis, dont l'explosion démographique, l'insécurité, l'évolution de l'épidémiologie des maladies et le changement climatique, a besoin de réformes dans le domaine de l'Education des Professionnels de la Santé (EPS). Ces réformes d'EPS devraient viser à former des agents de santé adaptés à leurs besoins et aux besoins. Ces tels professionnels de santé sont nécessaires pour remédier aux insuffisances historiques et actuelles du système de santé, ainsi qu'aux défis à venir. Cette revue met en évidence la base des problèmes,

conséquences et réformes nécessaires dans l'EPS au Nigeria pour répondre aux besoins changeants de la société, des conditions sanitaires changeantes et de la mondialisation afin de contribuer à l'objectif de 'Santé Totale Pour Tous' en tant que stratégie pour la sécurité sanitaire d'ici 2050 et au-delà.

**Mots-Clés :** *Education des professionnels de la santé, formation des professionnels de la santé, réforme éducationnelle, formation interprofessionnels*

### Introduction

The quality of healthcare in a country is a reflection of the quality of human resources that are available for health and their ability to respond to the challenges that attend the inevitable changes in their society. The current health indices of Nigeria and the challenges in the health and education sectors suggest that reforms are needed in Health Professionals' Education (HPE) if we hope to attain the goal of a healthy population. There is, therefore, an urgent requirement to review the training of health professionals in our country in light of the changing needs of the society, the changing health conditions, and the effects of globalization if we are to move towards achieving 'Total Health for All' as a strategy for health security by the year 2050 and beyond.

Major changes are occurring in our society, which have been identified as likely to pose unique challenges to the health security of our nation (and to all systems of governance) by 2050. These changes include: a population explosion (with consequences on Nigeria and neighbouring countries as a result of gross inadequacy of resources to cater for the population and an increased risk of man-made disasters and accidents); a changing epidemiology of diseases (with a negative impact on the control of communicable and non-communicable diseases); and an increase in social health problems (that would be worsened by environmental degradation and failure to meet basic needs of the population). Other challenges include mental and behavioural health problems (due to unemployment, poverty, poor access to health and inadequate security of lives and properties); and an inability to meet educational objectives and create a more literate population. Therefore, to achieve 'Total Health for All', and thus

health security for Nigeria by 2030, there is a need for HPE reform in order to produce fit-for-purpose and fit-of-purpose human resources for health (HRH) who can provide the type of healthcare needed at that time. Importantly, these reforms and innovations must address inadequacies in the health system that are the fallouts of historic, current and (projected) future challenges.

#### *Historical, current and future challenges*

The scramble for Africa and its resources i.e. products and people in the 19<sup>th</sup> century was carried out by European powers to consolidate on the economic prospects to their countries [1]. This led to the amalgamation of individual nation states into countries that were often composed of un-related people. Sometimes neighbouring nation states were balkanised and re-combined into different countries based on the economic considerations of the colonial masters at those times [1]. Inevitably, this resulted in stunted growth and development of the hitherto flourishing nation states. A major consequence of the scramble was that the demand for independence (from colonial masters) was born out of nationalistic desires rather than the needs of individual nation states and their people [2]. Following the attainment of independence, the countries then lacked national identities as they were more or less conglomerates of cities and towns.

There was a failure of identification of true societal needs, hence desires for governance was for precipitous rather than organic, well-conceptualized development [2]. The hitherto colonized, but now presumably free, countries kept colonial structures in place and therefore their educational and health systems were patterned after those of foreign interests [3]. Furthermore, years of military rule intertwined with unstable civilian administrations, resulted in inconsistent government policies. The countries' regulatory mechanisms guiding operations in the health, education and other sectors were also weak and ineffective.

The current challenges faced by HPE in Nigeria include persistence of the stunting of growth and development in nationhood. The country has persisted with educational structures conceptualized after the British system and hence, lack home-grown curricula. Thus, there is a huge mismatch between societal needs and the direction of training, as well as between the learning culture and teaching and training methods for health professionals [4]. Political and socio-economic instability persist, and industrial actions are rife (especially in the health and education sectors). Furthermore, the regulatory

structures in place for most aspects of HPE and healthcare delivery are still weak or dysfunctional [5]. Importantly, the country remains heavily reliant on imports to meet her needs for equipment, drugs and other consumables due to the poor efforts at industrialization and the weak infrastructural development process.

In the meantime, the country is changing rapidly, with a high fertility rate and a large aging population raising concerns about population explosion by the middle of the 21<sup>st</sup> century. More worrisome is the fact that the country is becoming increasingly dichotomized with the extremes of poverty and wealth rising simultaneously. In addition, Nigeria and other countries in the Lake Chad region are facing the effects of climate change, with expanding desertification and loss of 90% of the size of Lake Chad [6]. This is driving southward migration of grazing herdsmen in search of pasture for livestock and has contributed to the security crises in the North West, North East and Middle-belt regions, fuelling terrorism and clashes between herdsmen and farmers with internal displacement and migration as a prelude to other humanitarian disasters. The insecurity of lives and properties is worsening psychological problems among the populace with increase in drug abuse, depression and suicide rates. The consequent economic challenges have led to worsening of internal and external brain drain with constant migrations across the Atlantic and Mediterranean regions, often with great dangers and casualties. Indeed, mass migration from Nigeria and other developing countries towards high income countries is known to be fuelled by insecurity, poor development of infrastructures, weak health and educational systems, political and economic instability, uncertainty about the future and expanding population without adequate planning for societal transformation among others [7].

Unfortunately, future challenges for HPE will include continuation of the unsolved historic and current challenges. New added challenges will be global political and economic instability, and nationalization, which will worsen the dis-harmony between citizens and immigrants. This will be worsened by the reduction in the nation's revenue from oil exports as the demand for fossil fuel reduces with the development of alternatives such as shale oil and renewable energy resources. This will further reduce the government's ability to fund its systems and societal infrastructure with the health, education and welfare systems being hardest hit. In addition the deleterious effects of climate change will continue to manifest as shortages of potable water,

worsening overcrowding and the conflicts will lead to even greater drug abuse, crime rate, suicides, dislocations and humanitarian disasters. Furthermore, there will be greater demand for the country's highly trained healthcare professionals as industrialized countries continue to lag behind fulfilling their required quota of healthcare professionals [8]. All these and other factors will have a negative impact on the country's health security.

### Consequences of the challenges

The consequences of the above challenges are both internal and external to the health system. The internal challenges centre around inadequate resources to cater for the health needs of the increasing population. These include poor funding, limited infrastructural support, limited availability of drugs and equipment and poor regulatory mechanisms. Drugs and equipment are largely unavailable because of the lack of facilities for local production, the prohibitive cost of energy, and the high cost of importation. Furthermore, as stated above, there is an increasing demand for highly trained healthcare workers worldwide. This is in spite of the inadequate number and quality of teachers for HPE in our country, and the lack of incentives for healthcare workers to stay in rural areas resulting in the limitations in healthcare coverage of the population in those communities [5, 7, 9]. Poor job descriptions for healthcare professionals also lead to workplace conflicts, rivalry and industrial disharmony in the health sector. The current practice of formulating policies that directly and indirectly affect HPE, such as the National Policy on Health, without the input of the HRH training institutions such as Colleges/Faculties of Medicines also contributes to the disconnect between the various components of the health system.

The external consequences of these challenges include a changing epidemiology of diseases in the country. There are emerging and re-emerging epidemics, and the lack of control of already existing communicable and non-communicable diseases will continue to take a great toll on health resources and manpower. The poor environmental conditions, overcrowding and consequences of man-made and natural disasters, will overwhelm available human and material resources for healthcare. The number and variety of patients are also changing. There will be higher rates of suicides, mental and behavioural health problems. As a result, there will be increased demand for health services, increased cost of accessing healthcare with majority of stakeholders having a limited capacity to pay for these services. These challenges will worsen the increasing internal and external migration of trained HRH, and the vacuum created will be filled

by the widespread patronage of available (but mostly unregulated) alternative health providers resulting in an increased rate of complications, which are even more expensive to treat. The mass migration of the trained young and able population will also result in a dearth of competent workers in other sectors of the economy and further weaken the infrastructure of the economy and the society at large needed to support the education and health systems.

### Reforms needed in health professionals' education

Migration and poor physician to population ratios have led to the increased call for adoption of task-shifting as a way to combat physician shortages in Africa. However, task shifting does not replace a need for improvement in the quality of healthcare professionals' workforce. HPE reforms are required to ensure the production of fit-for-purpose and fit-of-purpose HPE graduates who are likely to stay and practice in-country rather than migrate (internally or externally) [9]. In this regard, HPE in the 21<sup>st</sup> century must produce a workforce comprised of interdependent professionals focussed on the provision of effective and efficient healthcare [4, 8, 9]. In addition, there is a need to reduce health-sector conflicts through better clarification of job descriptions of the individual healthcare workers [9] and emphasis on the quality of care of the patient.

The scaling up of medical education is a crucial part of the efforts to strengthen the health systems of countries [5, 10]. Consequently, there is a need to expand the training institutions available for HPE in Nigeria because the recommended ratio of healthcare workers to the population is far from being achieved. The strategies needed to achieve these goals include increasing the enrolment into medical schools, adopting retention strategies for trained healthcare professionals, innovations in the curricula, approval of private medical schools, quality continuing professional development and interprofessional education [5]. In Nigeria, new private medical schools have been licensed to train and a few of the schools had developed innovative curricula [11]. It is also necessary to strengthen regulatory bodies and ensure HPE is being delivered to an international standard [12, 13].

### Reforming methods of instruction in health professionals' education

In developing a revised model of HPE for Nigeria for the first half of the 21<sup>st</sup> century, there must be a change in the current philosophy of instruction with the new model focussing on improving the quality of health systems. To achieve this goal, the various curricula for HPE should be locally sensitive and relevant whilst being of global standards [14, 15]. It

is also important that HPE teaches students when and how to work together and identifies the roles of each health professional and where expertise abounds and how to deploy them. In addition, there should be emphasis on multimodal integration of concepts – within each professional group, between different health professions and between healthcare workers and other partners in the society. Towards these objectives, reforms in HPE in recent years have led to evolution from traditional methods of instruction to alternatives such as problem-based learning, community-based education and multidisciplinary team-based learning [4, 5].

Problem based learning emphasizes problem-based scenarios in which cases are used to drive home specific objectives in line with the curriculum requirements [16, 17]. This learning model is associated with greater analytical skills, better scientific thinking, problem solving and conflict resolution skills than what obtains in traditional education methods [17, 18].

On the other hand, community-based education, which was first introduced in Ibadan in the 1960s [7], involves activities in which the health professional student makes use of the community as the learning environment. Community based learning is relevant and will be successful if incorporated into other primary modes of pedagogy in view of the largely rural population in Nigeria [15]. This method of instruction encourages professionals to work in underserved communities including rural areas [7, 19]. Incorporating community-based education into the curricula of HPE will encourage the retention of HRH in underserved (rural) communities in order to improve the access to health by rural dwellers and open up the communities to improvements in preventive and curative aspects of healthcare.

Team based learning has been found to be more conducive to learning, involve greater student engagement and motivation and encourage better preparation prior to the session than problem based learning or other pedagogic strategies [20–22]. The role of HPE should go beyond transmission of scientific information to education on leadership, advocacy, continuing professional development and research. Inter-professional training improves teamwork among healthcare professionals and ultimately the quality of the healthcare in a community. There is also a need for interdisciplinary educational innovation to improve inter-professional training [9]. Inter-professional collaborative practice, which is facilitated by team-based learning is a recipe for the mitigation of industrial disharmony in the health sector. It will also help in actualization of the core competencies of each health professional within

the realm of working in a team. There should be enhancement of the ability of healthcare workers to form inter and trans-professional teams. Inter-professional education and inter-professional collaborative practice will help build strong teams [4, 8].

As such, a socially-responsive HPE curriculum should incorporate essential duties that the members of its host community expect healthcare workers to perform [4]. These should be based on skill-sets that are specific for different categories of healthcare professionals and should be as defined by stakeholders [8]. The incorporation of these essential duties to the curriculum of HPE, using appropriate teaching and evaluation methods will produce a responsive healthcare team that is able to work in collaboration, engineer and effect population-impacting health policies and lead to a workforce that values the health of Nigerians. The listing of essential duties of each professional will help in setting job descriptions and standards of care to measure performances of the professionals.

#### *Other aspects of health professionals' education reform*

The health workforce must understand the value of leaders as agents of change; there is a need to incorporate transformative learning concepts into HPE [8]. Uptake of appropriate leadership responsibilities will influence the dissemination of health information and thus educational enlightenment of the populace, thereby improving adoption of positive health habits and lifestyle modifications. The healthcare professional must imbibe the concept of person-centred and population-based approaches to healthcare services through the adoption of appropriate pedagogic tools. The overall health related quality of life of a patient (physical, mental, emotional, and social functioning) should always be in focus. Health professionals need to be taught the value inherent in espousing art and medicine as intertwined social concepts. HPE of the future needs to incorporate elements of literature, story-telling, folklore, music, drama, creative writing, poetry and other tools that enhance the ability to bring health education as close to the community members as is possible. These methods also help in improving the communication skills of healthcare professionals and help in dissemination of health information through print, electronic and social media platforms.

The required reforms also include the development of reading materials and literature directed at younger individuals such as for primary and secondary school students [23]. This will introduce the populace to the key concepts of

healthcare and measures to improve personal and community health early. The adoption of healthy-living practices by the pupils and students are likely to impact on the choices they make about their healthcare in the future. There should be provision of adequate resources for students of HPE. These should not be limited to textbooks alone but include electronic materials available and transmissible via electronic means, which will become increasingly important as the internet coverage improves. Information technology will be required to achieve the HPE reforms. The incorporation of e-learning tools such as massive open online courses (MOOCs), library resources and telemedicine into HPE with improved information technology services are essential in the 21<sup>st</sup> century. These tools are particularly important in an environment, such as in Nigeria as we move towards 2030 and beyond, with low teacher-student ratio.

#### **A role for partnerships and networks**

To survive in the knowledge economy environment of the future, HPE institutions must become more socially responsive and accountable. To this end, these institutions must reinvent themselves and develop new organizational platforms and networks that emphasize a continuing learning process that is better able to respond to the changing needs of the community [24, 25]. These institutions must take advantage of the knowledge economy and establish strong networks particularly as regards their strategic relationships with their communities, the private sector and government agencies. This will enable the identification and construction of local priorities, ease the collection and transmission of research evidence, strengthen its translation into practice for development, and promote accountability for development outputs. This also improves the quality of graduates who are fit-for-purpose thus improving employment and retention indices.

Accordingly, the reforms described above will only succeed if there are partnerships between stakeholders, which may involve the elimination of previous barriers in communication and implementation of policies between governmental agencies, educational networks and communities. In particular, communities of practice and networks must be developed amongst medical schools and the various regulatory ministries and government agencies. Over time, these platforms of HPE and healthcare will expand and become fully integrated into their host communities and become self-sustaining, socially-responsive and socially-accountable [15]. Furthermore, adequate

collaboration between agencies in the education and health sectors will ensure that policies that will influence HPE are well implemented. Funding is a critical issue as resources allocated to health education are quite abysmal. The adoption of Public-Private Partnership (PPP) initiatives in communities will help in bridging the gap in funding between what the government at all levels is able to provide and meeting the needs of the populace.

#### **Conclusion**

Health professional education in Nigeria in 2030 and beyond is likely to face unique challenges that are consequent upon major changes in our society by that time, which include population explosion, insecurity, changing epidemiology of diseases, climate change and social challenges. HPE reform is needed to ensure health security in 2050 and should be geared towards producing fit-for-purpose and fit-of-purpose health professionals. There is a need to adopt curricula that are locally sensitive and relevant whilst being of global standards, which will lead to a workforce that is well motivated and work towards goals established for the benefit of the patient and the community. With strong strategic partnerships between stakeholders, institutionalisation of inter-professional education, strong continuing professional development and adequate human and financial resources, the quality of and the access to health care will improve in the country.

#### **References**

1. Phimister I. Unscrambling the scramble: Africa's partition reconsidered. Paper presented to the African Studies Institute, University of the Witwatersrand, Johannesburg, 17 August. 1992. Last Accessed (8 April 2019) <http://wiredspace.wits.ac.za/bitstream/handle/10539/9599/ISS-350.pdf;sequence=1>
2. Mellanby K. The birth of Nigeria's university. London: Methuen and Co., Ltd. 1958.
3. Afolabi MO. Entrenched colonial influences and the dislocation of health care in Africa. *Journal of Black and African Arts and Civilization* 2011;5(1):229-247.
4. Olapade-Olaopa EO, Sewankambo N, Iputo JE, *et al.* Essential professional duties for the sub-Saharan medical/dental graduate: An Association of Medical Schools of Africa initiative. *Afr J Med Med Sci* 2016;45(3):221-227.
5. Mullan F, Frehywot S, Omaswa F, *et al.* Medical schools in sub-Saharan Africa. *Lancet* 2011;377(9771):1113-1121.

6. Gao H, Bohn T, Podest E, McDonald K and Lettenmaier D. On the causes of the shrinking of Lake Chad. *Environmental Research Letters* 2011;6(3):034021.
7. Greysen SR, Dovlo D, Olapade-Olaopa EO, *et al.* Medical education in sub-Saharan Africa: a literature review. *Med Educ* 2011;45(10):973-986.
8. Frenk J, Chen L, Bhutta ZA, *et al.* Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet* 2010;376(9756):1923-1958.
9. Olapade-Olaopa EO, Sewankambo NK and Iputo JE. Defining Sub-Saharan Africa's Health Workforce Needs: Going Forwards Quickly Into the Past Comment on "Non-physician Clinicians in Sub-Saharan Africa and the Evolving Role of Physicians". *Int J Health Policy Manag* 2016;6(2):111-113.
10. Olapade FE, Adaramoye OA, Raji Y, Fasola AO and Olapade-Olaopa EO. Developing a competency-based medical education curriculum for the core basic medical sciences in an African Medical School. *Adv Med Educ Pract* 2016;7:389-398.
11. Amalba A, van Mook W, Mogre V and Scherpbier A. The perceived usefulness of community based education and service (COBES) regarding students' rural workplace choices. *BMC Med Educ* 2016;16(1):130.
12. Cueto J Jr, Burch VC, Adnan NA, *et al.* Accreditation of undergraduate medical training programs: practices in nine developing countries as compared with the USA. *Educ Health* 2006;19(2):207-222.
13. van Zanten M. The association between medical education accreditation and the examination performance of internationally educated physicians seeking certification in the United States. *Perspect Med Educ* 2015;4(3):142-145. doi: 10.1007/s40037-015-0183-y.
14. Olapade-Olaopa E.O. and TWG members of the National Medical Advisory Committee. Nigeria Undergraduate Medical and Dental Curriculum Template. Bethesda, MD: Health Systems 20/20 project, Abt Associates Inc. Federal Ministry of Health of Nigeria, Health Systems 20/20 Project. 2012.
15. Olapade-Olaopa EO, Baird S, Kiguli-Malwadde E and Kolars JC. Growing partnerships: leveraging the power of collaboration through the Medical Education Partnership Initiative. *Acad Med* 2014;89(8 Suppl):S19-23.
16. Yalcin BM, Karahan TF, Karadenizli D and Sahin EM. Short-term effects of problem-based learning curriculum on students' self-directed skills development. *Croat Med J* 2006;47(3):491-498.
17. Marshall TA, Finkelstein MW and Qian F. Improved student performance following instructional changes in a problem-based learning curriculum. *J Dent Educ* 2011;75(4):466-471.
18. Burgess A, Roberts C, Ayton T and Mellis C. Implementation of modified team-based learning within a problem based learning medical curriculum: a focus group study. *BMC Med Educ* 2018;18(1):74.
19. Kiguli-Malwadde E, Kijjambu S, Kiguli S, *et al.* Problem Based Learning, curriculum development and change process at Faculty of Medicine, Makerere University, Uganda. *Afr Health Sci* 2006;6(2):127-130.
20. Mun KH and Mun KC. Verification of learner's differences by team-based learning in biochemistry classes. *Korean J Med Educ* 2017;29(4):263-269.
21. Obad AS, Peeran AA, Shareef MA, *et al.* Assessment of first-year medical students' perceptions of teaching and learning through team-based learning sessions. *Adv Physiol Educ* 2016;40(4):536-542.
22. Gray J, Fana GT, Campbell TB, *et al.* Feasibility and sustainability of an interactive team-based learning method for medical education during a severe faculty shortage in Zimbabwe. *BMC Med Educ* 2014;14:63.
23. Olapade-Olaopa EO, Akute OO, Adeleke D, Akinrinmade JF and Shokunbi MT. *Eya Ara fun Alakobere: Anatomy for Beginners (Human and Veterinary)*. Ibadan: College of Medicine, University of Ibadan, Nigeria. (In Press).
24. Aina TA. Beyond Reforms: The Politics of Higher Education Transformation in Africa. *Afr Stud Rev* 2010;53(1):21-40.
25. Bacdayan P. Finding Win-Win Forms of Economic Development Outreach: Shared Priorities of Business Faculty and Community. *Coll Teach* 2008;56(3):143-148.