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RESEARCH COMMENTARY

Policy Options for Addressing Health System and Human Resources for Health Crisis in Liberia Post-Ebola Epidemic

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ABSTRACT

Qualified healthcare workers within an effective health system are critical in promoting and achieving greater health outcomes such as those espoused in the Millennium Development Goals. Liberia is currently struggling with the effects of a brutal 14-year long civil war that devastated health infrastructures and caused most qualified health workers to flee and settle in foreign countries. The current output of locally trained health workers is not adequate for the tasks at hand. The recent Ebola Virus Disease (EVD) exposed the failings of the Liberian healthcare system. There is limited evidence of policies that could be replicated in Liberia to encourage qualified diaspora Liberian health workers to return and contribute to managing the phenomenon. This paper reviews the historical context for the human resources for health crisis in Liberia; it critically examines two context-specific health policy options to address the crisis, and recommends reverse brain drain as a policy option to address the immediate and critical crisis facing the health care sector in Liberia.

Key words: Liberia • Human Resources for Health • Health System • Health Policy • Health Workers • Brain Drain • Diaspora Option • West Africa • Ebola Virus

Introduction

A health system includes all the organization, institutions, people and resources with the primary objective of improving the health of a particular setting.[1] To strengthen a health system, decision-makers must address the issues related to health workers, infrastructure, health commodities, and logistics, financing and reporting progress (Figure 1).[2] A health policy refers to the decisions, strategies and activities that are undertaken to achieve agreed-upon health care goals.[1,2] The overall objective of this paper is to identify some of the key problems facing the Liberian health system, as well as describe the magnitude of the problem. Using evidence from international context, this paper suggests two feasible policy options to solve the significant human resources for health crisis confronting the country. The paper utilizes a policy triangle as a framework to rigorously analyze the two policy options in terms of actors, context, processes and contents of the policy

(Figure 2).[3] Based on this framework, the paper recommends a coherent policy option with the most feasible components to implement in Liberia.

The Republic of Liberia was established in 1847, the first independent country in Africa at the time.[4] The country is located on the west coast of Africa (Figure 3).[4] In December 1989, a civil war broke out in Liberia, which lasted until 2003 and devastated the entire healthcare infrastructure.[5-7] According to the World Health Organization (WHO), in 2013 Liberia had a population of 4.2 million and life expectancy at birth was 61 years (male) and 63 years (female), and with physicians density of 0.014 per 1000 population.[8] The country's infant mortality rate was 11 deaths per 1000 in 2013.[8]

Examining the Problem

The war in Liberia shattered the country's entire infrastructure, with roads and bridges destroyed and power and water supplies cut.[5] During the civil war, hospitals and clinics were looted and sometimes burned, medicine and medical equipment taken and sold.[9] At the end of the war in 2003, the number of operational health care centers was 354 compare to a pre-war total of 550. Most health care workers fled the country with an estimated nine out of ten doctors leaving the country to safety in foreign countries.[5] For instance, the A M Dogliotti College of Medicine, the main doctors training institute in Liberia was looted and destroyed during the civil war.[5]

All of the health professionals training institutes closed during the war but re-opened after the war stopped in 2003. By the end of 2003, five out of the seven pre-war medical colleges re-opened, including the AM Dogliotti College of Medicine, the Tubman National Institute of Medical Sciences, the Cuttington University College School of Nursing, Mother Pattern School of Health Sciences, and the Phebe School of Nursing and Midwifery.[9] A 2007 assessment of health training institutes conducted by the Liberia Ministry of Health and Social Welfare (MOHSW) and the United States Agency for International Development (USAID) found that only the Phebe School of Nursing and Midwifery and Mother Pattern School of Health Sciences had

Figure 1. Map of Liberia. **Source.** LISGIS.[4]

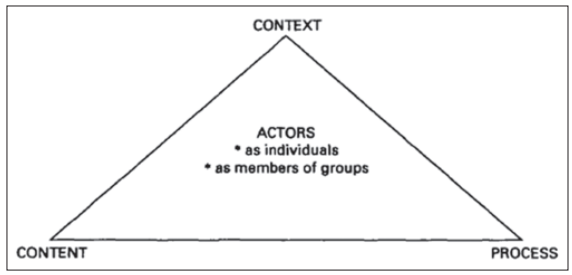

Figure 2. Health Policy Triangle. **Source.** Walt and Gilson.[3]

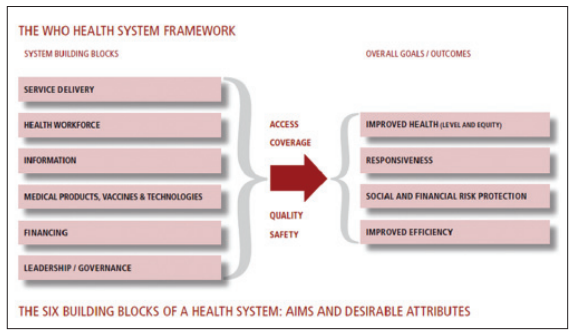

Figure 3. The World Health Organization Health System Framework. **Source.** World Health Organisation, Geneva, Switzerland.[2]

the appropriate resources to provide a conducive learning experience and capability to train nurses.[9]

Following on from the assessment in 2007, MOHSW developed the Emergency Human Resource Plan (EHRP) which created a central unit responsible

for conducting short-term training of nursing cadres in order to rapidly increase the number of healthcare workers.[9] In 2010, the number of clinical health workers had increased from 1396 in 1998 to 4653 with 3394 of them nurses and midwives.[9] Most of the other healthcare workers were poorly-trained physician assistants and doctors.[10] The suggestion in many places was that while trying to address the problem of insufficient health workers, MOHSW incidentally helped to create a new problem: a health system with poorly-trained medical doctors, nurses and physician assistants.[11]

Financing for basic healthcare exceeded the set target in 2012. Healthcare per capita spending was US$65 against an estimated target of US$60; this amount did not include allocations to the scarcity of trained medical doctors and health workers or equipment for health training facilities.[11,12] The evidence so far suggests that the effort of the government of Liberia has been focused on the quantity of the outputs rather than the quality of the service they provide.[9] Most graduates and medical students in Liberia are being trained without proper medical equipment or updated resources.[10] With current training below the required standards and the lack of investment to encourage qualified doctors to return and work in Liberia, the clinical responsibilities of the health system is being shouldered by poorly trained physician assistants and nurses.[11] The recent outbreak of the deadly Ebola Virus Disease (EVD) highlighted the limited capacity of the available health workers as well as the need for a better management system.[13,14] Given the critical crisis facing the health system, there has been increased calls to identify enduring solutions for addressing the human resources for health crisis in the country.

Addressing poorly training of health workers

Various measures have been used to address the scarcity of trained healthcare workers. One of the measures, also referred to as the Kerala option, calls for the decentralization of powers to local governments or counties so that they can identify the gaps in their local health system and recruit the best physicians (or other health workers) suited to their specific needs.[15] Some countries have also recruited Physicians from Cuba to carry out clinical treatment and train indigenous medical doctors.[10]

For the purpose of this paper, there are two policy options that are considered feasible for the Liberian case. The first is the reverse of brain drain. As indicated earlier, most qualified Liberian doctors fled the country due to the civil war and settled in other countries.[9] A reverse brain drain policy would entice native Liberians in the diaspora to share their knowledge and information with local doctors (as well as student doctors) and to take up short-term placements as doctors or lecturers at the various medical schools in Liberia.[11,16] The second policy option is the medical scholarship scheme. This policy will encourage more students to pursue careers in medicine by offering scholarships to study abroad.[16]

Both of these options could include actors from the government of Liberia, international and local partners, community groups, private and public health workers and, diaspora Liberian experts. These policy options, if implemented, could strengthen the human resource capacity of the Liberian health system.[10,16] The implementation of either policy would be at the national level, because decision-making is still the responsibility of the Minister of Health of Liberia [9] The next section of this paper provides details on the implementation of the two proffered policies.

Analysis and implementation of the reverse brain drain policy

Globally, the issue of brain drain is not a new phenomenon. Discussions about brain drain date back to the 1960s when British intellectuals and scientists were migrating to the United States (US) to seek jobs.[17,18] Over the years, countries have tried two main approaches to reverse brain drain: the first is seeing the brain drain as a loss; and the second is seeing it as a gain.[17,19] Policies associated with the first approach include restrictive policies (making migration difficult), incentive policies (offering incentives to would-be migrants) and compensatory policies (asking the receiving country (countries) or individual to pay compensation). However, in the case of Liberia, it is difficult to stop people from leaving

because freedom of movement is a constitutional right, also the country is recovering from civil war so cannot compete with developed countries on incentives for fleeing health care professional seeking for greener pastures.[16, 20] As for compensation, most Liberians pay for their own education therefore, they are free to migrate in search of better opportunities without any restrictions from the government.[9]

The second reverse brain drain approach is the diaspora approach (seeing the brain drain as a gain). This is where the Liberian government initiates networks of Liberian medical professionals across the world, encouraging them to work together to share ideas and knowledge amongst themselves and with medical professionals in Liberia.[19,21] The brain drain becomes a gain because the diaspora professionals' knowledge and experience could be useful to improve the capacity of local health workers.[17] The government could enlist the support of local residents in Liberia asking them to encourage diaspora relatives to join these networks [22] Development partners like the US and the United Kingdom (UK) could support Liberia by encouraging qualified Liberian health professionals living in their countries to take up temporary work placements in Liberia to share their experience and knowledge by ensuring that those Diasporas do not lose their permanent job positions upon their return.[23] This reverse brain drain approach has been successful in South Africa and the Philippines.[17]

The benefits to the government of using the diaspora approach is that it could be less expensive and could give the government more control over the contents, actors and processes of information and knowledge shared.[17] Local residence of Liberia could benefit from improvements in the quality of service they receive due to the knowledge exchanged via these networks.[23] There could be government and international partners' support for this option because it is less expensive to implement, with money being saved re-allocated to other projects, which could also be a benefit to local communities.[17] Another group that will potentially benefit from this policy is doctors working in Liberia, who would have access to new knowledge to develop their capacities.[17]

However, there are some disadvantages of using this approach. These include the time needed to set-up the networks; the inability of Liberian-based professionals to comprehend the information being shared; and the possibility of diaspora Liberians requesting remuneration for their time and knowledge which might be unaffordable to the Liberian government.[23] Another potential problem could be resistance from the local health workers.[24] Evidence in Liberia suggests that local people are very suspicious of diaspora Liberians, believing that their motives for return is to take their jobs.[24] This could make it harder for diaspora Liberians to contribute to the development of the human capacity of the health system. Local doctors could view this approach as a top-down relationship, therefore being unsupportive.[20]

Analysis and implementation of a medical scholarship policy

The second policy option is the medical scholarship scheme. In the 1980s and early 1990s, Ghana, another West African country, provided the evidence for medical scholarship as a p policy option to address health human resource crisis.[25] The then President Jerry Rawlings of Ghana signed an agreement with Cuba in 1983 to send Ghanaian students to study medicine, among other disciplines, in Cuba to increase the number of qualified health workers, but also to establish medical training institutions in Ghana.[26] The first Cuban cooperation medical school in Ghana was opened in 1991.[25]

In the case of Liberia, the government could solicit more scholarships for medical studies abroad from development partners.[11] In terms of the benefits to different groups, the number of students sent yearly could be shared across the counties, where a set number of students are recruited from each county in Liberia.[22] This could make it easier to encourage doctors to work in their parts of the country upon return from studying and gain support from local communities.[22]

The scholarship scheme's advantages could include lower costs for the government if development partners cover the cost of the scholarships; it could also benefit all the counties

equally, therefore reducing the chances of resistance to the implementation of the policy.[22] Inserting scholarship agreements compelling scholars to work in hard-to-reach parts of the country could give the government some control over the scheme and improve access to qualified doctors for local communities; having access to a qualified doctor could also benefit communities by giving them access to adequate healthcare.[9] International partners would support the scheme because of the benefits of students studying in their countries because interestingly aid money would stay in their economies.[27]

There are some disadvantages associated with the medical scholarship scheme. These include students absconding after completing their studies and higher costs if there is limited partners' support.[28] The time needed to train a doctor is approximately five to eight years; thus this could also be a disadvantage because the health system needs more doctors presently.[10] The government of Liberia might not have complete control over a scholarship scheme if it is funded by development partners.[20] There is also the issue of corruption. Some people allege that in Liberia, scholarships are allocated on a patronage basis, thus local people might potentially not benefit from the scheme and could therefore resist the deployment of newly qualified doctors perceived as benefiting from their entitlements.[28]

Policy Recommendation for the Future

The policy option recommended is the reverse brain drain or diaspora option. It is the most feasible because it involves multi-stakeholders' support; it gives the Liberian government more control over the actors, contents and processes; and it is less expensive for the government of Liberia and development partners to implement (money saved could be spent on other projects). Cost is a very important issue to consider in the context of Liberia and the diaspora option provides a cheaper and sustainable solution to the problem.[23] It is more feasible also because it minimizes the chances of potential corruption. Although there could be some resistance from local doctors who might not appreciate being told to do things differently, guaranteeing them that their jobs are not at risk and the goal is capacity building, could help reduce any such resistance.[24]

The diaspora option is also a short-term fix, exactly what the Liberian health system needs at this moment of critical need.[10] In the time it would take to train a doctor (five-eight years), the network of medical experts could train current doctors in modern practices at a much lower cost.[29] In the case of development partners' support and participation, the diaspora option would also give the Liberian government more control over the processes, actors and contents of the policy whereas the scholarship scheme could see more of a traditional donor top-down involvement.[30] Reflecting on the problem identified, it is not the numbers that needs fixing, it is the quality of the available professional that needs improvement. The scholarship scheme will increase the numbers whereas the diaspora option will improve the quality.[17]

Conclusion and Global Health Implications

The civil war in Liberia devastated the healthcare infrastructure. Since the end of the civil war, most of the health professional training institutions that re-opened are not producing the quality of doctors and nurses needed to provide adequate health care for Liberians. The recent Ebola Virus Disease (EVD) outbreak highlighted the limitations of the health system. To deal with the scarcity of trained health workers this paper suggested two policy options that the Ministry of Health could consider: reverse brain drain (diaspora) and scholarships scheme for training new doctors and nurses. Both options include stakeholders from the government, local and international partners and local community groups. The paper recommends the diaspora option because it is cost-effective, it involves Liberian diaspora stakeholders and it could solve the scarcity of trained health workers swiftly to address the short-term and acute need in the country.

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References

1. World Health Organisation WHO: About health systems. [Online]. [cited 2014 June 9]. Available at http://www.who.int/healthsystems/about/en/.
2. World Health Organization (WHO). Everybody's Business, Strengthening Health Systems to Improve Health Outcomes. [Online]. [cited 2014 June 8]. Available at http://www.who.int/healthsystems/strategy/everybodys_business.pdf?ua=1.
3. Walt G, Gilson L. Reforming the health sector in developing countries: the central role of policy analysis. Health policy and planning. 1994; 9(4), 353-370.
4. Liberia. Demographic and Health Survey. 2013. Liberia Institute of Statistics and Geo-Information Services (LISGIS). Monrovia, Liberia. Ministry of Health and Social Welfare [Liberia], National Aids Control Program [Liberia], and ICF International. 2014. Liberia Demographic and Health Survey 2013. Liberia Institute of Statistics and Geo-Information Services (LISGIS) and ICF International.
5. Mason C. Reducing infant mortality rate a challenge in Liberia. CMAJ 2010; 182 (14).
6. Dennis P. A Brief History of Liberia. The Center for Applied Linguistics. [Online]. [cited 2014 June 24]. Available at http://ictj.org/sites/default/files/ICTJ-Liberia-Brief-History-2006-English.pdf.
7. Tomczyk B, Goldberg H, Blanton C, Gakuba R, Saydee G, Marwah P, Rowley E. Women's Reproductive Health in Liberia: The Lofa County Reproductive Health Survey. [Online]. [cited 2014 June 30]. Available at http://www.africare.org/our-work/where-we-work/liberia/Resources/5Liberia_ResourceDoc.pdf.
8. World Health Organization (WHO). Countries: Liberia. [Online]. [cited 2015 September 12]. Available at: http://www.who.int/countries/lbr/en/.
9. Varpilah ST, Safer M, Frenkel E, Baba D, Massaquoi M, Barrow G. Rebuilding human resources for health: a case study from Liberia. Human Resources for Health 2011; 9(11).
10. IRIN. Liberia: War wounds left to fester. [Online]. [cited 2014 June 8]. Available at http://www.irinnews.org/report/82322/liberia-war-wounds-left-to-fester.
11. Downie R. The Road to Recovery, Rebuilding Liberia's Health System. CSIS Global Health Policy Centre. [Online]. [cited 2014 June 2]. Available at http://csis.org/files/publication/120822_Downie_RoadtoRecovery_web.pdf.
12. Heritage. Ellen: Liberia's healthcare faces countless challenges. [Online]. [cited 2014 June 2]. Available http://allafrica.com/stories/201309120943.html.
13. Schnirring L. WHO: Medical worker infections and shortages hamper Ebola response. CIDRAP, University of Minnesota. [Online]. [cited 2015 July 7]. Available at http://www.cidrap.umn.edu/news-perspective/2014/08/who-medical-worker-infections-and-shortages-hamper-ebola-response.
14. Azuine RE, Ekejiuba SE, Singh GH, Azuine MA. Ebola Virus Disease Epidemic: What Can the World Learn and Not Learn from West Africa? International Journal of MCH and AIDS 2015; 3(1): 1-6.
15. Nayar KR, Nair SB. Kerala's Roadmap to Privatisation in Health Services. Health and Development 2006.
16. World Health Organisation. Increasing access to health workers in remote and rural areas through improved retention. Global policy recommendations. [Online]. [cited 2014 June 5]. Available at http://www.rcgp.org.uk/rcgp-near-you/faculties/~/media/AAFAE44879354F5CB6EAF68F75CF78A5.ashx.
17. Brown M. Using the Intellectual Diaspora to reverse the Brain Drain: Some useful examples. UNECA et al., Brain Drain and Capacity Building in Africa, Addis-Ababa: UNECA; 2000.
18. Pang T, Lansang MA, Haines A. Brain drain and health professionals: a global problem needs global solutions. BMJ: British Medical Journal 2002; 324(7336): 499.
19. Meyer JB, Charum J, Bernal D, Gaillard J, Granés J, Leon J, Schlemmer B. Turning brain drain into brain gain: the Colombian experience of the diaspora option. Science Technology & Society 1997; 2(2): 285-315.
20. Liese B, Dussault G. The State of the Health Workforce in Sub-Saharan Africa: Evidence of Crisis and Analysis of Contributing Factors. Africa Region Human Development Working Paper Series; 2004.
21. Gorry C. Cuban health cooperation turns 45. MEDICC Review. 2008; 10(3): 44-47.
22. Attah R, Lievens T, Vujicic M, Brown-Annan

J. Health Worker Attitude Towards Rural Service In Liberia: Results from Qualitative Research. Health, Nutrition and Population Discussion Paper. [Online]. [cited 2014 June 3]. Available at http://siteresources.worldbank.org/HEALTHNUTRITIONANDPOPULATION/Resources/281627-1095698140167/HealthWorkerAttitudestowardRuralServiceinLiberiaDP.pdf.

23. Meyer JB, Brown M. Scientific Diasporas: A new approach to the brain drain. Management of Social Transformations (MOST) Program; 1999.

24. Fasuekoi, JK. Liberia: Returning to the Blues – Exiled-Liberian Returnees Fight Discrimination At Home. Front Page Africa. [Online]. [cited 2014 June 24]. Available from: http://allafrica.com/stories/20130531l065.html.

25. Gorry C. Joining forces to develop human resources for health. MEDICC Review. 2005; 7: 15-18.

26. Kirk JM. Cuba's medical internationalism: Development and rationale. Bulletin of Latin American Research. 2009; 28(4): 497-511.

27. Development Initiatives. Investment To End Poverty Now: Real money, real choices, real lives. Bristol, United Kingdom: Development Initiatives; 2013.

28. Kellman E. Impact Stories: SOAS PhD Student Robtel Neajai Pailey Uses Innovative Methods to Tackle Corruption in Her Native Liberia. Academics Stand Against Poverty. [Online]. [cited 2014 June 7]. Available at http://academicsstand.org/2014/02/impact-stories-soas-phd-student-robtel-neajai-pailey-uses-innovative-methods-to-tackle-corruption-in-her-native-liberia/.

29. Zweig D. Competing for talent: China's strategies to reverse the brain drain. International Labour Review 2006; 145(1-2): 65-90.

30. McEwan C, Mawdsley E. Trilateral development cooperation: Power and politics in emerging aid relationships. Development and Change 2012; 43(6): 1185-1209.