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Enough is Enough: The Silent Rise of Non-Communicable Diseases in Uganda

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Introduction

I removed my shoes and followed Esther* as we entered her house to meet her husband, Martin. Esther is a community health worker (CHW) located in the Mukono District of eastern Uganda. Earlier that day, along with a few other staff members of the NGO I was working with, I accompanied Esther on her home visits, which she does periodically in her village to teach her community about a myriad of health topics ranging from the importance of good sanitation practices to the use of mosquito nets. As I entered, I noticed Martin sitting up on a bed in the corner of the room. I waved to him, greeting him in Luganda and sat down, realizing that he did not acknowledge me as he was speaking across the room to his wife. He held a weak smile on his face, but it was apparent that it was partially an effort to mask some of his discomfort; his left leg was markedly more swollen than his right.

Non-Communicable Diseases in Low and Middle-Income Countries

Over the past decade, the global prevalence of non-communicable diseases (NCDs) such as hypertension, diabetes, chronic respiratory disease, and cancer has increased dramatically.[1] , Importantly, the burden of NCDs falls disproportionately on low and middle-income countries (LMICs), where nearly 80% of NCD-associate

[1] World Health Organization. (2017). Noncommunicable Diseases Progress Monitor 2017. World Health Organization. Retrieved from http://www.who.int/nmh/publications/ncd-progress-monitor-2017/en/

deaths are documented.[2],[3],[4],[5],[6],[7] As a result, many LMICs are experiencing a "double burden" of disease. While communicable diseases such as malaria, HIV, and tuberculosis usurp international attention, NCDs are mounting in prevalence and the burden on already strained health systems is beginning to show.[8],[9]

Over the past 20 years, Uganda has experienced a reduction in poverty with the concurrent rise of economic success, provoking changes in societal cultures and occupations that are more sedentary in nature.[10] , [11] In addition, the rise of multinational corporations in LMICs has prompted a nutrition transition, shifting eating patterns away from subsistence plant-based diets to diets rich in fats, sugar, and milk products.[12],[13] , Uganda's Ministry of Health has confirmed that the country is facing its own epidemiological transition, as the prevalence of NCDs is rapidly increasing, accounting for 35% of the country's deaths [14] ,[15] According to a national survey, most individuals with a NCD in Uganda were neither aware of their status/risk factors, nor took their medication regularly. [16]

NCDs in Uganda's Healthcare System

Martin did not know what hypertension was before his diagnosis a year ago. Prior to his debilitating illness, he was a truck driver with a stable income. Once diagnosed, his physician recommended lifestyle modifications and daily treatment for blood pressure maintenance in the form of medications, which were beyond the family's financial means. Without medical treatment, his blood pressure spiraled, and he slowly lost his eyesight and movement of his left leg, forcing him to quit his job. Now,

[2] Islam, S. M. S., Purnat, T. D., Phuong, N. T. A., Mwingira, U., Schacht, K., & Fröschl, G. (2014). Non-Communicable Diseases (NCDs) in developing countries: a symposium report. *Globalization and Health*, *10*, 81. https://doi.org/10.1186/s12992-014-0081-9

[3] O'Donovan, J., O'Donovan, C., Kuhn, I., Sachs, S. E., & Winters, N. (2018). Ongoing training of community health workers in low-income and middle-income countries: a systematic scoping review of the literature. BMJ Open, 8(4), e021467. https://doi.org/10.1136/bmjopen-2017-021467

[4] Reubi, D., Herrick, C., & Brown, T. (2016). The politics of non-communicable diseases in the global South. Health & Place, 39, 179–187. https://doi.org/10.1016/j.healthplace.2015.09.001

[5] Terzic, A., & Waldman, S. (2011). Chronic Diseases: The Emerging Pandemic. Clinical and Translational Science, 4(3), 225. https://doi.org/10.1111/j.1752-8062.2011.00295.x

[6] World Health Organization. (2014). Global status report on noncommunicable diseases. World Health Organization. Retrieved from http://www.who.int/nmh/publications/ncd-status-report-2014/en/

[7] World Health Organization, 2014

[8] Boutayeb, A., & Boutayeb, S. (2005). The burden of non communicable diseases in developing countries. International Journal for Equity in Health, 4, 2. https://doi.org/10.1186/1475-9276-4-2

[9] O'Neil, D. S., Lam, W. C., Nyirangirimana, P., Burton, W. B., Baganizi, M., Musominali, S., … Paccione, G. A. (2016). Evaluation of care access and hypertension control in a community health worker driven non-communicable disease programme in rural Uganda: the chronic disease in the community project. Health Policy and Planning. https://doi.org/10.1093/heapol/czw006

[10] Hickey, S. (2005). The politics of staying poor: exploring the political space for poverty reduction in Uganda. World Development, 33(6), 995–1009.

[11] Reubi et al., 2016

[12] Popkin, B. M. (1994). The Nutrition Transition in Low-Income Countries: An Emerging Crisis, 52(9). https://doi.org/10.1111/j.1753-4887.1994.tb01460.x

[13] Reubi et al., 2016

[14] Ministry of Health, Uganda. (2014). Non--Communicable Disease Risk Factor Baseline Survey: Uganda 2014

[15] World Health Organization, 2017

[16] Ministry of Health, Uganda, 2014

aged 45, Martin is upset that he can no longer support his family, ultimately leading to his child's removal from school.

As I reflected on this situation, I realized how Martin is an example of an individual who did everything right in his own capacity, but was a victim of structural violence. In Pathologies of Power, Paul Farmer describes structural violence as "processes and forces that conspire—whether through routine, ritual…or hard surfaces of life to constrain [human] agency.[17]" Martin presented to a health center and engaged with the formal medical system when he developed symptoms and sought further treatment. Yet, the current system's infrastructure was unable to help him. His sedentary lifestyle as a truck driver most likely led to his erratic diet. His additional suffering was brought on by a combination of insufficient public health provisions (i.e. NCD awareness) that further exacerbated his hypertension. Although I found myself struck by this immense feeling of injustice, it led me to reflect on whose responsibility it should be to help address this pressing issue.

The problem of NCDs in LMICs such as Uganda is nuanced, multifaceted, and challenging.

First, there is a low overall spend on government funded healthcare in Uganda, which in 2015 stood at 1.3%.[18] This is far from the recommendations put forward by the WHO Commission on Macro Economics, who suggest that low-income countries should allocate at least 5% of their GDP on health. [19] In addition, between the fiscal year 2013-2014, "government funds contributed 17.7%, private funds 41.1% and development partner funds 41.2% to the current health expenditure.[20]" The effect is two-fold: patients often have to shoulder the financial burden for health services and, a significant amount of Uganda's healthcare agenda is set by external funders who may not understand the country's changing health dynamics.

Second, there is low public awareness. In late June, I met with a physician at the Mulago National Referral Hospital in Kampala. He shared the same fear of the near reality of NCDs becoming a national issue. The hospital's weekly diabetic clinic regularly hosts over 200 patients, many of whom are unable to afford routine treatments. In addition, he has witnessed firsthand the rapid increase in the incidence of NCDs in the country. According to him, in 2010, the hospital's monthly supply of NCD medication (i.e. hypertensive and diabetic drugs) would last a little more than three weeks. In contrast, now in 2018, that same supply of drugs barely lasts a week, leaving a three-week window during which time the hospital has no drug supply.

[17] Paul Farmer. (2005). On Suffering and Structural Violence: Social and Economic Rights in the Global Era. In Pathologies of Power: Health, Human Rights, and the New War on the Poor. Berkeley: University of California Press

[18] Ministry of Health, Uganda. (2015). Uganda Health Accounts: National Health Expenditure. Ministry of Health, Uganda. Retrieved from www.health.go.ug/content/uganda-health-accounts-fys-201213-201314

[19] Savedoff, W. D., World Health Organization Dept of Health System Financing, & Expenditure and Resource Allocation. (2003). How much should countries spend on health? Retrieved from http://apps.who.int/iris/handle/10665/69025

[20] Ministry of Health, Uganda. (2015). Uganda Health Accounts: National Health Expenditure. Ministry of Health, Uganda. Retrieved from ealth.go.ug/content/uganda-health-accounts-fys-201213-201314

Third, there is an inefficient linkage between community members and health professionals for NCD management. This has caused many people with NCDs, like Martin, to present to health clinics with late-stage complications that are often resistant to medical treatment.

The rise in NCD incidence and prevalence is not new to Uganda, and there have been many proposals in the past aiming to address this pressing issue. [21], [22], [23],[24] , [25] However, based on my observations, the primary barriers against NCD-focused initiatives are the lack of documented surveillance and a national action plan on NCDs.[26] Without surveillance and community support at the grassroots level, the poorest members of the population are left in a vacuum without government support, further proliferating the socioeconomic gap in NCD prevention.

Task-Shifting with Community Health Workers (CHWs)

A potential way to highlight the importance of recognizing, preventing, and managing NCDs is through community outreach and engagement. As such, one proposed strategy has been to empower CHWs to address this important and growing issue. This concept has been documented in several existing initiatives in LMICs settings, which have suggested success when employing CHWs in NCD prevention and management.[27] , [28], [29], [30], [31]

While in Uganda, I met CeCe, a CHW who also supervises the NGO's Hypertension Program. She has seen firsthand the

[21] Armstrong-Hough, M., Kishore, S. P., Byakika, S., Mutungi, G., Nunez-Smith, M., & Schwartz, J. I. (2018). Disparities in availability of essential medicines to treat non-communicable diseases in Uganda: A Poisson analysis using the Service Availability and Readiness Assessment. PLOS ONE, 13(2), e0192332. https://doi.org/10.1371/journal.pone.0192332

[22] NCD Alliance. (n.d.). Retrieved July 31, 2018, from https://ncdalliance.org/

[23] Ojo, T. T., Hawley, N. L., Desai, M. M., Akiteng, A. R., Guwatudde, D., & Schwartz, J. I. (2017). Exploring knowledge and attitudes toward non-communicable diseases among village health teams in Eastern Uganda: a cross-sectional study. BMC Public Health, 17(1), 947. https://doi.org/10.1186/s12889-017-4954-8

[24] Schwartz, J. I., Guwatudde, D., Nugent, R., & Kiiza, C. M. (2014). Looking at non-communicable diseases in Uganda through a local lens: an analysis using locally derived data. Globalization and Health, 10, 77. https://doi.org/10.1186/s12992-014-0077-5

[25] The Uganda Initiative for Integrate Management of Non-Communicable Diseases. (2014, August 29). Retrieved July 31, 2018, from https://www.uincd.org/

[26] World Health Organization, 2017

[27] Feksi, A. T., Kaamugisha, J., Sander, J. W., Gatiti, S., & Shorvon, S. D. (1991). Comprehensive primary health care antiepileptic drug treatment programme in rural and semi-urban Kenya. ICBERG (International Community-based Epilepsy Research Group). Lancet (London, England), 337(8738), 406–409.

[28] Jeet, G., Thakur, J. S., Prinja, S., & Singh, M. (2017). Community health workers for non-communicable diseases prevention and control in developing countries: Evidence and implications. PLoS ONE, 12(7). https://doi.org/10.1371/journal.pone.0180640

[29] Joshi, R., Alim, M., Kengne, A. P., Jan, S., Maulik, P. K., Peiris, D., & Patel, A. A. (2014). Task shifting for non-communicable disease management in low and middle income countries--a systematic review. PloS One, 9(8), e103754. https://doi.org/10.1371/journal.pone.0103754

[30] Ndou, T., van Zyl, G., Hlahane, S., & Goudge, J. (2013). A rapid assessment of a community health worker pilot programme to improve the management of hypertension and diabetes in Emfuleni sub-district of Gauteng Province, South Africa. Global Health Action, 6, 19228.

[31] O'Neil et al., 2016

crippling effects of hypertension within her village, often feeling frustrated about how easily preventable hypertension can be with the availability of appropriate resources. Currently, she has helped lead the training of over 100 CHWs on hypertension awareness and develop a screening protocol with manual blood pressure cuffs. She states in reference to the growing prevalence of hypertension,
"[CHWs'] referral logs to the health centers are filling and running out pages."
Training CHWs on NCD prevention and management could possibly help curtail the rising NCD prevalence in not only Uganda, but other similar poor-resource settings. Although this approach is promising, and the will to establish greater community support is strong at the grassroots level, it is important to note that any type of CHW involvement would require multiple stakeholders (i.e. government, international donors, development banks, NGO funding partners) to commit to consistent training and stable funding. [32]

CHWs have the potential to bring about a three-tiered change in NCD management in Uganda: prevention/screening, referral to health centers, and adherence to medication. NCDs have been described as the social justice issue of our time and if we continue to neglect their causes and devastating effects, we are in danger of failing some of the most vulnerable members of society.

*Name has been changed to preserve confidentiality.

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[32] O'Donovan et al., 2018