A Needs Assessment of Sub-Sahara African National Hypertension Organizations for Hypertension Prevention and Control Programs

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Hypertension is a driving force in the global epidemic of noncommunicable diseases (NCDs) and is the leading risk factor for death and disability globally.[1] The global burden of hypertension is greatest where resources are the lowest, with developing countries disproportionately impacted by hypertension.[2] By 2025, almost three quarters of people with hypertension will be living in developing countries.[3] Over 14 million deaths from NCDs occur between the ages of 30 and 70, of which 85% are in developing countries.[4] The World Economic Forum describes NCDs as the greatest threat to economic development, predicting a cumulative loss in global economic output of $47 trillion US, or 5% of gross domestic product, by 2030.[5]

Hypertension is preventable and, as a global epidemic, demands a substantive global, collaborative response. The World Hypertension League (WHL) is an international nonprofit organization in official relations with the World Health Organization (WHO) and the International Society of Hypertension (ISH). The objectives of the WHL include partnering with national member organizations to promote the prevention and control of hypertension globally.[6] In 2014, the WHL published the results of a needs assessment to guide the development of programs for hypertension prevention and control; however, the group was unable to obtain responses from African organizations.[7] This represented a significant limitation given that the African region has one of the highest burdens of hypertension, with a prevalence rate of 46% in adults older than 25 years.[8] While blood pressure values are slowly decreasing in many countries worldwide, the prevalence of hypertension is increasing in most countries in sub-Saharan Africa.[9] The WHL, in an effort to reengage member organizations in the African region, subsequently reissued the needs assessment to African national hypertension societies. The survey objectives were to: (1) determine unifying commonalities in the perceived needs of its membership regarding hypertension prevention, treatment, and control; (2) understand some of the differences in the perceived needs of member organizations regarding hypertension prevention, treatment, and control; and (3) formulate the results of the study into recommendations to the WHL on how to more effectively collaborate with member organizations in the prevention, treatment, and control of hypertension.

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METHODS

This needs assessment was a cross-sectional survey of African national hypertension organizations, some of which were enrolled as full members or associate members of the WHL and sampled from September 2014 to November 2014. Only one full primary membership is allocated per country, with associate memberships available to additional societies within a given country. Although we attempted to contact 16 organizations, verifiable contact information was limited to 14 societies.

The questionnaire surveyed societies' interest in developing or enhancing programs for hypertension prevention and control, opportunities for partnership with WHL, and opportunities for collaboration across member societies. The needs assessment also identified major barriers in developing hypertension control programs, data on surveillance, and the application of national guidelines and solicited feedback on WHL's World Hypertension Day (WHD). The survey tool was the same as used previously.[7]

Analysis of the data involved both quantitative and qualitative descriptive methodology. Statistical analysis included recording the number of societies in the affirmative for each item and/or percentage positive out of all responding societies. Qualitative methods included an interpretive thematic analysis, with each individual survey's descriptive responses coded thematically with comparisons and subsequent revisions across all respondents. The barriers to hypertension programs were determined by this method, with an overall ranking of barriers determined by the total number of respondents that referenced a theme. Qualitative descriptive data did not undergo a theoretical analysis given the small sample size.

RESULTS

The WHL received six responses of a total of 14 societies with verifiable information from September 2014 to November 2014, representing a response rate of 43% (Table I). The responding societies represented six

TABLE I. African National Hypertension Organizations Responding to the World Hypertension League Needs Assessment

La Ligue Congolaise d'hypertension
Nigerian Heart Foundation
Sudanese Society of Hypertension
South African Hypertension Society
Stroke Investigative Research & Educational Network (SIREN)[a]
Cameroon Hypertension Society

[a]Operates in regions and communities of both Nigeria and Ghana.

TABLE II. Barriers to Hypertension Interventions

Lack of resources[a]
Problematic health systems[b]
Health literacy
Unhealthy environments[c]

[a]Includes a lack of funding sources, healthcare professionals, and government support, and an emphasis on communicable diseases with concomitant neglect of noncommunicable diseases (NCDs).
[b]Includes a lack of national strategic planning on hypertension and NCDs; lack of programs for prevention, screening, and control; lack of health insurance; and unstable political administrations.
[c]Includes problems with the built environment promoting high-salt intake, obesity, and sedentary behavior.

different countries and included one society from a low-income country, four societies from low-middle–income countries, and one society from an upper-middle–income country as defined by the World Bank.[10]

All of the responding six organizations were interested in developing or enhancing programs for hypertension prevention and control in their respective country. All responding organizations were interested in the International Forum for Hypertension Control and Prevention in Africa (IFHA) and WHL's assistance in developing and enhancing programs for hypertension prevention and control. All organizations (six of six) were specifically interested in developing or enhancing national hypertension programs. Two thirds of respondents (four of six organizations) were interested in developing or enhancing regional and community programs. All of the responding six organizations favored a comprehensive approach inclusive of prevention, screening, and control. One half of respondents (three of six organizations) were interested in assistance with program design, networking with similar programs from other countries, developing educational resources, grant writing, and links to funding bodies.

The majority (five of six organizations) were interested in collaborating with other national hypertension societies to help develop or enhance other countries' programs for hypertension prevention and control based on successes and learnings from their own programs. The two most highly ranked opportunities for collaboration included sharing learning experiences (five of six societies) and networking (four of six societies).

Current interventions already implemented included national programs as part of a more comprehensive approach geared towards NCDs or cardiovascular diseases (four of six). An equal proportion also had national programs on hypertension (four of six), as well as community programs (four of six). One third had regional programs (two of six), and one of six societies had no organized approach in place.

One half of responding societies (three of six) had educational programs on screening, diagnosis, and control. Such interventions included annual conferences and healthcare professional training and certification programs. One half of responding organizations (three of six) had established screening programs. One society had implemented hypertension screening within the national army, and another society had an annual screening day within certain states of the country (Table I).

Major achievements described in one country included the successful collaboration between national NCD and hypertension groups with the department of health in the creation of a 5-year strategic plan for NCDs. The same country also had successfully passed legislation on mandatory sodium restriction in processed foods.

With respect to identifying barriers to optimum activities for prevention and control of blood pressure nationally, the top four barriers are summarized in Table II. Lack of resources was the predominant barrier and included a lack of funding sources, government support, and healthcare professionals, and an emphasis on communicable diseases with concomitant neglect of NCDs. Problematic healthcare systems were identified as the second major barrier, and included a lack of national strategic planning on hypertension and NCDs, lack of programs for prevention, screening, and control; lack of health insurance; and unstable political administrations. Low health literacy was identified as the third major barrier to optimizing activities for the prevention and control of hypertension, and included social determinants such as poverty. Unhealthy environments was the fourth major barrier and was described as a preference for a "modernized and westernized way of living," which included high dietary sodium intake, ingestion of processed foods, and lack of physical activity.

Participants were also asked to prioritize, from their organization's perspective, 10 possible actions the WHL could undertake using a five-point scale (1=high priority and 5=low priority). The overall ranking was determined from the greatest number of societies assigning a value of "1" or "2" (Table III). Working with the WHO and other organizations to develop a list of core antihypertensive drugs and advocating for funding for these drugs was ranked as paramount by all responding societies (six of six). Other highly ranked interventions included assistance in development of standardized public education materials that are culturally and linguistically appropriate to your setting, conducting training sessions to develop strategic plans for prevention and control of hypertension, assistance in development of material for policy makers on the importance of

TABLE III. Prioritization of Potential World Hypertension League Interventions

1. Working with the World Health Organization and other organizations to develop a list of core antihypertensive drugs and advocating for funding for these drugs. (Global Needs Assessment: #8)
2. Assistance in development of standardized public education materials that are culturally and linguistically appropriate to your setting. (Global Needs Assessment: #6)
3. Conducting training sessions to develop strategic plans for prevention and control of hypertension. (Global Needs Assessment: #3)
4. Assistance in development of material for policy makers on the importance of prevention and control of hypertension. (Global Needs Assessment: #9)
5. Conducting training sessions for developing sodium reduction programs. (Global Needs Assessment: #4)
6. Developing a network of commercial and noncommercial funding organizations that are interested in hypertension that your organization could interact with. (Global Needs Assessment: #1)
7. Assistance in development of standardized healthcare professional materials that are appropriate to the needs of healthcare professionals in your country. (Global Needs Assessment: #7)
8. Conducting training sessions on how to train healthcare professionals in improving control of hypertension. (Global Needs Assessment: #2)
9. Assistance in the development of research protocols. (Global Needs Assessment: #5)
10. Assistance in developing health economic models for hypertension prevention and control for your country or region. (Global Needs Assessment: #10)

prevention and control of hypertension, conducting training sessions for developing sodium reduction programs, and developing a network of commercial and noncommercial funding organizations that are interested in hypertension that your organization could interact with (five of six societies).

All responding societies (six of six) used national or international guidelines. However, the majority of responding societies had a need for guidelines better suited to their country (four of six). One half had their own guidelines (three of six), one third used multiple guidelines with no official guideline adopted (two of six), and one of six societies used the ISH guidelines. WHD was ranked by one half as very useful (three of six), with the remaining half ranking it as either undecided (two of six) or not very useful (one of six).

DISCUSSION

This needs assessment provides a preliminary agenda for national and international hypertension organizations working together towards reducing the burden of hypertension-related disease in the African region. The majority of organizations expressed a willingness to collaborate with each other, the WHL, and IFHA towards developing or enhancing programs for hypertension prevention and control in their respective country. A major priority for organizations was the development of national programs with multiple dimensions (involving a multi-tiered approach inclusive of prevention, screening, and control and encompassing public and healthcare professional education, strategic planning at the policy level, and advocacy programs for reducing dietary salt). Another key issue was the need to collaborate with national governments in healthcare system reform. These findings are similar to the global needs assessment previously conducted by the WHL.[7]

The responding African hypertension societies indicated that the WHL could be of assistance in working with the WHO and other organizations to develop a list of core antihypertensive drugs and advocating for funding for these drugs. Although this intervention was ranked as paramount, it was previously ranked among the lowest priorities in the WHL global needs assessment, suggesting that quality control, procurement, and distribution of generic antihypertensive drugs remains a high priority in the African region.

As expected, barriers to hypertension interventions were found to be similar to the previous global needs assessment, with a lack of monitory and personnel resources as the major barrier faced by organizations, followed by inadequate healthcare systems and low health literacy of the public. However, these challenges were described as playing out in unique ways in the African context. For example, an emphasis on communicable diseases was cited by several organizations as one reason why NCDs were neglected, while there was no mention of communicable diseases as a competing demand for resources in the WHL global needs assessment. African societies described problematic healthcare systems as specifically concerning a lack of healthcare insurance and burden of drug costs shouldered by patients, while in the WHL global needs assessment the lack of physician remuneration for clinical interventions in prevention was more of a concern. Another notable difference between the two surveys was that two thirds of responding African societies indicated a need for guidelines better suited to their country, while in the previous needs assessment the majority of societies (75%) believed current guidelines were appropriate for their setting. Cost was described as the major obstacle towards implementation of international guidelines in the African region. These differences may be influenced by economic disparities, as none of the responding African societies were from high-income countries, whereas in the previous needs assessment, 12 of 22 organizations were from high-income countries as defined by the World Bank.[10]

The needs assessment has substantive limitations. The small sample size and poor response rate suggests that the results may not be generalizable to other national hypertension organizations in Africa. Furthermore,

there was only one response from a low-income country, making the survey findings less likely to be generalizable to organizations in low-resource settings. The previous global needs assessment also garnered only one response from a low-income country and underscores the need for the WHL to continue to expand efforts to engage with additional national organizations in low-resource settings where the global burden of hypertension is highest. It is also a potential limitation that the surveys are filled by individual experts who may or may not reflect the needs of the organization they represent and/or that the responses may not represent the needs of their countries' populations. In all, the responses indicate many common themes across organizations and are similar to the results of the previous global needs assessment, suggesting that the major observations are valid.

In May 2013, the World Health Assembly endorsed a set of global voluntary targets for NCDs, including a 25% reduction in the prevalence of uncontrolled blood pressure by 2025, a 30% reduction in dietary sodium/salt, and an 80% coverage of essential antihypertensive drugs and technologies such as blood pressure devices.[11] In pursuit of this global mandate, the WHL has expanded its involvement in sub-Saharan Africa. In 2014, Dr Daniel Lemogoum from Cameroon was appointed to the WHL board to represent the sub-Saharan Africa region. In December 2014, the WHL academically assisted the development of a Pan-African Hypertension Meeting in Doula, Cameroon, providing talks and workshops on dietary salt, screening for hypertension, and strategic planning for hypertension control and dietary salt reduction. Following the meeting, several African health organizations joined the WHL. A call to action and fact sheet on hypertension was developed by the WHL with the support of the ISH and 14 sub-Saharan African health organizations. In addition, an infogram was developed to support the call to action. (*Hypertension in Sub-Saharan Africa: Why Prevention and Control Are Important*. http://www.worldhypertensionleague.org/images/HTN_Infographic_Professionals_2015.pdf). Additional collaborative initiatives include the WHL's partnership with other African hypertension and cardiovascular organizations to support the WHO's high-level government and nongovernmental organization meeting in Africa in 2015. The WHL is also establishing a regional office in sub-Saharan Africa with the assistance of Dr Lemogoum. Finally, the WHL is in discussion with the WHO and other global agencies on strategic approaches to assist in hypertension control in sub-Saharan Africa.

Hypertension kills an estimated 9.4 million people annually worldwide—about as many as all infectious diseases combined—with low-resource settings most severely impacted.[1] Yet, a lack of awareness of NCDs and suboptimal control of hypertension-related diseases remains pervasive in low-resource settings, with few national strategic plans for hypertension or NCDs in place and primary healthcare systems not adapted to cope. African national hypertension organizations indicate a strong desire to collaborate across sectors, nations, and international health authorities to develop innovative solutions to the prevention and control of hypertension. Although the needs assessment had substantive limitations, it establishes a preliminary agenda for partnership between the WHL and African national hypertension organizations. The findings indicate that the WHL must continue to engage with additional national hypertension organizations in Africa towards expanded partnership in the region and the pursuit of common goals. There is a clear need for the procurement and distribution of quality, affordable, generic antihypertensive medications. A high priority is the development of comprehensive, multi-tiered national hypertension programs reproducible in low-resource settings, which include grassroots education initiatives for the public and healthcare professionals and extends to strategic planning and advocacy at the national policy level. These findings represent substantive points of departure towards the League's mandate, United Nations targets, and the pursuit of global health equity.

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