Annals of Global Health
VOL. 82, NO. 2, 2016

ISSN 2214-9996
http://dx.doi.org/10.1016/j.aogh.2016.01.022

EDITORIAL

Worldwide Hypertension: The Growing Threat and the Potential Opportunities

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Treatment of arterial hypertension through the prescription of antihypertensive medications is a success story for the late 20th century. Comprehensive meta-analysis of randomized clinical trials supports the effectiveness of treating hypertension for reducing fatal and nonfatal cardiovascular disease (CVD).[1] Developed nations have made a commitment to extending this successful intervention to a large fraction of their populations so that they can reap the rewards in health that issues from this progress. Developing nations, and less well-off areas of even developed nations (often where poverty is present), have substantial prevalence of hypertension in their adult populations and these rates are increasing in relation to changes in nutrition, exercise patterns and other behavioral factors.[2] Finding and effectively treating hypertension is truly a global challenge.[3]

Even for nations with advanced health care programs and the affluence to support resources needed to treat hypertension in their populations, progress is needed and complacency should be avoided. The ongoing National Health and Nutrition Examination Survey indicates that the prevalence of hypertension is 25% to 30% in most of the US population, but 40% to 45% in those of African-American identity.[4,5] Control of hypertension has increased in both groups, but is far lower in those with Mexican-American identity. Improved care for hypertension has steadily increased in Canada and the United Kingdom. However, much of the rest of the world has prevalence rates for hypertension that are equal or higher than that of the developed nations and markedly lower rates for treatment and control.[2,6] This is all too much the case for the 2 nations with the largest populations: China and India, but similar patterns are found in central Europe, South America, South Africa, and the central Asian countries. The total burden of fatal and nonfatal CVD in these nations is high and largely attributable to untreated hypertension. However, the added risk due to smoking and overweight needs emphasis as well. That said, and recognizing regional differences in distribution of these risk factors, it is estimated that hypertension is the most prominent and preventable cause of CVD at present and that effective antihypertensive treatment in these nations can, within 10 years, reduce premature cardiovascular deaths by 26% for men and 23% for women, saving 2.1 million lives.[7]

The size and complexity of the worldwide prevalence of hypertension and the need for implementation of its treatment are clearly recognized by national and international health care professionals and their various institutions. Five articles in this issue of the *Annals of Global Health* are focused on various aspects of identifying and managing hypertension in developed and developing countries. These articles address a broad spectrum. Bundy and He provide a comprehensive and descriptive epidemiology of hypertension and CVD in China. Ravi et al. drill down to a detailed look at salt intake and blood pressure in a large urban and rural population of southern India not previously studied in detail. Schiffrin et al. define strategies emerging in Canada, a developed nation with a large underserved population of indigenous First Nations. It is certain that care for those with hypertension and the other cardiovascular risk factors is well beyond the capacity of physicians alone and require expansion in availability of providers and in the systems that will link patients to remote providers as well. The article by Himmelfarb et al. summarizes how the expanding role of nurses as individual providers and members of health care teams can

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Annals of Global Health, VOL. 82, NO. 2, 2016
March–April 2016: 225–226

amplify care for hypertensive patients on a global basis. The United Kingdom, having a large national resource, the National Health Service, is based on preservation of local practices, but has begun to explore linkage between patients in their homes and communities with providers via the twin strategies of telemedicine and self-regulation for management of hypertension. Sheppard et al., in a comprehensive assessment, describes the current UK strategies for screening, detection, treatment, and quality control for treatment of hypertension in new models based on home pressure measurement, self-titration, and communication with supervising providers at a distance. Although this may seem limited to developed nations, the rapid growth of home computers and smartphones suggests that exploration of this model might gain traction where physicians and nurses are in scarce supply, but cardiovascular health awareness is growing as is Tibet where use of mobile phones is being studied.[8]

We hope that these contributions will stimulate exploration of other innovations in strategies for reducing the global burden of CVD through effectively treating a much greater fraction of the world's population of those with hypertension.

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