

Moving Forward the RHD Agenda at Global and National Levels



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Rheumatic heart disease (RHD) remains a persistent threat to the health of children and working-age adults in many low- and middle-income countries (LMIC). Although at the global level significant progress has been made on RHD mortality since 1990, a number of countries in sub-Saharan Africa, South Asia, and Oceania have been left behind with persistently high mortality rates [1]. More than 30 million people around the world are currently living with RHD [2], and nearly all of them are in countries with weak health systems that offer poor coverage of secondary prevention measures and low access to advanced medical and surgical care [3]. The upshot of these health system failures is a wide disparity in disability and case-fatality rates from RHD across LMIC [4].

Addressing the residual burden of RHD is both an ethical and economic imperative for public health systems. A recent World Health Organization consultation on universal health coverage recommended that countries prioritize and make publicly and freely available health services that are cost effective and preferentially impact those citizens who are the worst off [5]. By both of these criteria, RHD fits perfectly within the universal health coverage agenda. Although economic data are limited, they suggest that all aspects of the spectrum of RHD care, from primary and secondary prevention to surgical treatment, can be cost effective and affordable in low-resource settings [6]. From an ethical standpoint, RHD is exclusively a disease of the worst off, with age-standardized rates of disability-adjusted life-years 10 times higher in LMIC than in high-income countries [7].

Armed with these arguments, cardiovascular clinicians and public health practitioners can confidently approach decision makers and make a compelling case that RHD should be a top priority on the global and country health agendas. But the inevitable response from these decision makers will include a request for more local data, and for technical assistance in implementing comprehensive, integrated, and sustainable RHD control programs. In this special issue of *Global Heart*, we present data, tools, and frameworks for moving forward the RHD agenda at the global and national levels.

Taking a global perspective, Palafox et al. [8] present the World Heart Federation's RHD roadmap. Synthesizing literature from around the world, they identify known barriers and potential solutions in 4 domains: primary prevention, secondary prevention, tertiary care, and limitations in the general health system that span various building blocks such as human resources, financing, and

others. They also present an agenda for implementation research, highlighting several ways to bridge the so-called "knowledge-practice gap" in RHD prevention and control. This roadmap can be used as both a general guide and framework for regional and national activities. It can also serve to mobilize action at the international level—for example, to develop global public goods (e.g., vaccines) and mobilize political and financial commitments to RHD control.

On the other hand, Zühlke et al. [9] take a complementary view that focuses on action at the national and more local levels. They summarize the elements of a comprehensive needs assessment tool that is designed to identify local needs and priorities for RHD prevention and treatment. Their tool, the full version of which is available free of charge at <http://rhdaction.org>, follows a mixed-methods approach and traces the patient journey through the health system, ascertaining and quantifying barriers and enablers to care along the way. The tool is designed in a modular format that can be adapted based on area of interest (e.g., sore throat treatment or surgery) and research capacity (e.g., quantitative health facility surveys or qualitative interviews of patients and healthcare providers). The product of this needs assessment process would be a rich dataset that could be used to convene stakeholders who could then develop and implement locally relevant, culturally appropriate interventions.

The first stage of any needs assessment exercise will be to review available local datasets. To this end, Moloji et al. [10] present the findings of a systematic review of RHD epidemiology and health system barriers and enablers in Tanzania and Uganda, 2 countries with demonstration sites supported by RHD Action. Their review found a striking difference in data availability and knowledge between the 2 countries. The epidemiological research in these 2 countries to date has been focused on RHD, so there is an urgent need for information on the incidence of acute rheumatic fever and on the incidence and microbiological features of streptococcal pharyngitis. Still, the data from these 2 countries align with findings in other African countries: RHD remains highly prevalent in children, and symptomatic RHD in adults is associated with high rates of disability and premature mortality. In addition, there appears to be a number of important barriers to care in both countries, including low health literacy, disease stigma, and logistical challenges to receiving care, such as high transportation costs, long waiting lines, and low availability of benzathine penicillin at clinics. These findings underscore

The authors report no relationships that could be construed as a conflict of interest.

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GLOBAL HEART
© 2017 Published by Elsevier Ltd. on behalf of World Heart Federation (Geneva).
VOL. 12, NO. 1, 2017
ISSN 2211-8160/\$36.00
<http://dx.doi.org/10.1016/j.ghheart.2017.04.002>

the notion that RHD control cannot follow a one-size-fits-all approach, and local programs must be driven by local data.

Reaching the World Heart Federation's target of a 25% reduction in RHD deaths among individuals <25 years of age by the year 2025 will require intensive, dedicated investments in health systems in a large number of countries where progress to date on RHD has been inadequate. Yet these are the very countries that have many urgent and competing priorities, including a large burden of communicable diseases, maternal mortality, and nutritional deficiencies. Many of these countries also face a host of other endemic, noncommunicable diseases of poverty that have not been a part of the global health and development agenda to date [11]. Therefore, action on RHD must be considered and initiated within the context of these other concerns, and, where possible, integrated with services that address other issues.

To date there has been little research on the integration of RHD programs into health systems using the en vogue "diagonal" approach. The highly effective rheumatic fever programs supported by the World Health Organization during the 1970s and 1980s were targeted ("vertical") campaigns [12]. Yet there is currently little appetite among ministries of health and external donors for this sort of delivery strategy, with continual pressure placed on professional communities to develop disease-specific models of care that are woven into the existing health system. Unfortunately, there is very little published evidence on how best to do this for RHD, with only a few case studies or pilots of programs with potential for integration in areas such as HIV/AIDS and school health [13,14]. Although each of the articles presented in this issue speaks in some way to the importance of integrated and interdisciplinary approaches to RHD, the research agenda going forward must begin to address this gap by gathering prospective, comparative data on models of care from around the world in order to identify and disseminate best practices.

The weight of historical evidence suggests that, with intensive efforts, rheumatic fever can be eliminated from endemic settings over a period of a few years, and the health and economic impact of RHD can be drastically reduced as a result [15,16]. For countries and population groups stuck in health-related poverty traps, any such "quick wins" that can increase educational attainment and productivity of working-age adults should be very attractive to policymakers. RHD is thus an exceptional model for raising the profile of noncommunicable diseases and for strengthening cardiovascular health systems in low-resource settings. In this light, it is incumbent on the cardiovascular disease community to place an appropriate emphasis on RHD in our interactions with the broader public health and policy communities. The tools and frameworks presented in this issue expand the armamentarium available for fighting, and eventually eliminating,

this preventable disease and achieving better and more equitable cardiovascular health for all.

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