

Trans-Disciplinary Education and Training for NCD Prevention and Control

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Non-communicable, chronic diseases (NCDs) account for 70% of morbidity and over 60% of mortality worldwide [1]. Previously thought to be simply a normative consequence of aging, NCDs are largely preventable through maintenance of healthy behaviors and optimizing risk factors such as smoking, body weight, blood pressure, cholesterol, and glucose throughout the lifespan. However, in current modern environments, few individuals are able to maintain an ideal set of health behaviors and the subsequent optimal risk factor profile throughout their lives. In fact, precursors of cardiovascular disease, diabetes, and certain cancers are increasingly common in children, adolescents, and young adults [2].

Upstream social determinants that influence behaviors which can lead to NCDs are complex and include individual-level drivers such as gender, education, and socioeconomic position; population-level drivers such as the level of urbanization, the built environment, and the food system; and macro-level drivers such as trade agreements and taxation policies [3]. Given such complex inputs, there is growing realization that NCD prevention and control requires trans-disciplinary efforts to achieve real change [4]. This awareness, particularly the realization that NCD burdens are an overlooked barrier to development towards achieving the Millennium Development Goals [5], has prompted the United Nations to schedule a

High-Level Meeting (HLM) on NCDs in September 2011. This meeting will only be the second UN session devoted exclusively to health; the first such meeting in 2001 focused on HIV/AIDS and led to the Global Fund for AIDS, Tuberculosis, and Malaria. The HLM provides a critical opportunity to coordinate a global response to NCDs.

While the trans-disciplinary nature of NCDs is increasingly accepted in high-level discussions, medical, public health and global health training programs have not kept pace by restructuring curricula to appropriately train the next generation for global NCD prevention and control. Dealing with NCDs requires public health professionals to return to their multidisciplinary origins and span old and new arenas. These include academic disciplines and policy, but also incorporate sophisticated understandings of how business and the corporate sectors work, media relations, and the use of the new social media.

Given this current gap in training, the Young Professionals' Chronic Disease Network (YP-CDN), a global network of more than 320 members from 40+ countries, was developed after an Institute of Medicine meeting on global cardiovascular disease in 2009, in part to advocate for and participate in the development of trans-disciplinary training programs for NCD prevention and control. Members are students and budding experts in their fields – from public health, medicine, sociology, anthro-

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pology, philosophy, nutrition, architecture, and business.

YP-CDN capitalizes on the energy, innovation, and courage of young people to challenge the status quo as we advocate for restructuring our world to be healthier and more sustainable, unconstrained by the boundaries present in previous generations [6]. These perspectives are captured in our “Youth Manifesto on NCDs”, the result of extensive dialogue among network members [7]. Drawing upon a tri-dimensional framework of (1) awareness and empowerment at the community level, (2) distal (environmental) risks, and (3) proximal (individual) risks, the Youth Manifesto outlines recommendations to stakeholders at the UN HLM and pledges from youth. The full Manifesto is included in this issue. Here, we highlight the core recommendations from the Youth Manifesto for strengthening education and training for NCD prevention and control.

YOUTH MANIFESTO ON NCD: TRANS-DISCIPLINARY EDUCATION

To effectively address NCD policy issues ranging from tobacco control to food policies to access to essential medicines, the 21st century global health workforce must be sensitive to the complexity of NCDs. This requires training beyond the traditional public health, epidemiology, and clinical training, into fields of economics, international and domestic law, and agriculture. Curricula should therefore emphasize “health in all policies”, with a particular focus on the political process model and implementation sciences. To address a false dichotomy between prevention and treatment through health services, we actively encourage synergies and innovative dialogue between public health (clinical- and population-based) and related disciplines, such as urban planning or agriculture, within and outside our governments. Training in community-based participatory approaches, qualitative methodologies, and field-based work will also be needed.

Although guidelines for implementing feasible, cost-effective, and evidence-based policy interventions have been synthesized by expert groups [8], insufficient political will and capacity persist as barriers to adaptation and more extensive implementation. Governments and international research and funding bodies should direct more funds to translation trials to test and operationalize implementa-

tion of evidence-based policy recommendations, including randomized-controlled trial findings into real-life settings. Educational institutions can focus on better training students regarding the underlying social and economic policies that create or determine health.

We believe that participation of all stakeholders in the development, implementation, and evaluation of such training programs, with particular emphasis on individuals from low- and middle-income countries, will be important for effective, sustainable, and fair education of the next generation’s workforce.

YOUTH MANIFESTO ON NCD: OUR PLEDGES

In exchange for global action on the above recommendations, we as youth offer the following pledges:

- (1) We will lobby our academic institutions and work alongside faculty and administrators to reform curricula to include trans-disciplinary offerings on the complexities of NCDs and real-world implementation, and to leverage trans-disciplinary and field-based training opportunities.
- (2) In addition to traditional medical funding sources, we will actively recruit alternative, non-medical sources of revenue for curricular support in partnership with our peers who work in these disciplines.
- (3) To bolster the first two pledges, we will contribute to the development of a highly skilled movement through peer-to-peer support and capitalize upon opportunities offered by seniors in the field to develop intellectual capital, influence, and trans-disciplinary networks. We will continue to use virtual communities (web 2.0 technologies) to produce a dynamic and barrier-breaking health movement driven by a common vision. The development of YP-CDN itself – and the resulting NCD Action social movement (website: ncdaction.org; twitter feed: @ncdaction) – are examples of such models.
- (4) We will contribute to the development of a vision of a future society rooted in a social determinants of health approach and to work towards integrating the multitude of global agendas, including climate change and sanitation. Through our own research, we will promote the view that NCDs are societal problems that require a combination of population- and individual-level solutions, rather than simply being the “fault” of the individual.

CONCLUSIONS

This work has already begun. At the Academia and Research panel at the recent WHO Global Forum in Moscow and the UN Civil Society Hearing in New York City, we publicly announced our recommendations concerning a curricular shift from a solely biomedical view on health to one that acknowledges social, economic, and behavioral determinants, and our related pledges. Our statement, with strong support from WHO Member States and leading academics, was highlighted and lauded by Director-General Dr. Margaret Chan.

The incorporation of YP-CDN recommendations and voice into high-level policy discussions represents a tipping point for the emerging network. Future steps require operationalizing these views, starting with the recommendations and pledges highlighted here. In addition to reforming curricula to train interdisciplinary leaders, one crucial role of the global community is to support student-advocacy efforts and innovative, non-traditional global health work in tackling NCDs [9,10]. In this pivotal moment, the WHO and IOM have offered us a vote of support. Now will our universities do the same?

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