NCDs: Can Healthy Synergies Replace Fatal Interactions?

A growing global movement argues for health to take center stage in the post-2015 sustainable human development agenda, building on the Millennium Development Goals and improving measurement of outcomes and equity. Considered key is the urgent need to effectively stem chronic noncommunicable diseases (NCDs). The reasoning is straightforward and yet addresses the interactive complexities of NCD impact and the potential synergies to reduce it: NCDs constitute the most important, if until recently neglected, pandemic of our era. They accounted for over 65% of global deaths and 54% of the global disease burden in 2010.[1,2] Such a negative "contribution"—including the sequelae of disability and alarming costs of treatment for multimorbidities associated with aging populations worldwide—jeopardizes sustainable human development.

The 2011 UN High-Level Meeting on NCDs was one step towards gathering momentum to rein in the NCD threat; so, too, the NCD Alliance and *The Lancet* NCD Action Group. All address the fact that NCDs are multiplying fastest in the regions and countries least prepared to meet the challenge—their leaders, economies and health systems already encumbered by infectious diseases, now blindsided by the chronic disease pandemic without the material benefits of development. WHO predicts that by 2020, NCDs will account for seven of every ten deaths in developing countries;[3] and without swift and effective action, this could cost low- and middle-income countries over $7 trillion in 2011–2025.[4]

More hurdles block action: first, global experts seem to be stuck on whether prevention is actually cheaper than treatment—in some cases, proven to be, in others not so clear. But if NCDs are to be faced head on, cost isn't the first question to be raised, but rather health itself as the basis for full human development, participation in society and empowerment. Thus, a more pertinent question would be: what are the public and private spending priorities that leave so little in the coffers as to pit prevention against treatment? Where else is the money going?

A second hurdle, which has to be cleared in order to reach the UN goal of reducing preventable NCD deaths 25% by 2025, is to lessen fragmentation of approaches, and instead take coherent, synergistic action on a number of fronts. This in turn requires recognizing that NCD reduction needs to factor in a broad range of variables—from the environment and genetic clues, to health system reorganization and the retooling of health sciences education. It means incorporating life-course, social equity and gender perspectives. This is a tall order that only sound evidence—when heeded by political leaders—can fill.

Third, in order for action to be coherent, barriers must be broken down within health systems, to reveal the actual situation of patients, families and communities suffering from NCDs. In Cuba, since the 1970s, public health actions have been guided by four main programs, one of them centered on chronic diseases. While this focus was prescient—as was another program on older adults—what emerges today is the need for research and policy to cross over program lines, and then to develop more precise tools that reveal NCD patterns to guide resource deployment, health professions' education, prevention and treatment protocols.

Crossing the program lines within Cuba's health system to generate more integrated approaches is the subject of three papers in this issue: *Sex Education for Children and Adolescents with Type 1 Diabetes in Camagüey Province*, *Care for Pregnant Diabetics in Cuba*, and *Contribution of Genome–Environment Interaction to Pre-eclampsia*. The latter uses advances in genetics to posit the exacerbating effect of environment and hereditary interaction in determining predisposition to a condition that substantially contributes to maternal mortality in Cuba.

The article also presents evidence for clearer risk profiling, one of the more precise tools needed at both the epidemiological and patient level. Cuba has the benefit of a strong primary health care system, with family physicians and nurses embedded in their communities, where they apply the concept of continuous assessment and risk evaluation (CARE) to identify people in their geographic catchment area with such conditions as hypertension and diabetes. This is an important start at risk profiling in a universal public system, integrating clinical medicine for individual patients with population health approaches.

Two other manuscripts contribute to modeling NCD outcome prediction and risk: *Prognostic Factors in Hemodialysis Patients* and *Spatiotemporal Analysis of Lung Cancer Incidence and Case Fatality*. It should be noted that most of the studies in this issue are specific to particular provinces or cities in Cuba, bringing research closer to actual conditions there, while at the same time offering methodology for replication and results for comparison.

Finally, two articles urge further research into NCD causes: the Viewpoint asks whether the grave economic crisis suffered by Cuba in the 1990s may be a stressor increasing NCD prevalence in the country today; and the Interview with Dr María Isabel Rodríguez, El Salvador's Minister of Health, describes efforts to uncover the causes of the chronic kidney disease of unknown etiology (CKDu) sweeping poor agricultural communities in Central America and elsewhere.

Coming to terms with NCDs is a major challenge for the world—for Latin America, the Caribbean and Cuba itself: the island's first cause of death is now cancer, followed closely by heart disease and stroke, and rates of most NCDs are rising. So it is no wonder that Cubans are wont to say "We live like poor people, but die like the rich." Indeed, NCDs were once the province of wealthy nations. No longer the case.

The Editors

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4. World Health Organization, World Economic Forum. From burden to best buys: reducing the economic impact of non-communicable diseases in low- and middle-income countries. Geneva: World Economic Forum, 2011.