



Non-Communicable Diseases In The Caribbean: The New Challenge For Productivity And Growth

June 2013



This material has been prepared by Clark Matthews, under the supervision of Shiyan Chao of the Health Unit of the Latin America and the Caribbean Region of the World Bank. The content draws mainly on the following literature: "Promoting Healthy Living in Latin America and the Caribbean: Governance of Multisectoral Activities to Prevent Health Risk Factors", World Bank (forthcoming in 2013); "Non-Communicable Diseases in Jamaica: Moving from Prescription to Prevention" World Bank (2011) and "The Growing Burden of Non-Communicable Diseases in the Eastern Caribbean, World Bank (2011)

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This note was prepared to support the participatory policy dialogue in the context of the Caribbean Growth Forum (CGF). The CGF is an initiative facilitated by the Compete Caribbean Program, the Inter-American Development Bank, the World Bank and the Caribbean Development Bank, with the support of the Canadian International Development Agency, the United Kingdom's Agency for International Development, CARICOM Secretariat, the University of the West Indies, the European Union and Caribbean Export. It aims to facilitate a multi-stakeholder dialogue to identify practical solutions for the growth challenge in the Caribbean. To learn more about the CGF methodology and progress in each Caribbean country visit: <http://caribgrowth.competecaribbean.org/>

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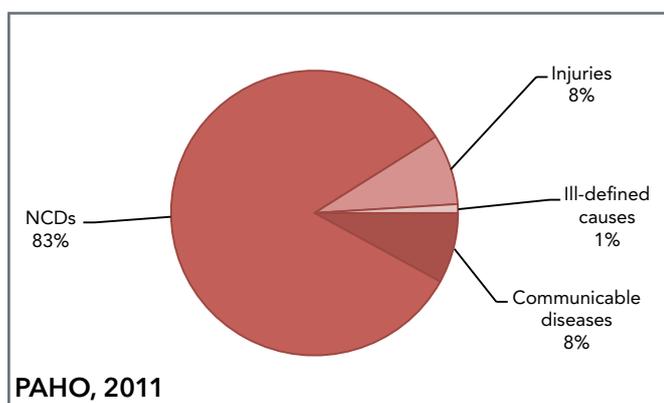
Non-communicable diseases in the Caribbean: the new challenge for productivity and growth

Non-communicable diseases (NCDs) pose significant challenges to individuals, communities, and nations alike, and represent the major cause of death in the Caribbean. NCDs, which by definition are non-infectious and non-transmissible among people, include autoimmune diseases, heart disease, some forms of cancers, and diabetes, among others. Over the last few decades, NCDs have reached the level of epidemic in many parts of the world. The severity is particularly pronounced in the Caribbean region, and has resulted in both considerable loss of life, and economic and social costs to individuals, families, and their communities. The prevalence of NCDs impacts labor market outcomes, including significant productivity losses due to absenteeism, disability, reduced functionality, and less years of worker output. Addressing NCDs is no longer solely a social protection strategy, but rather is a requirement to maximize investments in human capital to enhance productivity and achieve sustained economic growth.

The Emergence and Predominance of NCDs

Key demographic and migration trends have contributed to the predominance of NCDs. Since 1960, the rate of life expectancy at birth in the Caribbean region has increased from 61 to 72 years; all the while, death rates have been

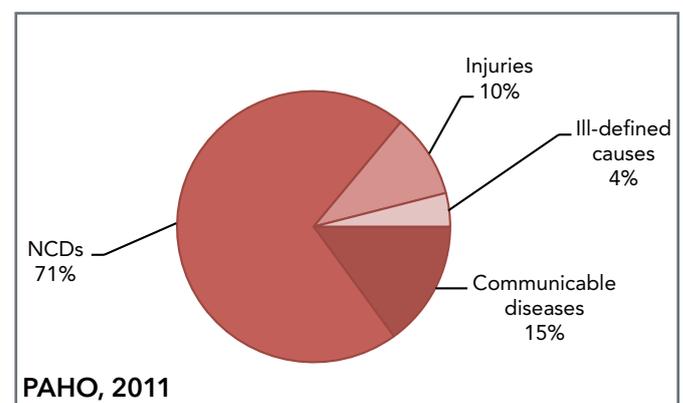
Figure 1: Mortality distribution by causes of deaths, Non-English speaking Caribbean



falling. During this period there has also been a move towards urbanization as workers often relocate from rural communities to city settings. The percentage of urban dwellers varies across the region, with countries such as the Dominican Republic (69 percent) and the Bahamas (84 percent) having among the highest proportion of citizens in urban settings. The result is an increasingly aging population concentrated in high-intensity locations. Crowded living conditions and significant environmental pollution are some of many factors that contribute to heightened health risks in the region.

NCDs are linked to more than 7 out of 10 deaths in the Caribbean region, which exceeds the global average of nearly 60 percent. In contrast, the occurrences of deaths as a result of communicable diseases are on average 8 to 15 percent in the region. Compared with the English speaking Caribbean countries' rate of death as a result of NCDs, non-English speaking Caribbean countries' rate is particularly high, averaging 83 percent compared with 71 percent¹. Within the Organization of Eastern Caribbean States (OECS) countries, the three types of NCDs that account for the largest portion of deaths includes: cardiovascular disease (30 to 46 percent of deaths), malignant neoplasms (10 to 20 percent of deaths), and diabetes mellitus (3 to 14 percent of deaths)².

Figure 2: Mortality distribution by causes of deaths, English speaking Caribbean



¹English-speaking Caribbean countries include: Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Bermuda, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Netherland Antilles, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Turks and Caicos. Non-English speaking countries include: Cuba, Dominican Republic, French Guiana, Guadeloupe, Haiti, Martinique, and Montserrat.
²OECS Countries are a proxy the entire Caribbean region. Data presented in World Bank, 2011. "The Growing Burden of Non-Communicable Diseases in the Eastern Caribbean". Washington, DC.

Risk factors of NCDs

NCDs share common underlying, interrelated risk factors, including obesity, physical inactivity, and tobacco and alcohol use. Despite overwhelming evidence of the harmful health consequences associated with these risk factors, the prevalence is on the rise in Caribbean countries.

- **Obesity:** Since the 1970s, the rate of obesity and overweight people in the Caribbean has steadily increased across all countries and age cohorts. Studies indicate that diets include heavy consumption of grains, meats, sugars, oils and sodium, thus rendering it common for the average calorie intake to exceed daily requirements.

- **Physical inactivity:** Physical inactivity is the fourth leading risk factor of global mortality. Country surveys provide moderate insight and demonstrate that populations are insufficiently active.

- **Smoking:** In total, smoking is responsible for at least 10 percent of all deaths in Caribbean countries. Among countries possessing statistical data tracking tobacco usage, the rate is highest in Trinidad and Tobago, where 33 percent of the adult male and 6 percent of the adult female populations smoke cigarettes.

- **Alcohol:** The excessive and harmful use of alcohol is a global problem that compromises both individual and social development, and can result in serious health concerns. Data from a subset of Caribbean countries shows that the total per capita consumption of pure alcohol per year is in excess of 5 liters in most countries. Studies show that overconsumption of alcohol increases the risk for more than 60 types of diseases and injuries.

Economic Impact of NCDs

Reducing the prominence of NCDs is an important economic growth strategy. Along with the social and human merits for intervention, there are strong economic motives for addressing NCDs. Countries in the Caribbean were negatively impacted by the 2008 financial crisis and have not fully recovered. They are heavily indebted, and economic growth has slowed. NCDs are costly, and have a direct and significant impact on economies, health systems, and households and individuals.

Public health systems bear a significant portion of direct costs as a result of NCDs. People with NCDs have higher utilization of health care services. Data for Jamaica from the period 1990 to 2007 shows

that over the 18-year period, the percentage of health care visits by patients without NCDs was relatively stable, whereas the rate for patients with NCDs increased 20 percentage points³. These visits are labor intensive and require costly technology and physical space, which results in the diversion of limited financial and human resources away from other pressing needs in the medical system. For example, in the OECS the total public health expenditure per diabetic patient ranges from USD 326 in St. Vincent and Grenadines to as high as USD 776 in Antigua and Barbuda per year. In total, this expenditure equates to USD 1.8 million and USD 2.4 million in the two countries presented, respectively.

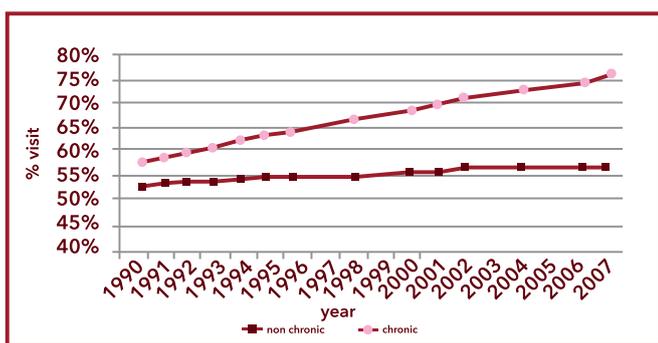
³Data presented in World Bank, 2011. "Non-Communicable Diseases in Jamaica: Moving from Prescription to Prevention". En Breve Series, Number 171. Washington, DC.

The economic burden of NCDs on individuals is high. Both direct and indirect economic burdens must be examined in order to estimate the total economic burden of NCDs to individuals. The direct economic burden can be defined as the sum of out-of-pocket spending by NCD patients on outpatient visits, inpatient care, and medication. In contrast, an evaluation of the indirect economic burden measures the reduction of productivity due to illness. A 2006 study estimates the total average private economic burden of NCDs to be approximately USD 1,320 in St. Lucia per year, or roughly 1/4th of GDP per capita. The implications of this high level of expenditure can be seen in many different ways. Allocating scarce financial resources to treat NCDs can impoverish families, diverting financial resources from other important areas, such as extracurricular activities for children and quality of life activities.

Addressing NCDs to Enhance Productivity

Reducing the prevalence of NCDs can lead to positive labor market outcomes. NCDs create barriers and impediments that limit employees' abilities to perform duties in the work place, which in turn affects the level of labor force participation and type of employment, and results in lower labor

Figure 3: Adjust Health Services Visits for individuals with and without NCDs (%)



Source: Estimates based on JSLC 1990-2007
 Note: Adjusted for major household socioeconomic characteristics.

supply and less hours worked. Although there is insufficient information to accurately assess the full extent in the Caribbean region, data from select South American countries shows that individuals with NCDs work less hours than do average workers, and have more pronounced working life cycles (greater share of hours are worked mid-career compared with early and late stages of a career). Anecdotal evidence also suggests that individuals with NCD-related disabilities are less able to undertake a full spectrum of work duties, which limits employment opportunities.

International evidence shows that individuals with NCDs have lower income. Studies undertaken in Brazil and Chile find that workers without NCDs earn higher incomes than those with NCDs by a measure of 30-40 percent⁴. Research further shows that there is a relationship between income and productivity, however it can be difficult to measure because labor earnings are a result of several factors, including education, ability, industry, technological factors, amongst others⁵. To assess the full implications of NCDs on income requires detailed analysis in the Caribbean region. Individuals suffering from NCDs in the Caribbean are already at a disadvantage. Reduced income potential, coupled with the high private cost, leads to reduced quality of life for individuals with NCDs and a diminished stock of human capital. Employers may then suffer from reduced profits as a result of higher labor costs and inefficiencies, and each level of government receives less revenue from taxation (from both business and personal taxation).

⁴World Bank, 2013. "Promoting Healthy Living in Latin America and the Caribbean: Governance of Multisectoral Activities to Prevent Health Risk Factors". Washington, DC.

⁵World Bank, 2013. "Promoting Healthy Living in Latin America and the Caribbean: Governance of Multisectoral Activities to Prevent Health Risk Factors". Washington, DC.

⁶For example, see: World Bank, 2013. "Promoting Healthy Living in Latin America and the Caribbean: Governance of multi-sectoral activities to prevent health risk factors". Washington, DC. P125372; World Bank, 2011. "Non-Communicable Diseases in Jamaica: Moving from Prescription to Prevention". Washington, DC; World Bank, 2011. "The Growing Burden of Non-Communicable Diseases in the Eastern Caribbean". Washington, DC.

Conclusions

Addressing NCDs should be at the forefront of the economic growth agenda in the Caribbean.

Tackling NCDs requires an integrated, multi-disciplinary and sustained approach. The primary challenge to addressing NCDs is there is no singular action that will lead decrease the prevalence of the diseases, but rather a multiple pronged approach that combines education, policy actions, and interventions is required. Investing financial and human resources wisely in the health care system through prevention and rehabilitation, such as screening, treatment, and care, is a necessity. Interventions - Healthy Caribbean, Caribbean Tobacco Control Project, amongst others - are environmental-based strategies to encourage and support behavioral change and can be supported

through various policy mechanisms, such as taxes and incentive-based systems. These efforts require involvement from a wide range of stakeholders in the planning and implementation of strategies, including the public and private sectors, and other organizations. The prevalence of NCDs is rampant, and the consequences well documented. From an economic perspective, addressing NCDs is a necessity to increase labor productivity and achieve sustained economic growth.

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