A Rapid Assessment Study on the Implementation of a Core Set of Interventions to Improve Cardiovascular Health in Latin America and the Caribbean

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Cardiovascular diseases (CVD) are the leading cause of death in the Americas with 1.6 million deaths per year, half a million of which occur before age 70 years. CVD (International Classification of Diseases—Tenth Revision, I00—I99) represent 38% of all causes of death in the region [1]. Although mortality due to CVD in the region declined at a rate of 1.9% per year from 2000 to 2010, low- income and medium-income countries, compared with high-income countries, had an excess of CVD mortality of 56.7% and 20.6%, respectively [2].

The 2013 World Health Assembly, in response to the 2011 U.N. political declaration on noncommunicable diseases (NCD), established a goal of 25% reduction in premature mortality due to 4 major NCD by 2025 (25 × 25 goal). These NCD are CVD, cancer, diabetes, and chronic respiratory diseases. Achieving a reduction of this magnitude will depend primarily on successes in the prevention and control of CVD.

The 2010 regional consultation on cardiovascular health (CVH regional consultation) led by the Pan American Health Organization (PAHO) established a list of priority interventions to improve CVH in the Americas. The list, prepared before the U.N.'s 2011 high-level meeting on NCD, serves as a road map for the region beyond that important event. A regional expert group, including PAHO technical advisors, representatives of health ministries, professional societies, academic institutions, and several nongovernmental organizations, defined a set of interventions around 4 main areas: 1) public policy and advocacy; 2) health promotion; 3) surveillance; and 4) disease management and integrated control for risk factors [3].

Much progress has been made by PAHO's member states since the CVH regional consultation [4]. Although 4 years is a relatively short time to fully implement a comprehensive package of interventions, it may be an appropriate interval to assess progress and make necessary course corrections. It is unlikely that progress will occur at the same rate among all countries. Our aim is to investigate the state of implementation of the core set of interventions recommended by the 2010 CVH regional consultation.

METHODS

We designed a rapid assessment study using a semi-structured questionnaire to gather information from a sample of key informants about their perceptions on the implementation of a core set of priorities to improve CVH. The questionnaire was designed as a web-based survey and disseminated to PAHO country offices, ministries of health (MOH), and the Inter American Society of Cardiology (IASC), a nongovernmental organization in official relation with PAHO. Respondents were all residents in their specific countries and comprised PAHO advisors for NCD, MOH representatives in charge of NCD or CVD, and leaders of the IASC. Members were invited to participate via email. An introductory letter and link to the online questionnaire were submitted to potential participants. Reminder emails were sent at 2-week intervals for 6 weeks.

The survey assessed the respondents' perceptions of progress in their countries since the CVH regional consultation in 2010. Whereas the respondents shared their individual perceptions, we considered their responses to reflect the opinion of their affiliated institution for the purposes of this study. The questions included basic demographic information to identify the respondent's characteristics, as well as their perceptions about a core set of interventions related to the following: 1) policy-based issues and advocacy; 2) surveillance; 3) health promotion and prevention; and 4) disease management (Online Table 1).

The online survey tool SurveyMonkey (Palo Alto, California, USA) was used to administer the questionnaire. Core questionnaire items were developed from the priorities established at the 2010 CVH regional consultation. Personal perceptions were assessed using the 5-point Likert method with responses ranked as follows: 1 = "strongly disagree"; 2 = "disagree"; 3 = "neither agree nor disagree"; 4 = "agree"; and 5 = "strongly agree." In order to classify countries according to degree of progress achieved (advanced, moderate, or minimal), the average was calculated from the ordinal score of responses from a particular country. The average was categorized as "advanced" if it was in the 3.5 to 5 range, "moderate" if it was in the 2.5 to 3.4 range, and "minimal" if it was in the 1 to 2.4 range. Group averages were rounded to the nearest whole number. Additionally, we asked an open-ended question allowing respondents to identify particular areas of success and areas needing improvement within their country's program. Questionnaires with anonymous contact information were removed from our sample due to the inability to associate their answers with a specific country or health institution.

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RESULTS

The survey was disseminated to 28 PAHO member states in the Latin America and Caribbean region. Questionnaires were completed in 22 countries for a response rate of 78.6%. There were 56 respondents with an average of 8.7 years of experience in their professional roles. There were 20 PAHO respondents (36% of the sample), 16 MOH respondents (28%), and 20 respondents from the IASC (36%).

Online Table 1 serves to outline priority themes for this study as well as present data on country progress. The category classifications and average cutoffs were described previously. Overall, 9 countries (40.9%) have advanced in their NCD priority themes since they were established. Meanwhile, 8 countries (36.4%) reported moderate progress, and 5 (22.7%) reported minimal progress.

The survey also evaluated progress concerning NCD policies. Specifically, policies regarding CVH in NCD plans were found to have received more attention and resources in 45.5% of responding countries. We also inquired about access to essential hypertension medication for disadvantaged people and found advances in 59.1% of responding countries.

Current public policies to reduce risk factors were evaluated by assessing specific efforts to combat tobacco use, sodium reduction, unhealthy eating, physical inactivity, and harmful use of alcohol. Concerning tobacco policies, we asked if more rigorous regulations had been implemented in achieving 100% smoke-free spaces, to which 63.6% of countries reported advancements. Among policies evaluated, those related to tobacco policy demonstrated the highest level of progress. Alcohol consumption policies were reported to have achieved minimal progress in 45.5% of countries responding, whereas sodium reduction policies demonstrated the least progress overall. Only 9.5% of countries reported advances and 61.9% of them claimed to have made only minimal progress. Regulations regarding the sale of junk food in schools were found to be variable: 36.4% of countries achieved advances; 31.8% reported moderate progress; and 31.8% reported minimal progress. Similar findings were reported regarding the inclusion of at least 50 min per day of physical activity in the school curriculum. In contrast, urban exercise spaces were reported as having advanced in 50% of the countries responding.

Overall, surveillance themes were found to be successful in the region. New and updated information on prevalence and control of hypertension was reported to have advanced in 66.7% of responding countries with data sources derived from population-based surveys. Additionally, actions to improve the quality of completeness of CVD mortality data were reported in 63.6% of countries responding to the survey. Information on the economic impact of CVD, however, was found to have advanced in only 23.8% of responding countries.

Disease management themes displayed a range of progression within the region. Hypertension disease management training activities showed progress in 45.5% of the countries. Basic resources for CVD had increased in 40.9% of responding countries, whereas there were advances in implementation of the care model for patients with CVD in 40.9% countries. Lastly, the emphasis of therapeutic control of blood pressure at 140/90 mm Hg was found to have progressed moderately in 45.5% of countries according to respondents.

We also found that many countries fell into the category of minimal progress with regard to disease management themes. One of the suggested actions for improvement at the CVH regional consultation was offering institutional incentives for medical personnel using clinical practice guidelines for patients with hypertension. A total of 45.5% of countries reported only minimal progress on this theme. Related to institutional incentives, 40.9% of respondents reported minimal progress in the quality of treatment for patients with acute coronary syndrome (ACS) at the country level. Unfortunately, 45.5% of countries reported minimal progress with CVD risk assessment becoming common practice in most primary care facilities. Finally, 50% of respondents reported minimal progress in public health programs for the early recognition of CVD signs and symptoms.

DISCUSSION

PAHO's regional NCD strategy promotes attention to NCD in economic and development agendas with a specific focus on 4 main NCD—CVD, cancer, diabetes, and chronic respiratory diseases—and their 4 main related risk factors—tobacco consumption, harmful use of alcohol, physical inactivity, and unhealthy diets [5]. The regional NCD strategy promotes multisectoral participation and formation of relevant partnerships to achieve increased attention. Our results suggest that less than one-half of the countries have had success garnering attention and more resources for CVH, which even in the ideal scenario does not necessarily mean more attention for CVD. These results may lead us to search for new ways to draw attention to the potential impact of CVD and generate advocacy for more resources in many countries that continue to focus on their traditional agendas.

The majority of responding countries reported improved access to medication for hypertension among disadvantaged populations. Recently, another strategy was outlined for universal access to health coverage in the region at PAHO's 53rd Directing Council (the universal access and universal health coverage strategy) and includes a section concerning essential medicines. The section states that availability and rational use of medication is fundamental to the success of health systems. Problems arise from inadequate supply, poor procurement management, underuse of quality generic drugs, ineffective use of medicines, high prices, and high taxes [6]. The universal access and universal health coverage strategy suggests that all member states offer quality health services to all citizens