In-Depth Qualitative Analysis of Noncommunicable Diseases

Multisectoral Action Plans in the Caribbean

Pan American Health Organization

World Health Organization
REGIONAL OFFICE FOR THE Americas

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Foreword

As the epidemic of noncommunicable diseases (NCDs) continues to have its negative impact on lives, livelihoods, and economies across the globe, the Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization (WHO), has taken action to strengthen its technical cooperation with Member States in addressing these diseases, their risk factors, and related issues, through the development and implementation of the Regional Plan of Action for the Prevention and Control of NCDs.

In the Region of the Americas, the Caribbean is the subregion most affected by NCDs. PAHO/WHO and the main Caribbean subregional political integration body, the Caribbean Community (CARICOM), have produced numerous frameworks and guidance tools to assist their Member States in policy and program development to prevent and control NCDs.

The contribution of factors outside the remit of the health sector demands the development, implementation, monitoring, and evaluation of multisectoral strategies and plans to address NCDs. Countries need to take whole-of-government, whole-of-society, and health-in-all-policies approaches to deal comprehensively with national NCD priorities.

Caribbean countries have a long history of working in NCD prevention and control, including through subregional collaboration. National NCD multisectoral action plans, developed and executed through participatory mechanisms, will make these efforts more effective and measurable. They will also contribute significantly to meeting the global and regional NCD targets set to reduce risk factors and improve health services for NCD management.

Although the establishment of national NCD plans is one of the four main global NCD commitments, only a selected number of countries have been able to establish such plans. In an effort to provide information and share knowledge of successful experiences and practices in establishing national NCD plans, this in-depth qualitative analysis was conducted in the selected countries. This report highlights the good practices and successes that can be replicated in other countries that have not yet established their NCD plans. It also identifies areas that can be strengthened for greater effectiveness in NCD prevention and control.

PAHO/WHO anticipates the use of this report not only as a tool for countries, but also as a guide for enhanced technical cooperation and collaboration between PAHO and its Member States. As such, governments, civil society, the private sector, as well as other development organizations can use these plans to carry out comprehensive, effective, multisectoral interventions for NCD prevention and control throughout the Caribbean.

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The analysis would not have been possible without the collaboration of the PAHO/WHO country offices that lead the Organization's technical cooperation with those countries, and sincere thanks are extended to the respective PAHO/WHO Representatives (PWRs) and their teams, especially the NCD technical advisors. Special thanks go to the PWRs and advisors in Barbados, Guyana, and Suriname for arranging and facilitating the country visits.

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Acronyms and abbreviations

BDS	Barbados Drug Service
BNR	Barbados National Registry
BoG	Bureau of Health (Suriname)
CARICOM	Caribbean Community
CARMEN	Collaborative Action for Risk Factor Prevention and Effective Management of NCDs
CARPHA	Caribbean Public Health Agency
CCH	Caribbean Cooperation in Health
CCM	Chronic Care Model
CDC	Centers for Disease Control and Prevention
CNCDs	Chronic noncommunicable diseases
CMO	Chief Medical Officer
CSO	Civil society organization
CVD	Cardiovascular disease
CWD	Caribbean Wellness Day
FAO	Food and Agriculture Organization of the United Nations
FBO	Faith-based organization
FCTC	Framework Convention on Tobacco Control
GAP	Global Action Plan
GACDRC	George Alleyne Chronic Disease Research Center
GDP	Gross domestic product
GMF	Global Monitoring Framework
GPHC	Georgetown Public Hospital Corporation
GSHS	Global School-based Student Health Survey
GYTS	Global Youth Tobacco Survey
HCC	Healthy Caribbean Coalition
HDI	Human Development Index
HiAP	Health in All Policies
HoTN	Health of the Nation Study (Barbados)
HR	Human resources
IEC	Information, education, and communication
JHLS	Jamaica Health and Lifestyle Survey
LF	Logical framework
M&E	Monitoring and evaluation
MAP	Multisectoral Action Plan

MoH	Ministry of Health
MoPH	Ministry of Public Health
MS	Member State
NCDs	Noncommunicable diseases
NGO	Nongovernmental organization
NNCDC	National Noncommunicable Diseases Commission
OECS	Organization of Eastern Caribbean States
PAHO	Pan American Health Organization
PHC	Primary health care
PoA	Plan of Action
POSD	Port of Spain Declaration
PPS	Pharmaceutical Procurement Service (OECS)
RF	Risk factor
RHA	Regional Health Authority
SDG	Sustainable Development Goal
SDH	Social determinants of health
SICA	Central American Integration System
SMART	Specific, Measurable, Achievable, Relevant (or Realistic), and Timebound (indicator characteristics)
SSBs	Sugar-sweetened beverages
STATIN	Statistical Institute (of Jamaica)
STEPS	STEPwise approach to surveillance (WHO)
SWOT	Strengths, weaknesses, opportunities, and threats
TC	Technical cooperation
UAH-UHC	Universal access to health and universal health coverage
UN	United Nations
UNASUR	Union of South American Nations
UNDP	United Nations Development Program
UNHLM	United Nations High-Level Meeting
UNICEF	United Nations Children's Fund
UWI	University of the West Indies
WHO	World Health Organization
WoG	Whole-of-government
WoS	Whole-of-society

Acronyms for selected CARICOM countries

(See http://www.nationsonline.org/oneworld/country_code_list.htm)

ATG	Antigua and Barbuda
BRB	Barbados
BLZ	Belize
GRD	Grenada
GUY	Guyana
JAM	Jamaica
KNA	St. Kitts and Nevis
SUR	Suriname
TTO	Trinidad and Tobago

Executive summary

NCD burden and frameworks

In light of the increasing global, regional, and subregional burden of NCDs, several frameworks have been developed by entities such as WHO, PAHO, and CARICOM, and agreements established by their Member States on actions needed for the prevention and control of these conditions. Emphasis has been placed on the influence that the social determinants of health have on the occurrence, severity, and impact of NCDs at the individual, societal, and national developmental levels, and the resulting significant contributions that actions in non-health sectors can make to their prevention and control.

The frameworks encourage whole-of-government, whole-of-society, health-in-all policies, multisectoral approaches to addressing NCDs. One of the global commitments is that countries develop and implement multisectoral action plans (MAPs) to address NCD prevention and control, and WHO has developed an NCD Map Tool to assist in the process.

NCD MAP qualitative analysis

Caribbean countries are significantly impacted by NCDs, and PAHO, through its Caribbean Subregional Program Coordination based in Barbados, undertook a qualitative analysis of the NCD MAPs in nine CARICOM Member Countries: Antigua and Barbuda, Barbados, Belize, Grenada, Guyana, Jamaica, St. Kitts and Nevis, Suriname, and Trinidad and Tobago. The analysis aimed to identify strengths, successes, and good practices, as well as areas to be strengthened to enable the efficient and effective development, implementation, monitoring, and evaluation of interventions for NCD prevention and control, and present relevant recommendations.
The analysis was done against the five core components of the WHO NCD MAP Tool and was based primarily on a desk review of the MAPs in nine countries, including visits to three of the countries (Barbados, Guyana, and Suriname). It examined antecedents for the development of the MAP; situation analysis; stakeholder engagement; multisectoral governance mechanisms; formulation; validation; implementation; and monitoring and evaluation.

Findings

The MAPs showed keen awareness of frameworks for NCD prevention and control at global, regional, and subregional levels, notably taking into consideration the CARICOM Heads of Government 2007 Port of Spain Declaration: Uniting to Stop the Epidemic of NCDs, and modeling the MAPs' strategic areas on those in the Strategic Plan of Action for the Prevention and Control of Chronic Noncommunicable Diseases for Countries of the Caribbean Community, 2011-2015. The MAPs also took into consideration the PAHO regional Plan of Action for the Prevention and Control of NCDs in the Americas, 2013-2019 and the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020 (WHO NCD GAP). The MAPs' targets and indicators reflected, to a significant degree, those in the WHO NCD Global Monitoring Framework (GMF), and the policy options presented included a majority of the WHO "Best Buys" listed in Appendix 3 of the WHO NCD GAP.

Overall, the MAPs included considerations of equity and improved access to health care among their values; identified non-health government sectors, civil society, and the private sector as key partners, and included those stakeholders in the preparation of the MAP; presented national NCD data; crafted interventions to strengthen

the quality, quantity, and timeliness of NCD data; addressed the establishment and strengthening of multisectoral National NCD Commissions to provide advice on, and oversight of, NCD prevention and control efforts; acknowledged Caribbean Wellness Day, as recommended in the Port of Spain Declaration; and recognized the contribution of development partners, among them PAHO/WHO, to the development of the MAP and NCD prevention and control in general.

However, relatively few MAPs presented disaggregated data to identify vulnerable or marginalized populations for special attention; identified strategies for the dissemination and promotion of the MAP; defined mechanisms for continued stakeholder engagement and contribution to implementation, monitoring, and evaluation; documented issues related to possible conflict of interest, especially with the private sector; conducted a risk analysis and developed risk mitigation strategies; estimated the cost of MAP implementation; identified resource mobilization strategies; and developed a robust monitoring and evaluation plan.

Recommendations

The recommendations made address general issues and NCD MAP development, implementation, monitoring, and evaluation. They include, but are not limited to:

- **General:** Strengthened stakeholder engagement and involvement throughout the MAP cycle, with due regard to possible conflict of interest; presentation of the MAP as a national, rather than a sectoral (Health) blueprint for action in NCD prevention and control; and allocation and mobilization of resources for MAP development, implementation, monitoring, and evaluation, commensurate with the significant threat that NCDs pose to individual and societal health, and to national development.

- **MAP development:** Enhanced dissemination and promotion of the WHO NCD MAP Tool; use of planning expertise available in and outside of the Ministry of Health (MoH) in the formulation of the MAP; inclusion of a comprehensive, concise situation analysis that includes an analysis of data disaggregated at minimum by age, sex, geographic location, and ethnicity, to facilitate the identification of disadvantaged groups and that takes advantage of research conducted by academic institutions at national and regional levels; analysis of strengths, weaknesses, opportunities, and threats related to the NCD MAP; and inclusion of indicative resources needed for MAP implementation—human, financial, and other—as well as possible sources, with development of resource mobilization strategies.

- **MAP implementation:** Sharing of information and expertise among countries including through mechanisms such as the Collaborative Action for Risk Factor Prevention and Effective Management of NCDs (CARMEN) network and the Cooperation Among Countries for Health Development initiative, both facilitated by PAHO; enhanced partnerships with national and regional civil society organizations, the latter including the Healthy Caribbean Coalition, which focuses on NCD prevention and control; expansion of Caribbean Wellness Day to encompass more interventions for risk factor reduction and management of NCDs; and greater use of legislation and mandatory regulations in creating enabling environments for NCD risk factor reduction.

- **MAP monitoring and evaluation:** Development and implementation of a costed monitoring and evaluation plan or framework; synchrony between national targets and indicators and those in international frameworks—to the extent possible—in order to avoid duplication of effort in monitoring and reporting; and involvement of key stakeholders in government, civil society, and the private sector.

1. Introduction

The Caribbean[1] has long been a leader in subregional cooperation for health through the Caribbean Cooperation in Health (CCH) initiative[2] and related efforts to address noncommunicable diseases (NCDs). With significant advocacy from Caribbean leaders, the first United Nations (UN) High-Level Meeting (HLM) on NCDs was convened in 2011 and its Political Declaration *(1)* led to the WHO Global Action Plan for the Prevention and Control of NCDs, 2013-2020 *(2)* and the PAHO regional Plan of Action for the Prevention and Control of NCDs in the Americas, 2013-2019 *(3)*. The 2015 United Nations 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs), specifically included an NCD target in SDG 3, the "health" goal *(4)*.

Many of the factors contributing to the occurrence and impact of NCDs, their risk factors, and their complications, are outside the purview of national ministries of health and subnational health authorities, as emphasized in the frameworks above and the social determinants of health (SDH) *(5)*.[3] The frameworks provide recommendations for, among other actions, the development, implementation, monitoring, and evaluation of national NCD multisectoral action plans or strategies, taking into account the national context and priorities. These plans and strategies are seen as essential enablers of efficient and effective NCD prevention and control, especially in resource-limited settings where prioritization and careful selection of interventions for greatest impact are critical. The successful implementation of NCD MAPs will contribute significantly to the achievement of indicators outlined in the WHO NCD Global Monitoring Framework (GMF) *(6)* and the WHO NCD Progress Monitor *(7)*.

This qualitative analysis provides an overview of the national NCD multisectoral action plans or strategic plans (hereafter referred to as NCD MAPs) of nine Caribbean countries: Antigua and Barbuda (ATG), Barbados (BRB), Belize (BLZ), Grenada (GRD), Guyana (GUY), Jamaica (JAM), St. Kitts and Nevis (KNA), Suriname (SUR), and Trinidad and Tobago (TTO). The report summarizes the methodology and findings, offers brief discussions, identifies successes, good practices, challenges, and lessons learned, and makes recommendations aimed at enhancing national strategic interventions to reduce the increasing burden of NCDs. It seeks to recognize and applaud the efforts of Caribbean countries to address NCD prevention and control in a systematic way and contribute to strengthened initiatives and partnerships in this critical endeavor.

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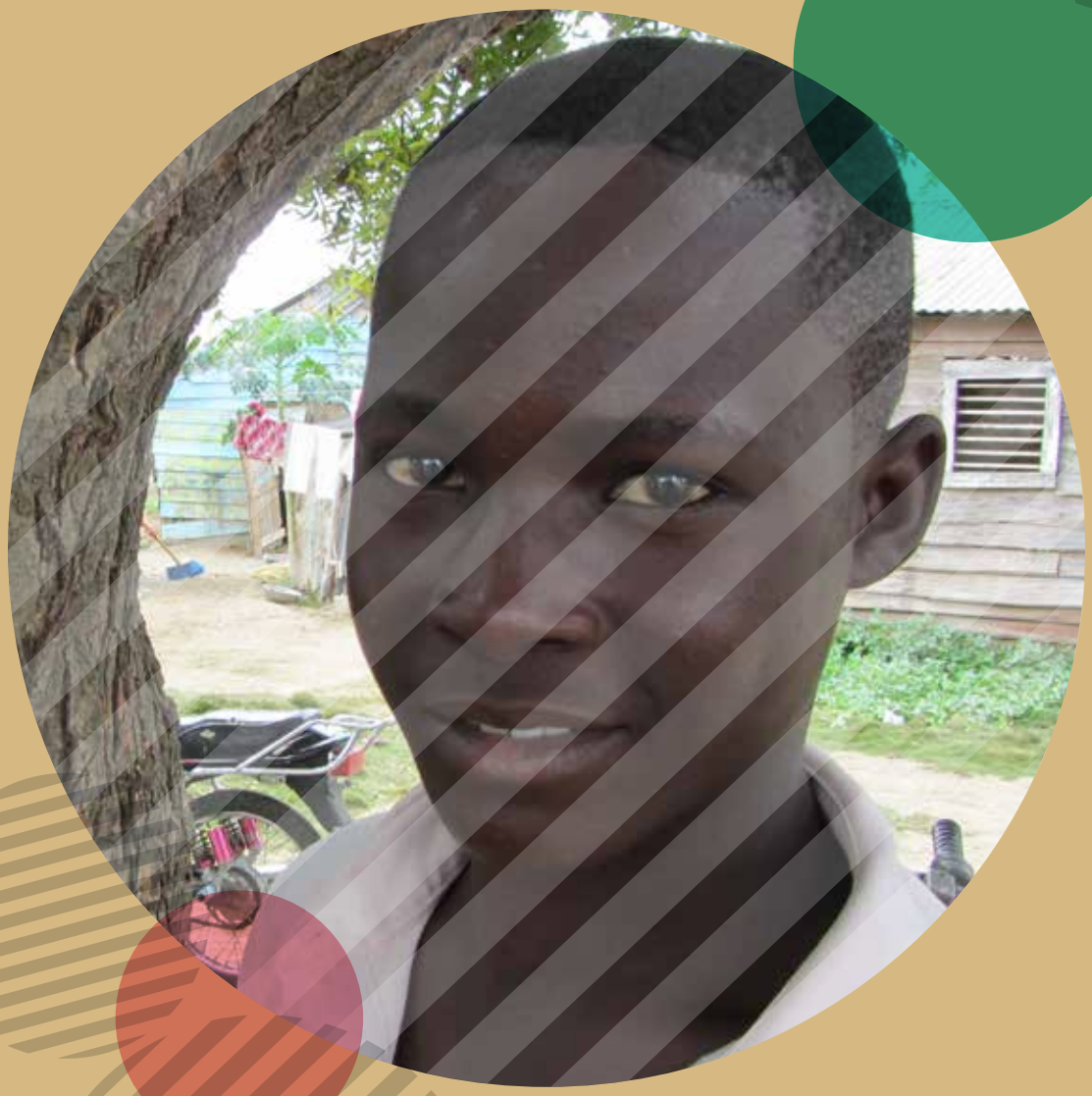
1 In this context, the Caribbean refers to the 15 Members and 5 Associate Members of the Caribbean Community. See www.caricom.org.

2 Information on the CCH is at http://bit.ly/2zF1iKH and http://bit.ly/2xZ30FM.

3 WHO defines the social determinants of health as the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life.



2. Background

Burden of NCDs

Globally, there has been an epidemiological transition from communicable diseases to NCDs as the major causes of death and illness *(8)*. In the Caribbean, as in many other regions, the four major NCDs—cardiovascular diseases (CVD), diabetes, cancer, and chronic respiratory diseases—and their four common risk factors (RFs)—tobacco use, physical inactivity, unhealthy diet, and harmful use of alcohol—are the leading causes of death and illness. NCDs are linked to seven out of ten deaths in the Caribbean subregion, which exceeds the global average of nearly 60%. Compared with other subregions[4] in the Region of the Americas, people in the Caribbean have the highest probability of dying prematurely from NCDs *(9)*.

NCDs are costly, and have a direct impact on economies, health systems, households, and individuals, causing decreased productivity due to absenteeism, disability, reduced functionality, and fewer years of worker output. NCDs systematically undermine both the capital and labor pillars of income, as, respectively, they need to be managed for significantly longer periods than other diseases, and a significant portion of the NCD burden is seen among the working-age population *(10)*. Expressed as a percentage of gross domestic product (GDP), in 2001 the total cost of diabetes ranged from 0.5% in The Bahamas to 5.2% in Trinidad and Tobago, while the total cost of hypertension ranged from 0.9% of GDP in The Bahamas to 3.5% of GDP in Barbados *(10)*.

More recently, PAHO, in collaboration with Harvard University, estimated that NCDs and mental health conditions will lead to a US$ 17 billion loss in Jamaica, equivalent to an annual reduction of 3.9% of GDP over the 15-year period 2015 to 2030 *(11)*. The economic burden posed by NCDs is particularly challenging for Small Island Developing States, a classification that applies to many CARICOM Member Countries. In CARICOM, economic growth was barely 1% in 2015 and was likely to contract in 2016, according to the Caribbean Development Bank *(12)*. NCDs have the potential to reverse the developmental and economic gains in the Caribbean, while the rising costs of health services associated with NCDs threaten the achievement of universal access to health and universal health coverage in the subregion.

Mandates to address NCDs

The social determinants of health *(5)* and health inequities (differences in health status that are avoidable, unjust, and unfair) strongly influence the occurrence and impact of NCDs. These disorders occur more often among the poor, who tend to have greater exposure to risk factors, lower health literacy, and less access to preventive and curative services. Given the realities of the SDH, a comprehensive response to NCDs should involve multisectoral, whole-of-government (WoG), whole-of-society (WoS), and health-in-all-policies (HiAP) approaches, comprising actions by health and non-health sectors in government, civil society, and the private sector.

[4] The Program Budget Policy of the Pan American Health Organization (PAHO) (CSP28/7) states that the Organization's subregional technical cooperation programs "encompass all or some countries belonging to one of the legally established intergovernmental integration mechanisms: the Caribbean Community (CARICOM), the Southern Cone Common Market (MERCOSUR), the Central American Integration System (SICA), the Andean Community of Nations (CAN), or the North American Free Trade Agreement (NAFTA), as well as others such as the Amazon Cooperation Treaty Organization (ACTO) and the Union of South American Nations (UNASUR)."

In order to strengthen implementation of the WHO NCD Global Action Plan (GAP) 2013-2020 *(2)*, WHO Member States endorsed four time-bound commitments to address NCDs as part of the Outcome Document *(13)* of the 2014 High-Level Meeting of the General Assembly, which reviewed progress on NCDs. Progress on the commitments will be assessed at the Third United Nations General Assembly on NCDs in 2018, and one of the ten indicators in the WHO NCD Progress Monitor *(7)* is "Member States that have an operational multisectoral national strategy or action plan that integrates the major NCDs and their shared risk factors."

Since its inception in 1984, the CARICOM health agenda, the Caribbean Cooperation in Health (CCH), has included NCDs as a priority for collective action by CARICOM Member Countries. The third iteration, CCH III, ended in 2015, and the fourth phase, CCH IV 2016-2025, is now in force.[5] Other mandates include:

- The 2001 Nassau Declaration by CARICOM Heads of Government, which recognized NCDs, HIV/AIDS, and mental health as priorities for cooperation in the subregion *(14)*.
- The 2005 report of the Caribbean Commission on Health and Development *(15)*, which noted that NCDs constituted a major disease threat in the subregion, and although they "can all be treated once they occur and the schemes for this are all being applied to a greater or lesser degree… the astronomical costs of these disorders speak to the need for primary prevention."
- The 2007 first-in-the-world CARICOM Heads of Government NCD Summit, which resulted in the Port of Spain Declaration: Uniting to Stop the Epidemic of NCDs *(16)*. The Declaration includes 14 statements from the Heads of Government regarding their collective intent and recommendations to address NCDs in the subregion.
- The Strategic Plan of Action for the Prevention and Control of Chronic Noncommunicable Diseases in Countries of the Caribbean Community 2011-2015, produced through a CARICOM-PAHO collaborative effort, which provides a road map for action and resource mobilization at both the subregional and country levels *(17)*. The CARICOM NCD Strategic Plan of Action made recommendations for country plans, advising that they be adopted or adapted according to national priorities.

At subregional level, there has been annual monitoring of CARICOM countries' implementation of the measures included in the Port of Spain Declaration (POSD), using a color-coded grid to assess their progress in each sphere. In 2016, the Port of Spain Declaration Evaluation Research Group undertook an evaluation of the POSD on behalf of PAHO/WHO and CARICOM, and found, among other issues, that *(18)*:

- NCDs need to be given a higher priority;
- There are widely differing levels of implementation of POSD mandates, related to country size, resources, and burden of NCDs;
- The WoS and WoG responses required for NCDs need strengthening;
- Indicators with the lowest levels of implementation concern diet, schools, and communications;
- Indicators with clear guidance for action and support from regional or international organizations have the highest levels of implementation; PAHO was identified as a particularly valuable resource.

One recommendation of the POSD evaluation *(18)* was to "further develop and support national leadership for multisectoral action on NCDs," which is consistent with global and regional mandates and recommendations.

[4] See article "Advancing the Caribbean Cooperation in Health (CCH)" at http://bit.ly/2f4b3K5.

Tools for NCD MAP development

In order to facilitate countries' work, WHO has provided the NCD MAP Tool *(19)*, an interactive, web-based tool to assist in the development of NCD MAPs, and has implemented a periodic NCD Country Capacity Survey *(20)* that includes a module on the status of NCD- and RF-relevant policies, strategies, and action plans. The NCD MAP Tool includes a list of several other WHO resources that are available for use by Member States in addressing this priority issue, including the NCD GMF *(6)*. PAHO also has technical resources available in the annexes of its Regional NCD Plan of Action (PoA) *(3)*.

As highlighted in the WHO NCD MAP Tool *(19)*, a well-developed national NCD plan can:

- Enable policymakers to know in detail what will be achieved in the short-, medium- and long-term;
- Improve coordination, organization, delivery, and quality of NCD prevention and control services and programs, and facilitate the engagement and collaboration of key players;
- Better define the key areas and strategies for action, including targets and indicators;
- Answer the questions of "what," "by whom," "when," "how," and "how much" regarding planned actions;
- Identify roles and responsibilities of stakeholders;
- Identify and allocate resources; and
- Lay the foundations for monitoring and evaluation.

Countries in the assessment

The nine countries included in the assessment indicated, through the WHO NCD Country Capacity Survey *(20)*, the availability of operational NCD MAPs. The countries are all independent CARICOM Member Countries, varying in size from Barbados, 430 square kilometers (166 square miles) to Jamaica, 10,830 square kilometers (4,182 square miles) to Guyana, 196,850 square kilometers (76,004 square miles).[6] Guyana and Suriname are in the northeastern part of South America with coastlines on the Caribbean Sea and English and Dutch, respectively, as their primary languages, while the other countries are English-speaking island states surrounded by the Caribbean Sea, with populations that range from 100,960 in Antigua and Barbuda to 285,000 in Barbados, and 2,881,360 in Jamaica.[7]

[6] Source: World Bank. See https://data.worldbank.org/indicator/AG.LND.TOTL.K2.
[7] Source: World Bank. See https://data.worldbank.org/indicator/SP.POP.TOTL.

3. Methodology

The bulk of the analysis was guided by the five core components defined in the WHO NCD MAP Tool *(19)*:

1. Comprehensive assessment of the situation
2. Stakeholder engagement and multisectoral governance mechanisms
3. Formulation of a national NCD MAP
4. Validation and implementation of a national NCD MAP, and
5. Monitoring and evaluation.

The methodology comprised:

- **Development and completion of tools and instruments** to facilitate the process and analysis. A tool for the desk review was developed to assess the five core components and the factors leading to the development of the NCD MAP: the antecedents or drivers. Separate tools were used to assess inclusion of specific GMF and other framework targets and indicators, and inclusion of WHO "Best Buys," the policy options for NCD prevention and control that have been found to be cost-effective, defined in Appendix 3 of the WHO NCD GAP *(2)*.[8]

- **Selection of variables for analysis.** In addition to the several global, regional, and subregional frameworks related to NCDs and their risk factors, there are numerous others resulting from academic research by various institutions in the Caribbean and in other subregions and regions. However, in alignment with the most common intergovernmental organization membership of the countries under consideration, the main variables considered in this assessment are culled from the following:
  - United Nations SDGs and their targets;
  - WHO GMF with its 9 voluntary targets and 25 indicators;
  - Fourteen WHO "Best Buys" for NCD prevention and control;
  - WHO NCD Progress Monitor 2015;
  - PAHO NCD Plan of Action 2013-2019, with its 4 strategic lines of action, 12 strategic objectives, and 30 indicators, most of which are aligned with those in the WHO GMF; and
  - CARICOM POSD.

- **Desk review** of NCD MAPs from the nine countries, which are all PAHO and WHO Member States, that they reported as being operational, or close to operational. Six countries (BRB, BLZ, GUY, JAM, KNA, and SUR) were selected based on the 2015 WHO NCD Country Capacity Survey *(20)*. The information was updated through formal communications with the NCD focal points at PAHO/WHO country offices in the Caribbean, and, as a result, TTO was included. ATG and GRD were included based on the 2017 Country Capacity Survey. All countries completed the validation process defined by WHO for NCD policies, strategies, or action plans, which involved submitting a copy of the document to the WHO web-based public repository of NCD-related documents, in support of their responses. Eight of the MAPs were accessed through the WHO Global

[8] Resolution WHA70.11 (http://bit.ly/2v5ylD3) adopted at the 70th World Health Assembly in May 2017 approved updates to Appendix 3, based on evolving scientific evidence and lessons learned, to adjust and expand the "Best Buys." See: 1) WHO. *Preparation for the third High-level Meeting of the General Assembly on the prevention and control of NCDs, to be held in 2018 – Report by the Director-General.* Document A70/21, Annex 1, 18 May 2017, available at http://apps.who.int/gb/ebwha/pdf_files/WHA70/A70_27-en.pdf and 2) WHO. 'Best Buys' and other recommended policy interventions for the prevention and control of NCDs: Updated (2017) Appendix 3 of the Global Action Plan for the Prevention and Control of NCDs 2013-2020, available at http://bit.ly/2hudGFt. **This report of the qualitative analysis of NCD MAPs focuses on the original 14 "Best Buys."**

NCD Document Repository *(21)*, while one (TTO) was made available by the Ministry of Health of that country. The desk review was completed using a matrix based on the components of the WHO NCD MAP Tool, supplemented by elements of the International Health Partnership (IHP+) Joint Assessment of National Strategies (JANS) tool *(22)* as well as knowledge of, and experiences in, the subregion. For greater clarity, validation and implementation of the NCD MAP were considered separately, resulting in seven major components for the analysis. **Annex I** contains the desk review tool.

- **Online searches** using the Google search engine and official government webpages to locate the NCD MAPs online and access information to complement the desk review and country visits.
- **Visits** to three of the countries: BRB, GUY, and SUR. These countries were selected on the basis of geographical size (small/large), structure for implementing the MAP (well established/being established), and level of success, in order to facilitate comparison and identify lessons to be learned. The country visits, conducted over the period March to May 2017, were designed to complement the desk reviews of the MAPs of the selected countries, based on information gleaned from interviews with key informants. The informants included, as available, representatives from government health and non-health sectors, civil society, and the private sector. **Annex II** contains the generic interview guide, which was adapted as appropriate to the key informants met with during the country visits. **Annex III** contains the lists of persons met with in the respective countries.

4. Limitations and challenges of the analysis

The limitations and challenges of the qualitative analysis are discussed in the following.

4.1 Desk review

- Dependence on subjective assessment by countries of the extent to which the NCD MAP is guiding national (and subnational) actions on NCD prevention and control, as per the WHO Country Capacity Survey.
- Absence of a common format for the NCD MAPs, with differences in the content of various sections with the same or similar titles, making comparisons difficult.
- Variations in the phrasing and definition of elements in the logical framework (LF) matrices that summarized the NCD MAPs, resulting in occasional challenges in mapping those elements to the targets and indicators of the WHO GMF, and in identifying the inclusion of WHO "Best Buys." This led to subjective evaluation of the extent to which the objectives, targets, and indicators, as written, captured the essence of the WHO GMF targets and indicators, and the WHO "Best Buys."

4.2 Country visits

- Relatively high turnover of health personnel in two of the countries, with resulting limited knowledge of the NCD MAP, its status, and associated processes by persons currently in post.
- Limited availability of some key stakeholders to participate in in-country meetings, resulting in less-than-optimal information being provided on the NCD MAP, especially from non-health sectors. In one country, only MoH staff and self-selected members of the National NCD Commission (NNCDC) were interviewed.
- Non-inclusion of representatives from the private sector and academia in one country, resulting in the absence of important perspectives on the NCD MAP and the whole-of-society approach to NCD prevention and control.

5. Findings

The results of the qualitative analysis are presented under the following headings:

1. General aspects of the NCD MAPs
2. Antecedents
3. Comprehensive assessment of the situation
4. Stakeholder engagement and multisectoral governance mechanisms
5. Formulation of the NCD MAPs
6. Validation of the NCD MAPs
7. Implementation of the NCD MAPs
8. Monitoring and evaluation.

5.1 General aspects of the NCD MAPs

Table 1 summarizes the MAPs and key sections included.

- The MAPs are all published by the respective Ministries of Health and all but three include the five core components suggested in the WHO NCD MAP Tool; those three MAPs do not include a section on monitoring and evaluation.

- Seven MAPs are of four to five years' duration (ATG, BRB, GRD, JAM, KNA, SUR, and TTO), while GUY has a duration of seven years, and BLZ ten years. Two MAPs end in 2017 (GRD and KNA); one in 2018 (JAM); two in 2019 (ATG and BRB), two in 2020 (GUY and SUR), one in 2021 (TTO), and one in 2023 (BLZ).

- In all of the NCD MAPs, except GRD and JAM, the political authority and weight given to the document is immediately evident through the inclusion of forewords by the respective Ministers of Health.

- Though all MAPs except ATG, GRD and KNA are available online, the BLZ and JAM NCD MAPs are the only ones found on the respective MoH websites. There are online reports of the launch of three of the MAPs:
  - BLZ in May 2014, at http://bit.ly/2x2AGlv, where the BLZ NCD MAP can also be downloaded.
  - GUY in December 2013, at http://bit.ly/2wHU2bU, the PAHO/WHO GUY webpage. The webpage also has a link to Health Vision 2020: A National Health Strategy for Guyana, 2013-2020, which was launched in January 2014.
  - TTO, in May 2017, at http://bit.ly/2yctPnl.

- Some NCD MAPs include an executive summary (ATG, BRB, GRD, JAM, and SUR), and specific sections on the methodology for development of the MAP (JAM); the relationship or linkages to existing declarations, strategies and initiatives (BRB, GRD, SUR); and description of the national health system (BLZ, GRD, JAM, and TTO).

Table 1. Key sections/information in national NCD MAPs in selected Caribbean countries
✓ = Included X = Not included

Country	Title	Period	Online	Situation analysis	Stakeholder identification/ engagement	Logical framework matrices	M&E plan/ frame-work	Estimated implementation cost	Number of references
ATG	Antigua and Barbuda Noncommunicable Diseases Policy and Action Plan	2015-19	X	✓	✓	✓	✓	✓	13
BRB	Barbados Strategic Plan for the Prevention and Control of Noncommunicable Diseases[a]	2015-19	http://bit.ly/2h7QiKD	✓	✓	✓	X	✓	10
BLZ	Belize National Plan of Action for the Prevention and Control of Noncommunicable Diseases	2013-23	http://bit.ly/2jwmtYC	✓[b]	✓	✓	✓	✓	24
GRD	National Chronic Noncommunicable Disease Policy and Multisectoral Action Plan for Grenada[c]	2013-17	X	✓[d]	✓	✓	✓	X	39
GUY	Guyana Strategic Plan for the Integrated Prevention and Control of Chronic Noncommunicable Diseases and Their Risk Factors	2013-20	http://bit.ly/2vF5fx1	✓	✓	✓	X	✓	33
JAM	National Strategic and Action Plan for the Prevention and Control of Noncommunicable Diseases in Jamaica	2013-18	http://bit.ly/2eeyvkq	✓	✓	✓	✓	X	82

[a] In BRB, there is also a *National Action Plan for the Prevention and Control of Noncommunicable Diseases* (NCDs) 2015-2019, developed by the MoH to guide implementation of the Strategic Plan.
[b] In the BLZ Plan of Action, the situation analysis is provided in "Background."
[c] Sections of the GRD Policy and Action Plan are incomplete, including the Foreword, Acknowledgements, and List of Participants/National Stakeholders for Validation on CNCD.
[d] The situation analysis is presented in sections titled "Background," "Burden of CNCDs in Grenada," "CNCD Risk and Protective Factors," and "CNCDs and the Health System Response in Grenada," which are all included in the Introduction.

Country	Title	Period	Online	Situation analysis	Stakeholder identification/ engagement	Logical framework matrices	M&E plan/ frame-work	Estimated implementation cost	Number of references
KNA	National Policy and Plan for Noncommunicable Diseases Prevention and Control – St. Kitts and Nevis	2013-17	X	✓	✓	✓	X	X	12
SUR	National Action Plan for the Prevention and Control of Noncommunicable Diseases[e]	2015-20	http://bit.ly/2qJAZi6	✓	✓	✓	✓	✓	48
TTO	National Strategic Plan for the Prevention and Control of Noncommunicable Diseases: Trinidad and Tobago	2017-21	http://www.health.gov.tt/ncd/	✓	✓	✓	✓	X	43

[e] The SUR Action Plan includes the *Monitoring and Evaluation Plan for the National Action Plan for the Prevention and Control of Noncommunicable Diseases (2012-2016) and the Workplan 2015-2016.*

5.2 Antecedents

Table 2 summarizes factors cited as leading to the development of the NCD MAP.

- **Response to global, regional, and subregional agreements and frameworks.** All countries cited at least two international frameworks as influencing the development of the NCD MAP. These frameworks include, but are not limited to, the United Nations High-Level Meeting (UNHLM) Political Declaration on NCDs; WHO Framework Convention on Tobacco Control (FCTC), mentioned by all countries except TTO; the MPOWER[9] measures for tobacco control (BLZ, GUY); WHO NCD GAP; PAHO NCD PoA; the Caribbean Charter for Health Promotion (23);[10] CCH III; and POSD. In addition:
  - BLZ, a member of the Central American Integration System (SICA) as well as a CARICOM Member Country, responds to a Declaration on NCDs from the Council of Ministers of Health of Central America and the Dominican Republic, and to a resolution by the Union of South American Nations (UNASUR) to strengthen intersectoral policies on NCDs.
  - KNA recognizes the 2008 Caribbean Civil Society Bridgetown Declaration *(17, Appendix III)* and the 2008 Caribbean Private Sector Statement *(17, Appendix II)* in support of the POSD, acknowledging the WoS approach and the key role of these partners in the NCD response.
  - SUR states that support from the PAHO-facilitated CARMEN[11] network contributed to the development of the NCD MAP.
- **National epidemiological and other health data.** All countries—to greater or lesser degree—presented national data substantiating the burden of NCDs and trends in their RFs. Data sources are summarized in section 6.3.6.
- **Global, regional, and subregional data.** All countries noted that these data have led to the recognition of NCDs as a development issue, and have highlighted the cost of inaction. References from WHO, PAHO, and the Caribbean Public Health Agency (CARPHA)[12] provide relevant evidence and some plans also cite international assessments of NCD costs—see section 6.3.2.
- **Successor to previous NCD plans or to address specific aspects of national health plans and/or national development plans.** Information provided in the MAPs and online searches revealed that all countries had previous plans that included NCDs, with variation in the level of detail provided, depending on the type of plan—national development, health, or NCD:
  - ATG had a *National Business Plan for Health 2008-2010*, revealed through online search. It was developed in collaboration with PAHO and included "Control of Noncommunicable Diseases" as a priority.[13]

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9 MPOWER = Monitor tobacco use and prevention policies, Protect people from tobacco smoke, Offer help to quit tobacco use, Warn about the dangers of smoking, Enforce bans on tobacco advertising, promotion, and sponsorship, and Raise taxes on tobacco. Information on MPOWER is at http://www.who.int/tobacco/mpower/en/.

10 Interestingly, both ATG and GRD cite the 1986 Ottawa Charter for Health Promotion, rather than the 1993 Caribbean Charter for Health Promotion, as an influence.

11 Information on CARMEN is at http://www.paho.org/carmen/?page_id=10.

12 CARPHA was legally established in July 2011 and began operations in January 2013. It integrates and incorporates the functions of five disestablished CARICOM regional institutions: the Caribbean Environmental Health Institute (CEHI); the Caribbean Epidemiology Center (CAREC); the Caribbean Food and Nutrition Institute (CFNI); the Caribbean Health Research Council (CHRC); and the Caribbean Regional Drug Testing Laboratory (CRDTL). Information on CARPHA is at http://carpha.org/.

13 The Antigua and Barbuda National Business Plan for Health 2008-2010 is at http://www1.paho.org/hq/dmdocuments/2010/National_Health_Policies-Antigua_Barbuda-Business_Plan_Health_2008-10.pdf.

Table 2. Summary of antecedents for NCD MAP development

Factors influencing NCD MAP development	ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
Response to global, regional, and/or subregional agreements and frameworks	✓	✓	✓	✓	✓	✓	✓	✓	✓
Global, regional, and subregional data	✓	✓	✓	✓	✓	✓	✓	✓	✓
National epidemiological and other health data	✓	✓	✓	✓	✓	✓	✓	✓	✓
Successor to previous NCD plans or to address specific aspects of national health and/or development plans	✓	✓	✓	✓	✓	✓	✓	✓	✓
Opportune availability of resources	-	-	-	-	-	✓	-	✓	✓

- BRB:
  - Had a plan for the NNCDC 2009-2012, and the *Barbados Strategic Plan for Health 2002-2012*[14] had NCDs as one of ten strategic directions. However, the focus was on clinical management of NCDs, while the current NCD MAP also focuses on risk factors.
  - Developed a draft *National Strategic Plan of Barbados 2005-2025*: *Global Excellence, Barbadian Traditions*[15] under the previous political administration. The Strategic Plan was prepared by the Research and Planning Unit, Economic Affairs Division, Ministry of Finance and Economic Affairs, overseen by the then-Prime Minister, who was also the Minister of Finance and Economic Affairs. Thus, the development plan had the highest political authority. It highlighted HIV/AIDS in its objective "To improve the health of all Barbadians" under the Goal of "Building Social Capital," but also had a target addressing "substantial reduction in communicable and noncommunicable diseases by 2025."
  - Developed the *Barbados Growth and Development Strategy 2013-2020*[16] under the current political administration. The Strategy was again prepared by the Economic Affairs Division of the Ministry of Finance and Economic Affairs, in collaboration with the Finance Division, Central Bank of Barbados; government ministries and select departments; and in consultation with the private sector association and labor representatives. The Strategy includes "Health care" under "Human and Social Development," specifically mentions challenges due to "lifestyle-related diseases," and has targets related to NCDs and RFs.
- BLZ has a *National Health Strategic Plan 2014-2024*,[17] which was launched in May 2014 at the same time as the NCD MAP; the Strategic Plan includes NCDs. There is also a national development plan, *Horizon*

[14] The Barbados Strategic Plan for Health 2002-2012 is at http://www1.paho.org/hq/dmdocuments/2010/National_Health_Policies-Barbados-Strategic_Plan_Health_2002.pdf.

[15] The draft National Strategic Plan of Barbados 2005-2025 is at http://www.sice.oas.org/ctyindex/BRB/Plan2005-2025.pdf.

[16] The Barbados Growth and Development Strategy 2013-2020 is at http://www.economicaffairs.gov.bb/archive-detail.php?id=327.

[17] The Belize National Health Strategic Plan 2014-2024 is http://www.health.gov.bz/www/events/events/801-ministry-of-health-officially-launches-health-sector-strategic-plan-and-ncds-plan.

2030,[18] which includes a section on health, and specifically mentions NCDs, noting "Vigorously pursue/implement programs for the prevention and management of chronic, noncommunicable diseases" as one of the strategies to achieve universal access to health care; promotion of healthy lifestyles; and accountability for delivery of health services.

- GRD developed a *National Strategic Development Plan in 2007*[19] that included a goal on Social Capital, with Health and Well-being as an area of focus. Strategies in that area included implementation of the National Health Strategic Plan; promoting healthy lifestyles among the population; and promoting the mental health and well-being of the population. The GRD *National Strategic Plan for Health 2008-2012: Health for Economic Growth and Human Development (draft)* is mentioned in a reference in the NCD MAP; however, an online search revealed only the National Strategic Plan for Health 2007-2011 (draft), with the same theme.[20]
- GUY's Health Vision 2020: *A National Health Strategy for Guyana 2013-2020*[21] was published in December 2013 and specifically addresses NCDs, food security and nutrition, and health promotion. However, GUY's national development plan, the 2010 Low Carbon Development Strategy, and its March 2013 update, focus on climate change resilience and do not specifically mention NCDs or health.
- *JAM has a Ministry of Health Strategic Business Plan 2015-2018*[22] that includes NCDs and *Vision 2030*,[23] the national development plan, includes a national outcome "A Healthy and Stable Population," which mentions implementation of the health promotion approach and encouragement of healthy lifestyles. *Vision 2030* specifically notes NCDs as the main causes of death and illness.
- KNA had a *National Health Plan 2008-2012*, as reported in an article found at http://vonradio.com/news_detail.asp?PressID=1754. The Plan's seven priority areas included Chronic Noncommunicable Diseases (CNCDs), Nutrition and Physical Activity, and Mental Health and Substance Abuse.
- SUR has a *National Health Sector Plan 2011-2018*,[24] with NCDs as the first priority.
- TTO had a *Ministry of Health Strategic Plan, Fiscal Years 2012-2016*[25] with core strategic priorities that included prevention, care, and treatment of chronic NCDs, and mental health and wellness. There is a draft *National Development Strategy 2016-2030: Many Hearts, Many Voices, One Vision (Vision 2030)*[26] dated 29 August 2016, which recognizes the need to promote healthy lifestyles and reduce NCDs.

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18 Belize Horizon 2030 is at http://www.cdn.gov.bz/belize.gov.bz/images/documents/NATIONAL%20DEVELOPMENT%20FRAMEWORK%202010-2030%20USER%20FRIENDLY%20VERSION.pdf.

19 See https://www.ilo.org/dyn/youthpol/en/equest.fileutils.dochandle?p_uploaded_file_id=577.

20 See https://www.healthresearchweb.org/files/National_Health_Policies-Grenada-National_Strategy_Plan_Health_2007-11.pdf.

21 Health Vision 2020: A National Health Strategy for Guyana, 2013-2020, is at http://www.paho.org/guy/index.php?option=com_docman&view=download&category_slug=health-systems-and-services&alias=123-guy-healthvision-2013-2020&Itemid=291.

22 The Jamaica Ministry of Health Strategic Business Plan 2015-2018 is at http://moh.gov.jm/wp-content/uploads/2015/07/Ministry-of-Healths-Strategic-Business-Plan-2015-2018.pdf.

23 Jamaica's Vision 2030 is at http://www.vision2030.gov.jm/.

24 The Suriname National Health Sector Plan 2011-2018 is at http://www.nationalplanningcycles.org/sites/default/files/country_docs/Suriname/nhsp_2011_2018.pdf.

25 The TTO MoH Strategic Plan, Fiscal Years 2012-2016 is at http://www.health.gov.tt/downloads/DownloadDetails.aspx?id=387.

26 The draft Trinidad & Tobago National Development Strategy 2016-2030 is at http://www.social.gov.tt/wp-content/uploads/2017/01/V2030-as-at-August-29th-2016.pdf.

- **Opportune availability of resources**
  - JAM recognizes a grant from the Inter-American Development Bank (IDB) for the Caribbean Regional NCD Surveillance System Project,[27] administered by the University of the West Indies (UWI), St. Augustine, TTO, as an important enabling factor for the development of the NCD MAP.
  - SUR indicates that after the 2011 UNHLM, the Government of Suriname assigned a special budget to the MoH for NCD prevention and control. The development of the NCD MAP was one of the first priorities, to enable a coordinated and integrated approach.
  - TTO benefits from a US$ 48 million loan from the IDB specifically for the NCD Strategic Plan.

Countries spanning subregional integration mechanisms

NCD prevention and control is recognized as a priority for action not only by the main Caribbean subregional integration mechanism, CARICOM, but also by subregional integration mechanisms in Central and South America. Countries that are members of more than one subregional integration mechanism can address NCD prevention and control using the respective subregional frameworks and agreements, and may be able to access resources from more than one of the subregions. These countries can also facilitate sharing of experiences and commonalities among the subregional mechanisms to which they belong. **Belize** is a member of both **CARICOM** and the **Central American Integration System (SICA**), while **Guyana** and **Suriname** are members of **CARICOM**, the **Union of South American Nations (UNASUR)**,[28] and the **Amazon Cooperation Treaty Organization (ACTO)**.[29]

The Council of Ministers of Health of Central America (COMISCA), comprising Ministers or Secretaries of Health of the Member Countries of SICA, approved the Health Plan for Central America and the Dominican Republic 2010-2015, which included NCDs as a priority area for action.[30]

The South American Council on Health of UNASUR (UNASUR-Health) also approved a five-year plan 2010-2015, with the following projects: South American network of surveillance and response; development of universal health systems; universal access to medication; health promotion and action on determinants of health; and development and management of human resources in health.[31] In 2014, the UNASUR 8th Ordinary Meeting in Paramaribo, Suriname, heard presentations on NCDs and social determinants, with special emphasis on obesity and the food and beverages industry, as well as regulatory measures and good practices for that industry.[32]

ACTO's strategic cooperation agenda,[33] approved by the Ministers of Foreign Affairs in 2010, includes the topic Regional Health Management, with priority areas comprising coordination with other initiatives; epidemiological surveillance; environmental health; health determinants in the Amazon; human resources policy for the Amazon; momentum, strengthening, and consolidation of research in the Amazon; and financing of the Health Agenda. ACTO participates in the Coordinating Committee of UNASUR-Health.

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27 See http://www.southsouth.org/uploads/IDB_-_Jointly_surveilling_diseases_in_the_Caribbean.pdf and https://sta.uwi.edu/uwitoday/archive/may_2010/article5.asp for information on the three-year project, which began its pilot phase in 2010 in seven countries, including Jamaica.

28 Information on UNASUR is at https://www.unasursg.org/en.

29 Information on ACTO is at http://otca.info/portal/index.php?p=index.

30 See Health Plan for Central America and the Dominican Republic 2010-2015 at http://www.ccghr.ca/wp-content/uploads/2014/02/PAHO_Health_Plan_CA-DR.pdf.

31 Information on the South American Council on Health of UNASUR is at http://www.unasursg.org/en/node/340.

32 For the report of the UNASUR 8th Ordinary Meeting, see http://www.isags-unasur.org/uploads/biblioteca/1/bb[501]ling[3]anx[1529].pdf.

33 The ACTO Strategic Cooperation Agenda is at http://otca.info/portal/admin/_upload/apresentacao/AECA_eng.pdf.

5.3 Comprehensive assessment of the situation

Table 3 summarizes the main components of the situation analysis included in the NCD MAPs, based on the WHO NCD MAP Tool.[34]

5.3.1 General

- The components of the situation analyses vary widely, as does the content under the same or similar headings across the MAPs.
- BRB, BLZ, GRD, GUY, JAM, SUR, and TTO present quite detailed situation analyses, including the response to NCDs; they mention past and current interventions, guidelines, policies, and programs. However, they have limited information on national trends.
- No NCD MAP provides a synthesis of the situation analysis findings that summarizes the priorities to be addressed and points to the strategic approaches to be used.
- Only ATG includes a formal stakeholder analysis that outlines key stakeholders' interest, capacity (human, financial, and technical resources), influence, motivation, and possible actions. Other MAPs list stakeholders, and TTO has an appendix titled "Stakeholder Analysis," but although these sections include government and non-government stakeholders, they do not present an assessment of their relative importance and influence, as is usually done in a stakeholder analysis to help determine the approaches to be taken to the stakeholders.[35]

Resource identification, allocation, and mobilization for NCD MAPs

Jamaica, Suriname, and **Trinidad and Tobago** provided great impetus to the development of their NCD MAPs by identifying, allocating, or mobilizing resources for NCD prevention and control from various sources, including the national budget and the IDB. When NCDs are recognized as the threat to national development that they are, international financing institutions and other development agencies may be willing to fund, and otherwise contribute to, the prevention and control of these diseases and their risk factors, including addressing the social determinants of health.

Good practice in stakeholder analysis

Antigua and Barbuda's MAP has a very good stakeholder analysis that summarizes the key government, civil society, and private sector entities and organizations involved in NCD prevention and control; their institutional interest, capacity, political influence, motivation to produce change, and possible actions. The analysis facilitates identification of stakeholders who can help in the achievement of objectives, how, and to what degree, as well as those who may actively or passively construct barriers to success. Strategies can then be developed to advocate with and persuade the latter, and collaborate and cooperate with the former.

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[34] The WHO NCD MAP Tool suggests the following components of the situation analysis: **1.Introduction. 2. Sociodemographic and economic information**, including 2.1 Population and health indicators; 2.2 Economic and health expenditure; 2.3 Social determinants of health, including income, education, and gender. **3. Magnitude and trends of NCDs and risk factors**, including 3.1 Mortality; 3.2 Morbidity; 3.3. Risk and protective factors. **4. Existing strategies, policies, plans, and programs**, including 4.1 Interventions, experiences, and best practices; 4.2 National NCD strategies, policies, programs, and plans; 4.3 Capacity of the health care/health system for NCD prevention and control; 4.4 Responses of non-health sectors; **5. Synthesis of findings**.

[35] See Stakeholder Analysis guidance in the section on Stakeholder Engagement, WHO NCD MAP Tool. http://apps.who.int/ncd-multisectoral-plantool/home.html and information on stakeholder analysis from MindTools at https://www.mindtools.com/pages/article/newPPM_07.htm.

Table 3. Summary of situation analysis components

Key components of situation analysis	ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
Sociodemographic information	✓	-	-	✓	-	✓	-	-	✓
Economic burden of NCDs based on local data	-	✓	✓	-	✓	✓	✓	-	✓
Magnitude and trends of NCDs and risk factors	✓	✓	✓	✓	✓	✓	✓	✓	✓
Existing strategies, policies, plans, and programs	✓	✓	✓	✓	✓	✓	✓	✓	✓
Responses to NCDs									
Health systems	✓	✓	-	✓	✓	✓	-	✓	✓
Non-health government sectors	-	✓	-	-	✓	-	-	-	-
Civil society	-	✓	✓	-	✓	-	-	-	-
Private sector	-	✓	-	-	✓	-	-	-	-
Strengths, weaknesses, opportunities, and threats analysis	-	✓	-	-	-	-	-	-	✓
Synthesis of situation analysis	-	-	-	-	-	-	-	-	-
Stakeholder analysis	✓	-	-	-	-	-	-	-	-

Good practice in introducing NCDs

Jamaica's MAP includes a section "Overview of noncommunicable diseases: Terminology, definitions, and mechanisms," which provides summary information on the nature, types, and characteristics of NCDs, focusing on cardiovascular diseases, cancer, diabetes, chronic respiratory diseases, and neuropsychological disorders. The section also includes a graphic[36] showing the "causes and pathway" to major NCDs, which lists underlying socioeconomic, cultural, political, and environmental factors; common modifiable and non-modifiable risk factors; intermediate risk factors; and the major NCDs. This section provides non-health stakeholders with useful information, and the inclusion of the underlying factors gives relevance to the participation of those stakeholders in the development, implementation, and monitoring of the MAP.

- Thus, none of the situation analyses can be described as truly "comprehensive," using the guidance provided in the WHO NCD MAP Tool *(19)*.

5.3.2 Sociodemographic and economic information

- Few MAPs provide significant general sociodemographic information; most go directly to the NCD situation. ATG, GRD, and JAM provide summary sociodemographic data, while TTO provides a more detailed description.

- All NCD MAPs mention the economic burden of NCDs or selected NCDs, often quoting general statements from international organizations. Some MAPs, such as BRB, cite studies of the economic burden of specific diseases such as diabetes and hypertension in Caribbean countries (8% of GDP),

[36] Source given: Modified from WHO. Preventing Chronic Disease: A Vital Investment. Geneva: WHO, 2011.

while others note that NCDs account for a significant number of hospital admissions and mention the cost of NCD medications, without quantifying the burden.

- BRB, BLZ, GUY, JAM, KNA, and TTO specify the national economic burden or aspects thereof.
  - BRB notes that NCDs are estimated to consume 65% of the budget of the Queen Elizabeth Hospital (QEH), the main tertiary care public hospital in the country, that 60% of the Barbados Drug Service (BDS) budget is consumed by pharmaceuticals used in NCD management.
  - BLZ notes the percentage of health expenditure on dialysis in 2010 (1.6%).
  - GUY cites a cost-of-illness study conducted in collaboration with PAHO that estimated the annual indirect costs of all NCDs to be 10% of GDP in 2010.
  - JAM notes a cost-of-illness study conducted in 2001 in collaboration with the World Bank, which showed an estimated cost (direct and indirect) for diabetes and hypertension of 5.9% of GDP.
  - KNA notes that approximately 2% of GDP is currently diverted from growth and development activities to cover costs of acute and chronic medical treatment and rehabilitation.
  - TTO quotes a 2016 study showing that the economic burden from diabetes, hypertension, and cancer represents approximately 5% of the current GDP.

5.3.3 Magnitude and trends of NCDs and risk factors

- All NCD MAPs include data and trends—to a greater or lesser degree—on the four main NCDs and their four main risk factors, and all include selected mortality and morbidity (or related) data.
- The most recent mortality data quoted for most countries are from 2009, which seem outdated, given that the start date for the MAPs is 2013 or later; only ATG and BLZ mention mortality data more recent than 2009. ATG reports absolute numbers of deaths for 2010 and 2012, while BLZ reports percentages of deaths and premature deaths due to NCDs in 2011. In addressing **premature mortality**, which most countries include in the goal of the MAP, only BLZ and SUR refer to years of life lost (YLL) in the situation analysis.
- Regarding morbidity, global and regional trends in NCD prevalence are mentioned more frequently than national trends; the national situation is most often addressed through mention of prevalence, and occasionally incidence, of diabetes, hypertension, and cancer. Clinic visits and hospital admissions are also used as evidence of morbidity.
- Data in most of the NCD MAPs are disaggregated only by sex and age. Despite the presence of significant proportions of at least two ethnic groups in at least three of the countries (GUY, SUR, and TTO), only one of them, SUR, presents information disaggregated by ethnicity, enabling identification of a specific ethnic group as being at high risk for CVD and diabetes. GRD does include the ethnic composition of the population in 2008, but does not disaggregate specific data by ethnicity.
- KNA presents very limited data, without disaggregation, though the NCD MAP references a 2010 analysis of the national health situation and WHO STEPwise assessment of behavioral risk factors (STEPS), Global Youth Tobacco Survey (GYTS), and Global School-based Student Health Survey (GSHS) investigations.

5.3.4 Existing strategies, policies, plans, and programs

- All MAPs refer to existing national frameworks and actions, to a greater or lesser degree.

- In reference to the NCD MAPs' alignment with disease-specific plans, BLZ indicates that an action plan for cancer is under development; JAM notes the existence of a separate plan for mental health, in keeping with its Mental Health Policy; and SUR has a National Drug Master Plan to address substance abuse, including tobacco and alcohol consumption.

- Regarding responses in **civil society**:
  - BRB notes services offered by some nongovernmental organizations (NGOs) and collaboration between the MoH and the Barbados Diabetes Foundation, an NGO, to establish the Maria Holder Diabetes Center for the Caribbean.
  - BLZ mentions MoH collaboration with NGOs such as the Diabetes Association.
  - GUY highlights the need to collaborate with civil society to address NCDs, and in-country interviews noted the Diabetes Foot Care Project, involving the MoH, Diabetes Association, and University of Toronto.

- **Private sector** responses are mentioned by only two countries:
  - BRB categorizes the media as private sector and identifies it as a "special partner within the private sector" in line with POSD recommendations.
  - GUY notes that the private sector provides a smaller (compared to public medical practitioners), but significant portion of health services, and states that "collaboration with these important partners needs to be developed and enhanced."

Selected good descriptions of national responses to NCDs

Barbados's MAP lists major NCD initiatives in 2009-2012, addressing strategic management, risk factor reduction, surveillance, and treatment.
Jamaica's MAP includes a section on the response to NCDs, under headings of policy and advocacy; unhealthy diet; tobacco use; physical activity; violence prevention; harmful use of alcohol; chronic disease surveillance and management; mental health; and other programs. The latter include national workplace wellness; national faith-based forum on promotion of healthy lifestyles; Camp-4 for obese adolescents; healthy lifestyle in schools; and Health and Family Life Education curriculum implementation.
Trinidad and Tobago's MAP includes a section on the country's response to the NCD epidemic, summarizing policies, programs, and strategies to respond to the NCD challenge, specifically addressing tobacco use, reduction in harmful use of alcohol, unhealthy diet and physical inactivity, and childhood obesity; strengthening clinical care capacity; and surveillance and research.

Selected national policies and legislation contributing to NCD prevention and control in Antigua and Barbuda

Antigua and Barbuda lists some of the national policies and legislation supporting NCD prevention and control, including the Public Health Act, 1957; Mental Treatment Act, 1957; Pharmacy Act, 2007; Aging Policy, 2012; Food and Nutrition Security Policy, 2012; Mental Health Policy, 2014; and the draft National Tobacco Control Act, 2014.

5.3.5 Health systems response to NCDs

In describing their health systems responses to NCDs, JAM, and TTO include descriptions of their decentralized national health systems, while BRB, GRD, GUY, and SUR make brief mention of their systems (GUY and SUR are also decentralized). No NCD MAP includes information on all the major components of the health system, as per the WHO health system "building blocks."[37] TTO includes civil society and the private sector as part of the health system, but does not include them in the description of the response to NCDs; GUY includes the private sector as part of the health system.[38]

- **Leadership and governance:** All countries have various NCD or NCD-related strategies, policies, and/or legislation, in particular related to tobacco as part of their ratification of the FCTC (tobacco legislation has been drafted in ATG, signed into law by the President in GUY, and enacted in BRB, JAM, SUR, and TTO). However, ATG notes several other supporting policies and legislation, including the Mental Health Policy 2014, Food and Nutrition Security Policy 2012, and Aging Policy 2012; BLZ imposes duties and exemptions on selected imports related to health; and TTO enacted the Regional Health Authorities Act 1994, which created the decentralized health system.

- **Service delivery:** BRB notes primary care services and drugs provided free of cost at polyclinics throughout the country; BLZ highlights its focus on primary health care (PHC); and KNA mentions the universal availability of free preventive services in its health system, while noting that the use of the services lags behind their availability.

- **Health workforce:** No NCD MAP details the health workforce related to NCDs.
  - BRB notes ongoing diabetes education for health professionals via the Step-by-Step program.
  - BLZ highlights the need for capacity building and the increasing attrition of nurses.
  - TTO details only the role of the County Medical Officer.

- **Health information:**
  - BRB states that it has been recognized as having a "model surveillance system."
  - BLZ notes the development and implementation of the Belize Health Information System, which is distributed in all major public health facilities and laboratories throughout the country and uses a unique patient identifier.
  - JAM notes the several risk factor surveys done over the years.
  - BLZ and JAM both mention their submission of data to the Caribbean Epidemiology Center (CAREC)[39] in, respectively, 2008 and 2010, to contribute to the Caribbean Minimum Data Set for NCDs, which was piloted in six countries through the IDB-funded Caribbean Regional NCD Surveillance System Project.[40]

- **Health financing:** ATG mentions its Medical Benefits Scheme, which offers financial assistance toward the cost of medical services and drugs for those living with NCDs; BLZ notes its National Health Insurance program, with an explicit package of PHC services and financial incentives linked to performance. GRD highlights ongoing efforts to develop a National Health Insurance scheme and the allocation, in 2010, of 20% of health

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37 The WHO health system "building blocks" are: leadership and governance; service delivery; health workforce; health information (including surveillance and research); health financing; and access to medicines, vaccines, and technology. See https://extranet.who.int/nhptool/BuildingBlock.aspx.

38 In 2015 BRB imposed a tax on sugar-sweetened beverages (SSBs) and in 2017 TTO banned the provision or sale of SSBs in and around government-funded schools.

39 CAREC was incorporated into CARPHA in 2013.

40 After the three-year project ended in 2012, the countries involved (The Bahamas, BRB, BLZ, GUY, JAM, and TTO) appear to have stopped submission of relevant data. See slide presentation on the project at http://slideplayer.com/slide/10203026/.

financing to Community Health Services, with 49% allocated to the General Hospital.

- **Medicines, vaccines, and technologies:** BRB, JAM, and TTO highlight interventions to provide NCD medications free of cost through, respectively, the BDS, the National Health Fund, and the Chronic Disease Assistance Program.

5.3.6 Data sources

- The NCD MAPs use a wide range of data sources, including WHO, PAHO, CARPHA, the MoH, and other national and subnational entities; risk factor and lifestyle surveys; and research conducted in collaboration with academic institutions and development partner organizations and agencies. These last include United Nations agencies other than WHO and PAHO, the World Bank, and the IDB.

- Sources of national information include:
  - MoH entities, such as health statistics or epidemiology units, regional health authorities (RHAs), clinics, hospitals, and drug procurement agencies.
  - National lifestyle surveys and NCD research conducted by the countries themselves, often in partnership with academia. BRB, JAM, and SUR conducted lifestyle surveys, respectively the Health of the Nation (HoTN) Survey 2011-2012; the Jamaica Health & Lifestyle Survey (JHLS) II 2007-2008[42]; and the 2001 Cardiovascular Risk Factor Survey. GRD conducted the 2009 Grenada Heart Study and JAM conducted the 2011 Jamaica Asthma and Allergies National Prevalence Study.
  - National surveys conducted in collaboration with development partners, which benefitted almost all the countries referenced in this analysis. These surveys include, but are not limited to:
    - STEPS, in collaboration with PAHO/WHO: done in BRB, 2007; GRD, 2011; GUY, 2016 (post-NCD MAP);[43] KNA, 2008; and TTO, 2011.
    - GYTS, in collaboration with PAHO/WHO and the United States Centers for Disease Control and Prevention (CDC): Done in BRB, 2007; BLZ, 2008; GUY, 2010; KNA, 2010; SUR, 2009; and TTO, 2011.[44]
    - GSHS,[45] in collaboration with PAHO/WHO: done in BRB 2011; BLZ, 2008; GRD, 2008; GUY, 2010; JAM, 2010; KNA, 2011; SUR, 2009; and TTO, 2011.
    - Central American Diabetes Initiative (CAMDI) in BLZ, which, as a member of SICA, has access to Central American NCD-related research processes and

On the road to universal access to health and universal health coverage

Health financing is an important aspect of universal access to health and universal health coverage (UAH-UHC). UAH-UHC, according to PAHO, implies that "all people and communities have access, without any kind of discrimination, to comprehensive, appropriate, and timely, quality health services determined at the national level according to needs, as well as access to safe, effective, and affordable quality medicines, while ensuring that the use of such services does not expose users to financial difficulties, especially groups in conditions of vulnerability."[41] Social protection programs, such as those in **Antigua and Barbuda** (Medical Benefits Scheme), **Belize** (National Health Insurance), and to be developed in **Grenada** (National Health Insurance), are important steps towards achieving the objectives of UAH-UHC.

[41] See http://bit.ly/2lXz9ZC.
[42] In describing trends in the JAM NCD MAP, reference is made to the JHLS I 2000-2001.
[43] At present, STEPS data are being used to finalize the Implementation Plan for remaining period of NCD MAP.
[44] The PAHO GYTS database at http://bit.ly/2ikkO5h shows GYTS in GRD in 2009, and in BLZ in 2014.
[45] The Centers for Disease Control and Prevention (CDC) GSHS database at http://bit.ly/2mvGeB6 shows GSHS in BLZ in 2011, and in SUR in 2016. The 2011 TTO GSHS, mentioned in the TTO MAP, is not in the CDC database at the time of writing.

entities. The BLZ NCD MAP includes 2006 data from CAMDI and data from the Institute of Nutrition for Central America and Panama (INCAP).
    - National Pap smear project in SUR (1998-2000).
- National disease registries:
    - Only BRB describes a National Registry for Chronic Noncommunicable Diseases[46] that is operated by the George Alleyne Chronic Disease Research Center (GACDRC)[47] of the UWI Cave Hill on behalf of the MoH. The registry collects information on strokes, acute myocardial infarctions (heart attacks), and cancer.
    - GUY refers to a National Cancer Registry.
    - JAM indicates that it has a cancer registry that covers Kingston and St. Andrew, the parishes with the greatest proportion of the population.
- Central statistics units. Only JAM quoted data from entities such as the Statistical Institute of Jamaica (STATIN) and the Registrar General's Department.

- ATG reports a lack of implementation of the WHO STEPS survey, but quotes data on student smoking and alcohol use from a 2009 GSHS and reports data on overweight and obesity, tobacco smokers, and physical activity from a 2009 study reported in the West Indian Medical Journal and PAHO 2012 Country Profiles on NCDs.

- Interestingly, GRD cited the Central Intelligence Agency (CIA) 2012 World Factbook as the source of some national demographic data and included national poverty and unemployment data from a 2007-2008 Country Poverty Assessment (CPA) authored by a private consulting firm. The CPA appears to have been commissioned by the Caribbean Development Bank.[48]

Planning for improvements in national data

Six countries specifically include the establishment or strengthening of national NCD registries in their respective MAPs: **Antigua and Barbuda** (cancer), **Belize** (cancer and diabetes), **Grenada** (cancer and other NCDs), **Jamaica** (cancer, CVD, diabetes, and asthma), **Suriname** (priority NCDs) and **Trinidad and Tobago** (cancer and other NCDs).
The **Antigua and Barbuda** MAP specifically includes an indicator for the collection of high-quality mortality data for the four main NCDs.

5.3.7 Strengths, weaknesses, opportunities, and threats

Only BRB and TTO include an "official" analysis of strengths, weaknesses, opportunities, and threats (SWOT). However, GUY includes elements of a SWOT analysis under the section "Update on NCD Progress Indicator Status/Country Capacity," with achievements, gaps/weaknesses and opportunities listed under headings of tobacco control, nutrition, physical activity, education/promotion, surveillance, and treatment. It is possible to identify elements of a SWOT analysis throughout the other MAPS, including in the POSD indicator status for 2010 that is annexed to the KNA MAP. Table 4 outlines a selection of strengths/achievements, gaps/weaknesses/challenges, opportunities, and threats identified in the NCD MAPs and through the country visits.

[46] See information on the Barbados National Registry for CNCDs at http://www.bnr.org.bb/cms/.
[47] Now the George Alleyne Chronic Disease Research Center.
[48] Grenada 2007-2008 Country Poverty Assessment available at http://www.gov.gd/egov/docs/reports/Grenada_CPA_Vol_2_PPA_Report_Submitted.pdf.

Table 4. Selected achievements and challenges in the NCD response in countries, as reported in the NCD MAPs

Country		General [a]	Risk factors	Health system/services	Health information [b]
ATG	Strengths Achievements	• Appointment of National NCD and Wellness Committee, and national NCD focal point	• Development of draft National Tobacco Control Act (2014) • Development of Food and Nutrition Security Policy 2012	• Establishment of Medical Benefits Scheme • Strong community health services	
	Weaknesses Gaps Challenges	• No specific budget allocation for NCDs	• No national alcohol policy and action plan	• Shortage of trained health professionals • Securing financing for human resource development	• Limited implementation of population-based surveys • No monitoring of health status of 6-19 age group • No NCD surveillance system or budget allocation for surveillance and research
	Opportunities			•Integration of effective NCD prevention and control into PHC	• Collaboration with international agencies such as PAHO and CARPHA to conduct national or subnational surveys
	Threats	• Inadequate government health care financing, given the increase in number of persons with NCDs	• Lack of appreciation of the need for multisectoral policies		
BRB	Strengths Achievements	• Appointment of Special Envoy on NCDs • Functioning NNCDC since 2007 • Expanded work with CSOs	• Implementation of several FCTC requirements, including legislation banning smoking in public places and sale of tobacco to minors; increased taxation of tobacco products and e-cigarettes; and packaging and labelling standards for tobacco products • Implementation of taxes on SSBs	• Establishment of the Diabetes Specialist Care Center • Establishment of the Step-by-Step diabetes foot care program through collaboration among Rotary Club, International Diabetes Federation, and Barbados Diabetes Foundation	• Establishment and funding of the Barbados National Registry • Funding and completion of the Health of the Nation (HoTN) study 2013 • Weekly health page and monthly health magazine, respectively, in the two main daily newspapers

[a] Including governance, infrastructure, and budget.
[b] Including surveillance and research.

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Country		General	Risk factors	Health system/services	Health information
BRB	Weaknesses Gaps Challenges	• Inadequate engagement of children in NCD prevention and control measures • Limited technical and administrative staff in the NCD Unit • Budgetary constraints that have led to a decline in the line item that supports the NNCDC and the NCD program • Excessive bureaucratic procedures to advance implementation of the technical cooperation (TC) program agreed with the Ministry of Health's main TC partner	• Pending implementation of some FCTC provisions • Limited measures to address harmful use of alcohol	• Inadequate utilization of quality of care guidelines and audits	• Need for a more comprehensive health information system • Strengthening of surveillance, research, monitoring, evaluation • Timely use of data, including reporting on morbidity and mortality
	Opportunities	• Enhanced civil society capacity in BRB and the Caribbean to advocate and more effectively communicate around NCDs, led by the Healthy Caribbean Coalition (HCC) • Establishment of CARPHA	• Willingness of private sector to be engaged in NCD prevention and control activities		• Supportive media environment • UNHLM surveillance requirements
	Threats	• Global economic downturn, leading to reduced technical and financial support from international development partners and financial commitment from central government	• Continued perception by policy makers and the public that tertiary care interventions should be the priorities for health		

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Country		General	Risk factors	Health system/services	Health information
BLZ	Strengths Achievements	• Multisectoral actions, including the establishment of the NNCDC and the National Food and Nutrition Security Commission	• Development of food-based dietary guidelines and collaboration among Health, Agriculture, and the Bureau of Standards on a rice fortification initiative	• Establishment of the National Health Insurance (NHI) program	• Establishment of the Belize Health Information System
	Weaknesses Gaps Challenges	• Under-resourcing of the Health Education and Community Participation Bureau (HECOPAB)	• Delays in drafting tobacco legislation • Lack of restrictions on alcohol advertising • Limited implementation of the Health and Family Life Education (HFLE) program, which is only in primary schools	• Limitations in the geographic scope of the NHI • Attrition of nurses and high turnover of foreign health care personnel • Limitations in specialized care	• Lack of national data linking alcohol to its harmful effects; providing evidence of the economic impact of NCDs; and providing a comprehensive picture of NCDs, with data disaggregated by ethnicity, region, age, gender, and vulnerable groups
	Opportunities		• Cabinet support for the adoption of tobacco legislation • Revision of national food-based dietary guidelines to incorporate measures for the reduction of salt, sugar, and saturated/trans fats • Renovations to Belize City's streets, which might facilitate physical activity • Widening the scope of Caribbean Wellness Day (CWD) and Wellness Week		
	Threats	• Failure of the NCD MAP to "take root," due to inadequate organization and facilitation, rather than due to lack of political and partners' will			

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Country		General	Risk factors	Health system/services	Health information
GRD	Strengths Achievements	• Creation of NNCDC		• Existence of guidelines for cancer testing and treatment	• Regular NCD surveillance: STEPS (2011), GRD Food and Nutrition Day Care and Preschool Survey (2011), GSHS (2008), and Second Secondary School Drug Prevalence Survey (2005) • Grenada Heart Study (2009) to study clinical, biological, and psychological determinants of cardiovascular health in GRD
	Weaknesses Gaps Challenges			• Inadequate integration of eye and foot examinations into diabetes standard of care • Lack of assessment of duration of NCD-related hospitalizations to identify quality of care issues	• Variations in use of disease classification system (WHO International Classification of Disease, ICD-10)[c] regarding mortality • Lack of a cancer registry • Lack of a mental health information system
	Opportunities			• Government initiatives to facilitate equitable distribution and access to health services • New PHC initiative, with reestablishment of PHC Teams • Efforts to develop a national health insurance scheme	
	Threats	• Low and disproportionate funding provided for PHC, inconsistent with the goals of the health sector			

[c] Information on the WHO ICD-10 is at http://www.who.int/classifications/icd/en/.

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Country		General	Risk factors	Health system/services	Health information
GUY	Strengths Achievements	• Establishment of a website for the NCD Unit in the Ministry of Public Health • Commitment from Government to provide funding for NCDs • Establishment of the NNCDC in 2014, based in the Office of the President • Annual multisectoral celebration of CWD, involving Health, Education, Culture, Youth and Sport, and local government	• Implementation of several requirements of the FCTC, including tobacco taxes, smoke-free indoor public spaces, and partial ban on advertising, promotion and sponsorship • Multi-sector food and nutrition plan in place, led by the Ministry of Agriculture • School health policy in place, with school canteens required to serve healthy food	• Establishment of Center of Excellence for diabetes foot care at the Georgetown Public Hospital Corporation (GPHC) and six regional diabetes foot care centers, through the Diabetes Foot Care Project [d]	
	Weaknesses Gaps Challenges	• Dormancy of the NNCDC since the government changed in 2015 • Limited technical and financial resources to maintain and update the NCD Unit's website	• Tobacco advertising ban does not cover national television, radio, and print media, and tobacco legislation has not yet been tabled in Parliament [e]	• Limited numbers and cadres of human resources, including for NCD prevention and control	• Limited NCD surveillance and reporting, with difficulty in accessing quality data • Inadequate research in certain areas, such as sickle cell disease prevalence, harmful use of alcohol, health effects of food preparation in the hinterland (coal fires), particularly in women • Limited evaluation of interventions for effectiveness in changing behaviors and reaching those most in need

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[d] Eight regional foot care centers were eventually established. See: Lowe J, Sibbald RG, Taha NY, et al. The Guyana Diabetes and Foot Care Project: Improved diabetic foot evaluation reduces amputation rates by two-thirds in a lower middle income country. Int. *J. of Endocrinology* 2015; Article ID 920124, http://bit.ly/2w45n9y.

[e] Update: The President of Guyana signed the Tobacco Control Bill into law in September 2017. The Bill bans all forms of tobacco advertising, promotion, and sponsorship.

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Country		General	Risk factors	Health system/services	Health information
GUY	Opportunities		• Advocacy by the Minister of Health for the enactment of tobacco legislation • Development of Caribbean standards for trans fat and caloric content of foods and for food labelling • Collaboration between the Ministry of Agriculture and the UN Food and Agriculture Organization (FAO) regarding farmers' education for the production of healthier foods • Involvement of community-based organizations in health promotion at subnational level		
	Threats	• Insufficiency of trained human resources for successful implementation of NCD MAP	• Inadequate attention to smoking cessation programs • Advocacy from the tobacco industry to delay or weaken national tobacco legislation	• Non-integration of the Diabetes Foot Care Project into the wider NCD program	
JAM	Strengths Achievements	• National Health Fund established 2004, with 20% of tobacco tax revenue allocated to it since 2008 • Enactment of Mental Health Act 1997 and development of Mental Health Policy • National Infant Feeding Policy, 1995	• Tobacco legislation enacted in 2013 • Annual celebration of CWD, focusing on physical activity • Camp 4 - the Healthy Way, a 2007 initiative targeting obese adolescents that was identified as a best practice[f]	• Child Abuse Mitigation Project 2004-2008 at the Bustamante Children's Hospital (CAMP Bustamante),[g] a hospital-based response to violence against children • Jamaica Drugs for the Elderly Program, launched 1996	• Establishment of National Statistical Institute and inclusion of information from other local sources, such as the Registrar General's Department and surveys

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[f] In FAO. Final Consultant's Report: Examples of best practices in food and nutrition communication and education in the English-speaking Caribbean. FAO, 2012.
[g] Information on Camp Bustamante Project at https://www.unicef.org/jamaica/violence_7144.htm.

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Country		General	Risk factors	Health system/services	Health information
JAM	Weaknesses Gaps Challenges		• Absence of significant improvement in NCD risk factors between the JHLS I (2000-2001) and JHLS II (2007-2008), despite programs and policy initiatives		• Limited data on established NCDs; no national data on incidence and outcome of CVD and cancer, due to absence of national chronic disease registry • Limited research on SDH and cultural practices and beliefs related to NCDs and associated behaviors • Absence of measurable objectives in Healthy Lifestyle Project
	Opportunities	• Implementation of the national development plan, Vision 2030, which includes a health goal			
	Threats	• Inadequate resource mobilization to fund the NCD MAP, resulting in a limited number of core NCD programs and projects			
KNA	Strengths Achievements		• Establishment of spaces for physical activity • Annual celebration of CWD • Implementation of multisector food and nutrition plan	• Implementation of the CCM in >50% of PHC facilities	• Implementation of STEPS, GYTS, and GSHS; participation in Caribbean NCD Minimum Data Set reporting • Regular media messages on NCD control
	Weaknesses Gaps Challenges	• Inadequate program effectiveness		• Low uptake of screening and early interventions, and limited access to health information • Inadequate social protection from the emotional and financial impact of NCDs	

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Country		General	Risk factors	Health system/services	Health information
KNA	Opportunities	• Advocacy for supplementary program resources through intersectoral networking and participation in regional, hemispheric, and global consultations	• MoH's emphasis on preventive measures		
	Threats				
SUR	Strengths Achievements	• Existence of Suriname Mental Health Plan • Establishment of National Road Safety Commission; development and approval of National Directional Framework on Road Safety (2010)	• Development of National Drug Master Plan addressing substance abuse, including tobacco and alcohol consumption • Enactment of comprehensive tobacco control legislation	• Development of National Drug Master Plan addressing substance abuse, including tobacco and alcohol consumption • Enactment of comprehensive tobacco control legislation	• Completion of GYTS, GSHS, and other surveys • Disaggregation of mortality and other data by ethnicity
	Weaknesses Gaps Challenges		• Inadequate human and financial resources to support further implementation of the National Drug Master Plan	• Inadequate application of PHC advances to address chronic diseases • High costs of diagnosis and treatment of NCDs, with heavy financial burden on the health system	
	Opportunities	• Participation in and support from the CARMEN Network, which will contribute to implementation of the MAP			
	Threats	• Downturn in national economy and resulting resource limitations			

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Country		General	Risk factors	Health system/services	Health information
TTO	Strengths Achievements	• Passage of Tobacco Control Act 2009, with enactment in 2010; Tobacco Control Regulations for packaging and labelling of tobacco products passed in 2013; establishment of dedicated Tobacco Control Unit in 2014 • National Policy on Alcohol	• Annual celebration of CWD since 2008, including by Regional Health Authorities	• Chronic Disease Assistance Program, which provides ~51 prescription drugs free of cost at all public health facilities and most private pharmacies	• Research on, and interventions to prevent, childhood obesity • Completion of STEPS • Development of research agenda for NCDs
	Weaknesses Gaps Challenges	• No dedicated national coordinating mechanism for NCD prevention and control • No dedicated budget for NCD prevention and control • No standing process for joint planning and monitoring of programs with MoH and RHAs		• Critical shortage of nursing personnel	• Absence of national NCD surveillance system • Inadequate analysis of long-term data to determine trends • Lack of collation and analysis of data from RHAs • Inadequate research on sociocultural factors and NCDs • Inadequate health information systems and technology to support seamless chronic care across levels
	Opportunities	• Local government reform, which could strengthen community approaches	• Agriculture as a new priority for government		
	Threats	• Current economic climate, which requires reduction in public expenditure	• Current economic climate leads some families to purchase cheaper, obesogenic foods	• Mounting pressure to open additional hospitals	

5.4 Stakeholder engagement and multisectoral governance mechanisms

Stakeholder engagement

The NNCDC or MoH led the process of development of the NCD MAPs in all the countries and all reported stakeholder participation. However, the description of the process varies widely in the MAPs and not all provide information on the stakeholders involved. No NCD MAP includes mechanisms for maintaining stakeholder engagement other than through a multisectoral NNCDC or similar body.[49]

- **ATG:** The MoH involved a wide range of stakeholders in the development of the MAP, including Ministries of Education, Agriculture, Social Transformation, Transport, and Trade; Medical Benefits Scheme; civil society, including NGOs, faith-based organizations (FBOs), academia, and the media; and the private sector. Consultations and stakeholder meetings were held; policies, strategies, international resolutions, and cost-effective interventions reviewed; and drafts of the document were developed and reviewed. A stakeholder consensus meeting was held to validate the final document.

- **BRB:** The NNCDC, which is responsible for development and oversight of the NCD MAP, led the process, holding a one-day retreat in November 2011 to determine the priority areas for inclusion in the MAP. There was representation from selected key partners, including the UWI and civil society, and the Planning Unit of the MoH was involved in the early stages of development of the MAP. A consultant was recruited to draft the Plan and the draft sent to key stakeholders for comments before finalization.

- **BLZ:** The development of the MAP involved recruitment of a consultant who drafted the Plan, and consultation with NNCDC members, other government sectors (Education, Agriculture, and Economic Development), NGOs, and the private sector. A final stakeholder session brought the entities together to contribute to finalization of the Plan.

- **GRD:** The development of the MAP was based on an initial stakeholder meeting to identify priorities; a desk review of NCD-related documents specific to GRD, as well as regional and international reports, studies, plans of action, policies, and best practices; and additional data and information from national and online sources. Appendix A of the MAP is titled "List of participants – National stakeholders' validation on CNCD, Grenada," but it is incomplete.

- **GUY:** The Acknowledgements section indicates that the development of the NCD MAP included the participation of:
  - A consultant, who drafted the Plan.
  - Several departments in the MoPH, personnel from health centers, and representatives of the GPHC.
  - Non-health government entities, including Ministries of Labour; Culture, Youth and Sport; Education; and Agriculture, as well as the Office of the Attorney General, and the Guyana Bureau of Standards.
  - Civil society organizations, including the Cancer Institute, Guyana Kidney Foundation, Guyana Diabetes Association, Periwinkle Club, and Guyana Diabetes and Foot Care Project. A cancer survivor also participated.

[49] In GRD, a National Health Status Steering Committee (NHSSC) is mentioned as the body to oversee the M&E function. The NHSSC will work closely with the NNCDC.

- Private sector representatives from the Carnegie School of Home Economics, Eureka Medical Laboratories, and Private Sector Commission. An attorney-at-law previously involved in the development of tobacco control legislation also participated.
- The United Nations Children's Fund (UNICEF) and PAHO/WHO.

- **JAM:** Consultations were held in the four RHAs with health sector and external stakeholders. A consultant was recruited to prepare the Plan, and key informant and national interviews were held with a range of stakeholders, followed by a national retreat to review an advanced draft of the MAP. The national consultations included representatives from Health, other government ministries, civil society, the private sector, and PAHO/WHO. Participants included:
  - Government: Ministries of Health; Industry, Investment & Commerce; Tourism (Tourism Product Development); Agriculture (Rural Agriculture Development Agency); Labour & Social Security (Jamaica Council for Persons with Disabilities); and Finance & Planning (Planning Institute of Jamaica).
  - Civil society: Heart Foundation of Jamaica; Diabetes Association of Jamaica; Jamaica Cancer Society; UWI (Tropical Medicine Research Institute, Department of Medicine); Nurses Association of Jamaica; Jamaica Medical Doctors Association; Combined Disabilities Association of Jamaica; Jamaica Council of Churches; and Council of Voluntary Social Services.
  - Private sector: Microlabs Limited; Carimed Limited; H.D. Hopwood; and Central Medical Laboratories.

- **KNA:** The Acknowledgements section lists persons from various sectors who participated in a stakeholder meeting in September 2011:
  - Government: St. Kitts: Ministries of Agriculture; Trade; Health, including Community-based Health Services, Nursing Services, Health Promotion Unit, Institutional-based Nursing Services, Pogson Health Facility Pharmacy, Principal Nursing Officer, and a public/private medical practitioner; Education, including Early Childhood Development Unit, Basseterre Secondary School; Gender Affairs, Social Development; Social Services; and Department of Sports. Nevis: Ministry of Health, including Health

Government must work with civil society and private sector to address NCDs

A 2014 meeting of faith-based organizations based in Barbados gave rise to the *Declaration of Bridgetown*, in which the FBOs pledged their support for NCD prevention and control in BRB and the Caribbean.[50] **Grenada** outlines a partnership application or verification process for entities wishing to collaborate with the MoH, and highlights facilitation of partnerships with Grenadians living in the diaspora who are interested in contributing to health and development in GRD. **Jamaica**'s NCD MAP explicitly recognizes the October 2007 Declaration of St. Ann by CARICOM Ministers of Agriculture, stating the agriculture sector's support for the September 2007 Port of Spain Declaration by the CARICOM Heads of Government. **St. Kitts and Nevis** references the 2008 Caribbean Private Sector Statement and the 2008 Caribbean Civil Society Bridgetown Declaration, which assert the respective sectors' support for the POSD, as well as the Caribbean Association of Industry and Commerce's (CAIC)'s[51] pledge to reduce the salt and fat content of processed and prepared foods.

[50] Barbados FBOs' Declaration of Bridgetown is available at http://bit.ly/2tJLJyf.
[51] Information on CAIC is at http://www.carib-commerce.org/.

Promotion Unit, Community Health, Alexandra Hospital; Social Security; and Department of Agriculture.
  - Civil society: St. Kitts: Healthy Lifestyle Center and Essence of Hope Breast Cancer Foundation. Nevis: Pink-Lily Cancer Care and University of St. Gallen, Switzerland.
  - Private sector: St. Kitts: Pharmcare Limited.
  - Intergovernmental agencies: PAHO/WHO.

- **SUR:** A workshop was held in 2010 and consultations were held with stakeholders from different sectors. PAHO/WHO, CAREC, and CDC participated, but there are no details on other stakeholders.

- **TTO:** A participatory process that included consultations occurred, but there are no details on the participants.

Political will for NCD risk factor reduction

In **Barbados**, the Prime Minister, the Minister of Health, the Minister of Finance, and the Chair of the National NCD Commission were steadfast in their determination to advance legislation and regulations, based on evidence, related to tobacco control and the 2015[52] tax on sugar-sweetened beverages. However, the country faced opposition and "push-back" from industry. A 2016 presentation on SSB taxes in the Caribbean quoted an excerpt from a speech by the Prime Minister of Barbados, which was reported in the Barbados Advocate newspaper, 7 October 2015. The Prime Minister noted that the tax was "such a shock to those who export sweet drinks… that a whole delegation flew into Barbados… to try and convince us that we should remove the tax." The Prime Minister also noted that the industry pressure was accompanied by an offer to help in other ways with the issue of NCDs, but, he recounted, "We said thanks, but no thanks."

Multisectoral governance mechanisms

The establishment of multisectoral National NCD Commissions or analogous bodies was encouraged in both the 2007 POSD *(16)* and the 2011 UNHLM *(1)*. NNCDCs were established in all the countries under review, but only the BRB NNCDC has functioned continuously since its establishment in 2007, having survived changes in political administration, while such changes led to hiatus or dormancy of the Commissions in the other countries *(24)*.

- All the NCD MAPs, except BRB (given its functioning NNCDC) include NNCDC re-establishment, revitalization, or strengthening among the objectives to be achieved or activities to be implemented.

- Other governance mechanisms mentioned in the MAPs include:
  - ATG: National NCD and Wellness Committee and National NCD focal point.
  - BRB:
    - Social Partnership and its Protocols.
    - Interministerial Task Force on NCDs, which considers policy-related issues referred by the NNCDC and is meant to drive intersectoral action at the policymaking level.

Suriname's civil society manifesto

Prior to the general elections in **Suriname** in 2015, a group of non-profit organizations and individual citizens developed a manifesto "For Our Future" as part of the Citizens' Initiative supported by Projekta.[53] The manifesto listed issues that should be "high on the agenda of any new government" and included Health, with requested action to "reduce non-communicable diseases and accidents/suicide."

[52] Xuereb, G. Presentation on SSBs in the Caribbean (Slide 18). http://onecaribbeanhealth.org/wp-content/uploads/2017/01/Sugar-Sweetened-Beverages-taxes-in-the-Caribbean-Dr-Godfrey-Xuereb.pdf.

[53] Information on Projekta is at www.projekta-suriname.blogspot.com.

Social Partnership in Barbados

Barbados has a unique Social Partnership[55] comprising representation from the highest levels of government, trade unions, and the private sector. The Social Partnership discusses and develops interventions for national development, and its most recent guide document, Protocol VI, speaks to workplace wellness and specifically includes NCDs. Protocol VI should have expired in 2013, but was extended and is operational at the time of writing, while discussions on Protocol VII take place. Key informants note that the trade unions are working on a workplace wellness policy based on the MAP, with expectations of unveiling it in late 2017.

National NCD Commission in Barbados

Barbados's Cabinet-approved multisectoral National NCD Commission has been functioning continuously since its establishment in 2007 due to the recognition, at the highest political levels, of NCDs as major national health issues; the prominence and drive of its Chair; and the dedication and commitment of its members. It meets monthly and receives reports on NCD prevention and control activities and interventions from the Senior Medical Officer (SMOH)/NCDs and submits minutes and annual reports to the Minister of Health. The NNCDC has 14 members and 4 ex-officio members, with representation from government: Ministries of Health, Agriculture, and Education, and the Bureau of Standards; civil society: UWI, FBOs, health NGOs, sports group, trade union, and retired persons' group; and private sector: health insurers, manufacturers, food retailers, advertising, and the media. The ex-officio members are the Chief Medical Officer, Health Promotion Officer, NCD Focal Point, and Project Manager *(24)*.

  - Senior Medical Officer of Health (SMOH)/NCDs, who works with an Administrative Officer.
  - Health Promotion Unit (HPU), which provides technical support to the NNCDC and the SMOH/NCDs, and reports to the Chief Medical Officer (CMO). The HPU is headed by the Senior Advisor, Health Promotion, and has four full-time and one part-time staff.
  - Task Force on Physical Activity and Exercise.
  - UWI and the GACDRC, which provide technical input through the NNCDC.
  - National Agriculture Commission, on which the NNCDC is represented and which works to advance the food and nutrition policy agenda.
- GRD: National Drug Avoidance Committee and Grenada Food and Nutrition Council.
- GUY: Chronic Diseases Unit in the MoPH, staffed by the NCD Coordinator and one other full-time technical staff, who report to the CMO.
- JAM: Health Promotion and Protection Branch, Chronic Diseases and Injury Prevention Unit, and an NCD focal point in the MoH. Their specific roles regarding the MAP are not stated.
- SUR: NCD Coordinator and Focal Point and Monitoring and Evaluation (M&E) Unit. The latter will provide "data and strategic information" to the Director of Health and the NNCDC.
- TTO: Establishment of a high-level intra-governmental NCD mechanism reporting to Cabinet, and an NCD Unit in the MoH.[54]

[54] No mention is made in the TTO NCD MAP of the Partners' Forum for Chronic NCDs that was established in 2011 as an analogue NNCDC – see http://www.health.gov.tt/news/newsitem.aspx?id=281. The Partners' Forum term ended in 2013 and it was not re-established.

[55] Information on the Social Partnership is at https://www.tripartism.sg/assets/files/THE%20BARBADOS%20SOCIAL%20PARTNERSHIP%20(2).pdf (Slide 38) and https://www.caribbeanleadership.org/news_publisher/news/view/spotlight-on-barbados-social-partnership. Protocol VI is at http://tradeteam.bb/resources/protocol-vi-of-the-social-partnership/.

Health in All Policies in Suriname

The Government of Suriname has endorsed, and is putting into practice, the Health in All Policies approach, with PAHO's technical cooperation. In 2015, 12 intersectoral policy areas related to the SDGs and NCDs, involving 17 government ministries, were developed by intersectoral working groups and approved for submission to the Council of Ministers for approval and adoption. Each policy area has a ministry as "policy lead," and identifies key public sector players. [56]

Good practice in risk analysis and mitigation

Grenada's MAP identifies potential risks to the implementation of the Plan and strategies to mitigate them. Among the risks identified are industry opposition to controlling the marketing and promotion of alcoholic beverages and tobacco; reduction in government and business revenues due to regulations on alcohol, tobacco, and unhealthy foods; social acceptance of alcohol marketing and use; and lack of private sector support due to possible increased costs for employee programs and anticipated loss of revenue due to regulations.

The mitigation strategies include, respectively, sensitization meetings with industry representatives and involvement of policymakers from finance, trade, and health in stakeholder meetings; development of a taxation mechanism based on best practices to ensure that revenue loss from decreased sales of alcohol, tobacco, and unhealthy foods are countered by increases in sales from healthier consumer behavior; mobilization of support from key community groups to promote safe drinking norms; and lobbying support from, and partnering with, the Trade Union Council and National Insurance Scheme to raise employers' and employees' awareness of the benefits of workplace health programs and incentives.

A thorough risk analysis is an essential component of planning, to anticipate and address potential barriers, and facilitate efficient and effective implementation.

5.5 Formulation of the NCD MAPs

5.5.1 General

Table 5 summarizes selected aspects related to the formulation of the NCD MAPs.

- There is no description of a formal priority-setting process in any Plan, only mention of meetings, consultations, and the national, subregional, regional, and global frameworks taken into consideration. However, all the NCD MAPs include the four main NCDs and four main RFs in one of more sections of the document; if all are not mentioned in the Introduction, Background, or Situation Analysis, they are seen in the LF for the MAP. For example, in the BRB MAP, the seven "priorities for controlling NCDs at the national level" listed in the early part of the chapter on the strategic agenda address behavioral and biological risk factors only, but the strategies of the MAP and the content of the LF itself are much more comprehensive.
- The MAPs place less emphasis on specific interventions for chronic respiratory diseases. Only BRB and JAM mention asthma: BRB plans to build clinical competencies of health care professionals in the management of the condition, and JAM plans its inclusion in a national chronic disease registry.
- SUR indicates its conscious decision to exclude mental health and road traffic injuries, given the existence of relevant frameworks outside of the NCD MAP.

[56] Information on HiAP in Suriname is at http://bit.ly/2j5aFfL.

Table 5. Formulation of NCD MAPs – selected aspects

Formulation of NCD MAPs	ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
Consultant recruited to draft MAP	X	✓	✓	✓	✓	✓	X	X	X
PAHO/WHO TC provided	✓	X	✓	✓	✓	✓	✓	✓	X
Vision	✓	✓	✓	✓	✓	✓	✓	X	✓
Mission/Statement of purpose	✓	✓	✓	X	X	✓	✓	X	X
Guiding principles/values	✓	✓	✓	✓	✓	✓	✓	✓	✓
Inclusion of four main NCDs	✓	✓	✓	✓	✓	✓	✓	✓	✓
Inclusion of four main risk factors	✓	✓	✓	✓	✓	✓	✓	✓	✓
Inclusion of other NCD priorities	X	✓	X	X	✓	✓	✓	X	X
Mix of population-[a] , community-[b] , and individual-based[c] interventions, linked to the priority areas/ lines of action and related objectives	✓	✓	✓	✓	✓	✓	✓	✓	✓
Outline of strategic approaches	✓	✓	✓	✓	✓	✓	✓	✓	✓
Goal, objectives	✓	✓	✓	✓	✓	✓	✓	✓	✓
Indicators	✓	✓	✓	✓	✓	✓	✓	✓	✓
Logical framework matrix[d]	✓	✓	✓	✓	✓	✓	✓	✓	✓
Risk analysis and mitigation strategies	X	X	X	✓	X	X	X	X	X
Inclusion of estimated implementation costs	✓	✓	✓	X	✓	X	X	✓	X

[a] Policies, regulations, guidelines
[b] Social networks, settings-based programs, education
[c] Health services, medical interventions
[d] The matrices in the GRD Plan include outputs, outcomes, and timeframes, but they are not "typical" LF matrices. See section 6.5.3.

- Priorities identified other than the four main NCDs and four main RFs include:
  - ATG: Mental health, oral and renal disease;
  - BRB: Men's health;
  - GUY: Sickle cell disease, domestic violence;
  - JAM: Sickle cell disease, injuries and violence, including road traffic injuries, and psychoneurological disorders (mental health).

- BRB, GUY, and JAM include specific strategies/activities in the Plan itself to address the other priorities identified, except for mental health in JAM.[57]

- Only the GRD Plan includes a specific section on risks and mitigation strategies for implementation of the Plan.

5.5.2 Strategic approaches

To a greater or lesser degree, usually in the Foreword or Introduction, or among the Overarching/Guiding Principles, all the NCD MAPs mention and endorse the importance of approaches that consider SDH, multisectoral action, WoG, WoS, HiAP, equity, universal access to health and UAH-UHC, and human rights. However, there is limited relevant analysis, identification of vulnerable or disadvantaged population groups, or indication of targeted interventions for those groups.

- ATG has equitable and sustainable health improvement for all citizens as the ultimate goal, and the government maintains a commitment to providing health care for all citizens. The MAP notes the importance of

[57] However, JAM refers to a separate mental health strategic plan.

integrating effective NCD prevention and control into PHC, given limitations in human resources. There is emphasis on childhood obesity prevention and control, and the MAP highlights the need to review and revise the School Health Program and establish adolescent health programs in collaboration with the Ministry of Education for early prevention of NCDs through a life course approach. The core values guiding the plan are equity, respect, sustainability, solidarity, integrity, and excellence.

- BRB states that health is a fundamental human right of all Barbadians, and that the MoH places priority on developing a patient-centered, equitable, efficient, and accessible health care system of high quality. The Plan notes that "the policy of access to health care as a fundamental human right and universal health care for Barbadian citizens and permanent residents has largely been achieved." The MAP is not explicit in rights-based priority-setting or interventions, though children are identified as a target group for obesity/overweight reduction, and men and older persons are mentioned as high-risk groups.

- BLZ mentions equity and principles that include an integrated holistic view of health; emphasis on risk factor reduction and health promotion; complementarity with Belize's national health plan in its aim to promote cost-effective interventions and address key health priorities; and a gender-based approach. The Plan refers to the PAHO NCD PoA regarding the need to emphasize improvements in accessibility, affordability, and quality in the broader health system as part of the regional response; the indicator "Social protection policy developed that includes NCDs by end 2018" is under the Program Management line of action, with activity "Expand social protection policies to provide universal health coverage and more equitable access to services, essential medicines and technologies for NCD diagnosis, treatment, rehabilitation, and palliative care." The MAP notes the need for data "disaggregated by ethnicity, region, age, gender, vulnerable groups, etc."

- GRD indicates that the MAP will take an approach that emphasizes disease prevention and health promotion. The principles include integration of NCD and risk factors into the national development and socioeconomic agenda, consideration of a life cycle approach in NCD policies and programs, and reorientation of the health care system based on PHC. Strategies include expansion of the scope for traditional medicine as a legitimate treatment option for NCDs; consideration of patients' use of traditional medicine along with biomedicine in the treatment of NCDs; and development of specialty services for vulnerable groups such as the elderly, persons with disabilities, and persons with mental health problems. Indicator "National social protection health schemes that address universal and equitable access to NCD interventions" is also included.

- GUY recognizes the need for a life course approach to address the SDH, and includes the right to health, equity, solidarity, people-centered, and public health leadership as the principles of the MAP. The geographic location of persons in the hinterland (interior) of the country is mentioned as a barrier to access and certain facilities, while higher poverty rates in rural areas and the association of certain cultural practices with increased morbidity and mortality from cervical cancer are noted. The LF includes an indicator targeting poor and rural communities to address wellness and physical activity.

- JAM includes a section on SDH in the NCD MAP and notes the need for further studies on the relationship between SDH and NCDs. The MAP also includes a section on cultural practices and NCDs, and mentions the importance of culturally acceptable interventions for NCD prevention and control. High-risk communities and groups for interventions related to violence and injury prevention are mentioned.

Subregional and regional inputs for the MAPs' strategic lines of action and priorities

CARICOM Plan of Action: The strategic lines of action in the Strategic Plan of Action for the Prevention and Control of Chronic NCDs for Countries of the CARICOM 2011-2015 are: Risk factor reduction and health promotion; Integrated disease management and patient self-management education; Surveillance, monitoring, and evaluation; Public policy, advocacy, and communications; and Program management. Many of the NCD MAPs adopt, adapt, or reflect these lines of action.

CARMEN: At a meeting of the CARMEN network in 2009 in Lima, Peru, the areas of support identified by the English Caribbean and Canada group for 2010-2011 included: implementation of tobacco legislation; gathering of evidence on NCDs in the Caribbean for NCD promotion; strategic planning on NCDs, based on evidence from each country; risk factor surveys; development of resource mobilization capability; and documentation of the Caribbean Wellness Day activities. Priority activities at the Caribbean subregional level included support for the design and implementation of National NCD Commissions; implementation of tobacco legislation; development of an integrated approach to NCDs; integration of surveillance and other actions into the health care model; and development of grant writing capacity.[58] Most of the MAPs reflect these priorities.

- KNA notes the need to work across sectors, and includes equity, social justice, and culturally sensitive strategies among the values/guiding principles of the MAP. Universal access to PHC is a focus, with LF activities that include an audit regarding gaps in, and inequity of access to, PHC services for CVD control, and a strategy to implement interventions for coverage of vulnerable groups.
- SUR notes SDH, with equity, ethnicity, and gender included among the MAP's guiding principles.
- TTO includes a section on SDH and mentions equity, UHC, and human rights among the principles/approaches of the NCD MAP. The MAP also notes the intent to incorporate "age, gender, and ethnicity dimensions into the design and execution of policies and interventions." Childhood obesity is an area of focus.
- As summarized in Annex IV, the strategic lines of action/priority areas in all the MAPs reflect, or are modeled after, those outlined in the *Strategic Plan of Action for the Prevention and Control of Chronic NCDs for Countries of the CARICOM 2011-2015* (17), which, in turn, reflect the lines of action/objectives of WHO and PAHO NCD action plans.
- BLZ and SUR mention the contribution of the CARMEN program to the formulation of the respective NCD MAPs: BLZ notes that the PAHO 2012 NCD capacity survey, which was prepared for the CARMEN meeting that year, contributed to the summary of country capacity and response that is in the MAP; and SUR, in the section on "Relationship to existing declarations, strategies, and initiative," states that that CARMEN priorities have been incorporated into the MAP.

5.5.3 Development of logical framework matrix

The MAPs include the goal(s), strategic outcomes, and outputs/expected results related to priority areas/lines of action, as well as indicators, targets (in most cases), and, in some cases, activities, set out in an LF matrix. GRD includes a matrix that lists outputs and outcomes by category of intervention strategy and implementation timeframe.

[58] See PAHO. The CARMEN Network for Chronic Disease Prevention and Control: Report from the 2009 Biennial Meeting, Lima, Peru, 26-29 October 2009. Available at http://bit.ly/2iX4JSs.

- Several of the indicators and targets at output level are really outcomes, and have unrealistic time frames, with expectations of significant reductions of risk factors over relatively short periods of time. In addition, some indicators are not sensitive to the objectives to which they are linked, and in one Plan (GRD) the indicators are linked to strategic areas/lines of action rather than to specific outcomes or outputs.

- All the NCD MAPs include indicators and targets from the WHO GMF, as summarized in section 6.5.4. Some indicators and targets from the PAHO PoA 2013-2019, and some reflecting several of the recommendations of the POSD and selected SDGs are also included, as summarized in section 6.5.5.

- Only BLZ, GUY, and SUR specifically state baselines for many or most of the outcome and impact indicators, despite the availability of mortality and risk factor data from, respectively, the MoH and surveys such as STEPS, GYTS, and GSHS.

- The MAPs include the lead/responsible agencies and key partners for the outcomes, outputs, or indicators in the LF; GRD also includes a matrix with the agencies responsible for various types of data.

5.5.4 WHO Global Monitoring Framework

Table 6 demonstrates that all the NCD MAPs include at least one GMF indicator or target related to premature mortality from NCDs; behavioral risk factors (harmful use of alcohol, physical inactivity, and salt/sodium intake); biological risk factors (raised blood pressure, and diabetes and obesity); and national systems response (essential NCD medicines and basic technologies to treat major NCDs, and cervical cancer screening).

Some countries include GMF indicators without targets, and others include targets without indicators. While most of the MAPs with well-defined targets and indicators mirror those in the GMF, several MAPs have modified the GMF targets and/or indicators, including percentages and age ranges, to be more in keeping with national aspirations, realities, and resources. This is particularly so regarding reductions in harmful use of alcohol and salt/sodium intake, two substances that are ingrained in the Caribbean food and entertainment culture. For example:

- With regard to **harmful use of alcohol**, GMF Target 2 specifies "at least a 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context," with Indicator 3 "Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context." ATG targets "2% relative reduction in harmful use of alcohol by 2019 (15+)"; GUY targets 8% reduction by 2020; and BRB's indicator changes the age cohort to ≥ 25 years old.

- For **salt reduction**, GMF Target 4 is "a 30% reduction in mean population intake of salt/sodium." ATG targets a "5% reduction of salt intake from baseline by 2019"; GUY targets 20% reduction by 2020; and JAM aims for 10% reduction by 2018.

- In **reducing tobacco** use, GMF Target 5 specifies 30% relative reduction in prevalence of current tobacco use, with Indicator 9 "Prevalence of current tobacco use among adolescents" and Indicator 10 "Age-standardized prevalence of current tobacco use among persons aged 18+ years." BRB targets 10% relative reduction in prevalence, with indicators of prevalence of current tobacco use among adolescents (13-15 years)[59] and age-standardized prevalence of current tobacco use among persons aged ≥ 25 years; GRD targets

[59] This is the age group studied in the GYTS, so this indicator was probably selected based on data availability.

a relative reduction of current tobacco use in persons aged 15+; GUY targets 30% reduction of smoking prevalence[60] in persons aged 15+; and JAM looks at age-standardized prevalence of current tobacco use among persons aged 15+ years.

- GMF Target 9 speaks to 80% availability of the **affordable basic technologies and essential medicines,** including generics, required to treat major NCDs in both public and private facilities, and GMF Indicator 20 addresses access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer. Rather than 80%, GRD targets an increase of 50% mean opioid consumption measured in morphine equivalent mg per person by 2017.

- GMF Indicator 25 is "Proportion of women between the ages of 30-49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programs or policies." ATG has a target of 80% of women aged 30-49 receiving **cervical cancer screening**;[61] BLZ omits the 30-49 age range and there is a baseline of 62% and a target of 80% for the "proportion of women screened according to national guidelines"; and KNA targets 50% increase in the number of women aged 25-65 years having Pap smears.

- Some countries reformulate or combine the target and indicator, as in GUY: "50% of hypertensive patients at goal by 2016" and "40% of high cholesterol patients at goal by 2016."

- For the overall goal of reducing premature mortality from NCDs, GMF Target 1 is a "25% relative **reduction in overall mortality** from CVD, cancer, diabetes, or chronic respiratory disease." ATG's target is 20% relative reduction in preventable premature deaths due to NCDs by 2019, and GUY targets 14% reduction by 2020.

- Some countries specify percentage reductions where the GMF target does not, as for GMF Target 7 "Halt the rise in diabetes and obesity," where ATG specifies a 5% reduction of age-standardized prevalence of obesity and overweight in persons aged 18+ and in school-aged children and adolescents by 2019.

- Occasionally, countries have higher targets than the GMF:
  - GMF Target 2 aims for "at least 10%" relative reduction in harmful use of alcohol, but GUY specifies 15% reduction from baseline.
  - GMF Target 3 is a 10% reduction in prevalence of insufficient physical activity, with indicators of prevalence of insufficiently physically active adolescents and persons aged 18+. However, ATG targets 20% relative reduction in prevalence of insufficient physical activity among adolescents by 2019, and BRB targets 20% relative reduction in prevalence of insufficient physical activity by 2016, with 30% reduction in prevalence of insufficiently physically active adolescents by 2017.
  - GMF Target 8 is at least 50% of eligible people receiving drug therapy and counseling to prevent heart attacks and strokes; ATG's related target is 75% of eligible people.
  - GMF Target 9 is an 80% availability of affordable basic technologies and essential medicines, but SUR aims for the inclusion of at least 90% of essential drugs in the National Essential Medicines list.

Annex V summarizes the reflection of the WHO GMF targets and indicators in the BRB, GUY, and SUR MAPs, as examples of how countries have addressed them.

[60] In the Caribbean, smoking is the most common form of tobacco use, but is not the only use of the substance.
[61] ATG also targets 80% of women aged 50-69 for breast cancer screening.

Table 6. NCD MAPs in the Caribbean – Inclusion of WHO Global Monitoring Framework targets and indicators[a]

Framework elements	GMF Targets and Indicators	Countries								
		ATG	BRB	BLZ	GRD[b]	GUY	JAM	KNA	SUR	TTO
MORTALITY AND MORBIDITY										
Premature mortality from NCD	**Target 1:** A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.	✓	✓	✓	✓	✓	✓	✓	X	✓
	Indicator 1: Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.	X	✓	✓	X	✓	✓	X	✓	✓
Additional indicator	***Indicator 2:*** Cancer incidence, by type of cancer, per 100,000 population.	✓	✓	✓	✓	X	✓	X	X	X
BEHAVIORAL RISK FACTORS										
Harmful use of alcohol	**Target 2:** At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context.	✓	✓	✓	✓	✓	✓	✓	X	✓
	Indicator 3: Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context.	X	✓	✓	X	X	X	X	X	X
	Indicator 4: Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context.	X	✓	✓	X	✓	X	✓	X	X
	Indicator 5: Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context.	X	✓	X	X	X	X	X	X	X
Physical inactivity	**Target 3:** A 10% reduction in prevalence of insufficient physical activity.	✓	✓	✓	X	✓	✓	✓	X	✓
	Indicator 6: Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily.	X	✓	✓	✓	X	✓	X	✓	✓
	Indicator 7: Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent).	X	✓	✓	✓	X	✓	✓	✓	✓
Salt/sodium intake	**Target 4:** A 30% relative reduction in mean population intake of salt/sodium.	✓	✓	✓	X	✓	✓	✓	✓	✓
	Indicator 8: Aged-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years.	✓	✓	X	✓	✓	✓	✓	X	X
Tobacco use	**Target 5:** A 30% relative reduction in prevalence of current tobacco use.	X	✓	✓	X	✓	✓	✓	X	✓
	Indicator 9: Prevalence of current tobacco use among adolescents.	X	✓	✓	X	X	✓	✓	✓	✓
	Indicator 10: Age-standardized prevalence of current tobacco use among persons aged 18+ years.	X	✓	✓	✓	✓	✓	✓	✓	✓

(Continued on next page)

(Continued)

Framework elements	GMF Targets and Indicators	Countries								
		ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
BIOLOGICAL RISK FACTORS										
Raised blood pressure	**Target 6:** A 25% relative reduction in the prevalence of raised blood pressure, or contain the prevalence of raised blood pressure, according to national circumstances.	✓	✓	✓	✓	✓	✓	✓	X	✓
	Indicator 11: Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg) and mean systolic blood pressure.	X	✓	X	✓	✓	✓	✓	✓	✓
Diabetes and obesity	**Target 7:** Halt the rise in diabetes and obesity.	X	✓	✓	✓	✓	✓	✓	X	✓
	Indicator 12: Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose).	✓	✓	✓	✓	X	✓	X	✓	✓
	Indicator 13: Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex).	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Indicator 14: Age-standardized prevalence of overweight and obesity in persons aged 18+ (defined as body mass index ≥ 25 kg/m^2 for overweight and body mass index ≥ 30 kg/m^2 for obesity).	✓	✓	✓	✓	X	✓	X	✓	✓
Additional indicators	***Indicator 15:*** Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years.	X	✓	X	X	X	✓	X	X	X
	Indicator 16: Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day.	X	✓	✓	X	X	✓	X	✓	✓
	Indicator 17: Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥ 5.0 mmol/l or 190 mg/dl; and mean total cholesterol concentration.	X	✓	✓	X	✓	✓	✓	X	✓

(Continued on next page)

[a] "✓" means that the country includes a related target and /or indicator, which may or may not be exactly aligned with the respective GMF component, in terms of percentage set or definition.

[b] Several indicators in the GRD Plan are formulated to "show progress from national baseline to contribute to the relevant global target" for the relevant variable, but do not state the level of progress anticipated.

(Continued)

Framework elements	GMF Targets and Indicators	Countries								
		ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
NATIONAL SYSTEMS RESPONSE										
Drug therapy to prevent heart attacks and strokes	**Target 8:** At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.	✓	✓	X	✓	X	✓	X	X	✓
	Indicator 18: Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk ≥ 30%, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.	X	✓	X	X	X	✓	X	X	X
Essential noncommunicable disease medicines and basic technologies to treat major noncommunicable diseases	**Target 9:** An 80% availability of the affordable basic technologies and essential medicines, including generics required to treat major noncommunicable disease in both public and private facilities.	X	✓	✓	✓	✓	✓	✓	X	✓
	Indicator 19: Availability and affordability of quality, safe, and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities.	✓	✓	✓	X	✓	✓	✓	✓	X
Additional indicators	***Indicator 20:*** Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer.	X	✓	X	✓	X	✓[c]	X	X	X
	Indicator 21: Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply, as appropriate, within the national context and national programs.	X	✓	X	✓	✓	✓	✓	✓	✓
	Indicator 22: Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus, according to national programs and policies.	X	✓	✓	✓	✓	✓	X	X	✓
	Indicator 23: Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt.	✓	✓[d]	✓	✓	X	✓	X	✓	✓
	Indicator 24: Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants.	X	✓[e]	✓	X	X	✓	X	X	X
	Indicator 25: Proportion of women between the ages of 30-49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programs or policies.	✓	✓	✓	✓	✓	✓	✓	✓	✓

[c] Jamaica's National NCD Strategic and Action Plan 2013-2018 includes development of palliative care policy (page 56), rather than wording more specific to the indicator.
[d] Barbados introduced a tax on SSBs in 2015.
[e] Modified to "target population" rather than "infants."

5.5.5 Selected frameworks other than the WHO GMF

Table 7 summarizes the inclusion in the NCD MAPs of selected targets and indicators from the PAHO NCD PoA (3), the POSD (16), and the SDGs (4) which complement the GMF and address priority regional and Caribbean subregional issues. These include improvement in the quality of health services for NCD management; universal access to health and universal health coverage; gender issues; multisectoral action; public awareness programs; population surveys; monitoring and evaluation; and dissemination of information.

- Under the strategic line of action/priority area that deals with integrated disease management, all the NCD MAPs include implementation of the CARICOM Chronic Care Model (CCM) *(25)*, which reflects Indicator 3.1.1[62] in the PAHO NCD PoA 2013-2019 (3). The CARICOM CCM is based on the PAHO "Expanded Chronic Care Model: Integrating Population Health Promotion" (26), and offers countries comprehensive, collaborative, and integrated approaches to implement appropriate, relevant, and feasible community-, patient- and health system-level actions for NCD prevention and control.

- Although BRB, BLZ, and GUY mention gender issues in their discussions, only BRB includes a target of considering gender dimensions in NCD programs, with an activity to have all mortality and morbidity data reported by gender. GUY includes "disaggregation by gender"[63] of data collected on risk and risk-taking behaviors, and alcohol binge-drinking.

Annex VI summarizes the reflection of selected non-GMF international targets and indicators in the BRB, GUY, and SUR MAPs, as examples of how countries have addressed them.

[62] PAHO NCD PoA 2013-2019 Indicator 3.1.1: "Number of countries implementing a model of integrated management for NCDs (e.g. chronic care model with evidence-based guidelines, clinical information system, self-care, community support, multidisciplinary team-based care."

[63] This might be more appropriately phrased as "disaggregation by sex," which would allow the identification of gender issues.

Table 7. NCD MAPs in the Caribbean – Inclusion of targets and indicators from selected frameworks other than the WHO GMF[a]

Issues	Frameworks and relevant elements	Countries								
		ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
Improvement in quality of health services for NCD management	**Target – PAHO Plan of Action (PoA) Strategic Objective (SO) 3.1:** Improve the quality of health services for NCD management.	✓	✓	✓	X	✓	✓	✓	X	✓
	***Indicator* – PAHO PoA Indicator 3.1.1:** Number of countries implementing a model of integrated management for NCDs (e.g. chronic care model with evidence-based guidelines, clinical information system, self-care, community support, multidisciplinary team-based care).	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Target – PAHO PoA SO 3.2: Increase access to and rational use of essential medicines and technologies for screening, diagnosis, treatment, control, rehabilitation, and palliative care of NCDs.	X	✓	✓	X	✓	✓	✓	X	✓
	***Indicator* – PAHO PoA Indicator 3.2.3:** Number of countries utilizing the PAHO Strategic Fund and Revolving Fund and/or other cost-saving mechanisms to procure essential medicines and health technologies relevant to prevention, control and palliation for the four leading NCDs, e.g. chemotherapy drugs, palliation medications, insulin, dialysis and hemodialysis, hepatitis B and human papillomavirus (HPV) vaccines, and medications for the treatment of hypertension and diabetes.	X	✓	✓	✓[b]	X	X	X	X	X
	***Indicator* – PAHO PoA Indicator 3.2.4:** Number of countries with an official commission that selects, according to the best available evidence and operating without conflicts of interest, NCD prevention and/or treatment and/or palliative care medicines and technologies for inclusion in/exclusion from public sector services.	X	✓[c]	✓	✓	X	X	X	X	X

(Continued on next page)

[a] "✓" means that the country includes a related target and/or indicator, which may or may not be exactly aligned with the respective PAHO PoA or other framework component, in terms of percentage set or definition.

[b] With regard to alignment with PAHO PoA Indicator 3.2.3, GRD specifies use of the OECS PPS.

[c] Though not specifically mentioned in the Strategic Plan, BRB has a Drug Formulary Committee that selects and reviews medicines to treat infections and chronic diseases for inclusion in the National Drug Formulary, based on WHO criteria. See: http://drugservice.gov.bb/index.php?id=726.

(Continued)

Issues	Frameworks and relevant elements	Countries								
		ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
Universal access to health and universal health coverage	**Target – PAHO PoA SO 1.3:** Expand social protection policies in health to provide universal health coverage and more equitable access to promotive, preventative, curative, rehabilitative, and palliative basic health services, and essential, safe, affordable, effective, quality medicines and technologies for NCDs.	X	X[d]	✓	X	X	X[e]	X	X	X
	***Indicator* – PAHO PoA Indicator 1.3.1:** Number of countries with national social protection health schemes that address universal and equitable access to NCD interventions.	X[f]	X	✓	✓	X	X	X[g]	X	X
Gender issues	**Target – Sustainable Development Goals Target 5.c:** Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.	X	✓	✓	X	✓	X	X	X	X
	***Indicator* – CARICOM Port of Spain Declaration:** Take account of the gender dimension in all our programs aimed at the prevention and control of NCDs.	X	✓	X	X	X	X[h]	X	X	X
Multisectoral action	**Target – PAHO PoA SO 1.1:** Promote integration of NCD prevention in sectors outside of health, at the government level, and conducted in partnership with a wide range of non-state actors.	✓	✓	✓	X	✓	✓	✓	X	✓
	***Indicator* – PAHO PoA Indicator 1.1.1:** Number of countries with multisectoral NCD prevention policies, frameworks, and actions in at least three sectors outside the health sector at the government level and conducted in partnership with a wide range of non-state actors, as appropriate, (e.g. agriculture, trade, education, labor, development, finance, urban planning, environment, and transportation).	✓	✓	✓	✓	✓	✓	✓	✓	✓

(Continued on next page)

[d] BRB states that "…access to health care as a fundamental human right and universal health coverage… have largely been achieved." (Page 4, Barbados NCD Strategic Plan 2015-2019).

[e] Under Priority Area 2, "Comprehensive and integrated disease management for NCDs and injuries" in the JAM National NCD and Strategic Plan 2013-2018, Strategic Objective 2 mentions universal health coverage (page 39), but no target or indicator is seen.

[f] ATG already has a Medical Benefits Scheme.

[g] KNA's NCD Policy and Plan 2013-2017 mentions universal access to primary health care (pages 25-26).

[h] Although gender equality is included among the "overarching principles and approaches" of the JAM National NCD and Strategic Plan 2013-2018 (page 37), there are no specific gender-related targets or indicators, except the inclusion of gender-based violence under Priority Area 2, "Comprehensive and integrated disease management for NCDs and injuries" (pages 56-57).

(Continued)

Issues	Frameworks and relevant elements	Countries								
		ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
Multisectoral action	***Indicator* – CARICOM Port of Spain Declaration:** Establishment of National Commissions on NCDs or analogous bodies to plan and coordinate the comprehensive prevention and control of chronic NCDs.[i]	✓	X	✓	X	✓	✓	X	✓	✓
Public awareness programs	**Target – CARICOM Port of Spain Declaration:** Provide incentives for comprehensive public education programs in support of wellness, healthy life-style changes, improved self-management of NCDs, and embrace of the media as a responsible partner in efforts to prevent and control NCDs.	✓	✓	✓	X	✓	✓	✓	X	✓
	Target – CARICOM Port of Spain Declaration: Observance of the second Saturday in September as "Caribbean Wellness Day," in commemoration of the landmark Summit.	X	✓	✓	X	✓	✓	✓	X	✓
	***Indicator* – WHO NCD Progress Monitor Indicator 8:** Implementation of at least one recent (within past 5 years) national public awareness program on diet and/or physical activity. [j]	X	✓	✓	X	✓	✓	✓	✓	✓
Population surveys	**Target – PAHO PoA SO 4.1:** Improve the quality and breadth of NCD and risk factor surveillance systems to include information on socioeconomic and occupational and/or employment status.	X	✓	✓	X	✓	✓	✓	X	✓
	***Indicator* – PAHO PoA Indicator 4.1.2:** Number of countries with high-quality mortality data (based on international criteria for completeness and coverage and percentage of ill-defined or unknown causes of death) for the four main NCDs and other NCDs of national priority, e.g. CKD.	✓	X	X	X	X	X	X	X	X
	***Indicator* – PAHO PoA Indicator 4.1.4:** Number of countries with at least two nationally representative population surveys by 2019 of NCD risk factors and protective factors in adults and adolescents, in the last 10 years, that include: tobacco use, blood pressure, physical inactivity, alcohol use, fasting glucose and cholesterol, sodium intake, anthropometry, fruit and vegetable intake, disease prevalence, albumin, creatinine, sugar intake, and medication use.	✓	✓	✓	✓	✓	✓	✓	✓	✓

(Continued on next page)

[i] For status of National NCD Commissions in the Caribbean as at October 2017, see HCC webpage https://www.healthycaribbean.org/national-ncd-commissions-or-equivalents/.

[j] NCD MAPs for BLZ, GUY, and KNA include annual observance of Caribbean Wellness Day as suggested in the CARICOM Port of Spain Declaration, frequently targeting physical activity. The observance has been expanded to Caribbean Wellness Week in BLZ and KNA.

(Continued)

Issues	Frameworks and relevant elements	Countries								
		ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
Monitoring and evaluation	Target – PAHO PoA SO 4.2: Improve utilization of NCD and risk factor surveillance systems and strengthening of operational research with a view to improving the evidence base for planning, monitoring, and evaluation of NCD-related policies and programs.	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Indicator – PAHO PoA Indicator 4.2.1: Number of countries that produce and disseminate regular reports with analysis on NCDs and risk factors, including demographic, socioeconomic, and environmental determinants and their social distribution, to contribute to global NCD monitoring process.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Dissemination of information	Target – PAHO PoA SO 4.2: Improve utilization of NCD and risk factor surveillance systems and strengthening of operational research with a view to improving the evidence base for planning, monitoring, and evaluation of NCD-related policies and programs.	✓	✓	✓	✓	✓	✓	✓	X	X
	Indicator – PAHO PoA Indicator 4.2.1: Number of countries that produce and disseminate regular reports with analysis on NCDs and risk factors, including demographic, socioeconomic, and environmental determinants and their social distribution, to contribute to global NCD monitoring process.	✓	✓	✓	✓	✓	✓	✓	X	X

5.5.6 WHO "Best Buys"

Table 8 summarizes the inclusion in the NCD MAPs of WHO "Best Buys" policy options (2, Appendix 3). All the NCD MAPs include at least nine of the 14 WHO "Best Buys" policy options and all include the "Best Buys" related to smoke-free environments, unhealthy diet, physical activity, and cervical cancer screening. Countries strongly emphasize improving awareness, and strengthening and enforcing policies, legislation, and regulations to enable risk factor prevention and control, especially relating to unhealthy diets. Regarding physical inactivity, annual celebration of Caribbean Wellness Day, as encouraged in the POSD, is specifically included in six of the Plans (BRB, BLZ, GUY, JAM, KNA, and TTO), most focusing on the promotion of physical activity. Risk factor interventions highlighted in the MAPs include, but are not limited to:

- Unhealthy diet
  - ATG: Implementation of a Child Friendly School Initiative to prevent and reduce obesity and protect children from marketing of foods and non-alcoholic beverages high in saturated and trans fats, and free sugars.
  - BRB: Healthy food production in collaboration with the Ministry of Agriculture and social marketing.
  - BLZ: Negotiation to encourage voluntary action by the local food industry and education of local vendors.
  - ATG and GRD: Increase in excise taxes on food high in saturated and trans fat, sugar, and salt/sodium.
  - GRD: Counseling on healthy diets (and physical activity) for persons with NCDs and their families.
  - GUY: Testing nutritional content of food to ensure healthy products.
  - GUY and JAM: Policies requiring fast-food establishments to post the caloric content of menus.
  - KNA: Advocacy with large food manufacturers to follow the pledge by the Caribbean Association of Industry and Commerce to reduce the salt and fat content of processed and prepared foods; policy dialogue with local food manufacturers to ensure use of national dietary guidelines in food development; and nutritional labeling.
  - Salt reduction strategies, including a tax on high-salt snacks, and use of the WHO Tool Kit for Salt Reduction to achieve population-level results (ATG); reduction of salt intake from processed, home-cooked, and restaurant foods, with appropriate skills, awards, and incentives (GRD); and reduction in salt content of imported and locally produced foods, based on relevant standards (SUR).
- Physical inactivity
  - ATG and GRD envisage the creation of safe, open spaces for physical activity in communities, through physical planning and environmental engineering.
  - BLZ and KNA have extended CWD to Caribbean Wellness Week, and GUY plans to extend the observance to one month. BLZ includes nutrition, with plans to widen further the scope of the activities.
  - BLZ plans to implement work-based physical activity programs.
  - GRD emphasizes mandatory physical activity in the school setting.
- Reduction of harmful use of alcohol
  - BLZ and GRD are the only two countries planning excise tax increases on alcoholic beverages. BLZ favors voluntary regulation of alcohol advertising and promotion, while GRD's strategies to control the marketing and promotion of alcoholic beverages (and tobacco) include building civil society capacity to act as a strong consumer monitor.
  - ATG, BRB, GRD, GUY, and KNA intend to strengthen and enforce legislation and regulations, especially regarding the availability of alcoholic beverages to minors.
  - JAM, SUR, and TTO will implement public

education/social marketing campaigns to discourage harmful use of alcohol, especially among young people.
  - JAM will strengthen the capacity of health care services to deliver relevant prevention and treatment interventions.
  - TTO already has a national alcohol policy and breathalyzer legislation, and plans to establish a multisectoral alcohol policy committee.

- Reduction of tobacco use
  - ATG, BRB, BLZ, GRD, GUY, and JAM include increases in tobacco taxation, but only BRB and GUY specify the level of increase, respectively 75% and 50% of the sale price.[64]
  - ATG also includes enactment of the Tobacco Control Act.

Though countries emphasize strengthening and enforcement of legislation and regulations, several MAPs include advocacy for voluntary action by manufacturers, producers, and retailers to reduce the availability and consumption of unhealthy foods and non-alcoholic beverages.

Annex VII summarizes the reflection of the "Best Buys" in the MAPs of BRB, GUY, and SUR as examples of how countries have addressed them.

Overall, the interventions described in the MAPs are aligned with the targets, indicators, and "Best Buys" included.

Caribbean Wellness Day—a hit in the Caribbean!

In the 2007 Port of Spain Declaration, the CARICOM Heads of Government declared the second Saturday in September "Caribbean Wellness Day" in commemoration of the landmark Summit. Since then, most CARICOM countries have embraced annual observance of CWD, using the occasion to promote reduction of NCD risk factors. **Belize** and **St. Kitts and Nevis** have extended the observance to a week, and **Guyana** plans to extend it to a month.

The 2016 evaluation of the POSD *(18)* found that CWD has been observed in 19 of the 20 CARICOM Member Countries, and there has been successful involvement of civil society and the private sector, fostering a whole-of-society response to NCDs. CWD activities typically included health fairs, exhibitions, healthy eating demonstrations, sponsored walks, mass public exercise sessions, and health screening *(18)*.

[64] WHO's MPOWER measures for tobacco control recommend at least 70% excise tax share in final consumer price of cigarettes. See http://www.who.int/tobacco/mpower/raise_taxes/en/index3.html, accessed 10 October 2017.

Table 8. Inclusion of WHO "Best Buys" policy options for NCD prevention and control in selected NCD MAPs in the Caribbean[a]

WHO "Best Buys"	Countries								
	ATG	BRB	BLZ	GRD	GUY	JAM	KNA	SUR	TTO
Tobacco use									
1. Reduce affordability of tobacco products by increasing tobacco excise taxes.	✓	✓	✓	✓	✓	✓	X	X	✓
2. Create by law completely smoke-free environments in all indoor workplaces, public places, and public transport.	✓	✓[b]	✓	✓	✓	✓	✓	✓	✓[c]
3. Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns.	✓	✓	✓	X	✓	X	X	✓	✓[d]
4. Ban all forms of tobacco advertising, promotion, and sponsorship.	✓	✓	✓	✓	✓	✓	X	✓	✓[e]
Harmful use of alcohol									
5. Regulate commercial and public availability of alcohol.	✓	✓	✓	✓	✓	X	✓	✓	✓[f]
6. Restrict or ban alcohol advertising and promotions.	X	✓	✓	✓	✓	X	✓	✓	X
7. Use pricing policies such as excise tax increases on alcoholic beverages.	X	X	✓	✓	X	X	X	X	X
Unhealthy diet and physical inactivity									
8. Reduce salt intake.	✓	✓	✓	✓	✓	✓	✓	✓	✓
9. Replace trans fats with unsaturated fats.	✓	✓	✓	✓	✓	✓	✓	✓	✓
10. Implement public awareness programs on diet and physical activity.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cardiovascular disease and diabetes									
11. Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk approach) and counselling to individuals who have had a heart attack or stroke, and to persons with high risk (≥ 30%) of a fatal and nonfatal cardiovascular event in the next 10 years.	✓	✓	X	✓	✓	✓	✓	X	✓
12. Acetylsalicylic acid for acute myocardial infarction.	X	X	X	X	✓	X	✓	X	X
Cancer									
13. Prevention of liver cancer through hepatitis B immunization.	X	✓	✓	X	X	✓	X	X	X
14. Prevention of cervical cancer through screening—visual inspection with acetic acid (VIA) (or Pap smear [cervical cytology] if very cost-effective)—linked with timely treatment of pre-cancerous lesions.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Number of Best Buys included (out of 14)	**10**	**12**	**12**	**11**	**12**	**9**	**9**	**9**	**10**

[a] "✓" means that the MAPs include related text in strategies (GRD), indicators, targets, outcomes, outputs, and/or activities; the text in the Plans may not be phrased exactly as in the "Best Buys."
[b] BRB enacted tobacco legislation for smoke-free environments and protection of minors from tobacco products in 2010.
[c] TTO enacted tobacco legislation in 2009, updated in 2015 http://rgd.legalaffairs.gov.tt/laws2/alphabetical_list/lawspdfs/30.04.pdf. The TTO NCD Strategic Plan specifies, in the Year 1 Action Plan 2016-2017, amendments to the legislation to include Electronic Nicotine Delivery Systems/Electronic Non-Nicotine Delivery Systems (ENDS/ENNCS) (page 45).
[d] TTO implemented regulations on tobacco packaging and labeling in 2013.
[e] Included in the TTO Tobacco Control Act 2010.
[f] The TTO NCD Strategic Plan specifies, in the Year 1 Action Plan 2016-2017, development of policy on harmful use of alcohol by children and youth (page 46).

5.5.7 Identification of resources

Financial resources

- The main source of funding for the respective NCD MAPs is the government, through the budgetary allocation to the MoH or, in the case of TTO, through an IDB loan (see below). In the countries visited, although the government allocation appears to be based on historical amounts, GUY and SUR report some adjustment to the needs of the NCD MAP.

- Five countries—ATG, BRB, BLZ, GUY, and SUR—include estimated costs for the implementation of the respective Plans. ATG and SUR include, respectively, costed Activity Plan and Workplan for 2015-2016, while BLZ gives estimated costs of major outputs/activities for Year 1, Years 2-10, and total cost over the 10-year implementation period, with 10% contingency added. Separate implementation plans for BRB and GUY (draft) include estimated costs of activities.

- ATG includes activities "Establish an earmarked tax for prevention and control of NCD programs" and "Establish diversion of existing taxes (sales tax from tobacco, snacks high in salt, trans fat, sugar, etc.)" under Strategic Area 1, Strengthening coordination and management of NCD prevention and control. The LF also includes an activity to "secure budgetary allocations for prevention and control of NCDs to be implemented via multisectoral approaches."

- BRB mentions the two main sources of funding: government, through the Ministry of Finance and the overall health budget, and PAHO/WHO. The MAP includes activities to build resource mobilization capacity.

- BLZ notes that "the costs of implementing a nation-wide NCD plan are a tiny fraction of the total health expenditure compared to the burden of disease that NCDs cause. Estimated costs for the first year[65] amount to less than 3% of the recurrent health expenditure for 2011/12 and the costs for the subsequent years are even less. This must be viewed as an investment and one that is quite small relative to the formidable costs of NCDs."

- GRD includes a section on "Financing," which emphasizes the mobilization of financial resources and makes recommendations for the government's actions in allocating and mobilizing financial resources for NCD prevention and control. These include redistribution of the health budget; use of taxes on unhealthy products;[66] strengthening of public-private partnerships; and development and implementation of a fee-for-service mechanism, currently being explored through a national health insurance scheme.

- GUY includes a section on "Resource mobilization/Health financing"; LF objectives for strengthened MoPH capacity to mobilize and allocate resources for improving quality of services and health outcomes; and objectives for resource mobilization by public, private, and civil society entities. The Plan suggests possible sources of funding and includes mobilization of resources as one of the functions of the NNCDC. Some activities are funded by partners, including PAHO/WHO, Insulin-for-Life, and the Diabetes Care Project.

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65 First-year costs estimated at BZ$ 3,118,500 (approximately US$ 1,559,250).

66 GRD specifically includes a strategy "Ensure that a proportion of the revenues from taxes on food, alcoholic beverages, and tobacco go to the health sector, primarily PHC, National Health Insurance, and civil society for prevention and treatment of related problems, including public health advertising (or counter-advertising)."

- JAM includes a short section on "Budgetary considerations and contingency actions," indicating that the government will allocate resources to core staff positions and key projects, and that funds will be sought through program and project grants. Possible funding agencies identified include the National Health Fund; the Culture, Health, Arts, Sport, and Education entity; corporate foundations; PAHO/WHO; IDB; and the World Bank. The Plan's LF includes activities "Mobilize resources for the NCD program in coordination with the Ministry of Finance and the Planning Institute of Jamaica" and "Submit grant applications to local, regional, and international funding agencies to fund specific segments of the NCD program."

- KNA includes expected results addressing the planning and implementation of resource allocation and mobilization strategies, and increased national capacity for securing additional revenue streams.

- TTO received a US$ 48 million loan from the IDB for the implementation of the NCD Plan, announced at the launch of the Plan in May 2017. However, the Plan recognizes that "all loans are finite and have to be repaid" and commits the Government to "explore creative mechanisms to dedicate the revenues derived from tobacco, alcohol, and other such products for the prevention and control of NCDs and for the operations of the 'Commissions', as stated in the Port of Spain Declaration."

Human resources

- No NCD MAP includes a comprehensive estimate of the specific human resources (HR) assigned to the Plan. However, BLZ and GUY refer to needed human resources: BLZ needs a dedicated coordinator for oversight, monitoring, and execution of the Plan; while GUY indicates need for the NNCDC, focal points, NCD coordinator, and filling of vacancies within the Chronic Disease Unit and the Department of Disease Control.

Good practice in estimating implementation costs

Belize's MAP summarized the inputs for estimation of its implementation costs, namely: 2010 National Health Accounts, audit of the National Health Insurance program, costs related to training, previous surveys, and MoH meetings, and the original estimates in the Draft Belize National NCD Strategy 2012-2016.

Good practice for disbursement of funds for NCD prevention and control

Guyana's MoH identifies NCD prevention and control activities for implementation and develops an annual workplan and budget for submission to the Ministry of Finance. The budget in 2014 was based on 2013 expenditure for NCDs, but since then the annual budget has been developed based on activities related to the priority lines of action in the NCD MAP.

Indicators in the MAP have been consolidated into a Program Monitoring Framework (PMF) and the MoH produces three-monthly progress reports, based on the PMF. These reports are submitted to allow quarterly draw-down of the funds allocated by the Ministry of Finance.

- In the NCD MAPs (except SUR), under the priority area/line of action for integrated management of NCDs or under other priority areas, the recruitment, training, and capacity development of various categories of HR for NCD prevention and control are included among the strategies, activities, and/or outputs. Examples of statements made include:
  - ATG: Provide continued training for health professionals to effectively deal with NCD prevention and control; provide incentives and motivational packages for health care providers.
  - BRB: Identification of HR adequate for the multisectoral NCD response, with

definition of skills and competencies for HR and training institutions, and projections for "NCD health manpower needs"; strengthened capacity of the National Nutrition Center; strengthened clinical competencies of health care professionals in the management of diabetes, asthma, and hypertension; and capacity building for the media and tool kits for faith-based organizations and NGOs, in support of risk factor reduction.

- BLZ: Revision of the Human Resources for Health Plan, and medical and professional education.
- GRD: Ensure that health workers in the public and private sectors receive pre- and in-service training in clinical and population health methods, best practices, health literacy, professionalism and ethics, and patient-provider communication; enforce continuing medical education (CME) requirement for health workers and ensure that general and NCD-specialized health workers in the public and private sectors participate in required number of credits/hours of NCD-related CME.
- GUY: Training of several categories of health professionals at various levels of care to participate in integrated NCD management; training of community educators from FBOs and NGOs; and training for stakeholders (public, private, and civil society) in resource mobilization and grant applications.
- JAM: Adequate staff at the MoH, RHAs, and public health facilities to support the NCD program.
- KNA: NNCDC, NCD focal point, and health workforce training in NCD management; capacity building for health professionals and civil society in networking, information sharing, and advocacy; capacity building for the media, MoH, and NNCDC regarding the development, implementation, and evaluation of communications and social media marketing strategies and plans; and training of stakeholders in resource mobilization and grant writing.
- TTO: Health professionals and NGOs for smoking cessation services; workplace lay health promoters; training of parents, teachers, and civil society groups in advocacy for healthy foods; training of trainers for CCM implementation in PHC; development of an HR Plan for the implementation of the NCD MAP; and capacity-building opportunities for stakeholders and partners.

Partners for NCD MAP implementation

- Development partners, primarily PAHO/WHO, contribute to NCD MAP implementation through funding of specific activities in the agreed TC program and direct TC.

- Other named partners include:
  - CARICOM
  - CARPHA
  - CARMEN network
    - GUY indicates that the CARMEN network can contribute to implementation of the PAHO Regional NCD Strategy, with which the country's NCD MAP is aligned. In a section titled "CARMEN," the MAP notes four priorities identified for the Caribbean subregion in 2009: Design and development of National Commissions; Support for development and implementation of tobacco legislation; Development of integrated approach to NCDs, mainstreaming surveillance and other actions within the health care model; and Capacity development for resource mobilization.
    - JAM, under the strategy "Raise the priority status of NCDs," includes an activity "Participate actively in PAHO/CARMEN network to share lessons learned and identify successful practices that Jamaica can introduce."
  - Civil society
  - IDB
  - UWI

5.6 Validation of the NCD MAPs

Official publication and branding of all the NCD MAPs by the respective Ministries of Health and inclusion of a Foreword by the respective Ministers of Health (except GRD and JAM) demonstrate high-level validation of the Plan and political commitment. There is at least tacit—and in some countries explicit—commitment to the NCD MAP at the highest political levels, with acceptance of the need for multisectoral, WoG, WoS, and HiAP approaches.

- BRB: The NNCDC is a legal entity approved by the Cabinet of Barbados, and is responsible and accountable for the NCD MAP. BRB is the only country with a Special Envoy for NCDs "to champion the cause and to challenge key decision makers and opinion leaders to get involved in the NCD response." The Special Envoy is also the Chair of the NNCDC.
- BLZ: There was an official launch of the Plan by the Minister of Health, reported in various media and online.
- GUY: The NNCDC, though currently awaiting reactivation, is located in the Office of the President.
- SUR: The government assigned funds for development of the NCD MAP after the 2011 UNHLM.
- TTO: In May 2017, the Minister of Health officially launched the Strategic Plan.[67]
- Only JAM and TTO specifically mention, respectively, a communication strategy for the Plan, with inclusion of activities to highlight the burden of NCDs; and the development of a communication strategy for the NCD MAP as part of the Phase I implementation.

5.7 Implementation of the NCD MAPs

A detailed assessment of the degree of implementation of the NCD MAPs is outside the scope of this analysis, and is not evaluable through the desk review of the MAP. Selected issues related to MAP implementation gleaned from the desk review and expanded through the country visits are summarized below.

Implementation plans and status

- All the NCD MAPs indicate, in one or other section of the document, the partners in non-health government sectors, civil society, and the private sector, that can or should be involved in the implementation of the MAP. Some MAPs outline the roles and responsibilities of the partners.
- Five countries—ATG, BRB, GUY (draft), SUR, and TTO—have implementation plans for, respectively, 2015-2016, 2015-2019, 2016-2018, 2015-2016, and for Year 1 of the NCD MAP, the last as part of the phased implementation of the MAP in TTO, where annual Action Plans will be developed.
- The ATG Activity Plan, BRB Action Plan, draft GUY implementation plan, and SUR Workplan

Tailoring interventions to the local environment

Cultural factors can influence health behavior, and must be taken into consideration in planning and implementing interventions. **Grenada** will consider traditional medicine as an adjunct to biomedicine in addressing NCDs. **Jamaica** recognizes the nexus between cultural beliefs and practices, and intends to conduct relevant research and increase knowledge of the use of complementary and alternative medicine.

[67] Online television news report at http://ctvtt.com/ctv/index.php/c-news/news/item/48315-health-ministry-launches-non-communicable-diseases-strategic-plan, accessed 12 October 2017.

include the costs of the activities; the BRB Action Plan also includes timelines (by year), performance indicators, and comments and assumptions, while the SUR Workplan includes strategic, main, and sub-activities.

- Though BLZ, GRD, JAM, and KNA do not have implementation plans, the LF matrices in the NCD MAPs of three of them (BLZ, JAM, and KNA) include activities and timeframes, and activities can be extracted from the strategies outlined in the GRD plan.

- In the three countries visited (BRB, GUY, and SUR), the implementation status was subjectively assessed as "satisfactory" by most key informants. However, the assessment was based on their knowledge of ongoing activities for NCD prevention and control in the country, rather than formal M&E activities related to the NCD MAP. Several informants expressed the opinion that much was being done by various entities that related to the content of the MAP, but that this was occurring by happenstance, rather than by design.

Selected frameworks in, and collaboration with, other sectors and departments

The LF matrices or other sections of the Plans include partners and key stakeholders, and current, planned, or possible collaboration that can contribute to MAP implementation. For example:

- ATG: Includes annexes summarizing policy links with other government sectors, civil society, and the private sector, as well as the main ministries and other partners responsible for the prevention and control of the main NCD risk factors.

- BRB: Cites collaboration between Health and Agriculture in the functioning of the National Nutrition Center to address food and nutrition security; Health and Education in the School Meals Program; Health and Finance to impose tobacco taxes; and Health and the National Sports Council in the establishment of a Task Force on Physical Activity and Exercise.

- GUY: Cites the Guyana *Food & Nutrition Security Strategy 2011-2020,*[68] developed by the Ministry of Agriculture; Strategic Plan of the Ministry of Culture, Youth and Sport, which has an objective to increase physical activity in order to reduce NCD incidence; MoPH support for the Ministries of Education and Agriculture in the rollout of the School Canteen Policy and the Food Safety and Security Policy; integration of sensitization, screening, management, and referral into the protocols of all MoPH service delivery programs, especially maternal and child health, tuberculosis, and HIV; and contribution of the RHAs to the implementation of the MAP.

- JAM: Works with the Ministry of Agriculture on availability of fruits and vegetables; food industry and restaurants on healthy eating; Ministry of Labour and Social Security on passage of the Occupational Safety and Health Act; Road Safety Council on road traffic injuries; media, telecommunications, NGOs, and FBOs on targeted settings-based interventions; Ministries of National Security, Education, Social Security, Youth and Local Government, and CSOs on violence prevention; and Ministry of National Security, Transport and Works on injury data.

- TTO: Intends closer collaboration with the RHAs.[69]

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[68] A Google search revealed that the Guyana Food & Nutrition Strategy 2011-2020 has an objective "To reduce the incidence and prevalence of diet-related NCDs and enhance their control and management" under Goal 2. The Strategy is at http://infoagro.net/programas/seguridad/politicas/RegionCaribe/estrategia_guyana.pdf.

[69] The National NCD Alliance of Trinidad and Tobago was launched in March 2017. The first national NCD alliance in the Caribbean, the coalition of nine CSOs may be a contributor to NCD MAP implementation in TTO. See https://www.healthycaribbean.org/trinidad-tobago-ncd-alliance-launched/.

Food and nutrition security approaches in Guyana

The NCD MAP highlights Guyana's self-sufficiency and status as a net exporter of food in the CARICOM region, noting that food availability is not a major issue. However, accessibility and utilization of sufficient quantities of the right foods are of great concern. The Ministry of Agriculture's *Food and Nutrition Security Strategy 2011-2020*[70] addresses this issue and includes an objective to reduce the incidence of NCDs. Complementary guidelines and frameworks mentioned include the 2004 Guyana Food-based Dietary Guidelines.[71]

Centers of Excellence for diabetes care

In **Barbados**, the MoH collaborated with the Barbados Diabetes Foundation, an NGO, to establish the Maria Holder Diabetes Center for the Caribbean in 2014. The Center provides a holistic approach to diabetes management and its vision is to become a Center of Excellence for diabetes surveillance and management in Barbados and the Caribbean by 2030.[72]

Guyana established a National Center of Excellence for diabetes care at the Georgetown Public Hospital Corporation, the main public tertiary care hospital in the country, and also established eight regional foot care centers. These initiatives took place through the Guyana Diabetes and Foot Care project (2007-2013) and the successor Guyana Diabetes Care project (2015-2018), overseen by the Banting and Best Diabetes Center at the University of Toronto. The Guyana Diabetes Foot Care project resulted in a 68% reduction in major amputations at the GPHC.[73]

Sustainability mechanisms

Not all NCD MAPs take into consideration the sustainability of the outputs and outcomes. However, specific mention is made in the following MAPs:

- GUY: Continued MoPH funding for NCDs; integration of NCD-related activities into other program protocols.
- JAM: Government's allocation of resources to core staff positions and key projects; resource mobilization.
- TTO: Government's intent to adequately resource the national coordinating mechanism and the NCD Unit in the MoH, both of which will collaborate to develop a resource mobilization strategy for the sustainability of critical interventions after the IDB loan period ends.

5.8 Monitoring and evaluation

- While most of the NCD MAPs are cognizant of the need for M&E, and include strengthening of information systems for health to provide relevant information as part of the NCD MAP, only BLZ, GRD, JAM, SUR, and TTO include specific sections on this important function.
  - BLZ: The Line of Action on Surveillance, Monitoring, and Evaluation includes outputs and activities related to annual reviews of the Plan, and mid-term and

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70 Guyana Food and Nutrition Security Strategy available at http://bit.ly/2vOVLyQ.

71 A project to revise the dietary guidelines was launched in 2016. See Guyana Chronicle newspaper 29 April 2016. Available at http://guyanachronicle.com/2016/04/29/revised-dietary-guidelines-launched.

72 Information on the Maria Holder Diabetes Center is at http://bit.ly/2tqx7Bk.

73 Lowe J, Sibbald RG, Taha NY, et al. The Guyana Diabetes and Foot Care Project: Improved diabetic foot evaluation reduces amputation rates by two-thirds in a lower middle income country. *Int. J. of Endocrinology*, 2015; Article ID 920124, http://bit.ly/2w45n9y. This article updates to eight the number of regional foot care centers established—six were mentioned in the GUY NCD MAP.

final evaluations, in addition to addressing surveillance data and disease registries.
- GRD: Includes an M&E Framework that outlines the governance, methods, types and sources of data, and responsible entities, as well as the formulation and dissemination of annual reports.
- JAM: Includes a section on M&E, with lead indicators and targets. This section states that "a comprehensive M&E plan will be developed as a companion document to the plan." There is also Priority Area 3, Surveillance, Research, Monitoring and Evaluation, which includes specific actions to make use of national data, and an objective under Priority Area 5, Leadership, Governance and Capacity Building, that speaks to maintaining the "annual national NCD review and conference."
- SUR: The M&E Plan includes sections on impact, outcome, and process indicators; management and information flows in the M&E system; data management and analysis; and NCD indicator reporting and use. It includes annual targets for many indicators over the period 2014-2020 and a 2015-2016 Workplan, and refers to an external end-of-NCD MAP evaluation.
- TTO: Includes a section on the approach to implementation and M&E. The National NCD Policy includes a brief section on M&E and an appendix "Strategic Priorities and Outcomes 2017-2021" that includes targets.

- The inclusion of LF matrices with objectives, indicators, and targets in most of the Plans provides the basis for periodic M&E. However, in the three countries visited, there was no formal mechanism for assessing progress in the implementation of the NCD MAP.
  - BRB: The SMOH/NCDs reports to the NNCDC and the CMO periodically on progress in NCD prevention and control, but not with clear reference to the NCD MAP.
  - GUY: The NCD Coordinator reports on data received and analyzed by the MoH statistics unit, and submits the report to the CMO, but not in the framework of the NCD MAP.
  - SUR: Despite the detailed M&E Plan, the M&E system and activities have not yet been implemented, pending the appointment of the NNCDC.

Good practices in addressing monitoring and evaluation

Grenada's M&E framework speaks to monitoring outcomes, exposures, health system response, and process indicators, and specifically references the WHO GMF. It gives the objectives, strategies, and governance of M&E. The M&E function will be under the purview of an intersectoral National Health Status Steering Committee, convened by the Minister of Health or designee, to be coordinated and chaired by the Chief of the Epidemiology Unit of the MoH. The preparation of an Annual Grenada Health Status Report is planned, to include the burden of NCDs, their risk factors, and related social determinants. The report will be widely disseminated in various media formats, and an Annual Health Minister's Conference—open to national and regional stakeholders, including the public —is suggested for dissemination and discussion of the Annual Health Report.

Suriname gives the purpose of its M&E Plan, and key concepts in M&E and results-based management. The Plan presents a graphic with the management and information flow for the NCD M&E system, and describes data quality and verification systems, NCD data management and analysis, and NCD indicator reporting and use. The reports to be prepared include a *semi-annual report* based on selected indicators, distributed to the Director of Health, the NNCDC, and key stakeholders; an *annual report* summarizing progress on all performance indicators in the MAP, distributed to all implementing partners and stakeholders; a *mid-term evaluation report* with a comprehensive review of the national response to NCDs as articulated in the MAP, prepared by an external evaluator; and an *end-of-MAP evaluation report* with a full assessment of accomplishments against all performance indicators. The end-of-MAP evaluation will be conducted by an external evaluation team and will provide strategic information to reformulate a national response to NCDs for the period 2016-2021.

6. Discussion

6.1 Success factors

- All countries are seized of the importance of NCD prevention and control. The emphasis placed on CARICOM frameworks, including the Caribbean Charter for Health Promotion, the Port of Spain Declaration, and the CARICOM NCD Action Plan 2011-2015, while taking into account the PAHO Regional NCD Plan of Action and the WHO NCD Global Action Plan and Global Monitoring Framework, is especially commendable. By adopting such an inclusive approach, the countries address not only their national priorities for NCD prevention and control, but also their commitments to contribute to, and report on, subregional, regional, and global efforts, avoiding duplication of interventions and reporting requirements wherever possible.

- The adoption of regional and subregionally adapted interventions, such as the Chronic Care Model, demonstrates acceptance of the need to tailor internationally-recommended interventions to national and subregional realities.

- In five of the nine countries, a consultant was recruited to draft the MAP, which was then subjected to stakeholder consultations and review prior to finalization. The recruitment of external assistance is a realistic response to the limited human resources available in the public health sector in many Caribbean countries.

- PAHO/WHO undertook TC with seven of the nine countries in the development of the NCD MAP. This is an important part of the Organization's TC, which should be strengthened to enable countries to improve the planning process, products, and cycle. CARPHA and other development agencies also contributed.

- It is clear that NNCDCs have been accepted as an important governance mechanism for NCD prevention and control in the Caribbean, notwithstanding the stumbling blocks.

6.2 Strengths

NCD MAP development

- Participatory development of the MAP, involving multiple government sectors, and in most cases, civil society and the private sector, though the extent to which the latter two were involved is not always clear.

- Use of data collected and analyzed by national entities, despite limited capacity in several of the countries under consideration. The NCD MAPs of the countries reviewed all contain valuable information and justification for approaches taken to NCD prevention and control; they highlight national data in the context of subregional, regional, and global commitments, plans, and guidance.

- Recognition of the principles of equity, multisectorality, UAH-UHC, and human rights, as well as SDH, WoG, WoS, HiAP, and culturally appropriate approaches, which demonstrates awareness and acceptance of their importance.

- Emphasis on improved access to services facilitated by decentralized health systems in several countries, and the intent to strengthen and/or reform PHC in many Plans.

- Inclusion of the establishment or continued functioning of multisectoral NNCDCs as an important entity in coordination, implementation, and oversight of the NCD MAP.

- Definition of lead agencies and partners from various sectors in the MAPs' logical framework matrices, a demonstration of the intent to pursue multisectoral action.

- Emphasis on prevention and risk factor reduction in all the NCD MAPs, even as they address integrated management of persons who already have NCDs.

- Ratification of the WHO FCTC, with evident intent in most countries to pursue measures addressing many of the components of the FCTC.

- Incorporation of the WHO "Best Buys" in policy interventions.

- Inclusion of indicators and targets from the WHO NCD GMF.

- Inclusion in the GRD MAP of risk analysis and risk mitigation strategies.

- Specific consideration of childhood obesity prevention where the national data show alarming increases in prevalence, as in ATG, BRB, and TTO.

- Cognizance of the important influence that cultural factors can exert on health behavior, as evidenced by the intent to conduct relevant research in JAM, and consideration of traditional medicine as an adjunct to biomedicine in GRD.

- Development partners' technical cooperation, and collaboration with development partners, to conduct periodic risk factor surveys to enable identification of trends, including STEPS, GYTS, and GSHS. The importance of such collaboration cannot be overstated, as many countries would not be able to afford or implement such surveys on their own. The GSHS, in particular, provides information on overweight, obesity, physical activity, and dietary behavior, including consumption of carbonated soft drinks, among 13-15 year-olds in schools. This information will be important in guiding and monitoring interventions to prevent childhood obesity, an emerging priority in the Caribbean.

- Enhanced research in countries with well-established UWI campuses—BRB, JAM, TTO, and the Open Campus[74] —in keeping with academic tradition. In addition, countries with well-established research entities, traditions, and systems tend to attract international entities that conduct research at national and subnational levels, adding to the database on various topics, including NCDs.

- Recognition of the value of regional resources such as the CARMEN network in the planning and implementation of the NCD MAP.

NCD MAP implementation

- Celebration of CWD, reported by almost all the countries, focusing mainly on physical activity, but with plans for expansion of the scope in at least one country.

- Consideration of sustainability issues in several countries, through integration of NCD-related activities into other thematic programs, and government's commitment to fund lifestyle surveys, maintain the NNCDC, provide funding—at least in part—for NCD prevention and control, and seek additional resources.

- Inclusion or mention of resource mobilization strategies; the identification of the diaspora as a resource for GRD is particularly noteworthy.

NCD MAP M&E

- Efforts in five countries—BLZ, GRD, JAM, SUR, and TTO—to highlight M&E frameworks, plans, and/or performance indicators.

[74] Information on the UWI Open Campus is at http://www.open.uwi.edu/.

6.3 Gaps

NCD MAP development

- Less than optimal alignment between the content of the situation analyses and the priorities included and explicated in the LF matrices.
- Focus only on health sector actions, despite the multisectoral intent of the Plans. There is limited analysis of civil society and private sector actions or contributions, and the HCC, the only umbrella civil society organization working in NCDs in the subregion, is mentioned as a possible partner only in the BRB NCD MAP.
- There is no discussion of possible conflict of interest and the need to exert due diligence regarding private sector involvement, anticipating and managing conflicts, should they arise.
- Inadequate national health information systems and related data collection, analysis, and reporting, leading to gaps in the production of timely, up-to-date epidemiological information on NCDs and their RFs to facilitate the development of situation analyses and contribute to policy and program planning. Technical persons in MoH and other units who collect, analyze, and report on data seem to do so in silos, without receiving feedback on how their reports and the data are used, and without seeing the "bigger picture" and the impact of their contributions.
- Limited use of existing data, for example from STEPs, GYTS, and GSHS, to provide baselines and determine targets.
- Limited analysis of data and information from non-health government sectors to facilitate reporting on the social determinants of health.
- Inadequate disaggregation of data by variables other than age and sex to demonstrate equity gaps, including by ethnicity, geographic location, education, and socio-economic status, resulting in limited identification of vulnerable or disadvantaged groups and targeted interventions to reduce health inequities, fulfill human rights obligations, and address the social determinants of health.
- Little or no mention of universal access to health, universal health coverage, and social protection as means of reducing inequities.
- Hesitancy in including excise taxes on alcohol among the interventions to reduce harmful use of alcohol, no doubt due to the economic importance of alcohol (rum) production in the region; the Caribbean's tourism-fostered reputation as a place where good times generally include alcohol ("sun, sea, and rum"); and cultural norms—slowly changing—that promote alcohol use, even as efforts to reduce its harmful effects are implemented.
- Exclusion of consideration of imposing or increasing excise taxes on tobacco products as a policy option in some countries, perhaps due to fear of industry backlash and economic considerations regarding reduction in, or loss of, current tax revenue.
- Apparent overdependence on negotiation with, and voluntary measures by, food importers and manufacturers to facilitate healthy diets, despite the intent to formulate policies, enact legislation, and develop and enforce regulations to address risk factors.
- Areas of unclear formulation and layout of the LF matrices, so that means–end relationships are not evident, and some indicators and targets are not sensitive to the relevant objectives.
- Little or no costing of the NCD MAP—except in ATG, BRB, BLZ, GUY, and SUR—to produce an indicative budget that can be used to guide resource allocation and mobilization.

- Limited, or lack of, editing of the documents to ensure clarity, legibility, and ease of reference.

NCD MAP implementation

- Overall, it appears that despite the inclusion of non-health government sectors, civil society, and the private sector in the development of the MAPs, and the identification of responsibilities for a variety of stakeholders, in reality the Plans are seen as a framework for the MoH's action. Not enough has been done in any of the countries to change that perception and use the MAP as a framework to encourage and integrate the active participation of non-health government sectors, civil society, and the private sector in NCD prevention and control efforts.

- Inadequate advocacy for, and dissemination, promotion, and use of, the NCD MAP as a frame of reference for multisectoral action in NCD prevention and control. Often entities in the government, including the MoH, civil society, and the private sector are carrying out activities which contribute to the Plan's objectives, but are not aware that they are doing so. This leads to missed opportunities for possible adjustment of those activities and collaboration to better contribute to the efficient and effective execution of the Plan, and use of all available resources.

- Limited participation of non-health government sectors, civil society, and private sector in the implementation of the plans in the countries visited. A contributing factor is the close identification of the NNCDC and NCD MAP with the MoH, except for the NNCDC in GUY, which was established in the Office of the President. The close ties between the NNCDCs and the Ministries of Health, and the perception of the NCD MAP as the responsibility of the MoH, form barriers to the acceptance of the NCD MAP as the business of other government sectors, civil society, and the private sector.

- No government commitment to increase the allocation of resources for NCD MAP implementation and to the overall NCD budget line, or to create such a line item where none exists.

NCD MAP M&E

- Limited formal monitoring and evaluation of the NCD MAPs, evident in the three country visits conducted. Though there is regular reporting to the NNCDC and/or the Minister of Health on progress in NCD prevention and control, there is no evidence that the reporting is done against the objectives, indicators, and targets of the NCD MAPs, or that they are routinely referenced in implementing activities.

6.4 Lessons learned

- Available tools and guidelines such as the WHO NCD MAP Tool, or well-developed NCD MAPs from other countries, are very useful in guiding the development of the NCD MAPs, adapting the guides as needed to the national context.

- Expertise exists in Planning Units, within or outside of the MoH, and can be tapped into for the development, monitoring, and evaluation of national NCD MAPs. Planning Unit personnel can provide technical advice on situation analyses; structure and content of logical framework matrices; and development and content of monitoring and evaluation frameworks or plans, with appropriate and evaluable performance indicators.

- Costing of the NCD MAPs is important, to provide an indicative budget to guide resource allocation and resource mobilization, and resource mobilization strategies should be summarized in the MAP.

- Once sensitized to the burden of NCDs, made aware of how NCDs affect their particular portfolios and overall national development, and actively involved in the development of plans and programs, non-health government sectors show appreciation and willingness to participate, as evident in the HiAP initiative in SUR.

- Wide dissemination, promotion, and use of the NCD MAP, with "excerpts" and "translation" as appropriate for various sectors and audiences, can facilitate their buy-in and contribution to the implementation, monitoring, and evaluation of the Plan.

- Technical cooperation in strengthening national information systems for health and aspects related to NCDs, including risk factor surveys and disaggregation of data, is critical to assisting countries in assessing trends; developing equitable, evidence-based policies, programs, and interventions; and undertaking periodic monitoring and evaluation of their NCD MAPs.

- Provision of information on, and promotion of, evidence-based recommendations for health system interventions is important to prevent countries from implementing strategies that have been shown to be barriers to the achievement of universal health and universal health coverage. One such strategy is the inclusion of fee-for-service as part of a national health insurance scheme, which is a planned action in the one of the NCD MAPs.

7 Recommendations for strengthening development, implementation, monitoring, and evaluation of the NCD MAP

7.1 Stakeholder engagement

- Ensure the engagement of key stakeholders from the MoH; other government ministries/entities; civil society; and the private sector in all aspects of the NCD MAP—development, implementation, monitoring, and evaluation—to facilitate their buy-in and continued commitment. From start to finish, the NCD MAP should be promoted and presented as a Plan for the country, which all relevant sectors and entities need to take on board and contribute to, rather than as a Plan for the Ministry of Health, and advocacy and communication strategies toward that objective should be an integral part of the NCD MAP. Time and other resources dedicated to engaging key stakeholders and delineating, with their participation, their contribution to activities, outputs, and achievement of the objectives of the Plan, are resources well spent. Many of the MAPs have "Ministry of Health" prominently displayed on the cover and elsewhere, branding which may lead other sectors to demonstrate no or limited interest in the Plan and its implementation. The MoH should be seen as the coordinator/oversight of the Plan's implementation, monitoring, and evaluation, not as the sole agency responsible for its execution.

- Ensure that in engaging with non-health government sectors, civil society, and especially the private sector, conflict of interest is considered and due diligence conducted, with a view to anticipating and managing any issues that might arise.

- Develop a directory of national and local CSOs, and their health-related areas of work; build their capacity, where feasible, to contribute to policy formulation, taking advantage of their sometimes-unappreciated role as "the voice of the voiceless" and in pursuit of health equity. In this regard, subregional CSOs such as the Healthy Caribbean Coalition can play an important role in promoting partnerships with national CSOs.

- Establish and/or strengthen National NCD Commissions to perform their envisaged multisectoral advisory and oversight roles, promoting and contributing to coordinated actions and regular monitoring and evaluation functions for NCD prevention and control, in the framework of the National Strategic Plan for NCDs. Ensure that the NNCDC is not seen as "belonging" to the MoH, but as a national body acting on behalf of the national government to promote and enable wide stakeholder collaboration for NCD prevention and control. Placement of the NNCDC in the Office of the President or Prime Minister might be ideal, but not always possible—its authority, leadership, membership, and functions matter more than its organizational position. The membership of the Commission may be initially determined by the major areas to be addressed and consideration of sectors identified by key informants as having the

most to contribute to NCD prevention and control. HCC publications on NNCDC establishment and functioning can provide useful information and guidance for countries.

- Build capacity at national level in the HiAP approach, with analysis and dissemination of the experience with HiAP in Suriname and elsewhere, as well as inter-country technical cooperation on this theme. PAHO/WHO and other development agencies are well placed to undertake technical cooperation in this area.

7.2 NCD MAP development

NCD MAP preparation

- Disseminate and promote the WHO NCD MAP Tool and undertake training in its use at country level, targeting not only the health sector, but also non-health government sectors, civil society, and the private sector.

- Ensure adequate analysis of the multisectoral, WoG, WoS, HiAP, human rights, universal access to health and universal health coverage, and equity approaches in the national and subnational context, with explicit identification of vulnerable or disadvantaged groups and inclusion of interventions to address priority NCD-related issues affecting those groups.

- Document the process for development of the MAP and include a summary of the methodology in the MAP, including stakeholder analysis and the priority-setting process.

- Ensure a comprehensive, but concise, situation analysis, including epidemiological data; social determinants of health-related data; description of the health system; responses from government, civil society, and private sector; SWOT analysis related to NCD prevention and control, or achievements/progress and gaps/challenges; results of the priority-setting process; and a summary of the priorities to be addressed, with justification for the omission of any of those identified. The summary of priorities for inclusion in the MAP will facilitate "carryover" of the priorities into the strategic plan agenda and the LF framework.

- Ensure training in the LF approach to project and program development at national level for planning units in and outside of ministries of health, with a view to providing and sustaining in-country resources for appropriate action in health and non-health government sectors, civil society, and the private sector. The training agencies should ensure synchrony and consistency in their training methodology and content across countries, so as to minimize confusion among those trained and facilitate comparison of products. The approach should include articulation of assumptions and risks, and inclusion of risk mitigation strategies.

- Take advantage of planning expertise available in other ministries if needed, in the preparation and M&E of the NCD MAP.

- Include estimated resources—financial, human, technical, and infrastructural—for the promotion/communication, implementation, and M&E of the MAP. There should be an outcome and/or output that specifically addresses M&E, since this will allow development of relevant indicators, activities, and estimated budget for this important aspect of the MAP.

- Give consideration to the following structure for the NCD MAP:
  - Cover
  - Inside cover
  - Page with publication information/ authorship
  - Table of contents
  - List of acronyms and abbreviations

- Foreword (preferably by Minister of Health or Head of Government)
- Acknowledgments
- Introduction
- Background (including antecedents, methodology/process, stakeholders involved)
- Methodology
- Situation analysis
- Strategic approaches, with vision, mission, and values/guiding principles
- Strategic plan itself in LF format, with goal, outcomes, indicators, targets; outputs, indicators, high-level activities, inputs, and resources. This last should include indicative budget amounts to achieve each outcome, based on the estimated amount to implement the relevant activities.
- Estimated resources
- Implementation approaches, including management and coordination, partnerships, TC, and resource mobilization strategies
- Risk analysis and risk management strategies
- M&E framework
- References
- Annexes
- Back cover

NCD information

- Revisit the outputs of the Caribbean Regional NCD Surveillance Project and the Caribbean Minimum Data Set for NCDs, with a view to adjusting and strengthening the data set as necessary to include indicators and targets from the WHO GMF, the PAHO NCD PoA, and the POSD, as applicable to the national situation; undertake TC to incorporate the indicators and targets into Caribbean national and subregional information systems for health and enable timely data collection, analysis, and reporting.

- Strengthen and contribute to CARPHA's role as a source—and technical cooperation partner in the production—of epidemiological and other data related to NCDs, disaggregated to identify inequities and facilitate interventions to reduce them. Data should be disaggregated by at least age, sex, geographic location, and ethnicity, to enable the identification of disadvantaged or vulnerable groups.

- Ensure collaboration between key TC agencies working at subregional level to strengthen national health information systems, and incorporation of relevant NCD indicators and targets into interventions in information systems projects or programs, such as the PAHO-executed Caribbean Information Systems for Health project.

- Ensure that data collected through surveys such as STEPS, GYTS, and GSHS are used to provide baselines and inform target-setting, interventions, monitoring, and evaluation.

- Undertake national institutional capacity building, refresher courses, and training of appropriate persons in epidemiological definitions and use of standardized indicators and variables, including the use of the ICD-10 classification of mortality, to ensure accuracy and comparability of data.

- Take measures to build countries' capacity and enable them to conduct studies that determine or estimate the costs and economic impact of NCDs and articulate to all stakeholders the comprehensive benefits that arise from healthier populations. This will facilitate advocacy and present evidence for increases in the resources allocated to NCD prevention and control, especially for primary health care and broad preventive measures by health and non-health sectors within and outside government.

- Build MoH and/or NNCDC capacity to promote and provide information on subregional, regional, and global frameworks for NCD prevention and control to various stakeholders, in order to keep them abreast of developments that can provide guidance for NCD interventions.

- Review the updated WHO "Best Buys" to determine additional policy options for inclusion in NCD prevention and control programs and to inform the next iterations of the NCD MAPs, taking into consideration and analyzing international recommendations for mandatory, as opposed to voluntary, interventions for risk factors; levels of taxation on tobacco, alcohol, sugar-sweetened beverages, and other unhealthy products; size and content of health warnings and labeling; and enforcement of regulations and legislation, to maximize the impact of the interventions.

- Ensure the provision of feedback to, and communication with, persons who collect, collate, and analyze data, so that they are aware of the use of the data and the national and international reports to which they contribute, and can see themselves as part of NCD prevention and control efforts.

- Expand the involvement of academic institutions, civil society, and the private sector in NCD-related research, and ensure that more Caribbean countries, especially the smaller ones and those without major university campuses, are included.

- Ensure final editing and formatting of the NCD MAP, and its wide dissemination, with extraction and synopsis of relevant information to produce materials with information targeting various audiences and key stakeholders, including the public, through use of both traditional and social media.

7.3 NCD MAP implementation

- Identify, with the participation of relevant MoH entities, non-health government sectors, and key stakeholders in civil society and the private sector, the contribution of these stakeholders to specific activities, outputs, and outcomes of the NCD MAP, including their ongoing activities and possible "tweaking" of those actions to align with those outlined in the NCD MAP, and the timeframes in which such activities should take place.

- Encourage voluntary reformulation of food and beverages to healthier options by manufacturers and importers, but also ensure implementation of policies, legislation, and regulations to mandate such actions should voluntary measures not achieve the desired impact.

- Facilitate sharing of information on good practices and successes among Caribbean countries, and from other countries and WHO regions, and enable and contribute to cooperation among countries for health development to address priority areas for NCD prevention and control.

- Promote and facilitate countries' membership in networks such as CARMEN, which can provide technical guidance and resources, and enable South-South cooperation, through initiatives such as Cooperation among Countries for Health Development (CCHD); both CARMEN and CCHD are coordinated by PAHO.

- Expand Caribbean Wellness Day to address NCD RFs other than physical activity and to include non-health government sectors, civil society, and the private sector, as already occurs in some countries.

- Request, and undertake, TC with development partners as needed for the implementation of the MAP, reducing bureaucratic procedures on both sides to the extent possible, without compromising accountability.

- Develop and implement a resource mobilization strategy for the implementation of the NCD MAP, to supplement resources allocated by the MoH and other government

ministries. The strategy should consider traditional and non-traditional partners; include the national diaspora; and address capacity strengthening for resource mobilization.

- Provide, where requested, available, and feasible, temporary human resources to be placed in Ministries of Health and/or other ministries to carry out specific tasks for the efficient implementation of activities related to priority NCD MAP outputs and outcomes. Such human resources may also be part of cooperation among countries or triangular cooperation, in addition to the traditional TC with development partners.

- Promote and facilitate partnerships with subregional civil society organizations such as the HCC and with private sector entities, highlighting and managing conflicts of interest where appropriate.

- Assist countries in presenting evidence-based arguments to counter industry pressure and "push-back" against health-promoting legislation and regulations. This need will likely become greater as more countries enact measures to better enable healthy lifestyles; it necessitates analyses of the economic impact of various interventions to address NCDs. Early engagement of economists will ensure that those analyses are relevant to country-specific contexts and use national and/or regional data where available.

- Allocate and mobilize adequate resources for the preparation, implementation, monitoring, and evaluation of the NCD MAP. It is evident that in several countries there have not been the required changes in allocation of the health budget to address the changes in the national epidemiological profile and burden of disease that have occurred over the years. NCDs now demand a share of available resources commensurate with their importance.

7.4 NCD MAP M&E

- Build country capacity not only to develop a culture of monitoring and evaluation—including financial accountability—but also to use the information and reports obtained to strengthen national and subnational policies and programs, and improve cost-efficiency and cost-effectiveness.

- Ensure the development of an M&E framework for the NCD MAP, including indicators related to national priorities and internationally agreed targets; resources needed for the M&E processes; and timelines, to guide periodic assessment and ultimate evaluation. The latter should include an external evaluation, for which resources should be allocated or mobilized.

- Synchronize, to the extent possible, NCD MAP M&E cycles with those for international reporting on NCD agreements and commitments.

- Involve key stakeholders in government sectors, civil society, and the private sector in M&E activities.

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Annex I:

Matrix for desk review of selected NCD MAPs in Caribbean countries

COUNTRY:_____

TITLE OF NATIONAL NCD MAP: _____

Issues/Questions	Included/Brief description	Comments
1. Antecedents		
a. What led to the decision to develop the NCD MAP?		
b. Is the process that led to the development and implementation of the plan described?		
c. When was the NCD MAP completed?		
d. When was the NCD MAP approved?		
e. When was it published?		
f. Are NCDs included in a national health plan?		
g. Are NCDs included in a national development plan?		
h. Did local data lead to an assessment of the burden of NCDs and the decision to develop the plan?		
i. Did international agreements play a role? For example, the POSD? CCH? SDGs?		
2. Comprehensive assessment of the situation		
Was a situation analysis done?[a]		
Does the situation analysis include: a. Socio-demographic and economic impact information on NCDs and RFs?		
b. Magnitude and trends of NCDs and their risk factors?		
c. Description of existing strategies, policies, plans, programs, and technical guidelines to address NCDs and risk factors?		
d. Reference to/synergy with disease-specific plans, e.g. for cancer?		
e. Description of legislative and/or regulatory frameworks, national and/or international, to enable NCD and RF prevention and control?		

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[a] Key components include *(11)*: Introduction; Methodology of data collection and analysis; Summary of country profile (population and key health indicators, age- and sex-specific prevalence of risk factors, economy and health expenditure); Main findings (issues related to NCDs, RFs; responses to NCDs and RFs, including laws, regulations, policies, strategies, plan, programs, technical guidelines, country capacity, key stakeholders and sectors involved); Areas of discussion (trends, comparison with other countries and international data, identification of gaps and challenges, and strengths and achievements, in NCD prevention and control, implications of inaction); Conclusions and recommendations (concise and specific, realistic expectations, in order of priority).

(Continued)

Issues/Questions	Included/Brief description	Comments
f. Description of the existence (or absence of) NCD-/RF-related legislation or policies in other sectors of government (e.g. Transportation, Education, Agriculture)?		
g. Assessment of the capacity of the health system for NCD prevention and control, including the "building blocks" of: • Leadership and governance? • Service delivery? • Health workforce? • Health information (including NCD surveillance and research)? • Health financing? • Access to essential medicines, vaccines, and technology?		
h. Responses in non-health sectors?		
i. Responses in civil society?		
j. Responses in the private sector?		
k. Primary, secondary, and tertiary health care interventions, including rehabilitation and palliation?		
l. Analysis of the social determinants of health to justify multisectoral, whole-of-government, whole-of-society, health-in-all-policies approaches to NCD prevention and control?		
m. Consideration of issues related to equity, gender, ethnicity, human rights, and progress towards universal access to health and universal health coverage?		
n. Identification of vulnerable and disadvantaged groups for special attention?		
o. The period to which the analysis refers? Is all the information up-to-date? If not, which data are the most recent, and which the oldest?		
p. The source/sources of the information? Local information systems? CARPHA? PAHO/WHO?		
q. References that are complete and searchable?		
r. A country data analysis that includes a comparison to Caribbean, regional, and global data?		
s. A SWOT analysis?		
t. Achievements, good practices, gaps, and challenges in NCD prevention and control?		
3. Stakeholder engagement and multisectoral governance mechanisms		
a. Was the process for development of the NCD MAP participatory? Which stakeholders took part? Government, civil society, private sector, development partners?		
b. Government? Which ministries?		

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Issues/Questions	Included/Brief description	Comments
c. Civil society? Which organizations/entities?		
d. Private sector? Which organizations/entities?		
e. Development partners? Which ones?		
f. Specifically, was there involvement of: • The media? Which? • Faith-based organizations? Which? • Health professional associations? Which? • Academia? Which? • International organizations, including UN agencies? Which? • Persons with, or affected by, NCDs? Or their legitimate representatives? Which?		
g. Was a formal stakeholder analysis conducted?		
h. What method(s) was (were) used to engage the stakeholders?		
i. Who actually wrote the plan?		
j. Was technical cooperation (TC) provided in the process? If so, from which organization/entity?		
k. Were WHO or other guidelines, models, or other countries' plans used as examples?		
l. What governance mechanisms and structures to ensure clear leadership, ongoing stakeholder engagement, and effective implementation of the NCD MAP are described?		
m. Specifically, are there any of the following: • National NCD Unit/Department? • Technical working groups/task forces? • High-level national multisectoral steering committee or NCD commission? • Scientific or expert committee?		
n. If so, what is their composition? How are they linked to the highest policy- and decision-making level?		
o. Do these mechanisms have administrative and budgetary support, and specific terms of reference? Who/which entity(ies) provide(s) the budget?		
p. Are conflicts of interest considered where there is multisectoral membership? If yes, what mechanisms are in place to manage conflicts of interest?		
q. Is there a formal or informal network of NCD stakeholders? If so, what is its membership, what is its main purpose, and how does it function?		
r. Were legislative or regulatory frameworks identified or created to facilitate effective governance and implementation of the NCD MAP?		

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Issues/Questions	Included/Brief description	Comments
4. Formulation of the NCD MAP		
a. What is the duration of the plan? Is the period aligned with that of any national or international frameworks?		
b. Does it include a concise summary of the national situation, including priority NCDs and RFs, trends, opportunities, resources, barriers, and challenges to enhanced NCD prevention and control?		
c. Specifically, are the four main NCDs and their four common risk factors included? Are there any other priority areas? Specifically, is mental health included? Road traffic injuries?		
d. Does the plan have a vision and a mission?		
e. Does it have clear objectives? That is, goals, expected outcomes, outputs? Are the objectives related to the WHO NCD GAP and/or PAHO NCD Plan of Action?		
f. Does it have indicators and targets?		
g. Are the indicators and targets aligned with the WHO NCD Global Monitoring Framework or other international targets? Are the indicators "SMART"[b]?		
h. Have specific policy options and cost-effective interventions been prioritized? What was the process to determine the priorities?		
i. Are specific criteria related to effectiveness and feasibility[c] and sustainability considered in determining the priority interventions?		
j. Are reduction of inequities and rights-based approaches explicitly considered in determining priority interventions? Have vulnerable and disadvantaged groups been identified and targeted for interventions?		
k. Are the WHO "Best Buys" and "Good Buys" considered?[d] If so, were any included? Which?		
l. Is the NCD MAP aligned with, or does it reference, disease-specific plans, such as those related to diabetes or cancer? Or to plans for universal access to health and universal health coverage?		
m. Is there a mix of population-[e] , community-[f] , and individual-[g] based interventions? Are they clearly linked to the objectives and targets?		
n. How were the interventions selected?		

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[b] Specific, Measurable, Achievable, Relevant (or Realistic), and Timebound (indicator characteristics).
[c] Technical, political, cultural, financial, and legal feasibility.
[d] Appendix 3, WHO NCD Global Action Plan 2013-2020 (2).
[e] Policies, regulations, guidelines
[f] Social networks, settings-based programs, education
[g] Health services, medical interventions

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Issues/Questions	Included/Brief description	Comments
o. Are responsible agencies for each objective/output identified? Do they include non-health sectors, civil society, and the private sector?		
p. Is there an implementation or operational plan for the NCD MAP?		
q. Does the NCD MAP include an indicative budget based on the cost of key activities to achieve deliverables and outputs? How are the costs estimated? Are they explained or justified as realistic, and based on economically sound methods?		
r. Have specific human resources been included in/assigned to the NCD MAP?		
s. Does it include a monitoring and evaluation framework that references the indicators and targets, and identifies milestones? Is a specific budget for the M&E activities included?		
5. Validation of the NCD MAP		
a. Has there been advocacy for the development, implementation, and assessment of the NCD MAP?		
b. Has political support for the plan been obtained from the highest level of government? At what levels of policymaking has it been approved or endorsed? Head of State? Cabinet? Minister of Health? Is there a commitment to a health-in-all-policies approach?		
c. Has the support and commitment continued at the same level? If not, what factors have contributed to the change? Has there been a change of government?		
d. How has the plan been communicated and disseminated to key stakeholders? Who are the key audiences? Do they include the public?		
e. Which agency(ies) is(are) responsible for communicating and promoting the Plan?		
f. Is this plan accessible online on the website of the MoH?		
g. What strategies and mechanisms are in place to maintain interest and ongoing stakeholder participation? To what extent have they been successful? Very? Somewhat? Not at all?		
h. Is there an "NCD Champion" who promotes the NCD MAP? If so, from what sector, and what are the main activities?		
i. Were strategies to counter industry lobbying and opposition to interventions, e.g. tobacco control, developed and implemented?		
j. Are social media involved? If so, which?		

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Issues/Questions	Included/Brief description	Comments
6. Implementation of the NCD MAP		
a. What mechanisms to facilitate successful implementation exist? Is there an implementation manager and/or team? Have there been changes in the manager or the team? If so, how has this affected the implementation?		
b. Is the process for implementation of the NCD MAP participatory? Which stakeholders took part? Government, civil society, private sector, development partners?		
c. Government? Which ministries?		
d. Civil society? Which organizations/entities?		
e. Private sector? Which organizations/entities?		
f. Development partners? Which ones?		
g. Specifically, is there involvement of: • The media? Which? • Faith-based organizations? Which? • Health professional associations? Which? • Academia? Which? • International organizations, including UN agencies? Which? • Persons with, or affected by, NCDs? Or their legitimate representatives? Which?		
h. Is there integration of the NCD MAP activities with those in other programs, e.g. maternal and child health, HIV/AIDS? If so, what are the mechanisms for integration, and to what extent have they been efficient and effective?		
i. Are there mechanisms or plans for implementation of the NCD MAP at sub-national levels?		
j. Have mechanisms for the sustainability of the outputs and outcomes of the plan been identified? If so, what are they?		
k. What is the implementation status of the Plan? Not satisfactory? Satisfactory? Very satisfactory? On what grounds are these ratings applied?		
Resources l. Have sources of funding been identified and assigned? Including from sectors other than health?		
m. Have needed human resources been identified and sourced? Are there plans for capacity building?		
n. Have resource mobilization strategies been developed and implemented?		
o. Have pilot projects been implemented or ongoing programs scaled up?		
p. Who are the main development and technical cooperation partners? PAHO/WHO? Other UN agencies? International financing institutions?		

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Issues/Questions	Included/Brief description	Comments
7. Monitoring and evaluation		
a. Are M&E framework, strategies, and mechanisms defined? Is there an external assessment?		
b. What is the periodicity of M&E? Are stakeholders involved on an ongoing basis? If so, which stakeholders? And through what mechanism(s)?		
c. Is there accountability for both programmatic and financial execution? Are both quantitative and qualitative data collected and used? Are financial audits conducted?		
d. What is(are) the source(s) of information for M&E? Is there an NCD surveillance system in place? If so, is it part of a national health information system?		
e. Specifically, have STEPS or household surveys been done to assess NCDs and RFs? If so, how often? When was the last survey?		
f. What other sources of health and health-related information exist in the country? Are there disease-specific registries? If so, for which diseases?		
g. What are the processes for NCD data collection, storage, quality assurance, and analysis?		
h. Who reports on the results of M&E? What is the format of the reports, and how are they presented?		
i. What is the main content of the reports? Do the reports include successes, challenges, lessons learned, and recommendations for improvement?		
j. How are results of M&E disseminated, and to whom?		
k. Is the public informed?		
l. How is the information from M&E used? How does it feed into policy-making/adjustment? Strategic and operational planning? Information posted in traditional and non-traditional media? Reporting on international NCD goals, e.g. POSD, CCH, WHO GAP, SDGs?		
m. Are the results communicated to the persons who collect and provide the data at national and sub-national levels?		
n. Are there mechanisms for adjusting the NCD MAP if needed? How will changes to the plan be made, if circumstances change?		

Annex II:

Country visits to discuss selected national NCD MAPs – Guide for interviews with key informants

Thank you for agreeing to participate in this interview; it should take no longer than 45 minutes. There has been a desk review of the national noncommunicable disease multisectoral action plan in this country, to look at the process and lessons learned from its development, implementation, monitoring, and evaluation.

This interview will complement the information from that review[75] and contribute to an analysis of NCD MAPs in the Caribbean that will enable countries to develop and implement stronger multisectoral plans to deal with the increasing problems that these diseases are causing.

Country: _____ Date of interview:_____

Name, title, organization/entity of interviewee(s): _____

I. Antecedents

1. What do you think were the driving factors for the development of the NCD MAP?

II. Comprehensive assessment of the situation

2. Are you aware of the existence of any non-health sector plans, programs, or interventions that influence or consider NCDs?

3. Are you aware of any of the regional and international agreements on NCD prevention and control? If so, which ones?

4. What are the top five NCDs and risk factors that should be included in the MAP? Why did you select those?

III. Stakeholder engagement and multisectoral governance mechanisms

5. Did you or a representative of your agency/organization participate in the development of the national NCD MAP? If so, how?

6. Are you or a representative of your agency/organization involved in oversight of the NCD MAP? If so, how?

7. Are there any benefits or advantages from your or your agency's/organization's participation in the development, implementation, and monitoring of the NCD MAP? If so, what are they?

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[75] Questions will vary from country to country depending on the information obtained through the desk review of the national NCD MAP.

8. Are there any drawbacks, disadvantages or challenges to your or your agency's/organization's participation in the development, implementation and monitoring of the NCD MAP? If so, what are they?
9. Which government sectors other than health do you think have the most to contribute to NCD prevention and control?
10. What role do you think civil society can play? Which civil society organizations or entities should be involved in NCD prevention and control?
11. What role do you think the private sector can play? Which private sector entities should be involved in NCD prevention and control? How should possible conflicts of interest be addressed?

IV. Formulation of the NCD MAP

12. Were you or your agency/organization named as being responsible for implementing, contributing to, or achieving any specific activities or objectives in the NCD MAP? If so, which? How is that being done?

V. Validation of the NCD MAP

13. Has the plan been accepted and "bought-into" by key stakeholders?
14. Has there been any opposition or "push-back" from industry representatives? If yes, how was this dealt with?
15. Are you or your agency/organization involved in the dissemination and promotion of the NCD MAP? If so, how? What do you think needs to be done to publicize the MAP and get more people to buy into it and support its implementation?

VI. Implementation of the NCD MAP

16. Are you or your agency/organization implementing or contributing to any specific activities or objectives in the NCD MAP?
17. How would you assess the implementation status of the Plan? Not satisfactory? Satisfactory? Very satisfactory? What are your reasons for the assessment?
18. Are you or your organization/entity contributing any resources—human, financial, infrastructural, technical, other—towards the implementation of the NCD MAP? If so, which, and what/how much?
19. Are you or your organization/entity involved in resource mobilization efforts to support the NCD MAP?
20. Are you aware of any development partners or technical cooperation agencies that are contributing to the implementation of the NCD MAP? If so, which ones, and what/how are they contributing?

VII. Monitoring and evaluation

21. Have you or your organization/entity participated in any meetings or processes to monitor and/or evaluate the NCD MAP? If so, which, and how often?
22. Is there monitoring of both programmatic and financial execution of the NCD MAP?
23. What have been the main successes or achievements in the implementation of the NCD MAP? What good practices would you highlight that can be shared as models, examples, references, and resources for other countries?

24. What have been the main challenges in the development, implementation, monitoring, and evaluation of the NCD MAP? What strategies were used to overcome these challenges?
25. What lessons have been learned from the development, implementation, monitoring, and evaluation of the NCD MAP? Were there any processes and/or interventions that didn't work as planned or anticipated? If so, why didn't they work?
26. What recommendations would you make to improve the development, implementation, monitoring, and evaluation of the NCD MAP, and increase the chances of its efficient and effective implementation?

General comments

27. Do you have any other comments about process, content, implementation, monitoring, or evaluation related to the NCD MAP?

Thank you very much for your time and the valuable information you provided.

Annex III:

Lists of persons met with in Barbados, Guyana, and Suriname

Barbados

1. Dr. Kenneth George, Senior Medical Officer/ NCDs, MoH
2. Ms. Denise Carter Taylor, Senior Health Promotion Officer, MoH
3. Ms. Reeshemah Cheltenham-Niles, Chief Health Planner, MoH
4. Ms. Stacie Goring, Health Planning Officer, MoH
5. Dr. Mark Alleyne, Acting Nutrition Officer, National Nutrition Center
6. Ms. Lisa Bailey, Acting Information Officer, Government Information Services
7. Mr. David Neilands, Retired Business Executive (private sector)
8. Ms. Antoinette Connell, News Editor, Nation Publishing Company
9. Professor Sir Trevor Hassell, Chair, National NCD Commission
10. Dr. Alafia Samuels, Director, George Alleyne Chronic Disease Research Center, UWI, Cave Hill

Guyana

Ministry of Public Health

1. Hon. Karen Cummings, Minister in the Ministry of Public Health
2. Dr. Shamdeo Persaud, Chief Medical Officer (CMO)
3. Dr. Karen Boyle, Deputy CMO
4. Dr. Kavita Singh, NCD Coordinator
5. Dr. Samantha Kennedy, Technical Advisor to Minister Cummings
6. Mr. Terrence Esseboom, Public Relations Officer
7. Mr. Aubrey Odle, Photographer
8. Dr. Melissa Dehaarte, Coordinator, Women's and Older Persons' Health
9. Dr. Oneka Scott, Coordinator, Adolescent Health (ADH)
10. Ms. Cilandell Glenn, Coordinator, ADH/ Sexual & Reproductive Health
11. Dr. Dennis Bassier, Coordinator, Men's Health
12. Ms. Nandanie Jerry, Surveillance Officer
13. Ms. Alexis Sears, Manager (currently Acting Director), Materials Management Unit
14. Ms. Dinte Conwuay, Director, Food Policy Division
15. Ms. Kesaundra Alves, Attorney-at-Law and Chair of the Georgetown Public Hospital Corporation

Non-health ministries and departments

16. Mr. Ian Manifold, Survey Statistician, National Bureau of Statistics
17. Ms. Aileen Nestor, Agriculture Program Officer, Ministry of Agriculture
18. Ms. Andrea Mendonca, Technical Officer, Guyana National Bureau of Standards
19. Ms. Dionne Browne, Health Promotion Coordinator, Ministry of Education
20. Mr. Calvin Douglas, Policy Analyst, Guyana Revenue Authority, Ministry of Finance
21. Ms. Abike Benjamin-Samuels, Deputy Director, Social Services, Ministry of Social Protection
22. Hon. Basil Williams, Minister of Legal Affairs and Attorney General, Ministry of Legal Affairs (MLA)
23. Dr. Zuru, Consultant, MLA

24. Mr. Charles Fung-A-Fat, Chief Parliamentary Counsel, MLA
25. Mr. John Fraser, Assistant, Drafting Department, MLA
26. Ms. Ananda Dhurjon, Consultant, MLA
27. Ms. Joann Bond, Senior Parliamentary Counsel, MLA

Civil society organizations
28. Ms. Fiona Legall, General Manager, Cancer Institute of Guyana
29. Dr. Sayan Chakraborty, Medical Director, Cancer Institute of Guyana
30. Dr. Claudette Harry, Secretary, Guyana Kidney Foundation
31. Ms. Glynis Beaton, President, Guyana Diabetes Association
32. Mr. John Joseph, Director, Health Ministries Department, Guyana Conference of Seventh Day Adventists

PAHO/WHO Guyana
33. Dr. William Adu-Krow, PAHO/WHO Representative
34. Ms. Karen Roberts, Specialist, Non-communicable Diseases and Family Health

Suriname

Ministry of Health
1. Hon. Dr. Patrick Pengel, Minister of Health
2. Ms. Edith Tilon, Deputy Director of Health
3. Ms. Gaitrie Baldewsingh, Medical Mission Region Coordinator
4. Ms. Wendy Emanuelson, Acting Head, Department of Planning, Ministry of Health (MoH)
5. Ms. Nishita Gajadin, Regional Health Services, MoH
6. Ms. Anne Getrouw, Nutritionist, Bureau of Public Health (BoG), MoH
7. Ms. Kavita Goercharn-Sital, Legal Department, MoH
8. Ms. Beatrix Jubithana, Head, Epidemiology Department, BoG,
9. Ms. Cynthia Kooman, NCD Program Manager, BoG, MoH
10. Ms. Anke Wegman, Epidemiologist, Regional Health Services (RHS), MoH
11. Dr. Lindy Liauw Kie Fa, Medical Director, Academic Hospital

Other ministries
12. Ms. Diana Gaddum-Riedewald, Policy Advisor, Ministry of Education, Science, & Culture
13. Mr. Mike Watson, Policy Advisor, Ministry of Education, Science, & Culture
14. Ms. Daniella Sumter, Deputy Director, Internal Market Sub-directorate, Ministry of Trade, Industry & Tourism
15. Ms. Marita Wijnerman, Head, Fiscal Affairs-Indirect Taxes, Directorate of Taxes, Ministry of Finance
16. Dr. Wilco Finsie, Director and Permanent Secretary, Ministry of Regional Development

Civil Society

Anton de Kom University of Suriname
17. Dr. Christel Antonius-Smits, Assistant Head and Sociologist, Department of Public Health, Faculty of Medical Sciences
18. Dr. Ingrid Krishnadath, Head and Epidemiologist, Department of Public Health, Faculty of Medical Sciences

Consumers' Association
19. Mr. Albert Alleyne, President
20. Ms. Karin Spong, Member; former Director, Pro Health; Project Director Maria Boarding School
21. Ms. Grace Bostdorp, Secretary

Inter-religious Council
22. Fr. Karel Choennie, Roman Catholic Bishop of Paramaribo
23. Mr. Robbert Bipat, President, Suriname Islamic Union

24. Mr. Isaac Jamaludin, President, Islamic Organization of Suriname
25. Mr. Akmanand Ramcharan, Chairman, AnyaDewaker (Hindu Priest Council)
26. Mr. Ardjoen Gajadharsing, Secretary, Dharm Maha Tobha, Suriname (Hindu)
27. Mr. Max Ooft, Policy Officer, VIDS (Association of Indigenous Village Leaders)[119]

One-Stop Shop (for Diabetes Management)
28. Dr. Elizabeth Berggraaf, Manager, One Stop Shop for Diabetes Management
29. Dr. Lucien Kloof, Medical Manager, One Stop Shop for Diabetes Management
30. Dr. Helyante Mac-Donald, Managing Director, Crossed Lines Advisory Services

Private sector
31. Mr. Steven Mac Andrew, Director, Suriname Trade and Industry Association

PAHO/WHO
32. Dr. Yitades Gebre, PAHO/WHO Representative
33. Eng. Esha Marhe, Consultant, Non-communicable Diseases and Mental Health
34. Dr. Pierre Pratley, Specialist, Sustainable Development and Health Policies

[119] No face-to-face interview – written comments submitted on pertinent interview questions.

Annex IV:

Strategic priorities in nine selected Caribbean NCD MAPs/Strategic Plans

ATG	BRB	BLZ	GRD	GUY
Four strategic areas: 1. Strengthening coordination and management of NCD prevention and control 2. Healthy and active community through multisectoral policies and partnership 3. NCD risk factors and protective factors 4. Health system strengthening to control NCDs and risk factors at all levels and all sectors 5. Surveillance, research, information, and education	**Four strategies:** 1. Strengthening strategic management 2. Surveillance and research 3. Risk factor reduction 4. Integrated disease management and patient education	**Four lines of action:** 1. Risk factor reduction, health promotion and communications 2. Integrated disease management and patient self-management 3. Surveillance, monitoring and evaluation 4. Program management, policy and advocacy	**Four priority action areas:** 1. Surveillance, monitoring and evaluation, research and information sharing 2. Government leadership and legislation 3. Prevention and risk reduction 4. Health care system	**Five lines of action:** 1. Risk factor reduction and health promotion 2. Integrated disease management and patient self-management education 3. Surveillance, monitoring and evaluation 4. Public policy, advocacy and communication 5. Program management

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Five priority areas: 1. Risk factor reduction and health promotion 2. Comprehensive and integrated disease management for NCDs and injuries 3. Surveillance, research, monitoring and evaluation 4. Public policy and advocacy 5. Leadership, governance and capacity building	**Five priority lines of action:** 1. Promotion of health and wellness (Risk factor reduction and health promotion)[a] 2. Delivery of high quality integrated care, appropriate treatment options and patient self-management (Disease management) 3. Strengthening epidemiological surveillance, research and performance monitoring and evaluation (Surveillance) 4. Development and implementation of evidence-informed policies, plans and programs coupled with effective social marketing strategies (Public policy, advocacy and social communications) 5. Strengthening of national capacity for program management and coordination (Program management)	**Four priority areas:** 1. Public policy and advocacy 2. Health promotion and disease prevention 3. Integrated management of chronic diseases (and risk factors)[b] 4. Surveillance (monitoring and evaluation)[c]	**Four priority areas:** 1. Risk factor reduction and health promotion 2. Comprehensive and integrated disease management for NCDs 3. Surveillance, monitoring and evaluation, and research 4. Governance, policy and advocacy

[a] Text in parentheses = priority actions as they appear in the Plan's logical framework matrix.
[b] Text in parentheses added in the NCD Monitoring and Evaluation (M&E) Plan.
[c] Text in parentheses added in the NCD M&E Plan.

Annex V:

Reflection of GMF Targets and Indicators in Barbados, Guyana, and Suriname NCD MAPs[76]

Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
MORTALITY AND MORBIDITY			
Premature mortality from NCD			
Target 1: A 25% relative reduction in the overall mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.	25% reduction in overall premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases by 2025.	"Guyana aims to decrease the mortality due to NCDs by 25% by 2025." 14% reduction in premature deaths due to NCDs by 2020. 2% annual reduction in mortality due to cancer, asthma, diabetes complications, CVD, and alcohol-related accidental deaths.	Reduce mortality due to NCDs.
Indicator 1: Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases.	• Unconditional probability of dying between ages of 30 and 70 from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases (total and by gender).		• Age-standardized mortality rate per 100,000 population for deaths <70 years due to ischaemic heart disease. • Age-standardized mortality rate per 100,000 population for deaths <70 years due to cerebrovascular disease (stroke). • Age-standardized mortality rate per 100,000 population for deaths <70 years due to underlying cause being diabetes. • Age-standardized mortality rate per 100,000 population for deaths <70 years due to lower respiratory diseases.

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[76] This includes targets and indicators most relevant to the selected areas of the framework. It does not include all the targets and indicators in the NCD MAPs.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
			• Age-standardized mortality rate per 100,000 population for deaths <70 years due to malignant neoplasm (total). • Age-standardized mortality rate per 100,000 population for deaths <70 years due to cervical cancer. • Age-standardized mortality rate per 100,000 population for deaths <70 years due to lung cancer, including trachea, bronchus, and lung. • Age-standardized mortality rate per 100,000 population for deaths <70 years due to female breast cancer. • Age-standardized mortality rate per 100,000 population for deaths <70 years due to cancers of the digestive system.
Indicator 2: Cancer incidence, by type of cancer, per 100,000 population.	• Cancer incidence, by type of cancer, per 100,000 population (total and by gender)		
BEHAVIORAL RISK FACTORS			
Harmful use of alcohol			
Target 2: At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context.	At least 10% relative reduction in overall alcohol consumption (including hazardous and harmful drinking) by 2025.	8% reduction in harmful use of alcohol. Reduction by 15% of baseline in harmful use of alcohol by 2019 (this includes binge drinking as well as average consumption rates disaggregated by gender); baseline of 9.5 litres per capita, target of 7.8 litres per capita. Reduction by 10% in motor vehicle and pedestrian fatalities associated with drunk driving by 2016. Reduction by 10% in the number of motor vehicle accidents associated with drinking and driving by 2019.	Promote and support reduction of risk factors related to tobacco and alcohol use.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Indicator 3: Total (recorded and unrecorded) alcohol per capita (aged 15+ years old) consumption within a calendar year in litres of pure alcohol, as appropriate, within the national context.	• Total alcohol per capita (≥ 25 years old) consumption within a calendar year in litres of pure alcohol.		
Indicator 4: Age-standardized prevalence of heavy episodic drinking among adolescents and adults, as appropriate, within the national context.	• Age-standardized prevalence of heavy episodic drinking among adolescents and adults.		• Prevalence (and standard deviation) of binge drinking among adults disaggregated by gender.
Indicator 5: Alcohol-related morbidity and mortality among adolescents and adults, as appropriate, within the national context.	• Alcohol-related morbidity and mortality among adolescents and adults.		
Physical inactivity			
Target 3: A 10% reduction in prevalence of insufficient physical activity.	20% relative reduction in prevalence of insufficient physical activity by 2016. Reduce prevalence of insufficiently physically active adolescents by 30% by 2017.	Physical activity levels increase by 5% over baseline determined from STEPS by 2019. Legislation, multisectoral policies and programs to promote physical activity by 2016.	Promote physical activity to support healthy lifestyle and reduce risk factors.
Indicator 6: Prevalence of insufficiently physically active adolescents, defined as less than 60 minutes of moderate to vigorous intensity activity daily.	• Prevalence of insufficiently physically active adolescents (defined as less than 60 minutes of moderate to vigorous intensity activity daily).		• Prevalence (and standard deviation) of physical inactivity among the youth.
Indicator 7: Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent).	• Age-standardized prevalence of insufficiently physically active persons aged ≥ 25 years.		• Prevalence (and standard deviation) of the population of adults with low levels of physical activity.
Salt/sodium intake			
Target 4: A 30% relative reduction in mean population intake of salt/sodium.	30% relative reduction in mean population intake of salt by 2025; 20% reduction by 2017.	Salt consumption declines by 20% by 2020.	30% reduction in salt content in imported and locally produced foods.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Indicator 8: Aged-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years.	• Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged ≥ 25 years.		
Tobacco use			
Target 5: A 30% relative reduction in prevalence of current tobacco use.	30% relative reduction in prevalence of current tobacco use by 2025; 15% reduction by 2019.[a]	Smoking prevalence declines by 30% in persons aged 15+ by 2020. Tobacco taxation increased by 50% of retail price by 2020.	• Promote and support reduction of risk factors related to tobacco and alcohol use.
Indicator 9: Prevalence of current tobacco use among adolescents.	• Prevalence of current tobacco use among adolescents (13-15 years).		• Prevalence (and standard deviation) of tobacco consumption among the youth.
Indicator 10: Age-standardized prevalence of current tobacco use among persons aged 18+ years.	• Age-standardized prevalence of current tobacco use among persons aged ≥ 25 years.		• Prevalence (and standard deviation) of current daily smokers of tobacco among adults 25-34 years, 35-44 years, and 45-64 years.
BIOLOGICAL RISK FACTORS			
Raised blood pressure			
Target 6: A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances.	25% relative reduction in the prevalence of raised blood pressure by 2025.	50% hypertensive patients at goal by 2016.	
Indicator 11: Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥ 140 mmHg and/ or diastolic blood pressure ≥ 90 mmHg) and mean systolic blood pressure.	• Age-standardized prevalence of raised blood pressure among persons aged ≥ 25 years.[b]		• Prevalence and standard deviation of hypertension.

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[a] Statement in NCD MAP LF matrix: "Based on national context a more realistic target is 10% by 2025 and 5% by 2017."
[b] Raised blood pressure defined as systolic blood pressure ≥ 140 mmHg and/or diastolic blood pressure ≥ 90 mmHg; and mean systolic blood pressure.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Diabetes and obesity			
Target 7: Halt the rise in diabetes and obesity.	Halt the rise in diabetes and obesity by 2025. Policies to reduce the impact on children of marketing of foods and non-alcoholic beverage high in saturated fats, trans fatty acids, free sugars or salt by 2016.	Legislation on nutrition, importation of foods high in trans fats, and caloric content of menus at fast food restaurants. 40% high cholesterol patients at goal by 2016. Reduction of childhood obesity by 10% by 2016.	Promote the availability, accessibility, and consumption of healthy, tasty foods.
Indicator 12: Age-standardized prevalence of raised blood glucose/ diabetes among persons aged 18+ years (defined as fasting plasma glucose concentration ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose).	• Age-standardized prevalence of raised blood glucose/diabetes among persons aged ≥ 25 years.[c]		• Prevalence and standard deviation of diabetes mellitus.
Indicator 13: Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – two standard deviations body mass index for age and sex).	• Prevalence of overweight and obesity in adolescents.[d]		• Prevalence and standard deviation of obesity among adolescents and adults. • Percentage of the population with a BMI that is between 21 and 25.
Indicator 14: Age-standardized prevalence of overweight and obesity in persons aged 18+ (defined as body mass index ≥ 25 kg/m^2 for overweight and body mass index ≥ 30 kg/m^2 for obesity).	• Age-standardized prevalence of overweight and obesity in persons aged ≥ 25 years.[e]		

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[c] Raised blood glucose defined as fasting plasma glucose value ≥ 7.0 mmol/l (126 mg/dl) or on medication for raised blood glucose.

[d] Overweight and obesity in adolescents defined according to the WHO growth reference for school-aged children and adolescents.

[e] Overweight and obesity in persons aged 25-64 years defined as body mass index (BMI) ≥ 25 kg/m^2 for overweight and BMI ≥ 30 kg/m^2 for obesity.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Indicator 15: Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged 18+ years.	• Age-standardized mean proportion of total energy intake from saturated fatty acids in persons aged ≥ 25 years.		
Indicator 16: Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruit and vegetables per day.	• Age-standardized prevalence of persons aged ≥ 25 years consuming less than five total servings (400 grams) of fruit and vegetables per day.		• Mean number (and standard deviation) of servings of fruits per day for adults. • Mean number (and standard deviation) of servings of vegetables per day for adults.
Indicator 17: Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥ 5.0 mmol/l or 190 mg/dl; and mean total cholesterol concentration.	• Age-standardized prevalence of raised total cholesterol among persons aged ≥ 25 years.[f]		
NATIONAL SYSTEMS RESPONSE			
Drug therapy to prevent heart attacks and strokes			
Target 8: At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.	At least 80% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes by 2025.	At least 80% of patients diagnosed with NCDs receive drug therapy and counselling according to National Primary Care Treatment guidelines by 2014.	
Indicator 18: Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk ≥ 30%, including those with existing cardiovascular disease) receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.	• Proportion of eligible persons[g] receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.		

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[f] Raised total cholesterol defined as total cholesterol ≥ 5.0 mmol/l or 190 mg/dl; and mean total cholesterol concentration.
[g] Defined as aged 40 years and older with a 10-year cardiovascular risk ≥ 30%, including those with existing cardiovascular disease.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Essential noncommunicable disease medicine and basic technologies to treat major noncommunicable diseases			
Target 9: An 80% availability of the affordable basic technologies and essential medicines, including generics required to treat major noncommunicable diseases in both public and private facilities.	90% availability of affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities. HPV vaccination for all girls 10-12 years of age by 2015. Define high-risk population and administer Hepatitis B vaccination for 90% of high-risk population by 2016.	50% increase in number of women having Pap smears or VIA by 2016.	
Indicator 19: Availability and affordability of quality, safe, and efficacious essential noncommunicable disease medicines, including generics, and basic technologies in both public and private facilities.	• Availability and affordability of quality, safe, and efficacious essential NCD medicines, including generics, and basic technologies in both public and private facilities.	• Essential (accessible, affordable, and high quality) generic drugs for NCD prevention and control available by 2013: aspirin, beta blocker, statin, thiazide diuretic, ACE inhibitor, nicotine patches, SSRIs (selective serotonin reuptake inhibitors), and bupropion.	• At least 90% of essential NCDs drugs included on National Essential Medicine List.
Indicator 20: Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer.	• Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics per death from cancer. • Morphine-equivalent analgesics available to 80% of terminally ill patients by 2016.		
Indicator 21: Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply, as appropriate, within the national context and national programs.	• Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils in the food supply.	• Legislation that limits importation of foods high in trans fat and requires labeling of the caloric value of meals at fast food restaurants.	• Number of NCD-related legislations passed (alcohol, tobacco, food).

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Indicator 22: Availability, as appropriate, if cost-effective and affordable, of vaccines against human papillomavirus, according to national programs and policies.	• Availability of HPV vaccines.	• Immunizing more than 50% of adolescent females with HPV vaccine, VIA screening of all sexually active women, starting with women in interior locations where there is relatively more risk.	
Indicator 23: Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt.	• Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt.		• National standards for salt, fat, trans fat and sugar content of imported and locally produced foods developed.
Indicator 24: Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine (HepB3) administered to infants.	• Vaccination coverage against hepatitis B virus monitored by number of third doses of Hep-B vaccine administered to target population.		
Indicator 25: Proportion of women between the ages of 30-49 screened for cervical cancer at least once, or more often, and for lower or higher age groups according to national programs or policies.	• Proportion of women between the ages of 30-49 screened for cervical cancer at least once, or more often.	• Proportion of women between the ages of 30-49 screened for cervical cancer at least once, or more often.	• Pap smear among women within the last three years.


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Annex VI:

Reflection of selected other international targets and indicators[77] in Barbados, Guyana, and Suriname NCD MAPs[78]

Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Improvement in quality of health services for NCD management			
Target – PAHO Plan of Action (PoA) Strategic Objective (SO) 3.1: Improve the quality of health services for NCD management.	Effective management structure based on the CCM implemented in 50% of polyclinics by 2018. CCM implemented in at least 2 polyclinics by 2018.		Integrate prevention and control of NCDs in primary health care using the Chronic Care Model. Strengthen health care workforce to deliver and manage quality NCD programs.
***Indicator* – PAHO PoA Indicator 3.1.1:** Number of countries implementing a model of integrated management for NCDs (e.g. Chronic Care Model with evidence-based guidelines, clinical information system, self-care, community support, multidisciplinary team-based care).	• Elements of CCM implemented in polyclinics. • Number of polyclinics with CCM implemented.	• CCM implemented in 50% of health facilities (public, private, and NGOs) by 2018. • Training for PHC professionals to also include management of cancer, hypertension, diabetes, risk approach, tobacco and exercise screening by 2013. • Number of doctors, medex,[a] and nurses trained in integrated NCD management. • Percentage of patients with NCDs who are managed in keeping with national guidelines and protocols.	• Percentage of health facilities in which the Chronic Care Model has been implemented. • Number of health care professionals training in NCD management (by disease).

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a The Guyana Medex Act of 1978 provides for the "registration of persons as medex for the purpose of providing primary health care as auxiliaries to medical practitioners employed in the service of the Government." See http://bit.ly/2jaPrNs.

[77] From PAHO NCD Plan of Action 2013-2019, CARICOM POSD, and SDGs.

[78] This includes targets and indicators most relevant to the selected areas of the framework. It does not include all the targets and indicators in the NCD MAPs.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Target – PAHO PoA SO 3.2: Increase access to and rational use of essential medicines and technologies for screening, diagnosis, treatment control, rehabilitation, and palliative care of NCDs.	See GMF Target 9 above.	See GMF Target 9 above.	
***Indicator* - PAHO PoA Indicator 3.2.3:** Number of countries utilizing the PAHO Strategic Fund and Revolving Fund and/or other cost-saving mechanisms to procure essential medicines and health technologies relevant to prevention, control and palliation for the four leading NCDs, e.g. chemotherapy drugs, palliation medications, insulin, dialysis and haemodialysis, hepatitis B and human papillomavirus (HPV) vaccines, and medications for the treatment of hypertension and diabetes.	• Barbados National Pharmaceutical Plan and Policy implemented by 2016.		
***Indicator* – PAHO PoA Indicator 3.2.4:** Number of countries with an official commission that selects, according to the best available evidence and operating without conflicts of interest, NCD prevention and/or treatment and/or palliative care medicines and technologies for inclusion in/exclusion from public sector services.	• Revise and update NCD formulary every two years or as necessary.[b]		

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[b] Though not specifically mentioned in the Strategic Plan, Barbados has a Drug Formulary Committee that selects and reviews medicines to treat infections and chronic diseases for inclusion in the National Drug Formulary, based on WHO criteria. See: http://drugservice.gov.bb/index.php?id=726.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Universal access to health and universal health coverage			
Target – PAHO PoA SO 1.3: Expand social protection policies in health to provide universal health coverage and more equitable access to promotive, preventative, curative, rehabilitative and palliative basic health services, and essential, safe, affordable, effective, quality medicines and technologies for NCDs.			
***Indicator* – PAHO PoA Indicator 1.3.1:** Number of countries with national social protection health schemes that address universal and equitable access to NCD interventions.			
Gender issues			
Target – Sustainable Development Goals Target 5.c: Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.			
***Indicator* – CARICOM Port of Spain Declaration:** Take account of the gender dimension in all our programs aimed at the prevention and control of NCDs.	• Gender dimensions considered in NCD programs.	• Baseline survey on public awareness of risk and of risk-taking behaviors by gender and age group.	

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Multisectoral action			
Target – PAHO PoA SO 1.1: Promote integration of NCD prevention in sectors outside of health at the government level, and conducted in partnership with a wide range of non-state actors.	Explore effective approaches to more fully engage all-of-government and all-of-society by 2015. Media partnership by 2016. Healthy lifestyle and wellness policies and programs in special settings, e.g. schools, enhanced/ implemented. 20% increase in workplace wellness programs by 2017. Tool kit for faith-based organizations and health NGOs developed and distributed by 2015.	12 new civil society or private sector partnerships with government to address NCD across Guyana. Functioning NCD Commission in place.	Enhance political commitment at national and local levels through multisectoral partnerships, policies, and legislation. Mobilize financial and organizational resources to support NCD prevention and control efforts.
***Indicator* – PAHO PoA Indicator 1.1.1:** Number of countries with multisectoral NCD prevention policies, frameworks, and actions in at least three sectors outside the health sector at the government level and conducted in partnership with a wide range of non-state actors, as appropriate, (e.g. agriculture, trade, education, labor, development, finance, urban planning, environment and transportation).	• Policy to guide relationship with health NGOs and the Ministry of Health published and implemented by 2016.	• Development of policies to facilitate multisectoral collaboration, implementation, and reporting on anti-NCD activities.	• Number of multisectoral partnerships established – focal points appointed from multisectoral by NCD Commission members.
***Indicator* – CARICOM Port of Spain Declaration:** Establishment of National Commissions on NCDs or analogous bodies to plan and coordinate the comprehensive prevention and control of chronic NCDs.	• National NCD Commission to plan and coordinate NCD response 2015-2019. • National NCD Commission enhances linkages with the MoH and work across all sectors aligned with the regional and national NCD strategies and plans.	• Establishment of NCD Commission with its own budgetary allocations for multisectoral program implementation.	• NCD Commission established. • NCD Commission functioning according to the Terms of Reference.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Public awareness programs			
Target – CARICOM Port of Spain Declaration: Provide incentives for comprehensive public education programs in support of wellness, healthy life-style changes, improved self-management of NCDs and embrace of the media as a responsible partner in efforts to prevent and control NCDs.	Provide incentives for comprehensive public education programs in support of wellness, healthy life-style changes, improved self-management of NCDs, and embrace of the media as a responsible partner in efforts to prevent and control NCDs by 2015. Comprehensive public education campaigns on wellness, lifestyle, and self-management. Celebration of Caribbean Wellness Day. Documented media and communication plan for NCD advocacy, including audience research and stakeholder analysis to inform suitable communication strategies and messages.	80% of the public is aware of how to reduce risk factors, eat healthy, exercise, and avoid smoking and excess alcohol.	Public information campaign on healthy lifestyle launched and operating.
***Indicator* – WHO NCD Progress Monitor Indicator 8:** Implementation of at least one recent (within past 5 years) national public awareness program on diet and/or physical activity.		• Communication strategy developed for NCDs. • Number of persons who report being exposed to NCD risk reduction messages via mass media, community-based interventions or health provider. • Caribbean Wellness Day multisectoral planning and activities by 2014.	
Population surveys			
Target – PAHO PoA SO 4.1: Improve the quality and breadth of NCD and risk factor surveillance systems to include information on socioeconomic and occupational and/or employment status.			Strengthen capacity for surveillance and research of chronic diseases and risk factors.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
***Indicator* – PAHO PoA Indicator 4.1.4:** Number of countries with at least two nationally representative population surveys by 2019 of NCD risk factors and protective factors in adults and adolescents, in the last 10 years, that include: tobacco use, blood pressure, physical inactivity, alcohol use, fasting glucose and cholesterol, sodium intake, anthropometry, fruit and vegetable intake, disease prevalence, albumin, creatinine, sugar intake, and medication use.	• Surveillance system for monitoring weight in primary school children developed in 2016. • Global School Health Survey repeated every 4 years, next in 2017. • Health of the Nation Study repeated in 2018.	• Health information policy and plan adopted by 2016. • Conduct STEPS survey at baseline 2014 and repeat by 2019. • Collect and report data at least annually on NCDs (risk factors, morbidity, mortality, determinants, health systems performance, using standardized methodologies by 2015.	• Prevalence burden of disease/risk factor survey completed (e.g. Mini STEPS).
Monitoring and evaluation			
Target – PAHO PoA SO 4.2: Improve utilization of NCD and risk factor surveillance systems and strengthening of operational research with a view to improving the evidence base for planning, monitoring, and evaluation of NCD-related policies and programs.	• Barbados National Registry funded and report production streamlined.	Over 80% of the health facilities with updated information and data on NCDs.	Monitor and evaluate the impact of NCD prevention and control interventions.
***Indicator* – PAHO PoA Indicator 4.2.1:** Number of countries that produce and disseminate regular reports with analysis on NCDs and risk factors, including demographic, socioeconomic, and environmental determinants and their social distribution, to contribute to global NCD monitoring process.	• Health information policy and plan adopted by 2016. • Standardized reports on in-country assessment of NCD surveillance system and capacity.	• Percentage of health facilities with updated NCD information, including indicators on prevalence, incidence, and mortality related to hypertension, diabetes, cancer and chronic respiratory diseases.	• Disease registries established for priority NCDs. • Annual data-driven reports on the status of implementing the NCD strategic plan.

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Framework elements/ issues Targets/Indicators	Barbados	Guyana	Suriname
Dissemination of information			
Target – PAHO PoA SO 4.2: Improve utilization of NCD and risk factor surveillance systems and strengthening of operational research with a view to improving the evidence base for planning, monitoring, and evaluation of NCD-related policies and programs.			
***Indicator* – PAHO PoA Indicator 4.2.1:** Number of countries that produce and disseminate regular reports with analysis on NCDs and risk factors, including demographic, socioeconomic, and environmental determinants and their social distribution, to contribute to global NCD monitoring process.	• Annual reports to CARICOM to monitor implementation of POSD. • Reports to PAHO/WHO to monitor 9 goals and 25 targets from UNHLM.	• Reports of in-country assessment of NCD surveillance system and capacity available by 2015. • Research agenda for NCDs developed in collaboration with University of Guyana, CARPHA, PAHO, and other CARICOM countries by 2013. • Standardized monitoring and evaluation systems for all aspects of NCD prevention and control programs developed and implemented by 2013. • Risk factor data used to evaluate NCD Declaration (POSD) by 2013.	• Annual data-driven reports on the status of implementing the NCD strategic plan.

Annex VII:

Reflection of WHO "Best Buys" in Barbados, Guyana, and Suriname NCD MAPs

Issues and WHO "Best Buys"	Barbados	Guyana	Suriname
Tobacco control			
1. Reduce affordability of tobacco products by increasing tobacco excise taxes.	• Increase taxes to 75% sale price.	• Tobacco taxation increased by 50% of retail price by 2020.	
2. Create by law completely smoke-free environments in all indoor workplaces, public places, and public transport.		• Anti-tobacco legislation passed. • 100% smoke-free public spaces (enclosed spaces) by 2016.	• Comprehensive tobacco legislation passed in February 2013.[a]
3. Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns.	• 90% cigarettes sold carrying FCTC compliant labels by 2016.	• Tobacco labeling standards passed. • 90% cigarettes sold carrying FCTC-compliant labels by 2016.	
4. Ban all forms of tobacco advertising, promotion, and sponsorship.	• Complete ban on tobacco ads, promotion and sponsorship by 2018.	• Complete ban on tobacco ads, promotion, and sponsorship by 2016.	
Harmful use of alcohol			
5. Regulate commercial and public availability of alcohol.	Review 1974 Liquor Licensing Act and recommend legislation establishing: • An increase in minimum age for the consumption and purchase of alcoholic beverages. • Ban on alcohol advertising and promotion aimed at minors.	• Enact and enforce legislation establishing the minimum age limit for the consumption and purchase of alcoholic beverages.	• Number of NCD-related legislations passed (alcohol, tobacco, food). • Lobby for legislation related to NCD risk factors, including alcohol, trans fat and energy drinks. • Review and update alcohol and energy drink policies and regulations. • Review and update alcohol legislation. • Creation of comprehensive national plan for alcohol: prevention, legislation, enforcement (based on FCTC framework and process).
6. Restrict or ban alcohol advertising and promotions.		• Regulate or ban alcohol advertising and promotion, especially those ads aimed at children and young people.	

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[a] Suriname's tobacco legislation includes bans on smoking in public places, workplaces, and transportation; on tobacco advertising, promotion, and sponsorship, including corporate social responsibility by the tobacco industry; on sale of tobacco products to and by minors; and on the use of vending machines to sell tobacco products. It forbids the importation, distribution, and sale of electronic cigarettes, and requires pictorial health warnings on all tobacco product packaging.

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Issues and WHO "Best Buys"	Barbados	Guyana	Suriname
7. Use pricing policies such as excise tax increases on alcoholic beverages.			
Unhealthy diet and physical inactivity			
8. Reduce salt intake.	• Evaluate, and redesign if necessary, public education salt campaign. • Utilize HoTN population-based survey to track salt consumption. • Advocacy for regulation of salt content in foods.	• Salt consumption of the population reduced. • Salt consumption declines by 20% by 2020. • Salt content of process and prepared foods reduced.	• 30% reduction in salt content in imported and locally produced foods. • National standards for salt, trans fat, and sugar content of imported and locally produced foods developed.
9. Replace trans fats with unsaturated fats.	Trans fat in the food supply eliminated. • Work with CARPHA to develop and implement trans fat free policies and programs. • Establish capacity to monitor trans fats. • Identify main sources of trans fat in Barbadian diet. • Policy dialogue with food manufacturers and suppliers about sources and dangers of trans fat.	• Reduction of trans fat from the food supply. • Legislation that limits importation of foods high in trans fats and requires labeling of the caloric value of meals at fast food restaurants.	• Lobby for legislation related to NCD risk factors, including alcohol, trans fat and energy drinks. • National standards for salt, trans fat, and sugar content of imported and locally produced foods developed.
10. Implement public awareness programs on diet and physical activity.	Community and population initiatives to promote physical activity and exercise supported. • Advocacy to and support of Town and Country Development Planning Office for: o Outdoor recreational spaces available and accessible in rural and urban communities o New housing developments include safe spaces for walking and biking • Public discussions on physical activity guidelines. • Public and private sector physicians trained and encouraged to prescribe exercise by prescription pad "Exercise is Medicine." • Caribbean Wellness Day promoted across all sectors.	• Mass-based low cost physical activity available by 2014. • Mass media and social media deployed to raise public awareness and participation in healthy living. • Caribbean Wellness Day celebrations in at least three separate locations by 2013.	• Public information campaign on a healthy lifestyle launched and operating.

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Issues and WHO "Best Buys"	Barbados	Guyana	Suriname
Cardiovascular disease and diabetes			
11. Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk approach) and counselling to individuals who have had a heart attack of stroke and to persons with high risk (≥ 30%) of a fatal and nonfatal cardiovascular event in the next 10 years.	Access to technologies and safe, affordable and efficacious essential medicines and counselling. • Revise and update NCD formulary every two years or as necessary. • Quality, safe and efficacious essential NCD medicines, including generics and basic technologies in both public and private facilities. • Develop and integrate pharmacy and laboratory data capture system into Health Information System. • Pharmaceutical utilization review.	• Essential (accessible, affordable, and high quality generic drugs for NCD prevention and control available by 2013: aspirin, beta blocker, statin, thiazide diuretic, ACE inhibitor, nicotine patches, SSRIs, and bupropion. • Drug formulary for essential and necessary drugs updated as required by 2015.	
12. Acetylsalicylic acid for acute myocardial infarction.		• Essential (accessible, affordable, and high quality generic drugs for NCD prevention and control available by 2013: **aspirin**, beta blocker, statin, thiazide diuretic, ACE inhibitor, nicotine patches, SSRIs, and bupropion.	
Cancer			
13. Prevention of liver cancer through hepatitis B immunization.	• Define and quantify high-risk population for hepatitis B vaccination. • Administer hepatitis B vaccine to high-risk population.		
14. Prevention of cervical cancer through screening—visual inspection with acetic acid (VIA) (or Pap smear [cervical cytology] if very cost-effective)—linked with timely treatment of pre-cancerous lesions.	Cervical cancer incidence reduced through enhanced screening and HPV vaccination. • HPV vaccination program in schools implemented. • Adoption of new cervical cancer guidelines in the public and private sectors. • Assess capacity for screening and management of cases generated.	• Immunizing more than 50% of adolescent females with HPV vaccine, VIA screening of all sexually active women, starting with women in interior locations where there is relatively more risk.	• Pap smear among women within the last three years.

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