HEALTH AND WELLNESS BARBADOS

NATIONAL STRATEGIC PLAN FOR
THE PREVENTION AND CONTROL OF
NON-COMMUNICABLE DISEASES
2020-2025

Government of Barbados
Ministry of Health and Wellness

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Foreword by the Prime Minister of Barbados

In 2018 the Barbados Labour Party presented its "People's Manifesto: Building the Best Barbados Together", which placed all who are Barbadian—by birth, marriage, descent, or choice—at the centre of our country's national sustainable development. We committed to "Healthy Bajans", through actions taken during both the initial Mission Critical phase of our governance and the longer-term Transformational Agenda.

With our election and strong evidence of the confidence that the people of Barbados placed in us, the Government of Barbados continues to work toward fulfilling the commitments made for greater emphasis on the health and wellbeing of our people. Non-communicable diseases (NCDs) like heart disease, stroke, high blood pressure, diabetes, and cancer consume 70% of the budgets of the Queen Elizabeth Hospital and the Barbados Drug Service. We cannot keep putting most of our limited resources towards fighting sickness; we cannot keep waiting until we get sick to take action; and we cannot afford the high price of these diseases, neither in lives nor in public expenditure.

Our parents' and grandparents' advice that "prevention is better than cure" is more applicable than ever in these times. We must continue on the road to making sure that all of us are educated about our health and have access to the food, facilities, and services we need to stay healthy. In advancing our national development in a sustainable way, we need all hands on deck; we need healthy, productive people at all levels to stay the course, contribute, and get our society and our economy back on track—we all contribute, and we all benefit.

The development of the National Strategic Plan for the Prevention and Control of NCDs 2020-2025 was led by the Ministry of Health and Wellness, and its implementation and monitoring will also be led by that Ministry. However, let there be no doubt that it is a national plan, and all sectors of government and all of society have to be involved for its successful execution. We have full confidence that the Ministry of Health and Wellness has mechanisms in place for such involvement, and the Government of Barbados, through the Cabinet Sub-committee on NCDs, will take more than a passing interest in progress made to tackle NCDs and reduce their burden.

Together, we can achieve our national health goals and contribute to the achievement of regional and global goals for sustainable development. Our goals are lofty and aspirational, but this is Barbados—we can do it!

The Right Honourable Mia Amor Mottley
Prime Minister of Barbados

Preface by the Minister of Health and Wellness

In 2018 the change in name from the "Ministry of Health" to the "Ministry of Health and Wellness" was not a change made for cosmetic purposes. It represented the commitment of the then newly-elected Government of Barbados to the health and wellbeing of every person living in Barbados, through efforts led and coordinated by the Ministry of Health and Wellness.

That commitment remains as strong as ever, and the remit of the Government of Barbados and the Ministry of Health and Wellness is to focus on health promotion, disease prevention, and maintaining health through the life course. An important part of that remit is the enhancement of our health systems to provide quality treatment and management,especially at the first level of care, for those persons who do become ill and who are at risk of premature death.

Over the years we have put in place policies, plans, and structures to improve the prevention and control of non-communicable diseases, and have long recognised the need for all sectors to be involved—this is not something that the health sector can do alone. As examples, we need the education sector to help improve health literacy and health education; the agriculture sector to help with food and nutrition security and reducing the double burden of malnutrition; the environment sector to include health in climate change adaptation measures; the trade, industry, and commerce sectors to help keep healthy food and other commodities for health available and affordable; civil society to help with community mobilisation and outreach, and contribute to policy development; and the private sector to facilitate theproduction, provision, and distribution of health-supporting, rather than health-damaging, goods and services.

The multi-sectoral Barbados National NCD Commission was created in 2007 in the wake of the Port of Spain Declaration on NCDs made by the Heads of State and Government of the Caribbean Community in that same year, and is recognised as one of premier NCD Commissions in the Caribbean region. In 2018, I established a National Task Force on Wellness to complement the Commission, enhance our multi-sectoral, whole-of-government, whole-of-society approaches to priority health issues, and foster wellness, including through NCD prevention and control.

This National Strategic Plan for NCD Prevention and Control 2020-2025 will guide our actions to emphasise promotive and preventive interventions for the major NCDs, such as heart disease, high blood pressure, stroke, diabetes, cancer, and chronic respiratory diseases. We look forward to working with other Ministries, civil society organisations, and the private sector to achieve the objectives of the Plan, as we advance Barbados' sustainable national development.

Lieutenant Colonel the Honourable Jeffrey Bostic
Minister of Health and Wellness
Barbados

Message from the Chair, National Task Force on Wellness

The National Task Force on Wellness (NTFW) has great pleasure in recognising the National Strategic Plan for NCD Prevention and Control 2020-2025 as a significant contribution to the health and wellness of the people of Barbados.

Inintroducing the National Wellness Initiative for Barbados in 2018, the Government of Barbados and the Ministry of Health and Wellness recognised several dimensions of wellness: social, occupational, spiritual, financial, intellectual, emotional, physical, and environmental.The multi-sectoral NTFW was established in that same year to develop and implement strategies to advance wellness, with a vision of wellness activities asintegral to the daily experiences of all Barbadians, and a goal of accentuating preventive measures and reducing the need for curative responses.

Multi-sectoral and inter-ministerial approaches are essential in advancing toward wellness, and, especially in light of the onerous burden of NCDs in Barbados, NCD prevention and control are critical components of wellness. The NTFW is delighted to note the emphasis given to multi-sectoral, whole-of-government, whole-of-society approaches in this NCD Strategic Plan, knowing that their successful implementation will go a long way to achieving Barbados' wellness vision and goal.

The National Task Force on Wellness looks forward to contributing to the implementation of the National Strategic Plan for NCD Prevention and Control 2020-2025, building strong partnerships with key stakeholders, including public and private sector agencies; working at community level;promoting 'wellness champions'; recognising individual achievements; and contributing to social marketing campaigns and other interventions to enable both institutional and individual behaviour change toward wellness.

Lieutenant Colonel Carlos Lovell
Chairperson
National Task Force on Wellness

Message from the Chair, National NCD Commission

The Barbados National NCD Commission welcomes the National Strategic Plan for NCD Prevention and Control 2020-2025 as the guiding framework to continue multi-sectoral work in reducing these diseases and improving the health, wellness, and productivity of the people of Barbados.

Continued strengthening of interventions for NCD prevention and control are closely linked with the country's advances to universal health, where comprehensive, quality health services—including health promotion and disease prevention, diagnosis, treatment, rehabilitation, and palliation—are available to all at the time of need without risk of financial hardship.

We have made considerable strides in implementing the primary health care approach in Barbados, with a strong polyclinic system and access to medicines through the Barbados Drug Service. Further enhancement of the first level of care, with efforts to reduce risk factors and improve the detection and management of NCDs, and efficient mechanisms for referral to other levels where needed, will be of great benefit in our drive to NCD prevention and control.

However, we must also strengthen our "joined up" work across sectors, recognising and addressing important contributing factors such as food systems and the food environment, and underlying issues such as climate change and its effect on agriculture and food and nutrition security.

Our civil society sector is growing and becoming stronger, increasingly advocating, communicating, and having a voice in "upstream" interventions for NCD reduction, such as policy development, to support and complement government's actions. Civil society is also an important advocate for recognition and management of conflict of interest, and for protection of the policy space from interests that do not have health as their primary focus.

The National NCD Commission is committed to continuing its close partnership with the Ministry of Health and Wellness, other government ministries, the National Task Force on Wellness, civil society, the health-supporting private sector, regional and international development agencies, and other key stakeholders to work towards the utopian vision of Barbados as an "NCD-free zone".

Sir Trevor Hassell
Chairperson
Barbados National NCD Commission

Acknowledgements

The Government of Barbados and the Ministry of Health and Wellness acknowledge, with gratitude, the contributions of:

- current and former members of the Barbados National Non-communicable Diseases Commission, particularly Sir Trevor Hassell, the Chair of the Commission, and Mr. Hewitt "Dru" Symmonds, Deputy Chair;
- representatives of government ministries, statutory bodies, and agencies;
- representatives of civil society, including non-governmental organisations, faith-based organisations, trade unions, academia, and persons living with NCDs;
- representatives of the health-supporting private sector;
- the Pan American Health Organization, Regional Office for the Americas of the World Health Organization; and
- last, but not least, the team at the Ministry of Health and Wellness, particularly the former Permanent Secretary, Ms. June Chandler;the Permanent Secretary, Ms. Janet Phillips; the Chief Medical Officer, Dr. Kenneth George; the Senior Medical Officer of Health for NCDs, Dr. Arthur Phillips; the former Senior Health Promotion Officer, Ms. Denise Carter-Taylor; and the Health Promotion Officer (Acting), Ms. Donna Barker.

Acronyms and abbreviations

AAB	Asthma Association of Barbados
AMI	Acute Myocardial Infarction
ASIR	Age-Standardised Incidence Rate
BAPC	Barbados Association for Palliative Care
BBs	Best Buys
BCC	Barbados Community College
BCHOPP	Barbados Childhood Obesity Prevention Programme
BCNF	Breastfeeding and Child Nutrition Foundation
BCS	Barbados Cancer Society
BDF	Barbados Diabetes Foundation
BDS	Barbados Drug Service
BNR	Barbados National Registry
CARICOM	Caribbean Community
CARPHA	Caribbean Public Health Agency
CDB	Caribbean Development Bank
CDC	Centers for Disease Prevention and Control
CoI	Conflict of Interest
COP	Childhood Obesity Prevention
COPD	Chronic Obstructive Pulmonary Disease
CMO	Chief Medical Officer
CROSQ	Caribbean Regional Organisation for Standards and Quality
CSO	Civil Society Organisation
CSS	Cancer Support Services
CVD	Cardiovascular Diseases
CWD	Caribbean Wellness Day
EIs	Effective Interventions
FAO	Food and Agriculture Organization
FBO	Faith-Based Organisation
FCTC	Framework Convention on Tobacco Control
FoPWL	Front-of-Package Warning Labelling
GA-CDRC	George Alleyne Chronic Disease Research Centre
GAP	Global Action Plan
GDP	Gross Domestic Product
GMF	Global Monitoring Framework
GoB	Government of Barbados
GSHS	Global School-Based Student Health Survey
GYTS	Global Youth Tobacco Survey
HCC	Healthy Caribbean Coalition
HiAP	Health in All Policies
HLM	High-Level Meeting
HoSG	Heads of State and Government
HoTNS	Health of the Nation Survey
HPU	Health Promotion Unit
HPV	Human Papillomavirus
HSFB	Heart and Stroke Foundation of Barbados
IDB	Inter-American Development Bank
IHD	Ischaemic Heart Disease
MAFS	Ministry of Agriculture and Food Security
MCCS	Ministry of Creative Economy, Culture and Sports
M&E	Monitoring and Evaluation
METVT	Ministry of Education, Technological and Vocational Training
MEWR	Ministry of Energy and Water Resources
MFEI	Ministry of Finance, Economic Affairs and Investment
MHW	Ministry of Health and Wellness
MOH	Ministry of Health
MIBP	Ministry of Information, Broadcasting and Public Affairs
MLSP	Ministry of Labour and Social Partnership Relations
MSBEC	Ministry of Small Business, Entrepreneurship and Commerce
MTWM	Ministry of Transport, Works and Maintenance
MYCE	Ministry of Youth and Community Empowerment
NCDs	Non-Communicable Diseases
NNC	National Nutrition Centre
NNCDC	National Non-Communicable Diseases Commission
NSP	National Strategic Plan
NTFW	National Task Force on Wellness
OCM	Outcome
OOP	Out-of-Pocket
OPT	Output
ORIs	Other Recommended Interventions
PAHO	Pan American Health Organization
PHC	Primary Health Care
PHE	Public Health Expenditure
PLWNCDs	Persons Living With NCDs
PMO	Prime Minister's Office
POSD	Port of Spain Declaration
PS	Private Sector
PSE	Private Sector Entity
RBM	Results-Based Management
ROI	Return on Investment
QEH	Queen Elizabeth Hospital
SBS	Special Benefit Service
SCD	Sudden Cardiac Death
SDG	Sustainable Development Goal
SIDS	Small Island Developing States
SMOH	Senior Medical Officer of Health
SP	Strategic Plan
SSB	Sugar-Sweetened Beverage
STEPS	STEPwise Approach To NCD Surveillance
THE	Total Health Expenditure

UN	United Nations
UNDG	United Nations Development Group
UNDP	United Nations Development Programme
UNIATF	United Nations Interagency Task Force on the Prevention and Control of NCDs
UNICEF	United Nations Children's Fund
UWI	University of the West Indies
WoG	Whole-of-Government
WoS	Whole-of-Society
WHO	World Health Organization
WTO	World Trade Organization

Executive Summary

NCD prevention and control is a priority for Barbados

In keeping with its commitment to the health and wellness of the people of Barbados, the development of human capital, the progressive realisation of the right to health, and national sustainable development, the Government of Barbados (GoB), through the Ministry of Health and Wellness (MHW), has developed the Barbados National Strategic Plan for the Prevention and Control of Non-communicable Diseases 2020-2025 (NSP-NCD 20-25).

The NSP-NCD 20-25 was developed through a participatory and iterative process that sought input and feedback from key stakeholders in government, civil society, and the private sector. It provides a blueprint for action by these stakeholders in contributing to the multi-sectoral, whole-of-government, whole-of-society, health-in-all-policies approaches that are essential to address NCD and their risk factors, as well as their social, economic, environmental, commercial, and other determinants.

Mirroring the global and regional situation, NCDs are the top causes of death and illness in Barbados, and the NSP-NCD 20-25 focuses on the four major NCDs—cardiovascular diseases (CVD), diabetes, cancer, and chronic respiratory diseases—and the four main risk factors: tobacco use, unhealthy diet, physical inactivity, and harmful use of alcohol.

For the period 2010-2012, the leading causes of death in Barbados included ischaemic heart disease (IHD), including acute myocardial infarction (AMI, "heart attack"); cerebrovascular disease (stroke); diabetes; hypertensive heart disease (heart disease due to high blood pressure), breast and prostate cancer; and respiratory infections.Prostate cancer accounted for the highest proportion of deaths in men in 2010 and 2011, but was secondto CVD in 2012. Together, over the period 2010-2012, diabetes mellitus, IHD, hypertensiveheart disease, and cerebrovascular diseaseaccounted for approximately one-quarter (25%) of deaths among men, and one-third (33%) of deaths among women. The World Health Organization (WHO) estimated that in 2016, NCDs accounted for 83% of all deaths in Barbados, with 29% of deaths due to CVD, 23% to cancer, 9% to diabetes, 4% to chronic respiratory diseases, and 18% to other NCDs; the total risk of premature mortality from NCDs was 16% (20% for men, 13% for women).

The age-standardised incidence rate (ASIR) for cancer in Barbados increased from 214.6/100,000 population in 2008 to 219.6/100,000 in 2013 and 237.0/100,000 in 2014, and, consistent with the global situation, the cancer ASIR was higher for men (265.7/100,000) than for women (218.5 per 100,000). The top cancer sites were prostate and breast, followed by colon, uterine cervix, and uterine body. The prostate cancer ASIR was 111.5 per 100,000,placing it in the top five prostate cancer rates globally, and breast cancer was the most common cancer among women, with an ASIR of 74.5 per 100,000. Barbados had one of the lowest rates of lung cancer globally (7.4 per 100,000), likely due to the country's relatively low prevalence of tobacco smoking.

If maternal and child health visits are excluded, 80% of all visits to polyclinics in Barbados are for a chronic disease; between 2010 and 2012, diabetes, hypertension, and lipid disorders were the main causes for visits to the polyclinics. In 2014, there were 584 stroke events, and 481 were admitted to the Queen Elizabeth Hospital (QEH), the sole public tertiary level health facility in the country. Of these patients, 90% had at least one NCD risk factor, and 68% had at least two risk factors; 89% had hypertension, 72% had diabetes, and 67% had high cholesterol, and 39% were obese. There were 411 AMI and sudden cardiac death (SCD)events in 407 patients, and 256 were hospitalised at the QEH. Of these patients, 86% had hypertension, 86% were obese, 80% had diabetes, and 76% had high cholesterol.

In 2012, asthma was the leading disease-specific discharge diagnosis from the QEH, occurring mainly in children and adolescents. After asthma, diabetes, IHD, stroke,chronic pulmonary disease—including bronchitis,influenza, and pneumonia—and heart failure were among the leading discharge diagnoses. The most frequent cancer diagnoses were breast, colo-rectal, prostate, and cervical cancer, in order of occurrence. In 2017, of NCD discharge diagnoses at the QEH, asthma accounted for 27.7%; IHD 13.7%; colon/recto-sigmoid cancer 11.4%; stroke 10.5%; breast cancer 7.0%; bronchitis, emphysema and otherchronic obstructive pulmonary disease (COPD) 6.2%; prostate cancer 5.0%; hypertension 4.3%; and cervical cancer 1.2%.

The Barbados Health of the Nation Survey (HoTNS) was conducted among persons 25 years and older, and core findings reported in 2015 confirmed that Barbadian adults are at high risk of NCDs due high prevalence of biological and behavioural risk factors. The HoTNS showed that:

- 1 in 10 adults had an NCD, and 1 in 3 was being managed for at least one NCD
- 1 in 3 had hypertension, 1 in 5 had diabetes, and of those with known hypertension or diabetes, at least 1 in 3 of those receiving treatment had sub-optimal control
- 8 in 10 men, and 9 in 10 women, had at least one risk factor
- 2 of every 3 adults were overweight or obese; about 1 in 10 women, and almost 1 in 20 men, had "gross" obesity (body mass index [BMI] $\geq$ 35 kg/m2)
- 1 in 10 men, and 1 in 50 women, reported daily tobacco use
- 1 in 10 men, and 1 in 50 women, reported excessive weekly alcohol consumption, with 1 in 3 men aged 25-44 years reporting binge drinking in the past 30 days
- 9 in 10 adults reported low fruit and vegetable consumption
- 5 in 10 adults reported low levels of physical activity
- A combination of three or more risk factors (current daily tobacco smoking, inadequate fruit and vegetable consumption, physical inactivity, being overweight or obese, and having hypertension) was more common in women than men, and in older adults

Risk factors in children are also cause for concern, demonstrated in the 2011 Global School-based Student Health Survey (GSHS) and the 2013 Global Youth Tobacco Survey (GYTS), both conducted among 13-15 yearold students. The findings justify childhood obesity prevention (COP) interventions in the school setting, including banson sugar-sweetened beverages (SSBs) and enhanced physical activity, as well as strengthened enforcement of restrictions on the sale of health-harming products to minors.

- The GSHS showed that 46.9% of the students drank at least one drink containing alcohol on one or more of the past 30 days (48.0% boys, 45.8% girls); 31.9% were overweight (32.1% boys, 31.8% girls); 14.2% were obese (13.9% boys, 14.6% girls); 73.3% usually drank carbonated soft drinks one or more times per day during the past 30 days (74.0% boys, 71.5% girls); only 29.1% were physically active for a total of at least 60 minutes per day on 5 or more days during the past 7 days (34.5% boys, 23.3% girls); only 33.3% went to physical education class on 3 or more days each week during the school year (35.4% boys, 31.2% girls); and 64.9% spent 3 or more hours per day during a typical or usual day doing sitting activities (60.4% boys, 69.6% girls).
- The GYTS showed that 14.5% of students currently used any tobacco products (17.4% boys, 11.4% girls); 12.6% currently smoked tobacco (15.7% boys, 9.3% girls); and 7.0% currently smoked cigarettes (8.8% boys, 5.0% girls). Those exposed to tobacco smoke at home constituted 19.1% of respondents; among current smokers, 22.6% obtained cigarettes by buying them from a store, shop, street vendor, or kiosk, and among current smokers who bought cigarettes, 64.6% were not prevented from buying them because of their age.

There are, as yet, no data from Barbados on the use of e-cigarettes ("vaping") and other products marketed as "cessation aids", cleaner alternatives to conventional cigarettes, or "reduced risk" products, but their increasing use globally, especially among youth, demands that a close eye be kept on this development and relevant local evidence collected.

Barbados has a long history of national efforts to combat NCDs, and of contributing to international and regional efforts, the latter including the 2001 Nassau Declaration and the 2007 Port of Spain Declaration, both made by Caribbean Community (CARICOM)Heads of State and Government (HoSG). The country appointed a Special Envoy on NCDs to strengthen its contribution to the first United Nations (UN) High-Level Meeting (HLM) on NCD Prevention and Control in 2011, and the Special Envoy has been a prominent advocate and participant in subsequent UN and WHO high-level meetings on NCDs.

The Prime Minister and Minister of Health and Wellness have also been prominent champions for NCD prevention and control in national, regional, and international settings, and in 2018, the UN Interagency Task Force on the Prevention and Control of NCDs (UNIATF) recognised Barbados' efforts with an award for outstanding contributionto NCD prevention and control. As a complement to the 2020 "We Gatherin'" initiative, which encourages the Barbadian diaspora to visit the country and become involved in its transformation, the GoB and MHW intend to intensify NCD prevention and control efforts during that year, and create momentum for further action.

National multi-sectoral structures have been put in place to guide and contribute to the NCD response, including the Barbados National NCD Commission (NNCDC), which was established in 2007, and the National Task Force on Wellness (NTFW) and the Cabinet Sub-committee on NCDs, bothestablished in 2018. Among the country's successes are the development of strategic plans for NCD prevention and control;enactment of legislation for tobacco control; formulation of guidelines for nutrition and physical activity; and development of protocols for NCD management. In 2015, the GoB introduced a 10% tax on SSBs as a measure to reduce consumption, combat obesity and NCDs, and realise revenue that could be applied to support health.

Efforts by the GoB—led by the MHW—to reduce NCDs are complemented and supported by CARICOM regional institutions such as the Caribbean Public Health Agency (CARPHA); international development agencies such WHO, the Pan American Health Organization (PAHO)[1] and other UN agencies; regional financing institutions such as the Caribbean Development Bank (CDB) and the Inter-American Development Bank (IDB); and a strong, vibrant, and vocal civil society sector. The last-mentioned includes civil society organisations (CSOs) and non-governmental organisations (NGOs) that focus on the four major NCDs;[2] a coalition of NGOs that addresses COP;[3] a regional umbrella organisation for CSOs working in NCD prevention and control, based in Barbados,[4] which has produced strategic plans to guide civil society action in NCD prevention and control, and COP; and, most recently, a group comprising persons living with NCDs (PLWNCDs) and caregivers.[5] Other CSOs contributing to NCD reduction include faith-based organisations (FBOs), trade unions, and academia; health-promoting private sector entities, such as insurance companies and sports organisations, also sponsor, promote, and participate in relevant initiatives.

There is much more to be done

Despite progress and successes, the cost of the increasing burden of NCDs in Barbados, in terms of their toll on people's individual and collective health, wellbeing, and productivity, and their negative financial and economic impact, demands intensified action to reduce NCD risk factors and complications. A 2015 investment case for NCD prevention and control in Barbados showed that for CVD and diabetes alone, estimated current spending was 64 million Barbados dollars (Bds$) per year, with losses to the economy of Bds$ 145 million per year due to missed work days, poor productivity, reduced workforce participation, and the costs to business of replacing workers. These costs represented approximately 2.6% of projected gross domestic product (GDP) in 2015.Further estimates showed that NCD-relatedout-of-pocket (OOP) spending, prevention and treatment expenditures, and decreased productivity are costing Barbados not less than Bds$ 375 million per year, and could be costing as much as Bds$ 825 million per year.

NCDs consume 65% of the budget allocated to the QEH, and 60% of the budget of the Barbados Drug Service (BDS) is allocated to pharmaceuticals used in the management of chronic diseases. In fiscal year 2017-2018, the BDS Special Benefit Service (SBS), which provides formulary medicines free of cost to children under 16 years of age, persons over age 65, and persons diagnosed with diabetes, cancer, hypertension, glaucoma, asthma, and/or epilepsy, spent 49.8% of its total expenditure on prescriptions for hypertension; 32.4% on diabetes; 8.6% on glaucoma; 7.4% on asthma; and 1.9% on cancer. These human and economic costs are not sustainable, especially in light of the inherent social, economic, and environmental

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[1] PAHO is the Regional Office for the Americas of WHO.

[2] Including the Diabetes Association of Barbados, the Barbados Diabetes Foundation, the Heart and Stroke Foundation of Barbados, the Barbados Cancer Society, and the Asthma Association of Barbados.

[3] The Barbados Coalition for Childhood Obesity Prevention.

[4] The Healthy Caribbean Coalition (HCC).

[5] Our Views, Our Voices Barbados.

vulnerabilities—including to factors such as climate change—associated with the country's status as a small island developing state (SIDS), and the implementation, in 2018, of the Barbados Economic Recovery and Transformation Plan (BERT).

The UN Secretary General's 2017 Report on Progress in the Prevention and Control of NCDs indicated that, globally, despite the myriad mandates, agreements, frameworks, and guidelines, progress towards the agreed global NCD targets has been unsatisfactory.In general, countries have not implemented the WHO 'Best Buys'—cost-effective interventions for risk factor reduction and NCD management outlined in Appendix 3 of the WHO Global Action Plan for the Prevention and Control of NCDs, and updated in 2017—to the desired extent. Recommendations from the Secretary General's report included health systems strengthening and development of national publicly-financed benefit packages providing universal health coverage that include the WHO Best Buys, Effective Interventions, and Other Recommended Interventions, and increased financing of national NCD responses, including fiscal measures that can generate revenue, such as taxation of tobacco products, alcohol, and SSBs.

The health system in Barbados has traditionally focused more on communicable diseases rather than on NCDs, and on treatment and cure, rather than on promotion and prevention. The NSP-NCD 20-25 deliberately focuses on health promotion, risk factor reduction, and prevention of disease and disease complications, aiming to strengthen the primary health care (PHC) approach, take advantage ofBarbados' network of polyclinics, enhance their functioning, and advance to universal health. This approach is in keeping with the shared vision of the draft Barbados National Strategic Plan for Health 2018-2022: "Healthy productive people and communities through excellent care for everyone, everywhere, every time", which encapsulates the commitment of the MHW and the GoB to universal health.

The NSP-NCD 20-25 builds on the successes of the Barbados Strategic Plan for the Prevention and Control of Non-communicable Diseases (NCDs) 2015-2019 (SP 15-19) and addresses gaps. It takes advantage of recommended, evidence-based, cost-effective interventions for NCD prevention and control, and aligns with relevant global and regional frameworks, including from WHO, PAHO, and CARICOM.

As a reflection of commitments in the 2018 Manifesto of the GoB and the addition of "Wellness" to the name of the Ministry of Health in that year, the NSP-NCD 20-25 emphasises the promotion and maintenance of health, and the prevention of disease. The Plan includes interventions that are critical for advancing universal health, reducing inequities, and fulfilling the promise of the UN 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) to "leave no one behind", especially in achieving SDG 3, the goal most directly related to health: "Ensure healthy lives and promote well-being for all at all ages".

The NSP-NCD 20-25 places great importance on multi-sectoral approaches to deal with determinants of health that are outside the purview of the MHW, and on civil society and private sector involvement in creating enabling, supportive environments for effective NCD prevention and control.

NSP-NCD 20-25 focus areas

Over the period 2020-2025, the GoB will focus on the following eight (8) priority areas for NCD prevention and control, led and coordinated by the MHW:

1. **Risk factor reduction**, with strengthening of the *implementation of the WHO Framework Convention on Tobacco Control (FCTC); reduction in the harmful use of alcohol*; promotion of healthy nutrition through improvements in health and nutrition literacy, the use of policy, legislation, regulations, and fiscal measures, introduction of front-of-package warning labelling (FoPWL) on pre-packaged foods, and elimination of trans fat; and promotion of regular physical activity through community, school, and workplace wellness interventions. **Wellness grants** can play a role in promoting healthy nutrition.
2. **Improved management of NCDs**, strengthening health systems and enhancing the application of the *chronic care model* and the *primary health care approach*, with the development, dissemination, and use of protocols and guidelines for standard management of common conditions at the first level of care, taking multi-morbidity into consideration and conducting related human resources for health (HRH) capacity-building, within a supportive policy, legislative, and regulatory environment.

3. **Childhood obesity prevention**, highlighting *SSB taxation, SSBbans in and around schools,restrictions on the sale andmarketing of unhealthy products to children*, and promotion of *physical activity*, with the involvement of key stakeholders across sectors, as well as the children themselves—as age-appropriate—their parents, guardians, and teachers.
4. **Multi-sectoral work and partnerships**, with *high-level advocacy; strengthening the remit and functioning of multi-sectoral bodies*; involving *civil society and the health-promoting private sector; and demonstrating linksamong* NCDs, agriculture, and climate change, among NCDs, SIDS, and trade, and between MHW and other ministries.
5. **Resource allocationand mobilisation**, undertaking *evidence-based advocacy* for greater allocation to Health of resources from the national budget; identifying and taking advantage of financial, technical, and other resources available through *international development agencies and foundations; sharing experiences* with other countries in and outside of the Caribbean region; and *identifying co-benefits* with other priorities such as climate change adaptation.
6. **Communicating for health**, with wide *promotion of the NSP-NCD 20-25;mass media and social media campaigns* in collaboration with civil society and other partners to reduce risk factors and inform of progress in implementing the NSP; and *advocacy* regarding effective policy options for NCD prevention and control, including to policymakers, through interventions that encompass creation of a *mass movement* that involves youth and PLWNCDs.
7. **NCD surveillance and research**,including development of a *framework to identify key actors and resources*, and guide systematic implementation of *surveys/studies* to provide updated,quality NCD-related information,including on multi-morbidity, *disaggregated* by at least age, sex, ethnicity, geographic location, and socio-economic status to identify gender, geographic, economic, and other inequities related to the social determinants of health. These studies will inform strategic planning that includes clear goals and objectives to achieve the country's vision for health with equity.
8. **Management, monitoring, and evaluation** of the NCD programme and the implementation of the NSP-NCD 20-25, including strengthened capacity for *governance and leadership, development of amonitoring and evaluation (M&E) and accountability framework and plan, and enhancement of mechanisms for oversight*.

NSP-NCD 20-25 strategic approaches, high-level objectives, and indicative budget

The NSP-NCD 20-25 carries forward the vision, mission, and values/guiding principles of the previous strategic plan, and explicitly recognises the importance of identifying and managing conflict of interest (CoI) in establishing and strengthening partnerships, especially with the private sector.

The high-level objectives(goal, purpose/overall outcome, and specific outcomes) are summarised below, along with lower-level objectives (outputs/expected results). The objectives are presented in detail in the Planin a Logical Framework Matrix that includes targets, indicators, means of verification, and assumptions for each objective. There is also a matrix that outlines the main activities for each output/expected result, with the inputs/estimated resources for each activity, indicative timelines, proposed partners, and an estimated budget.

Vision

The vision of the NSP-NCD 20-25 is to improve the health and wellbeing, and enhance the productive potential, of all Barbadians.

Mission

The mission of the NSP-NCD 20-25 is to empower Barbadian society, individuals, and organisations to enhance their quality of life throughout the life course through a whole-of government, whole-of-society response to NCDs, their risk factors, and the social determinants of risk, with emphasis on promotion, prevention, and the first level of care, so as to erase the avoidable burden of NCDs.

Values/guiding principles

- Health is a fundamental right of all Barbadians.
- Development of a patient-centred, equitable, efficient, and accessible health care system of high quality is a priority, to contribute to Barbadians' achievement of optimum physical, mental, and social well-being.
- Recognising that most of the causes and solutions to NCD risk factors lie outside of the health sector, the national response must be inclusive of all sectors and persons, respecting the views of all, while holding them accountable for their actions in a transparent and collaborative manner.

- There needs to be empowerment of people and communities to participate in their own health, within a life-course approach to wellness, prevention, and control, using evidence-based strategies, supported by national action and international cooperation and solidarity.
- **Creation of an enabling environment**—including policy, legislation, regulations and **wellness grants**—that facilitates, encourages, and supports healthy choices, while discouraging unhealthy behaviours, is an overarching principle for effective NCD prevention and control.
- In all interactions with civil society and the private sector, across all government ministries and statutory bodies involved in NCD prevention and control, conflict of interest issues must be identified, disclosed, and appropriately managed according to government policies and guidelines on transparency and good governance.

Goal

Mortality, morbidity, and disability due to NCDs reduced.

Purpose/Overall outcome

Cost-effective and recommended policy options and interventions implemented to reduce the main NCD risk factors and strengthen management of the major NCDs.

Specific outcomes(OCMs) and related *outputs/expected results (OPTs/ERs)*

OCM 1: Tobacco use reduced among adolescents and adults.
OPT/ER1.1 Implementation of the WHO**FCTC** accelerated.

OCM 2: Unhealthy diet and overweight/obesity reduced.
OPT/ER2.1: Strategies and mechanisms for **healthy nutrition** enhanced.
OPT/ER2.2: Implementation of strategies and interventions for **COP** enhanced.

OCM3: Physical inactivity reduced.
OPT/ER3.1: Strategies and mechanisms implemented for increased **physical activity**.

OCM4: Harmful use of alcohol reduced.
OPT/ER 4.1: Strategies and mechanisms implemented to reduce the **harmful use of alcohol**.

OCM 5: High blood pressure reduced, and screening for, and management of, diabetes, CVD, chronic respiratory diseases, and cancer improved.
OPT/ER5.1: Interventions implemented to reduce **high blood pressure** and improve screening for, and **integrated management** of, CVD, diabetes, chronic respiratory diseases, and cancer at the first level of care, taking multi-morbidity into consideration.

OCM 6: Multi-sectoral, whole-of-government, whole-of-society, and health-in-all policies approaches to NCD prevention and control strengthened.
OPT/ER6.1: Strategies and mechanisms implemented to promote and strengthen **multi-sectoral work and partnerships** for NCD prevention and control.

OCM 7: Adequate resources allocated and mobilized for enhanced functioning of the national NCD programme.
OPT/ER7.1: Strategies and mechanisms implemented to improve **resource allocation and mobilization** (financial and human resources) to strengthen the NCD programme and facilitate execution of the NSP-NCD 20-25.Systems development linking human resources and technologies to provide continuous communication and health promotion support. Human resources will be need specific and specialized to complete tasks. Mental health support including human resource acquisition to strength this sector of NCD care.

OCM 8: Increased awareness and understanding among key stakeholders of the major NCDs, their main risk factors, their impact, and responses.
OPT/ER8.1:Communication strategies developed and implemented to promote the NSP-NCD 20-25 and enable NCD risk factor reduction and improved management of NCDs.

OCM 9: Information systems related to NCDs strengthened.

OPT/ER9.1: Strategies and mechanisms implemented to strengthen ***NCD surveillance and research***, including assessment of multi-morbidity.

OCM 10: National leadership and governance of NCD prevention and control enhanced.

OPT/ER10.1: Strategies and mechanisms strengthened for the efficient and effective ***management, monitoring, and evaluation*** of the NCD programme and the NSP-NCD 20-25.

The total of the inputs andestimatedresources for the activities for achievement of the outputs/expected results providesan ***estimated budget for the NSP-NCD 20-25, which is Bds$ 2,792,000*** (approximately 1,396,000 United States Dollars, US$), excluding staff, infrastructure, procurement, and other 'in-kind' costs.

Strategies for implementation of the Plan

In implementing the NSP-NCD 20-25, strategies will include:

- **Taking advantage of high-level multi-sectoral structures** such as the Cabinet Sub-committee on NCDs and the Social Partnership, to drive whole-of-government and whole-of-society approaches and facilitate resource allocation and mobilisation.
- **Convening key government sectors** to facilitate and enable networking, joint action, and identification of co-benefits; increase awareness of the impact on health of actions in other sectors; and demonstrate the importance of health as both a contributor to, and a marker of, sustainable development.
- **Strengthening engagement with public and private health care providers**.
- Using **key global and regional declarations**, agreements, and mandates to frame national responses to NCDs.
- **Strengthening communication**, taking advantage of advances in information and communication technology to improve health literacy and promote the NSP-NCD 20-25.
- **Ensuring greater use of the settings approach**, particularly schools and workplaces.
- **Enhancing involvement of, and collaboration with, civil society**, including youth and PLWNCDs.
- **Fostering involvement of, and collaboration with, the private sector**, focusing on the health-promoting private sector, and identifying and managing CoI.
- **Strengthening information systems for health**, including the disaggregation of data to identify groups in conditions of vulnerability.
- **Enhancing resource mobilisation**, both financial and human.
- **Improving human resources capacity and functioning**.
- **Ensuring monitoring, evaluation, and accountability** for outputs/expected results and outcomes, and for resources allocated and mobilised.

Risks must be identified and mitigated

Among the risks to the successful execution on the NSP-NCD 20-25 are:

- **"Policy inertia"** and **interference by Industry** in efforts to reduce consumption of health-harming products. These risks demand high-level, evidence-based advocacy to policymakers, and involvement of youth, PLWNCDs, and other key stakeholders to make the case for, and demand, action.
- **Reduction of political will**, due to emerging issues, crises, emergencies, and disasters. Counter measures include sensitisation across all sectors, sustained functioning of supportive mechanisms for NCD prevention and control, and evidence-based planning, implementation, monitoring and evaluation, with communication of results to policymakers.
- **Limited financial and human resources**, where mitigation includes results-based management; capacity strengthening; resource mobilisation based on evidence-based plans and implementation of international mandates and agreements, as applicable to the national situation; and increased collaboration with CSOs, NGOs, and international development agencies.

- **Limited intersectoral work**, with perceptions of NCDs as being a health issue only. These perceptions need to be countered by increased dialogue with sectors other than health, provision of evidence on the impact of NCDs on sustainable development, identification of common objectives across sectors, demonstration of co-benefits in multi-sectoral interventions for NCD reduction, and promotion of health impact assessments.

Monitoring, evaluation, and accountability are critical

Critical aspects of managing for results, the overarching principle of the NSP-NCD 20-25, are monitoring, evaluation, and accountability. The principals in the M&E and accountability process include the Senior Medical Officer of Health, NCDs, who coordinates the MHW NCD Unit; the Chief Medical Officer; the NNCDC; the Minister of Health and Wellness; the Cabinet Sub-committee on NCDs; and, ultimately, the Prime Minister of Barbados.

The components of the strategic agenda delineated in the Plan provide the basis for the development of M&E and accountability plans, production and dissemination of periodic progress reports, and a final evaluation report, all of which will address both programmatic and financial execution of the NSP-NCD 20-25.

In the M&E and accountability process, the identification of successes/achievements, challenges/gaps, and lessons learned will enable appropriate adjustments to be made over the course of the NSP-NCS 20-25. The process will also set the stage for greater efficiency and effectiveness of evidence-based, multisectoral, whole-of-government, whole-of-society interventions for NCD prevention and control in Barbadosin the next strategic planning cycle.

1. Introduction

The Barbados National Strategic Plan for the Prevention and Control of Non-communicable Diseases 2020-2025 demonstrates the continuing efforts of the Government of Barbados to address the burden of non-communicable diseases, which are the main causes of death and illness globally, in the Region of the Americas, in the Caribbean region, and in Barbados. The NSP-NCD 20-25 succeeds the Barbados Strategic Plan for the Prevention and Control of NCDs 2015-2019,[6] builds on achievements and lessons learned during the previous strategic planning period, and addresses gaps and new developments.

In its 2014 report on NCDs,[7] the World Health Organization noted that NCDs were responsible for 68% of the world's 56 million deaths in 2012, more than 40% of which were premature deaths, occurring in persons under age 70 years. Almost three-quarters of all NCDdeaths and the majority of premature deaths (82%) occurred in low- and middle-income countries, and WHO estimated cumulative economic losses due to NCDs under a "business asusual" scenario in these countries at a totalof US$ 7 trillion for the period 2011–2025,significantly more than the annual US$ 11.2 billion cost of implementing a set of high-impact interventions to reduce the NCD burden.

In Barbados, NCDs result in massive socio economic costs as they undermine the health and wellbeing of individuals, families, and society through death, illness, and out-of-pocket and other spending costs. They account for the greatest proportion of government spending on health, and significantly contribute to reduced national productivity due to absenteeism, presenteeism, and costs to business. NCD-related costs, estimated at between Bds$ 375 million and Bds$ 825 million per year, pose a threat to sustainable national development that must be addressed,[8,9] and the NSP-NCD-20-25 is therefore a critical framework for national health action.

The four leading causes of NCD deaths are cardiovascular diseases, cancers, chronic respiratory diseases (including asthma and chronic obstructive pulmonary disease), and diabetes, which have four common risk factors—tobacco use, unhealthy diet, physical inactivity, and harmful use of alcohol. Since at least 2004, Barbados has developed specific policies for prevention and control of the four major NCDs and their four common risk factors, and has supported and aligned with global and regional frameworks for action in developing its NCD-related policy interventions.[10]

In recognition of the importance of addressing the social, environmental, economic, commercial, and other determinants of health in the fight against NCDs, and the need for multi-sectoral, whole-of-government (WoG), whole-of-society (WoS), health-in-all-policies (HiAP) approaches, the Barbados National NCD Commission[11]was created in 2007. The multi-sectoral Commission has functioned continuously since then, despite changes in government, to fulfill its mandate to advise, assist, recommend, and monitor NCD reduction efforts, collaborating closely with the Ministry of Health and Wellness and reporting to the Minister.

At its January 2019 meeting, the NNCDC noted the imminent end of the period covered by the NCD Strategic Plan 2015-2019 (SP 15-19) and proposed to the MHW the development of a new strategic plan to guide actions in NCD prevention and control. The NSP-NCD 20-25 should align with the emphasis placed on health and wellness by the newly-elected GoB; [12] encompass commitments made in the GoB's election manifesto;be consistent with the draft National Strategic Plan for Health (NSPH) 2018-2022;[13] and integrate not only existing national and sub-national entities and structures, but also newly-

[6]Ministry of Health (MOH). Barbados Strategic Plan for the Prevention and Control of NCDs 2015-2019. Bridgetown, Barbados: MOH; 2014.https://bit.ly/2K1psTC.
[7]World Health Organisation (WHO). Global status report on NCDs 2014. Geneva: WHO; 2014. https://bit.ly/2K2n5A8.
[8]WHO, UNDP, and MOH. The Investment Case for Non-communicable Disease Prevention and Control in Barbados. WHO, UNIATF, UNDP; 2015. https://bit.ly/2Q2RGBs.
[9]Theodore K. Real cost of NCDs and health system sustainability (presentation). BNR 10th Anniversary Seminar: Multidisciplinary stakeholder engagement in the management of NCDs. Bridgetown, Barbados, April 2019.
[10]Unwin N, Samuels TA, Hassell T, et al. The development of public policies to address non-communicable diseases in the Caribbean Country of Barbados: the importance of problem framing and policy entrepreneurs. Int J Health Policy Manag 2017; (6(2): 71-82. https://bit.ly/37NHcMJ.
[11]https://www.healthycaribbean.org/barbados-national-commission-for-cncds/.
[12]There was a change in government after general elections held in Barbados in May 2018.
[13]MHW, GoB. Barbados National Strategic Plan for Health 2018-2022: Working Together for a Healthier Nation (Draft). Bridgetown: MHW; 2017.

established ones, such as the National Task Force on Wellness (NTFW) and the Cabinet Sub-committee on NCDs, the latter beinga ministerial-level platform designed to facilitate policy coherence and greater,effective intersectoral collaboration for NCD prevention and control.

Barbados is signatory to many international frameworks and agreements for health, including the International Covenant on Economic, Social and Cultural Rights (ICESCR),[14] which the country ratified in 1973,and the Convention on the Rights of the Child (CRC),[15] which was ratified in 1990. Article 12 of the ICESCR recognises the right of everyone to the enjoyment of thehighest attainable standard of physical and mental health, and Article 24 of the CRC recognises the right of the child to the highest attainable standard of health and to "facilities for the treatment of illness and rehabilitation of health". The country has made significant advances in the progressive realisation of these rights, and is also committed to the 2030 Sustainable Development Agenda[16] and its Sustainable Development Goals, approved by the UN General Assembly in 2015. The SDGs include SDG 3, the goal most directly related to health: "Ensure healthy lives and promote well-being for all at all ages", and targets 3.4[17] and 3.8,[18] which address, respectively, reducing premature mortality from NCDs, and achieving universal health.

The Pan American Health Organization uses the term "universal health" (UH) to include universal access to health and universal health coverage (UHC). UH implies that "all people and communities have access, without any kind of discrimination, to comprehensive, appropriate, 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".[19]

The primary health care approach is a core component of UH, and is defined by WHO as an approach to health and well-being centred on the needs and preferences of individuals, families, and communities, providing whole-person care for health needs throughout the lifespan, not just for a set of specific diseases.[20] PHC ensures that people receive comprehensive care, ranging from promotion and prevention to treatment, rehabilitation, and palliative care, as close as feasible to their everyday environment. The PHC approach and UH both work to reduce inequities in health and promote social inclusion and justice.

WHO further notes that the approaches needed to contain the escalating costsof health care and provide sophisticated medicalservices for NCDs and their complications includemore investment in prevention and primary care,as well as reduction of the costs of treating the major NCDs and complications that require hospitalisation, such as heart attacks, strokes, and amputations; blindness due to diabetic or hypertensive retinopathy; and end-stage kidney disease requiring dialysis. The selection and implementation of essential evidence-based interventions can reduce costs, but despite the existing knowledge, services at the first level of care, especially inresource-constrained settings, are often limited, inappropriate, and not evidence-based. The situation is compounded by low per capita health expenditure in many countries, inadequate for the integration of NCD interventions into primary care in a comprehensive manner. In response to this situation, WHO prioritiseda core set of interventions to guide its Member States, reflected in the WHO Package of Essential NCD Interventions for PHC in Low-resource Settings[21] and the WHO Best Buys.[22]

[14]https://www.ohchr.org/en/professionalinterest/pages/cescr.aspx.
[15]https://www.ohchr.org/EN/professionalinterest/pages/crc.aspx.
[16]https://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E.
[17]https://unstats.un.org/sdgs/metadata?Text=&Goal=3&Target=3.4.
[18]https://unstats.un.org/sdgs/metadata/?Text=&Goal=3&Target=3.8.
[19]PAHO. Strategy for universal access to health and universal health coverage. Document CD53/5, rev.2. Washington, D.C.: PAHO; 2014. https://www.paho.org/hq/dmdocuments/2014/CD53-5-e.pdf.
[20]WHO. Primary health care: key facts. Geneva: WHO; 2019. https://bit.ly/32xSmB6.
[21]WHO. Package of Essential NCD Interventions (PEN) for Primary Health Care in Low-resource Settings. Geneva: WHO; 2010. https://www.who.int/nmh/publications/essential_ncd_interventions_lr_settings.pdf.
[22]WHO. Tackling NCDs: Best Buys and Other Recommended Interventions for the Prevention and Control of NCDs. Geneva: WHO; 2017. https://bit.ly/2Q2iXDK.

Barbados can be justly proud of its progress in these areas. The public health system provides services free at the point of delivery to citizens and residents of the country,and there is a strong polyclinic and district hospital network that provides access to essential services.The NSP-NCD 20-25 aims to strengthen the PHC approach even further, enhancing the first level of care and the network of promotive, preventive, and treatment services to reduce the main NCD risk factors and complications of the major NCDs. Successes in these areas will propel the country further towards universal health, reduction of inequities, progressive realisation of the right to health, and attainment of the SDGsby 2030.

The UN Third UN HLM on NCD Prevention and Controlheld in September 2018 added mental health disorders and air pollution to, respectively, the four major NCDs and the four main risk factors to establish "5x5" priorities for action in NCD reduction. However, the NSP-NCD 20-25 will not focus on these added conditions, since Barbados has a Mental Health Commission that addresses mental health disorders, and though the MHW addresses issues related to indoor air quality in the workplace setting, reduction of air pollution is the remit of another government sector. However, the MHW and the NNCDC will cooperate and collaborate with these entities as needed in reducing the NCD burden and fostering the health and wellbeing of the people of Barbados.

The NSP-NCD 20-25 presents the background to its development; the methodology; a summary situation analysis, priority areas to be addressed; strategic approaches; goals, overall and specific outcomes, outputs, indicators, and targetsthat are congruent with the national situation and with regional and global targets for NCD prevention and control; activities and related inputs and resources, indicative timelines, and proposed partners. It also includes an estimated budget, a monitoring and evaluation framework, implementation strategies, risks to successful execution, and risk management strategies.

With its focus on wellness and prevention, and taking into consideration the social, economic, environmental, commercial, and other determinants of health, the NSP-NCD 20-25 provides a blueprint for not only the MHW, but also for all government ministries, CSOs, and private sector entities (PSEs). It will enable these key stakeholdersto play their roles and assume their responsibilities to contribute to NCD prevention and control, the health and productivity of the people of Barbados, and the country's sustainable social and economic development.

2. Background

Global attention to NCDs has been building since the First UN HLM on NCD Prevention and Control in 2011[23] and its Political Declaration,[24] which recognised "the primary role and responsibility of Governments in respondingto the challenge of non-communicable diseases and the essential need for the effortsand engagement of all sectors of society to generate effective responses for theprevention and control of non-communicable diseases."Subsequent to the HLM, WHO and PAHO developed, respectively,global and regional guidance for their Member States to take action according to the national situation, including, but not limited to, the frameworks listed in the bibliography in **Annex 1**.

Notable among the WHO frameworks are the Global Monitoring Framework (GMF) with nine voluntary targets to be achieved by 2025—including a 25% reduction in premature mortality from the four major NCDs—and 25 indicators,[25] and the Global Action Plan (GAP) 2013-2020.[26] The GAP contains Appendix 3, a menu of policy options and cost-effective interventions that address risk factor reduction and disease management, including14 'Best Buys', interventions thatare especially cost-effective and affordable for all countries. The 'Best Buys' were updated in 2017 to a total of 16 interventions, in addition to Effective and Other Recommended Interventions for NCD prevention and control.[27]

The WHO Best Buys (BBs), Effective Interventions (EIs), and Other Recommended Interventions (ORIs) arelisted in Annex 2, and include a wide range of options that address the provision of supportive environments;promotion, education, prevention, and screening; taxation, legislation, enforcement, and trade; packaging, labelling, portion size, and reformulation of food; advertising, promotion, and sponsorship; and counselling, referral, treatment, drug therapy, care, rehabilitation, and palliation.

[23] https://www.un.org/en/ga/ncdmeeting2011/.
[24] https://www.who.int/nmh/events/un_ncd_summit2011/political_declaration_en.pdf.
[25] WHO. Global Monitoring Framework. Geneva: WHO; 2011. https://bit.ly/32pEsBa.
[26] WHO. Global Action Plan for the Prevention and Control of NCDs 2013-2020. Geneva: WHO; 2013. https://bit.ly/2pVmN79.
[27] WHO. Tackling NCDs: Best Buys and Other Recommended Interventions for the Prevention and Control of NCDs. Geneva.

Not withstanding these recommendations, the Report on progress in the prevention and control of NCDs – Report of the UN Secretary-General, December 2017[28] showed unsatisfactory progress toward the agreed global targets, with health system interventions not being scaled-up in the majority of developing countries, and limited translation of political commitments into action. Economic and trade promotion interests were identified as impeding the implementation of some of the BBs, EIs, and ORIs, and funding for national programmes from domestic resources and international finance was said to be still "grossly insufficient" in developing countries.

Recommendations from the 2017 UN Secretary General's report included:

- Prioritisation of implementation of the BBs;
- Health systems strengthening and development of national publicly-financed benefit packages providing UHC that include the BBs, EIs, and ORIs;
- Increased financing for national responses to NCDs, with creation of fiscal space for interventions that have the capacity to generate revenue, such as the taxation of tobacco products, alcohol, and sugar-sweetened beverages;
- Reinforcement of the role of non-State Actors, including civil society and the private sector;
- Development of health-promoting strategies,including media campaigns,to encourage healthier behaviours; and
- Promotion of accountability, including leveraging SDG review processes to incorporate NCD reporting; conducting periodic NCD risk factor surveys based on WHO survey methodology; and establishing or strengthening population-based cancer registries, cause-specific mortality reporting, and assessments of health systems performance.

The Political Declaration[29] from theThird UN HLM on NCDs held in September 2018[30] contained commitments by the participating Heads of State and Government, including to:

- Promote and implement policy, legislative, and regulatory measures, including fiscal measures, to reduce the main NCD risk factors;
- Accelerate the implementation of the WHO Framework Convention on Tobacco Control;[31]
- Implement interventions to halt the rise of overweight and obesity, in particular childhood obesity;
- Develop a national investment case on NCD prevention and control to raise awareness of their public health burden and impact on equity, poverty, and socioeconomic development;
- Establish or strengthen national multi-stakeholder dialogue mechanisms;
- Scale up efforts to use information and communication technologies and innovations in NCD prevention and control;
- Strengthen health systems and reorient them towards the achievement of UHC and improved health outcomes;
- Promote meaningful civil society engagement to develop multi-sectoral responses to NCDs, forge multi-stakeholder partnerships and alliances, and amplify the voices of PLWNCDs;
- Engage with the private sector, giving due regard to managing conflict of interest;
- Establish or strengthen transparent national accountability mechanisms for NCD prevention and control; and
- Commit to mobilise and allocate adequate and sustained resources for national NCD responses through domestic, bilateral, and multilateral channels, and continue exploring voluntary innovative financing mechanisms and partnerships, including with the private sector, to advance action at all levels.

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[28] https://www.who.int/ncds/governance/high-level-commission/A_72_662.pdf.
[29] https://www.un.org/en/ga/search/view_doc.asp?symbol=A/RES/73/2.
[30] https://www.who.int/ncds/governance/third-un-meeting/en/.
[31] https://bit.ly/2p1Fwxn.

The role of fiscal measuresas effective interventions for NCD prevention and control has gained traction globally, including taxation on unhealthy commodities such as tobacco, alcohol, and SSBs. In its 2019 report, the Task Force on Fiscal Policy for Health stated that: "large excise taxes on tobacco, alcohol, and sugary beverages are essential to reaching the targets set by the Sustainable Development Goals related to ensuring healthy lives, ending poverty, and promoting full and productive employment. Such taxes can also contribute to domestic revenue mobilization, as highlighted for the case of tobacco taxes".[32] The Task Force noted that "if all countries increased their excise taxes to raise prices on tobacco, alcohol, and sugary beverages by 50%, over 50 million premature deaths could be averted worldwide over the next 50 years, while raising over US$20 trillion of additional revenues in present discounted value" and characterised excise tax policy as an "underutilised yet highly effective policy measure to reduce tobacco, alcohol, and sugary beverage consumption and reap huge health benefits".

Childhood obesity prevention has also received global attention, with WHO's publication of an overview of COP interventions[33] and a set of tools for Member States[34] in 2012, and the Report of the WHO Commission on Ending Childhood Obesity (ECHO)[35] in 2016. The ECHO report considered interventions to address the obesogenic environment[36] and identified three critical periods in the life-course: preconception and pregnancy, infancy and early childhood, and older childhood and adolescence. In 2019, in observance of the 30th anniversary of the CRC, the UN Children's Fund (UNICEF) focused on the nutritional status of the world's children[37] and the use of the rights-based approach to create and safeguard food environments that enable healthy diets for children.[38]

The double burden of malnutrition, defined as the co-existence of overnutrition (overweight and obesity) alongside undernutrition (stunting and wasting), has received renewed attention, and healthy diets and supportive food systems that provide people with healthy, safe, affordable, and sustainable diets are of critical importance.[39] The Global Syndemic of undernutrition, overnutrition, and climate change has been described, with major systems of food and agriculture, transportation, urban design, and land use driving the syndemic.[40] These factors further emphasise the need for multi-sectoral interventions that address the issues concurrently—double-and triple-duty actions—and ensure synergy in reducing unhealthy diets and NCDs. Double-duty actions aim to tackle undernutrition, overnutrition, and diet-related NCDs with the same intervention, programme, or policy, and address early-life nutrition, diet quality, food environments, and socio-economic factors. They are delivered through health services; social safety nets; educational settings; and agriculture, food systems, and food environments.[41]

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[32] The Task Force on Fiscal Policy for Health. Health taxes to save lives: employing effective excise taxes on tobacco, alcohol, and sugary beverages. April 2019. https://bit.ly/36SMI07.

[33] WHO. Population-based approaches to childhood obesity prevention. Geneva: WHO; 2012. https://bit.ly/2Ntl9T8.

[34] WHO. Prioritizing areas for action in the field of population-based prevention of childhood obesity: a set of tools for Member States to determine and identify priority areas for action. Geneva: WHO; 2012. https://bit.ly/2NTEpbA.

[35] WHO. Report of the Commission on Ending Childhood Obesity. Geneva: WHO; 2016. https://bit.ly/34OHXTn.

[36] The obesogenic environment is defined as 'the sum of influences that the surroundings, opportunities, or conditions of life have on promoting obesity in individuals or populations.' Lake A, Townshend T. Obesogenic environments: exploring the built and food environments. J R Soc Promot Health 2006; 126: 262-267.https://www.ncbi.nlm.nih.gov/pubmed/17152319.

[37] UNICEF. The State of the World's Children 2019: Children, food and nutrition.https://bit.ly/2QL70Tu.

[38] UNICEF and UN Special Rapporteur on the Right to Food. Protecting children's right to a healthy food environment. Geneva: UNICEF and UN Human Rights Council; 2019. https://bit.ly/2XJmXev.

[39] Branca F, Demaio A, Udomkesmalee E et al. Comment: A new nutrition manifesto for a new nutrition reality. Lancet 2019; published online December 15, 2019. https://bit.ly/2tsWdUn.

[40] Swinburn BA, Kraak VI, Allender S, et al. The Global Syndemic of obesity, undernutrition, and climate change: The Lancet Commission report. Lancet 2019; 393: 791-846. https://bit.ly/2LrgNLY.

[41] Hawkes C, Ruel H, Salm L, et al. Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms. Lancet 2019; published online December 15, 2019. https://bit.ly/36I2jhP.

In the Region of the Americas, PAHO developed a regional Plan of Action for COP[42] to complement its Regional Strategy and Plan of Action for NCD Prevention and Control,[43,44] aligned with the global frameworks, but tailored to regional specificities.In September 2019, the PAHO 57th Directing Council approved a Plan of Action that providesguidance to its Member States for the elimination of trans fats from the food supply,[45] aiming to decreaseconsumption of unhealthy fats and contribute to CVD reduction. This regional Plan of Action for trans fat elimination is aligned with global nutrition and diet-related NCD targets under the commitments of the UN Decade of Action on Nutrition 2016-2025.[46]

In the Caribbean region, theCaribbean Community,[47] the main regional political integration body—of which Barbados is a member—has long recognised NCDs as a priority for joint action. These disorders have been included in the CARICOM regional health agenda, the Caribbean Cooperation in Health (CCH)[48] since its inception in 1984—its fourth iteration, CCH IV,[49] covers the period 2016-2025. The 1993 Caribbean Charter for Health Promotion[50] focused on health and wellness, advocating that "people's health is a positive resource for their living", while the 2001 Nassau Declaration on Health[51] by CARICOM HoSG stated that "the health of the region is the wealth of the region" and recognised the need to reorient and restructure health services; give special attention to vulnerable groups, including youth and women; and focus on NCDs and mental health, as well as human immunodeficiency virus (HIV).

Further, in a world-leading Summit on NCDs in 2007, the CARICOM HoSG developed the Port of Spain Declaration (POSD),[52] which remains the premier guiding framework for regional and national interventions for NCD prevention and control. Indicators related to the POSD and allied frameworks are monitored annually through the development of a grid that shows the status of related interventions in CARICOM countries. The 2017 POSD grid[53] shows that despite successes relating to the development of NCD policies and plans, funding for NCD programmes, and celebration of Caribbean Wellness Day (CWD),[54] several countries, including Barbados, are lagging in taxation of some health-harming products, such as tobacco, alcohol, and unhealthy foods and non-alcoholic beverages, among other interventions.

The Caribbean Public Health Agency,[55] a CARICOM regional institution that plays a major role in NCD prevention and control, especially in surveillance and research, developed a framework for COP to guide CARICOM Member States[56] and a six-point policy package for improving food environments in the region.[57] The Healthy Caribbean Coalition[58] (HCC), an umbrella organisation of CSOs working in NCD prevention and control in the Caribbean—the only such regional entity—has published many documents on the status of the NCD response in the region, focusing on civil society and the private sector, and has developed frameworks to guide civil society action in NCD prevention and control[59] and COP.[60]

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[42] PAHO. Plan of action for the prevention of obesity in children and adolescents. Washington, D.C.: PAHO; 2015. https://www.paho.org/hq/dmdocuments/2015/Obesity-Plan-Of-Action-Child-Eng-2015.pdf.

[43] PAHO. Strategy for the prevention and control of NCDs 2012-2025. Document CSP28/9, Rev. 1. Washington, D.C.: PAHO; 2012.https://www.paho.org/hq/dmdocuments/2012/CSP28-9-e.pdf.

[44] PAHO. Plan of action for the prevention and control of NCDs in the Americas 2013-2019. Washington, D.C: PAHO; 2014. https://www.paho.org/hq/dmdocuments/2015/action-plan-prevention-control-ncds-americas.pdf.

[45] PAHO. Plan of action for the elimination of industrially-produced trans-fatty acids 2020-2025. Document CD57/8. Washington, D.C.: 2019; PAHO. https://bit.ly/2NST46V.

[46] https://www.un.org/nutrition/.

[47] https://www.caricom.org/.

[48] https://bit.ly/2PZVraE.

[49] http://carpha.org/downloads/CCH-IV-Version7.pdf.

[50] https://bit.ly/33J0xfe.

[51] https://bit.ly/2pK2R7j.

[52] https://bit.ly/36PfKxB.

[53] http://onecaribbeanhealth.org/wp-content/uploads/2018/03/POS-Declaration-country-grid-2017.pdf.

[54] Bartholomew L, Bishop L, Brown CR et al. Caribbean Wellness Day: promoting a region-wide day of action. Rev Panam Salud Publica. 2018; 42: e105. https://bit.ly/35XDq1P.

[55] http://carpha.org/.

[56] CARPHA. Plan of Action for Promoting Healthy Weights in the Caribbean: Prevention and Control of Childhood Obesity 2014-2019. http://carpha.org/Portals/0/docs/HealthyWeights.pdf.

[57] https://www.paho.org/spc-crb/index.php?option=com_content&view=article&id=491:paho-facilitates-agreement-between-chile-and-caricom-to-address-childhood-obesity&Itemid=0&showall=1.

[58] https://www.healthycaribbean.org/.

[59] HCC. Strategic Plan 2017-2021: Enabling Caribbean civil society's contribution to national, regional, and global action for NCD prevention and control. Bridgetown, Barbados: HCC; 2017. https://bit.ly/33XbGIW.

[60] HCC. Civil Society Action Plan 2017-2021: Preventing childhood obesity in the Caribbean.Bridgetown, Barbados:

Barbados has contributed significantly to this rich background of Caribbean leadership and advocacy, which played an important role in the convening of the 2011 HLM on NCDs[61] and the GoB continues to demonstrate its commitment to NCD reduction at home and abroad, appointing a Special Envoy on NCDs,[62] and collaborating with national, regional, and international entities in the fight against NCDs. The Prime Minister of Barbados is recognised as a strong advocate and champion for NCD prevention and control; in 2018 she spoke in international and regional fora of the imperative to take relevant action. [63,64]Shortly after his appointment in 2018, the Minister of Health and Wellness presented the National Wellness Initiative for Barbados, noting the dimensions of wellness—social, occupational, spiritual, financial, intellectual, emotional, physical, and environmental—and highlighting the vision of "significantly reducing the impact of NCDs on the population by promoting and providing an enabling environment where wellness activities become part of the daily experiences of all Barbadians".

In 2018, the Barbados MHW received an award from the UNIATF[65] for outstanding contribution to NCD prevention and control,[66] and in June 2018 and July 2019, respectively, Barbados' Permanent Mission to the Organisation of American States successfully sponsored resolutions for multi-sectoral actions to address NCDs and for inclusion of school-based interventions for COP in the Inter-American Education Agenda, in collaboration with PAHO.[67] Barbados is the current Chair of the Regional Technical Subcommittee established in May 2018 to facilitate efforts by the Caribbean Regional Organisation for Standards and Quality (CROSQ) to revise the *Caribbean Regional Standard (CRS) 5—Specification for labelling of pre-packaged foods* to include FoPWL that provides information on foods high in salt, sugar, and fats. In November 2019, the Minister of Health and Wellness identified 2020 as a year of intensified action to reduce NCDs in Barbados[68] concurrent with the "We Gatherin' Barbados 2020"[69] initiative that encourages the Barbadian diaspora to visit the country during that year and help to catalyse national transformation.

3. Methodology

3.1 Conceptual framework

The main conceptual framework for the development of the NSP-NCD 20-25 is results-based management (RBM), whichthe UN Development Group (UNDG) defines as "a management strategy by which all actors, contributing directly or indirectly to achieving a set of results, ensure that their processes, products, and services contribute to the achievement of desired results (outputs, outcomes, and higher level goals or impact). The actors, in turn, use the information and evidence on actual results to inform decision-making on the design, resourcing, and delivery of programmes and activities, as well as for accountability and reporting."[70]

RBM, as applied to the development of the NSP-NCD 20-25, utilises the Theory of Change, defined as "a method that explains how a given intervention, or set of interventions, is expected to lead to specific development change, drawing on a causal analysis based on available evidence."[71] It provides the "big picture" to guide analysis of the possibilities, and is

[61] Chattu VK, Knight AW. Port of Spain Summit Declaration as a successful outcome of global health diplomacy in the Caribbean region: a systematic review. Health Promot Perspect 2019; 9(3): 174-180. https://bit.ly/2NTFiAW.
[62] https://www.who.int/global-coordination-mechanism/sir_trevor_hassell/en/.
[63] https://www.barbadosadvocate.com/news/urgent-action-needed-tackle-ncds-says-pm-mottley.
[64] https://bit.ly/2DpSuZx.
[65] https://www.who.int/ncds/un-task-force/en/.
[66] https://www.who.int/ncds/un-task-force/events/2018-awards/en/.
[67] Healthy Caribbean Coalition. Weekly News Roundup, 16 July 2019. https://bit.ly/2qBkM01.
[68] http://www.loopnewsbarbados.com/content/health-minister-2020-year-win-ncd-battle.
[69] https://www.wegatherinbarbados.com/.
[70] UNDG. Results-based Management Handbook: Harmonizing RBM concepts and approaches for improved development at country level. UNDG, October 2011.https://bit.ly/34QmHN7.
[71] UNDG. Theory of change. UNDAF companion guidance.https://bit.ly/2NYHRBC.

complemented by the Logical Framework Approach (LogFrame, LFA),[72] which analyses the particular strategy and pathway that the project or programme will use. The LFA leads tothe development of the LogFrame Matrix (LFM) which summarises what the project or programme intends to do, and how; what the key assumptions are; and how the outputs, outcomes, and goal in the hierarchy of objectives will be monitored and evaluated.

The SP 15-19 for NCD prevention and controlalso used the LFA and LFM format, and was included in a PAHO qualitative analysis of NCD multi-sectoral action plans in the Caribbean,[73] which identified success factors, strengths, gaps, and lessons learned, and made recommendations for improvement of the plans. The development of the NSP-NCD 20-25 takes advantage of the lessons learned and the recommendations, including clarity of means-end relationships in achieving the desired results. The core components of the NSP-NCD 20-25 are presented in an LFM in *Section* 7 of this document.

3.2 Process

A consultant was selected through a competitive process to assist the MHW with the development of the NSP-NCD 20-25, and was required to develop an inception report (IR) for the consultancy, including major milestones and indicative timelines. The MHW reviewed and approved the IR, and subsequent activities included:

- Meetings with MHW staff and the NNCDC.
- Desk review of key documents related to NCD prevention and control, including those listed in Annex 1.
- Development and dissemination of a survey instrument/interview guide to obtain input from key stakeholders related to the implementation of the NCD SP 15-19; their work in NCD prevention and control; strengths, weaknesses, opportunities, and threats (SWOT); and priorities for inclusion in the NSP-NCD 20-25.The survey instrument/interview guide is in **Annex 3.**
- In engaging stakeholders in the process of developing the NSP-NCD 20-25, the MHW solicited the participation of, and input from, MHW entities; other government ministries; CSOs and NGOs, including disease-specific NGOs, academia, FBOs, trade unions, and PLWNCDs; and the private sector. This was done either directly or through the representation of these entities in the NNCDC or HCC. Alist of key stakeholder entitiesthat provided input, including those at the stakeholder meeting mentioned below, is in **Annex 4.**
- Analysis of survey and interview responses,and development of a summary report.
- Development of a "pre-draft 1" document for review by key MHW personnel and the NNCDC, to facilitate the production of draft 1 of the NSP-NCD 20-25.
- Development of draft 1 of the NSP-NCD 20-25, dissemination of the draft, and convening of a meeting with key stakeholders to obtain feedback on the draft.
- Incorporation of feedback received to produce a penultimate version, its dissemination to the MHW and NNCDC for comments, and production of the final NSP-NCD 20-25.

3.3 Stakeholder Engagement Principles

Stakeholders may be defined as any individuals, groups of people, institutions, or organisations that may have a significant interest in the success or failure of a project around the issue of concern, and that may be affected either positively or negatively by the project.When identifying stakeholders, consideration must be given to groups in potential conditions of vulnerability, such as women, older persons, youth, persons with disabilities, and persons living in poverty, so that they are represented

[72] UN Public Administration Network (UNPAN). Module 3. Online training course on Results-based Monitoring and Evaluation (RMBE) for MDG implementation: Logical Framework Approach and RMBE. The Logical Framework Approach—Background, concepts, tools, and practices (Presentation).https://bit.ly/2qBPzts.
[73] PAHO. In-depth qualitative assessment of noncommunicable diseases multi-sectoral action plans in the Caribbean. Washington, D.C.: PAHO; 2018. https://bit.ly/2E7ovqR.

in the process, especially if the issue will affect their lives. It is also important to understand the stakeholders and their varying levels of interest and power to influence the project, as well as the motivation and capacity—resources, knowledge, and skills—that they bring to the issue.[74] This is especially applicable to civil society and the private sector.

The WHO tool for the development of multi-sectoral action plans (MAP) for NCD prevention and control,[75]identifies stakeholder subgroups that may be engaged. They include, but are not limited to:

- **Public sector**: Ministers and advisors (executive); civil servants and departments (administrative and technical); elected representatives (legislative); courts (judicial); political parties; local government councils; the military; commissions; and international and development bodies, such as the UN and the World Bank.
- **Private sector**: Corporations and businesses; business associations; professional bodies; individual business leaders; and financial institutions.
- **Civil society**: Media; FBOs; schools and universities; social movements and advocacy groups; trade unions; national NGOs; and international NGOs.

The WHO MAP tool also notes possible roles of key stakeholders, as outlined in **Annex 5**, and highlights the importance of networks, since each stakeholder may be part of several NCD prevention and control-related networks or non-NCD programmes that enable integrated approaches and realisation of co-benefits. Networks contribute to strengthening the participant- and resource-base; help to build the knowledge, skills, and competencies of their members; and offer both individuals and organisations more opportunities to access resources and expertise, including through international agencies that can facilitate network development.

Enhanced and effective functioning and networking of the multi-sectoral bodies already established in Barbados can play a significant role in marshalling the strengths and actions of key stakeholders for equitable NCD reduction.

3.4 Limitations

Limitations in the methodology included:

- Absence of reports on the monitoring or evaluation of the SP 15-19; this gap was addressed rapidly and qualitatively through the key stakeholder survey and interviews.
- The small number of persons responding to the key stakeholder survey and interviews, and participating in the stakeholder consultation.
- Incomplete knowledge of the SP 15-19 and NCD interventions by respondents both within and outside of the health sector, notwithstanding that the stakeholders who responded provided valuable input, as did the well-kept minutes of NNCDC meetings for the period January 2015-July 2019.
- Limited responses to requests for feedback on the drafts of the NSP-NCD 20-25.

4. Situation analysis

4.1 General

Barbados is an independent, English-speaking island located in the Lesser Antilles, and is the easternmost of the Caribbean islands, with an area of 166 square miles (430 square km). It is a member of the Commonwealth of Nations,[76]with a constitutional

[74] Community Sustainability Engagement Evaluation Toolbox: Stakeholder analysis. https://bit.ly/2OUVWSs.
[75] WHO. NCD MAP Tool: Stakeholder engagement and multisectoral governance mechanisms. http://apps.who.int/ncd-multisectoral-plantool/home.html.
[76] https://thecommonwealth.org/.

monarchy in which the titular Head of State is the Queen of England, represented by the Governor General. Legislative power is vested in Parliament, which comprises an elected House of Assembly, a nominated Senate, and the Governor General.

The 2010 censuspopulation estimate was 277,821,[77]47.9% male and 52.1% female; ethnicity 92.4% Black, 3.1% Mixed, 2.7% White, and 1.3% South Asian, with East Asians and Middle Easterners included in the remaining 0.5%. The main religion is Christianity, with Anglicans comprising the largest group (23.9%), followed by Pentecostals (19.5%), Seventh Day Adventists (5.9%), Methodists (4.2%), Roman Catholics (3.8%), and smaller percentages of other groups. Non-Christian religious groups in the country include Rastafarians, Muslims, Hindus, Jews, Baha, and Buddhists.[78]

Barbadosis one of the most densely populated countries in the world, with 1,627 inhabitants per square mile (639 per square km). In 2015, the life expectancy at birth was 75.1 years[79] (73.1 years in men, and 77.9 years in women) and the total fertility rate was 1.3 children per woman; the dependency ratio is increasing and is expected to continue to rise.[80] During the period 2010-2012, infants (children under 1 year old) represented approximately 1.1% of the estimated totalpopulation; children ages 1-4 years 5.1%; children ages 5-9 years 6.8%; adolescents 10-19 years old 14.0%; and the proportion of elderly persons (over 65 years old) 13.7%[81]—this last is expected to rise to 18% by 2025.[82]

Barbados is known for its centenarians: as at 5 May 2016, there were 114 centenarians (103 females and 11 males) living in the country[83] and in October 2019, the GoB, in collaboration with the Barbados Museum and Historical Society, launched an official website of Barbadian centenarians.[84] Persons with disabilities account for 4% of the population,[85] primary and secondary level education are mandatory and free to Barbadian students, andthe literacy rate is 97%; since 2018, tertiary level education is again being provided free of cost to students. Telecommunications systems are good, with 79.5% of the individuals using the Internet in 2017.[86]

In 2015, the per capita gross domestic product was US$ 15,600; Barbados is classified as a 'developing economy' by the UN Department of Economic and Social Affairs (UN/DESA),[87] and as 'high-income' by the World Bank.[88] Its economy is service-based, with tourism, international business, and retail trade being the main drivers of economic activity. Vulnerability to external shocks in the financial markets, as occurred in 2008-2009, resulted in declining output and an increase in unemployment. Unemployment rateswere 10.7% in 2010, 11.3% in 2011, and 11.6% in 2012;[8912].3% in 2014, 11.3% in 2015, 9.7% in 2016, 10.0% in 2017 and an estimated 9.2% in 2018.[90] Most unemployed persons (47.7%) were in the 15-19 year age group, indicating a challenge with youth employment, and the Country Assessment of Living Conditions conducted in 2010 found that 15% of households lived below the poverty line of US$ 3,930 per year, with 62% of poor households headed by women and an unemployment rate among poor households of slightly more than 25%.[91] Since 2018, the Barbados Economic Recovery and Transformation Plan (BERT) has been in effect.[92]

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[77] Barbados Statistical Service (BSS). 2010 Population and Housing Census, Volume I. Bridgetown: BSS; 2013. https://bit.ly/34LhxSe. Note: The 2014 mid-year population estimate was 286,100.
[78] https://www.gov.bb/Visit-Barbados/demographics.
[79] In 2017 and 2018, life expectancy at birth was, respectively 75.5 and 75.6 years. MHW Planning and Research Unit. The Barbados Health Report: 'Healthy productive people and communities' (Draft). Bridgetown: MHW; 2019.
[80] PAHO. Health in the Americas+. Washington, D.C.: PAHO; 2017.https://bit.ly/2Q2PSsa.
[81] Government of Barbados, MOH. Chief Medical Officer's (CMO's) report 2010–2012. Bridgetown: MOH; 2016. https://bit.ly/2Ctw1Ky.
[82] Barbados Strategic Plan for the Prevention and Control of NCDs 2015-2019.
[83] The Nation Newspaper (Barbados), 26 May 2016. Barbados home to over 100 centenarians. https://bit.ly/2X04TfO.
[84] https://centenariansofbarbados.com/.
[85] PAHO. Health in the Americas+. Washington, D.C.: PAHO; 2017.
[86] International Telecommunications Union (ITU). The state of broadband 2018: broadband catalyzing sustainable development. Geneva: ITU; 2018.https://bit.ly/2NQel0Y.
[87] UN/DESA. World Economic Situation and Prospects 2014: Statistical annex—Country classification. New York: UN; 2014. https://bit.ly/2pV98Nr.
[88] https://data.worldbank.org/country/barbados.
[89] CMO's report 2010–2012.
[90] Caribbean Development Bank (CDB). Barbados Economic Brief 2018.https://bit.ly/2WYRxQF.
[91] PAHO. Health in the Americas+. Washington, D.C.: PAHO; 2017.
[92] Central Bank of Barbados. Barbados' economic recovery: adjustment, adaptation, and the way forward. November 2018. https://bit.ly/2CrGkin.

The country's Human Development Index (HDI)[93] for 2017 was 0.800, which putsit in the 'very high' human development category and positions it at 58 out of 189 countries and territories. However, when the value is discounted for inequality, the HDI falls to 0.669, a loss of 16.4% due to inequality in the distribution of the HDI dimension indices.[94] Barbados is one of the SIDS, a group of countries facing specific social, economic, and environmental vulnerabilities, including limited opportunities to create economies of scale due their small size, natural hazards, global climate change, and sea-level rise.[95] Climate change mitigation and adaptation are critical, especially in light of the country's status as a water-scarce country and the impact of further reduction in water availability on agriculture, food and nutrition security, and health.

4.2 Epidemiological Summary

Mortality

The average number of deaths per year for the period 2010-2012 was 2,342, and crude death rates for 2010, 2011, and 2012, respectively, were 8.2, 8.8 and 8.4 per 1,000 population, adjusted to 5.8, 6.3, and 5.9 per 1,000 population, respectively, after standardisation to the world standard population.In the younger age groups (less than 44 years), men consistently accounted for higher proportion of deaths, but the ratio of male to female deaths was more evenly distributed in the older age groups. There was no significant change in Barbados' crude death rate for the period 2002-2012.[96]

NCDs, namely IHD, including AMI ("heart attack"); cerebrovascular disease (stroke); diabetes; hypertensive heart disease; breast and prostate cancer; and respiratory infections,were among the leading causes of death for the period 2010-2012, as shown in **Table 1** below.

Table 1. Top ten causes of death in Barbados and rank, 2010-2012

Cause of death	Rank		
	2010	2011	2012
Stroke, not specified as haemorrhage or infarction	1	1	1
Unspecified diabetes mellitus without complications	2	2	2
Malignant neoplasm of prostate (prostate cancer)	3	3	4
Acute myocardial infarction, unspecified	4	4	3
Unspecified acute lower respiratory infection	5	-	7
Breast, unspecified	6	5	8
Septicaemia, unspecified	7	6	5
Colon unspecified	8	8	-
Unspecified dementia	9	10	10
Urinary tract infection, site not specified	10	-	-
Pneumonia, unspecified	-	7	6
Unspecified acute lower respiratory infection	-	9	-
Essential (primary) hypertension	-	-	9

Source: MOH, Barbados. CMO's Report 2010-2012

[93] The HDI is a summary measure that combines life expectancy, mean years of schooling among the adult population, expected years of schooling for children of school-entry age, and gross national income per capita.

[94] UN Development Programme. Human development indices and indicators: 2018 statistical update—Barbados. New York: UNDP; 2018. http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/BRB.pdf.

[95] https://en.wikipedia.org/wiki/Small_Island_Developing_States.

[96] CMO's Report 2010-2012.

Prostate cancer accounted for the highest proportion of deaths in men in 2010 and 2011, but was secondto CVD in 2012. Together, over the period 2010-2012, diabetes mellitus, IHD, hypertensive heart disease, and cerebrovascular disease accounted for approximately one-quarter of deaths among men, and one-third of deaths among women. WHO estimated that in 2016, NCDs accounted for 83% of all deaths in Barbados, with 29% of deaths due to CVD, 23% to cancer, 9% to diabetes, 4% to chronic respiratory diseases, and 18% to other NCDs; the total risk of premature mortality from NCDs was 16% (20% for men, 13% for women).[97]

Morbidity

In 2014, the age-standardised incidence rate for cancer in Barbados was 237.0/100,000 population, compared with 219.6/100,000 in 2013 and 214.6/100,000 in 2008. Consistent with the global situation, the ASIR for men (265.7/100,000) was higher than that for women (218.5 per 100,000) and the top cancer sites were prostate and breast, followed by colon, uterine cervix, and uterine body. The prostate cancer ASIR was 111.5 per 100,000,placing it in the top five prostate cancer rates seen globally, and breast cancer was the most common cancer among women, with an ASIR of 74.5 per 100,000. The ASIR of colon cancer was 28.4/100,000 in men and 28.0/100,000 in women; cervical cancer 25.4/100,000; and cancer of the uterine body 18.2/100,000. Barbados had one of the lowest rates of lung cancer globally (7.4 per 100,000), likely due to the low prevalence of tobacco smoking.[98]

If maternal and child health visits are excluded, 80% of all visits to polyclinics in Barbados are for a chronic disease; between 2010 and 2012, diabetes, hypertension, and lipid disorders were the main causes for visits to the then eight polyclinics.[99] In 2014,there were 584 stroke events, of which 81% were classified as ischaemic and 16% as haemorrhagic—481 were admitted to the sole public tertiary level health facility in the country, the Queen Elizabeth Hospital. There were 411 AMI and SCD events in 407 patients, of which 84.2% had a definite diagnosis of AMI, and 256 were hospitalised at the QEH.[100] **Table 2** below presents a comparison of these events in 2014 and in 2016,[101] including identified risk factors.

Table 2. Summary of CVD events and risk factors in QEH patients, 2014 and 2016

CVD events and risk factors	2014 (risk factor %)	2016 (risk factor %)
Number of stroke events	***584 (481 abstracted)***	***723 (476 abstracted)***
At least one risk factor	90	86
At least two risk factors	68	61
Hypertension	89	72
Diabetes	72	46
Obesity	39	28
High cholesterol	67	63
Smokers	12	7
Prior stroke or ischaemic attack	47	26
Number of AMI or SCD events	***411 (234 abstracted)***	***439 (217 abstracted)***
Hypertension	86	84
Diabetes	80	65
Obesity	86	61
Hyperlipidaemia	76	73
Smokers	19	16
Alcohol use	23	21
Prior IHD/AMI/stroke	71/35/25	78/29/11

Source: Barbados National Registry (BNR) Annual Reports 2014 and 2016

[97] WHO. Noncommunicable diseases country profiles 2018. Geneva: WHO; 2018. https://bit.ly/2Nx6R3T.
[98] Barbados National Registry (BNR). Cancer in Barbados 2014. Bridgetown: George Alleyne Chronic Disease Research Centre (GA-CDRC), UWI; 2014.
[99] Barbados Strategic Plan for the Prevention and Control of NCDs 2015-2019. Note: Theninth polyclinic was opened in 2015.
[100] Barbados National Registry (BNR). Annual Report 2014. Bridgetown:GA-CDRC, UWI; 2014.https://bit.ly/2K4xHhA.
[101] BNR. Annual Report 2016. Bridgetown: BNR; 2016.https://bit.ly/2NSVlPv.

In 2012, asthma was the leading disease-specific discharge diagnosis from the QEH, occurring mainly in children and adolescents.After asthma, diabetes, IHD, stroke,chronic pulmonary disease—including bronchitis, influenza, and pneumonia—and heart failure were among the leading discharge diagnoses. The most frequent cancer diagnoses were breast, colo-rectal, prostate, and cervical cancer, in order of occurrence, and were highest in those 55 years of age and older, reaching a peak in those 75 years and older. In 2017, of NCD discharge diagnoses at the QEH, asthma was again the leading condition, accounting for 27.7%; IHD 13.7%; colon/recto-sigmoid cancer 11.4%; stroke 10.5%; breast cancer 7.0%; bronchitis, emphysema, and other COPD 6.2%; prostate cancer 5.0%; hypertension 4.3%; and cervical cancer 1.2%. [102]In 2011, there were 118 admissions to the Geriatric Hospital; the leading cause for referral and admission was dementia.[103]

Risk factors

The Barbados Health of the Nation Study: Core Findings 2015, [104]showed that Barbadian adults (persons aged 25 years and older) are at high risk from NCDs due to high prevalence of biological and behavioural risk factors. In addition, the occurrence of multiple risk factors occurring together greatly increases the risk of NCD development, compared with risk factors occurring in isolation. The HoTNS showed that:

- 1 in 10 adults had an NCD, and 1 in 3 was being managed for at least one NCD
- 1 in 3 had hypertension, 1 in 5 had diabetes, and of those with known hypertension or diabetes, at least 1 in 3 of those receiving treatment had sub-optimal control
- 8 in 10 men, and 9 in 10 women, had at least one risk factor
- 2 of every 3 adults was overweight or obese; about 1 in 10 women, and almost 1 in 20 men, had "gross" obesity (body mass index [BMI] ≥ 35 kg/m2)
- 1 in 10 men, and 1 in 50 women, reported daily tobacco use
- 1 in 10 men, and 1 in 50 women, reported excessive weekly alcohol consumption, with 1 in 3 men aged 25-44 years reporting binge drinking in the past 30 days
- 9 in 10 adults reported low fruit and vegetable consumption
- 5 in 10 adults reported low levels of physical activity
- A combination of three or more risk factors (current daily tobacco smoking, inadequate fruit and vegetable consumption, physical inactivity, being overweight or obese, and having hypertension) was more common in women than men, and in older adults

[102]The Barbados Health Report: 'Healthy productive people and communities' (Draft). 2019
[103]PAHO. Health in the Americas+. Washington, D.C.: PAHO; 2017.
[104]http://www.archive.healthycaribbean.org/newsletters/aug-2015/CDRC_HealthOfTheNationSurvey.pdf.

A summary of selected findings from the HoTNS and comparison with findings from the 2007 Barbados Risk Factor Survey (BRFS), [105]both of which were based on the WHO STEPS[106] methodology, are in **Table 3** below.

Table 3. Selected data from the HoTNS core findings 2015 and the 2007 BRFS

Risk factor and conditions	2015			2007		
	Total	Men	Women	Total	Men	Women
Currently smoke tobacco (%)	9.2	15.5	3.7	8.4	15.3	2.2
Currently smoke tobacco daily (%)	6.4	11.0	2.3	6.1	11.3	1.4
Drank alcohol in last 30 days (%)	42.4	56.8	29.9	28.7	42.1	16.9
Heavy episodic alcohol consumption (binge drinking) (%)	14.5	25.4	5.4	-	21.9	9.7
Percentage who drank alcohol on 4 or more days in the last week	5.5	9.3	2.4	13.8	17.8	4.4
Percentage who ate less than 5 combined servings of fruit and vegetables per day	90.0	91.9	88.5	95.4	96.6	94.3
Salt added at the table (%, Yes/Sometimes)	5.1/7.2	8.3/8.8	2.3/5.8	-	-	-
Salt added during cooking (%, Yes)	73.4	55.4	65.1	-	-	-
Prevalence of physical inactivity	49.9	30.0	67.2	51.3	42.5	59.0
Percentage who are overweight or obese (BMI ≥25 kg/m^2)	66.2	57.5	74.2	65.2	54.6	74.3
Percentage who are obese (BMI ≥30 kg/m^2)	33.8	23.4	43.4	28.5	20.3	35.5
Percentage with raised blood pressure (BP) (systolic BP ≥ 140 mm Hg and/or diastolic BP ≥ 90 mm Hg) OR currently on medication	40.7	36.9	44.0	20.5	25.9	15.3
Percentage with raised blood glucose (fasting glucose ≥ 7 mmol/dl) OR self-reported diabetes	18.7	15.9	21.0	14.9	12.7	16.7
Percentage with raised total cholesterol (≥ 5 mmol/l)[107]	21.2	19.3	22.9	35.0	38.6	32.1
Percentage with three or more of the following risk factors occurring together: current daily tobacco smoking, inadequate fruit and vegetable consumption, physical inactivity, being overweight or obese, and having hypertension	48.6	37.0	58.6	44.0	34.5	52.2

The results of risk factor studies in children[108] in Barbados are also cause for concern: selected findings from the 2011WHO Global School-based Student Health Survey[109] conducted among 13-15 year old students, and from the 2013 Global Youth Tobacco Survey,[110] conducted among the same school-based population, are in **Tables 4 and 5**, respectively.

[105] https://www.who.int/ncds/surveillance/steps/Barbados_2007_STEPS_FactSheet.pdf.
[106] https://www.who.int/ncds/surveillance/steps/en/.
[107] In the 2007 BRFS, the cut-off point was (≥ 5.2 mmol/l).
[108] For the purposes of this Strategic Plan, a child is defined as a person less than 18 years of age, aligned with the definition on the Convention on the Rights of the Child.
[109] https://www.who.int/ncds/surveillance/gshs/2011_Barbados_GSHS_FS.pdf.
[110] https://www.paho.org/hq/dmdocuments/2017/Tobacco-Barbados-GYTS-2013-Factsheet-(Ages-13-15)-FINAL-508tagged.pdf.

Table 4. Selected findings from the 2011 Barbados GSHS: 13-15 year old students

Variables	Total	Boys	Girls
Alcohol use			
% who drank at least one drink containing alcohol on one or more of the past 30 days	46.9	48.0	45.8
Among those who ever had a drink of alcohol (other than a few sips), % who had their first drink before age 14	88.7	88.7	88.6
% who drank so much alcohol that they were really drunk one or more times in their life	24.1	29.0	19.0
Dietary behaviour			
% who were overweight	31.9	32.1	31.8
% who were obese	14.2	13.9	14.6
% who usually drank carbonated soft drinks one or more times per day during the past 30 days	73.3	74.0	71.5
Physical activity			
% who were physically active for a total of at least 60 minutes/day on 5 or more days during the past 7days	29.1	34.5	23.3
% who went to physical education class on 3 or more days each week during the school year	33.3	35.4	31.2
% who spent 3 or more hours/day during a typical or usual day doing sitting activities	64.9	60.4	69.6
Tobacco use			
% who smoked cigarettes on one or more days during the past 30 days	9.7	12.7	6.6
Among those students who ever smoked cigarettes, % who first tried a cigarette before age 14 years	85.9	88.2	82.2
% of students who reported that people smoked in their presence on one or more days during the past 7 days	57.1	58.5	55.6

Table 5. Selected findings from the 2013 Barbados GYTS: 13-15 year old students

Variables (%)	Total	Boys	Girls
Currently used any tobacco products	14.5	17.4	11.4
Currently smoked tobacco	12.6	15.7	9.3
Currently smoked cigarettes	7.0	8.8	5.0
Currently used smokeless tobacco	2.9	2.9	3.0
Exposed to tobacco smoke at home	19.1	-	-
Exposed to tobacco smoke inside enclosed public spaces	22.6	-	-
Current smokers who obtained cigarettes by buying them from a store, shop, street vendor or kiosk	22.6	-	-
Among current smokers who bought cigarettes, those who were not prevented from buying them because of their age	64.6	-	-

Though there are, as yet, no data from Barbados on the use of e-cigarettes and other products marketed as "cessation aids", cleaner alternatives to conventional cigarettes, or "reduced risk" products, their increasing use globally, especially among youth, demands that a close eye be kept on this development and relevant evidence collected. Most of these products simulate the act of smoking while typically delivering nicotine; they include heated tobacco products (HTPs), and electronic nicotine delivery systems (ENDS), the latter commonly referred to as e-cigarettes or "vaping" products.[111] Research is ongoing, but recent reports from the United States Centers for Disease Prevention and Control[112] (CDC) have implicated the use of these devices in lung injury, which has resulted in several deaths, including among young people.[113]

With regard to dietary issues, the country has experienced a shift away from consumption of traditional and locally sourced foods to 'fast foods' prepared outside the home, which are frequently high in fat, salt, and sugar. This shift is due to several concurring developments, including globalization, increased income, ashift from agriculture to tourism as a primary industry, and a perceived "lack of time" to prepare foods at home, especially during the week. In addition, fresh and healthy foods suchas fruit and vegetables are often more expensive than unhealthy options, and are not as easily available. [114]These findings strongly justify the focus of the NSP-NCD 20-25 on NCD risk factor reduction—especially healthy nutrition to address the double burden of malnutrition, with a particular focus on children—and prevention of NCD complications, and highlight the need for strengthened multi-sectoral interventions and action at the first level of care.

4.3 Spending on NCDs

An investment case for NCD prevention and control in Barbados was developed in 2015, through collaboration among WHO, the UN Development Programme (UNDP), UNIATF, and the MHW. The findings showed:[115]

- Current spending estimates of Bds$ 64 million, or approximately Bds$ 220 per capita, per year, on CVD and diabetes.
- Losses to the economy of Bds$ 145 million per year due to missed work days (absenteeism), poor productivity (presenteeism), reduced workforce participation, and the costs to business of replacing workers from CVD and diabetes alone. These costs represent around 2.6% of projected GDP in 2015.
- Estimated financial resources of Bds$ 56 million to implement the prevention and primary care activities in the Barbados NCD Strategic Plan 2015-2019 in 2015, increasing to Bds$ 97 million in 2019. These figures were dominated by the drugs and supply costs required for diabetes treatment and pharmaceutical prevention of CVD.Over the course of the 5-year scale up of treatment coverage, the implementation of the SP 15-19 would have a minimum return on investment (ROI) of 1.9.

The report also noted that by scaling up actions to prevent hypertension, diabetes, IHD, and stroke, Barbados would increase workforce participation, productivity, and GDP.Avoided mortality would be the greatest contributor to GDP gains, which would reach Bds$ 17 million in 2019, and Bds$ 414 million in 2030, due to the selected set of interventions. Over the 15-year SDG period (2015-2030), scaling up prevention interventions, combined with diagnostic and treatment coverage over the next 5 years, and then holding coverage constant, would give a ROI of 4.1 (6.3 with health returns included), or a total of Bds$580 million in increased productivity, representing around 1% of annual GDP. For preventive interventions, the ROI would continue to grow beyond the duration of the SP 15-19, due to the long-term nature of the health outcomes.A major conclusion was that a move towards increased preventive actions would yield a greater ROI based on the relatively low cost of population-wide strategies, and recommendations included a WoG approach, with Health developing operational partnerships involving particularly Education, Labour/Social Affairs, Commerce, Town Planning, Youth and Sports, and Agriculture.

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[111] WHO. Report on the global tobacco epidemic, 2019: Offer help to quit tobacco use. Geneva: WHO; 2019. https://bit.ly/2XgJsHq.
[112] https://www.cdc.gov/.
[113] CDC. Outbreak of lung injury associated with the use of e-cigarette, or vaping, products. Updated 20 December 2019. https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html.
[114] UNIATF Joint Mission, Barbados, 13–17 April 2015. Geneva: WHO;2017.
[115] WHO, UNDP, and MOH. The Investment Case for Non-communicable Disease Prevention and Control in Barbados. WHO, UNIATF, UNDP; 2015.https://bit.ly/2Q2RGBs.

These findings were further emphasised and expanded in an April 2019 lecture by Professor Karl Theodore of the Health Economics Unit, University of the West Indies (UWI), St. Augustine, Trinidad and Tobago. He noted that the two main types of costs associated with NCDs were *personal*—comprising OOP, pain and disability, and loss of family and community time—and social, including loss in national savings due to increased expenditure for prevention and treatment, and loss of productivity due to illness and death.

NCD-related OOP spending, prevention and treatment expenditures, and decreased productivity cost Barbados not less than Bds$ 375 million, and could be costing as much as Bds$ 825 million, per year, a situation that is not sustainable, especially given the burgeoning NCD epidemic. [116]Data from Barbados related to these four variables are summarised in **Table 6** below, and Professor Theodore identified key interventions for sustainability as:

- Stopping the NCD epidemic through PHC and UH, focusing on prevention and early diagnosis;
- Proper coverage of everyone to access health care; and
- Building efficiency in the health system through adequate allocation of resources, mainly to primary care and public health, and effective cost control mechanisms, including incorporation of agreed standards of care and a modern health information system.

Table 6. Summary of NCD cost estimates, Barbados

Costs	Data sources	Estimates	Comments
OOP	United States Agency for International Development (USAID) 2008	43% of health expenditure	Bds$ 280 million
Prevention expenditure	Barbados National Health Accounts	0.7% of health expenditure	Bds$ 5 million
Treatment expenditure	Barbados NCD Investment Case Study	30% public health expenditure	Total expenditure estimated at twice this Bds$ 220 million
Productivity costs	Economic studies 2003-2017	3%-12% GDP	Bds$ 150-600 million

Source: Theodore K. Real cost of NCDs and health system sustainability (presentation). Barbados, April 2019

4.4 National Responses

Selected responses to advance NCD prevention and control in Barbados are noted below, under the headings of the WHO health system 'building blocks'.[117]

Leadership and Governance

The MHW is the executing agency for the delivery and financing of health care in the publicsector, with a mission to promote health, provide comprehensive health care, and ensure that environmental concerns are considered in all aspects of national development.[118] The MHW is headed by a Minister whose authority is vested in the Health Services Act 1969 Cap. 44[119]

[116] Theodore K. Real cost of NCDs and health system sustainability (presentation). BNR 10th Anniversary Seminar: Multidisciplinary stakeholder engagement in the management of NCDs. Bridgetown, Barbados, April 2019.
[117] WHO. Everybody's business: Strengthening health systems to improve health outcomes – WHO's framework for action. Geneva: WHO; 2007. https://www.who.int/healthsystems/strategy/everybodys_business.pdf.
[118] Barbados Estimates 2018-2019.https://bit.ly/2K4nOAx.
[119] http://extwprlegs1.fao.org/docs/pdf/bar20130.pdf.

of the Laws of Barbados. The Minister has overall responsibility for formulating health policies, setting strategic directions, developing norms and standards, enforcing regulations, and providing political leadership for the sector. Decision-making is centralised and there are no local health authorities. The Permanent Secretary is the administrative head of the Ministry, functioning as the chief executive and accounting officer, with responsibility for the effective functioning of all sections of the Ministry, while the Chief Medical Officer (CMO) is responsible for all technical and professional functions of the health sector.[120]An organisational chart of the MHW is in **Annex 6**.

The GoB and MHW have been forward-looking in the recognition of NCD prevention and control as a priority for action—a Health Promotion Unit (HPU) and the posts of Senior Health Promotion Officer and Senior Medical Officer of Health for NCDs (SMOH-NCDs)were established in 2006, to coordinate the respective programmes.[121]The need for multi-sectoral action was recognised and relevant entities were created, including the NNCDC (2007),for which the HPU provides technical and administrative support, and whichis funded through a line item in the HPU budget; a Task Force on Physical Activity and Exercise (2009); an Inter-Ministerial Committee (2014), now replaced by the Cabinet Sub-committee on NCDs (2018); and a National Wellness Task Force (2018).

Other key leadership and governance responses include, but are not limited to:

- Commitment of the Social Partnership,[122] a unique tripartite body that comprises representation from government, trade unions, and private sector employers, to "support and commit, both individually within their respective spheres of influence and collectively at the national level, to take action to slow the pandemic of chronic diseases".[123]
- Appointment of a Special Envoy on NCDs and high-level advocacyby 'policy entrepreneurs'—highly-respected local champions, including senior medical personnel, public health professionals, and researchers—with the credibility to gain access to senior government members. These persons have played a key role in putting and keeping NCDs on the political agenda.[124]
- Advances in the implementation of the WHO FCTC, with an increase in excise duty on tobacco products and the enactment of tobacco control legislation[125] in 2010 that banned smoking in public places and sale of tobacco products to minors, and regulated health warnings on tobacco products. In 2017 the legislation was amended to include electronic smoking devices and require picture-based warnings on tobacco packaging.
- Development of various frameworks and guidelines, including the NCD Strategic Plans 2002-2012 and 2015-2019; National Nutrition Improvement and Salt Reduction Initiative (2009); Food and Nutrition Security Policy (2013) and Plan of Action 2014-2018;[126] Food-based Dietary Guidelines (revised 2017);[127] guidelines for healthy foods in schools (2015);[128] physical activity guidelines; and the Barbados Childhood Obesity Prevention Programme (BCHOPP) National Plan of Action for Childhood Obesity Prevention and Control 2015-2018.[129]
- Collaboration and cooperation between the MHW and NGOs, with development of a draft policy for relations with NGOs in June 2010, and the piloting of a Health NGO Desk in June 2012 as an experiment to strengthen therelationship between the MHW and the NGO sector.
- Collaboration with regional and international entitiesin strategic programme planning, implementation, monitoring, and evaluation, including the HCC; UWI Cave Hill Campus; CARICOM Secretariat; CARPHA; international technical cooperation and development agencies, such as PAHO/WHO, UNICEF, UNDP, and other UN agencies; international financing institutions, such as CDB and the IDB; and selected health-promoting PSEs.

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[120]CMO's report 2010-2012.
[121]Guell C, Samuels TA, Hassell TA, Unwin N. Chronic disease policy in Barbados : analysis and evaluation of policy initiatives. September 2013. https://bit.ly/2sWnCLM
[122]https://labour.gov.bb/social-partnership/.
[123]Protocol 6 of the Social Partnership. https://labour.gov.bb/pdf/social-partnership-protocols/Protocol%206.pdf.
[124]Unwin N, Samuels TA, Hassell T, Brownson RC, Guell C. The development of public policies to address NCDs in the Caribbean country of Barbados: the importance of problem framing and policy entrepreneurs. Int Journal Health Policy Manag. 2017; 6(2):71-82. https://bit.ly/34OLuRD.
[125]https://www.tobaccocontrollaws.org/legislation/country/barbados/laws.
[126]http://extwprlegs1.fao.org/docs/pdf/bar171434.pdf.
[127]http://www.fao.org/3/I9680EN/i9680en.pdf.
[128]National Nutrition Centre, MOH, Barbados. Nutritious and healthy foods in schools: nutritional and practical guidelines for Barbados. Bridgetown: National Nutrition Centre; 2015. https://bit.ly/2K3qFdh.
[129]https://bit.ly/2m000F7.

In 2015, a UNIATF Joint Mission visited Barbados in support of the UN Country Team and the GoB, and made several recommendations for strengthening the NCD response. The recommendations included: strengthening intersectoral action to tackle risk factors; obesity reduction, particularly COP; school-based promotion of healthy nutrition and physical activity; acceleration of the implementation of the WHO FCTC, including an FCTC needs assessment to identify gaps in tobacco control; building an investment case for NCDs; and improving health care, particularly at the first level of care.[130]

Health Services

The centrepieces of Barbados' healthcare system have been the PHC delivery framework established on the principles of the 1978 Declaration of Alma Ata,[131]and a secondary and tertiary care system established in collaboration with the UWI Faculty of Medical Sciences.[132]Services comprise a public-private mix where approximately 65% of health care is public and 35% private, with up to 80% of private health care paid for out-of-pocket.[133]

The public health services in Barbados are organised into the following programmeareas:[134]

- The *first level of care*, which is delivered from nine polyclinics and three satellite clinics that arestrategically located along the major road networks within each catchment area, making them readily accessible. The polyclinicmodel is based on the PHC approach and the Chronic Care Model,[135,136]and provides a wide range ofpreventive and curative services, including maternal and child care, immunisation,family planning, dental care, general practice, nutrition counselling, andenvironmental health. In July 2019, in further efforts to strengthen the health system, improve access, and advance towards universal health, the MHW implemented 24-hour service in one polyclinic as part of a phased rollout of extended opening hours at several such facilities.
- *Acute, secondary, tertiary and emergency care*, provided at the QEH,[137]with support through the Medical Aid Scheme for services that are not available at that institution. The QEH is the country's leading acute care medical facility, with a capacity of 600 beds, which comprise 94% of all hospital beds in Barbados. It provides services to Barbadians and permanent residents at no charge to the users, is accredited as a teaching hospital affiliated with the UWI Faculty of Medical Sciences, and serves as a referral centre for patients from other eastern Caribbean states. The QEH has laboratory, baby-friendly, and HACCP[138]accreditation and also has gold accreditation status with Accreditation Canada International.[139]It receives an operating budget as approved by Parliament, disbursed from the treasury through the Ministry of Finance, Economic Affairs and Investment (MFEI) and the MHW.[140]
- Mental health services, which are provided at the Psychiatric Hospital, with the Roseville Halfway House andEverton House serving as community centres for the rehabilitation of people with psychiatricdisorders who have been discharged from hospital. In 2003, the MHW entered into apartnership with the Substance Abuse Foundation[141]and Teen Challenge[142] to treatpersons who are medically recommended for substance abuse treatment services.
- Care of the Elderly, provided through the Geriatric Hospital and three District Hospitals thatprovide in-patient, long-term care for the senior citizens. This programme includes the Alternative Care of the Elderly Programme, which is a partnership arrangement between the MHW andprivate sector providers of long-term care for senior citizens. The Geriatric Hospital also housesan adult day care programme.

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130 WHO. Joint mission of the UNIATF on the Prevention and Control of NCDs, April 2015. Geneva: WHO; 2017. https://bit.ly/34MWqyS.
131 https://www.who.int/publications/almaata_declaration_en.pdf.
132 MOH Barbados, Planning and Research Unit. Discussion paper on health financing reform in Barbados. Bridgetown: MOH; January 2015.https://bit.ly/2qBSRgi.
133 Labonté R, Runnels S, Crooks V, et al. What does the development of medical tourism in Barbados hold for health equity? An exploratory qualitative case study. Glob Health Res Policy 2017; 2:5. https://bit.ly/2PHBfsj.
134 CMO's Report 2010-2012.
135 Institute for Healthcare Improvement (IHI). Chronic care management. https://bit.ly/34HL2EC.
136 CARICOM. Chronic care policy and model of care for the Caribbean Community. Georgetown, Guyana: CARICOM Secretariat; 2014.https://bit.ly/2NUcisT.
137 http://www.qehconnect.com/.
138 Hazard Analysis and Critical Control Point.http://www.fao.org/3/y1579e/y1579e03.htm.
139 https://accreditation.ca/intl-en/accreditation/qmentum/.
140 Business View Caribbean. The Queen Elizabeth Hospital: a new prescription. Oct. 2019. https://bit.ly/36PkinF.
141 http://thesafinc.com/.
142 https://www.chnet.com/9664/teen-challenge-barbados.html.

- Care of Persons with Disabilities, which provides assessment and rehabilitation services forchildren and young adults with disabilities at the Albert Cecil Graham Development Centre (formerly the Children's Development Centre). In-patient, long-term care for people with physical and mental disabilities is provided at the Elayne Scantlebury Centre.
- Pharmaceutical Services, provided by the Barbados Drug Service,[143]which is responsible for the annual production of the Barbados National Drug Formulary, and for the procurement and distribution of the drugs listed in the formulary.
- Inspection and Licensing Programmes, which include:
  - The Medical, Nursing, Pharmacy, Dental, and Paramedical Professional Councils, each responsible forsetting the standards for professional conduct, and for registration of, respectively, physicians, nurses, pharmacists, dentists,and allied health professionals.
  - The Drug Inspectorate, which maintains the inspection and licensing programme for public and private pharmacies, and pharmaceutical manufacturing plants.
  - Environmental Health Officers, who maintain the inspection and licensing programme for restaurants, bakeries, supermarkets, and other service providers and retail establishments.
  - The Advisory and Inspection Committee, which is responsible for the inspection, licensing, and periodic monitoring of the operations of nursing homes and senior citizens' homes.
  - The Senior Laboratory Technologist, who heads a team responsible for licensing and providing oversight of the operations of private and public medical laboratories.

In 2012, the QEH Department of Medicine had a bed occupancy rate of 122.3%; the institution is often obligated to admit patients affected by chronic conditions that may have stabilised, or who are at an incurable stage in the disease process, contributing to the high occupancy rate. In addition, elderly persons who can no longer live on their own, or those whose relatives can no longer cope with the challenges of care, are in many instances "abandoned" at the QEH. These issues prompted analysis of the appropriateness of care and the cost-effectiveness of undertaking certain types of care inan in-patient tertiary level setting versus utilizing other modalities such as day-case, hospice, nursing home, or community care settings.[144]

Recent estimates indicate that NCDs consume 65% of the QEH budget[145]and in 2012 an *Institutional Assessment and Expenditure Review of the Health Sector* found that though the delivery of health care was satisfactory with regard to comprehensiveness, coverage, and accessibility, challenges included continuity and coordination of care across the network of services; insufficient community-based services; outdated operational policies and procedures; and inadequate regulation of health institutions in the private and public sectors.[146]The review also showed that the performance of the Ministry and the QEH continued to be constrained by several factors, including inadequate health information systems, insufficient funding, absence of cost accounting systems, weak quality improvement schemes, and inadequate income generation in the health sector. It was suggested that overall efficiency of the sector could be improved if clinical services at the QEH and the polyclinics were re-designed, the approach to the management of patients with NCDs made systematic, and procurement processes reformed.

The number of people who seek treatment overseas, especially for services not available in Barbados, is not easily estimated, as data from the private sector are not currently captured. Access to overseas medical services is made possible through the Medical Aid Scheme at a cost of Bds$4.0 million annually, but the range and number of persons sent overseas for treatment have diminished, due to the establishment of a variety of medical specialties in Barbados during the past two decades.[147]Statistics from the Medical Aid Scheme showed that for 2010, 2011, and 2012, respectively, 29, 26, and 30 persons accessed treatment overseas, partly as a result of the chronic disease burden,[148]while the period 2016-2018 saw 57 referrals for medical treatment abroad, from various specialities.[149]Contributory developments to the decline have been the capacity of the private health sector to offer services that the QEH has been unable to establish or maintain; establishment of new public-

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[143] http://drugservice.gov.bb/.
[144] CMO's Report 2010-2012.
[145] Barbados Strategic Plan for the Prevention and Control of NCDs 2015-2019.
[146] PAHO Health in the Americas+ 2017.
[147] MOH Planning and Research Unit. Discussion paper on health financing reform. January 2015.
[148] CMO's Report 2010-2012.
[149] The Barbados Health Report: 'Healthy productive people and communities' (Draft) 2019.

private partnerships with outsourcing of certain services, especially in the diagnostics sector; and inter-governmental exchanges of resourced medical teams that have brought new skills and expertise.

Public health laboratory servicesare provided by the Best-Dos Santos Public Health Laboratory (BDSPHL), which was officially opened in January 2018. The facility is an amalgamation of the Public Health Laboratory, the Leptospira Laboratory, and the Ladymeade Reference Unit Laboratory, and serves as the major public health laboratory in the country, providing routine testing services to all of the polyclinics and some private clinics. It has bio-safety level three capacity, improved laboratory safety, and the capability for an enhanced range and quality of tests, and offers reference laboratory services to private laboratories, as well as services for other regional laboratories, clinics, and programmes. The BDSPHL collaborates with several regional and international organisations, including CARPHA, Caribbean Med Labs Foundation,[150]PAHO/WHO, and the CDC. The QEH Laboratory provides clinical testing services for the hospital and other public health facilities.[151,152]

The MHW provides subventions to national CSOs to enhance service delivery, including the Barbados Cancer Society[153]and the Diabetes Association of Barbados,[154]and has entered into contractual arrangements with the Barbados Diabetes Foundation[155] (BDF); the Barbados National Registry[156](BNR); the Heart and Stroke Foundation of Barbados[157](HSFB); Diagnostic Radiology Services[158](DRS); and SILS Dialysis Barbados[159]to provide services on behalf of the Ministry.[160]

- The BDF, a specialist centre of excellence, provides a six-month comprehensive assessment and treatment programme for people living with diabetes in the initial stages of developing complications who are referred to the facility. The programme includes medical, nursing, nutrition, and counselling support, with an emphasis on self-management.
- The BNR is a population-based, national surveillance system operated by the UWI George Alleyne Chronic Disease Research Centre (GA-CDRC)[161]on behalf of the MHW, comprising three registries: BNR-Stroke, BNR-Heart, and BNR-Cancer.
- The HSFB provides CVD risk reduction and cardiac rehabilitation services.
- DRS provides radiology services to institutions in the public sector, including magnetic resonance imaging, computerized tomography, ultrasound, mammography, and other specialised imaging.
- SILS collaborates with the QEH for the provision of dialysis services.

The network of private health services in Barbados includes general practitioners, specialists, laboratories, pharmacists, dentists, and rehabilitation therapists on a fee-for-service basis. The private sector includes a 24-bed hospital, diagnostic imaging, a renal dialysis provider, a halfway house providing mental health services, two substance abuse treatment providers, and 45 nursing and senior citizens' homes that offer long-term care for older persons.[162]

Health Workforce

The effective recruitment, distribution, and management of quality human resources for health (HRH) are essential for advancing to universal health. Barbados has, overall, become self-sufficient in meeting its demand for HRH through the training of doctors, primarily at the UWI Cave Hill Campus, and training of nurses and other health care professionals at the

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[150] http://cmedlabsfoundation.net/.
[151] The Barbados Health Report: 'Healthy productive people and communities' (Draft) 2019.
[152] Barbados National Strategic Plan for Health, 2018-2022.
[153] https://www.barbadoscancersociety.com/.
[154] https://www.diabetes.bb/.
[155] http://www.thebarbadosdiabetesfoundation.org/.
[156] http://www.bnr.org.bb/cms/.
[157] https://www.hsfbarbados.org/.
[158] http://diagnosticradiologyservices.org/.
[159] https://www.silsdialysis.com/.
[160] The Barbados Health Report: 'Healthy productive people and communities' (Draft) 2019.
[161] http://www.uwi.edu/cdrc/cdrc-home.
[162] Barbados National Strategic Plan for Health 2018-2022.

Barbados Community College[163](BCC). All medical personnel must be registered with the Barbados Medical Council, which has statutory responsibility for the regulation of all medical practitioners; the Nursing, Dental, Pharmacy, and Paramedical Professionals Councils hold similar responsibility for the respective professions.[164]

In 2007, the PAHO Sanitary Conference adopted resolution CSP27.R7,[165]which addressed strategies for strengthening HRH in the Region of the Americas, and a Regional Task Force developed a set of HRH goals for theperiod 2007 to 2015.[166]In 2012, Barbados had 21 doctors and 44 nurses per 10,000 populationin the public sector (1 doctor per 516 persons and 1 nurse per 227 persons). This equates to 2.3 nurses per doctor, which met the regional HRH benchmark (goal 4) of at least a 1:1 ratio of qualified nurses to physicians. Barbados also exceeded the regional standard of 25 health professionals per 10,000 population (goal 1), with an average of 49 health professionals per 10,000 population over the period 2010-2012; this achievement has been maintained despite the fact that, more recently, the country has experienced nursing shortages due in part to migration, and has sought to fill gaps by recruiting nurses from other countries, including Ghana.[167]

Currently, the MHW, with PAHO/WHO's technical cooperation, is developing a strategy and action plan to improve HRH management, including an analysis of the state of HRH in the country.

[163] http://www.bcc.edu.bb/.
[164] The Barbados Health Report: 'Healthy productive people and communities' (Draft) 2019.
[165] http://www1.paho.org/english/gov/csp/csp27.r7-e.pdf?ua=1.
[166] PAHO. Regional Goals for Human Resources for Health 2007-2015. Document CSP27/10. Washington, D.C.: PAHO; 2007. http://www1.paho.org/english/gov/csp/csp27-10-e.pdf?ua=1.
[167] https://barbadostoday.bb/2019/07/02/govt-team-to-recruit-ghanaian-nurses-minister/.
[168] CMO's Report 2010-2012.
[169] The Barbados Health Report: 'Healthy productive people and communities' (Draft) 2019.

Table 7: Human resources for health per 10,000 population, Barbados, 2010-2012 and 2017

	2010		2011		2012		2017	
Categories	**# Workers**	**Density**	**# Workers**	**Density**	**# Workers**	**Density**	**# Workers**	**Density**
Doctors	564	20.3	477	17.2	582	21.1	642	23.4
Dentists	77	2.8	65	2.3	69	2.5	79	2.9
Hospital Administrators	10	0.4	10	0.4	10	0.4	10	0.4
Veterinarians	34	1.2	25	0.9	27	1.0	41	1.5
Social Workers	11	0.4	11	0.4	11	0.4	16	0.6
Nutritionists/Dietitians	8	0.3	6	0.2	9	0.3	*	*
Nurses	1,322	47.6	1,149	41.4	1,214	44.0	*	*
Nursing Assistants	394	14.2	352	12.7	355	12.9	395	14.4
Radiographers (Diagnostic)	33	1.2	19	0.7	29	1.0	34	1.2
Laboratory Technologists/Technicians	79	2.8	68	2.4	28	1.0	31	1.1
Pharmacists/Dispensers	274	9.9	232	8.4	261	9.4	NI	NI
Physiotherapists	48	1.7	42	1.5	46	1.7	NI	NI
Occupational Therapists	14	0.5	13	0.5	12	0.4	11	0.4
Dental Auxiliaries	9	0.3	9	0.3	9	0.3	6	0.2
Environmental Health Officers	113	4.1	117	4.2	117	4.2	99	3.6
Environmental Health Assistants	92	3.3	92	3.3	92	3.3	75	2.7
Statistics and Medical	74	2.7	74	2.7	74	2.7	NI	NI
* Registered nurses							1,178	42.9
*Midwives							134	4.9
*Psychiatric nurses							255	9.3
*Nursing auxiliaries							613	22.3
*Dietitians							11	0.40
*Nutritionists							6	0.22
+Dental technician							9	0.33
+Emergency medical dispatcher							6	0.22
+Emergency medical technician							80	2.9

Sources: CMO's Report 2010-2012 and Barbados Health Report (Draft) 2019

NI = no information provided in 2019 report ** = categories separated in 2019 report* *+ = New categories in 2019 report*

Health Financing

The healthcare system in Barbados is supported by a health financing model based on tax revenues approved by Parliament and allocated to the MHW through the MFEI to pay for the delivery of services to the population.[170]During the 2010-11 to 2012-13 fiscal years, the MHW expenditure (Public Health Expenditure, PHE, or government health spending) rose from Bds$355.3 million to Bds$415.0 million. In 2012-13, PHE accounted for approximately 11% of total government expenditure and was estimated at 4.7% of Barbados' GDP; PHE per capita was estimated at Bds$1,495.50. Total health expenditure (THE) 2012-13 was estimated at Bds$ 732.7 million, 8% of GDP;[171]THE in 2017 and 2018, respectively, was 13.1% and 7.5% of total government expenditure.[172]

During 2010-11 and 2012-13, PHE facilitated eight programme areas: Direction and Policy Formulation, Primary Health Care, Hospital Services, Care of the Disabled, Pharmaceutical Programmes, Care of the Elderly, HIV/AIDS Prevention and Control, and Environmental Health Services. Despite the intended focus on health and wellness, following the trend of previous years, the Hospital Services programme areas was allocated the largest share of PHE: 51.8% in 2010-11 and 61.0% in 2012-13, while PHC was allocated 7.9% and 7.2% for the respective periods.[173]The NCD programme itself is funded through line items under the HPU budget and Procurement of Services, the latter to cover contractual arrangements for outsourced services.

The first Barbados Health Accounts Report, 2012-2013,was published in 2014,[174]and in 2018, a study on health spending for 2016-2017[175]was conducted to update the 2014 findings. **Table 8** below provides a comparison of key indicators in the studies, which demonstrate a reduction in THE and PHE over the intervening period, with an increase in OOP spending.

Table 8. Key health financing indicators 2012-13 and 2016-17

Indicator	2012-13	2016-17
Total health expenditure (Bds$)	732.7 million	651.6 million
THE as a percentage of GDP	8.7	7.0
THE as a percentage of total government expenditure	11.0	-
THE per capita (Bds$)	2,582	2,232
PHE as a percentage of total government expenditure	11.0	8.0
PHE as a percentage of THE	55.0	51.0
OOP household expenditure as a percentage of THE	39.0	43.0
Private health insurance as a percentage of THE	5.0	5.8

[170] MOH Planning and Research Unit. Discussion paper on health financing reform in Barbados. January 2015.
[171] CMO's Report 2010-2012.Note: Bds$ 1.00 ≈ US$ 0.50.
[172] The Barbados Health Report: 'Healthy productive people and communities' (Draft), 2019.
[173] CMO's report 2010–2012.
[174] MOH. Barbados 2012-2013 Health Accounts Report. Bridgetown: 2014; MOH. https://bit.ly/2K77LID.
[175] Barbados 2016/17 Health Spending Estimation: Final Results (Presentation). https://bit.ly/2NZdpHy.

In 2012-2013:

- The THE of approximately 11% of total government expenditure representeda decline from 12.1% in 2011-2012, and was followed by a further decline to 10.6% in 2014-2015.[176]
- The THE per capita ofBds$ 2,582 was the third highest in the Caribbean, behind the British Virgin Islands and The Bahamas.
- While the government spending of 55% of THEwas in line with the government's commitment to the health of the people of Barbados, the household OOP spending of 39% of THE was much higher than the WHO benchmark of 20% and the regional average of 30%. This is cause for concern, since WHO estimates that at least 1% of households may be at risk of falling below the poverty line due to OOP spending on health.
- Private health insurance plans provided coverage for 27% of the population—13% employer-based and 14% individual-based—so thatapproximately one in four of the adult population had private health insurance cover, increasing to one in three when restricted to those currently working.[177]
- One-third of THE was spent at the first level of care, primarily through polyclinics and private doctors' offices; 44% on secondary care; 6% on tertiary care; 3% on long-term care; and 9% was spent on purchasing medicines, laboratory tests, and radiological investigations in the private sector.

In 2016-2017:

- The fall of 14% in real health spending was driven by a fall of 21% in MHW spending.
- Governments and households remained the two biggest spenders on health.
- Private medical clinics, paid for by household OOP spending, dominated health spending (39.8%), with the QEH accounting for the next largest share (27.6%); 96% of spending at the QEH was from government, and the remainder was from private insurance and OOP payments.
- Over 75% of health spending was on curative care, with only 2% spent on prevention.
- Private doctors' offices were the main providers for households paying OOP.
- Approximately 28% and 27% of polyclinic medicines spending was for, respectively, diabetes and hypertension.

These statistics, particularly the spending of 50% of THE on secondary and tertiary care, have serious policy implications, and further justify the MHW's renewed focus on health promotion and disease prevention, with strengthening of the PHC approach. In 2015, estimates indicated that over the next five years, Bds$ 38 million (Bds$ 26 per capita per year) would be required to scale up a limited set of prevention and treatment activities for CVD, which would also have significant impact on preventing diabetes and cancer. Low coverage levels for pharmaceutical prevention of vascular events would be improved, along with the implementation of policy actions to lower tobacco use and salt intake in line with the cost-effective interventions outlined by WHO.[178]

The allocation to the MHW for the fiscal year 2018-2019 was Bds$ 319.3 million, representing 7.2% of GoB's projected total expenditure for the period. As in previous years, hospital services received the major share of the allocation, 56.7%, while PHC received 12.1%; the proportional allocations for 2017-2018 were, respectively, 56.5% and 9.7%, demonstrating an increase for PHC. However, the allocations for 2019-2020 are estimated at 60.9% and 9.5%, showing an increase for hospital services and a mild decrease for PHC.[179]

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[176] PAHO Health in the Americas+ 2017.
[177] HoTNS Core Findings 2015.
[178] WHO, UNDP, MOH. Investment Case for NCD Prevention and Control in Barbados. 2015
[179] The Barbados Health Report: 'Healthy productive people and communities' (Draft), 2019.

While there are recommendations from WHO that government spending on health should be at least 5% of GDP for adequate financial protection—one of the key components of UHC—there is no "magic number" for health spending, as health system performance is a function of several factors other than PHE.[180]However, it is critical for governments to allocate and mobilise adequate financial resources to improve access to, and the quality and delivery of, health services. The WHO Universal Health Coverage Global Monitoring Report 2019[181]calls on governments to redouble their pace of expanding coverage and immediately commit to spending at least 1% of GDP on PHC, to support advances to UHC.This call recognises, as the UHC Global Monitoring Report states, "the need to invest first and foremost in strong PHC, with an emphasis on health promotionand disease prevention. Secondary and tertiary servicesare important parts of every health system, but no country can afford to rely on curative care. By promoting health and preventing disease, countries canprevent or delay the need for more expensive services. That increases the efficiency of health spending, saveslives, and increases healthy life expectancy".

The National Insurance Scheme (NIS) has been in place for 50 years and provides benefits related to unemployment, workplace injury, maternity, disability, and old age security. The MHW has been examining methods and policy options that would lead to sustainable financing of public health services, while ensuring UHC. In October 2018 one such measure was introduced, with increases in NIS contributions from employers and employees, respectively, of 1.5% and 1.0%, a Health Services Contribution that is expected to raise Bds$ 45 million each year; the NIS will transfer these funds directly to the QEH. Recommendationsfrom extensive health financing consultations include implementation of a system of financing that guarantees a pool of funds earmarked for the health services; conduct of an actuarial study to determine the population base that can contribute to such a fund and the level of the contributions; and determination of the essential basket of services at primary, secondary, and tertiary care levels to be covered by the fund. Hospital Philanthropy was also introduced at the QEH as an innovative approach for generating capital revenue to support technology replacement.[182]

Access to essential medicines, vaccines, and health technologies

The Barbados Drug Service is the agency responsible for maintaining, updating, and administering the Barbados National Drug Formulary, and is also responsible for the Supply and Inventory Service, which procures and distributes medicines; the Special Benefit Service; the BDS Pharmacy Service; the Drug Inspectorate; the Drug Information Centre; pharmacovigilance; and related administration and financial management. The BDS has spearheaded rational drug use policies and programmes, including the use of reputable generic preparations.

Children under 16 years of age, persons over age 65 years, and individuals who have been diagnosed with diabetes, cancer, hypertension, glaucoma, asthma, and/or epilepsy can obtain formulary drugs free of charge through the SBS.Sixty percent of the BDS budget is allocated to pharmaceuticals used in the management of chronic diseases; all NCD drugs are designated 'special benefit' and are available free of cost to patients in the public and private sectors.[183]Prescriptions can be filled at either government pharmacies or private participating pharmacies (PPPs)contracted by the BDS to dispense formulary drugs,and there is no provision for patients to make a co-payment; patients who opt to fill prescriptions under the SBS at PPPsare required to pay the dispensing fee only. An assessment of prescription activity in the private sector under the SBS showed that hypertension accounted for the largest prescription volume and expenditure—42.5% and 47.5% respectively—followed by diabetes, at 18.8% and 22.9% respectively. In fiscal year 2017-2018, the SBSspent 49.8% of its total expenditure on prescriptions for hypertension; 32.4% on diabetes; 8.6% on glaucoma; 7.4% on asthma; and 1.9% on cancer.[184]On average, 2,700,000 prescriptions are filled by the BDS annually.[185]

[180] Jowett M, Brunal MP, Flores G, Cylus J. Spending targets for health: no magic number. Geneva: WHO; 2016 (WHO/HIS/HGF/HFWorkingPaper/16.1; Health Financing Working Paper No.1). https://bit.ly/2K6DdAp.
[181] https://www.who.int/healthinfo/universal_health_coverage/report/uhc_report_2019.pdf?ua=1.
[182] Barbados National Strategic Plan for Health 2018-2022.
[183] Barbados Strategic Plan for the Prevention and Control of NCDs 2015-2019.
[184] The Barbados Health Report: 'Healthy productive people and communities' (Draft), 2019.
[185] MOH Planning and Research Unit. Discussion paper on health financing reform. January 2015.

Barbados has a strong immunisation programme, and in 2015 vaccine coverage with the commonly-used antigens, according to the recommended schedule[186]was estimated to be 96%. Specifically related to NCDs, the human papillomavirus vaccine (HPV) was introduced in 2014 for girls aged 11 and older—coverage is estimated at 50%—and seasonal influenza vaccines are offered to persons 65 years of age and older.[187]The Expanded Programme on Immunisation procures vaccines through the PAHO Revolving Fund for Vaccine Procurement.[188]

Information systems for health

Over the years Barbados has made efforts to strengthen national information systems for health (IS4H) and improve the collection, analysis, and use of health information for decision-making, monitoring, and evaluation, including in relation to NCD prevention and control. NCD-related IS4H interventions include, but are not limited to:

- Implementation of the 2007 Behaviour Risk Factor Survey, based on the WHO STEPS methodology.
- Establishment in 2009 of the BNR for NCDs, which documents all cases of stroke, heart attack, and cancer.
- Conduct of PAHO/WHO-recommended risk factor surveys, including the GYTS and theGSHS, which were last conducted in, respectively, 2013 and 2011; these need updating to continue to detect trends and monitor risk factor interventions.
- Implementation of the 2015 HoTNS, based on the STEPS methodology.

The country has also taken action to strengthen its health information system through phased implementation of an eHealth strategy, supported by PAHO's IS4H initiative[189]and a World Bank project addressing HIV/AIDS. A Health Information Policy and Legislative Notes, and a Health Data Dictionary, have been developed; Barbados' electronic medical records system, known as MedData, has been put into service in all of the nine polyclinics, with modules for electronic health records, admissions, discharge records, transfers, and appointments already in place. MedData has also been applied in the QEH Medical Records Department to facilitate admissions, discharges, coding, and census functions, and the hospital has telemedicine solutions available across the institution for laboratory investigations and imaging studies, so that diagnostic investigations can be transmitted electronically.[190]

Health information collected in Barbados is commonly disaggregated by age and sex; however, SDG target 17.18[191] calls for "the availability of high-quality, timely, and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts" to enable the identification of inequities and groups in conditions of vulnerability. This analysis facilitates the development and implementation of interventions that "leave no-one behind" in keeping with the overarching principle of the SDGs, contributingto equitable, sustainable national development.

4.5 Progress Toward Selected International Targets and Indicators

The WHO BBs, EIs, and ORIs; the WHO GMF; the PAHO Plan of Action on the Prevention and Control of NCDs; and the CARICOM POSD, among other frameworks, provide major targets and indicators related to NCD prevention and control that can guide countries' efforts. Many of these targets and indicators were reflected in the SP15-19, and addressedNCD behavioural and biological risk factors; the national systems response, including improvement in the quality of health services for NCDs management, gender issues, multi-sectoral action, public awareness programmes, population surveys, M&E, and dissemination of information; and NCD mortality and morbidity.[192]

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[186] DTP3, Polio3, Hib3, HepB3, MMR1, MMR2
[187] PAHO Health in the Americas+, 2017.
[188] https://bit.ly/2NxDuyE.
[189] https://www.paho.org/ish/index.php/en/stories/?id=134.
[190] Business View Caribbean. The Queen Elizabeth Hospital: a new prescription. 25 October 2019.
[191] https://unstats.un.org/sdgs/metadata/?Text=&Goal=17&Target=17.18.
[192] PAHO. In-depth Qualitative Assessment of Noncommunicable Diseases:Multisectoral Action Plans in the Caribbean (Annexes V, VI, and VII). Washington, D.C.: PAHO; 2018. https://bit.ly/2E7ovqR.

Barbados' progress related to the WHO BBs, EIs, and ORIs, based on information from the MHW NCD Unit, is summarised in **Annex 7**. Of the 40 BBs, EIs, and ORIs associated with the four main risk factors, the country has fully implemented seven (17.5%), while it has implemented 18 (56.3%) of the 32[193]BBs, EIs, and ORIs associated with management of the four major NCDs, indicative of the greater emphasis given to disease management over risk factor reduction and prevention. In addition, the country's progress toward the components of the POSD and related interventions is reflected in the 2017 POSD evaluation grid;[194]although Barbados ("BAR" in the grid) implemented relatively more strategies/indicators than other countries, several critical ones remained unimplemented, again reflecting less focus on risk factor reduction, especially the use of fiscal measures.

Data related to the country's progress towards GMF targets and indicators, with relevant sources, are summarised in **Annex 8**. Major successes/achievements, challenges/gaps, and lessons learned related to NCD prevention and control, including those identified by key stakeholders, are summarised below.

4.6 Successes/Achievements

Major successes and achievements include:

- Greater national awareness in all sectors of the challenge posed by NCDs and the need for action. This has resulted from public awareness programmes, events, dissemination of information, and community outreach by the MHW HPU, National Nutrition Centre (NNC), national NGOs dealing with specific diseases, and the HCC, especially in observance of regional and international markers such as Caribbean Wellness Day, Caribbean Alcohol Reduction Day, World Health Day, and other "world days". A 2018 HSFB public opinion poll[195]showed significant public concern about obesity (83% of respondents) and childhood obesity (88% of respondents), as well as an appreciation of the importance of the government's role in taking action to reduce obesity (78% very important, 17% somewhat important). Campaigns for reduction in salt, alcohol,and SSB consumption have been conducted, and other common activities to raise public awareness include promotion of physical activity with "mass walks"; health fairs; and emphasis on nutritious eating. The MHW and HCC often partner with PAHO/WHO in mounting events and disseminating messages.
- Development of strategic plans addressing health, NCDs, childhood obesity prevention, and cancer control, among other frameworks.
- Enactment of legislation related to the WHO FCTC, whichenables tobacco taxation, currently at 47.1% of the retail price of tobacco products;[196]smoke-free spaces; tobacco product graphic labelling; and bans on sales of tobacco products to minors.
- Bans on sales of alcohol to minors.
- Imposition of a 10% tax onSSBs in 2015, which resulted in a decrease in SSB sales.[197]
- Continuous functioning of the National NCD Commission.
- Production of a National Workplace Wellness Policy (2019).
- Civil society-led advocacy and interventions for COP focusing on healthy nutrition—involving mainly the HSFB and the HCC—through mass media campaigns, establishment of coalitions, involvement of youth, and work in school settings.

[193]There are 33 BBs, EIs, and ORIs related to management of the four priority NCDs, but the MHW deemed the ORI "Access to improved stoves and cleaner fuels to reduce indoor air pollution" inapplicable in the Barbados context, and it was omitted in this analysis.
[194]http://onecaribbeanhealth.org/wp-content/uploads/2018/03/POS-Declaration-country-grid-2017.pdf.
[195]https://www.healthycaribbean.org/wp-content/uploads/2019/03/CADRES-Infographic-FLYER.pdf.
[196]WHO. Report on the global tobacco epidemic, 2019: Offer help to quit tobacco use. Geneva: WHO; 2019. https://bit.ly/2XgJsHq.
[197]Alvarado M, Unwin N, Sharp S et al. Assessing the impact of the Barbados sugar-sweetened beverage tax on beverage sales: an observational study. International Journal of Behavioral Nutrition and Physical Activity. 2019; 16:13. https://doi.org/10.1186/s12966-019-0776-7.

4.7 Challenges/Gaps

Many challenges and gaps remain, including:

- Failure to move the issue of NCDs from being a health issue to being a national development issue, despite the existence of the Cabinet Sub-committee on NCDs.
- Inadequate use of fiscal measures for NCD prevention and control. Tobacco taxation is not at the WHO-recommended level of at least 75% of the retail price; SSB taxation is only half of the recommended minimum of 20%; and there has been no increase in taxation on alcoholic beverages. The study that documented the decrease in SSB sales after the introduction of the SSB tax also found that consumers may also have responded by purchasing cheaper sugary drinks and substituting untaxed products, which has implications for tax design.[198]
- Gaps in WHO FCTC implementation, including in legislation to ban tobacco advertising, promotion, and sponsorship, and eliminate illicit trade in tobacco products.
- Insufficient financial and human resources, and inadequate reallocation and realignment of available human and financial resources,for an efficient and effective response to NCDs.
- Inadequate realignment of health services from a focus on treatment to emphasis on promotion and prevention, as well as fragmentation of service delivery.
- Food insecurity and limited food sovereignty, with a high level of food importation that includes unhealthy commodities.
- Negative impact of the food, beverage, alcohol, and tobacco industries on health interventions—Industry interference—due to their economic power and resulting political influence.
- Inadequate identification and management of CoI.
- Insufficient engagement and participation of the medical and nursing professions in NCD prevention and control.
- Limited health and nutrition literacy among certain segments of the population.
- Inadequate communication about, and coordination of, actions for NCD prevention and control, including the remit and functioning of the NNCDC, with most of the information remaining within the MHW and related institutions.
- Lack of explicit focus on gender issues in NCD-related planning and interventions.
- Inadequate consideration of multi-morbidity, defined by WHO as the coexistence of two or more chronic conditions in the same individual[199]and by the Academy of Medical Sciences as "the coexistence of two or more chronic conditions, each one of which is either a physical non-communicable disease of long duration, such as a cardiovascular disease or cancer; a mental health condition of long duration, such as a mood disorder or dementia; or an infectious disease of long duration, such as HIV or hepatitis C".[200] Multi-morbidity poses a challenge for health care systems, which are mostly organised to treat single conditions, and its burden is increasing globally, likely driven by the ageing population, overweight and obesity, urbanisation, and the growing burden of NCDs; it is more prevalent is older adults and in women.[201]

4.8 Lessons Learned

Among the lessons learned are that:

- Multi-sectoral involvement is critical—health-supporting policies do not have to emanate from the MHW; other sectors are important in developing and implementing such policies.
- The link between NCDs and other national priorities such as climate change and the green economy must be demonstrated and exploited, with consideration given to the use of Geographical Information Systems[202] (GIS) to present relevant information and facilitate decision-making.

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[198] Ibid.
[199] WHO. Multimorbidity: Technical Series on Safer Primary Care. Geneva: WHO; 2016.https://bit.ly/350S5s9.
[200] The Academy of Medical Sciences. Multimorbidity: a priority for global health research. London: Academy of Medical Sciences; April 2018. https://acmedsci.ac.uk/file-download/82222577.
[201] Editorial. Making more of multimorbidity: an emerging priority. Lancet 2018: 391; 1637. https://bit.ly/2rI9KXk.
[202] WHO. Maps and spatial information technologies (Geographical Information Systems) in health and environment decision-making. https://www.who.int/heli/tools/maps/en/.

- A mass movement for NCD prevention and control must be created through greater public outreach, involvement of youth, and participation of PLWNCDs.
- Mechanisms must be defined for constructive and effective engagement with the private sector, and for identifying and managing CoI.
- Successes in NCD prevention and control should be identified, documented, promoted, and marketed to provide incentives for further action, encourage participation, and add to the national and regional evidence base.
- The NSP-NCD 20-25 must be disseminated to key stakeholders (including all ministries and civil society), and communities, businesses, and partners must be involved from an early stage for greater mobilisation of human and financial resources.
- Guidelines are ineffective without support from strong, enforceable policy, legislation, and regulations to enable compliance, and the availability of, and access to, essential medicines and technologies.
- Greater efforts should be made to obtain exemptions from certain World Trade Organization (WTO) rules that are inimical to health, since WTO structures allow such exemptions, with justification.
- Gender-related gaps must be highlighted and addressed. For example, the greater prevalence of obesity and physical inactivity in women should trigger targeted, evidence-informed interventions in that group, and in improving HRH, a sex-disaggregated analysis of categories of workers in various settings may highlight areas and opportunities for more active recruitment and training of men and women, including in strengthening interdisciplinary teams and task-shifting at the first level of care.[203]
- More research on multi-morbidity is needed, especially in lower- and middle-income countries,[204] and guidelines for the integrated management of NCDs, including at the first level of care, must take multi-morbidity into consideration. This is particularly relevant in light of the potential for interactions between medications and between diseases, which makes application of single-disease-based clinical guidelines potentially hazardous for people with multiple conditions.[167]
- Production and dissemination of up-to-date, quality information are critical for successful strategic planning and M&E, and the BNR and GA-CDRC play important roles that should be expanded, with relevant allocation of resources by the GoB, resource mobilisation, and support from CARPHA and other regional and international entities, as appropriate.

4.9 SWOT Analysis of the NCD Programme

As the MHW focal point for the coordination, implementation, monitoring, and evaluation of the NSP-NCD 20-25, the NCD programme needs to recognise and build on its strengths, address weaknesses, take advantage of opportunities, and identify and manage threats to efficient and effective functioning. **Table 9** below presents a SWOT analysis of the NCD programme in Barbados, based on stakeholder input.

Table 9. SWOT analysis of the national NCD programme

Strengths

- Existence of national frameworks and guides related to health, including national strategic plans for health, childhood obesity prevention, and cancer control.
- Emergence of an increasingly strong civil society sector as a partner for action, support, and contribution to NCD reduction.
- Commitment of current personnel in the NNCDC and the NCD programme.
- Barbados' position as a leader in NCD prevention and control, and a potential model of success in that arena, reflected, for example, in the low prevalence of smoking and associated lung cancer.
- Existence of strong political commitment to human capital development and the increasing realisation of the negative effect of NCDs on that capital.

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[203] PAHO. Plan of action on human resources for universal health and universal health coverage 2018-2023. Document CD56/10, Rev.1. Washington, D.C.: PAHO; 2018. https://bit.ly/2NZfFyN.
[204] Eyowas FA, Schneider M, Yirdaw BA, Getahun FA. Multimorbidity of chronic non-communicable diseases and its models of care in low- and middle-income countries: a scoping review protocol. BMJ Open 2019; 9:e033320. https://bit.ly/33LKz47.

- Establishment of the Cabinet Sub-committee on NCDs and existence of the Social Partnership, which provide vehiclesto strengthen multi-sectoral action and to insert NCD prevention and control into the national development agenda.
- Establishment of the BNR, conduct of research by the UWI/GA-CDRC, and implementation of standardised NCD-related surveys such as the GSHS, GYTS, and STEPS, demonstrating a commitment to gather evidence.
- Establishment of an electronic medical records system (MedData).

Weaknesses

- Muted MHW leadership voice in the wider political sphere, beyond the MHW.
- Insufficient visibility of, and action by, the Cabinet Sub-committee on NCDs.
- Inadequate governance systems and guidance to identify and manage CoI when engaging with the private sector.
- Delayed finalisation and persistence in draft status of several national frameworks and guides for health, limiting their publication, dissemination, and use to inform NCD reduction interventions.
- Absence of a clear strategy and plan to implement and finance advances to UH, which would benefit NCD reduction.
- Persisting focus on programme development and resource allocation for the prevention and control of communicable diseases, to the detriment of NCD reduction.
- Greater allocation of resources to medications and treatment of NCDs than to their prevention and early detection.
- Inadequate coordination of NCD-related interventions and activities across the health sector and absence of standardised protocols for NCD management at the various levels of care.
- Overdependence on development of guidelines to drive behaviour change and improvement in quality of care, with limited focus on their promotion, dissemination, implementation, monitoring, and evaluation, and supporting policy, legislation, and regulations.
- Limited capacity to develop and enact enabling policies and legislation.
- Limited information on the financial andeconomic cost/impact of NCDs.
- Limited and outdated statistics on NCD mortality and morbidity; outdated information on risk factors; insufficient data collection from the private sector; and inadequate dissemination of NCD data to sectors other than health and selected civil society organisations.
- Failure to take advantage of MedData and use the available information for policy development and programme planning.
- Inadequate inclusion of civil society in strategic planning and policy development processes, with limited capacity of civil society to effectively engage in those processes.

Opportunities

- Strong efforts of local, regional, and international CSOs and NGOs in NCD prevention and control, with global partnerships that can facilitate resource mobilisation.
- Tertiary learning institutions located in Barbados, including the BCC; UWI; American University of Barbados School of Medicine;[205]Ross University School of Medicine;[206]and University of the Southern Caribbean (USC).[207]
- Focus on wellness in the new name and remit of the health ministry.
- Exploration of involvement of the diaspora and development of new partnerships through the "We Gatherin'" initiative in 2020.
- Major meeting of the UN Conference on Trade and Development[208] (UNCTAD) to be held in Barbados in 2020, which can strengthen local linkages among NCDs, trade, climate change, and SIDS.
- Enhanced funding from HSFB for its COP campaign, which allows the MHW to partner with the HSFB to get messages to the public and counter Industry messages.
- Interest of the media in covering priority health issues that resonate with the public.

[205] https://www.aubmed.org/.
[206] https://medical.rossu.edu/student-life/barbados.
[207] https://www.usc.edu.tt/.
[208] https://unctad.org/.

- Overtures from the Barbados Chamber of Commerce and Industry (BCCI), which can foster positive engagement with Industry.
- Interest of private sector health providers in using MedData.
- GoB's evident intent to enhance the functioning of the Cabinet Sub-committee on NCDs.
- Cabinet approval of the National Workplace Wellness Policy and establishment of the National Workplace Wellness Committee, chaired by the Ministry of Labour and Social Partnership Relations (MLSP), which offer more opportunities for collaboration/partnerships among ministries, particularly on workplace- and community-related objectives.
- Wide dissemination of the NSP-NCD 20-25 to CSOs, to facilitate its use as a framework and resource mobilisation instrument, and enable their more structured contribution to NCD prevention and control.
- MHW's intent to establish a mechanism in the Ministry for effective engagement and enhanced collaboration with NGOs around issues such as COP.
- Availability of WHO technical packages and policy guidance for risk factor reduction and management of priority NCDs, including MPOWER[209] (tobacco control); SAFER[210] (alcohol reduction) and the WHO Global Strategy for Reduction of the Harmful Use of Alcohol;[211]REPLACE[212] (trans fat elimination); SHAKE[213] (salt reduction); ACTIVE[214] (physical activity); PEN[215](PHC interventions); and HEARTS[216](CVD management in PHC).

Threats

- Continued reluctance of policymakers to develop and implement policy and legislation related to certain aspects of risk factor reduction, with inadequate "push" to do so from the public and key constituents ("policy inertia").
- Private sector interference.
- Name and nature of NCDs, which are not fully understood by many stakeholders.
- Inadequate prioritisation of, and allocation and mobilisation of financial and human resources for, NCD prevention and control.
- Insufficient technical and administrative support for the NCD programme in the MHW.
- Strategic plans related to health and NCDs that are not finalised, disseminated widely, and monitored, to drive multi-sectoral action in achieving agreed objectives.

5. Priority Focus Areas

Based on the situation analysis, national responses, progress to date, and the results of the SWOT analysis, the GoB will focus on the following eight (8) priority areas for NCD prevention and control during the period 2020-2025, led and coordinated by the MHW:

1. **Risk factor reduction**, with strengthening of the *implementation of the WHO FCTC; reduction in the harmful use of alcohol*; promotion of *healthy nutrition* through improvements in health and nutrition literacy, the use of policy, legislation, regulations, and fiscal measures, introduction of FoPWL on pre-packaged foods,[217]and elimination of trans fat; and promotion of regular *physical activity* through community, school, and workplace wellness interventions.

209https://www.who.int/tobacco/mpower/mpower_report_six_policies_2008.pdf.
210https://www.who.int/substance_abuse/safer/msb_safer_framework.pdf?ua=1.
211https://apps.who.int/iris/bitstream/handle/10665/44395/9789241599931_eng.pdf?sequence=1.
212https://www.who.int/nutrition/topics/replace-transfat.
213https://bit.ly/2WYDQ4a.
214https://apps.who.int/iris/bitstream/handle/10665/275415/9789241514804-eng.pdf?sequence=1&isAllowed=y.
215WHO. Package of Essential NCD Interventions (PEN) for Primary Health Care in Low-resource Settings. Geneva: WHO; 2010. https://www.who.int/nmh/publications/essential_ncd_interventions_lr_settings.pdf.
216https://www.who.int/cardiovascular_diseases/hearts/en/.
217As at the time of writing, no regional consensus on FoPWL has been reached through the CROSQ process. However, Barbados endorses FoPWL and will take relevant action to put the local standard in place.

2. **Improved management of NCDs**, strengthening health systems and enhancing the application of the *chronic care model* and *theprimary health care approach*, with the development, dissemination, and use of protocols and guidelines for standard management of common conditions at the first level of care, taking multi-morbidity into consideration and conducting related *HRH capacity-building*, within a supportive policy, legislative, and regulatory environment.
3. **Childhood obesity prevention**, highlighting *SSB taxation, SSB bans in and around schools, restrictions on the sale and marketing of unhealthy products to children*, and promotion of *physical activity*, with the involvement of key stakeholders across sectors, as well as the children themselves—as age-appropriate—their parents, guardians, and teachers.
4. **Multi-sectoral work and partnerships**, *advocating* at the level of the Social Partnership and the Cabinet Sub-committee on NCDs; *strengthening the remit and functioning of multi-sectoral bodies* such as the NNCDC and the NTFW; involving *civil society and the health-promoting private sector; and demonstrating links* among NCDs, agriculture, and climate change, among NCDs, SIDS, and trade, and between MHW and other ministries.
5. **Resource allocation and mobilisation and allocation**, undertaking *evidence-based advocacy* for greater allocation to Health of resources from the national budget; identifying and taking advantage of financial, technical, and other resources available through *international development agencies and foundations; sharing experiences* with other countries in and outside of the Caribbean region; and *identifying co-benefits* with other priorities such as climate change adaptation.
6. **Communicating for health**, with wide *promotion* of the NSP-NCD 20-25;*mass media and social media campaigns* in collaboration with civil society and other partners to reduce risk factors andinform of progress in implementing the NSP; and *advocacy* regarding effective policy options for NCD prevention and control, including to policymakers, through interventions that encompass creation of a *mass movement* that involves youth andPLWNCDs,.
7. **NCD surveillance and research**,including development of a *framework to identify key actors and resources*, and guide systematic implementation of surveys/studies to provide updated, quality NCD-related information,including on multi-morbidity, *disaggregated* by at least age, sex, ethnicity, geographic location, and socio-economic status to identify gender, geographic, economic, and other inequities related to the social determinants of health. These surveys/studies include the GYTS, GSHS, STEPS(amended to include e-cigarettes/vaping), and follow-up to the 2015 investment case for NCD prevention and control, to inform strategic planning that includes clear goals and objectives to achieve the country's vision for health with equity.
8. **Management, monitoring, and evaluation** of the NCD programme and the implementation of the NSP-NCD 20-25, including strengthened capacity for *governance and leadership*, development of an *M&E and accountability framework and plan* for the NSP-NCD 20-25, and enhancement of *mechanisms foroversight* by the MHW, NNCDC, NTFW, Social Partnership, and Cabinet Sub-committee on NCDs.

6. Strategic Approaches

The NSP-NCD 20-25 is aligned with the draft Barbados National Strategic Plan for Health (NSPH) 2018-2022: "Working Together for a Healthier Nation", which embraces the contributions of a wide range of national and international stakeholders, and emphasises partnerships, collaboration, and coordination. The NSPH's shared vision is "healthy productive people and communities through excellent care for everyone, everywhere, every time", which encapsulates the commitment of the MHW and the GoB to universal health. Its goals are to 1) promote and protect the health of the population; 2) provide safe, client-centred services; 3) improve the performance of the health system; and 4) engage and mobilise partners in health.

The NSP-NCD 20-25 mirrors these goals through its focus on promotion of health, risk factor reduction, and prevention of NCD complications; the PHC approach and strengthening the first level of care, with improved management of NCDs at that level; communication and constructive partnerships with civil society and the health-promoting private sector; and information for evidence-based decision-making, policy development, monitoring, and evaluation. The NSP-NCD 20-25 is also consistent with BCHOPP,the draft National Cancer Control Plan for Barbados 2019-2024, and other national frameworks for health, as summarised in Annex 1.

The vision, mission and values/guiding principles of the SP 15-19 remain valid and inform those of the NSP-NCD 20-25.

Vision
The vision of the NSP-NCD 20-25 is to improve the health and wellbeing, and enhance the productive potential, of all Barbadians.

Mission
The mission of the NSP-NCD 20-25 is to empower Barbadian society, individuals, and organisations to enhance their quality of life throughout the life course through a whole-of government, whole-of-society response toNCDs, their risk factors, and the social determinants of risk, with emphasis on promotion, prevention, and the first level of care, so as to erase the avoidable burden of NCDs.

Values/Guiding Principles
- Health is a fundamental right of all Barbadians.
- Development of a patient-centred, equitable, efficient, and accessible health care system of high quality is a priority, to contribute to Barbadians' achievement of optimum physical, mental, and social well-being.
- Recognising that most of the causes and solutions to NCD risk factors lie outside of the health sector, the national response must be inclusive of all sectors and persons, respecting the views of all, while holding them accountable for their actions in a transparent and collaborative manner.
- There needs to be empowerment of people and communities to participate in their own health, within a life-course approach to wellness, prevention, and control, using evidence-based strategies, supported by national action and international cooperation and solidarity.
- Creation of an enabling environment—including policy, legislation, and regulations—that facilitates, encourages, and supports healthy choices, while discouraging unhealthy behaviours, is an overarching principle for effective NCD prevention and control.
- In all interactions with civil society and the private sector, across all government ministries and statutory bodies involved in NCD prevention and control, conflict of interest issues must be identified, disclosed, and appropriately managed according to government policies and guidelines on transparencyand good governance.

The strategic agenda of the NSP-NCD 20-25 is presented in Section 7 below.

7. Strategic Agenda – The Core of the Strategic Plan

7.1 Goal, purpose/overall outcome, specific outcomes, and outputs/expected results

The **goal** of theBarbados National Strategic Plan for the Prevention and Control of NCDs 2020-2025 is to reduce mortality, morbidity, and disability due to the major NCDs, and its **purpose/overall outcome**—the impact—is reduction of the main NCD risk factors and strengthening of the management of the major NCDs, focusing on the first level of care.

Table 10 sets out, below, in a Logical Framework Matrix, the key elements of the strategic agenda—the goal, purpose/overall outcome, specific outcomes, and outputs/expected results, including relevant targets, indicators, means of verification, and assumptions. **Definitions and baselines for the targets and indicators of the goal and specific outcomes are in Annex 8, which summarises data on Barbados' progress towards the WHO Global Monitoring Framework targets and indicators**, which provide the basis for the specific outcome targets and indicators in the NSP-NCD 20-25; the targets are to be achieved by 2025.

Table 10. Logical Framework Matrix: Strategic Agenda for the Barbados NSP-NCD 2020-2025

Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
Goal Mortality, morbidity, and disability due to NCDs reduced.	Reduction in premature mortality from the four major NCDs by 25% by 2025.[218]	Unconditional probability of dying between ages of 30 and 70 from CVD, cancer, diabetes, or chronic respiratory diseases.	MHW mortality data	Sustained effective multi-sectoral action, allocation of adequate human and financial resources for comprehensive NCD prevention and control, and advances to universal health.
	Reduction in cervical cancer incidence by 25% by 2025.[219]		MHW/BNR incidence data	
Purpose/Overall outcome Cost-effective and recommended policy options and interventions implemented to reduce the main NCD risk factorsand strengthen management of the major	At least 40% implementation of the WHO BBs, EIs, and ORIs for reduction of the four main NCD risk factors—tobacco use, unhealthy diet, physical inactivity, and	Proportion of WHO BBs, EIs, and ORIs implemented related to NCD risk factor reduction. *Baseline (2019):* 17.5%[220]	MHW report WHO NCD Country Profile	Sustained allocation of human and financial resources and efficient implementation of effective policy options and interventions for primary, secondary, and tertiary

[218] Using 2010 baseline data, as stipulated in the GMF. See https://www.who.int/nmh/ncd-tools/definition-targets/en/.
[219] Ibid.
[220] See first paragraph in Annex 7.

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Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
NCDs.	harmful use of alcoholby 2025.			prevention of the majorNCDs.
	At least 70% implementation of WHO BBS, EIs, and ORIs for management of the four major NCDs—CVD, diabetes, cancer, and chronic respiratory diseasesby 2025.	Proportion of WHO BBs, EIs, and ORIs implemented related to the management of the four major NCDs. *Baseline (2019)*: 56.3%.[221]	MHW report WHO NCD Country Profile	
Specific outcomes				
1. Tobacco use reduced among adolescents and adults.	10% relative reduction in prevalence of current tobacco use in persons aged ≥13 years.	Prevalence of current tobacco use among students aged 13-15 years.	GYTS	Strengthened WHO FCTC implementation, including protecting health policies from tobacco industry interference, and continuation of interventions to create tobacco-free norms, standards, and culture.
		Age-standardised prevalence of current tobacco use among persons aged ≥25 years.	STEPS/HoTNS	
2. Unhealthy diet and overweight/obesity reduced.	30% relative reduction in mean population intake of salt.	Age-standardised mean population intake of salt/sodium per day (in grams) in persons aged ≥25 years.	STEPS/HoTNS	Improvement in agricultural practices and food and nutrition security and supply systems to allow easy access to affordable, healthy food and beverages, reduction in obesogenic environments, and adaptation to climate change.
	Halt the rise in obesity and diabetes.	Adoption of national policies that limit saturated fatty acids and virtually eliminate partially hydrogenated vegetable oils (trans fat) in the food supply.	Copy of policies and documentation of related interventions	
		Age-standardized prevalence of raised total cholesterol among persons aged ≥ 25 years.	STEPS/HoTNS	
		Prevalence of overweight and	GSHS	

[221] See first paragraph in Annex 7.

Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
		obesity among students aged 13-15 years.		
		Age-standardized prevalence of overweight and obesity in persons aged ≥25 years.	STEPS/HoTNS	
	At least 10% decrease in the prevalence of persons aged ≥25 years consuming less than five total servings of fruit and vegetables per day.	Age-standardized prevalence of persons aged ≥25 years consuming less than five total servings of fruit and vegetables per day.	STEPS/HoTNS	
	At least 10% decrease in the prevalence of children aged 13-15 years drinking carbonated soft drinks (or other SSBs) daily.	Prevalence of children aged 13-15 years drinking carbonated soft drinks (or other SSBs) one or more times per day during the past 30 days.	GSHS	
	At least 10% increase in the prevalence of exclusive breastfeeding for the first six months of life.	Prevalence of exclusive breastfeeding. *Baseline(2012)*: 19.7%[222]	MHW report	
3. Physical inactivity reduced.	10% relative reduction in prevalence of insufficient physical activity.	Prevalence of insufficiently physically active students aged 13-15 years.	GSHS	Creation and maintenance of spaces, facilities, and opportunities for regular physical activity in school, workplace, and community settings.
		Age-standardized prevalence of insufficiently physically active persons aged ≥25 years.	STEPS/HoTNS	
4. Harmful use of alcohol reduced.	At least 10% relative reduction in harmful use of alcohol.	Total alcohol consumption per capita (in persons aged ≥25 years) within a calendar year, in litres of pure alcohol.	MHW report	Continuation of interventions to create norms, standards, and culture that value reduction of alcohol-related harms, including adoption of new legislation/regulations
		Age-standardized prevalence of	STEPS/HoTNS	

[222] PAHO/WHO. World Breastfeeding Week 2018: Breastfeeding—Foundation of Life (Presentation, Slide 7). https://www.paho.org/hq/index.php?option=com_docman&view=download&category_slug=2018-9957&alias=45711-presentation-world-breastfeeding-week-2018-711&Itemid=270&lang=en.

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Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
		heavy episodic drinking among students aged 13-15 years and adults (persons aged ≥25 years).		without alcohol industry interference.
5. High blood pressure reduced; screening for, and integrated management of, diabetes, CVD, chronic respiratory diseases, and cancer improved.	25% relative reduction in the prevalence of raised blood pressure.	Age-standardized prevalence of raised blood pressure among persons aged ≥25 years.	STEPS/HoTNS	Resource allocation, capacity-building, and PHC approach enhanced, with strong leadership and governance, adequate funding, human resources, social protection, health information, service delivery, and access to essential medicines and technologies, in tandem with other measures to advance to universal health.
	At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.	Proportion of eligible persons receiving drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes.	MHW report	
	80% availability of the affordable basic technologies and essential medicines, including generics, required to treat the four major NCDs 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.	MHW/BDS report	
		Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer.	MHW/BDS report Barbados Association for Palliative Care (BAPC) report	
	At least 90% of girls aged 9-13 years receive HPV vaccination (two doses).	Proportion of girls aged 9-13 years receiving HPV vaccination. *Baseline (2016)*: 50.0%	MHW report	
	At least 80% of women aged 30–49 years screened for cervical cancer at least	Proportion of women aged 30-49 years screened for cervical cancer at least once, using	MHW report	

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Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	once, throughPap smear (cervical cytology) every 3-5 years linked with timely treatment of pre-cancerous lesions, or HPV test every 5 years linked with timely treatment of pre-cancerous lesions.	cervical cytology or HPV testing.[223]		
	At least 80% of women aged 50-69 years screened with mammography at least once every two years.	Proportion of women aged 50-69 years screened with mammography at least once every two years.[224]	MHW report	
6. Multi-sectoral whole-of government, whole-of-society, and health-in-all-policies approaches to NCD prevention and control strengthened.	At least three ministries other than health, and three entities with representation from civil society and the private sector, involved in leadership, strategic planning, implementation, monitoring, and evaluation for NCD prevention and control.	Number of ministries, and entities with civil society and private sector representation, involved in leadership, strategic planning, implementation, monitoring, and evaluation for NCD prevention and control.	NNCDC/MHW report Reports from other ministries	Improved appreciation by ministries other than Health, civil society, and the private sector of the importance of their contribution to health, and their sustained and effective participation in interventions for NCD prevention and control.
	Mechanism for effective engagement with NGOs established and functioning in the MHW.	NGO engagement mechanism established in MHW and functioning.	MHW report	
7. Adequate resources allocated and mobilised for enhanced functioning of the national NCD programme.	Establishment of a line item in the national health budget specific to NCD prevention and control and at least a 10% increase in	Line item in health budget for NCD prevention and control, and proportion of national health budget allocated to NCD programme.	MHW report Copy of national budget	Resources used efficiently and effectively for NCD prevention and control, with performance assessments conducted in a results-based

[223] Baseline to be established.
[224] Baseline to be established.

Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	the financial resources allocated to the MHW NCD programme.			management framework and sustained allocation and mobilisation of adequate resources.
	At least two full-time technical staff and one full-time administrative staff assigned to the MHW NCD Unit.	Number of full-time technical and administrative staff in the MHW NCD Unit.	MHW report	
	At least three ministries other than MHW with NCD-related objectives/activities included in their operational plans, supported by financial resources from their own budgets.	Number of ministries other than MHW with NCD-related objectives/activities included in their operational plans and relevant budgetary allocations.	Cabinet report Reports from other ministries	
8. Increased awareness and understanding among key stakeholders of the major NCDs, their main risk factors, their impact, and responses.	At least a 10% increase in the proportion of persons expressing concern about obesity and childhood obesity.	Proportion of persons expressing concern about obesity and childhood obesity. *Baseline (2018)*: 83.0% obesity, 88.0% childhood obesity.[225]	Results from follow-up to the 2018 HSFB public opinion poll.	Awareness messages and interventions tailored to various audiences as appropriate, sustained, and trigger desired behaviours.
9. Information systems related to NCDs strengthened.	Development of a framework for systematic NCD surveillance and research that identifies core areas, sources of information, key actors, resources needed, and possible sources of funding/resources.	Existence of a framework for systematic, periodic NCD surveillance and research, that identifies core areas, sources of information, key actors, resources needed, and possible sources of funding/resources.	MHW report Copy of framework	Information systems include data from public and private sectors; maintained; provide timely, quality data; and data used for decision-making, evidence-based policy development, monitoring, and evaluation.
	At least three population-based surveys/studies	Number of surveys/studies implemented to detect NCD	MHW report	

[225] HSFB public opinion poll 2018. https://www.healthycaribbean.org/wp-content/uploads/2019/03/CADRES-Infographic-FLYER.pdf.

Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	implemented to detect NCD and risk factor trends.	and risk factor trends.	Survey/study reports	
10. National leadership and governance of NCD prevention and control enhanced.	At least one forum of key stakeholders convened/coordinated by the NNCDC and MHW annually to provide updates on NCD prevention and control.	Number of fora of key stakeholders convened annually by the NNCDC and MHW.	NNCDC and MHW reports Reports of the fora	Multi-sectoral leadership for NCD prevention and control sustained and effective.
Outputs/Expected results				
1.1 Implementation of the WHO **FCTC** accelerated.	Tobacco control legislation or regulations amended, or new legislation/regulations introduced, to facilitate implementation of at least three additional components of the FCTC, including increase in tobacco taxation to at least 75% of the retail price; ban on tobacco product advertising, promotion, and sponsorship; and measures to eliminate illicit trade in tobacco products.	Number of amendments to the tobacco control legislation or regulations, and/or number of new legislation/regulations introduced, to improve compliance with the WHO FCTC.	MHW report Tobacco or related legislation/regulations WHO Report on the Global Tobacco Epidemic PAHO Report on Tobacco Control in the Region of the Americas	Successful advocacy, and amendment and/or development and enforcement of legislation and regulations related to the WHO FCTC and tobacco control, including measures to prevent tobacco industry interference.
2.1. Strategies and mechanisms for **healthy nutrition** enhanced.	At least three interventions implemented for salt reduction based on the WHO SHAKE technical package.	Number of interventions implemented based on the WHO SHAKE technical package.	MHW report	Successful advocacy, and sustained priority given to healthy nutrition and reduction of obesity, overweight, and the obesogenic environment across sectors, including mandatory implementation of FoPWL.
	At least two interventions implemented to reduce sugar consumption, including increase in taxation on SSBs from the	Number of interventions implemented to reduce sugar consumption, and level of taxation on SSBs.	MHW report	

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Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	current level of 10% to at least 30% and advocacy for reformulation of foods and beverages to lower their sugar content.			
	At least three interventions implemented for the elimination of trans fat based on the WHO REPLACE technical package.	Number of interventions implemented based on the WHO REPLACE technical package.	MHW report	
	At least three interventions implemented promoting increased fruit and vegetable consumption, including messages in mass and social media; enhanced promotion and implementation of national food-based dietary guidelines; and collaboration with the Ministry of Agriculture and Food Security (MAFS) to improve access to local fruits and vegetables.	Number of interventions promoting increased fruit and vegetable consumption, and ministries involved.	MHW and MAFS reports	
	Front-of-package 'high in' nutrition warning labels implemented and enforced on at least 50% of locally produced and imported packaged foods.	Proportion of local and imported packaged foods with front-of-package 'high in' nutrition warning labels.	MHW report Product labelling monitoring	
	At least three interventions to promote exclusive breastfeeding for the first six months of life	Number of interventions to promote exclusive breastfeeding for the first six months of life.	MHW report BCNF report	

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Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	implemented, including expansion of the Baby-Friendly Hospital initiative to include the private sector; promotion, and assessment of the implementation, of the International Code of Marketing of Breast-milk Substitutes; and promotion of breastfeeding in the workplace.			
2.2 Implementation of strategies and interventions for **childhood obesity prevention** enhanced.	At least five strategies and interventions for COP implemented, including restriction on the sale and marketing of unhealthy commodities to children, and, in the school setting: ban on SSBs; updating and implementation of nutrition guidelines specific to the school environment; mandatory physical activity; and improved access to potable water.	Number of strategies and interventions developed and implemented addressing childhood obesity prevention.	MHW report HCC report	Successful advocacy, and sustained priority given to healthy nutrition and prevention of childhood obesity across sectors, including Education and Trade.
3.1 Strategies and mechanisms implemented for increased **physical activity**.	At least three interventions for increasing physical activity based on the WHO ACTIVE technical package implemented.	Number of interventions implemented based on the WHO ACTIVE technical package.	MHW report	Successful advocacy, and sustained priority given to reduction of physical inactivity across sectors, including urban planning.
4.1 Strategies and mechanisms implemented to reduce the **harmful use of alcohol**.	At least three interventions implemented to reduce the harmful use of alcohol based on the SAFER	Number of interventions implemented to reduce the harmful use of alcohol.	MHW report HCC report	Successful advocacy, and sustained priority given to reduction of the harmful use of alcohol across sectors,

Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	technical package (WHO BBs) and the policy options and interventions recommended in the 2010 WHO Global Strategy for Reduction of the Harmful Use of Alcohol,[226] including promoting and enforcing drink driving counter measures; enforcing bans/comprehensive restrictions on alcohol advertising, sponsorship, and promotion; and raising prices on alcohol through excise taxes and pricing policies.			including Business, Commerce, Trade, and Transportation.
5.1 Interventions implemented to reduce **high blood pressure** and improve **screening** for, and/or **integrated management** of, CVD, diabetes, chronic respiratory diseases, and cancer at the first level of care, taking multi-morbidity into consideration.	Protocol for the management of hypertension at the first level of care reviewed and updated to use a total risk approach consistent with WHO HEARTS guidance, and implemented in all nine polyclinics.	Number of polyclinics implementing protocol for hypertension management updated to use the total risk approach, consistent with WHO HEARTS guidance.	MHW report	Capacity built, and continued access to quality, comprehensive services for screening and management of hypertension and priority NCDs at the first level of care, with access to essential medicines and technologies, appropriately trained, qualified human resources for health, and efficient and effective referral systems, within supportive policy, legislative, and regulatory frameworks.
	WHO HEARTS guidance for CVD management adopted/adapted as needed and protocols for CVD management, including drug therapy and counselling, implemented in all nine polyclinics.	Number of polyclinics implementing protocol for CVD management, including drug therapy and counselling, adopted/adapted from the WHO HEARTS guidance.	MHW report	

[226] https://apps.who.int/iris/bitstream/handle/10665/44395/9789241599931_eng.pdf?sequence=1.

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Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	Protocol for management of Type 2 diabetes reviewed and updated, including preventive foot care and screening for retinopathy, and implemented in all nine polyclinics.	Number of polyclinics implementing updated protocol for management of Type 2 diabetes, including preventive foot care, screening for retinopathy, and seasonal influenza vaccination.	MHW report	
	Protocol for management of chronic respiratory diseases reviewed and updated, and implemented in all nine polyclinics.	Number of polyclinics implementing updated protocol for management of chronic respiratory diseases, including seasonal influenza vaccination for persons with COPD.	MHW report	
	Protocols, including a call-and-recall system, developed for screening for breast, cervical, and colo-rectal cancers, and applied in all nine polyclinics.	Number of polyclinics applying protocols, including a call-and-recall system, for breast, cervical, and colo-rectal cancer screening.	MHW report	
	Printed information and audiovisual messages regarding prostate cancer screening available in all nine polyclinics.	Number of polyclinics with printed information and audiovisual messages available.	MHW report	
	Basic palliative care for cancer available through home-based and hospital care, with access to opiates and essential supportive medicine.	Number of facilities or entities providing home- and hospital-based palliative care for cancer.	MHW report BAPC and Cancer Support Services (CSS) reports	
	Implementation of the self-care/self-management component of the Chronic Care Model (CCM) in all	Number of polyclinics implementing the self-care management component of the CCM.	MHW report	

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Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	nine polyclinics.[227]			
	Integration of NCD management using the PHC approach into curricula for training health and allied health professionals.	Number of training curricula at UWI and BCC adapted to include/strengthen aspects related to NCD management using the PHC approach.	MHW, Ministry of Education, Technological and Vocational Training (METVT), and BCC reports	
6.1 Strategies and mechanisms implemented to promote and strengthen **multi-sectoral work and partnerships**for NCD prevention and control.	Partnerships/collaboration between MHW and at least three other ministries to develop and implement interventions related to NCD prevention and control in specific settings—schools and/or workplaces and/or communities.	Number of partnerships/collaboration involving the MHW and other ministries for the implementation of interventions for NCD prevention and control in school, workplace, and community settings.	MHW and NNCDC reports	Capacity built, and establishment of sustained, effective multi-sectoral collaboration and partnerships for NCD prevention and control.
	At least three entities with representation from government, civil society and health-supporting private sector demonstrating leadership in NCD prevention and control advocacy, policy development, planning, implementation, monitoring, and evaluation.	Number of entities with government, civil society, and health-supporting private sector representation leading NCD prevention and control advocacy, policy development, planning, implementation, monitoring, and evaluation.	MHW report	
	Mechanism for effective engagement with NGOs established at the MHW and at least one intervention annually	Establishment of the NGO engagement mechanism in the MHW and number of interventions implemented through MHW and NGO	MHW report	

[227] Information and tools for the implementation of this component of the CCM, which can be adapted as appropriate, including to consideration of multi-morbidity, are available from the Institute for Healthcare Improvement at http://www.ihi.org/Topics/ChronicCare/Pages/default.aspx. Additional information is available from the CARICOM Chronic Care Policy and Model of Care at https://caricom.org/documents/12061-chronic_care_policy__model_of_care_for_the_caribbean_community.pdf.

Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	attributable to collaboration between the MHW and NGOs as a result of the mechanism.	collaboration.		
7.1 Strategies and mechanisms implemented to improve **resource allocation and mobilisation** (financial and human resources) to strengthen the NCD programme and facilitate execution of the NSP-NCD 20-25.	Presentation of Green Paper and White Paper to Cabinet/Parliament to advocate for, justify, and request, increased allocation of human resources to the NCD Unit and financial resources to the NCD programme.	Number of papers presented to Cabinet/laid in Parliament to advocate for, justify, and request increased allocation of resources for NCD prevention and control.	MHW report Cabinet report	Capacity built, successful advocacy, and justification for increased allocation of resources, with increase in health and NCD budgets, and effective resource mobilisation.
	At least two strategies per year developed and implemented to mobilise financial and human resources for the execution of the NSP-NCD 20-25.	Number of strategies developed and implemented annually to mobilise financial and human resources for the execution of the NSP-NCD 20-25.	MHW report	
8.1 **Communication strategies** developed and implemented to promote the NSP-NCD 20-25 and enable NCD risk factor reduction and improved management of NCDs.	At least two documented and demonstrable communication strategies developed and implemented annually to promote the NSP-NCD 20-25 and enable NCD risk factor reduction and improved management of NCDs, including targeting specific populations such as children, youth, and men.	Number of communication strategies developed and implemented annually to promote the NSP-NCD 20-25 and enable NCD risk factor reduction and improved management of NCDs, including targeting specific populations such as children, youth, and men.	MHW report Copies of communication products	Communication products effectively disseminated via various media and platforms and result in wide knowledge and use of the NSP-NCD 20-25 as a framework for action across sectors and society for NCD prevention and control.
9.1 Strategies and mechanisms implemented to strengthen NCD **surveillance and research**, including	All modules of MedData electronic medical records (EMR) system implemented in all polyclinics in keeping	Number of polyclinics with all modules of MedData EMR system implemented.	MHW report	Capacity built, timely data collection and analysis (including from the private sector), and production,

Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
assessment of multi-morbidity.	with framework for NCD surveillance.			dissemination, and use of reports, including to identify inequities in health.
	Exploration with private health care providers of their use of MedData to improve data collection from that sector.	Number of formal discussions/interactions held with private health care providers and the outcomes of the discussions/interactions.	MHW report	
	At least two MedData reports generated annually to contribute to planning and policy development.	Number of reports generated from MedData per year.	MHW report Copies of MedData reports	
	Improved capacity of MHW Planning and Research Unit and BNR to extract raw data from MedData for HEARTS monitoring	Number of persons from MHW Planning and Research Unit and BNR trained in extracting raw data from MedData for HEARTS monitoring.	MHW report	
	At least three surveys/studies implemented among adolescents and adults, including the GSHS, GYTS, and STEPS to determine trends in priority NCDs, NCD risk factors, and multi-morbidity.	Number of surveys/studies among adolescents and adults to determine trends in priority NCDs, risk factors, and multi-morbidity.	MHW report Results of the surveys/studies	
10.1 Strategies and mechanisms strengthened for the efficient and effective **management,monitoring, and evaluation** of the NCD programme and the NSP-NCD 20-25.	Annual implementation plans developed for the NSP-NCD 20-25, with six-monthly monitoring of their programmatic and financial execution, production of six-monthly and annual progress reports, and final internal and external evaluation of	Number of implementation plans, progress reports, and evaluation reports related to the NSP NCD-20-25.	MHW report Copies of the progress and evaluation reports	Capacity built, and sustained efficient and effective management of the NCD programme and implementation of the NSP-NCD 20-25, with adjustments as needed to attain agreed outputs and outcomes.

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Objectives Narrative Summary	Targets	Indicators	Means of verification	Assumptions
	the implementation of the NSP-NCD 20-25.			
	Capacity-building interventions held at least annually for the NNCDC, NTFW, and MHW NCD Unit to facilitate their efficient and effective functioning, management, and oversight of NCD prevention and control in Barbados.	Number of capacity-building interventions held for the NNCDC, NTFW, and MHW NCD Unit annually.	MHW, NNCDC, and NTFW reports	

7.2 Outputs/expected results, main activities, inputs/estimated resources, indicative timelines, and proposed partners

The OPTs/ERs and theirindicators, main activities, estimated inputs/resources, indicative timelines, and proposedpartners to achieve the specific outcomes are presented in **Table 11** below. **The estimated inputs/resourcescover the 5-year period of the Plan and do not include estimates for in-kind costs**, which comprise, among other items, personnel salaries and time, and use of government infrastructure; the estimated budget amounts for each activity assume both resource allocation and resource mobilisation.

Table 11. Outputs/expected results, main activities, inputs/estimatedresources, indicative timelines, and proposed partners

OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
1.1 Implementation of the WHO**FCTC**accelerated .	1.1.1 Conduct an FCTC needs assessment, as recommended by the 2015 UNIATF mission.	MHW, NNCDC Consultant 6,000 Materials 2,000	2020	UNIATF/UN Subregional Team HSFB, BCS
	1.1.2 Implement at least two of the major recommendations of the FCTC needs assessment.	MHW, NNCDC, other ministries as indicated Implementation 24,000	2021-23	UNIATF/UN Subregional Team HSFB, BCS
	1.1.3 Conduct evidence-based advocacy with the MFEI for increase in taxation on tobacco products from the current level of 47.1% to at least 75%, and application of at least a portion of the tax revenue	MHW, NNCDC Advocacy materials and interventions 2,000	2020	PAHO/WHO HSFB, BCS, HCC

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	to NCD prevention and control interventions, including health financing.			
	1.1.4 Conduct evidence-based advocacy with the Ministry of Information, Broadcasting and Public Affairs (MIBP) for a ban on tobacco advertising, promotion, and sponsorship.	MHW, NNCDC, MIBP Advocacy materials and interventions 5,000	2020	PAHO/WHO HSFB, BCS, HCC
	1.1.5 Contribute to, and adopt/adapt as needed, regional (CARICOM) efforts to eliminate illicit trade in tobacco products.	MHW, NNCDC, Ministry of Foreign Affairs and Foreign Trade (MFA) Meeting and other support costs 5,000	2020-22	PAHO/WHO
	1.1.6 Review and monitor emerging evidence and current smoking regulations to advocate for, and enable, legislation and regulations that restrict or ban inhalable substances/products other than tobaccothat have a negative impact on health.	MHW, NNCDC Evidence review, documentation, advocacy 8,000	2020-25	PAHO/WHO
				Cost OPT 1.1: US$ 52,000
2.1 Strategies and mechanisms for **healthy nutrition** enhanced.	2.1.1 Review the SHAKE technical package for salt reduction and advocate for and implement at least three of the five suggested policies and interventions,[228]building on the 2015 PAHO/University of South Florida/HCC social marketing campaign[229] and integrating them into other NCD prevention and control strategies as appropriate.	MHW, NNCDC, NNC Ministry of Small Business, Entrepreneurship and Commerce (MSBEC) Consultations 5,000 Implementation 25,000	2021-22	PAHO/WHO
	2.1.2 Undertake evidence-based advocacy with the MFEI and MSBEC for an increase in the SSB tax from the current level of 10% to at least 30%.	MHW, NNCDC Advocacy materials and interventions5,000	2020	HCC
	2.1.3 Undertake evidence-based advocacy with the	MHW, NNCDC, NNC	2020	PAHO/WHO

[228]**S**urveillance—measure and monitor salt use; **H**arness Industry—promote the reformulation of foods and meals to contain less salt; **A**dopt standards for labelling and marketing—implement standards for effective and accurate labelling and marketing of food; **K**nowledge—educate and communicate to empower individuals to eat less salt; **E**nvironment—support settings to promote healthy eating (e.g. schools, workplaces, hospitals).

[229]https://www.healthycaribbean.org/pahousfhcc-social-marketing-dietary-salt-reduction/.

OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	MSBEC and the Barbados Chamber of Commerce and Industry[230] and offer incentives to producers and manufacturers for reformulation of foods and beverages to lower their sugar content.	Advocacy materials and interventions 5,000		
	2.1.4 Review the REPLACE technical package for elimination of trans fat reduction, and advocate for and implement at least three of the six areas of action,[231] integrating them into other NCD prevention and control strategies as appropriate.	MHW, NNCDC, NNC Consultations 5,000 Implementation 30,000	2021-23	PAHO/WHO
	2.1.5 Develop and disseminate messages promoting increased fruit and vegetable consumption using mass and social media.	MHW, NNC, MAFS Development and dissemination of mass and social media messages 30,000	2020-25	PAHO/WHO, FAO HSFB, HCC Youth groups
	2.1.6 Promote and support implementation of the national food-based dietary guidelines (FBDGs).[232]	MHW, NNC, MAFS FBDGs promotion and implementation 6,000	2020-25	FAO
	2.1.7 Collaborate with the MAFS to implement mechanisms for increased access to local fruits and vegetables, including through the annual Agrofest fair and the "buy local" campaign.	MHW, NNC, MAFS Implementation 20,000	2020-25	FAO
	2.1.8 Develop a local standard for interpretive 'high in' FoPWL, holding meetings with relevant stakeholders; consulting, sensitising, and educating the public; developing and submitting a Cabinet Paper; and, as needed, presenting evidence to	MHW, MFA, MAFS, Barbados National Standards Institute (BNSI), Department of Commerce and Consumer Affairs, NNC	2020-23	PAHO/WHO, FAO

[230] https://www.barbadoschamberofcommerce.com/.

[231] **Re**view dietary sources of industrially-produced trans fat and the landscape required for policy change; **P**romote the replacement of industrially-produced trans fat with healthier fats and oils; **L**egislate or enact regulatory actions to eliminate industrially-produced trans fat; **A**ssess and monitor trans fat content in the food supply and changes in trans fat consumption in the population; **C**reate awareness of the negative health impact of trans fat among policymakers, producers, suppliers and the public; Enforce compliance with policies and regulations.

[232] http://www.fao.org/3/I9680EN/i9680en.pdf.

OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	counter Industry arguments, aligning with Codex Alimentarius Commission standards,[233] and taking advantage of health-supporting exemptions tothe WTO Agreement on Technical Barriers to Trade[234] (TBT).	Meetings with stakeholders 5,000 Public consultations, sensitisation, education25,000		
	2.1.9 Advocate with the MFA and the MSBEC for the 'high in' FoPWL to be mandatory and enforceable; implement the standard and conduct monitoring of its fulfillment.	MHW, MFA, SBEC, BNSI, NNC Advocacy materials and interventions 5,000 Implementation and monitoring of standard 20,000	2020-23	PAHO/WHO
	2.1.10 Develop and implement strategies in nurseries, private practices, and workplacesto improve breastmilk acceptance,including training of nursery/day care owners and operators in both the private and public sector, and of private physicians.	MHW, BNSI Advocacy, support, and training 20,000	2020-22	Breastfeeding and Child Nutrition Foundation (BCNF) UNICEF, PAHO/WHO
	2.1.11 Explore and support expansion of the Baby-friendly Hospital Initiative[235] and exclusive breastfeeding for the first six months of life to private sector institutions, aligned with WHO guidelines.[236,237]	MHW, BNSI Advocacy and support 5,000	2020-22	BCNF UNICEF, PAHO/WHO
	2.1.12Promote breastfeeding benefits and the International Code of Marketing of Breast-milk Substitutes[238] and subsequent relevant WHA	MHW Mass media and social media promotion 25,000	2020-25	BCNF UNICEF, PAHO/WHO

[233] Thow AM, Jones A, Hawkes C, Ali I, Labonté R. Nutrition labelling is a trade policy issue: lessons from an analysis of specific trade concerns at the World Trade Organization. Health Promot Int 2018; 33(4): 561-571. https://doi.org/10.1093/heapro/daw109.

[234] https://www.wto.org/english/tratop_e/tbt_e/tbt_e.htm.

[235] https://www.who.int/nutrition/bfhi/en/.

[236] WHO. Guideline: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services. Geneva: WHO; 2017.https://bit.ly/2K6EjMx.

[237] WHO. Implementation guidance: protecting, promoting and supporting breastfeeding in facilities providing maternity and newborn services—the revised Baby-friendly Hospital Initiative. Geneva: WHO; 2018. https://apps.who.int/iris/bitstream/handle/10665/272943/9789241513807-eng.pdf?ua=1.

[238] https://www.who.int/nutrition/publications/code_english.pdf.

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	resolutions (The Code), including through annual observance of 'Breastfeeding Week'.			
	2.1.13 Assess implementation of The Code[239] and develop and implement selected strategies to fill the gaps.	MHW Code assessment 10,000 Interventions 20,000	2020-22	BCNF UNICEF, PAHO/WHO
	2.1.14Finalise and implementbreastfeeding workplace policy in the framework of the National Workplace Wellness Policy and the International Labour Organization (ILO) Maternity Protection Convention (No. 183).[240]	MHW, MLSP Consultant/meetings 5,000 Policy implementation 15,000	2020-21	BCNF UNICEF, PAHO/WHO
				Cost OPT 2.1: US$ 286,000
2.2 Implementation of strategies and interventionsfor **childhood obesity prevention** enhanced.	2.2.1 Advocate for and implement policy for restrictions on the sale and marketing of unhealthy commodities to children.	MHW, MSBEC Advocacy materials and interventions 5,000 Policy implementation 10,000	2020-21	HCC, HSFB, Barbados Coalition for COP (BCCOP), UNICEF, PAHO/WHO Youth groups
	2.2.2 Advocate for and implement a ban on the sale and marketing of SSBs in and around schools.	MHW, METVT Advocacy materials and interventions 8,000	2020	HCC, HSFB, BCCOP, Barbados Association of Retailers, Vendors, and Entrepreneurs (BARVEN), Youth groups UNICEF, PAHO/WHO
	2.2.3 Collaborate in the update, finalisation, dissemination, and implementation of nutrition guidelines specific to the school environment, including *Framework for Food and Nutrition Policy in Private and Public Nursery, Primary and Secondary Schools* (in draft) and *Guidelines for Canteen Concessionaires* (in draft), and in the implementation of other interventions targeting children, such as quizzes and competitions related to food, nutrition, and health.	MHW, METVT, NNC Finalisation and dissemination of guidelines 5,000 Implementation 20,000	2020-21	HSFB, BCCOP, BARVEN, Youth groups UNICEF, PAHO/WHO

[239] NetCode Toolkit. Monitoring the marketing of breast-milk substitutes: Protocol for periodic assessment. Geneva: WHO; 2017. https://bit.ly/34LXeUR.
[240] https://www.ilo.org/global/about-the-ilo/newsroom/news/WCMS_186325/lang--en/index.htm.

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	2.2.4 Advocate for and support the introduction of mandatory physical activity in schools.	METVT, MHW, Ministry of Creative Economy, Culture and Sports (MCCS) Advocacy materials and interventions 5,000	2020-21	Youth groups UNICEF, PAHO/WHO HSFB
	2.2.5 Advocate for and support improved access to potable water in schools, including the placement of water fountains.	METVT, MHW, Ministry of Energy and Water Resources (MEWR) Advocacy materials and interventions 10,000	2020-21	Barbados Muslim Association, HSFB, Youth groups UNICEF
	2.2.6 Review, update, and apply the Health and Family Life Education (HFLE) curriculum[241] and the Schools Positive Behaviour Management Programme[242] to, respectively,strengthen and include NCD risk reduction, focusing on healthy nutrition and regular physical activity; participate in CARICOM regional efforts to update the HFLE curriculum.	METVT, MHW Curriculum review, update, and application 10,000	2020-22	UNICEF, PAHO/WHO, CARICOM Secretariat, UWI, HSFB, Youth groups
				Cost OPT 2.2: US$ 73,000
3.1 Strategies and mechanisms implemented for increased **physical activity**.	3.1.1 Review and analyse the WHO ACTIVE technical package and implement interventions from at least three of the four policy action areas,[243] integrating them into other NCD prevention and control strategies as appropriate, and taking into consideration the vision and relevant principles of the Barbados Physical Development Plan 2017.[244]	MHW, NNCDC, NTFW, Town and Country Development Planning Office; MCCS; National Sports Council; MLSP Advocacy, analysis, and consultations 10,000 Implementation 25,000	2021-22	PAHO/WHO HSFB, Sports organisations, Gyms, Youth groups

[241] https://hivhealthclearinghouse.unesco.org/sites/default/files/resources/bie_hflecurriculum-regional.pdf.

[242] Marshall I et al. Monitoring the implementation of the SPBMP in Barbados. J Educ and Dev Caribbean. 2018; 17(1): 161-192. https://bit.ly/33A9mrU.

[243] **Active societies**—implement behaviour change communication campaigns and build workforce capacity to change social norms; **Active environments**—promote safe, well-maintained infrastructure, facilities and public open spaces that provide equitable access to places for walking, cycling and other physical activity; **Active people**—ensure access to opportunities, programmes, and services across multiple settings to engage people of all ages and abilities in regular physical activity; **Active systems**—strengthen leadership, governance, multi-sectoral partnerships, workforce, research, advocacy, and information systems to support effective coordinated policy implementation.

[244] http://www.townplanning.gov.bb/pdp/Overview/Vision.

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	3.1.2 Enhance the implementation of the 'Barbados Moves' and 'Get Women Moving' initiatives in communities and as part of Workplace Wellness initiatives.	MHW, NNCDC, NTFW MYCE, MCCS, MLSP Implementation 15,000	2020-25	PAHO/WHO HSFB, Sports organisations, Gyms, Youth groups
	3.1.3 Advocate for, and explore the feasibility of, creating space and opportunity for Cabinet members to take part in regular physical activity as a group, on their turf, guided by expert physical activity trainers, as an example to the people of Barbados; implement as indicated, at least monthly.	MHW, NNCDC, NTFW Prime Minister's Office (PMO) Cabinet Office Advocacy materials and interventions 5,000 Implementation 10,000	2020-25	Sports organisations, Gyms
				Cost OPT 3.1: US$ 65,000
4.1 Strategies and mechanisms implemented to reduce the **harmful use of alcohol**.	4.1.1 Undertake a public opinion poll to inform advocacy for the implementation of the five high-impact strategies of the WHO SAFER technical package for alcohol harm reduction.[245]	MHW Implementation of poll 20,000	2020-21	PAHO/WHO HSFB, HCC
	4.1.2 Based on the results of the public opinion poll, advocate with the MFEI, MIBP, and other relevant ministries, and collaborate with PAHO/WHO, to implement at least three of the five high-impact strategies for alcohol harm reduction, focusing on increased taxation, pricing policies, and enforcement of bans/comprehensive restrictions on alcohol advertising, sponsorship, and promotion, with integration into other NCD prevention and control strategies as appropriate.	MHW, NNCDC Advocacy materials and interventions 5,000 Implementation 25,000	2021-22	PAHO/WHO HCC Professional associations Youth groups Health-supporting private sector (PS)
	4.1.3 Collaborate with the Barbados Royal Police Force and the Ministry of Works and Maintenance (MTWM) to monitor the impact of breathalyser testing on alcohol-related road traffic injuries.	MHW, NNCDC Monitoring mechanisms 5,000	2020-25	PAHO/WHO HCC Health-supporting PS
	4.1.4 Develop and disseminate messages through mass	MHW, NNCDC, MTWM,	2020-25	HCC

[245] **S**trengthen restrictions on alcohol availability; **A**dvance and enforce drink driving counter measures; **F**acilitate access to screening, brief interventions, and treatment; **E**nforce bans/comprehensive restrictions on alcohol advertising, sponsorships, and promotion; **R**aise prices on alcohol through excise taxes and pricing policies.

OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	3.1.2 Enhance the implementation of the 'Barbados Moves' and 'Get Women Moving' initiatives in communities and as part of Workplace Wellness initiatives.	MHW, NNCDC, NTFW MYCE, MCCS, MLSP Implementation 15,000	2020-25	PAHO/WHO HSFB, Sports organisations, Gyms, Youth groups
	3.1.3 Advocate for, and explore the feasibility of, creating space and opportunity for Cabinet members to take part in regular physical activity as a group, on their turf, guided by expert physical activity trainers, as an example to the people of Barbados; implement as indicated, at least monthly.	MHW, NNCDC, NTFW Prime Minister's Office (PMO) Cabinet Office Advocacy materials and interventions 5,000 Implementation 10,000	2020-25	Sports organisations, Gyms
				Cost OPT 3.1: US$ 65,000
4.1 Strategies and mechanisms implemented to reduce the **harmful use of alcohol**.	4.1.1 Undertake a public opinion poll to inform advocacy for the implementation of the five high-impact strategies of the WHO SAFER technical package for alcohol harm reduction.[245]	MHW Implementation of poll 20,000	2020-21	PAHO/WHO HSFB, HCC
	4.1.2 Based on the results of the public opinion poll, advocate with the MFEI, MIBP, and other relevant ministries, and collaborate with PAHO/WHO, to implement at least three of the five high-impact strategies for alcohol harm reduction, focusing on increased taxation, pricing policies, and enforcement of bans/comprehensive restrictions on alcohol advertising, sponsorship, and promotion, with integration into other NCD prevention and control strategies as appropriate.	MHW, NNCDC Advocacy materials and interventions 5,000 Implementation 25,000	2021-22	PAHO/WHO HCC Professional associations Youth groups Health-supporting private sector (PS)
	4.1.3 Collaborate with the Barbados Royal Police Force and the Ministry of Works and Maintenance (MTWM) to monitor the impact of breathalyser testing on alcohol-related road traffic injuries.	MHW, NNCDC Monitoring mechanisms 5,000	2020-25	PAHO/WHO HCC Health-supporting PS
	4.1.4 Develop and disseminate messages through mass	MHW, NNCDC, MTWM,	2020-25	HCC

[245]**S**trengthen restrictions on alcohol availability; **A**dvance and enforce drink driving counter measures; **F**acilitate access to screening, brief interventions, and treatment; **E**nforce bans/comprehensive restrictions on alcohol advertising, sponsorships, and promotion; **R**aise prices on alcohol through excise taxes and pricing policies.

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	and social media to reduce the impact of marketing of alcoholic beverages, particularly on adolescents and youth, including annual observance of Caribbean Alcohol Reduction Day (CARD).	Ministry of Youth and Community Empowerment (MYCE) Media messages and CARD observation 20,000	Annually in November	PAHO/WHO, UNICEF Youth groups Health-supporting PS
	4.1.5 Establish a surveillance system to track alcohol-related morbidity and mortality, including in young people.	MHW, MTWM, BNR Expansion of BNR capability 25,000	2022-25	PAHO/WHO, UNICEF CARPHA Youth groups
				Cost of OPT 4.1: US$ 100,000
5.1 Interventions implemented to reduce **high blood pressure** and improve **screening** for, and **integrated management** of, CVD, diabetes, chronic respiratory diseases, and cancer at the first level of care, taking multi-morbidity into consideration.	5.1.1 Review and update protocols for the management of hypertension, exploring alignment with both the HEARTS technical package[246] and the United Kingdom National Institute of Care and Excellence (NICE) 2019 article[247] and infographic;[248] train relevant staff in all polyclinics in the application of the updated hypertension management protocol.	MHW Consultations 5,000 Training 20,000	2020-21	PAHO/WHO HSFB Professional associations Health-supporting PS
	5.1.2 Review the HEARTS technical package for CVD management, and implement at least five of the six elements,[249] integrating them into other NCD prevention and control strategies as appropriate.[250]	MHW Consultations and implementation costs included with Activity 5.1.1.	2020-21	PAHO/WHO HSFB Professional associations Health-supporting PS
	5.1.3 Review and update protocol for the management of Type 2 diabetes, aligned with the HEARTS technical package and including preventive foot care and, retinopathy screening; train relevant staff	MHW Consultations 5,000 Training 20,000	2020-21	PAHO/WHO BDF, DAB Professional associations Health-supporting PS

[246] The WHO Tool for the development of a consensus protocol for treatment of hypertension (2018) is available at https://bit.ly/2Cvzoki.

[247] Boffa RJ, Constanti M, Floyd CN, Wierzbicki AS on behalf of the Guideline Committee. Hypertension in adults: summary of updated NICE guidance. BMJ 2019; 367: I5310. https://doi.org/10.1136/bmj.l5310.

[248] https://www.bmj.com/content/367/bmj.l5310/infographic.

[249] **H**ealthy lifestyle—counselling on tobacco cessation, diet, physical activity, alcohol use, and self-care; **E**vidence-based treatment protocols—simple standardised algorithms for clinical care; **A**ccess to essential medicines and technology—access to a core set of affordable medicines and basic technology; **R**isk-based management—total cardiovascular assessment, treatment and referral; **T**eam care and task-sharing—decentralised, community-based and patient-centred care; **S**ystems for monitoring—patient data collection and programme evaluation.

[250] The HEARTS technical modules and Implementation Guide are available at https://bit.ly/36QyZGK.

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	in all polyclinics in the application of the updated protocol.			
	5.1.4 Review and update protocol for the management of chronic respiratory diseases—asthma and COPD; train relevant staff in all polyclinics and in the QEH Accident and Emergency Department in the application of the updated protocol.	MHW Consultations 5,000 Training 15,000	2021-22	PAHO/WHO Asthma Association of Barbados (AAB)
	5.1.5 Conduct cost analysis study regarding the introduction of seasonal influenza vaccine into protocols for management of Type 2 diabetes,at least for persons above 65 or under 16 years of age,and for COPD for persons above 65 years of age, to inform relevant decision-making.	MHW, BDS Cost analysis study 8,000	2020-21	PAHO/WHO DAB, BDF, AAB
	5.1.6 Update and widely disseminate evidence-based protocols for screening for breast, cervical, and colo-rectal cancers, emphasising high-risk and vulnerable groups, including a call-and-recall system based on the electronic medical records system, MedData.[251]	MHW Consultations 5,000 Protocol and system development 20,000	2022-24	PAHO/WHO BCS, CSS Professional associations Health-supporting PS
	5.1.7 Train relevant staff in all polyclinics in the application of the updated cancer screening protocols and offer the training to NGOs and private providers that offer screening services, including through medical and nursing professional associations.	MHW Training 25,000	2022-24	PAHO/WHO Professional associations Health-supporting PS
	5.1.8 Identify providers of mammography screening in the public and private sectors, and conduct a study to determine the number of women aged 50-69 years screened by mammography over the period 2015-2019.	MHW, BNR Study 8,000	2020	PAHO/WHO BCS, CSS Health-supporting PS
	5.1.9 Procure or produce, disseminate, and have available in all polyclinics printed and audiovisual	MHW Materials 5,000	2020-21	PAHO/WHO BCS, CSS

[251] Information on cancer screening is available from sites such as the National Cancer Institute https://www.cancer.gov/about-cancer/screening/screening-tests

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	information on prostate cancer and related screening, emphasising groups at higher risk of developing the disease.			Health-supporting PS
	5.1.10 Assess the availability of home- and non-QEH-based institutional palliative care, including for NCDs other than cancer, and develop strategies to address the gaps, including training of allied health professionals, community workers, and family members.	MHW Assessment 10,000 Implementation, including training 35,000	2024-25	PAHO/WHO BAPC, CSS, FBOs Professional associations Health-supporting PS
	5.1.11 Develop a standardised model for patient self-care/self-management, based on the five 'changes for improvement'[252] identified in the Institute for Healthcare Improvement's chronic care model; the three actions in the CARICOM CCM Policy and Model of Care;[253]and the Stanford University Chronic Disease Self-Management Programme (CDSMP),[254]emphasising aspects related to older persons and multi-morbidity.	MHW Consultant, consultations, development of model20,000	2024-25	PAHO/WHO HSFB, DAB, BDF, BCS, CSS Professional associations Health-supporting PS
	5.1.12 Support the implementation of the standardised model for patient self-care/self-management in all polyclinics and in other health facilities, including training of health care providers.	MHW Implementation 35,000	2024-25	PAHO/WHO HSFB, DAB, BDF, BCS, CSS
	5.1.13 Hold discussions with training institutions regarding curriculum revision for health and allied health professionals to improve management of NCDs at the first level of care, taking into consideration multi-morbidity and the needs of older persons and PLWNCDs; revise and implement	MHW, METVT, BCC Curriculum revision and implementation 20,000	2021-25	UWI, PAHO/WHO, Association of Caribbean Tertiary Institutions (ACTI)

[252] Train providers and other key staff on how to help patients with self-management goals; use self-management tools that are based on evidence of effectiveness; use group visit to support self-management set and document self-management goals collaboratively with patients; follow-up and monitor self-management goals.http://www.ihi.org/resources/Pages/Changes/SelfManagement.aspx.

[253] Emphasise the patient's central role in managing his/her health; use effective self-management support strategies that include goal setting, action planning, and problem solving; organise internal and community resource to provide ongoing self-management support to patients.https://bit.ly/2NOSoiE (page 10).

[254]https://www.selfmanagementresource.com/programs/small-group/chronic-disease-self-management/.

OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	the updated curricula.			
				Cost OPT 5.1: US$ 261,000
6.1 Strategies and mechanisms implemented to promote and strengthen **multi-sectoral work and partnerships**for NCD prevention and control.	6.1.1 Ensure collaboration among key ministries in implementing the National Workplace Wellness Policy; improving the school food environment; and improving access to healthy food.	NNCDC, MHW, MLSP, METVT, MAFS Consultations 5,000	2020-25	PAHO/WHO Professional associations Health-supporting PS
	6.1.2 Identify and analyse the top five policy priorities of the METVT, MAFS, and MYCE, to determine their health impact and areas of commonality with health; develop common objectives and collaborative strategies, including pooling of resources or resource mobilisation, to facilitate a HiAP approach and achieve co-benefits.	MHW, METVT, MAFS, MYCE Consultant, analysis, and development of HiAP plan 10,000	2021-22	PAHO/WHO, UN Subregional Team, UNIATF
	6.1.3 Advocate with the MLSP for NCD prevention and control to be a standing item on the agenda of the Social Partnership, aligned with Protocol VI of the Partnership, and collaborate in planning and executing interventions agreed with the Partnership.	MHW, NNCDC Meeting support 2,000 Implementation 5,000	2020	PAHO/WHO, UN Subregional Team, UNIATF
	6.1.4 Liaise with the Cabinet Sub-committee on NCDs to discuss and identify opportunities for advocacy to support policy development and resource mobilisation for NCD prevention and control.	MHW, NNCDC Meetings support 3,000	2020-25	PAHO/WHO, UN Subregional Team, UNIATF
	6.1.5 Build NNCDC and NWTF capacity, including in rights-based and HiAP approaches; management of CoI; principles of program planning, implementation, monitoring, and evaluation; and the priority areas of focus of the NSP-NCD 20-25.	MHW Training 10,000	2020-25	PAHO/WHO UN Subregional Team, UNIATF
	6.1.6 Identify opportunities and implement actions that provide greater visibility for the NNCDC and NWTF, and that showcase their work and achievements to key stakeholders, including the public.	MHW, NNCDC, NWTF, MIPB Promotion/public relations materials and venues 15,000	2020-25	PAHO/WHO, UN Subregional Team, UNIATF Health-supporting PS
	6.1.7 Identify NGOs to be involved in collaboration with	MHW, NNCDC	2021-22	PAHO/WHO, UN Subregional

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	the MHW for NCD prevention and control, develop a memorandum of understanding or other collaborative instrument with them, identify sources of funding and strategies for resource mobilisation, and establish a functioning NGO engagement mechanism in the MHW.	NGO engagement support 15,000		Team, UNIATF
	6.1.8 Explore partnerships, alliances, and resource mobilisation with the diaspora to support and execute NSP-NCD 20-25 activities through the "We Gatherin'" initiative taking place in Barbados in 2020.	MHW, MFA, NNCDC, NTWF (In-kind)		PAHO/WHO, UN Subregional Team, UNIATF HCC
				Cost OPT 6.1: US$ 65,000
7.1 Strategies and mechanisms implemented to improve **resource allocation and mobilisation** (financial and human resources) to strengthen the NCD programme and facilitate execution of the NSP-NCD 20-25.	7.1.1 Undertake evidence-based advocacy with the Cabinet Sub-committee on NCDs, including the use of information from the 2015 *Investment Case for NCD Prevention and Control in Barbados* and development of Green and White Papers for submission to Cabinet/Parliament, to justify and request increases in staffing in the NCD Unit and in allocation of financial resources to the MHW for the NCD programme.	MHW, NNCDC, MFEI, PMO Advocacy materials and interventions 5,000	2020-21	PAHO/WHO, UN Subregional Team, UNIATF CDB, IDB
	7.1.2 Develop and submit to appropriate funding agencies project proposals to support execution of the NSP-NCD 20-25, including to UNIATF for an FCTC needs assessment and other recommendations from the 2015 UNIATF Joint Mission; to UNDP for a follow-up study to the 2015 NCD Investment Case; to PAHO/WHO regarding strengthening IS4H; and to international financing institutions for other outputs of the NSP, obtaining buy-in and support from the Cabinet Sub-committee on NCDs where appropriate to add credence to the efforts.	MHW, NNCDC Development of project proposals 5,000	2020-24	PAHO/WHO, UN Subregional Team, UNIATF CDB, IDB
	7.1.3 Explore opportunities, and develop and submit	MHW, NNCDC, MAFS	2020-24	PAHO/WHO, UN Subregional

OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	proposals for funding to the Green Climate Fund,[255] addressing the impact of climate change on NCDs, in collaboration with the Cabinet Sub-committee on NCDs, and/or MAFS and/or MEWR, in the frameworks of the WHO Special Initiative on Climate Change and Health in SIDS[256] and the related Caribbean Action Plan on Health and Climate Change.[257]	Development of project proposals 5,000		Team, UNIATF CDB, IDB
				Cost OPT 7.1: US$ 15,000
8.1**Communication strategies** developed and implemented to promote the NSP-NCD 20-25 and enable NCD risk factor reduction and improved management of NCDs.	8.1.1 Develop and implement mass media and social media campaigns related to the main NCD risk factors, management of the major NCDs, and the specific outcomes and outputs of the NSP-NCD 20-25, ensuring the appropriate involvement of children and youth, especially for COP, and of PLWNCDs.	MHW, MIBP, NNCDC Mass and social media campaigns 100,000	2020-25	HCC, Youth groups, HSFB, DAB, BDF, BCS, CSS, FBOs Health-supporting PS
	8.1.2 Develop and disseminate, including electronically, a summary brochure of the NSP-NCD 20-25 to promote the NSP and facilitate advocacy and resource mobilisation; undertake an official launch of the NSP; and ensure that both the summary brochure and the NSP itself are posted on the MHW website.	MHW, NNCDC, Cabinet Sub-committee on NCDs Brochure development and printing 8,000 Launch of the NSP 3,000	2020	PAHO/WHO
	8.1.3 Conduct high-level advocacy nationally, regionally, and internationally to promote the NSP-NCD 20-25 and facilitate resource mobilisation.	MHW, NNCDC, Ministry of Foreign Affairs and Foreign Trade (MFA) Support for advocacy interventions 8,000	2020-24	PAHO/WHO, UNICEF, UNDP, UN subregional Team, UNIATF HCC, NGOs
	8.1.4 Promote and encourage the development of CSO coalitions, including of youth and PLWNCDs, to advocate for NCD prevention and control, and the	MHW, NNCDC, METVT Support for coalitions/advocacy 10,000	2020-21	HSFB, HCC, NGOs

[255] https://www.greenclimate.fund/home.
[256] https://www.who.int/globalchange/sids-initiative/180612_global_initiative_sids_clean_v2.pdf?ua=1;.
[257] http://iris.paho.org/xmlui/bitstream/handle/123456789/38566/PAHOCDE19007_eng.pdf?sequence=19.

OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	execution of the NSP-NCD 20-25.			
	8.1.5 Observe Caribbean Wellness Day annually, involving sectors other than health, civil society, and the health-supporting private sector.	MHW CWD observance 75,000	2020-25 annually	HCC, HSFB, DAB, BDF, BCS, CSS, BCCI PAHO/WHO, CARPHA
				Cost OPT 8.1: US$ 204,000
9.1 Strategies and mechanisms implemented to strengthen NCD **surveillance and research**, including assessment of multi-morbidity.	9.1.1 Develop a framework outlining legislative needs and key information needed for more comprehensive NCD surveillance and research to monitor trends and multi-morbidities in NCD prevention and control, track outcomes of the NSP-NCD 20-25, and facilitate international reporting, identifying critical surveys/studies, timelines, sources, and actors and resources.	MHW, NNCDC Framework development 5,000	2020	PAHO/WHO, CARPHA
	9.1.2 Conduct GYTS, GSHS, HoTNS/STEPS, and follow-up to the 2015 *Investment Case for NCD Prevention and Control*, ensuring the inclusion of the use of e-cigarettes/vaping in the surveys,and produce and publish reports on the results within a year of completion of data collection, as well as annual BNR reports on trends in CVD, diabetes, and cancer.	MHW, GA-CDRC, BNR Implementation and reporting on surveys/studies 150,000	2020-25	PAHO/WHO, CARPHA
	9.1.3 Ensure disaggregation of data by key variables—at minimum age, sex, ethnicity, geographic location, and socioeconomic status—to facilitate identification of inequities and gaps, and development of strategies to address them.	MHW, GA-CDRC, BNR System adjustments for additional analysis 5,000	2020-25	PAHO/WHO, CARPHA
	9.1.4 Assess the functioning of the electronic medical record system (MedData) in the polyclinics and support the implementation of all modules in all polyclinics, with timely data collection, analysis, and use of information for decision-making.	MHW, GA-CDRC, BNR Assessment and expansion 30,000	2021-23	PAHO/WHO, CARPHA
	9.1.5 Hold discussions with the Barbados Association of Medical Practitioners (BAMP), other groupings of private health care providers, and private hospitals	MHW, GA-CDRC, BNR Meeting costs 5,000	2020-21	PAHO/WHO, CARPHA

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OPTs/ERs	Main activities	Inputs/estimated resources (US$)	Indicative timelines	Proposed partners
	regarding their inclusion in the use of MedData.			
	9.1.6 Analyse data, and prepare and disseminate reports from MedData twice annually to contribute to monitoring, evaluation, and planning/adjustment of NCD-related interventions.	MHW, GA-CDRC, BNR Data analysis, report preparation and dissemination 10,000	2021-25	PAHO/WHO, CARPHA
	9.1.7 Facilitate training of selected personnel from the MHW Planning and Research Unit and the BNR in extraction of raw data from MedData to facilitate monitoring of HEARTS implementation.	MHW Training 10,000	2020-21	PAHO/WHO, CARPHA
				Cost OPT 9.1: US$ 215,000
10.1 Strategies and mechanisms strengthened for the efficient and effective **management,monitoring, and evaluation** of the NCD programme and the NSP-NCD 20-25.	10.1.1 Develop and execute annual costed Implementation Plans for the NSP-NCD 20-25.	MHW, NNCDC (In-kind)	2020-24	PAHO/WHO
	10.1.2 Monitor programmatic and financial execution of the Implementation Plans, producing summary reports six-monthly for dissemination to the Cabinet Sub-committee on NCD and to allow adjustments to execution as needed.	MHW, NNCDC (In kind)	2020-25	PAHO/WHO
	10.1.3 Develop and disseminate annual reports on the execution of the NSP-NCD 20-25 to key stakeholders across sectors.	MHW, NNCDC Production, publication, dissemination of reports 10,000	2020-25	PAHO/WHO
	10.1.4 Ensure final evaluation of the implementation of the NSP-NCD 20-25, both internal and external, with identification of successes/achievements, challenges/gaps, and lessons learned, to inform the next strategic planning cycle for NCD prevention and control, and international reporting; publish results of evaluation.	MHW, NNCDC External evaluation, production and publication of report 50,000	2025	PAHO/WHO
				Cost OPT 10.1: US$60,000
		Total cost of OPTs/ERs		***US$ 1,396,000***

The total estimated budget for the NSP-NCD 20-25 is US$ 1,396,000 (approximately Bds$ 2,792,000)—this figure excludes staff salaries; infrastructure development and maintenance; procurement of essential medicines, supplies, and technologies;and other in-kind costs.

The distribution of the estimated budget by output is summarised in **Annex 9**, and underscores the GoB's and MHW's focus on risk factor reduction (41.3% of the budget) and improved detection and management of NCDs (18.7%). The outputs addressing communication, and surveillance and research, account for, respectively, 14.6% and 15.4% of the estimated budget, with the other outputs accounting for smaller proportions.

8. Implementation Strategies

Key strategies for the successful implementation of the NSP-NCD 20-25 include:

- **Taking advantage of national high-level multi-sectoral structures** such as the Cabinet Sub-committee on NCDs and the Social Partnership to advance the WoG, WoS, HiAP approaches that are critical for NCD reduction. Involvement of these structures enableseffective utilisation of the strengths of civil society and the private sector, while managing possible CoI; drives advocacy, decision-making, and policy development; fosters interaction with international development agencies; and facilitates resource allocation and mobilisation.
- **Convening key government sectors** to make a case for networking and joint action, discuss the respective needs and constraints, and create a shared language for decision-making;[258] show the co-benefits of joint action to achieve sectoral objectives; demonstrate Health's added value; and identify the impact on health—positive or negative—of policies and actions in other sectors.
- **Strengthening engagement with public and private health care providers**, especially through their various groupings, including professional associations.
- **Using key global and regional declarations, agreements, and mandates** to frame national responses to NCDs; make greater use of fiscal measures to support health; and demonstrate Barbados' commitment to the health of its people, sustainable national development, and fulfillment of its role as an important regional and international voice for equity.
- **Strengthening communication**, utilising advances in information and communication technology to improve health literacy, promote the Strategic Plan,and facilitate its use as a reference by key stakeholders for their relevant planning, activities, and resource allocation and mobilisation.
- **Ensuring greater use of the settings approach**, particularly schools and workplaces, with school health policy development, and the implementation of the National Workplace Wellness Policy.
- **Enhancing involvement of, and collaboration with, civil society, including youth and PLWNCDs** in advocacy, policy development, and other NCD prevention and control interventions.
- **Fostering involvement of, and collaboration with, the private sector**, focusing on the health-promoting private sector, and identifying and managing CoI.
- **Strengthening IS4H**, including more active participation in the PAHO IS4H initiative and the use of data disaggregated by at least age, sex, ethnicity, geographic location, and socio-economic status to identify groups in conditions of vulnerability.
- **Enhancing resource mobilisation**, both financial and human, taking advantage of support provided by, and available from, regional and international technical cooperation agencies and other development partners, including those based in Barbados, such as UN agencies and regional and international financing institutions.
- **Improvinghuman resources capacity and functioning**, especially in leadership and oversight structures, and at the first level of care, with more efficient functioning of those whose capacity has been built and taking advantage of virtual platforms for cost-efficiency.
- **Ensuring monitoring, evaluation, and accountability** for outputs/expected results and outcomes, and for resources allocated and mobilised.

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[258] Robert Wood Johnson Foundation. Health Impact Assessment: A Tool for Promoting the Health-in-All-Policies Approach. Issue Brief, May 2011.https://rwjf.ws/2q098Mb.

9. Risk Analysis and Risk Mitigation Strategies

Table 12 below lists the main risks to successful NSP-NCD 20-25 execution and strategies to prevent or mitigate them, based on key stakeholder input and the assumptions in Table 8.

Table 12. Main risks and risk mitigation strategies

<table>
<tr><th>Main risks</th><th>Risk mitigation strategies</th></tr>
<tr><td>1. “Policy inertia”, described by The Lancet journal as “thecollective effects of inadequate political leadership andgovernance to enact policies to respond to the GlobalSyndemic (of obesity, undernutrition, and climate change); strong opposition to those policies bypowerful commercial interests; and a lack of demandfor policy action by the public.”[259]</td><td rowspan="2">• Intensify high-level advocacy, presenting evidence to policymakers and involving the public, youth, and PLWNCDs, to strengthen their voices and the demand for creation of supportive environments for NCD prevention and control through relevant policy development and implementation.
• Increase activities and visibility of NCD champions, taking advantage of the publicly stated intent of the Prime Minister, Minister of Health and Wellness, and Minister of Education, Technical and Vocational Training, to “walk the talk” regarding NCD prevention and control.
• Continue advocacy with key stakeholders, including the public and health-promoting private sector to change attitudes, beliefs, and behaviour, and shift cultural norms and standards towards healthier options.
• Take advantage of Barbados’ leadership of CARICOM for the period January-June 2020 to advocate for evidence-based policies for NCD reduction.</td></tr>
<tr><td>2. Inadequate measures to counter Industry interference in interventions for healthy nutrition and tobacco control.</td></tr>
<tr><td>3. Reduction in political will to address NCDs for various reasons, including shifts in attention and resources to deal with national crises, including emergencies and disasters.</td><td>• Sensitise political stakeholders across all sectors using evidence-based information, strategies, and interventions.
• Ensure sustained functioning of the NNCDC and accountability mechanisms.
• Ensure evidence-based planning, implementation, monitoring, and evaluation for NCD prevention and control that keeps policymakers “in the loop”.</td></tr>
<tr><td>4. Limited financial resources</td><td>• Encourage and advocate for increases in resource</td></tr>
</table>

[259] Swinburn BA, Kraak VI, Allender S, et al. The Global Syndemic of obesity, undernutrition, and climate change: The Lancet Commission report. Lancet 2019; 393: 791-846. https://bit.ly/2LrgNLY.

Main risks	Risk mitigation strategies
	allocation within a results-based management framework, demonstrate cost-efficiency, cost-effectiveness, and value for money. • Strengthen capacity of health and other sectors to develop project proposals and undertake resource mobilisation in the framework of the NSP-NCD 20-25 and international mandates and agreements. • Collaborate with other ministries to identify co-benefits and undertake joint resource mobilisation.
5. Limited human resources	• Expandcollaboration with CSOs, including NGOs, faith-based organisations, and academia. • Explore and implement, to the extent feasible, task-shifting, including increased utilisation of allied health professionals and training community workers in advocacy and in carrying out appropriate tasks for NCD prevention and control at the first level of care. • Take advantage of needed expertise available through ministries other than health, through secondments and other mutually agreed mechanisms. • Recruit part-time personnel and volunteers as appropriate, and continue to tap into technical expertise available through regional and international agencies such as CARICOM, CARPHA, PAHO/WHO, and other UN agencies. • Include human resources—short- and/or medium-term—in resource mobilisation proposals.
6. Limited intersectoral work, with perceptions of NCDs as being a health issue only.	• Intensify high-level advocacy and dialogue to demonstrate the tangible benefits of NCD prevention and control not only on health, but also on productivity, the economy, and sustainable development through the use of investment cases. • Strengthen the awareness of all sectors on the co-benefits of the HiAP approach and joint actions, and build capacity for use of health impact assessments in policy development.
7. Inadequate promotion and awareness of the NSP-NCD 20-25, its implementation, and M&E results.	• Ensure provision of adequate resources to launch the Plan early in 2020, making it a feature of the "We Gatherin'" initiative and other such events throughout the year; promote it widely; and disseminate the results of M&E using a variety of media, requesting technical cooperation in doing so if needed, including from PAHO/WHO.

Monitoring, Evaluation and Accountability Framework

The M&E and accountability framework provides the basis for the development of an M&E and accountability plan, aligned with output/expected result 10.1 in Tables 10 and 11 above. The MHW is the main entity accountable for execution of the NSP-NCD 20-25, with operational oversight by the SMOH-NCDs and the NCD Unit; technical oversight by the SMOH-NCDs and the CMO; and administrative oversight by the Permanent Secretary. Advisory oversight is provided by the NNCDC,withpolicy and political oversight by the Minister of Health and Wellness, who keeps the Cabinet Sub-committee on NCDs informed and ultimately reports to the Prime Minister.

The CMO and SMOH-NCDs are ex-officio members of the NNCDC, enabling strong links between the MHW and the NNCDC, and facilitating partnerships and shared responsibility for NCD prevention and control among sectors, on behalf of the GoB.

The objectives (goal, purpose/overall outcome, specific outcomes, outputs/expected results), and their targets, indicators, activities, inputs/estimated resources, indicative timelines, and proposed partners in the Logical Framework Matrices for the NSP-NCD 20-25—Tables10 and 11—provide the M&E and accountability framework for the Plan.

The means of verification provide the sources of information for corroborationof the indicators, and the assumptions suggest the factors that should hold true for the higher level objectives in the matrix to be achieved. Specific outcome 10 and output/expected result 10.1 outline the development, frequency, and dissemination of progress reports, suggesting the types of reports to be produced, their contents, and their dissemination, while the summary of the main activities, inputs/estimated resources (the total of which provides an estimated budget), and indicative timelines for their completion facilitate the development of implementation plans and the tracking of both programmatic and financial execution.

It will be critical for the assumptions and risks identified in, respectively, Tables 10 and 12 to be monitored,and risk mitigation strategies implemented as needed to ensure achievement of the outputs and specific outcomes. Documentation, key stakeholder participation, communication, and dissemination of the M&E reports are emphasised.

The M&E andaccountability framework anticipates the next strategic planning cycle, which should build on the successes/achievements and lessons learned during the implementation of the NSP-NCD 20-25, address challenges/gaps, and take into considerationchanges in the NCD situation, as well as new, innovative, and evidence-based strategies for NCD prevention and control.

Annex 1: Bibliography

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Annex 2: Who Best Buys and Other Recommended Interventions for NCD Prevention and Control, Including Non-Financial Considerations[263]

Risk factor/Disease to be addressed	Best Buys and Effective/Other Recommended Interventions		Detailed description	Non-financial considerations
REDUCE TOBACCO USE	Best Buys	Tax	• Increase excise taxes and prices on tobacco products	• Best Buys 2-5 require capacity for implementing and enforcing regulation and legislation
		Packaging	• Implement plain/standardized packaging and/or large graphic health warnings on all tobacco packages	
		Advertising, promotion, and sponsorship	• Enact and enforce comprehensive bans on tobacco advertising, promotion and sponsorship	
		Smoke-free public places	• Eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places, public transport	
		Education	• Implement effective mass media campaigns that educate the public about the harms of smoking/tobacco use and second hand smoke	
	Effective interventions	Support	• Provide cost-covered, effective and population-wide support (including brief advice, national toll-free quit line services) for tobacco cessation to all those who want to quit	• Requires sufficient trained providers and a better functioning health system
	Other recommended interventions from WHO guidance	Trade	• Implement measures to minimize illicit trade in tobacco products	-
		Advertising	• Ban cross-border advertising, including using modern means of communication	-
		Support	• Provide mobile phone based tobacco cessation services for all those who want to quit	-
REDUCE HARMFUL USE OF ALCOHOL	Best Buys	Tax	• Increase excise taxes on alcoholic beverages	• Increase in excise taxes requires an effective system for tax administration and should be combined with efforts to prevent tax avoidance and tax evasion
		Advertising	• Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media)	• Requires capacity for implementing and

Risk factor/Disease to be addressed	Best Buys and Effective/Other Recommended Interventions		Detailed description	Non-financial considerations
		Availability	• Enact and enforce restrictions on the physical availability of retailed alcohol (via reduced hours of sale)	enforcing regulations and legislation • Formal controls on sale need to be complemented by actions addressing illicit or informally produced alcohol
	Effective interventions	Legislation and enforcement	• Enact and enforce drink-driving laws and blood alcohol concentration limits via sobriety checkpoints	• Requires allocation of sufficient human resources and equipment • Requires trained providers at all levels of health care
		Counselling	• Provide brief psychosocial intervention for persons with hazardous and harmful alcohol use	
	Other recommended interventions from WHO guidance	Pricing	• Carry out regular reviews of prices in relation to level of inflation and income	-
			• Establish minimum prices for alcohol where applicable	
		Age and outlet restrictions	• Enact and enforce an appropriate minimum age for purchase or consumption of alcoholic beverages and reduce density of retail outlets	
		Promotion and sponsorship	• Restrict or ban promotions of alcoholic beverages in connection with sponsorships and activities targeting young people	
		Prevention, treatment, and care	• Provide prevention, treatment and care for alcohol use disorders and comorbid conditions in health and social services	
		Education	• Provide consumer information about, and label, alcoholic beverages to indicate, the harm related to alcohol	
REDUCE UNHEALTHY DIET	Best Buys	Reformulation of foods	• Reduce salt intake through the reformulation of food products to contain less salt and the setting of target levels for the amount of salt in foods and meals	• Requires multi-sectoral actions with relevant ministries and support by civil society
		Provision of supportive environments	• Reduce salt intake through the establishment of a supportive environment in public institutions such as hospitals, schools, workplaces and nursing homes, to enable lower sodium options to be provided	-
		Education	• Reduce salt intake through a behaviour change communication and mass media campaign	-
		Packaging	• Reduce salt intake through the implementation of front- of-pack	• Regulatory capacity along

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Risk factor/Disease to be addressed	Best Buys and Effective/Other Recommended Interventions		Detailed description	Non-financial considerations
			labelling	with multi-sectoral action is needed
	Effective interventions	Legislation	• Eliminate industrial trans-fats through the development of legislation to ban their use in the food chain	• Regulatory capacity along with multi-sectoral action is needed
		Tax	• Reduce sugar consumption through effective taxation on sugar-sweetened beverages	-
	Other recommended interventions from WHO guidance	Promotion	• Promote and support exclusive breastfeeding for the first 6 months of life, including promotion of breastfeeding	-
		Pricing	• Implement subsidies to increase the intake of fruits and vegetables	
		Reformulation of food, policies	• Replace trans-fats and saturated fats with unsaturated fats through reformulation, labelling, fiscal policies or agricultural policies	
		Packaging, portion size	• Limit portion and package size to reduce energy intake and the risk of overweight/obesity	
		Education	• Implement nutrition education and counselling in different settings (for example, in preschools, schools, workplaces and hospitals) to increase the intake of fruits and vegetables	
		Labelling	• Implement nutrition labelling to reduce total energy intake (kcal), sugars, sodium and fats	
		Education	• Implement mass media campaign on healthy diets, including social marketing to reduce the intake of total fat, saturated fats, sugars and salt, and promote the intake of fruits and vegetables	
Reduce physical inactivity	Best Buys	Education	• Implement community wide public education and awareness campaign for physical activity which includes a mass media campaign combined with other community based education, motivational and environmentalprogrammes aimed at supporting behavioural change of physical activity levels[264]	-
	Effective interventions	Counselling and referral	• Provide physical activity counselling and referral as part of routine primary health care services through the use of a brief	• Requires sufficient, trained capacity in primary care

[264] The wording has been updated from document A70/27 to fully align with the technical briefing entitled "Physical inactivity interventions for the Appendix 3 of the WHO Global NCD Action Plan", which was madeavailable to Member States on 24 April 2017 as part of WHO's effort to provide additional technical briefingson the evidence underlying the Best Buys and other recommended interventions (see http://www.who.int/ncds/governance/appendix3-update/en/)

Risk factor/Disease to be addressed	Best Buys and Effective/Other Recommended Interventions		Detailed description	Non-financial considerations
			intervention	
	Other recommended interventions from WHO guidance	Supportive environments	• Ensure that macro-level urban design incorporates the core elements of residential density, connected street networks that include sidewalks, easy access to a diversity of destinations and access to public transport	• Requires involvement and capacity of other sectors apart from health
			• Implement whole-of-school programme that includes quality physical education, availability of adequate facilities and programs to support physical activity for all children	-
			• Provide convenient and safe access to quality public open space and adequate infrastructure to support walking and cycling	-
			• Implement multi-component workplace physical activity programmes	-
		Promotion	• Promote physical activity through organized sport groups and clubs, programmes and events	-
MANAGE CARDIOVASCULAR DISEASE AND DIABETES	Best Buys	Drug therapy and counselling	• Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk[265] approach) and counselling to individuals who have had a heart attack or stroke and to persons with high risk (≥ 30%) of a fatal and non-fatal cardiovascular event in the next 10 years ○ 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 strokeand to persons with moderate to high risk (≥ 20%) of a fatal and non-fatal cardiovascular event in the next 10 years	• Feasible in all resource settings, including by non-physician health workers • Applying lower risk threshold increases health gain but also increases implementation cost
	Effective interventions	Drug therapy	• Treatment of new cases of acute myocardial infarction[266] with either: acetylsalicylic acid, or acetylsalicylic acid and clopidogrel, or thrombolysis, or primary percutaneous coronary interventions (PCI)18 ○ Treatment of new cases of acute myocardial infarction with aspirin, initially treated in a hospital setting with follow up carried out through PHC facilities at a 95% coverage rate	• Selection of option depends on health system capacity

[265] Total risk is defined as the probability of an individual experiencing a cardiovascular disease event (forexample, myocardial infarction or stroke) over a given period of time, for example 10 years.
[266] Costing assumes hospital care in all scenarios.

Risk factor/Disease to be addressed	Best Buys and Effective/Other Recommended Interventions		Detailed description	Non-financial considerations
			○ Treatment of new cases of acute myocardial infarction with aspirin and thrombolysis, initially treated in a hospital setting with follow up carried out through PHC facilities at a 95% coverage rate ○ Treatment of new cases of myocardial infarction with primary percutaneous coronary interventions (PCI), aspirin and clopidogrel, initially treated in a hospital setting with follow up carried out through PHC facilities at a 95% coverage rate	
		Drug therapy	• Treatment of acute ischemic stroke with intravenous thrombolytic therapy	• Needs capacity to diagnose ischaemic stroke
		Primary prevention	• Primary prevention of rheumatic fever and rheumatic heart diseases by increasing appropriate treatment of streptococcal pharyngitis at the primary care level	• Depending on prevalence in specific countries or sub-populations
		Secondary prevention	• Secondary prevention of rheumatic fever and rheumatic heart disease by developing a register of patients who receive regular prophylactic penicillin	
	Other recommended interventions from WHO guidance	Treatment	• Treatment of congestive cardiac failure with angiotensin converting- enzyme inhibitor, beta-blocker and diuretic	-
		Rehabilitation	• Cardiac rehabilitation post myocardial infarction	
		Treatment	• Anticoagulation for medium-and high-risk non-valvular atrial fibrillation and for mitral stenosis with atrial fibrillation	
		Treatment	• Low-dose acetylsalicylic acid for ischemic stroke	
		Rehabilitation	• Care of acute stroke and rehabilitation in stroke units	
MANAGE DIABETES	Effective interventions	Preventive measures	• Preventive foot care for people with diabetes (including educational programmes, access to appropriate footwear, multi-disciplinary clinics)	• Requires systems for patient recall
		Screening	• Diabetic retinopathy screening for all diabetes patients and laser photocoagulation for prevention of blindness	
		Control and monitoring	• Effective glycaemic control for people with diabetes, along with standard home glucose monitoring for people treated with insulin to reduce diabetes complications	
	Other recommended interventions	Prevention	• Lifestyle interventions for preventing type 2 diabetes	-
		Prevention	• Influenza vaccination for patients with diabetes	
		Education and	• Preconception care among women of reproductive age whohave	

Risk factor/Disease to be addressed	Best Buys and Effective/Other Recommended Interventions		Detailed description	Non-financial considerations
	from WHO guidance	management	diabetes including patient education and intensiveglucose management	
		Screening	• Screening of people with diabetes for proteinuria and treatment with angiotensin-converting-enzyme inhibitor forthe prevention and delay of renal disease	
MANAGE CANCER	Best Buys	Vaccination	• Vaccination against human papillomavirus (2 doses) of 9–13 year old girls	
		Screening	• Prevention of cervical cancer by screening women aged 30–49 years, either through: ○ Visual inspection with acetic acid linked with timely treatment of pre-cancerous lesions ○ Pap smear (cervical cytology) every 3–5 years linked with timely treatment of pre-cancerous lesions ○ Human papillomavirus test every 5 years linked with timely treatment of pre-cancerous lesions	• Visual inspection with acetic acid is feasible in low resource settings, including with non-physician healthworkers • Pap smear requires cytopathology capacity • HPV test requires systems for organized, population-based screening and quality control
	Effective interventions	Screening	• Screening with mammography (once every 2 years for women aged 50-69 years) linked with timely diagnosis and treatment of breast cancer	• Requires systems for organized, population-based screening and quality control
		Treatment	• Treatment of colorectal cancer stages I and II with surgery +/- chemotherapy and radiotherapy	-
			• Treatment of cervical cancer stages I and II with either surgery or radiotherapy +/- chemotherapy	
			• Treatment of breast cancer stages I and II with surgery +/- systemic therapy	
		Palliation	• Basic palliative care for cancer: home-based and hospital care with multi-disciplinary team and access to opiates and essential supportive medicine	• Requires access to controlled medicines for pain relief
	Other recommended interventions from WHO	Prevention	• Prevention of liver cancer through hepatitis B immunization	-
		Screening	• Oral cancer screening in high-risk groups (for example, tobacco users, betel-nut chewers) linked with timely treatment	
			• Population-based colo-rectal cancer screening, including through	

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Risk factor/Disease to be addressed	Best Buys and Effective/Other Recommended Interventions		Detailed description	Non-financial considerations
	guidance		a faecal occult blood test, as appropriate, at age >50, linked with timely treatment	
MANAGE CHRONIC RESPIRATORY DISEASES	Effective interventions	Relief of symptoms	• Symptom relief for patients with asthma with inhaled salbutamol	-
			• Symptom relief for patients with chronic obstructive pulmonary disease with inhaled salbutamol	
		Treatment	• Treatment of asthma using low dose inhaled beclomethasone and short-acting beta agonist	
	Other recommended interventions from WHO guidance	Prevention	• Access to improved stoves and cleaner fuels to reduce indoor air pollution	-
			• Cost-effective interventions to prevent occupational lung diseases, for example, from exposure to silica, asbestos	
			• Influenza vaccination for patients with chronic obstructive pulmonary disease	

Annex 3: Survey Instrument/Interview Guide for Key Stakeholder Input

DEVELOPMENT OF BARBADOS NATIONAL NCD STRATEGIC PLAN 2020-2025

Introduction

As part of the Barbados Ministry of Health and Wellness' preparation of the Barbados Strategic Plan for the Prevention and Control of Non-communicable Diseases (NCDs) 2020-2025 (NSP-NCD 20-25) on behalf of the Government of Barbados, a qualitative assessment is being conducted among key stakeholders of the extent to which the main strategies and objectives/ expected results of the Barbados NCD Strategic Plan 2015-2019 (SP-NCD 15-19) were achieved. The SP-NCD 15-19 had four strategies:

1. Strengthening strategic management;
2. Surveillance and research;
3. Risk factor reduction; and
4. Integrated disease management and patient education.

Stakeholders are also being asked to provide inputs that will be invaluable in informing the development of the NSP-NCD 20-25:

- Information on past, current, and planned major projects and activities for NCD prevention and control, to get a sense of how they have been contributing to NCD reduction, and possible roles they may play in the planning, implementation, monitoring, and evaluation of the NSP-NCD 20-25;
- Their perspectives on major successes/achievements over the period 2015-2019;
- Major challenges and gaps over the period of the SP-NCD 15-19;
- Lessons learned;
- Strengths and weaknesses of, opportunities for, and threats to (SWOT analysis) the national NCD prevention and control programme; and
- Their suggestions/recommendations on priorities/themes for inclusion in the NSP-NCD 20-25.

Methodology

Section I contains a matrix summarising the main strategies and relevant objectives (OBJs)/expected results (ERs) of the SP-NCD 15-19. Stakeholders are asked to provide their perspectives on the extent to which the OBJs/ERs have been achieved (fully, partially, not, don't know, using a tick (✓) or an "x" in the appropriate box, and provide related comments, including past, current, or planned projects and major activities relating to the respective OBJ/ER. **Focus should be on the OBJs/ERs most relevant to the stakeholder's main area(s) or scope of work, but responses may be provided for other areas, as the stakeholder sees fit.**

Sections II, III, and IV determine, respectively, major successes/achievements, challenges/gaps, and lessons learned; **Section V** requests a SWOT analysis of the NCD prevention and control programme in Barbados; and **Section VI** seeks to obtain the stakeholders' views on priorities/themes for inclusion in the NSP-NCD 20-25.

NOTE: INFORMATION PROVIDED WILL BE REPORTED ANONYMOUSLY.

NAME OF PERSON COMPLETING TOOL ______________________ **NAME OF ENTITY** ______________________

SECTION I – Qualitative assessment of SP-NCD 15-19

OBJs/ERs	Level of achievement				Comments, including past, current, and planned projects/major activities
	Fully	Partially	Not	Don't know	
Strategy 1: Strengthening strategic management					
1.1 Governance and administration of NCD programmes improved.					•
1.2 Financial resources sufficient to address priority health needs identified.					•
1.3 Human resources adequate for multi-sectoral NCD response identified.					•
Strategy 2: Surveillance and research					
2.1 Morbidity and mortality rates from NCDs reduced.					•
2.2 Access to reliable and accurate data on NCDs increased, including data from the private sector.					•
2.3 Information on NCD risk factors and burden of disease available and utilized for planning and evaluation.					•
2.4 Surveillance capacity of the MoH enhanced.					•
2.5 Research initiatives implemented to assess disease burden, risk factors, and determinants of chronic diseases.					•
Strategy 3: Risk factor reduction					
3.1 FCTC[267] compliant legislation enacted and enforced.					•
3.2 Strategies to reduce the harmful use of alcohol supported.					•
3.3 Food security and healthy eating promoted.					•
3.4 Healthy products provided and promoted by food manufacturers					•

OBJs/ERs	Level of achievement				Comments, including past, current, and planned projects/major activities
	Fully	Partially	Not	Don't know	
3.5 Support for population-based salt reduction increased.					•
3.6 Trans-fat in food supply eliminated.					•
3.7 High fat content foods reduced.					•
3.8 Daily consumption of fruits and vegetables increased.					•
3.9 Community and population initiatives to promote physical activity and exercise supported.					•
3.10 Building capacity with media and other partners to promote healthy lifestyles.					•
3.11 School-based prevention initiatives facilitated and promoted.					•
3.12 Health Promoting Schools programme implemented.					•
3.13 Workplace wellness programmes supported and embraced.					•
3.14 Faith-based organizations and communities (involved in health promotion programmes).					•
Strategy 4: Integrated disease management and patient education					
4.1 Patient education enhanced.					•
4.2 Effective, integrated management for all chronic diseases enhanced.					•
4.3 Clinical quality of care for chronic diseases enhanced.					•
4.4 Screening and early detection enhanced.					•
4.5 Priority cancers addressed—cervical cancer, breast, prostate, and colon.					•
4.6 Hospital management enhanced to deliver quality care and treatment.					•
4.7 Access to technologies and safe, affordable, and efficacious essential medicines and counselling.					•
4.8 Palliative care enhanced.					•

SECTION II – Major successes/achievements

Please list the top five (5) successes/achievement in NCD prevention and control in Barbados over the period 2015-2019.

1.

2.

3.

4.

5.

SECTION III – Major challenges/gaps

What were the top five (5) challenges/gaps in NCD prevention and control in Barbados over the period 2015-2019?

1.

2.

3.

4.

5.

SECTION IV – Lessons learned

What were the top five (5) major lessons learned for NCD prevention and control in Barbados over the period 2015-2019?

1.

2.

3.

4.

5.

SECTION V – SWOT analysis

Please list the top five (5) strengths and weaknesses of, opportunities for, and threats to, the NCD prevention and control programme in Barbados.

Strengths	Weaknesses	Opportunities	Threats
1.			
2.			
3.			
4.			
5.			

SECTION VI – Priorities/themes for the NSP-NCD 20-25

Please indicate no more than five (5) priorities/themes for inclusion in the Barbados Strategic Plan for the Prevention and Control of NCDs 2020-2025.

1.

2.

3.

4.

5.

THANK YOU FOR YOUR TIME AND INPUT!

Annex 4: List of Key Stakeholder Agencies/Entities/Organisations That Provided Input

Government ministries/bodies

- Barbados National Standards Institute
- Ministry of Health and Wellness
- Ministry of Labour and Social Partnership Relations
- National NCD Commission
- National Nutrition Centre

Academia

- Barbados National Registry-George Alleyne Chronic Disease Research Centre, University of the West Indies

Non-governmental organisations (disease-specific)

- Barbados Alzheimer's Association
- Barbados Cancer Society
- Barbados Diabetes Foundation
- Diabetes Association of Barbados
- Healthy Caribbean Coalition

Faith-based organisations

- East Caribbean Conference of Seventh Day Adventists

Other civil society organisations

- Our Views, Our Voices Barbados

International technical cooperation/development entities

- Pan American Health Organization/World Health Organization

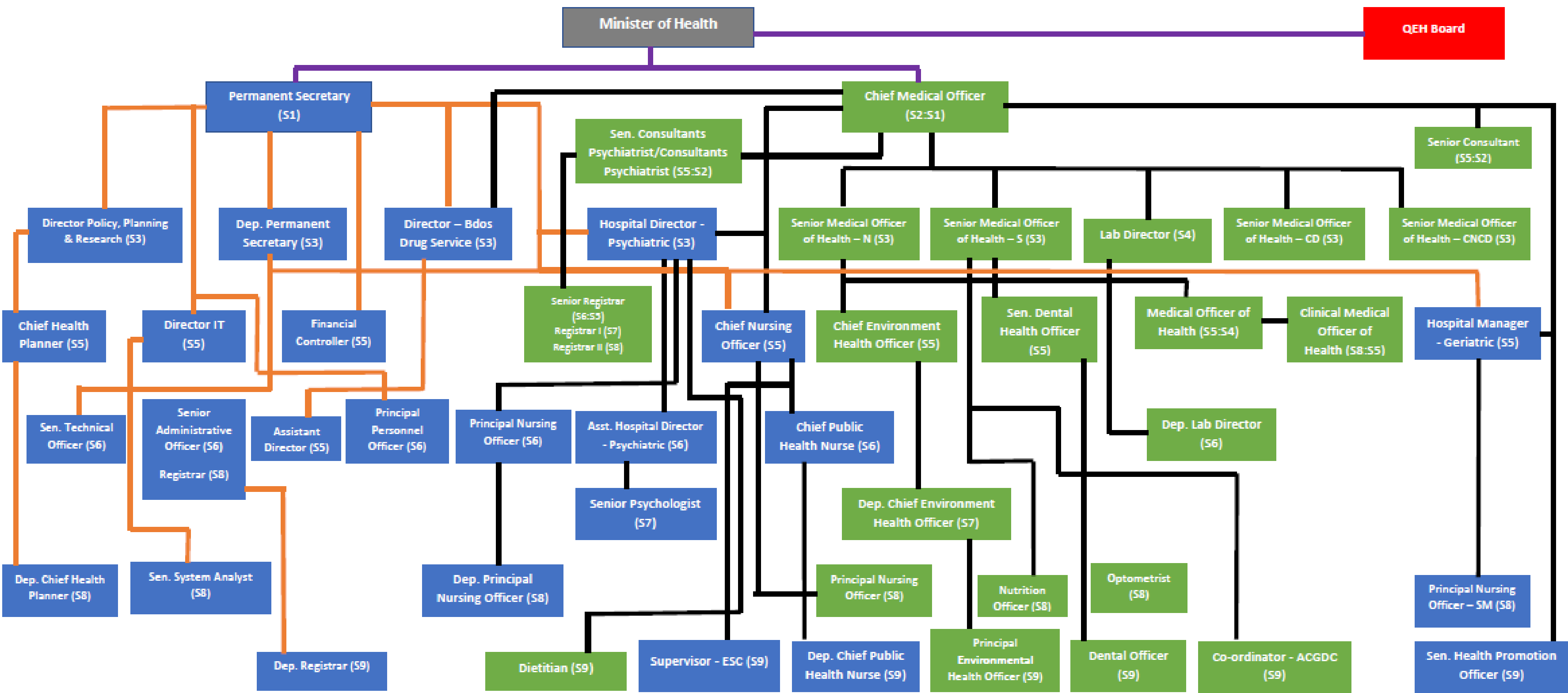
Annex 5: Possible Roles of Key Stakeholders[268]

Sectors/Stakeholders	Possible roles
Ministry of Health	• Coordinate, advocate and facilitate the contribution of other ministries, government agencies and stakeholders; lead and facilitate development of national NCD policy, plans and programmes
Ministry of Agriculture	• Ensure national food and agricultural policies promote and protect public health
Ministry of Education	• Develop school health policies and programmes that promote healthy diets, physical activity and smoke-free environments
Ministry of Transport	• Develop transport policies that promote walking and non-motorized options
Ministry of Finance	• Ensure finance is available to support NCD policy implementation; encourage use of fiscal and taxation policies that promote and protect public health
Ministry of Sports	• Develop policy for promoting physical activity
Department of Revenue/Customs	• Ensure the collection of taxes levied on tobacco and alcohol to achieve the objectives of public health and public finance; ensure the prevention of Illicit trade of tobacco and alcohol and other substance abuse that impacts NCDs
Ministry of Commerce/Departments of Trade, Investment etc.	• Ensure the adoption of multilateral and bilateral trade and investment instruments that are compliant with all global health laws and keep the health of citizens as a priority
Ministry of Consumer Affairs/Information and Broadcasting/Public Affairs	• Ensure the dissemination of relevant public health information to all stakeholders through appropriate means, including through packaging and labelling of products and public service announcements
Ministry of Labour/Employment	• Ensure the adoption of labour laws that encourage public health measures promoting healthy lifestyles at workplaces; ensure the generation of alternative livelihoods to workers engaged in tobacco growing or in related enterprises that are likely to be impacted by the full implementation of public health policies on NCDs
Ministry of Urban Development	• Ensure the development of building codes and town plans that keep a public health focus
Ministry of Foreign Affairs	• Negotiate, analyse and ensure adoption of normative international agreements and frameworks that may be directly linked to public health-related issues
Non-governmental organizations	• Advocate action to prevent NCDs, mobilize community support, organize information and education campaigns and deliver NCD services
Civil society	• Create expectations for government and the private sector to take action
Academic institutions	• Provide expert advice on public health, NCD risk factors and cost-effective interventions
Health professionals	• Advocate action, provide clinical and public health information, and support policy and planning processes; assist in implementation of plans and programmes
Media	• Provide sustained news coverage of chronic disease prevention to help raise awareness, promote discussion and facilitate change; journalists can be key stakeholders for advocacy and public education in NCD prevention

[268] WHO. NCD MAP Tool: Stakeholder engagement and multisectoral governance mechanisms. http://apps.who.int/ncd-multisectoral-plantool/home.html.

Sectors/Stakeholders	Possible roles
The private sector when there is no conflict of interest and excluding the tobacco industry	• Take measures to implement the World Health Organization set of recommendations to reduce the impact of the marketing of unhealthy foods and non-alcoholic beverages to children, while taking into account existing national legislation and policies • Consider producing and promoting more food products consistent with a healthy diet, including by reformulating products to provide healthier options that are affordable and accessible and that follow relevant nutrition facts and labelling standards, including information on sugars, salt and fats and, where appropriate, trans fat content • Promote and create an enabling environment for healthy behaviours among workers, including by establishing tobacco-free workplaces and safe and healthy working environments through occupational safety and health measures, including, where appropriate, through good corporate practices, workplace wellness programmes and health insurance plans • Work towards reducing the use of salt in the food industry in order to lower sodium consumption • Contribute to efforts to improve access to and affordability of medicines and technologies in the prevention and control of NCDs

Annex 6: MHW Organisational Chart



Annex 7: Progress Towards WHO Best Buys and Effective and Other Recommended Interventions

The matrix below summarises Barbados' progress towards the Best Buys (BBs), Effective Interventions (EIs), and Other Recommended Interventions (ORIs).[269] Of the 40 BBs, EIs, and ORIs associated with the four main risk factors, Barbados has fully implemented seven (17.5%), while it has implemented 18 (56.3%) of the 32[270] BBs, EIs, and ORIs associated with management of the four major NCDs.

Risk factor/Disease	BBs, EIs, ORIs	Description	Progress/Comments
Reduce tobacco use	BBs	Increase excise taxes and prices on tobacco products	**Partial**. Excise taxes imposed; tax comprises 47.1% of the price of the most-sold brand of cigarettes. FCTC recommends tax at least 75% of retail price.
		Implement plain/standardised packaging and/or large graphic health warnings on all tobacco packages	**Full**. This aspect of legislation was enacted in 2017, but its enforcement is not optimal.
		Enact and enforce comprehensive bans on tobacco advertising, promotion and sponsorship	**None**. However, there is little overt evidence of tobacco advertising, promotion, or sponsorship, due to the efforts of the NNCDC and NCD "champions", who exert moral suasion on media and event organisers.However, the NSP-NCD 20-25 addresses this legislative/regulatory gap.
		Eliminate exposure to second-hand tobacco smoke in all indoor workplaces, public places, public transport	**Full**.
		Implement effective mass media campaigns that educate the public about the harms of smoking/tobacco use and second hand smoke	**Partial**. Campaigns implemented, but not sustained.
	EI	Provide cost-covered, effective and population-wide support (including brief advice, national toll-free quit line services) for tobacco cessation to all those who want to quit	**Partial**. Tobacco dependence treatment is available in some private doctor's offices and other private sector facilities, and nicotine replacement therapy is available, but these interventions are not cost-covered in all cases; there is no quit line service.
	ORIs	Implement measures to minimise illicit trade in tobacco products	**None**. Some discussion is taking place at regional level, and PAHO/WHO is encouraging countries in the region to sign on to the relevant FCTC Protocol.[271]

[269] Information on progress was obtained from the SMOH-NCDs, and, where appropriate, from WHO and PAHO reports. Most of the information on progress in tobacco control was obtained from WHO. Report on the global tobacco epidemic 2019: Country profile Barbados. Geneva: WHO; 2019. https://www.who.int/tobacco/surveillance/policy/country_profile/brb.pdf?ua=1.
[270] There are 33 BBs, EIs, and ORIs related to management of the four priority NCDs, but the MHW deemed the ORI "Access to improved stoves and cleaner fuels to reduce indoor air pollution" inapplicable in the Barbados context, and it was omitted in this analysis.
[271] WHO. Protocol to Eliminate Illicit Trade in Tobacco Products.Geneva: WHO; 2013.https://www.who.int/fctc/protocol/en/.

Risk factor/Disease	BBs, EIs, ORIs	Description	Progress/Comments
		Ban cross-border advertising, including using modern means of communication	**None**.
		Provide mobile phone-based tobacco cessation services for all those who want to quit	**None**.
Reduce harmful use of alcohol	BBs	Increase excise taxes on alcoholic beverages	**None**.
		Enact and enforce bans or comprehensive restrictions on exposure to alcohol advertising (across multiple types of media)	**Full**. New draft bill on liquor licenses bans sales and advertising to minors, and minimum age will move from 16 to 18 years. No support from MHW/Council on Substance Abuse or Industry for parental exemptions between 16 and 18 years.
		Enact and enforce restrictions on the physical availability of retailed alcohol (via reduced hours of sale)	**Partial**. Ban on sale to minors (see above); not related to reduced hours of sale.
	EIs	Enact and enforce drink-driving laws and blood alcohol concentration limits via sobriety checkpoints	**Partial**. Regulations in place under traffic safety regulations, but are not currently enforced; awaiting equipment and training for police. Supported by alcohol industry.
		Provide brief psychosocial intervention for persons with hazardous and harmful alcohol use	**Partial**. Limited to psychiatric/drug rehabilitation settings.
	ORIs	Carry out regular reviews of prices in relation to level of inflation and income	**None**.
		Establish minimum prices for alcohol where applicable	**None**.
		Enact and enforce an appropriate minimum age for purchase or consumption of alcoholic beverages and reduce density of retail outlets	**Partial**. Minimum age for purchase enacted, mostly enforced; no reduction in density of retail outlets. Commerce is seeking to expedite/streamline liquor licensing while protecting minors.
		Restrict or ban promotions of alcoholic beverages in connection with sponsorships and activities targeting young people	**Partial**. Promotion to young people is not encouraged, but there has not been much policy support for this; HCC, in collaboration with PAHO, plans and implements activities for annual Caribbean Alcohol Reduction Day in November.
		Provide prevention, treatment and care for alcohol use disorders and comorbid conditions in health and social services	**Partial**. Treatment for alcohol use complications and co-morbid conditions is available when they occur, and is offered in psychiatric/drug rehabilitation/clinical care settings.
		Provide consumer information about, and label, alcoholic beverages to indicate, the harm related to alcohol	**Partial**.Industry has moved ahead with this; there has been no MHW intervention on this recommendation.
Reduce unhealthy diet	BBs	Reduce salt intake through the reformulation of food products to contain less salt and the setting of target levels for the amount of salt in foods and meals	**Partial**. Consultations with, and voluntary reformulation of some products by, Industry.
		Reduce salt intake through the establishment of a supportive environment in public institutions such as	**Partial**. Low-salt diets available in hospitals, nursing homes as part of clinical management; low-sodium options for some products available in

Risk factor/Disease	BBs, EIs, ORIs	Description	Progress/Comments
		hospitals, schools, workplaces and nursing homes, to enable lower sodium options to be provided	supermarkets.
		Reduce salt intake through a behaviour change communication and mass media campaign	**Partial**. Salt reduction information and campaign implemented through HCC, NNCDC, and MHW.
		Reduce salt intake through the implementation of front-of-pack labelling	**None**. This is currently under discussion at the regional level, related to revision by CROSQ of the Caribbean Regional Standard on Pre-packaged Food Labelling (CRS 5)to include FoPWL. However, Barbados intends to advance with FoPWL, in face of regional delays.
	EIs	Eliminate industrial trans-fats through the development of legislation to ban their use in the food chain	**None**. This is under discussion, supported by NNCDC in the framework of the CARPHA 6-Point Policy Package for healthier food environments and the PAHO Plan of Action for the Elimination of Industrially-produced Trans-fatty Acids 2020-2025,[272] and related resolution CD57.R12, approved at the 57th PAHO Directing Council in September 2019.The Minister of Health and Wellness has asked for a brief on the issue, which benefitted from National Nutrition Centre guidance on using the WHO REPLACE technical packagelocally.
		Reduce sugar consumption through effective taxation on SSBs	**Partial**. A 10% tax on SSBs was introduced in 2015; the level is much lower than the WHO-recommended 20% minimum. There is no apparent policy appetite to increase the tax to a level that is likely to have significant impact—there appears to be a belief in the industry talking points, despite sharing the evidence.
	ORIs	Promote and support exclusive breastfeeding for the first six months of life, including promotion of breastfeeding	**Full**. There is a MHW Breastfeeding Committee; breastfeeding is an intervention in the BCHOPP; the QEH is a certified “Baby Friendly Hospital”; the Breastfeeding and Child Nutrition Foundation of Barbados, an NGO, promotes breastfeeding; and there are guidelines for government-operated primary care settings on child and infant feeding.
		Implement subsidies to increase the intake of fruits and vegetables	**None**. The GoB’s Manifesto speaks to wellness grants and a discussion paper has been written and submitted, as well as a specific paper on incentives for hypertension and diabetes control, as requested.
		Replace transfats and saturated fats with unsaturated fats through reformulation, labelling, fiscal policies or agricultural policies	**None**. Proposing to use REPLACE framework with support from Commission and possibly from Minister, as above.
		Limit portion and package size to reduce energy intake and the risk of overweight/obesity	**None**. There are plans to do this in the school environment.

[272] https://www.paho.org/hq/index.php?option=com_docman&view=download&alias=49612-cd57-8-e-poa-trans-fatty&category_slug=cd57-en&Itemid=270&lang=en/

Risk factor/Disease	BBs, EIs, ORIs	Description	Progress/Comments
		Implement nutrition education and counselling in different settings (for example, in preschools, schools, workplaces and hospitals) to increase the intake of fruits and vegetables	**Full**. This is the remit of the MHW's National Nutrition Centre.[273]
		Implement nutrition labelling to reduce total energy intake (kcal), sugars, sodium and fats	**None**. No national standard for nutrition labelling exists. However, this is currently under discussion through the Barbados National Standards Institution (BNSI),[274] related to revision by the CARICOM Regional Organisation for Standards and Quality (CROSQ) of the CARICOM Regional Standard on Nutrition Labelling (CRS 5) for pre-packaged foods, to include FoPWL. Barbados will advance FoPWL in face of regional delays.
		Implement mass media campaign on healthy diets, including social marketing to reduce the intake of total fat, saturated fats, sugars and salt, and promote the intake of fruits and vegetables	**Partial**. The HPU performs this function as resources permit, and a consultant was engaged to provide relevant project advice in 2019.
Reduce physical inactivity	BBs	Implement community wide public education and awareness campaign for physical activity which includes a mass media campaign combined with other community based education, motivational and environmentalprogrammes aimed at supporting behavioural change of physical activity levels	**Full**. A National Task Force on Physical Activity and Exercise was established in 2009; the document "Physical Activity Guidelines for Barbadians" was published in 2013; and the 'Barbados Moves' initiative and the NTFW were launched in 2018. The NTFW is seeking to implement 'Barbados Moves' parish by parish, through direct activities and through endorsing activities. Efforts are also being made to strengthen the "Get Women Moving"[275] programme, a community-based, MHW-supported initiative launched in 2016 that provides opportunities for aerobic sessions at affordable rates, targeting women.
	EIs	Provide physical activity counselling and referral as part of routine primary health care services through the use of a briefintervention	**None**. Terms of reference for consultancy drafted; funding and consultant to be identified.
	ORIs	Ensure that macro-level urban design incorporates the core elements of residential density, connected street networks that include sidewalks, easy access to a diversity of destinations and access to public transport	**None**. Comments on new draft physical development plan submitted by SMOH-NCDs and NNCDC.
		Implement whole-of-school programme that includes quality physical education, availability of adequate	**None**. Ongoing discussions with METVT; MHW contribution to revision of CARICOM/CXC curriculum to include NCDs, being undertaken through UWI.

[273] http://nutritioncentre.health.gov.bb/.
[274] http://www.bnsi.bb/.
[275] https://onecaribbeanhealth.org/get-women-moving-campaign-launched-on-world-health-day/.

Risk factor/Disease	BBs, EIs, ORIs	Description	Progress/Comments
		facilities and programs to support physical activity for all children	
		Provide convenient and safe access to quality public open space and adequate infrastructure to support walking and cycling	**None**. New physical development plan already includes requirement for new developments of a particular size to reserve green space; submissions made for inclusion of other aspects, e.g. bike lanes, sidewalks.
		Implement multi-component workplace physical activity programmes	**None**. This is Included in the 2019 National Workplace Wellness Policy[276] under the Ministry of Labour; MHW is represented on new National Committee for Workplace Wellness
		Promote physical activity through organized sport groups and clubs, programmes and events	**Full**. Many sports groups and clubs exist, as well as a Sports Council, and topic is on the agenda of the Cabinet Sub-committee on NCDs.
Manage CVD and diabetes	BB	Drug therapy (including glycaemic control for diabetes mellitus and control of hypertension using a total risk[277] approach) and counselling to individuals who have had a heart attack or stroke and to persons with high risk (≥ 30%) of a fatal and non-fatal cardiovascular event in the next 10 years • 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 strokeand to persons with moderate to high risk (≥ 20%) of a fatal and non-fatal cardiovascular event in the next 10 years	**Partial**. Drug therapy is provided; there is limited risk assessment and prevention using the WHO HEARTS technical package for CVD risk reduction at four pilot sites.
	EI	Treatment of new cases of acute myocardial infarction[278] with either: acetylsalicylic acid, or acetylsalicylic acid and clopidogrel, or thrombolysis, or primary percutaneous coronary interventions (PCI) • Treatment new cases of acute myocardial infarction with aspirin, initially treated in a hospital setting with follow up carried out through PHC facilities at a 95% coverage rate • Treatment of new cases of acute myocardial	**Full**. A National Protocol has been commissioned, including care pathways. The BNR tracks achievement of these targets and public service announcements (PSAs) for heart attack have been developed to promote awareness of symptoms and the appropriate response.

[276] https://www.healthycaribbean.org/wp-content/uploads/2019/03/National-Workplace-Wellness-Policy-for-Barbados-2019.pdf.
[277] Total risk is defined as the probability of an individual experiencing a cardiovascular disease event (forexample, myocardial infarction or stroke) over a given period of time, for example 10 years.
[278] Costing assumes hospital care in all scenarios.

Risk factor/Disease	BBs, EIs, ORIs	Description	Progress/Comments
		infarction with aspirin and thrombolysis, initially treated in a hospital setting with follow up carried out through PHC facilities at a 95% coverage rate • Treatment of new cases of myocardial infarction with primary percutaneous coronary interventions (PCI), aspirin and clopidogrel, initially treated in a hospital setting with follow up carried out through PHC facilities at a 95% coverage rate	
		Treatment of acute ischemic stroke with intravenous thrombolytic therapy	**Full**. There is a Stroke protocol and a Stroke Unit at the QEH. PSAs for stroke promoting awareness of symptoms and appropriate response have been developed, and the BNR tracks achievement of these targets.
		Primary prevention of rheumatic fever and rheumatic heart diseases by increasing appropriate treatment of streptococcal pharyngitis at the primary care level	**Unclear**. Assumed, but no specific guideline currently in place.
		Secondary prevention of rheumatic fever and rheumatic heart disease by developing a register of patients who receiveregular prophylactic penicillin	**None**. This would be facilitated by a nationwide electronic dispensing system.
	ORIs	Treatment of congestive cardiac failure with angiotensin converting- enzyme inhibitor, beta-blocker and diuretic	**Unclea**r. Assumed standard of practice, no specific protocol in place.
		Cardiac rehabilitation post myocardial infarction	**Full**. Services provided by the HSFB supported by government funding.
		Anticoagulation for medium-and high-risk non-valvular atrial fibrillation and for mitral stenosis with atrial fibrillation	**Unclea**r. Assumed standard of practice, no specific protocol in place.
		Low-dose acetylsalicylic acid for ischemic stroke	**Full**. Standard practice.
		Care of acute stroke and rehabilitation in stroke units	**Full**. Stroke unit established at the QEH.
Manage diabetes	EIs	Preventive foot care for people with diabetes (including educational programmes, access to appropriate footwear, multi-disciplinary clinics)	**Partial**. Some elements in place in public first level of care facilities and at the Barbados Diabetes Foundation (BDF), which receives a subvention from the MHW.
		Diabetic retinopathy screening for all diabetes patients and laser photocoagulation for prevention of blindness	**Full**. Screening is offered at the QEH and BDF, and treatment is provided at the QEH.
		Effective glycaemic control for people with diabetes, along with standard home glucose monitoring for people treatedwith insulin to reduce diabetes complications	**Full**. Guidelines are in place, and glucometer strips are included in the National Formulary, facilitating access to them.
	ORIs	Lifestyle interventions for preventing type 2 diabetes	**Full**, through efforts to reduce NCD risk factors and the obesogenic environment.

Risk factor/Disease	BBs, EIs, ORIs	Description	Progress/Comments
		Influenza vaccination for patients with diabetes	**Unsure**. No specific protocol in place.
		Preconception care among women of reproductive age who have diabetes including patient education and intensive glucose management	**Partial**. Some elements are in place, but there are no national guidelines.
		Screening of people with diabetes for proteinuria and treatment with angiotensin-converting-enzyme inhibitor for the prevention and delay of renal disease	**Partial**. Not in primary care or other guidelines, but observed as standard practice.
Manage cancer	BBs	Vaccination against human papillomavirus (2 doses) of 9–13 year old girls	**Full**.
		Prevention of cervical cancer by screening women aged 30–49, either through: • Visual inspection with acetic acid linked with timely treatment of pre-cancerous lesions, • Pap smear (cervical cytology) every 3–5 years linked with timely treatment of pre-cancerous lesions, or • Human papillomavirus test every 5 years linked with timely treatment of pre-cancerous lesions	**Full**. Guidelines developed for use at the first and second levels of care for screening using cervical cytology and HPV testing. The Barbados Cancer Society (BCS) offers cervical cancer screening.
	EIs	Screening with mammography (once every 2 years for women aged 50-69 years) linked with timely diagnosis and treatment of breast cancer	**Partia**l. Mammography screening services are available in the public and private sectors, and are offered by the BCS, but there are no national guidelines, database, or call and recall system.
		Treatment of colorectal cancer stages I and II with surgery +/- chemotherapy and radiotherapy	**Full**.
		Treatment of cervical cancer stages I and II with either surgery or radiotherapy +/- chemotherapy	**Full**.
		Treatment of breast cancer stages I and II with surgery +/- systemic therapy	**Full**.
		Basic palliative care for cancer: home-based and hospital care with multi-disciplinary team and access to opiates and essential supportive medicine	**Partial**. Provided on a limited basis through public and private sectors, and the Barbados Association of Palliative Care,[279] an NGO.
	ORIs	Prevention of liver cancer through hepatitis B immunisation	**Full**.
		Oral cancer screening in high-risk groups (for example, tobacco users, betel-nut chewers) linked with timely treatment	**None**.

[279] http://www.barbadospalliative.org/.

Risk factor/Disease	BBs, EIs, ORIs	Description	Progress/Comments
		Population-based colorectal cancer screening, including through a faecal occult blood test, as appropriate, at age >50, linked with timely treatment	**Non**e. There is no population-based screening programme, but there is early detection and case finding through screening of high-risk and symptomatic persons.
Manage chronic respiratory diseases	EIs	Symptom relief for patients with asthma with inhaled salbutamol	**Full**.
		Symptom relief for patients with chronic obstructive pulmonary relief with inhaled salbutamol	**Full**.
		Treatment of asthma using low-dose inhaled beclomethasone and short-acting beta agonist	**Full**.
	ORIs	Access to improved stoves and cleaner fuels to reduce indoor air pollution	Not relevant in the Barbados context.
		Cost-effective interventions to prevent occupational ling diseases, for example, exposure to silica, asbestos	**Full**. Generally covered under occupation health and safety regulations.
		Influenza vaccination for patients with chronic obstructive pulmonary disease	**Unsure**. No national protocol exists.

Annex 8: Progress Towards the Global Monitoring Framework Targets and Indicators

Framework elements	Targets	Indicators	Data trends/Comments
MORTALITY AND MORBIDITY			
Premature mortality from NCDs	1. A 25% relative reduction in the overall mortality 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	***WHO NCD Country Profiles 2018, 2016 data***:[280] *Risk of premature death between 30 and 70 years of age*: 16.0% risk (males 20.0%, females 13.0%) ***WHO NCD Country Profiles 2011, 2008 data***:[281] NCD deaths < age 60 (% of all NCD deaths): males 22.7%, females 17.3%)
Additional indicator		Cancer incidence, by type of cancer, per 100,000 population	***International Agency for Research on Cancer (IARC) Globocan 2018***:[282] *Age-standardised (world) cancer incidence per 100,000 population*: Prostate 129.3; Breast 72.8; Colorectum 38.9 (males 22.8, females 16.2); Corpus uteri (uterine body) 18.6; **Cervix uteri 15.5**; Lung 9.4 (males 13.7, females 5.8) ***Barbados National Registry 2014***:[283] *Age-standardised (world) cancer incidence per 100,000 population*: Prostate 111.4; Breast 74.5; Colon 28.4 females, 28.0 males; Corpus uteri 25.4; **Cervix uteri 18.2**; Lung 7.4 (males 10.4)
Harmful use of alcohol[284]	2. At least 10% relative reduction in the harmful use of alcohol, as appropriate, within the national context[285]	Total (recorded and unrecorded) alcohol per capita (aged 15+years old) consumption within a calendar year in litres of purealcohol, as appropriate, within the national context	***WHO NCD Country Profiles 2018, 2016data***: 10 litres/year (males 17 litres/year, females 3 litres/year)
		Age-standardized prevalence of heavy episodic drinkingamong adolescents	***2011 GSHS (students 13-15 years of age)***: *Percentage who drank so much alcohol that they were really drunk one of*

[280] https://www.who.int/nmh/countries/2018/brb_en.pdf?ua=1.
[281] https://www.who.int/nmh/countries/2011/brb_en.pdf?ua=1.
[282] https://gco.iarc.fr/today/data/factsheets/populations/52-barbados-fact-sheets.pdf.
[283] Barbados National Registry. Cancer in Barbados 2014. Bridgetown: George Alleyne Chronic Disease Research Centre, UWI; 2014.
[284] Countries will select indicator(s) of harmful use as appropriate tonational context and in line with WHO's global strategy to reducethe harmful use of alcohol and that mayinclude prevalence ofheavy episodic drinking, total alcohol per capita consumption, andalcohol-related morbidity and mortality, among others.
[285] In WHO's global strategy to reduce the harmful use of alcohol the conceptof the harmful use of alcohol encompasses the drinking that causesdetrimental health and social consequences for the drinker, the peoplearound the drinker and society at large, as well as the patterns of drinkingthat are associated with increased risk of adverse healthoutcomes.

Framework elements	Targets	Indicators	Data trends/Comments
		andadults, as appropriate, within thenational context	*more times in their life*: 24.1% (males 29.0%, females 19.0%) ***2015 HoTNS (≥25 years of age)***: *Percentage binge-drinking*: 14.5% (males25.4%, females5.4%) ***2007 BRFS (≥25 years of age)***: *Percentage of men who had 5 or more drinks/women who had 4 or more drinks on any day in the last week*: males 21.9%, females 9.7%
		Alcohol-related morbidity and mortality among adolescentsand adults, as appropriate, within the national context	Data not collected.
Physical inactivity	3. A 10% relative reduction in prevalence of insufficient physical activity	Prevalence of insufficiently physically active adolescents,defined as less than 60 minutes of moderate to vigorousintensity activity daily	***GSHS 2011 (students 13-15 yearsof age)****: Percentage who were physically active for a total of at least 60 minutes/day on 5 or more days during the past 7 days)*: 29.1% (males 34.5%, females 23.3%)
		Age-standardized prevalence of insufficiently physically activepersons aged 18+ years (defined as less than 150 minutes ofmoderate-intensity activity per week, or equivalent)	***WHO NCD Country Profiles 2018, 2016 data:****Physical inactivity among adults aged 18+ years*:44.0% (males, 30.0%, females 57.0%) ***2015 HoTNS (≥25 years of age)***: *Prevalence of physical inactivity*: 49.9% (males 30.0%, females 67.2%) ***2007BRFS (≥25 years of age)***: *Percentage with low physical activity*: 51.3% (males 42.5%, females 59.9%)
Salt/sodium intake	4. A 30% relative reduction in mean population intake of salt/sodium[286]	Age-standardized mean population intake of salt (sodiumchloride) perday in grams in persons aged 18+ years	***WHO NCD Country Profiles 2018, 2010 data****: Mean population salt intake in adults aged 20+ years*: 9.0 g/day (males9.0 g/day, females 8.0 g/day)
Tobacco use	5. A 30% relative reduction in prevalence of current tobacco use in persons aged 15+ years	Prevalence of current tobacco use among adolescents	***GYTS 2013 (Students 13-15 years of age)****: Percentage whocurrently used any tobacco products*: 14.5% (males 17.4%, females 11.4%); *Percentage whocurrently smoked cigarettes*: 7.0% (males 8.8%, females 5.0%) ***GYTS 2007 (Students 13-15 years of age)****: Percentage who currently used any tobacco products*: 28.6% (males 34.5%, females 23.2%); *Percentage whocurrently smoked cigarettes*: 11.6% (males 14.3%, females 9.3%)
		Age-standardized prevalence of current tobacco use among persons aged 18+ years	***WHO NCD Country Profiles 2018, 2016 data****: Current tobacco smoking among adults aged 15+ years*: 8.0% (males 14.0%, females 2.0%)

[286] WHO's recommendation is less than 5 grams of salt or 2 grams of sodium per person per day.

Framework elements	Targets	Indicators	Data trends/Comments
			2015 HoTNS (≥25 years of age): Current smokers 9.2% (males 15.5%, females 3.7%)
BIOLOGICAL RISK FACTORS			
Raised blood pressure	6. A 25% relative reduction in the prevalence of raised blood pressure or contain the prevalence of raised blood pressure, according to national circumstances	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	***WHO NCD Country Profiles 2018, 2015data***: *Raised blood pressure among adults aged 18+ years*: 28.0% (males 29.0%, females 27.0%)
Diabetes and obesity[287]	7. Halt the rise in diabetes and obesity	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)	***WHO NCD Country Profiles 2018, 2014 data***: *Raised blood glucose among adults aged 18+ years*:14.0% (males 12.0%, females 16.0%) ***2015 HoTNS (≥25 years of age)***: *Percentage with raised blood glucose OR self-reported diabetes*: 18.7% (males 15.9%, females 21.0%) ***2007BRFS (≥25 years of age)***: *Percentage with raised blood pressure OR currently on medication for raised blood pressure*: 20.5% (males 25.9%, females 15.3%)
		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)	***WHO NCD Country Profiles 2018, 2016 data***: *Obesity among adolescents aged 10-19 years*:11.0% (males 11.0%, females 11.0%) ***GSHS 2011 (13-15 year old students)***: *Percentagewho were overweight*: 31.9% (males 32.1, females 31.8%); *Percentage who were obese*: 14.2% (males 13.9%,females 14.6%)
		Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥ 25 kg/m^2 for overweight and body mass index ≥ 30 kg/m^2 for obesity)	***WHO NCD Country Profiles 2018, 2016 data***: *Obesity among adults aged 18+ years*:25.0% (males 16.0%, females 34.0%) ***2015 HoTNS (≥25 years of age)***: *Obese*: 33.8% (males 23.4%, females 43.4%) ***2007 BRFS(≥25 years of age)***: *Obese*: 28.5% (males 20.3%, females 35.5%) ***2015 HoTNS (≥25 years of age)***: *Overweight or obese*: 66.2% (males 57.5%, females 74.2%)

[287] Countries will select indicator(s) appropriate to national context.

Framework elements	Targets	Indicators	Data trends/Comments
			2007 BRFS(≥25 years of age): *Overweight or obese*: 65.2% (males 54.6%, females 74.3%
Additional indicators		Age-standardized mean proportion of total energy intakefromsaturated fatty acids in persons aged 18+ years	Data not collected.
		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	***2015 HoTNS (≥25 years of age)***: *Percentage with raised total cholesterol*: 35.0% (males 38.6%, females 32.1%) ***2007 BRFS (≥25 years of age)***: *Percentage with raised total cholesterol*: 21.2% (males 19.3%, females 22.9%)
		Age-standardized prevalence of persons (aged 18+ years)consuming less than five total servings (400 grams) of fruit andvegetables per day	***2015 HoTNS (≥25 years of age)***: 90.0% (males 91.9%, females 88.5%) ***2007 BRFS (≥25 years of age)***: 95.4% (males 96.6%, females 94.3%)
		Prevalence of adolescents drinking one or more carbonated soft drinks (or other SSBs) one or more times per day	***GSHS 2011 (13-15 year old students)***: *Percentagewho usually drank carbonated beverages one or more times per day during the past 30 days*: 73.3% (males 74.0%, females 71.5%)
National systems response			
Drug therapy to prevent heart attacks and strokes	8. At least 50% of eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes	Proportion of eligible persons (defined as aged 40 years andolder with a 10-year cardiovascular risk ≥30%, including thosewith existing cardiovascular disease) receiving drug therapyandcounselling (including glycaemic control) to prevent heartattacks and strokes	***WHO NCD Country Profiles 2018, 2017 data:*** *Proportion of primary health care centres offering CVD risk stratification*: Less than 25% *Reported having CVD guidelines used in at least 50% of health facilities*: Yes
Essential NCD medicines and basic technologies to treat major NCDs	9. An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major NCDs in both public and private facilities	Availability and affordability of quality, safe and efficaciousessential NCD medicines, includinggenerics, and basic technologies in both public and privatefacilities	***WHO NCD Country Profiles 2018, 2017 data:*** *Proportion of primary health care centres offering CVD risk stratification*: Less than 25% *Number of essential NCD medicines reported as "generally available"*: 10 out of 10 *Number of essential NCD technologies reported as "generally available"*: 6 out of 6

Framework elements	Targets	Indicators	Data trends/Comments
Additional indicators		Access to palliative care assessed by morphine-equivalent consumption of strong opioid analgesics (excluding methadone) per death from cancer	***WHO Cancer Country Profiles 2014***.[288] Oral morphine, (formulation not specified) is generally available in the public health system.
		Adoption of national policies that limit saturated fatty acidsand virtually eliminate partially hydrogenated vegetable oils inthe foodsupply, as appropriate, within the national context andnational programmes	In process of developing plans for REPLACE framework to facilitate adoption of relevant policies.
		Availability, as appropriate, if cost-effective and affordable, ofvaccines against human papillomavirus (HPV), according to nationalprogrammes and policies	HPV vaccination has been incorporated into the immunisation schedule for girls aged 9-13 years and coverage is approximately 50%.
		Policies to reduce the impact on children of marketing of foodsand non-alcoholic beverages high in saturated fats, trans fattyacids, free sugars, or salt	Not yet in place – under discussion.
		Vaccination coverage against hepatitis B virus monitored bynumber of third doses of Hep-B vaccine (HepB3) administeredto infants	Hepatitis B vaccination has been incorporated into the immunisation schedule for children and third dose coverage is approximately 95%
		Proportion of women between the ages of 30–49 screened forcervical cancer at least once, or more often, and for lower orhigher age groups according to national programmes or policies	Baseline to be determined.

[288] https://www.who.int/cancer/country-profiles/brb_en.pdf.

Annex 9: NSP-NCD 20-25, Estimated Budget by Output