



*Chronic Care Policy & Model of Care  
for the Caribbean Community  
(CARICOM)*





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## Executive Summary

The Caribbean Community (CARICOM) has the highest prevalence of chronic non-communicable diseases (NCDs) in the region of the Americas. This is due in large part to Primary Health Care (PHC) programme successes in preventing and controlling communicable diseases, aging of the population, economic development and unhealthy behaviours. Global and local influences have shaped consumption lifestyles which have fueled the epidemiological transition in the Caribbean, so that NCDs are now the leading cause of premature loss of life, lost productivity and spiraling health care costs.

In response to the growing NCD burden, the Caribbean held a first of its kind summit of Heads of Government to address the subject which produced the 2007 Port of Spain Declaration “Uniting to Stop the Epidemic of Chronic Non-Communicable Diseases”. The declaration represents a mandate from the highest political level to develop and implement effective multi-sectoral policies and programs to combat NCDs.

Consistent with the region’s history of functional cooperation in health, this document proposes a model for CARICOM countries to utilize in addressing NCDs using comprehensive, collaborative and integrated approaches. This model is based on “The Expanded Chronic Care Model: Integrating Population Health Promotion”, and should form the basis for the region to reduce the tide of NCDs through appropriate, relevant and feasible community-, patient- and health system-level actions.

**Community:** Empowered participation provides communities a voice in health care decision-making. This is expected to enhance uptake and compliance thus supporting and sustaining pro-family and community health policies and programs.

**Patient:** Patient-centeredness places the needs of the person and the family at the center of care decisions and supports patients in their communities.

**Health Care System:** A responsive health system is better able to address the priority needs of patients and communities. Attributes include seamless access to comprehensive and high quality services close to where people live and work; care-providers functioning in coordinated multi-disciplinary teams; policies and programs aligned to priority needs; emphasis on prevention and health promotion; and the use of evidence-based treatment. These characteristics define a primary health care-based system, the most cost-effective approach to achieving substantial improvements in the care of patients living with chronic conditions.

## Introduction

This document seeks to provide CARICOM member countries (CMCs) with a framework for instituting strategies and models of care for prevention and control of NCDs in line with the goals and objectives of the Caribbean Cooperation in Health (CCH III) and the Port of Spain NCD Summit Declaration.

CMCs have a proud track record of cooperation in health evidenced by the reduction of the burden of communicable diseases. This collaborative approach will be extended to the goals of chronic disease control and risk factor reduction. The expanded Integrated Chronic Care Model will be used within the context of a reoriented primary health care system as outlined in this and the companion to this document, the “Framework for the Review of Primary Health Care Policy in the Caribbean Community”.

## Background

CARICOM Member Countries<sup>1</sup> have made important advances in health and in implementing Primary Health Care (PHC) over the past 30 years. Despite this, persistent health challenges remain. PHC programme successes, aging of the population, economic development and increasingly unhealthy behaviours influenced by the global and local environment, have fueled the epidemiological transition in the Caribbean (1).

The Caribbean now has the highest prevalence of chronic non-communicable diseases (NCDs) in the region of the Americas causing much premature loss of life, lost productivity and spiraling health care costs (2,3). Diabetes mortality in Trinidad & Tobago, and in St. Vincent & Grenadines is 600% higher than in North America (USA & Canada), and cardiovascular disease mortality in Trinidad and Tobago, Guyana and Suriname is 84%, 62% and 56% higher respectively than in North America (4). In Barbados the prevalence and mortality rate of diabetes-related lower extremity amputations are among the highest recorded in the world (5-7).

### History of Cooperation in Health

The Caribbean already had a strong history of successful functional cooperation in health including the eradication of poliomyelitis, measles and rubella (8). CARICOM Heads of Government recognized in the Nassau Declaration of 2001 that “the health of the Region is the wealth of Region (9), underscoring the importance of health to the economic development of the region. They appointed the Caribbean Commission on Health and Development to “propel health to the center of development”. The Commission report identified the major health problems of the Region as Chronic Non-communicable Diseases (NCDs), HIV/AIDS and Injuries and Violence (10). They also highlighted the need for public health leadership, improved workforce

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<sup>1</sup>CARICOM includes mainland countries Guyana, Suriname and Belize, and the islands of Antigua & Barbuda, Bahamas, Barbados, Dominica, Grenada, Haiti, Jamaica, Montserrat, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago. The five United Kingdom Overseas Territories (UKOTs), Anguilla, Bermuda, British Virgin Islands, Cayman Islands and Turks and Caicos Islands are associate member

capacity and health information systems. The Caribbean Cooperation in Health was established in response, and is now in its third iteration (11).

## **Response to Chronic Disease Epidemic**

In response to the growing NCD burden in the Caribbean, the first in the world summit of Heads of Government to address NCDs issued the CARICOM Port of Spain Declaration in 2007 “Uniting to Stop the Epidemic of Chronic Non-Communicable Diseases” (12). The declaration gives the basis for effective public policy delivering high-level support for multi-sectoral policies to combat NCDs.

Fourteen of the 15 mandates of the NCD Summit Declaration address the need for an all of society response to the multi-sectoral causes of the risk factors of this epidemic.

The other mandate, POS NCD Declaration item #5 states:

*That our Ministries of Health, in collaboration with other sectors, will establish by mid-2008 comprehensive plans for the screening and management of chronic diseases and risk factors so that by 2012, 80% of people with NCDs would receive quality care and have access to preventive education based on regional guidelines;*

National capacity assessment for chronic disease prevention and control in the Caribbean in 2005 and 2007 revealed, a substantial proportion of countries still have no policies, plans or programs to combat chronic diseases. Yet the evidence is that managing patients living with NCDs who are already accessing the health system, according to evidence-based guidelines, has the greatest potential for saving lives (13)

The WHO and PAHO have developed chronic disease policies and plans (14-18); and the Caribbean Health Research Council (CHRC) has developed regional guidelines (19).

## **Primary Health Care and the Chronic Care Model**

Primary Health Care is the most suitable contextual approach for tackling the specific challenges of NCDs (20). The CCH III is a mechanism to unite CARICOM countries in a common strategy to improve the health and wellbeing of the region’s people.

This document provides CMCs with guidance in operationalizing the main goals and objectives of CCH III as it relates to chronic diseases and the CARICOM Port of Spain declaration “Uniting to Stop the Epidemic of Chronic Non-communicable Diseases”.

A companion document “Framework for the Review of Primary Health Care Policy in the Caribbean Community” describes the PHC context for the Integrated Chronic Care Model (21).

## MAIN GOALS

1. To improve the quality of life of the Caribbean peoples and mitigate the high cost of NCDs to society by reducing the burden of NCD morbidity and mortality.
2. To improve the screening and management of chronic diseases and their risk factors

## OBJECTIVES

- 1.a. To reduce morbidity and disability by 5% per year over and above existing trends
- 1.b. To reduce mortality from chronic diseases by 2% per year over and above existing trends
- 2.a. To produce and disseminate integrated, evidence-based guidelines for control of chronic diseases, and implement their use throughout the national health system (public and private sector)
- 2.b. To develop and improve the competencies in the health workforce to effectively and efficiently manage the prevention and control of chronic disease
- 2.c. To improve access to affordable technologies and essential medicines

## EXPECTED RESULTS

- 1.1 The accelerated development and implementation of evidence-based policies and implementation of the chronic care model in 50% of countries by 2015 and 100% of countries by 2020.
- 2.1 Action plans implemented for the prevention and control of chronic disease, their risk factors, and determinants in 50% of countries by 2015 and 100% of countries by 2020.
- 2.2 By 2015, 50% of people living with NCDs would receive quality care and have access to preventive education based on regional guidelines for screening and management of chronic diseases and their risk factors

### Rationale

Any systematic approach to NCD prevention and control has to be based on the premise of primary prevention focused on the reduction of the risk factors (22-25). In various countries, several policies, laws, and regulations, have been implemented to prevent or reducing the burden of disease and injury. Examples of effective interventions are tobacco taxation and the mandated use of seat belts and helmets.

Developing effective frameworks for health care services requires an understanding of both the critical health issues, and the determinants of population health (26). Control strategies include the 'high-risk' approach which seeks to protect susceptible individuals, and the population approach aiming for small reductions in the mean population levels of several risk factors with the latter being more effective in reducing the incidence of disease in populations (27).

Ultimately, to realize sustained investment in policy options and recommended interventions, there must be clear evidence of their cost-effectiveness and cost-benefit in preventing premature morbidity and mortality from chronic diseases (28-31).

## Strategic Approaches

There is need to support the strengthening of the capacity and competencies of the health system to effectively and efficiently deliver services of assured quality. Such services should span chronic disease and risk factor screening and management based on regional guidelines.

Several strategic approaches may be used by CMCs singly or in combination to reduce the burden of chronic diseases.

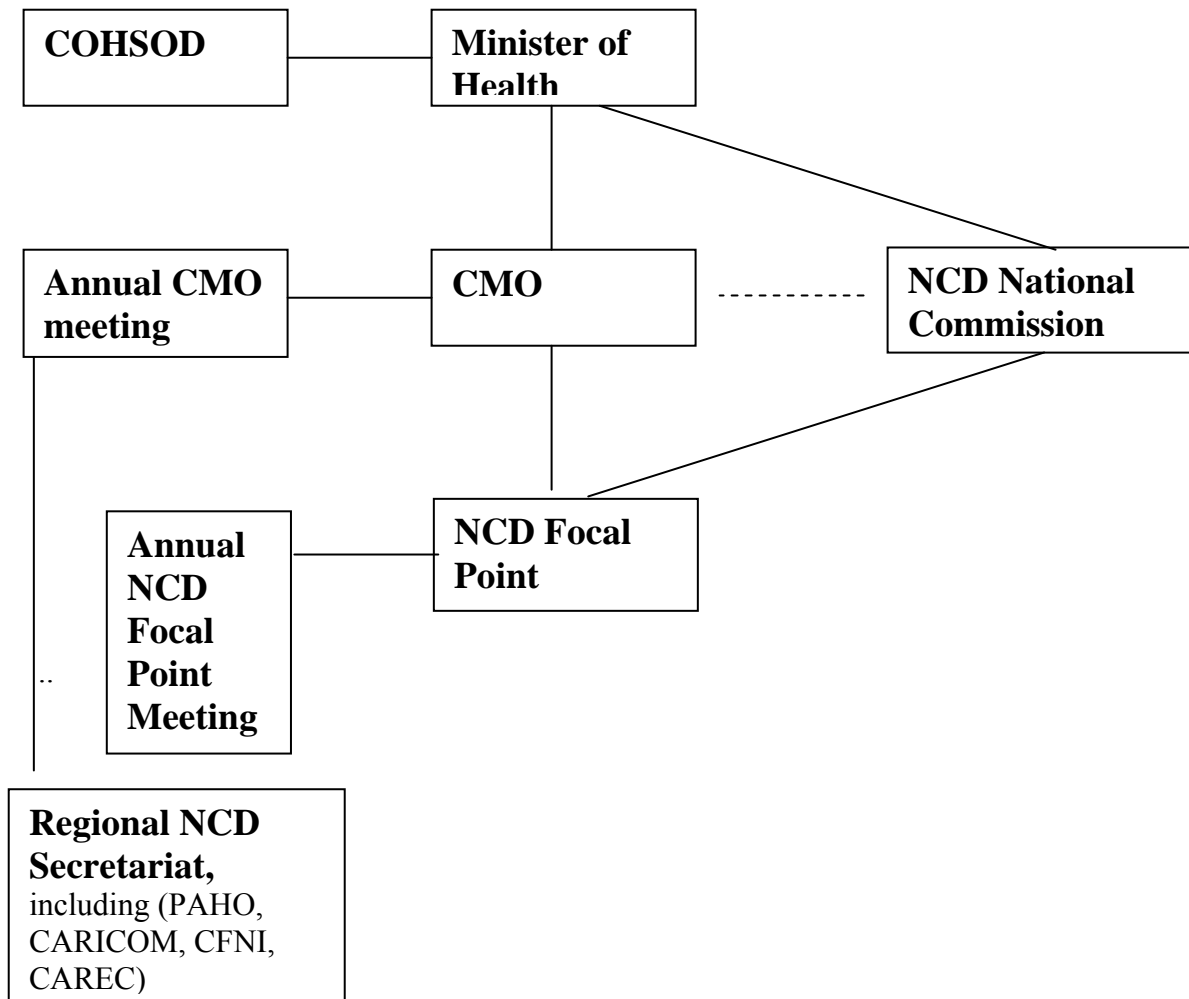
- Life course perspective: Encompasses the environmental, economic and social factors, and the consequential behavioral, and biological processes that act across all stages of life to affect disease risk (33, 34).
- Socio-economic determinants of health: NCD risk factors have upstream determinants – economic, political, social, environmental and behavioural. These must be considered in the adopted strategic approach (35).
- Health Promotion: Creating supportive environments “to make the right choice the easy choice”. Lines of action guided by the Caribbean Charter on Health Promotion (36).
- Community involvement: Developing partnerships with wider civil society for effective programming. Key partners include non-health Government agencies, civil society, trade unions, the business and service sectors, schools, the faith community and regional and international donors (12).
- Health system strengthening: A responsive health system is better able to address the priority needs of patients and communities. Attributes include seamless access to comprehensive and high quality services close to where people live and work; care-providers functioning in coordinated multi-disciplinary teams; policies and programs aligned to priority needs; emphasis on prevention and health promotion; and the use of evidence-based treatment. These characteristics define a primary health care-based system, the most cost-effective approach to achieving substantial improvements in the care of patients living with chronic conditions (39, 40).
- Chronic care model as one component of a re-oriented Primary Health Care policy, emphasizing empowered and participating patients and a responsive pro-active health team for productive interactions and improved outcomes (37).



# PROPOSED MANAGEMENT ORGANOGRAM FOR NCD PROGRAMME (38)

## REGIONAL LEVEL

## NATIONAL LEVEL



## MODELS OF CARE

### Patient centered, integrated, community and facility

Health care models illustrate the factors that determine population health status and establish critical pathways to address health care priorities. They provide the foundation for constructing effective strategies aimed at improving population health. Models of care include consideration of the types of health care providers, the mode of service delivery, the location of services, types of health care programs, and health concerns/issues measurement criteria issues, evaluation methods.

#### THE EXPANDED CHRONIC CARE MODEL: INTEGRATING POPULATION HEALTH PROMOTION

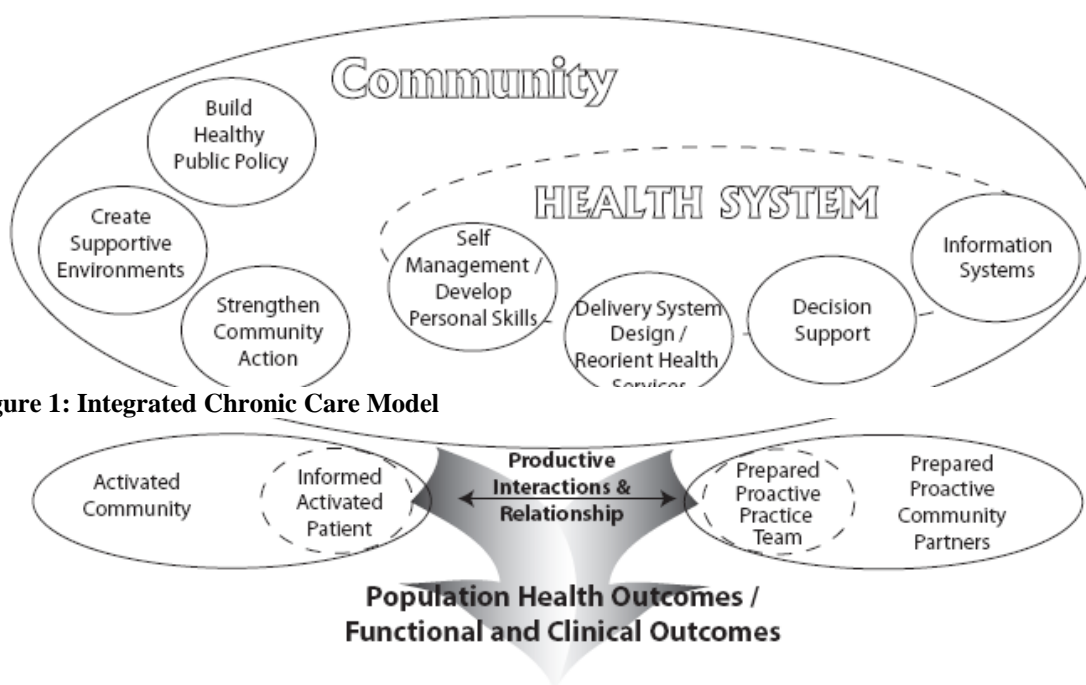


Figure 1: Integrated Chronic Care Model

**evidence-based treatment at the most cost-effective level of care** are some effective methods for achieving substantial improvements in caring for chronic conditions (39).

This model exemplifies comprehensive health care that is collaboratively and cooperatively provided by involving the community, non-health and health sectors. Intersectoral links must be strengthened since actions extend beyond the health sector. Care has to be coordinated and integrated using scientific evidence to guide practice. The model also recognizes the fundamental role of government in forging informed decisions about priority needs, quality standards, incentives to promote wellness, and the mix of financing mechanisms.

The goal of this document is to articulate an overarching framework that allows innovation in the care of chronic conditions. Appropriate and effective policies and regulations are needed to

actualize the model. The evolution of health care systems can advance rapidly with the leadership of informed decision-makers.

NCD Policy	Implementation of the Integrated Chronic Care Model
<p><b>1. Healthy Public Policy and Health Financing (40)</b></p> <p>1.A Create <i>healthy public policies in the context of the political environment.</i></p> <p>1.B Implement POS NCD Summit mandate #3: "That public revenue derived from tobacco, alcohol or other such products should be employed, inter alia for preventing chronic NCDs, promoting health and supporting the work of the Commissions."</p>	<p><b>1.A. PROVIDE LEADERSHIP AND ADVOCACY</b></p> <p>1.A.1. Develop and implement effective, sustainable, evidence-based healthy public policies and national action plans for NCDs, their risk factors and determinants.</p> <p>1.A.2. <b>Advocate and sensitise policymakers</b> to the need for evidenced based, effective and sustainable public policy guided by the CARICOM and national NCD Plans.</p> <ul style="list-style-type: none"> <li>i) Improve countries' capacity for <b>advocacy for NCD policies.</b></li> <li>ii) Build capacity for health professionals, NGOs and Civil Society in networking, information sharing and advocacy strategies to lobby for healthy public policies.</li> <li>iii) Develop and implement mechanisms to monitor the progress of NCD risk reduction policies, including reports to annual meeting of Ministers of Health, CMOs and NCD focal points/CARMEN).</li> </ul> <p><b>1.B. PROMOTE / PROVIDE CONSISTENT SUSTAINABLE FINANCING</b></p> <p>1.B.1 Ensure adequate financial <b>resources</b> commensurate with the NCD burden and in keeping with the mandate from the Port of Spain Declaration.</p>
<p><b>2. Create Supportive Environments</b></p> <p>2.A. Build healthy public policies for healthy eating, active living, no alcohol abuse, tobacco, and drug-free environments to promote health and prevent disease.</p> <p>2.B. Create supportive environments, including in schools, workplaces, faith-based organisations and other settings.</p>	<p><b>2.A. SUPPORT LEGISLATIVE FRAMEWORK</b></p> <ul style="list-style-type: none"> <li>i) Develop a regional policy framework</li> <li>ii) Develop model regional guidelines for advocacy for NCD policy framework and supporting legislation</li> <li>iii) Governments to enact or amend, then implement the instruments at their disposal - <b>legislation, regulation and taxation</b> to support NCD prevention and control.</li> <li>iv) <b>Align sectoral policies for health</b> - Priority government ministries and agencies review and update their policies and programmes which impact NCD risk factors.</li> </ul> <p><b>2.B. SUPPORTIVE ENVIRONMENTS</b></p> <ul style="list-style-type: none"> <li>v) Create a supportive and enabling environment through policies, regulations, protocols standards and guidelines.</li> <li>vi) Policies to support reduction in behavioural and environmental risk factors (workplace wellness, school wellness, nutrition and food security, physical inactivity, tobacco use and alcohol abuse).</li> <li>vii) Develop <b>links to non-health</b> government sectors that can influence population health and set standards for quality of care.</li> </ul>

<p><b>3. Strengthen Community Actions</b></p> <p>3.A. Form partnerships with community organizations to develop effective interventions.</p> <p>3.B. Work with communities to identify and collaboratively fill gaps in needed resources or services and to <b>support patients in their community.</b></p> <p>3.C. Encourage patients to participate in effective community programs.</p> <p>3.D. Advocate for policies to promote health, prevent disease and improve patient care.</p>	<p><b>STRENGTHEN PARTNERSHIPS</b></p> <p>3.A. Establish National level NCD Commissions or analogous bodies, comprising Government, private sector, NGOs, Universities and other partners in civil society.</p> <p>3.B. Mobilize and coordinate Community resources. Use <b>social marketing</b> strategies, taking the gender and social perspectives into consideration,</p> <ol style="list-style-type: none"> <li>i. for advocacy, to persuade the population to think differently about chronic conditions,</li> <li>ii. to raise awareness and reduce stigma of NCDs in the community</li> <li>iii. to reduce risk factors</li> <li>iv. to improve self-management.</li> </ol> <p>3.C. Develop <b>information sharing</b> strategies across health care organizations and communities. Develop population based programmes to promote wellness, e.g. Caribbean Wellness Day (41).</p> <p>3.D. Promote inter-sectoral collaboration between the countries, regional institutions and partners. The <b>regional health institutions</b>, the Caribbean Epidemiology Center (CAREC), Caribbean Food and Nutrition Institute (CFNI), Caribbean Health Research Center (CHRC), Caribbean Environmental Health Institute (CEHI) and Caribbean Regional Drug Testing Laboratory (CRDTL) are expressions of CCH. The process of integrating these five regional bodies into the Caribbean Public Health Agency (CARPHA) has begun. PAHO/WHO and CARICOM Health Desk partners and regional support mechanism; University of the West Indies (UWI), Chronic Disease Research Center (CDRC) research and academic components.</p>
<p><b>4. Self-Management / Develop Personal Skills</b></p> <p>4.A. Emphasize the patient's central role in managing his/her health.</p> <p>4.B. Use effective self-management support strategies that include goal setting, action planning and problem-solving.</p> <p>4.C. Organize internal and community resources to provide ongoing self-management support to patients.</p>	<p>4.A. <b>Center care on the patient and their family</b></p> <ol style="list-style-type: none"> <li>i. Recognise the central role and responsibility of the patient and their family in required daily lifestyle and behaviour change.</li> <li>ii. Promote continuity and coordination, effective treatments, self-management support, and regular follow-up.</li> <li>iii. Provide <b>basic information</b> about managing their chronic conditions to patients and families, user-friendly evidence-based guidelines and Chronic Disease Passports.</li> </ol> <p>4.B. Improve self management</p> <ol style="list-style-type: none"> <li>iv. Include self-management and prevention support instruction during health care interactions.</li> <li>v. Promote adherence to long-term therapies by providing appropriate information, support, including peer counselors and lay health promoters.</li> <li>vi. Assist providers through education and tools to "<b>put prevention first</b>", so that prevention becomes a component of every health care interaction.</li> </ol> <p>4.C. Self-management support</p> <ol style="list-style-type: none"> <li>vii. Develop educational and skill-building <b>workshops for patients and families</b> on the management of chronic conditions.</li> <li>viii. Use written educational materials at Grade 5 level and audio-visual aides to encourage self-management through improvement of health literacy.</li> </ol>

<p>5. Delivery system design: Reorient Health Services</p> <p>5.A. Visibly support improvement in chronic illness care at all levels of the organization to support a <i>paradigm shift from acute episodic care to chronic care</i>.</p> <p>5.B. Facilitate care coordination throughout the organization: evidence-based care, planned interactions, active follow up by care team to <i>build an integrated, efficient health system</i>.</p>	<p><b>PROGRAMME MANAGEMENT AND COORDINATION</b></p> <p><b>5.A. Organizational Capacity</b></p> <ul style="list-style-type: none"> <li>i. Develop CARICOM and national action plans and programmes for Prevention and Control of NCDs that are technically realizable, socially desirable, politically acceptable and financially feasible.</li> <li>ii. Implement national programs, within an integrated health systems approach, based on primary health care, emphasizing intersectoral action, and an organized system of care.</li> <li>iii. Appoint NCD Focal Points in each country with Terms of Reference and a toolkit for their orientation.</li> <li>iv. Convene annual NCD Focal Point meetings as an opportunity for technical cooperation.</li> </ul> <p><b>5.B. Care Coordination</b>  <i>Service must be evidence-based care</i> (See 6. Decision Support), with <b>planned interactions</b> and <b>active follow up</b> by the care team.</p> <p><b><u>Planned Interactions</u></b></p> <ul style="list-style-type: none"> <li>- <b><i>Location of services</i></b> <ul style="list-style-type: none"> <li>i. Ensure geographic locations and hours of operation to facilitate <b>access</b> to services.</li> <li>ii. Provide integrated services to reduce labeling of patients seen accessing single disease units.</li> <li>iii. Develop <b>links to private</b> health sector and Health NGO workers.</li> <li>iv. Take steps to support prevention and self-management efforts in <b>the workplace</b>.</li> <li>v. Ensure employers are informed about chronic conditions prevention and control.</li> </ul> </li> <li>- <b><i>Types of health care programs</i></b> <ul style="list-style-type: none"> <li>i. Provide comprehensive screening programmes for priority diseases.</li> <li>ii. Provide comprehensive care for chronic diseases including diabetes, cardiovascular disease, HIV/AIDS, depression, tuberculosis and cancer.</li> <li>iii. Provide complementary services or direct patients to these services.</li> <li>iv. Develop local demonstration projects of innovative care models and strategies.</li> </ul> </li> </ul> <p><b><i>Material Resources</i></b></p> <ul style="list-style-type: none"> <li>v. Information systems (See 6 and 7 below).</li> <li>vi. <b>Drugs and Laboratory</b> services. <ul style="list-style-type: none"> <li>a. Establish <b>formularies</b> for vital, essential and necessary drugs.</li> <li>b. Access essential, affordable, high quality <b>generic drugs</b> for NCD prevention and control.</li> <li>c. Implement a harmonised list of standard criteria for procurement and indicators of performance.</li> <li>d. Develop laboratory services protocols, including maintenance.</li> </ul> </li> </ul>
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<p>5.C. Human Resource management to <i>use health care personnel more effectively</i></p> <ul style="list-style-type: none"> <li>- Define roles and distribute tasks among team members.</li> <li>- Provide incentives to encourage better chronic illness care.</li> <li>- Seek to give care that patients understand and that fits with their cultural background.</li> </ul>	<p><b>5.C. DEVELOP AND ALLOCATE HUMAN RESOURCES</b></p> <p>CCH III has developed <b>comprehensive human resource policies</b> for the region, which forms the framework for human resources development for chronic care. However, there are specific requirements to meet this new chronic care approach.</p> <p>Health care providers need new, <b>team care</b> models and <b>evidence-based</b> skills for managing chronic conditions. Advanced <b>communication</b> abilities, behaviour change techniques, <b>patient education</b>, and counseling skills are necessary in helping patients with chronic problems.</p> <p><b>Active follow up by care team</b></p> <ul style="list-style-type: none"> <li>i. Train, organize and equip health care teams. <ul style="list-style-type: none"> <li>a. <b>Educate health care workers</b> who help patients with chronic conditions via workshops and printed materials.</li> </ul> </li> <li>ii. Review type and mix of health care providers, including NCD community health workers with less formal education and trained volunteers.</li> <li>iii. Encourage quality through leadership and incentives.</li> </ul> <p><b>Training</b></p> <ul style="list-style-type: none"> <li>i. Influence medical schools and other <b>training programmes</b> to promote chronic conditions management.</li> <li>ii. Implement <b>joint committees</b> between the Ministry of Health and Ministry of Education to promote a common understanding of medical education needs.</li> </ul>
<p><b>6. Decision support</b></p> <p>6.A. Embed evidence-based guidelines into daily clinical practice.</p> <p>6.B. Share evidence-based guidelines and information with patients to encourage their participation.</p> <p>6.C. Integrate specialist expertise and primary care.</p>	<p>Utilize Integrated, evidence-based policies, guidelines and protocols for screening, prevention and control of NCDs in keeping with the best evidence from the CHRC or other national Guidelines, including the total risk approach.</p> <p><b>6.A. Guidelines</b></p> <ul style="list-style-type: none"> <li>i. Develop and disseminate <b>pocket</b> guidelines for CVD, diabetes, asthma and other priority chronic conditions.</li> <li>ii. <b>Mandate continuing education</b> on management of chronic conditions across a range of health care workers.</li> <li>iii. Train and re-train health professionals to perform new tasks aligned with Standard Operating Procedures.</li> </ul> <p><b>6.B. See 4 above</b></p> <p><b>6.C.</b> Develop and implement shared tertiary treatment services that addresses technical, legal, economic and political realities.</p>

<p>6.D. Develop <b>research and surveillance</b> programmes for NCDs and their risk factors for NCDs with regional partners to support decision making at all levels, including <b>monitoring and evaluation</b>.</p>	<p><b>6.D. MONITORING AND EVALUATION</b></p> <ul style="list-style-type: none"> <li>i. Establish Regional NCD Secretariat to operationalize the <b>NCD plan</b>.</li> <li>ii. <b>Monitor</b> the establishment and implementation of <b>healthy public policies</b> in support of NCD prevention and control.</li> <li>iii. Monitor the implementation of the components of the <b>chronic care model</b>.</li> <li>iv. Monitor and evaluate <b>program</b> effectiveness and <b>resource</b> allocations.</li> <li>v. Present <b>progress reports on NCDs</b> and the need for healthy public policies, to Heads of Government and Ministers of Agriculture, Health, Education &amp; Social Development.</li> <li>vi. Develop a matrix to support the reporting process for NCD Focal Points/CARMEN, CMOs annual meetings, and the bi-annual Conference of Ministers of Health.</li> </ul>
<p><b>7. Information systems</b></p> <p>7.A. Facilitate individual care planning.</p> <p>7.B. Identify subpopulations for proactive care</p> <p>7.C. Monitor performance of practice team and care system;</p>	<p><b>7.A. Care Planning</b></p> <ul style="list-style-type: none"> <li>i. Upgrade information systems for sharing information to increase coordination across public and private health care settings, providers, and time (from the initial patient contact, onward).</li> <li>ii. Share information with the patient.</li> <li>iii. Provide timely reminders for providers and patients.</li> </ul> <p><b>7.B. Target Populations</b></p> <ul style="list-style-type: none"> <li>i. Develop basic <b>patient registries</b> and basic information systems.</li> <li>ii. Where appropriate recommend utilization of electronic records.</li> <li>iii. Model estimates of target populations living with NCDs in the Caribbean, nationally and sub-nationally.</li> </ul> <p>7.C. Improve ongoing <b>surveillance</b> of prevention and control programmes [See 6.D ii) – iv)] above.</p>

***Bold italics*** indicated the 8 building blocks of the WHO Innovative Care for Chronic Conditions (ICCC) based on Wagners Chronic Care Model



## Abbreviations

CAREC	Caribbean Epidemiology Center
CARICOM	Caribbean Community
CARMEN	Collaborative Action for Risk Factor Reduction and Effective Management of NCDs
CARPHA	Caribbean Public Health Agency
CCH	Caribbean Cooperation for Health
CDRC	Chronic Disease Research Center
CEHI	Caribbean Environmental Health Institute
CFNI	Caribbean Food and Nutrition Institute
CHRC	Caribbean Health Research Council
CMC	CARICOM Member Country
CMH	CARICOM Conference of Ministers of Health
CMO	Chief Medical Officer
CRDTL	Caribbean Regional Drug Testing Laboratory
CVD	Cardio-vascular Disease
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
ICCC	Innovative Care for Chronic Conditions
NCD	Non-communicable Diseases
NGO	Non-governmental Organization
PAHO	Pan American Health Organization
PHC	Primary Health Care
POS	Port of Spain
USA	United States of America
UWI	University of the West Indies
WHO	World Health Organization

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