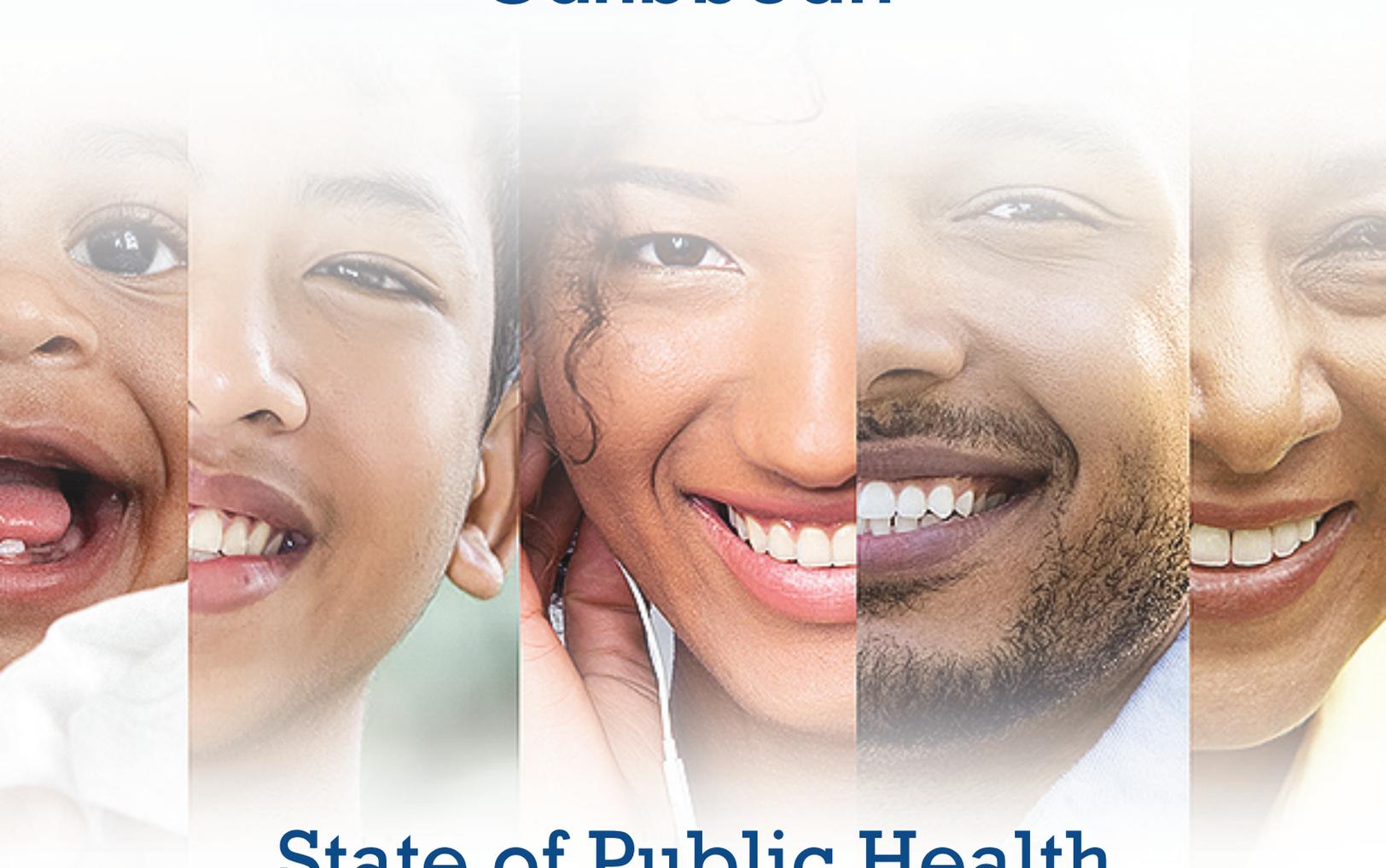


# Healthy Ageing in the Caribbean



## State of Public Health Report

— 2019 —

The Caribbean Public Health Agency is the Caribbean Region’s collective response to strengthening and reorienting our health system approach so that we are equipped to address the changing nature of public health challenges, which threaten development.

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The report is dedicated to the people of the Caribbean, so that their exceptional will-power and determination will enable not only healthy ageing for older persons but ageing with dignity, independence and autonomy.

## Preface

This State of Public Health Report – “Healthy Ageing in the Caribbean” is a welcome publication for the people of the region. Healthy ageing was identified through a survey, as one of the areas requiring further research and policy recommendations by our Member States.

This publication contributes to fulfilling the priorities outlined in the Caribbean Cooperation in Health (CCH IV); Health and well-being of Caribbean people throughout the life course. As a consequence, healthy living throughout the life course is also a strategic priority in CARPHA’s strategic plan 2018-2020.

Upon assuming office in July 2019, when I discovered that Healthy Ageing was a possible topic, I was delighted, as the Care of the Elderly has been an area of focus since my early Public Health Career.

As we approached the end of the year, participating in the process of development of this report brought a lot of the issues related to healthy ageing to the fore. These issues highlight the need for proactive initiatives to address healthy ageing throughout the life course. These include good nutrition, an active lifestyle, decent work and programmes to support quality of life in the Caribbean.

I am pleased to say that at CARPHA’s flagship event, the 65<sup>th</sup> Annual Health Research Conference, themed “ Transforming Frontiers in Ageing Charting New Perspectives – The Caribbean Moves, this year, there will be dissection of the issue of Healthy Ageing through research, posters and a keynote address by an expert in Healthy ageing,

Within this publication, there is an expansion of factors that affect ageing. These also include non-communicable diseases and the economic impacts on the population among others.

Now is the time for us as a region to collectively examine the resources, services and policies currently in place for our elderly population. With this assessment, we can develop policies that will adequately address the needs of our increasingly growing elderly population.

I encourage all sectors to utilize this report as a tool for proactive planning for maintaining a healthy region. These policy recommendations can only bear fruit if we advocate for prioritization of the needs of our precious elders by addressing healthy ageing throughout the life course.

**Dr. Joy St. John**  
**Executive Director**  
**Caribbean Public Health Agency**



## Foreword

The publication of the State of Public Health Report on healthy ageing by the Caribbean Public Health Agency (CARPHA) is both timely and needed. Timely as it is being published as the world begins the Decade of Healthy Ageing 2020-30 aimed at *“being the catalyst for a concerted and collaborative action to improve the lives of older persons, their families and the communities in which they live”* (WHO, 2019).

Timely also, because the Caribbean like the rest of the world is ageing at a fast pace and, in fact, is the fastest ageing region among developing countries (UN 2017). While ageing is acknowledged as a demographic and public health success, the growth of the over sixty population will have an impact on society in several ways.

This very well-researched and written report makes a signal contribution by providing the information necessary for evidence-based decision making and policy formulation in the area of ageing in the Caribbean. Ageing has been recognized as having many components and while public health reports are centered on health, equally important are the social and other determinants which impact the lives of older persons. The focus on healthy ageing allows for a wide life course perspective which while including health incorporates important economic and social aspects such as savings and pensions. The empowerment of older persons is a theme of this report and is fundamental to healthy ageing so that older persons may continue to contribute to the wider society in an active way.

The report provides decision makers across multiple ministries, departments and sectors as well as NGOs with the information critical to decision making necessary to promoting and facilitating an active and healthy older population. The chapters are written in an accessible way, making use of case studies, diagrams and pictures alongside description of the research evidence, to facilitate utilising this much needed information.

This report is the first of its kind in the region collating a large amount of research in one place. As such the academic community will also find it very useful in providing information and pointing to new areas of research.

CARPHA and the authors are to be congratulated in recognising the importance of ageing in the Region. I would recommend this report to policy makers, practitioners and students concerned with healthy ageing.

**Professor Denise Eldemire-Shearer**  
**Director of Graduate Studies and Research**  
**University of the West Indies Mona**  
**Jamaica**

**Director of the Mona Ageing and Wellness Centre**



## Acronyms

ACEP	Alternative Care of the Elderly Programme
ACSC	Ambulatory Care Sensitive Conditions
ACSH	Ambulatory Care Sensitive Hospitalisations
ADL	Activities of Daily Living
AIDS	Acquired ImmunoDeficiency Syndrome
BES Islands	Bonaire, Sint Eustatius and Saba
BSCG	Biabou Senior Citizens Group
CARICOM	Caribbean Community
CARPHA	Caribbean Public Health Agency
CBC	Caribbean Broadcasting Corporation
CBO	Community Based Organisation
CCH	Caribbean Cooperation in Health (Initiative)
CCHA	Caribbean Charter on Health and Ageing
CDB	Caribbean Development Bank
CDCC	Caribbean Development and Cooperation Committee
CEDAW	Committee for the Elimination of Discrimination Against Women
CESCR	Committee on Economic, Social and Cultural Rights
CMS	CARPHA Member State
COHSOD	Council for Human and Social Development
COPD	Chronic Obstructive Pulmonary Disease
COPD	Chronic Obstructive Pulmonary Disease
CPD	Continued Professional Development
CSO	Civil Society Organisation
CT	Computerised Tomography
CWD	Caribbean Wellness Day
DHA	Decade of Health Ageing
DSM	Diagnostic and Statistical Manual
ECLAC	Economic Commission for Latin America and the Caribbean
ELDAMO	Elderly Disabled Mobile
EPP	Extended Patient Programme
ESCAP	Economic and Social Commission for Asia and the Pacific
FBD	Food-Borne Disease
FOPL	Front of Pack Labelling
FCTC	Framework Convention on Tobacco Control
GAPP	Government Geriatric Adolescent Partnership Programme
GBD	Global Burden of Diseases
GDP	Gross Domestic Product
GSAPAH	Global strategy and action plan on ageing and health 2016-2020
HCC	Healthy Caribbean Coalition
HIC	High Income Country
HIV	Human Immunodeficiency Virus
HOGs	Heads of Government
IAC 2015	OAS Inter-American Convention on Protecting Human Rights of Older People 2015
I-ADL	Instrumental Activities of Daily Living
IARC	International Agency for Research on Cancer
ICD	International Classification of Diseases

ICOPE	Integrated Care for Older People
ICT	Information, Communication and Technology
IDRC	International Development Research Centre
LAC	Latin America and the Caribbean
LGBTQI	Lesbian, Gay, Bisexual, Transgender, Intersex
MAP	Multisectoral Action Plan
MAWC	Mona Ageing and Wellness Centre
MIPAA	Madrid International Plan of Action on Ageing
MMSE	Mini Mental Status Examination
MRI	Magnetic Resonance Imaging
NAACCR	North American Association of Central Cancer Registries
NCD	Non-Communicable Disease
NCI	National Cancer Institute
NGO	Non-Government Organisation
OAS	Organization of American States
OECD	Organisation for Economic Cooperation and Development
OECS	Organisation for Eastern Caribbean States
PAHO	Pan American Health Organization
PHC	Primary Health Care
PPS	Pharmaceutical Procurement Service
PWD	People with disabilities
PYLL	Potential Years of Life Lost
RICA	Regional Intergovernmental Conference on Ageing
SAC	Senior Activity Centre
SARI	Severe Acute Respiratory Disease
SDG	Sustainable Development Goal
SDH	Social Determinants of Health
SEM	Social Ecological Model
SIDS	Small Island Developing States
SPHR	State of Public Health Report
SSB	Sugar Sweetened Beverages
STEPS	Stepwise Approach to Surveillance
STI	Sexually Transmitted Infection
TTARP	Trinidad and Tobago Association for Retired People
UHC	Universal Health Coverage
UK	United Kingdom
UKOT	United Kingdom Overseas Territory
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environmental Programme
UNGA	United Nations General Assembly
UNHLM	United Nations High Level Meeting
US	United States of America
UWI	University of the West Indies
WHO	World Health Organization
WNTD	World No Tobacco Day

## Executive Summary

The years of later life are often referred to as the “golden years”, signifying a hope that they will be filled with serenity and happiness. Ideally, older persons should be able to continue pursuing their goals and aspirations, including (among other things) spiritual pursuits and contemplation of lifetime achievements; enjoyment of mastery over skills acquired earlier in life; participation in family and community life, and sharing of accumulated wisdom, cultural values and skills. However, to attain these requires conditions conducive to health along the life course. If circumstances of life and earlier behaviours result in non-communicable diseases (NCDs) and other disabling conditions, opportunities to enjoy the “golden years” will be restricted, as will the potential social and economic benefits of a vigorous, active and productive older population.

This State of Public Health Report (SPHR), from the Caribbean Public Health Agency (CARPHA) provides information on the health situation and response to ageing in the Caribbean region. The information provided aims to facilitate

- 1) Development of rights-based approaches to health of older persons;
- 2) Strengthening of initiatives to promote health along the life course to ensure a healthy older population while reducing potential costs associated with population ageing.

The healthy ageing concept is fundamentally about maximising the amount of time in the life course during which functional abilities<sup>1</sup> are maintained, so that people can, for as long as possible meet their basic needs; learn and make decisions; be mobile; build and maintain relationships; and contribute to society (WHO, 2019b).

Following the Introduction that provides background characteristics of the Caribbean region and CARPHA Member States (CMS), the SPHR is organised in seven chapters.

**Chapter 1** presents concepts and principles of healthy ageing, introducing sets of ideas that are applied to the evidence presented throughout the report. They may be regarded as tools to be applied to put in place appropriate actions and measures, and include the Life Course Model; the Social Ecological Model; Social Determinants of Health; human rights, ethics and principles of public health; gender equity, and Geriatric Giants (health conditions concentrated among older persons). It is shown that healthy ageing is a process, involving action along the life-course to promote health and prevent functional incapacities. Action to address social determinants of health, including gender inequity and access to resources, and to maintain and promote human rights, are essential components.

The Life Course Model provides an especially useful framework to assess the appropriate types of action at various levels of functional capacity that people may transition through over their lifetimes. In the period of **high and stable capacity**, action focuses on prevention, notably of chronic conditions, ensuring early detection and control and promoting capacity-enhancing behaviours. If and when there is **declining capacity**, the main goals become the reversal or slowing of the decline in capacity and supporting capacity-enhancing behaviour. With **significant loss of capacity**, the removal of barriers to participation is essential so that older persons can retain their independence for as long as possible. Removing barriers involves environmental measures, for instance providing transport or installing wheelchair ramps, or compensating for loss of capacity, for instance providing spectacles to people with vision loss and providing assistance with activities of daily living such as

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<sup>1</sup> The terms “functional abilities” and “functional capacity” appear to be used interchangeably in the literature on healthy ageing. We therefore do not make a distinction between them in this report.

shopping, cooking, domestic chores and bathing for people who cannot manage these adequately. Ethical approaches to care and support become especially important, with people enabled to make and implement their own decisions whenever possible and provided with trustworthy proxy decision-makers otherwise. Suitable measures throughout the life course can prevent and provide compensation and solutions to Geriatric Giants such as immobility, cognitive and sensory deficits, frailty and incontinence.

**Chapter 2** describes the history of global and regional strategies and plans of action on ageing. Especially notable are the Madrid International Plan of Action on Ageing (MIPAA) and the regional/sub-regional reviews on progress with respect to MIPAA from Latin America and the Caribbean, the Global Strategy and Action Plan on Ageing and Health 2016-2020, and the framework for the Decade of Healthy Ageing set to start in 2020. Under the MIPAA there are three priorities for action – older persons and development; advancing health and well-being into old age; and ensuring enabling and supportive environments. Action areas defined for the Decade of Healthy Ageing include age-friendly communities; person-centred integrated care, and community-based social care and support. A Caribbean Charter on Health and Ageing was developed by CARICOM and launched in 1999 but does not appear to have been widely used.

**Chapter 3** presents evidence on demographic shifts and the ageing of Caribbean populations. It starts by explaining demographic, epidemiological and nutritional transition models, which are then applied to Caribbean data. Analyses are presented by individual countries and territories of the Caribbean in Appendix 1 of the SPHR. The evidence shows that Caribbean populations are ageing, being at a stage of demographic transition marked by falling birth rates and low death rates. There is considerable diversity between Caribbean countries and territories in the distribution of the population by age and sex, though life expectancy of women generally exceeds that of men. The period of *demographic dividend* has been defined as that during which the young population has fallen below 30%, the adult population age 15-59 has increased, but the 60+ population has not yet surpassed 15% (Eldemire-Shearer, 2014). The Caribbean as a whole is in a period of demographic dividend, since the child population stands at 25.2% and the population 60 and over is 11.6% of the Caribbean population. The region should take advantage of this period to invest in healthy and active ageing programmes. Ageing strategies in individual countries and territories should consider issues of migration, since patterns of immigration and emigration of working age and older persons differ widely across the region, with varying implications for the availability of human resources and strategies to support older persons.

**Chapter 4** presents Caribbean evidence from data reported to CARPHA and other sources on health conditions along the life-course and among older persons. NCDs are the leading causes of death in the Caribbean, both in the population over and under 60 years of age. They account for most potential years of life lost (premature mortality) and for three-quarters of deaths overall. Low socio-economic status among mothers and low birth weight and have been shown to be associated with higher blood pressure among adults, pointing to the importance of nutrition and social determinants of health even prior to birth (Ferguson et al., 2015). Under the age of 60, violence, road traffic accidents and HIV/ AIDS are in the top 10. There is a need for further research on the consequences of health conditions in childhood and adulthood for functional abilities as people age. NCD risk factor surveys show that in most Caribbean countries physical activity levels, smoking and harmful use of alcohol are at higher levels among men, while overweight and obesity are more prevalent among women. Fruit and vegetable consumption are below recommended levels for both sexes, with vegetable consumption even lower than average for low- and middle-income countries (Frank et al., 2019).

Most risk factor surveys were conducted in populations less than 70 years old; there is a need for similar research among older persons. In the older population, 8 of the top 10 causes of death are

NCDs others are lower respiratory infections and digestive diseases. Many older persons live with co-morbidities; 47.5% of participants in the 2012 Jamaica ageing survey reported more than one NCD (Mitchell-Fearon et al., 2015). Psycho-social challenges identified in studies with older persons include loneliness (Rawlins, 2014; Rawlins, Simeon, Ramdath, & Chadee, 2008) and alcohol consumption (Gibson et al., 2017), both more prevalent among older men than older women.

Data reported to CARPHA on Severe Acute Respiratory Infections show that most health care facility admissions for these are of children, but most deaths from these infections are among older persons. Reasons for these patterns require further research, but the data suggest the need for greater use of health facilities by older persons.

Mortality data for persons aged 60 and over shows more men than women dying from falls in the age groups up to 79 and more women in the 80 and over age groups. A Jamaican study showed that more older women than older men fall (though not fatally), with risk factors including area of residence (rural), eyesight problems, cataracts, high blood pressure and depression. Slippery floors and other environmental factors in some households contribute to falls (Mitchell-Fearon et al., 2014).

Over the 2000-2016 period, 6,216 deaths among persons aged 60 and over across CMS were attributed to disorders associated with cognitive impairment. There were more deaths among women from dementia (Alzheimer's and other) than among men, while deaths from Parkinson's disease were mostly among men.

There is a need for further research on Geriatric Giants in the Caribbean. CARPHA data suggest that diagnosis of health conditions and cause of death registration should be strengthened, since substantial numbers of deaths in people aged 60 and over are attributed to "old age", "senescence" or "senility" – 6,022 people in the period 2000-2016. Diagnosis of causes of cognitive impairment is important, as some are more preventable (such as vascular dementia), and they require different treatment strategies.

**Chapter 5** looks at care and support of older persons in the Caribbean. Informal care is both provided by and for senior citizens, with major contributions by them to the care and upbringing of grandchildren and other children, and some younger old persons caring for older old persons (McKoy Davis et al., 2017; Rawlins, 2001; Thomas, 2014).

Most Caribbean people spend most of their later years living in their own homes (rented or owner-occupied) or that of a family member, with only a small minority living in nursing or residential care settings (Rawlins, 1999; Rawlins & Spencer, 2002). Therefore, informal care within the home is critical to healthy ageing. Support should be provided for the adaptation of homes via things like handrails and non-slip flooring, to facilitate continued independence. With evolving social roles and a trend towards smaller households and away from extended family co-residence, challenges in the availability of care and support at home may increase.

Carers of senior citizens in the Caribbean are most often wives, daughters or daughters-in-law of the person receiving care (Rawlins & Spencer, 2002). The gendered nature of care work contributes to poverty and lower incomes among women as they age, since their participation in the labour force is more limited than that of non-carers and men. Deficits in the availability of flexible working arrangements in formal employment, of respite care and of practical and financial support for carers contribute to economic vulnerability of women as they age (International Labour Organization, 2018).

Formal health care in the Caribbean tends to be oriented to management of acute conditions, which is not suitable for older persons who are more likely than younger persons to have chronic and multiple conditions. There is evidence of over-use of hospital facilities by older persons whose

conditions could be prevented, managed and treated at the primary health care level (Bushelle-Edghill, Laditka, Laditka, & Brunner Huber, 2015). Most Caribbean states have specific chronic disease programmes, including systems for the supply of medication, offered as part of primary health care. There is scope for better targeting of these towards the needs of the elderly. Few formal health facilities have been adapted to facilitate access by older persons with functional incapacities, for instance by providing wheelchair access, handrails and notices in large print. Provision of healthy lifestyle information and advice by health care workers to older persons is rare and of short duration in some health facilities (Eldemire-Shearer, Holder-Neveins, Morris, & James, 2009). Lack of coordination, collaboration and referral mechanisms between primary, secondary and tertiary care, between public and private providers and between government ministries leads to discontinuity in care. Regulation, and enforcement of regulation, of private providers of health care should be strengthened to prevent abuse and improve quality. There are very few Caribbean examples of palliative care services characterised by multidisciplinary team support and adequate pain-relieving medication and therapy.

Examples of good practice in care include

- The development of a minimum package of care for the elderly in Jamaica, designed to cover access to clinical services and referral mechanisms. This can help the development of suitable care models, of integrated person-centred care, of greater equity and of Universal health Coverage (Eldemire-Shearer & Mona Ageing and Wellness Centre Team, 2019).
- The Alternative Care of the Elderly Programme in Barbados, where older persons are referred to private residential care facilities by a multidisciplinary team. Government supports care costs in these facilities, with considerable cost savings as compared with public hospitals. Regulation and enforcement of quality standards are built into the model (Ministry of Health Barbados, 2018)
- Senior Activity Centres in Trinidad and Tobago, where civil society organisations were invited by the Division of Ageing to tender to provide Centres where older persons could meet participate in social and health activities. The Division played a regulatory and supportive role (Rouse, 2005).

**Chapter 6** describes initiatives for health promoting environments and self-care. These include regional frameworks for health promotion across the life course, such as the Nassau Declaration on Health, the Port of Spain Declaration on NCDs, Caribbean Wellness Day and the activities of the Healthy Caribbean Coalition. National policies and strategies on ageing are described, revealing a wide variety of institutional arrangements across different ministries and departments. Examples of advocacy and awareness activities for older persons are described. Case studies from Cuba and St. Vincent and the Grenadines give examples of community-based organisations enhancing the social participation and involvement in health promotion of older persons.

Section 2 of Chapter 6 shows strategies that help address environmental influences on health of older persons, in the areas of housing, transport, disaster management, and personal and financial security. Section 3 provides Caribbean examples and case studies of health promotion strategies to address physical activity, nutrition, alcohol and tobacco among older persons and across the life course.

**Chapter 7** looks at health systems and policy implications for older persons of the findings of the previous chapters and makes recommendations. The analyses are informed by the action areas of the forthcoming Decade of Healthy Ageing 2020-2030 age-friendly communities; person-centred integrated care and community-based social care and support (WHO, 2019a). The WHO's Building Blocks of Health Systems are used to structure the analysis service delivery, health workforce, health information systems (including research), medical products and technologies, finances and governance (WHO, 2007). Selected recommendations are presented here.

## Service delivery

1. Scale up services for older persons across the public, private and NGO sectors, while strengthening the managerial role of the State.
2. Increase focus on medium- to long-term care.
3. Strengthen primary health care responses oriented to prevention and care of older persons.
4. Improve communication and coordination between different parts of the health system.
5. Respond to diversity and special needs.
6. Develop regional and international collaborative networks.
7. Address migration issues in national strategies on healthy ageing.
8. Establish systems for the participation of older persons in health decision-making.
9. Develop palliative care and end-of-life services.

## Health workforce

1. Increase the number of adequately trained staff in
  - a. Geriatric medicine and gerontology;
  - b. Specialisms that can assist with elder care and support and be included on multi-disciplinary teams.
2. Include geriatric medicine, gerontology, human rights of older persons, and strategies to combat ageist attitudes in the curricula for general medical and other health care worker training. Access training, locally and internationally and via the Internet.
3. Provide training in care of the elderly to informal carers.
4. Provide practical and financial support to carers, e.g. assistance with transport, incentives for installation of safety measures in the home, carers' allowances.
5. Establish human resource development strategies for healthy ageing, including numbers and types of professionals and support for informal carers.
6. Involve health care workers who are nationals living abroad in providing assistance in the health care system, through online communication, training, consultation and periodic visits.

## Health information systems

1. Improve the quality of health data on people aged 60 and over, paying attention to accurate reporting of cause of death and timely reporting.
2. Implement clinical and population-based trials of interventions to identify factors and elements of successful action to improve health conditions, functional capacities and health-related behaviour of older persons.
3. Establish monitoring and evaluation indicators and procedures specific to geriatric health, accompanied by mechanisms for incorporating into decision-making.
4. Communicate information in various ways using various media in line with the diverse abilities and interests of older persons.

## Research

1. Increase research on the prevalence, characteristics and experiences of older people living with the Geriatric Giants and NCDs.
2. Involve older persons as partners in research design and use.
3. Conduct research on outcomes in older age of health conditions that may start earlier in life.
4. Conduct regular surveys of the state of older persons in each country.
5. Present gender- and age-disaggregated data whenever possible, including by five-year age group for people over 60.

6. Research the following among older persons risk factors for NCDs; quality of life; management of dementia; carer experiences and support; sexual health; economic burdens of disease; health-seeking behaviour.

#### Medical products and technologies

1. Continue to develop systems for procurement, distribution, monitoring and sustained supply of medication for chronic conditions and NCDs.
2. Provide free or subsidised access to medications for older persons whenever possible.
3. Provide low-cost or free access to basic equipment to reduce functional incapacities, such as eyeglasses, hearing aids and walking frames.
4. Conduct outreach and delivery, especially to housebound older persons, to provide access to medication and equipment.
5. Invest in Caribbean research and development of medical products and technologies to assist older persons and their carers.

#### Financing

1. Review mandatory retirement ages and other age-related barriers so that older persons can retain rights to work.
2. Enable senior citizens to make active choices on the level of economic activity they wish to have, in line with their human rights and values such as dignity and respect.
3. Address gender-related barriers to employment and to men's participation in the care economy.
4. Establish guidelines for 'health rights' and access to essential packages of care by older persons.
5. Establish and monitor quality standards for care in the private sector and develop public-private financing options.
6. Establish quality standards and efficiency criteria for non-governmental, community-based and faith-based organisations, taking care not to stifle action and innovation by over-regulation.
7. Provide economic security by providing adequate levels of pensions and other forms of social security such as disability and carer allowances. Simplify procedures for access to social security benefits.

#### Leadership and governance healthy ageing policies and plans

1. Review the *Caribbean Charter on Health and Ageing* (1999) in the light of other regional and national strategies pertinent to ageing.
2. Review the *Inter-American Convention on Protecting the Human Rights of Older Persons* (OAS, 2015) and other human rights instruments relevant to older persons with a view to developing a Caribbean-specific agreement and convention.
3. Supplement development of ageing policies and plans by human and other resource development and enforcement capacity to ensure implementation.
4. Include strategies for public-private partnerships and intersectoral working, including regulation.
5. Protect older persons from all kinds of abuse through policies and enforcement mechanisms.

6. Incorporate needs for protection and participation of older persons in Caribbean climate change strategies and disaster response mechanisms.
7. Ensure safe and affordable housing and transport for the elderly. Enforce building codes and provide incentives to persons adapting their homes with age-friendly safety features and mobility aids.
8. Mark international days honouring the elderly by national-level celebrations and events.
9. Build an evidence-based culture of action on ageing, based on a strong health information system and research.

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# Introduction

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## Late life opportunities

The years of later life are often referred to as the “golden years”, signifying a hope that they will be filled with serenity and happiness accompanied by good health. Some potential benefits to older persons and society from the later period of life are shown in Box 1.

Attainment of these benefits in old age is consistent with a broad concept of health as “*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*” as defined in the preamble to the Constitution of the World Health Organization (WHO) (WHO, nd). However, to attain this desirable state in older age requires conditions conducive to health along the life course. If circumstances of life and earlier behaviours result in non-communicable diseases and other disabling conditions, opportunities to enjoy the “golden years” will be restricted, as will the potential social and economic benefits of a vigorous, active and productive older population.

This Report, from the Caribbean Public Health Agency (CARPHA) provides information on the health situation and response to ageing in the Caribbean region. The information provided aims to facilitate:

- 3) Development of rights-based approaches to health of older persons;
- 4) Strengthening of initiatives to promote health along the life course to ensure a healthy older population while reducing potential costs associated with population ageing.

### Box 1: Potential individual, social and economic benefits of ageing

Spiritual and religious pursuits and contemplation of lifetime achievements;

Enjoyment of mastery over occupational and life skills acquired earlier in life;

Sharing and influencing occupational and life skills through interaction with social networks, education of others and selective engagement in employment and consultancies. In this way, social capital and human resources are enhanced;

*Optional withdrawal from some or all labour force responsibilities that may have been associated with mental and physical stress and ill-health;*

Engagement in leisure activities that enhance mental and physical health;

Greater interaction with and mutual support of “loved ones”, including family members, partners and friends;

Contribution to care and socialisation of children;

Opportunities to enrich the life experience, knowledge bank and moral values of families by sharing intergenerational perspectives and histories;

*Exploration of paths not yet or little trodden in earlier life, such as travel to new places and engagement in new hobbies and experiences;*

*Enjoyment of use of savings, including pensions, accumulated to support and enrich life experiences;*

*Expenditure of savings on goods and services, creating “multiplier effects” in the economy, increasing national income;*

*Development of innovative and specialist products and services to cater to older persons, such as tourism experiences and facilities, financial products, mobility and sensory aids, pharmaceutical and cosmetic products;*

*Expansion of opportunities for employment and economic growth in the “grey” or “silver economy”, responding to economic demand from older persons.*

*(Neil Henderson and Carson Henderson, 2010)*

State of Public Health Reports (SPHRs) by the Caribbean Public Health Agency (CARPHA) are designed to inform and help guide stakeholders<sup>2</sup> in decisions on issues of public health importance for the Caribbean region. Healthy ageing was identified in a poll of Caribbean Ministry of Health stakeholders in 2016 as one of the priority topics for SPHRs<sup>3</sup>, which are to be produced annually by CARPHA according to the Inter-Governmental Agreement establishing CARPHA.

This Introduction starts by describing the Caribbean region as background to the rest of the report. Section 3 describes the content of each chapter.

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<sup>2</sup> Stakeholders are broadly defined as people concerned with the topic of the SPHR. *Core audiences are people in decision-making positions regarding the topic, especially Caribbean public health policy-makers. Audiences are potentially wide, since according to a Health in All Policies approach, or a Social Determinants of Health approach, the decisions of individual members of the public and of multiple Ministries, sectors, governmental and non-governmental agencies affect public health. SPHRs are designed to provide detailed information to a wide variety of audiences, including researchers and students. CARPHA also works to disseminate the information from the SPHRs in a variety of shorter formats to specific audiences, via its Communications Department.*

<sup>3</sup> *Participants in the 2016 poll of CARPHA Member States (CMS) comprised participants representing Ministries of Health from CMS. They were asked to allocate points to eight subject areas based on: relevance to CMS and regional development, Caribbean Cooperation in Health Priority Areas, economic impact, and alignment to events, partners and funding. The eight subject areas were: childhood obesity/non-communicable diseases, mosquito borne viral diseases, climate change and health, healthy ageing, violence and injury prevention, anti-microbial resistance, universal health coverage, tourism and health, Caribbean regional development through functional cooperation in health, and the Caribbean region's regulatory capacity. Representatives from 22 of CARPHA's 24 Member States responded. Healthy ageing is the fourth priority topic in order of preference HUNTE, S.-A. 2016. Presentation to plan State of Public Health Report 2014-16., Port of Spain, Caribbean Public Health Agency.. Previous CARPHA SPHR's have addressed the first three preferred topics: childhood obesity/non-communicable diseases, mosquito borne viral diseases, and climate change and health. It is notable that Healthy Ageing attracted comparatively high scores in the categories "Relevance to your country and the Region's development", "Economic impact" and "Caribbean Cooperation in Health Priority Area." Accordingly, the current report includes collating evidence of the economic, development and regional policy dimensions of healthy ageing as well as on the health status of older persons.*

## The Caribbean Region

The Caribbean comprises multiple islands and low-lying mainland territories and countries. The Region is remarkably diverse, with a mix of languages and ethnicities. Countries have varying sizes, geographic landscapes and political systems.

Population sizes vary from extremely small (approximately 1,900 in Saba) to relatively large (approximately 11.4 million in Cuba). Many of the states comprise small islands, which have been identified as facing development challenges resulting from small size, internal and external transport costs, coastal weather patterns, vulnerability to climate change, dependence on income from a small range of exports, and high dependence on imports to meet basic nutritional and other needs (International Labour Organization, 2014, UNEP, 2014). The Central American mainland country of Belize, the South American mainland countries of Guyana and Suriname and the island of Bermuda to the East of the United States are also considered part of the Caribbean, given a similar political history to the Caribbean islands. These mainland countries are in low-lying coastal zones, making them especially vulnerable to climate impacts on coastal regions, such as sea level rise, coastal erosion and floods.

The Caribbean is in the tropical zone and has little temperature variation throughout the year. There are two seasons; a rainy or wet season that runs roughly from June to November, and a dry season from December to May. The region is prone to tropical storms and hurricanes during the rainy season, with the hurricane season starting on June 1<sup>st</sup> and ending on November 30<sup>th</sup>. It is also prone to earthquakes resulting from movement of the Caribbean tectonic plate, and volcanic activity since several territories include volcanoes. Major natural disasters have afflicted many of the Caribbean countries, and these have set back development, sometimes for years or decades, and brought grave public health consequences. Being made up of Small Island Developing States, the region is extremely vulnerable to consequences of climate change, including temperature rise, changes in rainfall patterns, longer periods of drought, more intense periods of rainfall, sea level rise, ocean acidification and severe weather events. Health consequences of climate change and strategies to address them were examined in CARPHA's State of Public Health Report 2017-'18 (CARPHA, 2018).

Caribbean countries have highly open economies, meaning that they are highly dependent on imports for consumption and inputs for production, and on exports for income. For instance, 70% of foods consumed are imported from outside the Region. This affects susceptibility to Food-Borne Diseases (FBDs), and to Non-Communicable Diseases (NCDs) associated with the consumption of processed foods high in fat, sugar, artificial flavourings and preservatives. Additionally, the major export of most countries is tourism, which accounts for 25-65% of Gross Domestic Product (GDP) in most countries. While contributing to prosperity and cultural diversity, this also affects the range of goods available to local people and susceptibility to a wide range of pathogens from around the world.

Factors affecting Caribbean health at population level include (but are not limited to) population ageing, import dependency, sedentary lifestyles, climate and natural disasters. Between censuses conducted around 1990 and those around 2010, the proportion of the Caribbean population aged 14 and under fell by 8.7 percentage points, while the population 60 and over increased by 2.4 percentage points.<sup>4</sup> The change in the age profile results from demographic and nutritional transitions, as described in Chapter 3, and is among contributors to increased prevalence of NCDs. The transition towards a services economy, led by sectors such as finance, and away from agriculture and

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<sup>4</sup> These population data refer to CARPHA Member States (CMS), as listed in Table 1. There are 26 CMS, including CARICOM Member States, CARICOM Associate Members and Dutch Caribbean States.

manufacturing, and the advent of social media and hand-held digital devices, have tended to decrease physical activity levels.

The Caribbean has a rich mix of people of varying backgrounds. These include indigenous people, Africans, Asian Indians, Europeans, Chinese, Indonesian Javanese and many of mixed ancestry. The population of most countries comprises mostly people of African descent, but in Guyana, and Trinidad and Tobago, people of Indian descent outnumber them. There are four primary languages in the Caribbean: English, Spanish, French and Dutch, and several dialects including Patois, Creole and Papiamentu.

Politically, the countries can be grouped into the Caribbean Community (CARICOM) Member States, the United Kingdom Overseas Territories (UKOTs), the Dutch Caribbean (both municipalities in the Netherlands and countries), the French Departments and the Hispanic Countries. CARICOM consists of fifteen Member States, inclusive of the Organisation of Eastern Caribbean States (OECS), which is made up of nine member countries that share a common currency and a common market and economy. The UKOTs are associate Member States of CARICOM.

Countries vary widely in economic development, and in levels of health expenditure. There are wide variations in health expenditure as a percentage of government expenditure, bearing little relationship to the national income levels of each country (World Bank Databank, 2017).

This report focuses mostly on CARPHA Member States (CMS). CARPHA, established in 2013, merges pre-existing specialist Caribbean Regional Health Institutions, each with a history of cooperation and achievements in health. The issues highlighted in this report are likely to be similar in Caribbean countries and territories that are not part of this grouping. CARPHA membership currently includes all CARICOM Member States and associate Member States as well as the Dutch Caribbean (Table 1).

**TABLE 1: CARPHA MEMBER STATES (CMS)**

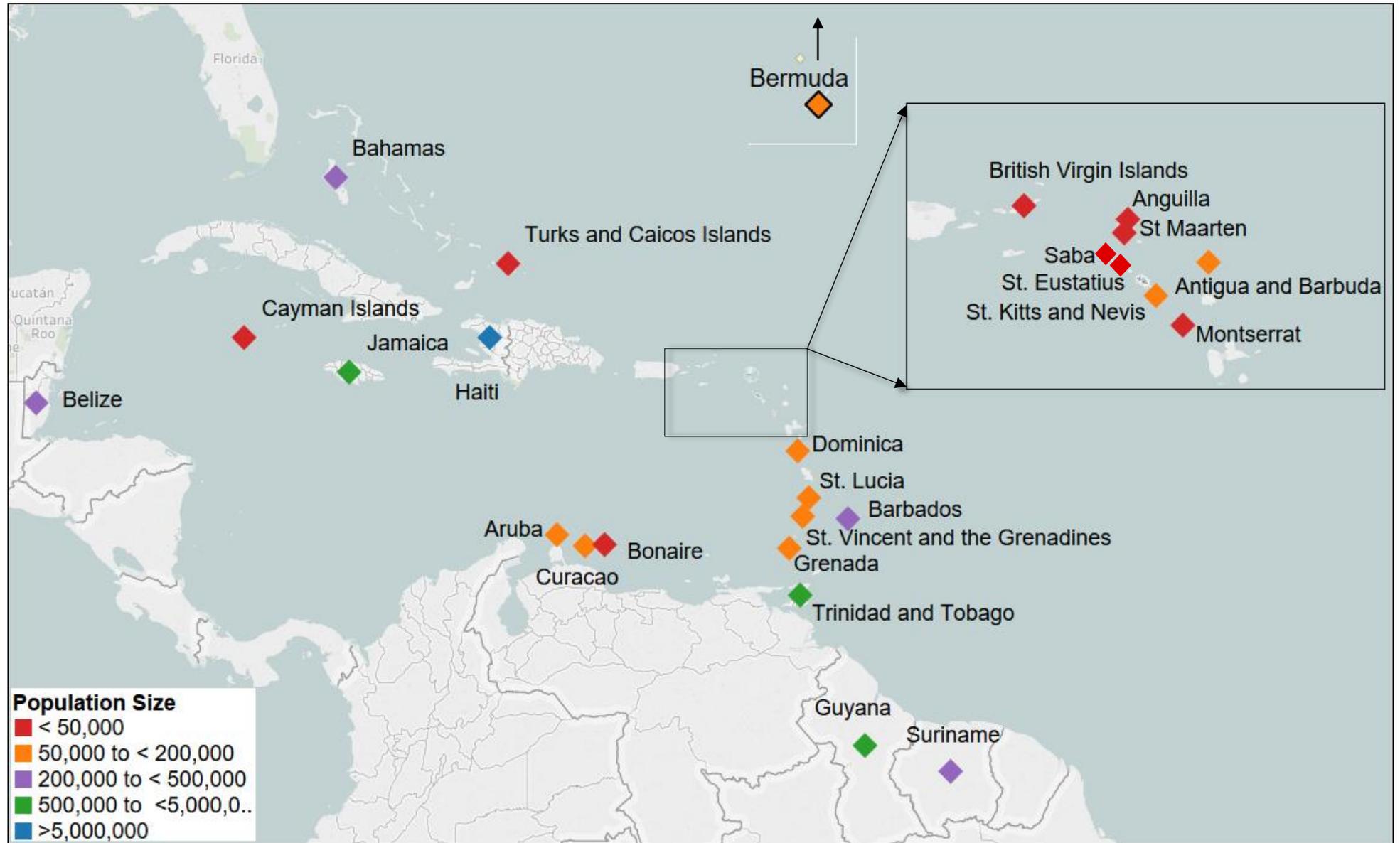
CARICOM Member States	CARICOM Associate Members	Dutch Caribbean <sup>5</sup>
Antigua and Barbuda*	Anguilla*	Aruba
Bahamas	Bermuda	Bonaire
Barbados	British Virgin Islands*	Curacao
Belize	Cayman Islands	Saba
Dominica*	Turks and Caicos Islands	Sint Eustatius
Grenada*		Sint Maarten
Guyana		
Haiti		
Jamaica		
Montserrat*		
Saint Lucia*		
St. Kitts and Nevis*		
St. Vincent and the Grenadines*		
Suriname		
Trinidad and Tobago		

\* OECS Member States

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<sup>5</sup> *Aruba, Curacao and Sint Maarten are now constituent countries within the Kingdom of the Netherlands, whose government and parliament are empowered to enact legislation with regard to the countries' own affairs. Bonaire, Sint Eustatius and Saba (often known as the BES Islands) are special municipalities of the Kingdom of the Netherlands Administration whose administration falls under the Ministry of the Interior and Kingdom Relations of the Kingdom of the Netherlands.*

FIGURE 1: MAP SHOWING POPULATION SIZES AMONG CARPHA MEMBER STATES



## Outline of the report

The diversity of the Caribbean region and other characteristics detailed above are important influences on the scope of action with regard to healthy ageing. In the chapters that follow, Caribbean characteristics are taken into account in discussing the issues and options for the region. On some matters, there is a scarcity of Caribbean data, so relevant information from outside the region is referred to. There are also important international initiatives on ageing in which Caribbean people have participated; these are described. Gaps in research and information are discussed in the final chapter of this report.

In Chapter 1, the concept of healthy ageing is elaborated, along with associated conceptual frameworks and ethical principles.

Chapter 2 presents the major international and Caribbean inter-governmental agreements and frameworks on ageing.

Chapter 3 presents information on demographic shifts and the ageing of Caribbean populations.

Chapter 4 presents data and studies on health conditions along the life-course and among older persons.

Chapter 5 looks at informal and formal care among older persons in the Caribbean socio-cultural context.

Chapter 6 looks at health promoting environments and self-care

In chapter 7, we draw out health systems and policy implications for older persons. In that chapter we present and use WHO's framework of building blocks of health systems to analyse the information on care and health promotion presented in chapters 5 and 6. We also refer to progress with respect to international agreements and frameworks presented in chapter 2.

Throughout the SPHR, gender analysis is used to draw out the findings for men and women.

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## Chapter 1: Healthy Ageing Concepts and Principles

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## Concepts and principles of “Healthy Ageing”

The “golden years” of life are a time of great potential (see Introduction, Box 1), but this depends crucially on good health. During older age the attainment of “*a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*” – the WHO’s definition of health (WHO, nd-a) – may be challenged by age-related vulnerabilities. These vulnerabilities are associated with biological processes, health-related behaviours and socio-economic circumstances throughout the life course, gender and the ethical treatment of senior citizens.

Healthy ageing does not only refer to being free from disease but rather can be defined as, “*the process of developing and maintaining the functional ability that enables well-being in older age*” (WHO, 2015). This process involves creating supportive environments and opportunities.

*Healthy ageing is about creating the environments and opportunities that enable people to be and do what they value throughout their lives.*

(WHO, 2019)

This SPHR aims to provide information to help Caribbean people create and sustain environments and opportunities to be and do what they value throughout their lives. The healthy ageing concept is fundamentally about maximising the amount of time in the life course during which functional abilities<sup>6</sup> are maintained, so that people can, for as long as possible:

- meet their basic needs;
- learn and make decisions;
- be mobile;
- build and maintain relationships; and

### Box 113: Defining the older population

WHO notes that, “*chronological age is not a precise marker for the changes that accompany ageing*” (WHO, 2002). Nevertheless it is helpful to have guidelines as to the age groups concerned. WHO defines older persons as those, “*...whose age has passed the median life expectancy at birth*” (WHO, 2015). The *Vienna International Plan of Action on Ageing* (described in Chapter 2) defined the threshold of older age as 60 years (UN, 1982) Other definitions are linked to the age of retirement and pension entitlement. In most CMS this is between 60 and 65 years (Nassar Koffie et al., 2016, WHO, 2015). The United Nations defines the following age groups (Theodore et al., 2016):

Pre-elderly:	Age 50-59
Young old:	Age 60-74
Middle old:	Age 75-84
Oldest old:	Aged 85+

These definitions will be used in this SPHR.

Throughout the SPHR, groupings 60 and over will be collectively, and interchangeably, referred to as the elderly, older persons, seniors, or senior citizens. Another term, geriatric, will also be used to refer clinical conditions that are more common in older people.

WHO notes that, “*chronological age is not a precise marker for the changes that accompany ageing*” (WHO, 2002). Nevertheless it is helpful to have guidelines as to the age groups concerned.

<sup>6</sup> The terms “functional abilities” and “functional capacity” appear to be used interchangeably in the literature on healthy ageing. We therefore do not make a distinction between them in this report.

- contribute to society. (WHO, 2019)

This focus on functional abilities is consistent with a concept of health that is not equivalent to absence of disease, since people with diseases may still have high functional abilities.

*Everybody can experience Healthy Ageing. Being free of disease or infirmity is not a requirement for Healthy Ageing as many older adults have one or more health conditions that, when well controlled, have little influence on their wellbeing.*

*(WHO, 2019)*

Healthy ageing thus requires adequate health care and support (among other things) so that the impact of diseases on functioning are minimised and infirmities or disabilities are addressed. The emphasis is on minimising the length of time, especially at the end of life, when individuals are in a dependent state due to disease or disability. The outcome would be a higher quality of life for most, and a more economically feasible late life experience (Neil Henderson and Carson Henderson, 2010, WHO, 2015, WHO, 2017b, WHO, 2017a, WHO, 2002, WHO, nd-b, WHO, 2019).

The healthy ageing concept encompasses or is related to a number of approaches, frameworks and concepts that will now be detailed:

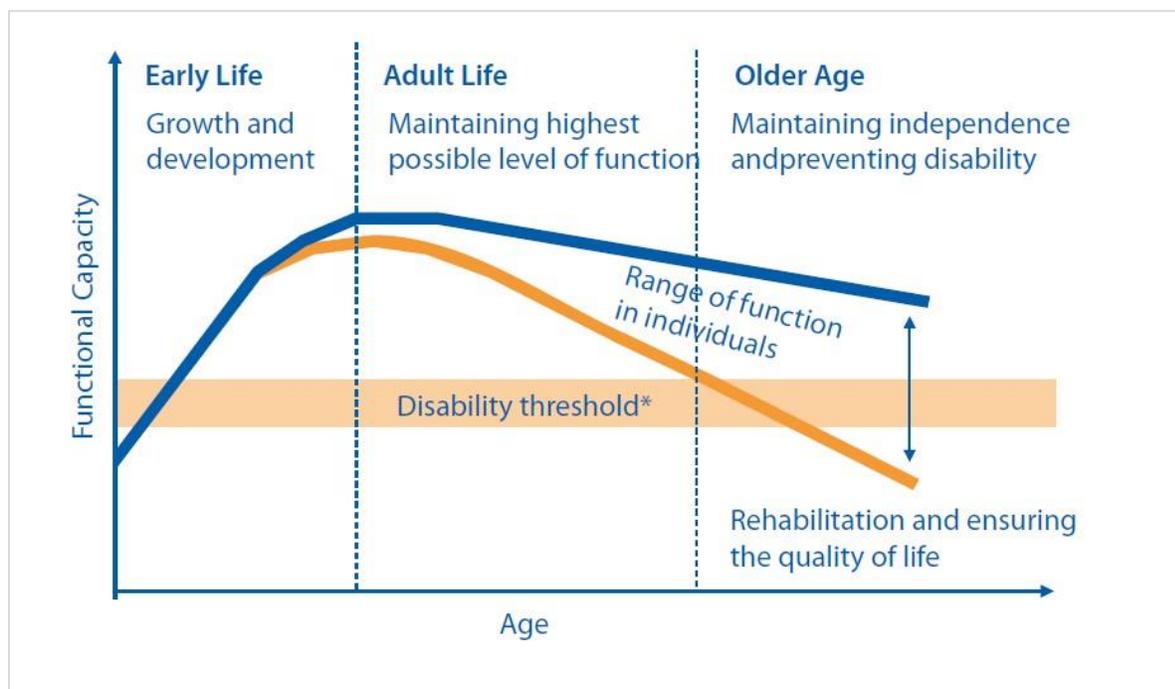
- The Life Course Approach
- The Social Ecological Model
- Structural Determinants of Health
- Active ageing
- Human Rights of Older Persons
- Gender
- The Geriatric Giants

## 1. The Life Course Approach

Ageing begins at conception and continues throughout the life course. Socio-economic conditions, diseases, injuries and behaviours in early stages of life will affect functional abilities later on. A strategic approach to achieving health in older age therefore needs to focus on prevention of illness and disability throughout life. It is also critical to enable older persons to continue to be and do what they value by creating health promoting environments, including provisions such as adequate pensions and fiscal assistance, immunisations, screenings, access to medication, mobility and sensory aids, transport, nutritional support, lifelong learning and employment opportunities, and home modifications for persons with special needs (Neil Henderson and Carson Henderson, 2010). These and other aspects of health promoting environments will be considered in later chapters. The healthy ageing approach promotes investments in prevention, care and support to enable the benefits of ageing to be fulfilled.

The theoretical impact of such investments is illustrated in the following diagram (Figure 1). By investing in health throughout the life course, the general course of human health would be like that in the blue line, while without such investment there would be a more rapid decline in health and eventual disability, as depicted by the orange line. The difference in functional capacity between the two lines potentially represents quality of life and economic savings and gains from investing in health over the life course.

FIGURE 2: MAINTAINING FUNCTIONAL CAPACITY THROUGHOUT THE LIFE COURSE



\*Changes in the environment can lower the disability threshold, thus decreasing the number of disabled people in a given community.

Physical aspects of functional capacity (such as ventilatory capacity, muscular strength and cardiovascular output) increase in childhood and peak in early adulthood, eventually followed by a decline. The rate of decline, however, is largely determined by factors related to adult lifestyle – such as smoking, alcohol consumption and diet – as well as external and environmental factors. The gradient of decline may become so steep as to result in premature disability. However, the acceleration in decline can be influenced and may be reversible at any age through individual and policy measures.

Source: (Kalache and Kickbusch, 1997) cited in (WHO, 2002), p14.

## BOX 305: KEY TERMS IN HEALTHY AGEING

### KEY TERMS:

**Functional ability** comprises the health-related attributes that enable people to be and to do what they have reason to value. It is made up of the intrinsic capacity of the individual, relevant environmental characteristics and the interactions between the individual and these characteristics.

**Intrinsic capacity** is the composite of all the physical and mental capacities of an individual. At its core this includes the person's genetic inheritance. It also includes personal characteristics, which are both fixed and socially determined, such as sex, ethnicity and education. Intrinsic capacity also includes health-related characteristics, such as health-related traits and skills, physiological changes and risk factors, diseases and injuries and changes to homeostasis.

**Environments** comprise all the factors in the extrinsic world that form the context of an individual's life.

**Resilience** is the ability to maintain or improve a level of functional ability in the face of adversity (either through resistance, recovery or adaptation). This ability comprises both components intrinsic to each individual (for example, psychological traits that help an individual frame problems in a way that can lead to a positive outcome, or physiological reserves that allow an older person to recover quickly after a fall) and environmental components that can mitigate deficits (for example, strong social networks that can be called on in times of need, or good access to health and social care).

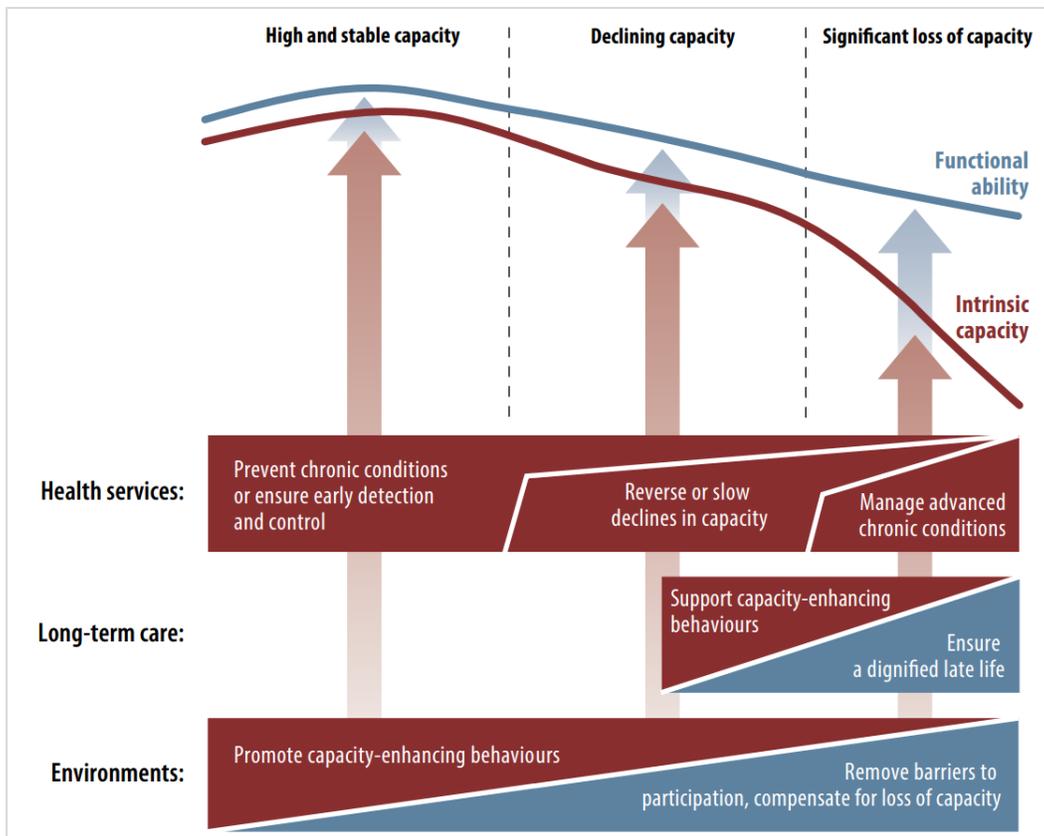
*Source: (Morley, 2017, WHO, 2015)*

Box 145: Key terms in healthy ageing

The Life Course Approach to ageing is based on recognition of the role of environments in health and that intrinsic and functional capacities can decline in old age. It posits that the design of social and physical environments and health care can slow the decline and maintain and sustain functional abilities. The conceptual framework depicted in Figure 2 shows the different components of an appropriate response over the life course (WHO, 2015).

The following framework presents a holistic approach to healthy ageing by combining health promotion approaches, indicated in red, with health care measures to increase functional capacity where this is impaired, indicated in grey.

FIGURE 3: A PUBLIC-HEALTH FRAMEWORK FOR HEALTHY AGEING: OPPORTUNITIES FOR PUBLIC-HEALTH ACTION ACROSS THE LIFE COURSE



Source: (WHO, 2015), p33

The early period of adulthood tends to be characterised by **high and stable capacity**, with little difference between levels of intrinsic capacity and functional ability. At this stage, public health action within health services should mainly focus on prevention of chronic conditions and ensuring early detection and control (e.g. through cancer screening). Environmental action works to promote healthy behaviours. Disabilities will be relatively few, reflected in the small gap between the red and grey lines. There is nevertheless a need to develop systems to remove barriers to participation and compensate for loss of capacity, especially for the relatively small population with disabilities.

In the period of **declining capacity**, which may start in the mid-adult years, the focus of health services becomes mainly the reversal or slowing of the decline in intrinsic capacity, with continued health promotion to achieve capacity-enhancing behaviours. To maintain functional ability and reduce the rate of decline, there is an increase in the need to remove barriers to participation and compensate for loss of capacity.

When there is **significant loss of capacity**, which may take place generally in the later years, the main focus of health care shifts to the management of chronic conditions, while environmental action focuses on removing barriers to participation (for instance by providing transport to people who can no longer drive) or compensating for loss of capacity (for instance providing spectacles to people with poor vision). Between the period of declining and significant loss of capacity there is the need to introduce long-term care options, supporting capacity-enhancing behaviours via health promotion and ensuring a dignified late life as functional capacity is progressively lost (WHO, 2015).

To assess the position of a person with respect to functional capacity, measurement tools are important. Box 3 provides details of some of those commonly used.

Associated with the development of strategies to assist people with functional impairment are a number of monitoring tools. These include (among others) the **Activities of Daily Living (ADL) scale** and the **Mini Mental Status Examination (MMSE)**. Some measurement scales and diagnostic tools are specific to conditions concentrated among older persons, such as incontinence and falls (Bartoszek et al., 2019).

Clinicians typically use the Katz Independence in Activities of Daily Living (Katz ADL) scale to assess function and detect problems in performing ADL and to plan care accordingly. The Index ranks adequacy of performance in the six functions of bathing, dressing, toileting, transferring, continence, and feeding. Clients are scored yes/no for independence in each of the six functions. A score of 6 indicates full function, 4 indicates moderate impairment, and 2 or less indicates severe functional impairment.

Katz also developed another scale for instrumental activities of daily living (I-ADL) such as heavy housework, shopping, managing finances and telephoning. The I-ADL are those activities whose accomplishment is necessary for continued independent residence in the community (Bourne, 2009, Katz, 1983, McCabe, 2019).

The MMSE is a 30-point questionnaire commonly used by doctors and other healthcare professionals to check for cognitive impairment. The questions check short- and long-term memory; attention span; concentration; language and communication skills; ability to plan and ability to understand instructions (Tombaugh, 1992, Gibson et al., 2019, Gibson et al., 2013, Neita et al., 2014).

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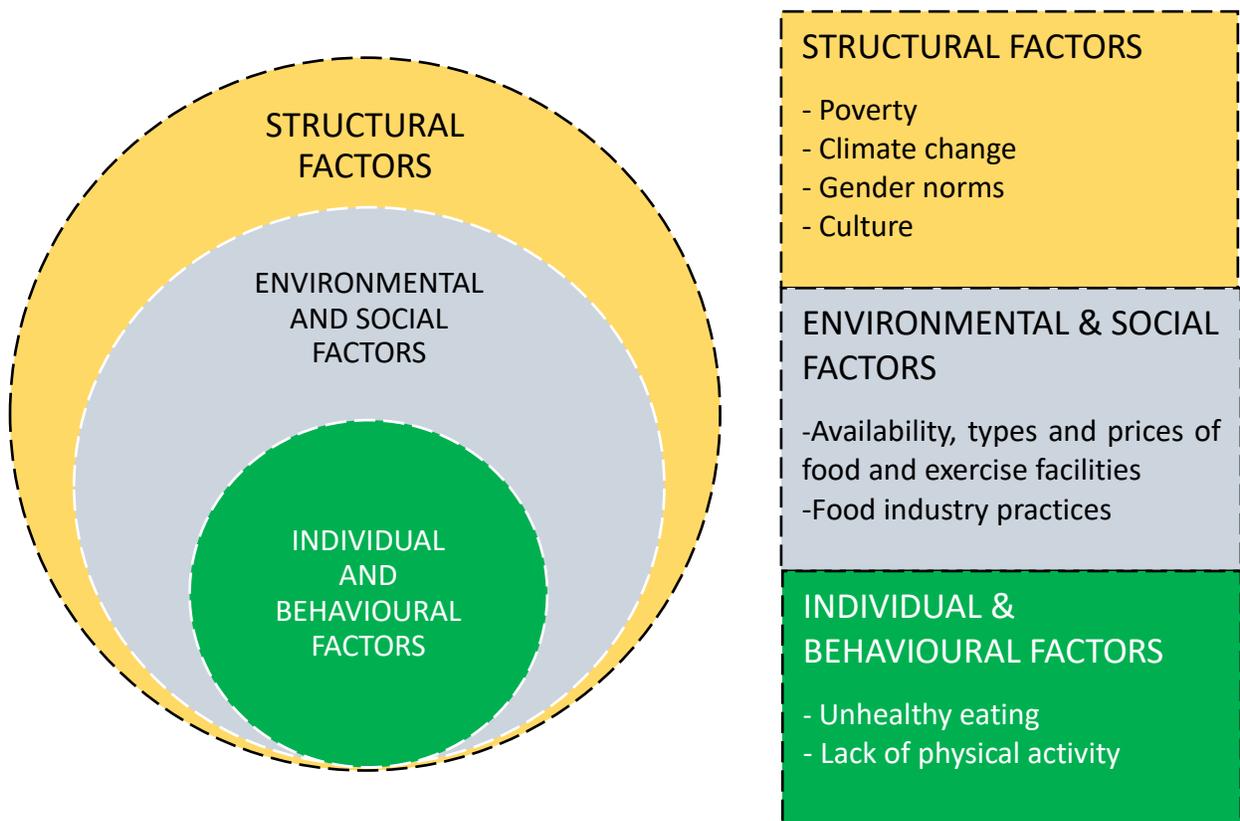
The Life Course Approach seeks to influence both intrinsic capacity and environments, building resilience and enhancing functional abilities. The role of environments in determining the functional abilities of older persons is conceptualised in the Social Ecological Model (SEM).

## 2. The Social Ecological Model

The healthy ageing approach sees health as determined by behavioural and environmental factors at various “levels”, as conceptualised in the SEM, variants of which are widely used in public health. Holistic health promotion requires constructive action at each of these levels to achieve better health outcomes.

A basic version of the SEM is presented in Figure 3. According to this, health outcomes are determined by a combination of individual and behavioural factors, environmental and social factors and structural factors. These three basic levels are represented by concentric circles, as the outer circles are the environments seen as limiting and influencing the range of action in the inner circles. The lines around the circles are not continuous as there is also two-way action between levels. For instance, individual action can influence the social environment; people are not just victims of circumstance.

FIGURE 4: BASIC SOCIAL-ECOLOGICAL MODEL ILLUSTRATING LEVELS OF FACTORS AFFECTING RISK OF NCDs (FOCUS ON DIET AND EXERCISE)



Sources: Adapted from (Poundstone et al., 2004, McLeroy et al., 1988)

The boxes at the right-hand side of the diagram provide a few examples of factors at the three levels that can affect the risk of NCDs (such as cardiovascular disease, diabetes, cancer, chronic respiratory disease and mental health) and associated impairments and disabilities that manifest especially in later life. Unhealthy eating and lack of physical activity have been identified in research as contributing to all these NCDs. The important contribution of the Socio-Ecological Model is in providing a framework to explain risk factors - the “causes of the causes” (Marmot, 2005).

One of the important issues at the social-environmental level is access to health promoting resources. Using the example in Fig. 3, resources include healthy food and exercise facilities. These may be restricted for example by geography (lack of proximity to green spaces, parks, exercise equipment, gyms etc.) or by economics (prices of healthy food options and mobility aids, limited availability of healthy food options in local stores). Lack of resources to promote health literacy may also be a challenge. A study carried out in the parish of St. Catherine, Jamaica looked at the provision of preventive care to persons aged 50 and over in the primary health care system. Only 5.1%, 24.5% and 9.6% of older persons reported being advised about smoking, physical activity and alcohol consumption respectively by health centre staff. A higher proportion (56.5%) reported being advised about diet. Qualitative research conducted as part of the study revealed misunderstandings by older persons themselves about the role of prevention in maintaining health status (Eldemire-Shearer et al., 2009).

The structural level generally refers to macro-economic and macro-social factors. Climate change can affect health in multiple ways, either directly (for example via the effects of temperature rise on thermal regulation of bodily functions) or indirectly via its effects on social and environmental determinants. For instance, in the Caribbean, climate change is leading to more frequent and longer periods of drought, overall decrease in precipitation (rainfall) along with increased frequency of extremely heavy precipitation events (CARPHA, 2018). These are harmful to agricultural production and are likely to reduce access to fresh foods. Poverty is a factor that reduces access to health promoting resources. Gender norms can condition the abilities of women and men to prevent and respond to ill-health. For example, Caribbean data shows that women spend less time engaged in physical exercise than men (CARPHA, 2017), which may be attributed to various gendered beliefs and practices such as norms for men to be physically strong and for women to take primary responsibility for child-care and household chores.

Culture also plays an important role in defining the types of food that are available, how they are prepared and the times and places where they are consumed, and by whom. Older persons may have food preferences that differ somewhat from those of younger people. For instance, “Creole” food practices in the Caribbean population of African descent was developed from traditional African recipes and conditioned by what was available at low cost during and after slavery in the region. It often includes the use of root vegetables, known as “ground provision”, that can be easily grown in tropical conditions, such as eddoes, dasheen and yam. Younger persons are increasingly influenced in their dietary practices by the media and globalisation, leading to increasing consumption of products farmed in Northern countries, such as “Irish” potatoes, and of highly processed foods containing high fat, preservatives and sugar. “Irish” potatoes and various types of ground provision differ in their glycaemic index and thus their nutritional effects (Ramdath et al., 2004), and highly processed foods are associated with deficits in key nutrients (Watson-Duff and Cooper, 1994) and with risks of NCDs (Murphy et al., 2018). Changing food consumption patterns are cause for concern as to their impact on NCDs and associated disabilities as the current younger adult population moves into older age.

More complex versions of the Social Ecological Model have a greater number of levels, but all aim to show how health is determined by factors at various levels, from the proximal level of individual behaviour and characteristics to the distal level of macro-economic and social factors. A widely used model is that of Hanson et al, who define five levels (Box 4).

**BOX 529: LEVELS OF INFLUENCE ON HEALTH OUTCOMES, FROM THE SOCIAL ECOLOGICAL MODEL**

**Level 1: Intrapersonal** - biological, behavioural and psychological factors

**Level 2: Interpersonal** - relationships with family members, partners, and peer groups and others

**Level 3: Organisational** - e.g. characteristics and practices of employing organisations, schools, health organisations, clubs and associations

**Level 4: Community** - social environmental factors in the locality or within social networks, such as social capital, social class, cultural beliefs and the built environment

**Level 5: Society** - macro-social and economic factors such as national culture, gender norms, economic inequality, and government policy

*Source: (Hanson et al., 2005, Coreil, 2010).*

The various levels of the model influence health outcomes, such as incidence and prevalence of NCDs, and functionality outcomes, such as the extent of sensory, motor and cognitive disabilities throughout the life course and especially in old age.

The potential impacts of the determinants at the various levels are illustrated in Figure 4 on the following page. Here, examples of determinants of NCDs at the various levels are contrasted with a health promotion approach to prevention of NCDs and creation of a supportive environment for older persons. The idea is to contrast the situation of:

- 1) a person whose environment and behaviour are not supportive of health and who loses functional abilities – disability or premature mortality results, and
- 2) a person who pursues a healthy lifestyle in a health promoting environment and is disability free.

**FIGURE 5: COMBINING THE LIFE COURSE APPROACH AND SOCIO-ECOLOGICAL MODEL TO CONCEPTUALISE FACTORS INFLUENCING HEALTH IN OLDER AGE: EXAMPLES OF DETERMINANTS AND OUTCOMES**



### 3. The Social Determinants of Health approach

FIGURE 6: SOCIAL DETERMINANTS OF HEALTH DEFINITION



Source: (Solar and Irwin, 2010)

As noted in section 2, social factors at various levels of the Social Ecological Model determine health outcomes. The Social Determinants of Health (SDH) approach is fundamentally about achieving equity in social factors that present barriers to health. The approach is based on the recognition that some people are placed in a position of systematic disadvantage by lack of access to power, money and resources and by the circumstances in which they are born, grow, live, work and age. The approach is thus consistent with a life course approach and is driven by ethical considerations. As shown in Figure 5 above, the World Health Organization Commission on Social Determinants of Health has determined that access to energy, investment, community institutions, water, justice and food are critical determinants of health. One can note that access to these resources is especially critical to ensure health and survival in old age.

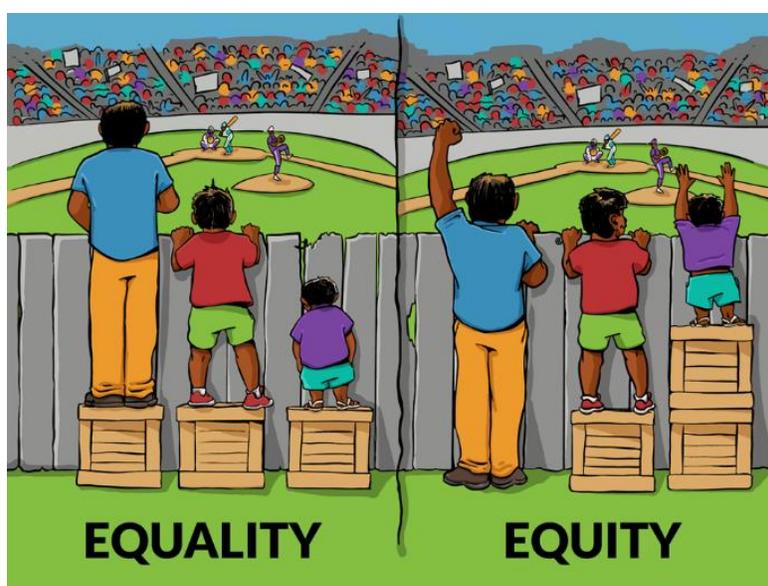
Access to resources is affected by discrimination, especially when personal characteristics do not fit the societal norm. Therefore, in examining health issues, we should analyse and address upstream, structural factors, looking at “the causes of the causes” (Marmot, 2005). The emphasis is on social justice and power relations: redressing the balance and reducing inequalities that are structured on the basis of age, disability, gender, social class and other dimensions of social difference. It should be noted that people have multiple identities and thus vulnerabilities that potentially compound each other. For instance, vulnerabilities associated with age may be compounded by vulnerabilities associated with disability, gender etc.

People in vulnerable populations may require special provisions to enable them to participate on an equal basis and maintain functional ability. For instance, people who do not have full use of their legs may be systematically excluded from health settings unless these settings are adapted – for instance through the installation of wheelchair ramps – or people with these disabilities are provided with assistance such as walking frames and prostheses. People with disabilities may also face verbal

insults, hurtful remarks and exclusion from opportunities that affect their health and use of health care settings. An equitable approach in line with the Social Determinants of Health approach would seek social inclusion, addressing physical, cultural and psycho-social barriers to full participation in social and health opportunities.

The following picture (Figure 6) illustrates the difference between equality and equity. Equal treatment of the three people trying to watch the baseball game is shown on the left-hand side, where they all stand on boxes of the same size. Here, the smallest person cannot see the game. Redistribution of the boxes is an example of equity in action. On the right-hand side, we see that the smallest person is now able to see the game as the tallest person's box has been re-allocated to him. An equity-based approach is thus about allocation of resources to persons with different needs and characteristics.

FIGURE 7: EQUALITY AND EQUITY



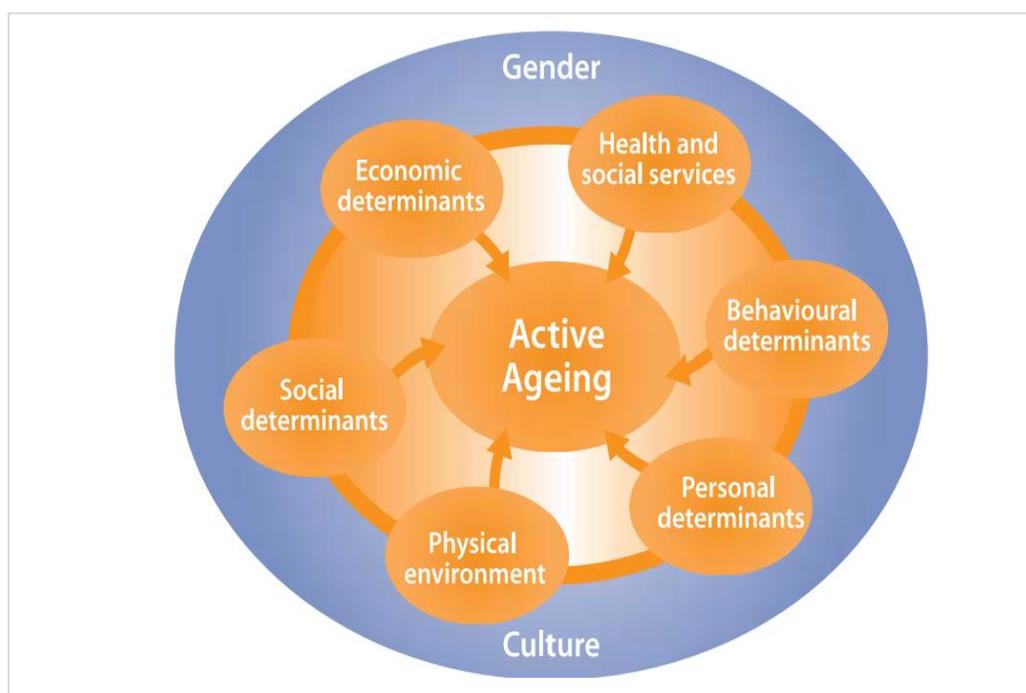
Source: [http://interactioninstitute.org/wp-content/uploads/2016/01/IISC\\_EqualityEquity.png](http://interactioninstitute.org/wp-content/uploads/2016/01/IISC_EqualityEquity.png)

#### 4. Active Ageing

Historically, the healthy ageing concept grew out of the increasing focus of global health policy advisors and actors on the health and functional ability aspects of ageing. In the early 2000s, the WHO and other international agencies developed the concept of *active ageing* (WHO, 2002), which included health as one of its pillars and from which the healthy ageing concept later grew. Chapter 2 traces the history of the various documents and international and regional meetings that developed the frameworks to guide action. Some agencies continue to use active ageing as a major set of ideas to guide their work and to monitor progress in achieving developmental goals relating to senior citizens (UNECE, 2019, Eldemire-Shearer, 2008, Cloos et al., 2010, Willie-Tyndale et al., 2016). The active ageing framework also underpins the Madrid International Plan of Action on Ageing (MIPAA), described in Chapter 2, which continues to guide international action for and with older persons (UN, 2002).

The three major pillars of the active ageing framework are **health, participation** and **security**. See Figure 7. These are guided by the United Nations Principles for Older People (UN, 1991). The achievement of active ageing requires the mainstreaming of ageing into all sectors as it entails considerations of health, social services, security, civil society and social engagement, economic status, physical environment, culture and gender. As such it is compatible with the Health in All Policies approach which seeks to mainstream health (WHO, 2014) and which has been used to develop broad health promotion approaches to ageing. The difference is that the main focus of active ageing is on the *population* (older persons) while the main focus of healthy ageing is on *health*.

FIGURE 8: THE DETERMINANTS OF ACTIVE AGEING



Source: (WHO, 2002) p19

## 5. Human Rights, Ethics, and Principles of Public Health

### 5.1 Human rights vulnerabilities of older persons

Older persons are recognised as a potentially vulnerable population, with their vulnerabilities being associated with decline in functional abilities and with social attitudes and anxieties about ageing. Most intergovernmental agreements to orient action vis-à-vis the elderly incorporate human rights perspectives. The United Nations Principles for Older Persons, which have been used to guide active and healthy ageing approaches, include **dignity, independence, participation, self-fulfilment and care** (UN, 1991). These are illustrated in Box 5.

## **Box 561: EXAMPLES OF HUMAN RIGHTS VULNERABILITIES OF OLDER PERSONS**

### **DIGNITY**

Older persons with functional impairments are especially vulnerable to being in undignified situations, such as (in the case of cognitive impairment) being incompletely or inappropriately dressed when appearing in public. Assistance is needed with activities of daily living such as dressing, toileting and bathing to maintain dignity in public, and with maintaining private and safe spaces.

Dignity is closely related to respect. Older persons may be subject to insults and discrimination resulting from their difference from social norms emphasising youth, physical and mental competence. Staff providing support to older persons should receive training and be subject to disciplinary procedures to maintain respect. Intergenerational solidarity is a concept that applies to approaches to bring younger and older persons together to develop mutual understanding and respect and lend assistance to senior citizens.

### **INDEPENDENCE**

Challenges in maintaining independence accompany the decline in functional abilities. Special measures are necessary to enable independence, such as the provision of wheelchairs to people who would otherwise be immobile, and adaptation of environments to enable wheelchair access. Independence is also related to the concept of choice. Older persons may need assistance in making decisions as a result of physical or cognitive impairment. For instance, legal documents may need to be read to someone with visual impairment. In cases of extreme cognitive impairment, a trusted person should be selected and ratified legally as a proxy to make decisions on behalf of the person.

### **PARTICIPATION**

Participation in activities such as sports may decline as a result of reduction in functional abilities and age discrimination (ageism). Specific measures should be taken to ensure participation, such as developing sporting opportunities and clubs designed for older people and for specific functional impairments. Older age can be a period of increasing isolation, loneliness and exclusion from former social roles. Involuntary retirement from the labour force is an example of social exclusion. Flexible working arrangements, including flexibility in retirement ages and hours and locations of work, are among the measures that can be taken to promote social inclusion of older persons.

### **SELF-FULFILMENT**

Older persons have the right to engage in activities they enjoy, without exclusion and discrimination. This includes leisure, social and sexual activities. It also includes selective engagement in employment. Adaptation of environments, staff training, and flexible modes of working may be needed to facilitate self-fulfilment of older persons

### **CARE**

Care is related to protection. Older persons may be vulnerable to physical, emotional, sexual and financial abuse, especially if functional abilities are impaired. Legal provisions, involving for example regulation and inspection of residential and health care settings for older persons, should be developed, implemented and enforced to protect older persons from abuse. Legislation and mechanisms (such as Protection Orders) to protect persons against domestic violence can be applied to protect older persons from abuse.

## 5.2 Quality of health care and health settings

Principles of good practice in health settings relate to human rights, especially those of vulnerable populations. Criteria used to determine the quality of services are **access**, **acceptability**, **appropriateness** and **equity** (Eldemire-Shearer, 2011, Eldemire-Shearer and Mona Ageing and Wellness Centre Team, 2019, WHO, 2008, WHO, 2012).

**Access:** Vulnerable populations *are able* to obtain services.

Access is an especially important issue for older persons with functional impairment. Health settings should be made physically accessible to people with mobility challenges by means such as wheelchair ramps, wide doorways, adapted toilet facilities and grab rails. Extra transport services are critical for people who no longer drive or who otherwise have limited access to transport. For people with sensory impairment, accessibility may be enhanced by means such as provision of audio and braille materials for the visually impaired, and visual messaging and sign language interpretation for people with hearing impairment (ECLAC, 2018).

Adaptation of home environments is also a means to maintain independence and avoid institutional care as long as possible, enhancing abilities to participate and thus access social and other opportunities.

Barriers to access may be social as well as physical. Stigma and discrimination can affect the willingness and ability of people to come forward and access services. For instance, stigma relating to cancer may create fear of a cancer diagnosis and of being seen to be tested for cancer, impeding the efficacy of cancer screening efforts. Lack of patient/ client confidentiality is a key concern that can impede the uptake of services, especially for stigmatising conditions. This has been found to be the case for HIV and other sexually transmitted infections (STI) (Allen et al., 2019), and given social discomfort with sexuality among older persons (Rabathaly and Chattu, 2019), the likelihood that they will come forward for HIV/ STI testing may be low.

**Acceptability:** Vulnerable populations *are willing* to obtain services that are available.

**Appropriateness:** The *right services* (i.e. the ones that target populations' need) are provided.

Terms such as “client-centred” or “patient-centred” and “age-friendly” are associated with the acceptability of services, as well as their appropriateness. The principle of social inclusion dictates that services should be responsive to the wishes of clients/ patients, implying that democratic processes of consultation and active involvement of older persons should be used in service design. Given limitations in functional capacity, it may be necessary to implement special measures (such as sign language interpretation) to enable full participation in decisions.

Services also need to be clinically appropriate, based on adequate processes of diagnosis and rational processes of resource allocation. Challenges in this regard include differences in the symptomatic presentation of illnesses among the elderly, and difficulties some patients and clients have in communicating their symptoms and emotions. Specialist geriatric training may be needed to enable the design of appropriate services.

**Equity:** *All people*, not just selected or privileged groups, are able to obtain the services that are available.

Social inclusion is a human right which influences access to care and thus treatment outcomes. The issue of equity has been explored above in the section on SDH, and especially affects people who face

marginalization and discrimination. Among older persons, there may be multiple identities and conditions in addition to chronological age that affect experiences and access to services, such as race, gender, sexual orientation, income, disease and functional abilities. An equitable approach needs to be client-centred, based on knowledge on the multiple characteristics of each patients or client and to develop responsive approaches for each person.

### 5.3 The ethics of care

**Ethical considerations** are especially important in health care responses for the elderly.

The ethical principle of **respect for persons** implies that health care must be delivered with informed consent of the patient/ client, and that patient/ client privacy and confidentiality must be upheld. Informed consent is difficult to obtain from persons with some types of functional impairment, such as cognitive and sensory difficulties. Where such impairment is severe and a person is unable to provide fully informed consent, this power may be transferred to a proxy. Countries generally have legal provisions for Power of Attorney to be transferred to a trusted person, such as an adult child, who can make decisions on health, welfare and finances on behalf of the older person. Rigorous procedures are necessary to do background checks and ensure that older people are not subject to exploitation or abuse as a result of the transfer of power.

Respect for persons also dictates that palliative care should be provided, regardless of the likelihood of full recovery from an illness or of progressive deterioration (OAS, 2015). Palliative care aims to improve quality of life of patients and their families facing life-threatening illness, through the prevention and relief of suffering by means of early identification and assessment and treatment of pain and other physical, psychosocial and spiritual concerns. NCDs often entail a long period of dying with potential increase in suffering, which can be alleviated by good palliative care, enabling senior citizens to regain their autonomy and make their own decisions – compatible with the UN human rights of older persons principles of self-fulfilment and dignity. Unfortunately, despite its importance as a humanitarian issue, palliative care remains a privilege and is not accessible to all. In the San José Charter on the rights of older persons (see Chapter 2), ECLAC Member States pledged “*to promote the development of and access to palliative care to ensure that older persons with terminal illness die with dignity and free of pain*” (ECLAC/CDCC, 2015) p8.

The ethical principle of **non-maleficence (“do no harm”)** also carries special significance for older persons, particularly at the end-of-life. When caring for the dying, the emphasis shifts to facilitating “a good death.” Characteristics of a good death are said to be: good quality of life during the end-of-life phase; comfort; preparation; fulfilment of life roles; welcomed with clarity of mind, and non-stigmatised. A range of skills, only some of them medical, are needed by professionals and others who aim to facilitate these (Greaves, 2012), whether or not in the context of a formal palliative care package or programme.

When death is an imminent possibility, or patients’ quality of life has deteriorated massively, questions arise about the exercise of a “right to die” or to choose the manner of death. Legal provisions are necessary to enable patients to give “advance directives” regarding their wish to be or not to be resuscitated or retained on life support under specific medical circumstances. Specialist staff should be available to explain the legal options and enable patients to exercise their rights.

There are also ethically controversial decisions to be made concerning a patient’s right to choose to end his/ her life on the basis of an assessment of their own quality of life. What are the criteria that can be used by professionals to assess the rationality of such decisions, to advise in the patient’s best interest? Under precisely what circumstances can health professionals assent to the patient’s wishes,

given the Hippocratic Oath to “do no harm”? Assisted suicide is a very controversial ethical issue. To date there appears to be an absence of legislation addressing these questions in the Caribbean context. In Europe, the European Court of Human Rights ruled, in the case of Diane Pretty v. the United Kingdom, that the State’s obligation is to provide medical care to alleviate suffering at the end of life, not to provide the means to put an end to it (European Court of Human Rights, 2001)(ECLAC/CDCC, 2015).

## 5.4 Public health principles

Public health principles based on ethical concerns are important in the design of strategies for healthy ageing.

### **Multisectoral Action/ Health in All Policies**

These principles are based on the observation that the causes of ill-health are multifactorial and can be related to the various levels of the SEM as detailed above. For instance, practices of the food industry and in international trade can ultimately affect health (WHO, 2014). A life course approach to health entails a variety of health promotion strategies that must involve sectors and engage actors beyond the health sector in order to improve health outcomes optimally.

### **Empowerment of people and communities**

Empowerment of people and communities is in line with principles of social inclusion, participation and self-fulfilment. It also makes sense in terms of the allocation of resources in line with needs and the sustainability of action for healthy ageing. As noted above, special provisions may need to be made for older persons to exercise their choices and rights, or, in the case of severe cognitive impairment, appropriate and trustworthy proxies must be identified.

### **Universal Health Coverage**

For older persons, the principle of Universal Health Coverage is related to issues of access, acceptability and appropriateness. Unless healthcare settings meet these criteria, which may necessitate specific adaptations, the needs of older persons will not be met.

The interface between government, private and NGO sectors should also be considered. Without sufficient coordination and referral, there may be important gaps in provision of needed support. For instance, if dietary support through a meals-on-wheels service is only available through specific community-based organisations, it is unlikely to cover all persons in need of it.

### **Primary Health Care approach**

Primary Health Care is concerned with prevention and with detecting and treating health conditions at an early stage. It is therefore highly compatible with the Life Course Approach entailing interventions throughout life to promote health and maintain functional ability.

### **Sustainability**

Sustainability of healthcare, social interventions and solutions to functional deficits is a critical ethical issue for older persons. Withdrawal of support can lead to rapid deterioration and even death among frail elders. Lack of financial and human resource sustainability affects Universal Health Coverage.

## 5.5 Human rights pertaining to ageing asserted in international agreements

FIGURE 9: OLDER PERSONS HAVE THE RIGHT TO LIFE AND DIGNITY IN OLD AGE



Source: (PAHO, 2015)

General human rights provisions that speak to issues such as self-determination, social and economic participation, income-generation and protection, health and disabilities are especially relevant to older persons. Human rights relevant to these issues are included in the **International Bill of Human Rights** and the **International Covenant on Economic, Social and Cultural Rights**. The **International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families**, and the **Convention on the Rights of Persons with Disabilities**, also explicitly prohibit discrimination on grounds of age. The latter Convention also commits States to take all measures to prevent exploitation, violence and abuse of persons with disabilities (PWD) of all ages. (ECLAC, 2016, ECLAC, 2010, ECLAC, 2018).

In 1995, the Committee on Economic, Social and Cultural Rights (CESCR) adopted General comment No. 6 on the economic, social and cultural rights of older persons. Article 12: *Right to physical and mental health*, asserted that States parties should seek to maintain health into old age through investments through the entire life span. General comment No. 14 of the CESCR elaborates on the right to health and addresses issues related to older persons, including “*preventive, curative and rehabilitative health treatment... maintaining the functionality and autonomy of older persons... [and] attention and care for chronically and terminally ill persons, sparing them avoidable pain and enabling them to die in dignity.*” (cited in (ECLAC, 2016) p23).

In 2010, the Committee for the Elimination of Discrimination Against Women (CEDAW) adopted General Recommendation No. 27 on older women and protection of their human rights. This addresses discrimination as women age and outlines State obligations with respect to older women’s rights.

It should be noted that within the United Nations human rights system, there is no single human rights treaty which specifically addresses the human rights of older persons in the same way that exists, for example, in the case of children, persons with disabilities and women. In the absence of

such a treaty, the human rights of older persons rest on a patchwork of treaties that either address the rights of this age group alongside other dimensions of human rights, or otherwise establish rights that have particular relevance for older persons (such as rights relating to disabilities). This results in a lack of clarity that undermines the efforts of duty-bearers, particularly States, that are responsible for adopting legislative measures, policies and other actions to promote and protect the rights of older persons (ECLAC, 2016, ECLAC, 2010).

In the Organisation of American States (OAS) Inter-American human rights system there is, however, explicit recognition of human rights of older persons. Article 17 of the **Protocol of San Salvador** of 1988<sup>7</sup> establishes the right to special protection in old age and obliges States:

- to provide facilities, as well as food and specialised medical care, for elderly individuals who lack them and are unable to provide them for themselves;
- to give the elderly the opportunity to engage in productive activity, and
- to foster the establishment of social organisations aimed at improving the quality of life of the elderly.

To date, however, Suriname is the only Caribbean country to have acceded to the Protocol of San Salvador. No Caribbean countries have ratified it (ECLAC, 2016, OAS, 2019a).

The **Inter-American Convention on the Prevention, Punishment and Eradication of Violence Against Women**, also known as the **Convention of Belem do Para**, identifies older women as a group requiring special attention. This Convention has been ratified by all Caribbean countries.

First steps towards the creation of an inter-American convention on the rights of older persons came with the adoption of the Declaration of Commitment of Port of Spain at the Fifth Summit of the Americas in April 2009. Governments then pledged to promote an examination of the feasibility of developing such a Treaty. The **Inter-American Convention on Protecting the Human Rights of Older Persons** was approved by the member States of the OAS, including Caribbean governments, in June 2015. The Convention aims to, “...promote, protect and ensure...all human rights and fundamental freedoms of older persons” (OAS, 2015 article 1, PAHO, 2019). It should be used as a framework, by regions and individual countries, to develop legislation that addresses challenges and issues faced by older persons especially regarding the exercise of their human rights (OAS, 2015 article 1, WHO, nd-c). The following lists the main areas of focus (OAS, 2015 article 3):

- Promotion and defense of the human rights and fundamental freedoms of older persons
- Recognising older persons, their role in society, and their contribution to development
- The dignity, independence, proactivity, and autonomy of older persons
- Equality and non-discrimination
- Participation, integration, and full and effective inclusion in society
- Well-being and care
- Physical, economic, and social security
- Self-fulfillment
- Gender equity and equality, and the life course approach
- Solidarity and the strengthening of family and community protection
- Proper treatment and preferential care
- Differentiated treatment for the effective enjoyment of rights of older persons
- Respect and appreciation of cultural diversity

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<sup>7</sup> Also known as the Additional Protocol of the Inter-American Convention on Human Rights in the Area of Economic, Social and Cultural Rights.

- Effective judicial protection
- Responsibility of the State and participation of the family and the community in the active, full, and productive integration of older persons into society, and in the care of, and assistance to, the older person, in accordance with domestic law.

Health-related rights included in this Convention are detailed in the following table. As of August 2019, however, only seven countries have ratified this Convention, not including Caribbean countries<sup>8</sup> (OAS, 2019b). Most Caribbean countries abstained from voting on the Convention.

**TABLE 2: SELECTED ARTICLES PERTAINING TO HEALTH, IN THE INTER-AMERICAN CONVENTION ON PROTECTING THE HUMAN RIGHTS OF OLDER PERSONS**

Article	Protected Rights
<b>Article 5: Equality and non-discrimination on the basis of age</b>	Prohibits discrimination based on age of older persons
<b>Article 6: Right to life and dignity in old age</b>	Enjoyment of the right to life and the right to live with dignity in old age until the end of their life and on an equal basis with other segments of the population
<b>Article 9: Right to safety and a life free of violence of any kind</b>	The right to safety and a life without violence of any kind, to be treated with dignity, and to be respected and appreciated.
<b>Article 10: Right not to be subjected to torture or cruel, inhuman or degrading treatment or punishment</b>	The right not to be subjected to torture or cruel, inhuman or degrading treatment or punishment
<b>Article 11: Right to give free and informed consent on health matters</b>	The inalienable right to express their free and informed consent on health matters
<b>Article 12: Rights of older persons receiving long-term care</b>	The right to a comprehensive system of care that protects and promotes their health, provides social services coverage, food and nutrition security, water, clothing, and housing, and promotes the ability of older persons to stay in their own home and maintain their independence and autonomy, should they so decide
<b>Article 13: Right to personal liberty</b>	The right to personal liberty and safety
<b>Article 16: Right to privacy and intimacy</b>	Older persons are entitled to privacy and intimacy, and neither their private life, family, home, household unit, nor any other environment in which they function, nor their correspondence, nor any other communications shall be the subject of arbitrary or illegal intrusion. Older persons have the right not to have their dignity, honour and reputation attacked. They are also entitled to privacy in their personal hygiene and other activities, regardless of their environment.
<b>Article 19: Right to health</b>	The right to physical and mental health
<b>Article 22: Right to recreation, leisure and sports</b>	Older persons are entitled to recreation, physical activity, leisure, and sports
<b>Article 24: Right to housing</b>	The right to decent and adequate housing and to live in safe, healthy and accessible environments that can be adapted to their preferences and needs
<b>Article 25: Right to a healthy environment</b>	The right to live in a healthy environment with access to basic public services
<b>Article 26: Right to accessibility and personal mobility</b>	The right to accessibility to the physical, social, economic and cultural environment, as well as to personal mobility
<b>Article 29: Situations of risk and humanitarian emergencies</b>	States Parties shall adopt all necessary specific measures to ensure the safety and rights of older persons in situations of risk, including situations of armed conflict, humanitarian emergencies, and disasters.

*Source: (ECLAC, 2016) p26-7; (OAS, 2015)*

<sup>8</sup> The countries that have ratified the Inter-American Convention on Protecting the Human Rights of Older Persons are Argentina, Bolivia, Chile, Costa Rica, Ecuador, El Salvador and Uruguay.

Despite the lack of progress in developing specific human rights agreements on ageing, there has been progress at Caribbean as well as global levels in developing mechanisms through which the human rights of older persons can be asserted and protected. As detailed in Chapters 2 and 6, Caribbean governments have participated in developing international and Latin American and Caribbean frameworks to guide action on ageing. Human rights have been incorporated into these agreements.

## 6. Gender

Longevity and health conditions often differ by biological sex, as shown in Chapters 3 and 4 of this report, that look at demographic and health data. To address differences between the sexes, and various health inequities that result, it is important to analyse the role of gender.

While sex is concerned with biological status or distinctions based on biological status, gender is concerned with the socially constructed roles, behaviours, activities, and attributes that a given culture associates with a person's biologic status (American Psychological Association, n.d.). These differing roles, behaviours, activities and attributes differ between cultures and can shift over time. In this report we examine what research tells us about how gender characteristics relate to the health status and functional abilities of older persons. We also conduct gender analysis of the provision of care to older persons in formal and informal settings.

FIGURE 10: SEX VS. GENDER



The gender norms in a society can be considered as societal level factors in the SEM outlined in section 2, Box 4. They condition the scope of action by men, women, boys and girls at lower levels of the model. Discrimination and lack of access to opportunities structured by sex are social determinants of health that ultimately affect health outcomes. Furthermore, divergence from gender norms can be a basis for social exclusion, isolation and reduced access to services.

For example, experiences of sexual impotence caused by a chronic disease may lead a man to withdraw from sexual activity and may affect his confidence to the extent that he withdraws from some types of social interaction. For women, fear of what mastectomy may mean for their feminine identity may make them reluctant to access breast cancer screening and prevention services.

Gender norms affect health-seeking behaviour differentially. Factors such as the gender norm that promotes self-reliance among men, and the greater participation of men in formal employment

(combined with inflexible healthcare facility opening hours) tend to result in lower health-care seeking by men than women (Eldemire-Shearer et al., 2009).

A cross-sectional survey of two thousand (2,000) men aged 55 and over in St Catherine, Jamaica, for instance, found low levels of use of available healthcare options:

- 67.6% had not visited a health provider in the year prior to the survey
- Only 35% of men ever had a prostate check/examination
- 8.2% of men eligible for drug benefits under the Jamaica Drugs for the Elderly Programme had registered for that programme

One of the recommendations by the authors of this study is to take health programmes to “where men are”: bars and sports events (Morris et al., 2011). The study highlights the importance of being gender sensitive and responsive in designing healthcare and the settings in which it is delivered. In a further study in Jamaica, men aged 50 and over were found not to embrace routine medical visits but to be more likely to visit if advised by a physician (Willie-Tyndale, 2017). This indicates that health care workers can help address gender-related barriers to health care.

Related to gender is sexuality. Gender and age norms may combine to make it difficult for older men and women to discuss and express their sexual feelings and related healthcare needs. There may be continued expectations, for instance, that men demonstrate their masculinity through multiple

#### BOX 562: MALE GENDER NORMS

Some male gender norms in the United States of America

- SELF-RELIANT
- EMOTIONAL CONTROL
- AVOID FEMININE BEHAVIOR
- BE SUCCESSFUL/ COMPETENT
- ACCEPTANCE IN MALE COMMUNITY
- RISK TAKING
- NON-RELATIONAL ATTITUDES TOWARD SEXUAL ENCOUNTERS
- PRIMACY OF WORK
- ACHIEVEMENT AND STATUS
- WINNING DOMINANCE

SOURCE: (GARFIELD ET AL., 2008)

sexual encounters, while women may feel pressure to maintain their physical appearance to attract sexual partners. Ageing may require difficult renegotiation of these roles and adjustment to new modes of sexual expression. Healthcare providers, unless they are specifically trained, may struggle to assist persons with sexual matters as they age. The challenges may be magnified in healthcare encounters with people whose sexual orientation differs from the norm, such as persons from the Lesbian, Gay, Transgender, Queer and Intersex (LGBTQI) community (Allen et al., 2019).

In a qualitative study with 35 Primary Care Providers in Trinidad and Tobago, most doctors stated that they were not comfortable with conducting a sexual history with their older patients, and they rarely discussed or initiated talking about sexual health with them. Barriers included (among others) inadequate professional referral services, insufficient medical training in sexual function in middle and old age, reluctant patient behaviour and conflicting personal beliefs on sexuality (Rabathaly and Chattu, 2019).

There were similar findings about healthcare worker discomfort in a study in Jamaica that examined sexual and genitourinary health of adults 50 years and older. Doctors believed sexual health among older persons could be more intentionally integrated in healthcare delivery but acknowledged barriers including discomfort, low competence and limited time. They identified expansion of

urological services and increase in skilled human resources as needed improvements. The older men and women included in the study identified different sexual health issues.

Approximately 52% of women had one or more pelvic floor disorder and odds increased by 14% with each vaginal delivery. Sixty-eight per cent of men reported moderate to severe urinary symptoms. For women, genitourinary problems were considered bothersome and embarrassing but social engagement was unaffected by pelvic floor disorders. About half of men and 41% of women were sexually active, with likelihood of sexual activity in the last 12 months decreasing with age. For women, sexual activity was more likely if in a union. For men, likelihood of sexual activity decreased if affected by prostate cancer, stroke or functional dependence (Willie-Tyndale, 2017).

## 7. The Geriatric Giants: health conditions concentrated among older persons

The so-called “Geriatric Giants” are progressive disorders that lead to functional disability and deteriorate the quality of life of older people. The risk of their occurrence increases with age. They do not pose a direct threat to life, but are difficult to treat, reduce social contacts and increase the dependence of older persons on carers (Bartoszek et al., 2019).

The list of Geriatric Giants differs slightly between scholars, but they generally include mobility disorders, instability, sensory disorders, impaired intellect/ memory and incontinence. Recent work has emphasised syndromes of frailty, sarcopenia, the anorexia of ageing, and cognitive impairment (Morley, 2017, Hughes, 2018).

### Box 563: GERIATRIC GIANTS

MOBILITY DISORDERS  
INSTABILITY AND FALLS  
SARCOPENIA  
FRAILTY  
ANOREXIA OF AGEING  
VISUAL AND AUDITORY DISTURBANCE  
DEPRESSION  
COGNITIVE IMPAIRMENT  
URINARY INCONTINENCE  
STOOL INCONTINENCE

*SOURCE: (BARTOSZEK ET AL., 2019, MORLEY, 2017)*

Among the challenges posed by the Geriatric Giants is that several often coexist and they can compound and reinforce each other. They are an element of so-called cycles and geriatric cascades where a worsening of one condition contributes to deterioration in one or more of the others, leading to health crises and threats to safety.

A further challenge is in healthcare seeking behaviour for these conditions. Patients or their carers may consider them a natural consequence of ageing or that treatment is impossible. On the other hand, healthcare workers may have insufficient specialist training to offer high quality care for these conditions (Bartoszek et al., 2019).

**Mobility disorders** can result from a variety of conditions, such as chronic diseases and age-related muscular atrophy (sarcopenia). Diseases more common in older persons, such as Parkinson’s Disease, can lead to loss of control over and “freezing” of movement.

**Falls** are sudden, unforced or unintentional loss of balance, as a result of which a person is on the ground, floor or lower surface, while walking or performing other activities. The causes of falls can be divided into internal ones (e.g. acute illness) or external (e.g. a slippery floor). Risk factors may be divided into the following categories:

*Biological:* Age, sex, clinical status, age-related changes

*Behavioural:* Use of multiple drugs simultaneously, use of anti-depressants, alcohol use, low physical activity, inappropriate footwear, lack of orthopaedic assistance

*Environmental:* Architectural barriers, narrow stairs, slippery floor, loose carpets, lack of handrails

*Socio-economic:* Low income and low education.

Falls may lead to bruising, wounds, fractures and other injuries, potentially reducing functional ability. Fear of falling may reduce physical activity and social participation, increasing costs of care.

**Sarcopenia** is degenerative loss of skeletal muscle mass, quality, and strength associated with ageing. The rate of muscle loss is dependent on exercise level, co-morbidities, nutrition and other factors.

**Frailty** is defined as a clinically recognisable state of increased vulnerability resulting from aging-associated decline in reserve and function across physiologic systems such that the ability to cope with every day or acute stressors is comprised. Frailty has been defined by meeting three out of five criteria indicating compromised energetics: low grip strength, low energy, slowed walking speed, low physical activity, and/or unintentional weight loss (Xue, 2011).

**Anorexia of ageing** is defined by decrease in appetite and/or food intake in old age. It is a major contributing factor to under-nutrition and adverse health outcomes in the older population (Landi et al., 2016).

### **Impaired vision and hearing**

Age-related changes in the eye may be genetic, anatomical, visual disturbances or result from eye diseases. NCDs, notably diabetes, increase the risk of impaired vision.

Hearing impairment affects many persons over the age of 60. Older persons report deterioration in sound locating abilities and in distinguishing speech in noise.

**Cognitive impairment** in older age may be related to a number of clinical conditions. **Dementia** is a set of cognitive symptoms caused by progressive brain disease. It includes loss of memory, thinking, understanding, orientation, counting, language, assessment and planning. Alzheimer's Disease is the most common cause. Other forms include vascular dementia, dementia with Lewy bodies, and fronto-temporal dementia. Some forms of dementia, such as Lewy bodies, are associated with psychotic and neurological symptoms such as visual hallucinations. Lewy bodies dementia is especially common among people with Parkinson's Disease.

**Depression** among older persons is characterised by reduced mood and motor drive, loss of interest, anxiety and sleep disorders. Some medications used to treat other conditions can have depressive effects. Depression may also have complex psycho-social causes, resulting for example from grief at the illness or death of a loved one or loss of valued social roles and activities.

**Incontinence** indicates loss of control over urination or defecation. Urinary incontinence more often affects women than men. Incontinence can lead to the loss of dignity and self-worth, emotional disorders and resignation from sexual and other forms of physical activity. In about 50% of fecal

incontinence cases, the cause is constipation and leakage of liquid stool around retaining fecal masses (Bartoszek et al., 2019).

While some of these conditions appear as outcomes of the ageing process, they are not inevitable, and NCDs contribute to them significantly. The neurovascular complications associated with ill-controlled diabetes have been shown to be associated with cognitive dysfunction, depression, malnutrition, incontinence, falls and fractures, and the loss of senses (Lewandowicz et al., 2018).

Principles of competency for management of the Geriatric Giants have been developed recently. In 2017, during a keynote address to the Canadian Geriatric Society, Maria Tinetti outlined the concept of the 5Ms, which define the core competencies of geriatric medicine: mind, mobility, medications, multi-complexity and matters most. The last of these, “matters most”, recognises the importance of the patient at the centre of service delivery (Morley, 2017, Hughes, 2018). Mind and mobility address cognitive and emotional challenges, and issues such as immobility, frailty and sarcopenia. Medical personnel require knowledge and access to appropriate medications to treat geriatric conditions. Multi-complexity addresses the simultaneous presentation and potentially cascading impact of these conditions.

## Conclusion

For healthy ageing to be achieved, action needs to be oriented to promoting health throughout the life course, addressing social determinants of health including gender inequity. Action in support of senior citizens should be guided by ethical principles to protect against abuse and promote their human rights. For those older persons who experience significant loss of capacity, measures should be put in place to manage advanced chronic conditions, remove barriers to participation, compensate for loss of capacity and ensure a dignified late life. The concepts and principles of healthy ageing presented in this chapter may be regarded as tools to be applied to put in place appropriate actions and measures.

The following chapter presents international and Caribbean agreements on ageing that can also inform action at the local level. Chapter 3 presents evidence and implications of population ageing.

The concepts and principles presented in the current chapter inform the analyses of later chapters as follows.

Chapter 4 presents data and studies on health conditions along the life course and among older persons. The life course approach (presented above in section 1) and geriatric giants (section 7) are used to frame the analyses of this chapter. Information on risk factors and determinants is also presented, informed by the SEM and SDH approaches (see sections 2 and 3 above).

Chapter 5 looks at informal and formal care among older persons in the Caribbean socio-cultural context. The life course approach (section 1 above) and ethics, human rights and principles of public health (section 5) are used for the analysis of information. Approaches to managing the geriatric giants (section 7) are explored.

Chapter 6 looks at health promoting environments and self-care. The life course, SEM and SDH approaches (sections 1 – 3) are the main conceptual frameworks used.

In chapter 7, we draw out health systems and policy implications for older persons. In that chapter we present and use WHO’s framework of building blocks of health systems to analyse the information

on care and health promotion presented in chapters 5 and 6. We also refer to progress with respect to international agreements and frameworks presented in the chapter 2.

Throughout the SPHR, gender analysis is used to draw out the findings for men and women.

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## Chapter 2: Global and regional strategies and plans of action on Ageing

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## Global and regional strategies and plans of action on ageing

The economic, social, epidemiological and human rights importance of global ageing has been widely acknowledged by international, regional and national health and social development agencies and organisations. We now examine frameworks and strategies on ageing agreed between governments globally and at Caribbean regional level. National level frameworks and strategies are examined in Chapter 7, while care and health promotion strategies relating to ageing in Caribbean countries are presented in Chapters 5 and 6.

### 1. Global

As far back as 1948, albeit anecdotally and briefly, the issue of ageing was discussed at the United Nations General Assembly (UNGA) and at other UN fora responsible for social development. It was at the December 1948 Third Session of the UNGA that a draft declaration of old age rights was adopted (Resolution 213(III)) (UN, 1948). Other examples include the adoption of the Declaration on Social Progress and Development (Resolution 2542 (XXIV)), where *inter alia*, the UNGA agreed to protect the rights and the wellbeing of the elderly (UN, 1969). Through the adoption of Resolution 3137 (XXVIII) – “*Questions of the elderly and the aged*” – further steps were taken to ensure the development of national policies and programmes for older persons (UN, 1973).

In 1978, at the 33<sup>rd</sup> UNGA, it was decided to convene a World Assembly on the Elderly in 1982 (Resolution 33/52), “...to launch an international action programme aimed at guaranteeing economic and social security to older persons” (UN, 1978). The **Vienna International Plan of Action on Ageing** was adopted in August 1982 at the First World Assembly on Ageing (UN, nd, UN, 1982, UN, 1948). It made recommendations on aspects of health and nutrition, protection of elderly consumers, housing and environment, family, social welfare, income security and employment, and education as well data collection, training and education, and research regarding the elderly. It was stated that this Plan of Action needed to be examined within the framework of other international plans and strategies such as the Universal Declaration of Human Rights, the International Covenants on Human Rights and the Declaration on Social Progress and Development (UN, 1982). In 1991, the UNGA adopted the United Nations Principles for Older Persons (Resolution 46/91). Governments were encouraged to include these principles – relating to independence, participation, care, self-fulfilment and dignity – when developing national programmes (UN, 1991).

In 2002, in preparation for to the upcoming Second World Assembly on Ageing, WHO, through a consultative process from over 20 countries, proposed a Policy Framework for active ageing. It proposed three pillars of active ageing: health, participation and security, guided by the UN Principles for Older Persons. This **WHO Policy Framework** identified the following seven challenges that must be overcome to ensure active ageing at the global, national and local levels (WHO, 2002).

- Challenge 1: The double burden of disease – The co-existence of communicable and non-communicable diseases stretches resources, especially within developing countries.
- Challenge 2: Increased risk of disability – NCDs, especially mental health issues, are more prevalent in older persons. Other disabilities also reduce independence.
- Challenge 3: Providing care for ageing populations – There is a need to strike a balance in the interest of older persons between caring for oneself, being taken care of by family and friends, and care that is provided for by the health and social services (private and public).
- Challenge 4: The feminisation of ageing – Women tend to live longer than men, and gender-specific strategies are needed.

- Challenge 5: Ethics and inequalities – There is a need to address ageism and the exacerbation of pre-existing inequalities based on race, gender and ethnicity.
- Challenge 6: The economics of an ageing population – Strategies are needed to meet and rationalise costs related to health care and social security.
- Challenge 7: Forging a new paradigm – Older people should be active contributors as well as beneficiaries of development.

It was asserted that designing and implementing policies and programmes to ensure active ageing must be conducted with an understanding of the related determinants – health and social services, behavioural, physical, social, economic – together with cross-cutting determinants of culture and gender. This Framework was intended to assist policy-makers in the production of national, and regional action plans that promoted healthy and active ageing (WHO, 2002).

The *Madrid International Plan of Action on Ageing* (MIPAA) was adopted at the Second World Assembly on Ageing in 2002 through the Political Declaration made by the Governments attending the Assembly (UN, 2002). In 2002, a total of 159 states embraced this new agenda on ageing. These included eight from the Caribbean – The Bahamas, Barbados, Belize, St Kitts and Nevis, Guyana, Jamaica, Suriname, and Trinidad and Tobago. This Plan was to be globally assessed every five years through a bottom-up participatory approach by the United Nations Commission for Social Development: there have been three global reviews – 2008, 2013 and 2018. National sub-regional and regional reviews are coordinated by UN Regional Commissions which feed into the global review. In the case of the Caribbean (sub-regional level) and Latin America and the Caribbean (regional level) these reviews are conducted by ECLAC (ECLAC, 2017b).

Under the MIPAA there were three priorities for action – older persons and development; advancing health and well-being into old age; and ensuring enabling and supportive environments; each with several issues, objectives and actions (See Table 1) (UN, 2002).

1. **Older persons and development** – stressed that older persons must be included in the development process, and also share in the benefits. Older persons can become marginalised due to urbanisation, migration, the movement from extended to smaller, mobile families, lack of access to technology and other socio-economic changes, thus reducing their economic and social roles and traditional social support systems. Equitable distribution of benefits derived from economic growth must be ensured through development and implementation of policies and social protection systems that ensure equity amongst all age groups.
2. **Advancing health and well-being into old age** – examined older persons and their ability to have complete access to healthcare and services that maintain independence, prevent and delay disease and disability treatment, as well as improve the quality of life for those that are already functionally impaired. Training of health workforce and having facilities available that can provide these services to the older population was also thought to be necessary. Ensuring these services was believed to be the role of government, NGOs and families.
3. **Ensuring enabling and supportive environments** – acknowledged the shortfall in domestic and international resources for social development especially among, and for, developing countries. Despite this, it was acknowledged that everyone including older persons are entitled to safe and enabling environments, including access to housing, clean water, adequate food supplies, lifelong development and independent living. Governments, in collaboration with NGOs and older persons, were encouraged to develop and implement such policies. The MIPAA also strongly recommended conduct of research on ageing, including gender-sensitive research, monitoring, regular reviews and updating.

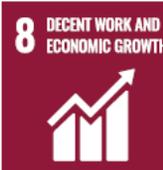
**TABLE 3: MADRID INTERNATIONAL PLAN OF ACTION ON AGEING: PRIORITIES AND ISSUES**

Priority	Issues
1. Older persons and development	1.1. Active participation in society and development
	1.2. Work and the ageing labour force
	1.3. Rural development, migration and urbanisation
	1.4. Access to knowledge, education and training
	1.5. Intergenerational solidarity
	1.6. Eradication of poverty
	1.7. Income security, social protection/social security and poverty prevention
	1.8. Emergency situations
2. Advancing health and well-being into old age	2.1. Health promotion and well-being throughout life
	2.2. Universal and equal access to health-care services
	2.3. Older persons and HIV/AIDS
	2.4. Training of care providers and health professionals
	2.5. Mental health needs of older persons
	2.6. Older persons and disabilities
3. Ensuring enabling and supportive environments	3.1. Housing and the living environment
	3.2. Care and support for caregivers
	3.3. Neglect, abuse and violence
	3.4. Images of ageing

*Source: (UN, 2002)*

In 2015, the UN adopted Resolution 70/1, “*Transforming our world: the 2030 Agenda for Sustainable Development*”. Seventeen Sustainable Development Goals and 169 targets, known collectively as the **Sustainable Development Goals** (SDGs) were established, with an intergovernmental pledge, “...no one will be left behind” (UN, 2015). The SDGs are a critical component of the 2030 Agenda for Sustainable Development, known as Agenda 2030. They are relevant to senior citizens and to issues associated with population ageing, as they promote economic and social security and safety; independence, health and productivity; and empowerment in decision making (UNDP, nd, UN, 2015). Table 2 outlines the relevance of the SDGs to older persons (UN, 2015, UNDP, nd, WHO, nd, ESCAP, nd).

**TABLE 4: RELATIONSHIP BETWEEN ACHIEVING THE SUSTAINABLE DEVELOPMENT GOALS AND HEALTHY AND ACTIVE AGEING**

Sustainable Development Goal	Relationship to healthy and active ageing
 <p><b>1 NO POVERTY</b></p>	<p><b>End poverty in all forms</b></p> <p>Increased employment choices and ensuring minimum pensions</p>
 <p><b>2 ZERO HUNGER</b></p>	<p><b>End hunger, achieve food security and improved nutrition and promote sustainable agriculture</b></p> <p>Better nutrition for older persons can assist with malnutrition and disease reduction along the life course that result in dependency and decreased intrinsic capacity.</p>
 <p><b>3 GOOD HEALTH AND WELL-BEING</b></p>	<p><b>Ensure healthy lives and promote well-being for all at all ages</b></p> <p>Implementation of Universal Health Coverage policies throughout the life course in health systems and services will ensure functionality and independence in older persons.</p>
 <p><b>4 QUALITY EDUCATION</b></p>	<p><b>Ensure inclusive and equality education for all and promote lifelong learning</b></p> <p>Continued access to training and educations opportunities will allow older people to continue to do what they value, make their own decisions and preserve their independence and autonomy.</p>
 <p><b>5 GENDER EQUALITY</b></p>	<p><b>Achieve gender equality and empower all women and girls</b></p> <p>Women tend to live longer than men. They also contribute to healthy ageing through working, child- and long-term care of their spouses and other family members. Gender inequalities throughout the life-course can lead to poverty, reduced access to health and social care, and social security in later life.</p>
 <p><b>8 DECENT WORK AND ECONOMIC GROWTH</b></p>	<p><b>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</b></p> <p>Older persons can often make contributions to the economy. Allowing older persons to be retained in employment, past the usual retirement age, will often reduce the dependency burden on those that are working; allow the elderly to be financially independent and give a sense of value to older populations.</p>
 <p><b>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</b></p>	<p><b>Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation</b></p> <p>Older persons should be enabled to contribute to development and innovation. Programmes need to be designed that are suitable for older adults and utilise innovative means (e.g. digital devices) that foster independence and improve quality of life.</p>

Sustainable Development Goal		Relationship to healthy and active ageing
	<b>Reduce inequality within and among countries</b>	Inequalities among older persons can be influenced by factors such as gender, ethnicity and education level resulting in unequal access, in all sectors of public service and support. Older persons with the least economic and social resources should be prioritised.
	<b>Make cities and human settlements inclusive, safe, resilient and sustainable</b>	Age-friendly cities and communities enable older persons to live healthy, independent and quality lives. Environments need to take into account health, long-term care, transport, housing, labour, social protection, information and communication.
	<b>Take urgent action to combat climate change and its impact</b>	Older people are often more vulnerable to aspects of climate change such as increases in weather temperature and disasters such as hurricanes.
	<b>Promote just peaceful and inclusive societies for sustainable development, the provision of access to justice for all, and building effective, accountable institutions at all levels</b>	Ageism needs to be combatted to enable older persons to continue to participate in, and contribute towards, society. To do this requires a shift in the way society understands ageing and regards older people.

In 2016, the 69<sup>th</sup> World Health Assembly adopted the *Global strategy and action plan on ageing and health 2016-2020: towards a world in which everyone can live a long and healthy life (GSAPAH)* (WHO, 2016b) whose vision is, ‘a world in which everyone can live a long and healthy life’ (WHO, 2017b). Cognizant of the SDGs, the GSAPAH builds upon previous strategies of the MIPAA (UN, 2002) and the WHO Policy Framework (WHO, 2002) as well as the WHO World Report on Ageing and Health (WHO, 2015). The GSAPAH supports a multi-sectoral and life course approach to foster longer and more healthy lives. Guiding principles that underpin the GSAPAH and the goals are in Box 1.

## BOX 564: PRINCIPLES AND GOALS OF THE GLOBAL STRATEGY AND ACTION PLAN ON AGEING AND HEALTH

### **Guiding principles**

- Human rights
- Gender equality
- Equality and non-discrimination
- Equity
- Intergenerational solidarity

### **Action plan 2016-20 goals**

1. Five years of evidence-based action to maximize functional ability that reaches every person
2. By 2020, establish evidence and partnerships necessary to support a Decade of Healthy Ageing from 2020-2030

*Source: (WHO, 2017b)*

Other commitments, approaches and platforms incorporated in the GSAPAH are (WHO, 2017b):

- Universal Health Coverage (UHC)
- Social Determinants of Health
- Combatting non-communicable diseases
- Disability
- Violence and injury prevention
- Age-friendly cities and communities
- Strengthening human resources for health
- Developing person-centred and integrated care
- Tackling dementia and ensuring the provision of palliative care

The strategic objectives and sub strategic objectives of the GSAPAH are outlined in Table 3.

**TABLE 5: STRATEGIC OBJECTIVES AND KEY ACTIONS OF THE GLOBAL STRATEGY AND PLAN OF ACTION ON AGEING AND HEALTH 2016-2020**

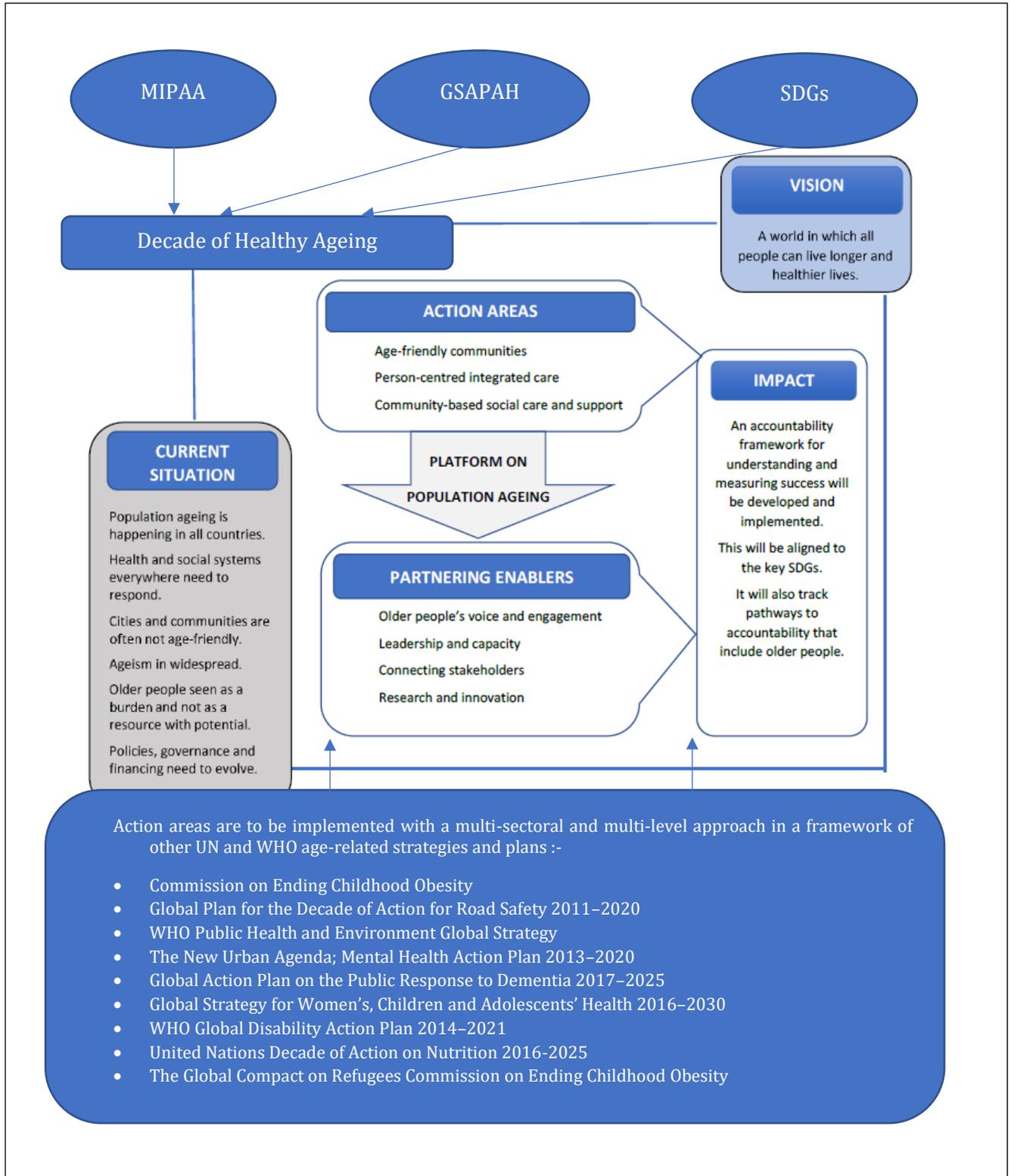
<b>Strategic objectives</b>	<b>Sub strategic objectives/key actions</b>
1. Commitment to action on healthy ageing in every country	1.1. Establish national frameworks for action on healthy ageing
	1.2. Strengthen national capacities to formulate evidence-based policy
	1.3. Combat ageism and transform understanding of ageing and health
2. Developing age-friendly environments	2.1. Foster older people's autonomy
	2.2. Enable older people's engagement
	2.3. Promote multisectoral action
3. Aligning health systems to the needs of older populations	3.1. Orient health systems around intrinsic capacity and functional ability
	3.2. Develop and ensure affordable access to quality older person-centred and integrated clinical care
	3.3. Ensure a sustainable and appropriately trained, deployed and managed health workforce
4. Developing sustainable and equitable systems for providing long-term care (home, communities, institutions)	4.1. Establish and continually improve a sustainable and equitable long-term care system
	4.2. Build workforce capacity and support caregivers
	4.3. Ensure the quality of person-centred and integrated long-term care
5. Improving measurement, monitoring, and research on healthy ageing	5.1. Agree on ways to measure, analyse, describe and monitor healthy ageing
	5.2. Strengthen research capacities and incentives for innovation
	5.3. Research and synthesise evidence on healthy ageing

Source: (WHO, 2016a)

A **Decade of Healthy Ageing 2020-2030** has been established by UN agencies, led by WHO (WHO, 2017a, WHO, 2019). This is believed to be necessary to ensure Agenda 2030 and the timely achievement of the SDGs through the implementation of evidence-based activities that promote healthy ageing while focusing on equity and leaving no elderly persons behind. It provides a sense of urgency to improve the lives of a growing and important population through a multi-stakeholder platform that emphasises country-driven planning and partnerships.

The Decade, whose vision is, *'a world in which all people can live longer and healthier lives'* (WHO, 2019), is aligned to the SDGs, based on the GSAPAH and linked to the MIPAA. The focus, as with the GSAPAH, is with a life course approach but emphasises what can be done in the second half of life. Figure 1 demonstrates the pathways which contribute to the achievement of the Decade's vision and Agenda 2030.

**FIGURE 11: FRAMEWORK FOR THE PATHWAYS FOR IMPLEMENTATION OF A DECADE OF HEALTHY AGEING 2020-2030**



## 2. Regional

The *Caribbean Charter on Health and Ageing* (CCHA) (part of the Caribbean Cooperation in Health II mandate) was adopted at the Second Meeting of the Council for Human and Social Development (COHSOD) in 1998 and launched in 1999 (CARICOM, 1999a), the year declared the International year of Older Persons by the UNGA (UN, nd). The Charter was developed in collaboration with agencies of the CARICOM Member States, PAHO and WHO, and covers:

- Supportive environments for older persons at home, in the community and in long term care facilities;
- Primary health care and health promotion, and
- Economic security, employment and other productive activities for healthy ageing (CARICOM, 1999a).

The CCHA seeks to support the 1997 Charter of Civil Society which upholds the human rights, freedom and dignity of all Caribbean people regardless of age (CARICOM, 1999b).

Out of the MIPAA, in 2003, the Population Division of ECLAC convened the first Regional Intergovernmental Conference on Ageing (RICA) in Latin America and the Caribbean in Santiago, Chile. Here, a *Regional Strategy for the Implementation in Latin America and the Caribbean of the Madrid International Plan of Action on Ageing* (afterwards known as the Regional Strategy) was designed and adopted for the unique challenges faced by the LAC region. The Regional Strategy identified four overarching goals (ECLAC, 2004, ECLAC, 2017b, ECLAC, 2003): see Table 4.

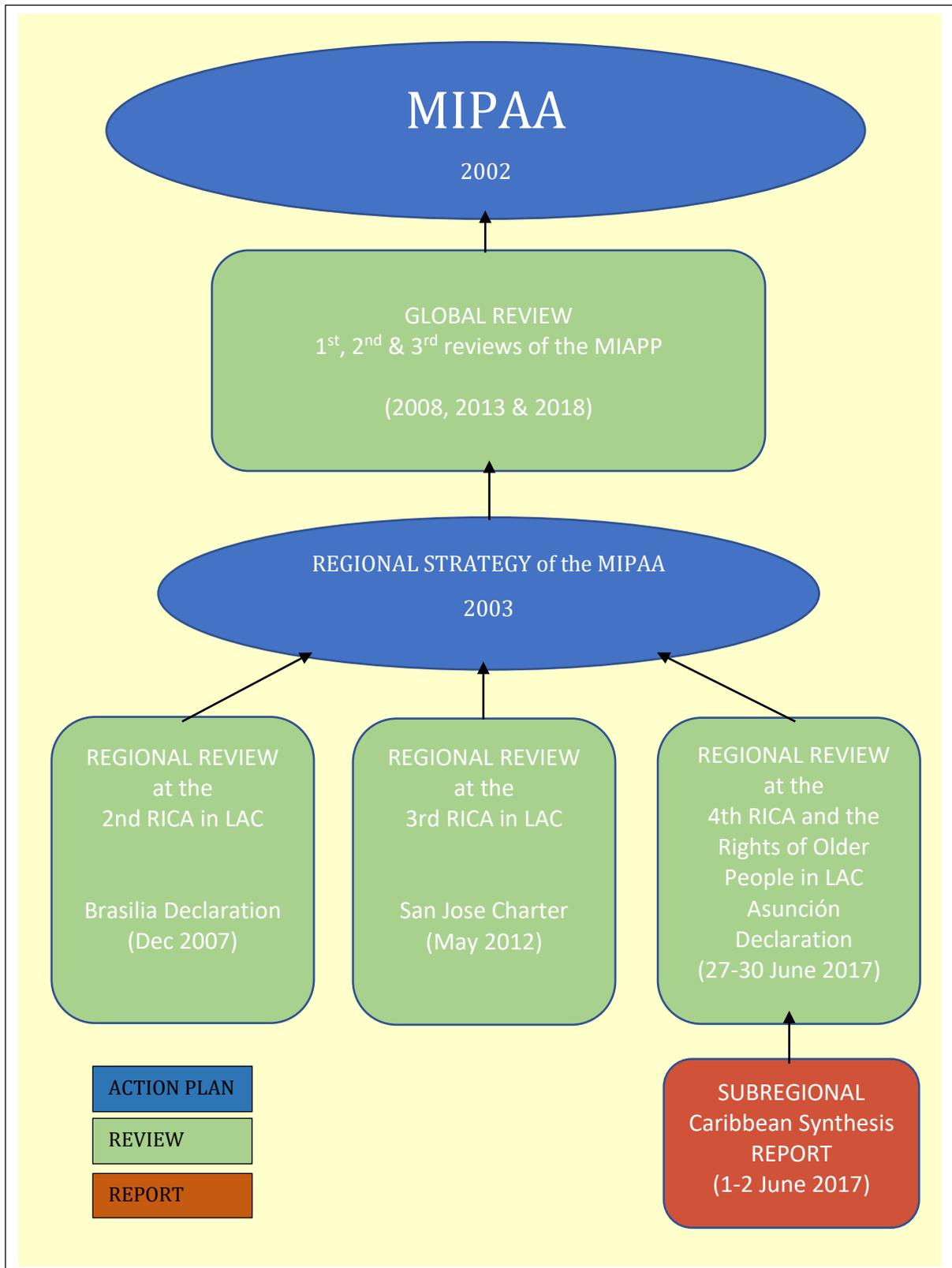
**TABLE 6: GOALS AND OBJECTIVES OF THE REGIONAL STRATEGY FOR THE IMPLEMENTATION IN LATIN AMERICA AND THE CARIBBEAN OF THE MADRID INTERNATIONAL PLAN OF ACTION ON AGEING**

Goal	Objective
1. Protection of the human rights of older persons and creation of conditions of economic security, social participation and education that promote the satisfaction of older persons' basic needs and their full inclusion in society and development	1.1. Promote the human rights of older persons
	1.2. Promote access, under conditions of equality, to decent employment, continuing training and credit for individual or community undertakings
	1.3. Promote and facilitate the inclusion of older persons in the formal-sector workforce
	1.4. Expand and improve the coverage of both contributory and non-contributory pension schemes
	1.5. Create suitable conditions for older persons' full involvement in society as a means of promoting their empowerment as a social group and strengthening the exercise of active citizenship
	1.6. Promote equality of opportunity and access to lifelong education
2. Older persons should have access to comprehensive healthcare services which are suited to	2.1. Promote universal coverage for older persons to healthcare services through the inclusion of ageing as an essential component of national legislation and policies on health
	2.2. Establish comprehensive healthcare services that meet the needs of older adults by strengthening and refocusing existing services and creating new ones where necessary

Goal	Objective
<p>their needs and which guarantee a better quality of life in old age and the preservation of their autonomy and ability to function.</p>	2.3. Promote healthy personal behaviours and environments through legislation, policies, programmes and measures at the national and community levels
	2.4. Create legal frameworks and suitable mechanisms for the protection of the rights of older persons who use long-term care services
	2.5. Promote the development of human resources through the design and implementation of a national gerontology and geriatrics training plan for existing and future health-care providers at all levels of care, with emphasis on primary health care
	2.6. Develop and utilise instruments for improving the understanding of the health status of older persons and monitoring changes in this regard
<p>3. Older persons will enjoy physical, social and cultural environments that enhance their development and are conducive to the exercise of rights and duties during old age</p>	3.1. Adapt the physical environment to the characteristics and needs of older persons to enable them to live independently in their old age
	3.2. Increase availability, sustainability and suitability of social support systems for older persons
	3.3. Eliminate all forms of discrimination and mistreatment of older persons
	3.4. Promote a positive image of old age
<p>4. Each country of the region is encouraged to promote the actions necessary for the full implementation of this strategy and to establish mechanisms for its application, follow-up, evaluation and review, in accordance with their particular circumstances.</p>	4.1. Incorporate the issue of ageing into all spheres of public policy in order to adjust State actions to reflect demographic changes and the aim of building a society for all ages
	4.2. Procure technical assistance, through cooperation between countries and support from international agencies, for the design of policies and programmes on ageing
	4.3. Design and implement a system of specific indicators to serve as a frame of reference for the follow-up and evaluation of the situation of older persons at the national and regional levels
	4.4. Pursue and promote research on the main aspects of ageing at both the country and regional levels
	4.5. Request ECLAC and other relevant organizations to promote contacts with all countries of the region and to present them with a formal offer of support from the Inter-Agency Group for the development of the necessary mechanisms for the suitable implementation of the commitments emanating from this Conference.

Figure 2 demonstrates relationships between the global, regional and sub-regional reviews of progress towards the goals of the MIPAA.

**FIGURE 12: SCHEMATIC OF RELATIONSHIPS BETWEEN THE GLOBAL REVIEWS OF THE MADRID INTERNATIONAL PLAN OF ACTION ON AGEING (MIPAA) AND THE REGIONAL/SUB-REGIONAL REVIEWS FROM THE LATIN AMERICA AND THE CARIBBEAN (LAC) REGION**



Since 2003, ECLAC has organised three more Regional Intergovernmental Conferences on Ageing in Latin America – Brasilia, Brazil in 2007 (ECLAC, 2008), San José, Costa Rica in 2012 (ECLAC, 2012), and Asunción, Paraguay in 2017 (ECLAC, 2017a). At these conferences, the region’s government agencies, civil society organisations and older persons convened to discuss best practices, challenges, emerging issues and future priority areas. The discussions from each of these Regional Intergovernmental Conferences, which fed into the global MIPAA review, produced three declarations respectively.

1. The *Second Regional Intergovernmental Conference on Ageing in Latin America and the Caribbean: Towards a society for all ages and rights-based protection*, reviewed the Regional Strategy and identified priority areas for implementation over the next five years. The **Brasilia Declaration** was adopted at this Conference. It reaffirmed the goals of the Regional Strategy and as well as those to promote and protect human rights and freedoms of all older people; eradicate discrimination and violence and to create networks for older people (ECLAC, 2017b, ECLAC, 2008, UN, 2008).
2. The *Third Regional Intergovernmental Conference on Ageing in Latin America and the Caribbean: Ageing, solidarity and social protection: time for progress towards equality*, focussed on the theme of equality and ageing while advocating for equality to be placed high on the agenda. Inequalities relating to social security and pensions, and the role of the family as caregivers were key topics of discussions. Governments agreed measures including specific laws to protect human rights and measures to enforce such laws at the national level. This adoption of the **San José Charter on the rights of older people in Latin America and the Caribbean** was a major outcome of this Conference and led to the strengthening of the human rights perspective in the implementation of the MIPAA (ECLAC, 2017b, ECLAC, 2012, ECLAC, 2013, UN, 2013).
3. A Caribbean Synthesis Report (ECLAC, 2017b) was produced with the assistance of ECLAC at the Caribbean preparatory meeting, in Port of Spain Trinidad. This Report fed into the LAC regional report at the *Fourth Regional Intergovernmental Conference on Ageing and the Rights of Older People in Latin America and the Caribbean* resulting in the **Asunción Declaration: Building Inclusive Societies: Ageing with Dignity and Rights** (ECLAC, 2017a). The Caribbean synthesis report looks at the progress and the challenges regarding the implementation of the San José Charter. Fourteen keys areas of concern for older persons in the Caribbean were identified (ECLAC, 2017b):
  1. Legal and policy frameworks
  2. Institutional framework
  3. Awareness-raising, data survey and research
  4. Care
  5. Autonomy and independence
  6. Adequate standard of living and social protection
  7. Right to work and access to inclusive labour market
  8. Equality and non-discrimination based on age
  9. Accessibility, infrastructure and housing
  10. Participation and contribution
  11. Neglect, violence and abuse
  12. Access to justice
  13. Emergency and Disaster risk management
  14. Education, training, lifelong learning and capacity-building

All the regional agreements take a human rights-based approach, with common themes such as care, social protection, employment participation, ageism, dignity and integrity running through them. A gender perspective has also been emphasised in all policies and programmes to take into consideration the needs of older women. For example, the Regional Strategy makes reference to, “...gender-, ethnically- and racially-based inequalities that impact on the quality of life of older persons” (ECLAC, 2003 para 6); the Brasilia Declaration acknowledges, “...intergenerational, gender, race and ethnic perspectives in policies and programmes...”(318, para 7); and the San José Charter, speaks to discrimination, “...with an emphasis on gender-based discrimination” (ECLAC, 2012 para 12).

It is important to note that the Regional Strategy is the only one which refers specifically to the Caribbean subregion. The Brasilia Declaration makes mention of the differences between countries in ageing issues and the need to find appropriate responses, but it does not separate these challenges by subregion. The San José Charter uses the term, “country-specific opportunities” with respect to social security, health services and products and employment (ECLAC, 2012 para 7, 8).

In 2009, at the 49<sup>th</sup> Directing Council, in September 2009, PAHO’s Member States adopted the **PAHO Plan of Action on the Health of Older Persons, including Active and Healthy Aging 2009-2018**. This broke new ground in that it preceded the GASAPH by more than seven years. It consisted of four strategic areas, each with specific objectives, goals and activities at the national and regional level (see Table 5).

**TABLE 7: STRATEGIC AREAS AND OBJECTIVES OF THE PAHO PLAN OF ACTION ON THE HEALTH OF OLDER PERSONS, INCLUDING ACTIVE AND HEALTHY AGEING 2009-2018**

Strategic area	Objective
1. Health of older persons in public policy and its adaptation to international instruments	1.1 Formulate policies, laws, regulations, programs, and budgets consistent with the human rights instruments of the United Nations (UN) and Inter-American (OAS) systems
	1.2 Develop legal frameworks and execution mechanisms to protect the health of older persons in long-term care services
	1.3 Promote cooperation to and among countries in the design of strategies and the sharing of skills and resources to execute their plans on health and aging
2. Adapt health systems to the challenges associated with the aging of the population and the health needs of older persons	2.1 Formulate strategies that include healthy environments and personal behaviors throughout the life cycle to ensure active aging
	2.2 Improve prevention and management of chronic diseases and other health problems of older persons
	2.3 Establish quality services for older persons while strengthening health systems based on primary care
3. Training of the human resources necessary for meeting the health needs of older persons	3.1 Develop the competencies of personnel for the delivery of health services to older persons
	3.2 Train other actors involved in the health of older persons
4. Strengthen the capacity to generate the necessary information for executing and evaluating activities to improve the health of the elderly population	4.1 Strengthen the technical capacity of the health authority to monitor and evaluate health care for the older population
	4.2 Promote acquisition and dissemination of the scientific evidence necessary for adapting health interventions to national situations

Source: (PAHO, 2009).

A final report of this Plan was presented at the PAHO 164<sup>th</sup> Session of the Executive Committee which described the progress made by the Member States, a brief update of the health and ageing situation in the Region of the Americas and recommendations to improve the condition of older persons. Some of the results included that 20 countries had developed a national plan or strategy to address the health and wellbeing of older persons; the same number of countries had also created a multisectoral mechanism for dealing with age-related issues including health; and more than 450 communities had joined the WHO Global Network of Age-friendly Cities and Communities. The names of the countries with these achievements was not provided. Recommendations included making ageing and health an aspect of all national, regional and global public policies; improving health promotion strategies within a life course approach to maintain functionality and reduce dependency for older people; increasing the capacity of health systems and health delivery to respond to an ageing population; and endorsing the WHO Declaration of Action on Healthy Ageing 2020-2030 with a new plan of action (PAHO, 2019b, PAHO, 2019a).

Various other international and regional frameworks are relevant to healthy ageing and have been listed in the column marked “other relevant frameworks” in Table 6. Note that regional agreements on NCDs, namely the Nassau and Port of Spain Declarations are described in chapter 6.

**TABLE 8: KEY GLOBAL AND REGIONAL STRATEGIES AND PLANS OF ACTION ON AGEING**

Global	Regional	Other relevant frameworks
1982: Vienna International Plan of Action on Ageing	1999: CARICOM Caribbean Charter on Health and Ageing	1966: International Human Rights Law
2002 (January): WHO Active Ageing: A Policy Framework	2003: Regional Strategy for the Implementation in Latin America and the Caribbean of Madrid International Plan of Action on Ageing, Santiago, Chile	2001: The Nassau Declaration on Health: <i>The Health of the Region is the Wealth of the Region</i>
2002 (April): Political Declaration and the Madrid International Plan of Action on Ageing	2007: Brasilia Declaration adopted at the Second Regional Intergovernmental Conference on Ageing in Latin America and the Caribbean, Brasilia, Brazil	2007: The Port of Spain Declaration: <i>Uniting to Stop the Epidemic of Chronic Non-Communicable Diseases</i>
2015: Sustainable Development Goals	2009: PAHO Plan of Action on the Health of Older Persons, including Active and Healthy Aging 2009-2018	2011: Rio Political Declaration on Social Determinants of Health
2017: WHO Global Strategy and Action Plan on Ageing and Health	2012: San José charter on the rights of older persons in Latin America and the Caribbean adopted at the Third Regional Intergovernmental Conference on Ageing in Latin America and the Caribbean, San José, Costa Rica	2011: Political Declaration of the UN High-level Meeting of the General Assembly on the Prevention and Control of Non-Communicable Diseases
2019: WHO Decade of Healthy Ageing 2020-2030		2013: Health in All Policies
		2019: Strategic Plan of the Pan American Health Organization

Global	Regional	Other relevant frameworks
	2015: OAS: Inter-American Convention on Protecting the Human Rights of Older Persons  2017: Asunción Declaration Building Inclusive Societies: Ageing with Dignity and Rights adopted at the Fourth Regional Intergovernmental Conference on Ageing and the Rights of Older People in Latin America and the Caribbean, Asunción, Paraguay	2020-2025: <i>Equity at the health of health</i>  1986-2025: Caribbean Cooperation in Health (CCH I-IV) initiatives <sup>9</sup>

## Conclusion

Caribbean governments, technical advisors and regional agencies have actively participated in the development of the global and regional strategies and plans of action on ageing outlined in this chapter. In developing healthy ageing strategies at national and local level, decision-makers should refer to these. Chapters 5, 6 and 7 examine care, health promotion and policy responses in the Caribbean and progress should be appraised in the light of the globally and regionally agreed strategies. In chapters 3 and 4 we provide the background to national and local action by looking at evidence of population ageing and health along the life course in Caribbean countries and territories.

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<sup>9</sup> CCH1: (1986-1995); CCH11: (1997-2001); CCH111: (2007-2015) and CCH1V (2016-2025)

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## Chapter 3: Demographic shifts and the ageing of Caribbean populations

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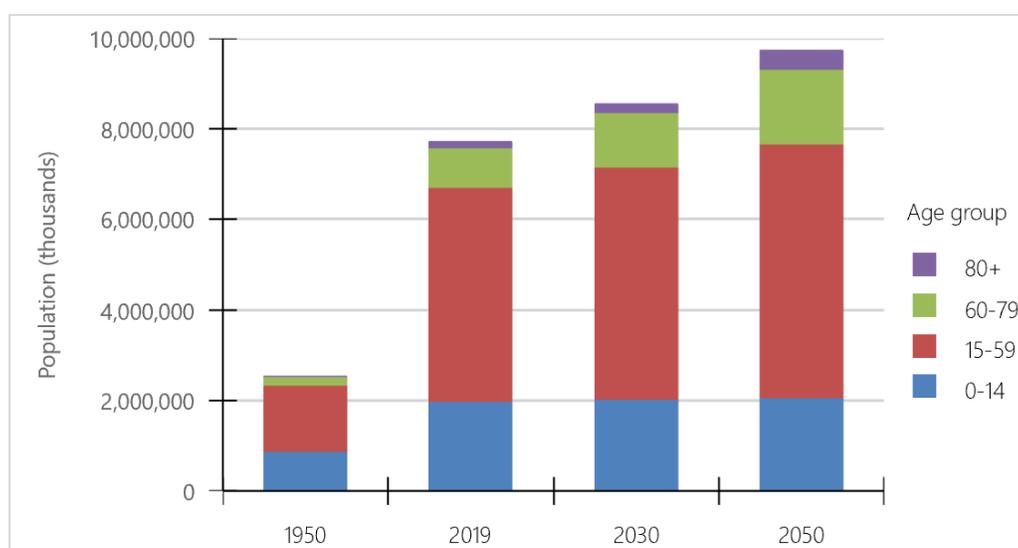
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## Demographic shifts and the ageing of Caribbean populations

Global ageing is a success story (Eldemire-Shearer, 2014), indicating that human health and opportunities have improved and expanded (Cumberbatch et al., 2013). The world as a whole (Figure 1) and most countries are seeing an increasing number and proportion of older people in their populations. Ageing is poised to become one of the most significant social transformations of the twenty-first century with implications for almost all sectors of society (ECLAC, 2018, UN Population Division, 2015). In this chapter we present frameworks for understanding population ageing, evidence of population ageing in Caribbean countries and territories and the role of migration. We then look at some of the economic implications, with the main focus being on implications for the health sector.

**FIGURE 13: TOTAL GLOBAL POPULATION BY AGE GROUP IN 1950 AND 2019 AND PROJECTED FOR 2030 AND 2050**



*Source: (UN Population Division, 2019b)*

### 1. Population ageing: conceptual frameworks

Ageing of the population refers to the increasing size of the older population relative to younger age groups. As detailed below, most Caribbean countries are experiencing population ageing, in line with global trends. The potential costs associated with this process are among the reasons for increasing emphasis on the life course approach to prevention of functional disability in older age groups.

Population ageing is one of the characteristics of the later stages of the **demographic transition**. The standard model of the demographic transition consists of four stages.

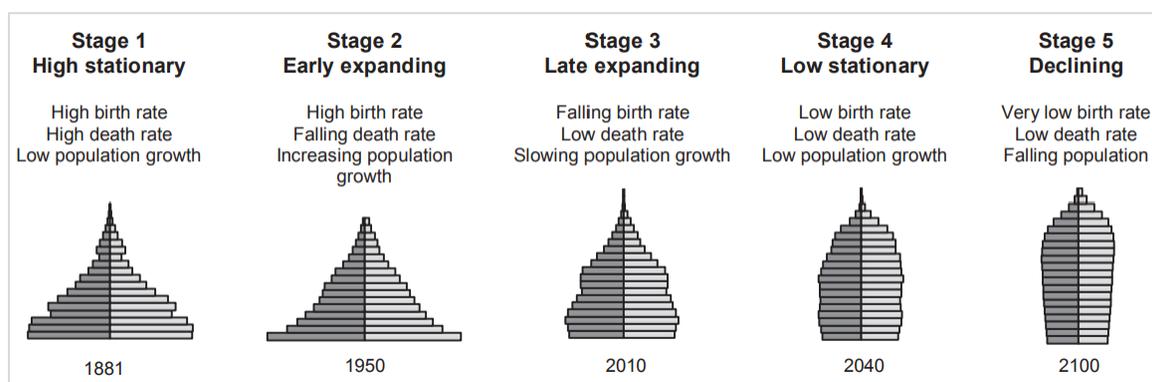
1. **High stable or high stationary.** The first stage characterises the situation in pre-industrial societies where birth rates are high, death rates are high and population growth is low. Populations in such societies are very young. This was the situation for the Caribbean during the first half of the nineteenth century (ECLAC, 2016).

2. **Early transition or early expanding.** Birth rates are maintained at a high level, and death rates commence a period of year-on-year reduction. Reduced death rates result largely from improved food supply and public health (water, sanitation, hygiene etc.). This leads to rapid population growth and longer life spans. In the Caribbean, this second stage occurred during the second half of the nineteenth century and continued until around the 1960s.
3. **Late transition or late expanding.** The reduction in death rate begins to slow and a steady reduction in the birth rate occurs due to changing behaviour, the availability of contraception and progress in gender equality. The Caribbean is currently in this phase and it is projected that this will continue until around the 2030s.
4. **Low stable or low stationary.** Both birth rates and death rates regain relative stability but at much lower levels than at stage 1. The era of population growth ends. In the Caribbean this is expected to happen around the 2030s. (Moon, 1995, ECLAC, 2016, Coreil, 2010, ECLAC, 2018)

Projections suggest there may be a fifth stage of **declining** population, resulting from a birth rate lower than the death rate. This is especially likely given the ageing of the population (ECLAC, 2016).

The age structure of the population is depicted in “population pyramids”, showing numbers of persons by age group and sex. During the different stages the shape of the pyramid changes from one with a wide base and narrow apex, reflecting concentration of the population in younger age groups, to dome-shaped structures where older age groups are similar in size to younger age groups. This can be shown using data from the Caribbean, as in Figure 2.

**FIGURE 14: THE CARIBBEAN: PHASES OF THE DEMOGRAPHIC TRANSITION**



Source: (ECLAC, 2016) p13. Note that the 1881 pyramid was based on data for Jamaica only.

Accompanying the transition are increases in life expectancy. For instance, at global level, life expectancy increased from 57 years in 1950 to 73 years in 2015 and is projected to increase to 85 years by 2100. As sanitary conditions and associated public health measures improve from stage 1 onwards, there is an **epidemiologic transition**, with a shift from a situation characterised by



**KEY MESSAGE:** *With a healthy ageing approach throughout the life course, illness and loss of functional ability among older persons will be minimised, reducing costs and maximising opportunities and benefits from an older population. Healthy ageing is therefore critical to the development of Caribbean societies and economies.*

infectious disease to one typified by non-communicable diseases (NCDs). Among adults, the major health challenges in the pre-transition period are infectious and parasitic diseases, injuries, maternity problems and under-nutrition. Later stages see the increasing prevalence of NCDs, including mental disorders, circulatory diseases, cancer and respiratory diseases, alongside injuries and the persistence of some infectious and parasitic diseases such as HIV and dengue (Coreil, 2010). Greater longevity brings greater costs of these conditions and of their impact on functional abilities.

**Nutritional transition** refers to the nutritional changes that accompany the demographic and epidemiologic transition. At stage 1 foraging, hunting and rudimentary agriculture produce most of the nutrients available. Villages and towns grow around agricultural production, leading to concentration on staple crops and livestock, with greater variety permitted through trade. Most foods are fresh and unprocessed. In stages 3 to 5, there is a concentration of food outlets in urban centres, necessitating systems for transport, packaging, preservation and storage of food. Agricultural production is increasingly industrialised, and food is increasingly processed. There is a transition towards eating more processed food, which may contain high amounts of preservatives, fats, sugar and salt that are associated with prevalence of NCDs (Coreil, 2010).

From stage 3 to stage 5 of the transition, the size of the adult working age population (generally defined as the 15-64 age group) shrinks relative to the older population (65+). In stages 4 and 5 of the transition, economic and social challenges may arise in providing care and support for the older population (ECLAC, 2018). With a healthy ageing approach throughout the life course, illness and loss of functional ability among older persons will be minimised, reducing costs and maximising opportunities and benefits from an older population. Healthy ageing is therefore critical to the development of Caribbean societies and economies. Potential costs of population ageing are presented in section 6: many of them can be forestalled by implementation of healthy ageing strategies.

## 2. Population ageing in the Caribbean

Before analysing the aggregated evidence for Caribbean countries on population ageing, it should be noted that the Caribbean is a diverse region of countries with a wide range of characteristics.

**FIGURE 15: OLDER PERSONS HAVE THE RIGHT TO RECREATION, LEISURE AND SPORTS**

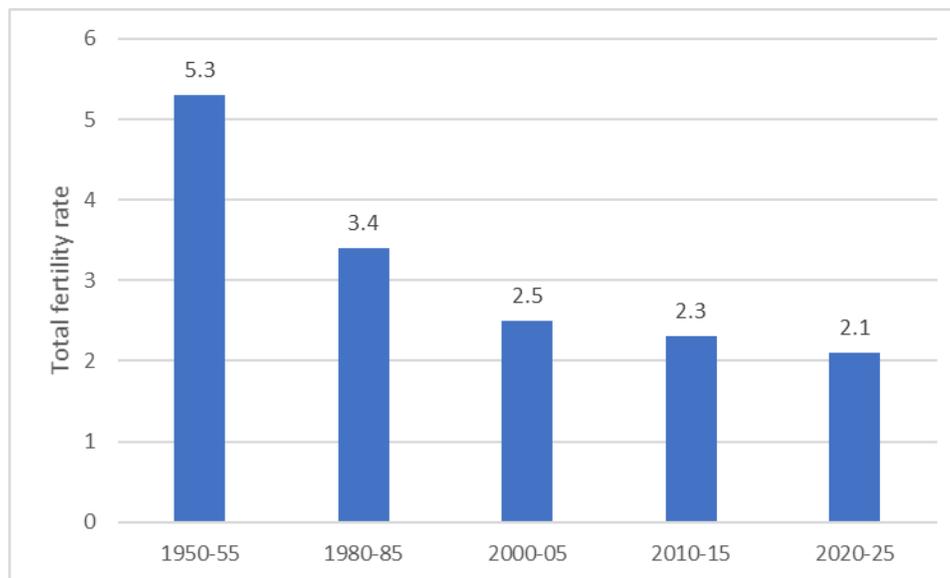


Source: (PAHO, 2015)

Accordingly, the picture regarding population ageing differs widely across the region. This diversity is explored in section 3 of this chapter, drawing on data presented in Appendix 1, which shows population pyramids, population size and age dependency ratios by country, using census data collected by Caribbean countries.

In the Caribbean, the second stage of the demographic transition, with falling death rates and high fertility, occurred during the second half of the nineteenth century and continued until around the 1960s (ECLAC, 2016). From the 1950s, the fertility rate<sup>10</sup> fell, as illustrated in Figure 4. This marked the start of the third stage of the demographic transition, resulting in progressive ageing of the population. By 2025, the total fertility rate is projected to be around 2.1, which is the replacement rate, below which the population will start to decrease, other things being equal.

**FIGURE 16: TOTAL FERTILITY RATE PER WOMAN, 1950 - 2025**

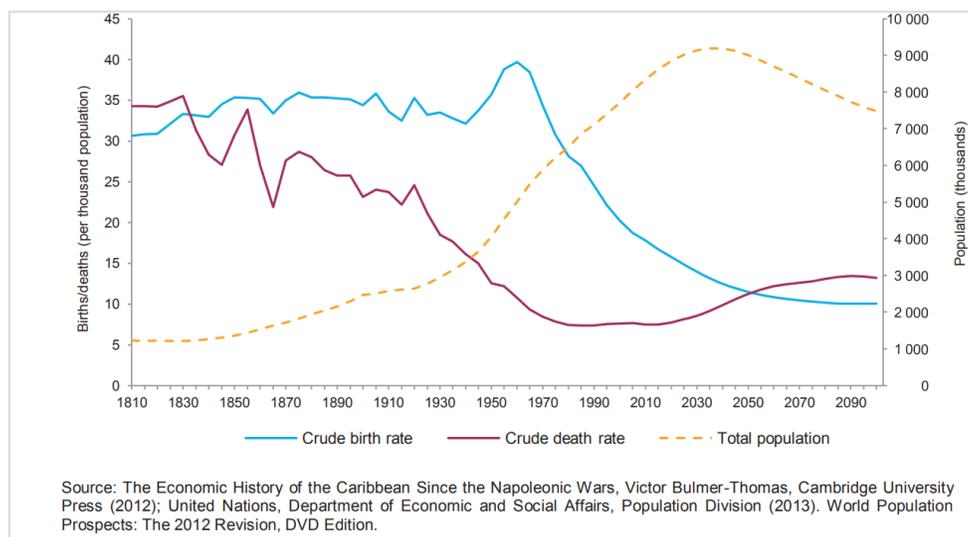


Source: (UN Population Division, 2019b)

<sup>10</sup> The terms “birth rate” and “fertility rate” are closely related but different. The term birth rate can be defined as the rate at which the births take place in a population during a particular time period. It is usually defined for a calendar year. The fertility rate, also known as the total fertility rate, is an individual-specific parameter of a female, which measures the average number of children a female could give birth to over her entire lifetime. (Source: <https://www.differencebetween.com/difference-between-birth-rate-and-vs-fertility-rate/>)

Figure 5 shows the stages of the demographic transition using Caribbean data. Stage 2 of the demographic transition, during which mortality rates fall, is generally accompanied by an epidemiological transition, as the share of deaths attributable to communicable diseases decreases. Stage 3 is marked by falling birth rates and thus the ageing of the population. This is accompanied by an increase in the share of NCDs among causes of death (ECLAC, 2016). Epidemiological evidence is presented in Chapter 4.

**FIGURE 17: THE DEMOGRAPHIC TRANSITION IN THE CARIBBEAN**



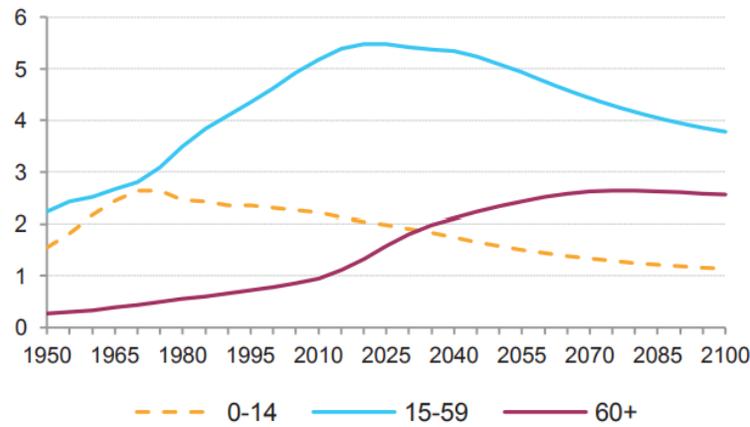
Source: (ECLAC, 2016)

Children are making up a decreasing proportion of the Caribbean population while older persons are making up a growing proportion. In 1970, the proportions of children (0-14), younger adults (15-59) and older adults (60+) were: 45%, 48% and 7% respectively. By 2016, the corresponding proportions were 25%, 63% and 13% (ECLAC, 2016). Figure 6 depicts the relative shares of the population since 1950 and projected until 2100. It indicates that the numbers in the younger adult population are set to level off and decline from around 2025, while the numbers of older persons continue to grow in absolute terms until around 2070 and relative to other age groups until the end of the 21<sup>st</sup> century. Around 2035 the number of older people is set to overtake the number of children in the Caribbean, for the first time in history.

#### Key message

The period of demographic dividend has been defined as that during which the young population has fallen below 30%, the adult population age 15-59 has increased, but the 60+ population has not yet surpassed 15% (Eldemire-Shearer, 2014). The Caribbean is in a period of demographic dividend, since the child population stands at 25.2% and the population 60 and over is 11.6% of the Caribbean population. The region should take advantage of this period to invest in healthy and active ageing programmes.

FIGURE 18: THE CARIBBEAN POPULATION BY AGE (MILLIONS OF PERSONS)

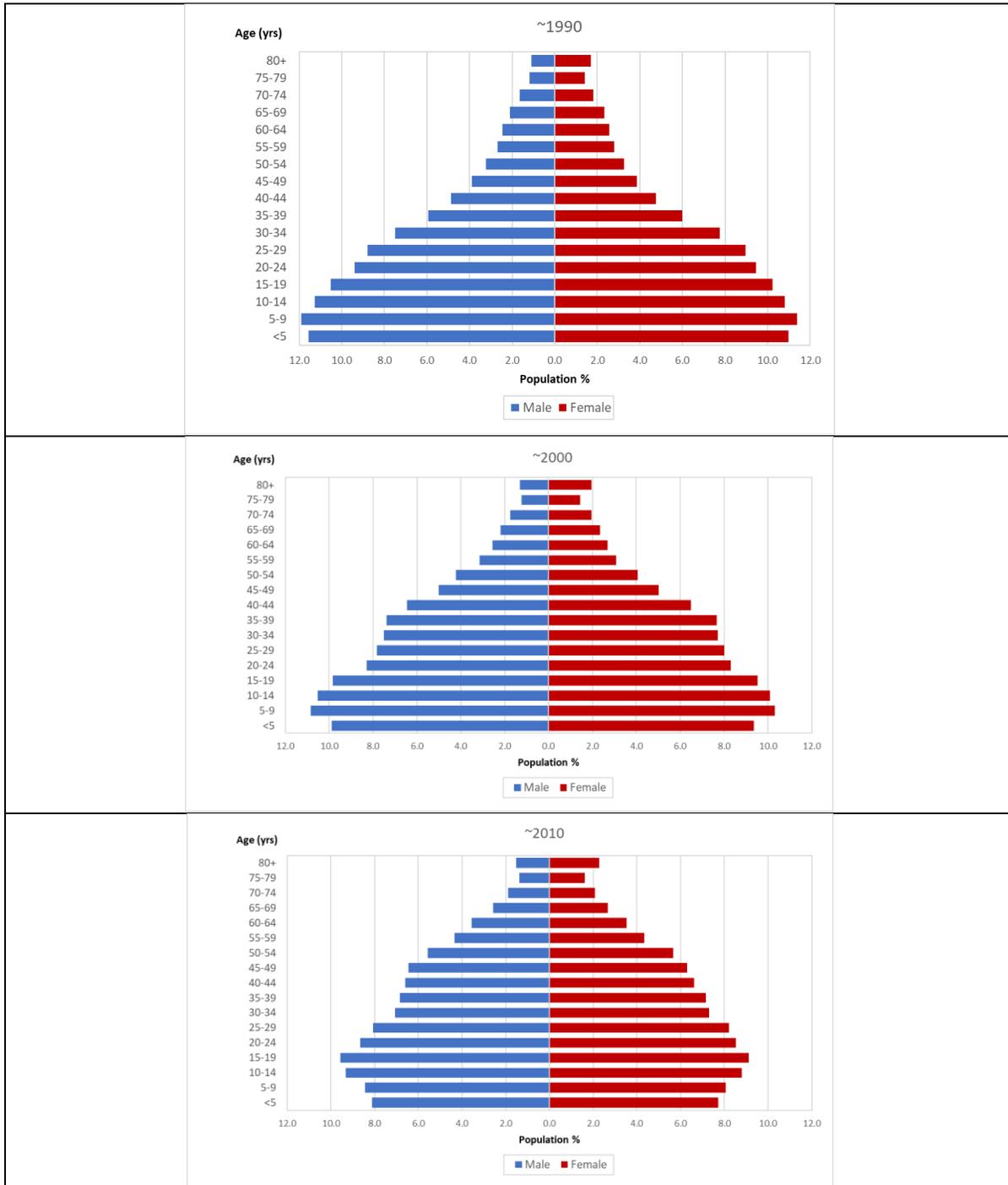


Source: United Nations Population Division (2013) *World Population Prospects*, cited in (ECLAC, 2016)

As indicated in section 1, the Caribbean region is, overall and generally, in Stage 3 of the demographic transition, with a birth rate that continues to fall and a low death rate. During this period the working age population is relatively large, facilitating care for the older and the younger population. This phase has been referred to as the **window of opportunity** or **demographic dividend**, during which rapid economic growth is possible if the right social and economic investments and policies are made in health, education, governance, and the economy. This window allows for putting policies and programmes in place for the increasing numbers of older persons (Eldemire-Shearer, 2014, ECLAC, 2018). Among the opportunities is to increase social and economic participation as people age, so that they can continue to contribute as much as they wish and are able. A healthy ageing approach, accompanied by flexibility in labour markets and income-earning opportunities, and support for carers, are among the dimensions of progressive action in response to population ageing (Jones, forthcoming 2020).

Figure 7 presents population pyramids showing primary data (rather than estimates and projections) from Caribbean censuses carried out around the years 1990, 2000 and 2010. In this twenty-year period, we see the narrowing of the base of the pyramids as the birth rate has fallen, and a widening of the mid sections of the pyramids as the working age population expands.

**FIGURE 19: POPULATION PYRAMIDS (% DISTRIBUTIONS BY AGE GROUP AND SEX) FOR CARPHA MEMBER STATES, ~1990, ~2000 AND ~2010\***



Sources: Country censuses for CMS, collected by CARPHA. See Appendix 1 for full sources and references.  
 Notes: \* ~ = around the year stated. Census years for individual countries and territories are presented below.  
 Countries included are those with population data for ~1990 and ~2000 and ~2010 and that also have data disaggregated by age group up to 80+ years. These and other countries' population pyramids are included in Appendix 1.  
 Censuses ~1990: 1989: Cayman Islands; 1990: Bahamas, Barbados, Trinidad & Tobago; 1991: Aruba, Belize, Guyana, Jamaica, St. Lucia, St. Vincent and the Grenadines; 1992: BES Islands, Curacao.

Censuses ~2000: 1999: Cayman Islands; 2000: : Aruba, Bahamas, Barbados, Belize, Trinidad & Tobago; 2001: BES Islands, Curacao, Jamaica, St. Lucia, St. Vincent and the Grenadines; 2002: Guyana.  
 Censuses ~2010: Aruba, Bahamas, Barbados, Belize, Cayman Islands, St. Lucia; 2011: BES Islands, Curacao, Jamaica, Trinidad & Tobago; 2012: Guyana, St. Vincent and the Grenadines.

Table 1 summarises the same data in numerical format. We see that in the space of twenty years, the percentage of the Caribbean population that are children has fallen from one third (33.9%) to a quarter (25.2%). This has been accompanied by an increase in the population aged 15-59 from 56.9% to 63.2%, the 60+ population from 9.2% to 11.6%, and the 80+ population from 1.4% to 1.9%. Available evidence suggests, then, that the region is still in a phase of expansion of the working age population, consistent with the demographic dividend. However, it is also notable that the older populations are expanding more rapidly, proportionally speaking, than the population aged 15-59. Between 1990 and 2010, the percentage of the population aged 15-59 expanded by 11.1%, as against 26.1% for the older population as a whole (60+) and 37.1% for the over 80s.

**TABLE 9: PERCENTAGE DISTRIBUTION OF THE CARIBBEAN POPULATION BY AGE GROUP, ~1990, ~2000 AND ~2010**

	~1990			~2000			~2010		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
0-14	33.1	34.7	33.9	29.7	31.3	30.5	24.6	25.9	25.2
15-59	57.0	56.8	56.9	59.9	59.7	59.8	63.2	63.2	63.2
60+	9.8	8.5	9.2	10.4	9.0	9.7	12.2	10.9	11.6
80+	1.7	1.1	1.4	2.0	1.3	1.6	2.3	1.5	1.9

Sources: Country censuses for CMS, collected by CARPHA. See Figure 7 for notes.

Another way to look at the age distribution is in terms of **dependency ratios**. These measure the percentages of the total population in the child and older age groups relative to the working age population. The working age population in the dependency ratio calculations is defined as aged 15-64. The age dependency ratio measures the size of the older population (aged 65 and over) relative to the size of the working age population (aged 15-64), measured as a percentage.

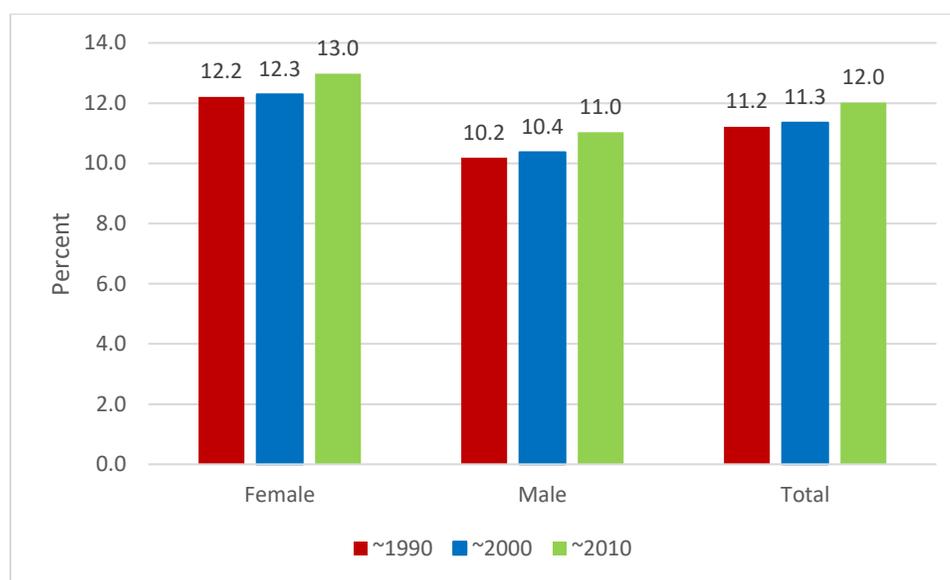
Table 2 shows that children continue to make up the bulk of “dependents”. While the child dependency ratio continues to exceed the age dependency ratio several-fold, there has been a large fall in the child dependency ratio, without (yet) an equivalent rise in the age dependency ratio, indicating a potential demographic dividend. Figure 8 shows that the age dependency has increased for both sexes over the period, with a larger increase in the new millennium (2000 – 2010).

**TABLE 10: DEPENDENCY RATIOS IN CARIBBEAN COUNTRIES, ~1990 AND ~2010**

	% ~1990	% ~2010	Means of calculation
<b>Dependency ratio</b>	68.3	49.8	<u>Number of people aged 0-14 + Number of people aged 65 and over</u> Number of people aged 15-64
<b>Child dependency ratio</b>	57.1	37.8	<u>Number of people aged 0-14</u> Number of people aged 15-64
<b>Age dependency ratio</b>	11.2	12.0	<u>Number of people aged 65 and over</u> Number of people aged 15-64

Sources: Country censuses for CMS, collected by CARPHA. See Appendix 1 for full sources and references.  
 Note: Countries included are those with population data for ~1990 and ~2000 and ~2010: Aruba, BES Islands, Bahamas, Barbados, Belize, Cayman Islands, Curacao, Guyana, Jamaica, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago.

**FIGURE 20: AGE DEPENDENCY RATIOS BY SEX IN THE CARIBBEAN, ~1990, ~2000 AND ~2010**



Sources: Country censuses for CMS, collected by CARPHA. See Appendix 1 for full sources and references.  
 Note: Countries included are those with population data for ~1990 and ~2000 and ~2010: Aruba, BES Islands, Bahamas, Barbados, Belize, Cayman Islands, Curacao, Guyana, Jamaica, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago.

The term **age dependency ratio** may be considered inappropriate as it suggests that the population aged 65 and over is dependent on younger people. Use of this term may connote that people in this age bracket are incapable of looking after themselves. The assertion that this may not, or should not, be the case is consistent with the healthy ageing approach, which speaks to maintaining and building autonomy and functional abilities among older persons, thereby avoiding dependency and supporting the notion that “age is just a number”. In this report, age dependency ratios are used as a purely technical term to show changes in the relative size of the older population, without intending the connotation that older people are dependent and potentially a “burden.”

### 3. Diversity in ageing patterns in the Caribbean

As described in the introduction, the Caribbean is a region of considerable diversity. This is reflected in differences in the population profiles by country. **Appendix 1** shows population pyramids, size of population and age dependency ratios for 23 individual CARPHA Member States (CMS), based on census data. Where data are available from more than one census, it is possible to see progression with respect to the demographic transition.

The population pyramids generally show reduction in the child population and increase in the working age population, with evidence of ageing within the working age group. There is a mixed picture with regards to the relative size of the older population, as indicated by trends in the age dependency ratio. Where the age dependency ratio is stable or is falling, as applies to almost half of the states (Anguilla, Antigua and Barbuda, Belize, Bermuda, BES<sup>11</sup> Islands, Cayman Islands, Grenada, Jamaica, Montserrat, St Kitts and Nevis and Turks and Caicos), this may indicate either or a combination of the following two situations:

Key messages	
<ol style="list-style-type: none"><li>1. <i>There are considerable opportunities for economic and social transformation in preparation for an expanding older population, since the working age population remains large relative to the older population.</i></li><li>2. <i>Ageing strategies should consider the impact of migration, which is an important feature of Caribbean social and economic life.</i></li></ol>	

1) Birth or death rates remain high.

2) Net migration is affecting the relative size of the working age and older populations.

Most evidence points to the latter being the explanation, since the region has experienced falls in death rates for over a century and in birth rates since the 1950s. For all of these 11 countries, a fall in the birth rate can be detected

by looking at the shrinking relative size of the infant population aged 0-5 years. Issues associated with migration will be considered in section 3.

The data in Appendix 1 indicate, firstly, that population ageing is progressing but that there are considerable opportunities for economic and social transformation in preparation for an expanding older population, since the working age population remains relatively large. In other words, there is a demographic dividend, and Caribbean states can take advantage of this. Second, ageing strategies should consider migration, which is an important feature of Caribbean social and economic life (Thomas-Hope, 2002).

To put the findings in context, it is useful to compare the information with current global figures. Table 3 presents 2018 estimates of age dependency ratios for individual Caribbean countries and states, selected world regions and income groupings of countries. It will be seen that some Caribbean countries and states have age dependency ratios over 15%: similar to averages for high income or upper middle-income countries and ratios for the United States and the Euro Area. These countries or territories are Aruba, Barbados, Cuba, Curacao, Puerto Rico and Trinidad and Tobago. Barbados and Cuba are at a very advanced stage of demographic transition and among the forerunners of population ageing in Latin America and the Caribbean (Quashie et al., 2018). There are some other countries with ratios of 10-15%, around the average level for middle income countries: Dominican Republic, Grenada, Guyana, Jamaica, St. Lucia, St. Vincent and the Grenadines and Suriname. Two

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<sup>11</sup> BES: Bonaire, St Eustatius and Saba

countries have age dependency ratios below 10%, around the level of low income or low middle-income countries and sub-Saharan Africa: Belize and Haiti. The median age dependency ratio estimate for 2018 for these Caribbean countries is 14%, which is similar to the ratio for upper middle income countries.

**TABLE 11: AGE DEPENDENCY RATIO, CARIBBEAN COUNTRIES AND SELECTED WORLD REGIONS, 2018**

Country or region	2018
<i>Caribbean</i>	
Aruba	20
Barbados	24
Belize	7
Cuba	22
Curacao	25
Dominican Republic	11
Grenada	14
Guyana	10
Haiti	8
Jamaica	13
Puerto Rico	29
St. Lucia	14
St. Vincent and the Grenadines	14
Suriname	10
Trinidad and Tobago	16
<i>Regions</i>	
United States	24
Euro area	32
Latin America and the Caribbean	13
Sub-Saharan Africa	5
<i>Income groupings</i>	
High income	27
Low and middle income	11
Low income	6
Lower middle income	9
Middle income	11
Upper middle income	15

Source: World Bank Databank (<https://data.worldbank.org/indicator/SP.POP.DPND.OL>)

Table 4 presents age dependency ratio figures for individual CMS from the latest population censuses that took place around 2010. The rows have been colour-coded to indicate ratios over 15%, between 10 and 15% and below 10%. This enables the reader to compare the situation for individual countries with global figures.

**TABLE 12: AGE DEPENDENCY RATIOS, BY CARIBBEAN COUNTRY, ~2010 CENSUS DATA**

Country	Year	Female %	Male %	Total %
Anguilla	2011p	11.5	9.6	10.5
Antigua and Barbuda	2011	11.8	10.6	11.2
Aruba	2010	16.6	13.4	15.1
Bahamas	2010	10.2	8.2	9.2
Barbados	2010	21.8	16.4	19.2
Belize	2010	6.8	7.2	7.0
Bermuda	2010	21.7	16.8	19.3
BES Islands	2011	14.5	12.5	13.4
British Virgin Islands	2010	8.5	8.3	8.4
Cayman Islands	2010	7.6	6.6	7.1
Curacao	2011	21.8	19.2	20.6
Grenada	2011	17.8	13.5	15.6
Guyana	2012	8.6	7.2	7.9
Jamaica	2011	13.1	11.5	12.3
Montserrat	2011	22.2	20.3	21.2
St. Kitts and Nevis	2011	12.5	9.7	11.1
St. Lucia	2010	14.0	11.6	12.8
St. Vincent and the Grenadines	2012	14.6	13.1	13.8
Suriname	2012	11.9	9.7	10.8
Trinidad and Tobago	2011	13.9	11.5	12.7
Turks and Caicos Islands	2012p	4.7	4.7	4.7
<b>AVERAGE</b>		<b>13.6</b>	<b>11.5</b>	<b>12.6</b>

Sources: Country censuses for CMS, collected by CARPHA. See Appendix 1 for full sources and references.  
p =projected

Key: Orange = Age dependency ratio over 15%
Yellow = Age dependency ratio 10-15%
Green: Age dependency ratio below 10%

The census data indicate that around 2010 six of the CMS had age dependency ratios over 15%: Aruba, Barbados, Bermuda, Curacao, Grenada and Montserrat. At the other end of the spectrum, as of the dates of the last censuses, six countries had age dependency ratios below 10%. Comparison with the projections for 2018 suggest that the censuses scheduled for around 2020 will see increases in the number of countries with high age dependency ratios (over 15%) and reductions in the number of countries with low age dependency ratios (under 10%).

#### 4. Migration and population ageing

FIGURE 21: OLDER PERSONS HAVE THE RIGHT TO NATIONALITY AND FREEDOM OF MOVEMENT



Source: (PAHO, 2015)

As well as birth and death rates, population distributions by age are affected by the balance between immigration and emigration by age group. Countries with low age dependency ratios are not necessarily at a low stage of economic development, since they may have a large migrant population of working age. Some of the countries shown in Table 4 are indeed on the low end of the per capita income scale, such as Belize and Guyana. However, others are middle to high income and their working age populations are inflated by considerable immigration. This applies to Anguilla, Antigua and Barbuda, The Bahamas, British Virgin Islands, Cayman Islands and Turks and Caicos Islands. For instance, the latest censuses showed that 60.9% of the population of the British Virgin Islands and 30.4% of the population of Antigua and Barbuda were

born in other countries (Government of the British Virgin Islands, 2010, Government of Antigua and Barbuda, 2010).

Immigrants from around age 25 – 59 generally move to countries to work and they contribute to economic growth through consumption and investment – creating multiplier effects on national income. However, those immigrants who are undocumented are unlikely to be integrated into the tax and national insurance contribution systems that can help sustain the older population economically. Immigrants may have little social connection with local older people and thus are less likely than the local population to provide informal care to them. Some, however, may work in social or healthcare and provide care to older persons.

There is a need to plan for the population of immigrants as they age. What is the likelihood that they will stay in the country into older age? Is it possible to provide suitable standards of care and support to a range of persons with different backgrounds and, possibly, different languages?

To plan adequately for the older population in the context of immigration it is also important to develop a profile of the diversity of the immigrant population, including their age profile, sex profile, settlement practices and their different social and economic practices and needs. There is considerable diversity in the populations of immigrants themselves. For instance, in Dutch-speaking territories some of the immigrants have high income or wealth and come from The Netherlands or other parts of Europe (Sint Eustatius Department of Public Health and PAHO, 2019). Some wealthy persons may choose to retire to the Caribbean, having perhaps experienced enjoyable vacations in the region. Others, generally employed in manual labour or low-level service occupations, come from poorer countries such as Haiti. The length of time spent in the country may vary from a few weeks, possibly with frequent return trips, to years. While there is substantial literature on migration, the

links between population ageing and migration have not been a subject of sufficient research by Caribbean scholars.

Systems need to be put in place to facilitate integration of immigrant populations so that their professional support and friendship to the local older population is enhanced, and they can engage in healthy ageing practices. These need to be based on analysis of diversity among the immigrants.

A further issue in Caribbean population ageing is that of people from the Caribbean diaspora “returning” to the region to retire or spend their later years. Some may have been born in the region, while others are second generation or beyond, having spent most of their lives in other countries (Plaza, 2008). Questions arise regarding the means of providing care on the part of the receiving country if the returning migrants and their families are unable to support the care that may be needed.

On the other hand, some Caribbean countries also experience considerable emigration, notably of skilled labour. Around half of international migrants originating in the Caribbean are women, and it is important to consider the different motivations, intentions and skills of women and men who migrate (ECLAC and International Organization for Migration, 2017). Some very small states do not have tertiary level educational institutions serving the local population; other small states do not cover the range of demands for tertiary education of the local population. The result is “brain drain” of the local young adult population when they travel abroad to study, with few returning until late adulthood if at all. In the population pyramids in Appendix 1 for Anguilla, Aruba, The Bahamas, Bermuda, BES Islands, British Virgin Islands, Cayman Islands, Curacao, Montserrat, Sint Maarten and Turks and Caicos, we see that the population of young adult age (15-29) is relatively small (there is a “dent” in the pyramid at this age), suggesting that many may be away studying or advancing their early careers.

Major emigration of young adult populations and persons with specialist skills creates human resource challenges in providing health and social care, such as an absence of people on island with specialist skills in care of the elderly (Brissett, 2019, Sint Eustatius Department of Public Health and PAHO, 2019). These and other human resource challenges are explored in chapter 5 of this report.

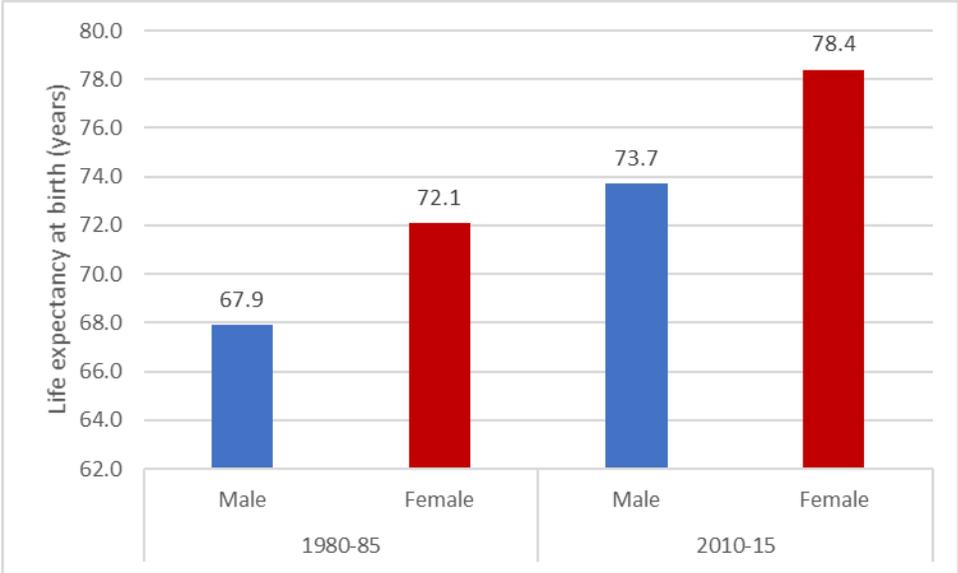
The issue of migration and its relationship to population ageing is one that deserves special attention in the context of small island developing states (SIDS) of the Caribbean with limited human resources. With adequate measures to integrate the immigrant population accompanied by a human resource strategy that monitors and recruits non-nationals with appropriate skills, immigrants can contribute to the resources available for care of older persons, and to preventive healthy ageing strategies. Human resource strategies should also include methods to encourage the return of local people who travel abroad to advance their education and careers. In the absence of individuals with high-level skills and qualifications, locally-based healthcare workers can receive short-term training in person by visiting specialists or online, to gain a range of skills appropriate to elder care (Sint Maarten Ministry of Public Health Social Development and Labour and PAHO, 2019, Sint Eustatius Department of Public Health and PAHO, 2019).

## **5. Gender and ageing**

Evidence presented below suggests that population ageing is a gender issue, and that prevention and care strategies should adapt to the needs of men and women separately, with differing age profiles, medical conditions, and social and economic behaviours.

Almost all the population pyramids and age dependency ratios shown above and in Appendix 1 demonstrate that the numbers of older women exceed the numbers of older men. There are also greater percentages of women than men in the population of working age, though the differences by sex are not as large as in the elderly population (see Table 1 above). Age dependency ratios are generally higher among women than men. These features reflect the generally greater longevity of women than men (Figure 10 and Table 5). Table 5 shows that in the Caribbean, women live on average 4.7 years longer than men, and that the age difference increased since the early 1980s. Over the 30-year period, male life expectancy in the Caribbean increased by 5.8 years and female life expectancy by 6.3 years. The significant and in many cases increasing disparity in life expectancy between men and women has been referred to as “the feminisation of ageing” (Davidson et al., 2011).

**FIGURE 22: AVERAGE LIFE EXPECTANCY AT BIRTH BY SEX FOR CARIBBEAN COUNTRIES, 1980-85 AND 2010-15**



Source: (UN Population Division, 2019a)

**TABLE 13: LIFE EXPECTANCY AT BIRTH BY SEX BY COUNTRY OR REGION, 1980-85 AND 2010-15**

	1980-85		2010-2015		Increase in age between 1980-85 and 2010-15	
	Male	Female	Male	Female	Male	Female
<b>WORLD</b>	59.8	64.4	68.5	73.3	8.7	8.9
<b>LATIN AMERICA AND THE CARIBBEAN</b>	62.4	68.3	71.2	77.7	8.8	9.4
Anguilla	69.5	76.3	78.5	83.7	9	7.4
Antigua and Barbuda	67.5	71	74.8	77.4	7.3	6.4
Aruba	70.5	75.2	72.9	77.8	2.4	2.6
Bahamas	64.7	71	70.1	74.8	5.4	3.8
Barbados	71	75.1	77.1	80	6.1	4.9
British Virgin Islands	70.9	71.7	76.8	79.3	5.9	7.6
Caribbean Netherlands	70.9	76.4	73.6	80.1	2.7	3.7
Cayman Islands	68.4	75.6	79.9	85.7	11.5	10.1
Cuba	72.6	76	76.5	80.4	3.9	4.4
Curacao	70.9	76.4	74.5	80.7	3.6	4.3
Dominica	69	74.8	71.5	76.3	2.5	1.5
Dominican Republic	61.9	65.8	69.6	75.9	7.7	10.1
Grenada	65.6	70.6	70.3	75.2	4.7	4.6
Guadeloupe	67.5	74.2	76.8	84	9.3	9.8
Haiti	50.3	53.3	59.3	63.5	9	10.2
Jamaica	70.3	72.4	72.5	75.5	2.2	3.1
Martinique	69.4	74.2	77.8	84.4	8.4	10.2
Montserrat	73.1	67.9	75.2	71.7	2.1	3.8
Puerto Rico	70.5	77.4	75.4	82.7	4.9	5.3
St. Kitts and Nevis	63.9	68.9	72.6	77.4	8.7	8.5
St. Lucia	66.8	70.9	73.9	76.6	7.1	5.7
St. Vincent and the Grenadines	67.1	70.1	69.6	74.5	2.5	4.4
St. Maarten	70.9	76.4	74.8	81.3	3.9	4.9
Trinidad and Tobago	64.8	69.1	69.8	75.2	5	6.1
Turks and Caicos	67.4	70.3	76.6	82.2	9.2	11.9
United States Virgin Islands	70.7	73.9	76.7	82.2	6	8.3
<b>CARIBBEAN AVERAGE</b>	67.9	72.1	73.7	78.4	5.8	6.3
<b>AGE DIFFERENCE BETWEEN THE SEXES</b>	4.2		4.7			

Source: (UN Population Division, 2019a)

The feminisation of ageing reflects the fact that there are more deaths among males than females earlier in life. Table 6 shows that proportionally more males than females die in every age group between 10 and 79 years old. Greater proportions of women than men die at ages 80 and over, reflecting women’s greater longevity.

**TABLE 14: AGE AND GENDER DISTRIBUTION OF TOTAL REPORTED DEATHS FOR THE ENGLISH- AND DUTCH-SPEAKING CARIBBEAN, 2000-2016**

Age Group	% of Males	% of Females	Male/Female Ratio
0 - 9 Years	5.0	4.8	1.0
10 - 19 Years	2.1	1.4	1.5
20 - 29 Years	5.8	3.2	1.8
30 - 39 Years	6.6	4.4	1.5
40 - 49 Years	8.8	6.9	1.3
50 - 59 Years	12.3	9.9	1.2
60 - 69 Years	16.0	13.7	1.2
70 - 79 Years	20.6	20.1	1.0
80 - 89 Years	17.2	22.9	0.8
90 and over	5.7	12.7	0.4

*Source: Data reported to CARPHA*

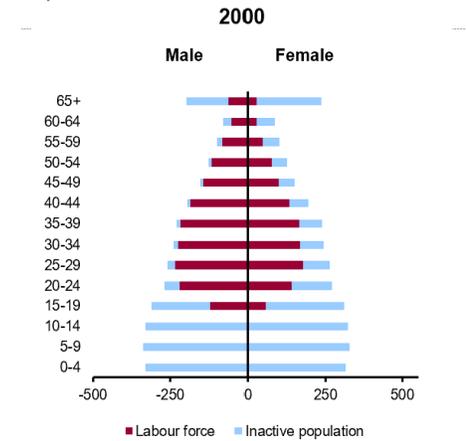
The gendered patterning of mortality reflects a gendered distribution of health conditions along the life course. Some health conditions are specific to one of the sexes (such as prostate cancer), but most differences in health between the sexes are the result of differences in exposures, risk factors and environments along the life course.

In the Caribbean, injuries are the leading cause of death among male youth and men in the age groups 10-39, whereas they are not the leading cause of death for females at any age group (CARPHA, 2017). This points to the greater exposure of young men to risks of accidents and violence, which may cause specific forms of disability that become increasingly difficult to manage as ageing progresses, such as those related to amputations. The high rates of injury among males also illustrate the importance of mental health issues in exposing people to risk along the life course, and how mental health manifests differently among men and women. For instance, men may react violently to stress as it is socially acceptable for them to do so (Chevannes, 2001). Among females, the leading causes of death from age 10 onwards are NCDs, whereas in men, NCDs only emerge as leading causes of death in the 40-49 age group. Nevertheless, rates of death from NCDs are higher among men than women before the age of 60 (CARPHA, 2017). This may be associated with lower rates of presentation for health screening and care among men than women (Willie-Tyndale et al., 2019, Bourne et al., 2010). Further analyses of causes of death, including potential years of life lost disaggregated by sex, are presented in chapter 4.

With lengthening lifespans, especially among women, the question of financing of health and other forms of care arises. General economic implications will be considered in the following section. Gender disparities in economic status can become a major source of risk in older age. In the Caribbean, women earn less than men, they are less likely to be employed or participate in the labour force and they contribute less to National Insurance schemes and pensions. Figure 11 shows lower levels of labour force participation by women than men throughout working age groups and into older age. Women’s accumulated pensions, savings and health insurance are more often insufficient to meet their needs in old age. While economic insecurity is a concern for older persons in general, it is a particular concern for women, because of economic inequality along the life course combined with longer survival among them. There are some indications that gender gaps in economic indicators are shrinking in the Caribbean, in part because of the rapid progress in the educational achievements of girls and women. However, this is taking place in the younger generation, and may not benefit the current middle-aged and older generations, except indirectly through taxation and expenditure of young women (International Labour Organization, 2018, Quashie et al., 2018).

While the economic status of older women tends to be worse than that of older men, there is also a need to examine quality of life among both sexes. Older men tend to have less social support than older women, having established less strong bonds with family members in earlier years. Caribbean studies have shown that loneliness may be more prevalent among older men than older women (Rawlins et al., 2008). Further research should be oriented to measuring quality of life by sex among senior citizens, using instruments such as the SF-36 health-related quality of life scale (Ho et al., 2009).

FIGURE 23: THE CARIBBEAN POPULATION, BY SEX, AGE AND ECONOMIC ACTIVITY STATUS



Source: (Jones, forthcoming 2020)

## 6. Economic implications of population ageing

**FIGURE 24: OLDER PERSONS HAVE THE RIGHT TO SOCIAL SECURITY**



Source: (PAHO, 2015)

Population ageing in the Caribbean is taking place in a different era and under different economic circumstances from that which has taken place in developed countries. Population ageing initially occurred in developed countries in the 1950s, during which time the economic boom enabled them to develop institutional care and community programmes to support the elderly. Caribbean populations started experiencing ageing around the time of independence, the 1960s. However, it was not until the 1990s that ageing was fully recognized in the region. The historical period is different from that which favoured the development of elder care in the developed countries from the 1950s onwards. In most of the developed world, population ageing was a gradual process following steady socio-economic

growth over several decades and generations. In developing countries, the process is being compressed into two or three decades. Thus, while developed countries grew affluent before they became old, developing countries are getting old before a substantial increase in wealth occurs (WHO, 2002, Palloni et al., 2002). There are additional challenges and opportunities associated with globalisation, urbanisation, industrialisation and technology development (Eldemire-Shearer, 2014). The position of the Caribbean in the global economy is also very different from that of the developed countries whose populations are farther advanced in the demographic transition. Caribbean economies are more vulnerable to economic shocks as they are highly dependent on exports and imports, and on markets for their goods in the developed countries (Theodore et al., 2016, International Labour Organization, 2014).

Responses to ageing in the Caribbean must be cognisant of the economic characteristics of the region. As shown in the introductory chapter, section 2, the countries range from small to very small in population and physical size. These characteristics limit human resource capacity and locally available and affordable products for health. With a generally small manufacturing base and major reliance on tourism, financial services and primary commodities for income, many goods necessary for care and support of older persons must be imported, such as medication and prosthetics. Caribbean countries also vary widely in income per capita (Table 7) and thus resources available to finance programmes to meet the needs of older persons (Quashie et al., 2018). Some of the higher income countries also have structural constraints such as a small human resource base and very high reliance on imports. All the Caribbean SIDS are vulnerable to impacts of climate change. Some (e.g. Guyana, The Bahamas) have low-lying coasts, highly vulnerable to sea level rise. Some are frequently in the path of major hurricanes, that have devastated economies and health systems for years. All are subject to more frequent drought and heavy precipitation events predicted to worsen throughout the 21<sup>st</sup> century (CARPHA, 2018). Like climate change, ageing is an ongoing and escalating challenge, which requires strategic approaches alongside those to address environmental and economic challenges faced by the region. Caribbean countries cannot copy and adopt responses of the developed world, but will have to fashion their own responses, appropriate to their socio-economic

circumstances and resources (Eldemire-Shearer, 2014). Nevertheless, it is important to examine responses to ageing in the developed and other countries, to analyse what can be adapted for the Caribbean.

**TABLE 15: GDP PER CAPITA IN CARIBBEAN COUNTRIES AND WORLD BANK COUNTRY INCOME GROUPINGS, 2018**

	GDP per capita (Current US Dollars)
High income	44,714.7
Upper middle income	9,200.5
Middle income	5,484.0
Lower middle income	2,218.9
Low income	812.8
<b>CARIBBEAN</b>	
Antigua and Barbuda	16,864.4
Bahamas	31,857.9
Barbados	16,327.6
Belize	5,025.2
Bermuda	85,748.1
Cayman Islands	56,334.2
Cuba	8,541.2
Curacao	19,457.5
Dominica	7,031.7
Dominican Republic	7,650.1
Grenada	10,833.7
Guyana	4,634.7
Haiti	868.3
Jamaica	5,355.6
St. Kitts and Nevis	19,829.4
St. Lucia	10,315.0
St. Vincent and the Grenadines	7,377.7
Trinidad and Tobago	16,843.7
Turks and Caicos	27,142.2
<b>CARIBBEAN AVERAGE</b>	18,844.12
<b>CARIBBEAN MEDIAN</b>	10,833.70

*Source: (World Bank, 2019)*

Countries around the world have been grappling with potentially or actually increasing cost associated with population ageing. The greatest cost is generally pension provision, which presents increasing challenges as the size of the older population increases relative to the size of the working age population. Several countries in Europe have responded by increasing the age at which people are eligible for state pension payouts. This is also happening in Caribbean countries, where in several countries, retirement age was around 60 years until recently.

**TABLE 16: RETIREMENT AGES (ELIGIBILITY FOR FULL SOCIAL SECURITY PENSION)**

	Retirement age
Antigua and Barbuda	61 increasing to 65 by 2025
Bahamas	65
Barbados	67 (previously 65)
Belize	60 (conditional upon not working for those aged 60-64)
Dominica	63.5 increasing to 65 by 2021
Grenada	60
Guyana	60
Jamaica	65 (conditional upon not working for those aged 65-69)
Saint Kitts and Nevis	62
Saint Lucia	65 (previously 60)
Saint Vincent and the Grenadines	61 increasing to 65 in 2028
Suriname	60
Trinidad and Tobago	60 (conditional upon not working for those aged 60-64)

Source: (Jones, forthcoming 2020)

Increasing pension ages across the board is not responsive to individual needs and may deprive some of economic security, especially those who are no longer able to work. Given high rates of NCDs in middle age to young old age, this challenge may affect many. A range of private pension options with variable dates of access are available, but these are beyond the economic reach of some of the most vulnerable people.

The healthy ageing approach includes prevention and response to disabling conditions and can be combined with an active ageing response to create flexibility in working conditions and thus enable more people to work as long as they want to. Adapted work environments and flexibility in working hours and locations can assist senior citizens in continuing to work to the extent they want to, and in response to their health status (Jones, forthcoming 2020). Creating work opportunities for older persons is in line with major pillars of the active ageing approach, namely participation and (economic) security. It also conforms with the ideal of *productive ageing*, according to which older persons are able to participate in economic activity as well as activities contributing to their own health, to their families, to their communities, and to society as they age (Leland and Elliott, 2012).

ECLAC (2018) used population projections and data on government expenditure on education, health and pensions to predict likely changes in the costs of these dimensions of social protection by 2050 in ten English-speaking Caribbean countries. Estimation of healthcare costs attributable to ageing is challenging, as expenditures are generally not classified by age of patient. For the analyses, the authors based costings on the observation that most healthcare costs are incurred in the last ten years of life. The “near-death dependency ratio” was calculated as the annual number of deaths, multiplied by 10, divided by the working-age population (Miller et al., 2011). This may be a more satisfactory measure of dependency than the age dependency ratio. The latter tends to imply that people over 65 are dependent while the near-death dependency ratio is based on mortality data and on observation that most healthcare costs are incurred in the last 10 years of life. However, the

measure is based on assumptions of dependency that are unlikely to hold universally, and there appear to be difficulties in producing nationally applicable measures of levels of functional disabilities and associated costs.

The estimated near-death population was projected based on demographic trends and multiplied by health expenditures to show costs over time. In this “business-as-usual” scenario, healthcare costs were predicted to rise from 3.7% to 5.4% of Gross Domestic Product (GDP) between 2010 and 2050. This compares with an estimated increase in pensions expenditure from 3.7% to 8.4% of GDP, illustrating the greater economic impact on pensions of population ageing. In line with the decrease in the child population, education costs were predicted to fall from 4.3% to 2.8% of GDP (ECLAC, 2018). The following table shows the projected changes in health expenditure in the ten countries alongside the projected changes in the near-death dependency ratio. The dependency ratios were not disaggregated by sex.

**TABLE 17: NEAR-DEATH DEPENDENCY RATIOS AND PUBLIC EXPENDITURES ON HEALTH AS A PERCENTAGE OF GDP, 2010 AND 2050**

	Near death dependency ratios			Expenditure on health (% of GDP)		
	2010	2050	Change	2010	2050	Change
Antigua and Barbuda	10.3	16.9	+6.6	4.3	6.6	+2.3
Bahamas	9.6	18.3	+8.7	3.5	5.7	+2.2
Barbados	17.0	27.6	+10.6	4.3	6.6	+2.3
Belize	10.6	12.0	+1.4	3.9	4.5	+0.6
Grenada	13.7	17.1	+3.5	2.7	3.8	+1.1
Guyana	15.4	19.3	+3.8	4.4	5.1	+0.7
Jamaica	12.6	19.4	+6.9	3.0	4.5	+1.5
Saint Lucia	11.9	20.4	+8.5	4.2	7.0	+2.8
Saint Vincent and the Grenadines	12.5	20.5	+8.0	3.9	5.8	+1.9
Trinidad and Tobago	14.3	25.1	+10.8	2.9	4.6	+1.7
CARIBBEAN AVERAGE	12.8	19.7	+6.9	3.7	5.4	+1.7

*Source: (ECLAC, 2018)*

The economic implications should not just be framed in terms of costs to the State. There is a need to consider questions of equity in the allocation of resources, and the adequacy of social and economic safety nets to ensure that the human rights of all older persons can be respected in practice. Questions of equity are especially important because impairments in functional capacity are concentrated among people of lower socio-economic status. For instance, the Trinidad dementia study found that prevalence of dementia was higher among people of lower educational status (Davis et al., 2018). The impact on communities, and especially on carers of the elderly population, should also be considered. Two important questions arise:

- Is the safety net in place broad enough to protect the living conditions of older people?
- Does the health system afford equitable access to all older people? (Bethelmie et al., 2019).

In the Caribbean, there are many social programmes and non-governmental organisations to protect the low-income groups. However, the system tends to be difficult to navigate and there is a lack of coordination, and sometimes a lack of co-operation, between the different entities and programmes. There is a need for programmes to be reviewed with an eye on rationalisation and allocation of resources towards specialised housing, transport and health care for older persons (Theodore et al., 2016, Caddle, 2010). Increased capacity is needed for oversight and regulation required in respect of designated providers. Communication with the corporate sector and social security agencies is important to instil improved interactions and customer service for senior citizens. Most care of the elderly in the Caribbean takes place at home by family members. There is thus also a need to develop strategies of support for carers, especially in the context of increasing economic pressures on carers to earn incomes outside the home (Bethelmie et al., 2019).

With regard to health, the strategies to achieve Universal Health Coverage should specifically incorporate a focus on care, treatment and prevention with and for older persons. Improved access by older people on lower incomes and living with NCDs should be a major focus. This will generally entail review of national health insurance models and procedures. In some countries, such a review is underway, in response to recognition of the increasing prevalence of NCDs and elderly care needs and rights (Sint Maarten Ministry of Public Health Social Development and Labour and PAHO, 2019).

Overall, population ageing necessitates a rethink of the allocation of resources at the State, community and family levels and how they might best be organised to support the growing numbers of senior citizens (Bethelmie et al., 2019). The balance between public and private financing is also an issue to be determined, with strengths and weaknesses on both sides (Cumberbatch et al., 2013, Theodore et al., 2016).

**TABLE 18: PRIVATE AND PUBLIC AGEING AND HEALTH FINANCING MECHANISMS**

Mechanism	Main Features	Comments
<b>1. Private (market)</b>		
<b>i) Self-financing</b>	<b>* Individual and family pay for care from cash or property assets e.g. reverse mortgage</b>	<ul style="list-style-type: none"> <li>• More responsibility for one’s health and care</li> <li>• But inequitable—variable access to care depending on one’s asset base.</li> </ul>
<b>ii) Insurance</b>	<b>* Pooling of risks with risk rating to determine package and premiums</b>	<ul style="list-style-type: none"> <li>• Actuarially fair</li> <li>• But risk-income-illness exclusions limit universal coverage</li> </ul>
<b>2. Public</b>		
<b>i) Gov’t funds</b>	<b>* Tax resources cover spectrum of health care services</b>	<ul style="list-style-type: none"> <li>• Potential access for all</li> <li>• But fiscal space constraints so variable range and quality of services</li> </ul>
<b>ii) Social Security</b>	<b>* Pooling of risks with graduated contributions based on earnings during work years</b>	<ul style="list-style-type: none"> <li>• Equitable with financial protection in accessing care</li> <li>• But enforcement issues with self-employed and informal workers</li> </ul>
<b>3. Hybrid of 1 and 2</b>		
<b>3. Public-private mix</b>	<b>* Gov’t or social security covers essential package of care with private ‘top-up’</b>	<ul style="list-style-type: none"> <li>• Cost sharing is established</li> <li>• But issues in defining essential package to be available to all.</li> </ul>

*Source: (Cumberbatch et al., 2013)*

## Conclusion

The evidence of this chapter shows that Caribbean populations are ageing, but that there is considerable diversity in the rate of change and in the distribution of the population by age and sex. Individual countries and territories should examine their own data and fashion responses accordingly. Generally, gender and migration should be factored into considerations of how to respond to demographic change in each context. The data show that women have longer life expectancy than men, and there are economic vulnerabilities associated with this as women tend to accumulate less savings and pension contribution while they are of working age. There is also a need to consider potential quality of life differences between older men and women; there is a lack of Caribbean research in this area.

In the Caribbean context migration must be factored into the response to population ageing. Net immigration is a feature of some countries, while net emigration is a feature of others. This raises issues concerning the integration of immigrant populations into the local systems that address ageing, such as national insurance systems, and of human resource capacity depletion in the case of large-scale emigration. The links between population ageing and migration into and from the region have not been sufficiently explored in research.

Overall, the data show that there are considerable opportunities to develop appropriate policy and programmatic responses to population ageing in the region, since there is a relatively large working age population and a 60+ population of less than 15%. The allocation of resources should be driven by human rights principles, especially in terms of equitable distribution according to economic and health needs, including functional abilities.

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WORLD BANK 2019. Databank: GDP per capita: current US\$.

## Chapter 4: Health conditions along the life-course and among older persons

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Health in the later years of life is strongly determined by what has gone before: the previous and continuing health conditions, and the array of genetic, behavioural and social determinants. In this chapter we examine health among older persons from two major perspectives:

- 1) A life course perspective, looking at the general profile of health and its determinants in children, young and middle-aged adults and how they are likely to affect Caribbean people as they age;
- 2) Health conditions prevalent and concentrated among senior citizens, especially NCDs and the Geriatric Giants. What is the evidence on their prevalence, impacts and determinants in the Caribbean context?

We start with a general profile of health in the Caribbean, including comparisons between older and younger people. We then use the life course approach to present the major conditions in the child and adult population and notable determinants. Thirdly, we look at health conditions among older persons.

## 1. General profile of health in the Caribbean

At population level, and in the absence of regular nationally representative health surveys, registered deaths by cause of death are a good way to obtain national profiles of health conditions. CMS report their mortality statistics to CARPHA, and these data are used in this analysis.<sup>12</sup>

As the Caribbean population has aged and the demographic transition has progressed, the share of mortality attributable to NCDs has increased, while that attributable to Communicable, Maternal, Neonatal and Nutritional Diseases has decreased. This is an ongoing process, as can be seen in Table 1 and Figure 1. These show that in the period 2000-2016, the share of NCD mortality grew by 4.1 percentage points, while the share of Communicable, Maternal, Neonatal and Nutritional Diseases fell by 4.9 percentage points. A further remarkable feature of this period has been the rise in deaths attributable to injuries, indicating that accidents and violence are increasing challenges in the 21<sup>st</sup> century Caribbean.

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<sup>12</sup> CARPHA Member States (CMS) report annual cause of death data to CARPHA. These data are typically presented by age, gender and underlying cause of death. The underlying cause of death refers to the disease or injury which initiated the train of morbid events leading directly or indirectly to death or the circumstances of the incident (the external cause) that produced the (fatal) injury. The underlying cause is considered to be the primary target for disease prevention and control.

The disease classifications used in the analyses of data reported to CARPHA are based on the *International Classification of Diseases, Tenth Revision (ICD-10)*, according to the recommendations of the *Global Burden of Disease Study 2017 (GBD 2017) Causes of Death and Nonfatal Causes Mapped to ICD Codes* (Global Burden of Disease Collaborative Network, 2018).

**TABLE 19: PERCENTAGE CONTRIBUTION TO TOTAL DEATHS OF BROAD GROUPINGS OF CONDITIONS IN THE ENGLISH-AND DUTCH-SPEAKING CARIBBEAN, 2000 AND 2016<sup>13</sup>**

Broad Groups	2000	2016
Communicable, Maternal, Neonatal and Nutritional Diseases	16.1%	11.3%
Injuries	4.8%	9.8%
Non Communicable Diseases	72.7%	76.8%
Ill-defined Conditions	6.3%	2.1%

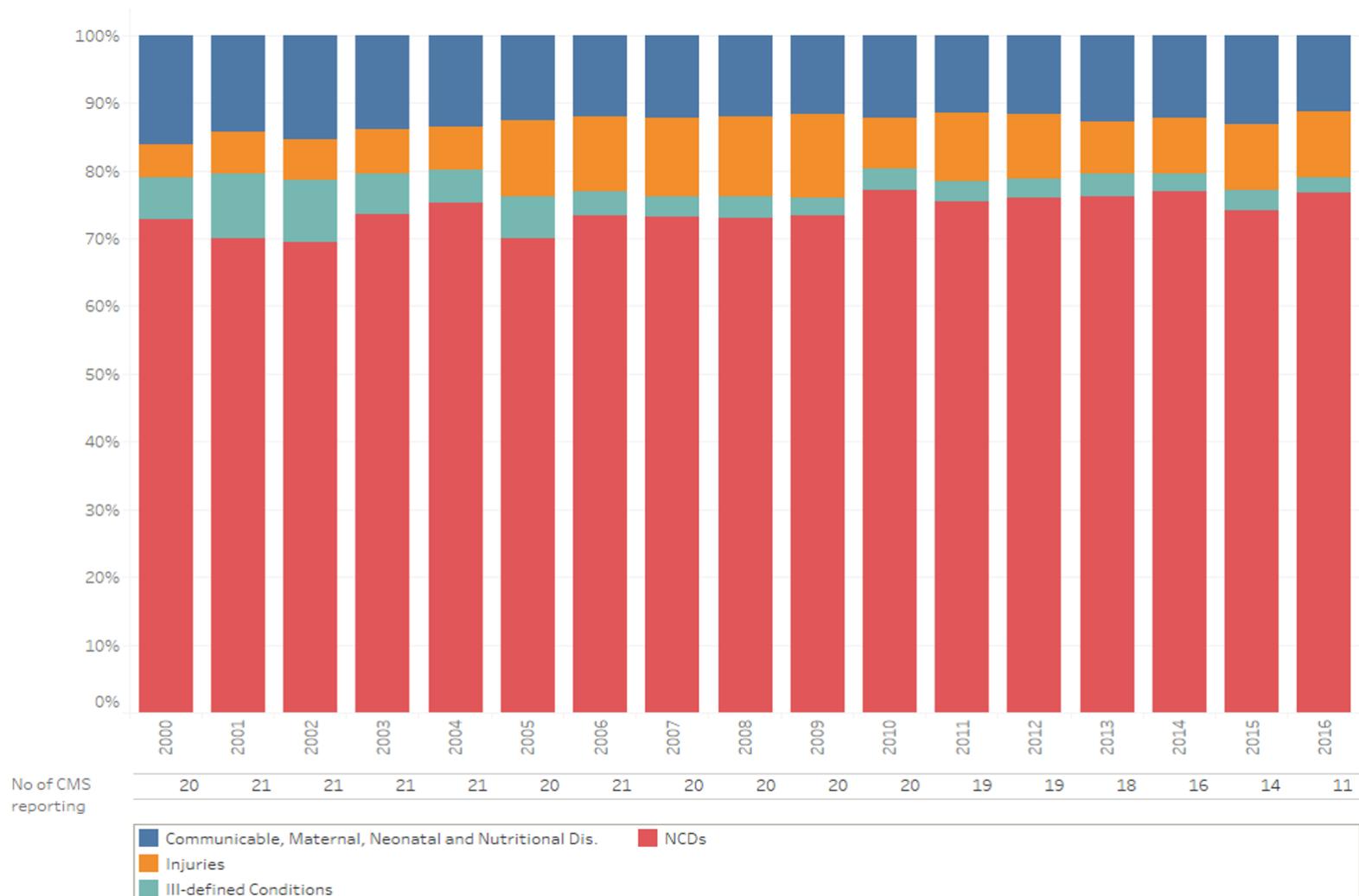
Source: Data reported to CARPHA

<sup>13</sup> The data used in the analyses of mortality in this chapter were based on reporting to CARPHA between 2000 and 2016. The following table shows the countries that reported in each year, marked in green. Data are available for 2017 and 2018 but have not been included in the analyses because less than half of countries have yet reported for those years. Timely reporting of surveillance data would enable the production of more up-to-date estimates.

**CARPHA Regional Mortality Surveillance System, Reporting Log, 2000-2016**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
ANGUILLA																	
ANTIGUA AND BARBUDA																	
ARUBA																	
BAHAMAS																	
BARBADOS																	
BELIZE																	
BERMUDA																	
BRITISH VIRGIN ISLANDS																	
CAYMAN ISLANDS																	
CURACAO																	
DOMINICA																	
GRENADA																	
GUYANA																	
JAMAICA																	
MONTserrat																	
SAINT KITTS AND NEVIS																	
SAINT LUCIA																	
SAINT VINCENT AND THE GRENADINES																	
SURINAME																	
TRINIDAD AND TOBAGO																	
TURKS AND CAICOS ISLANDS																	

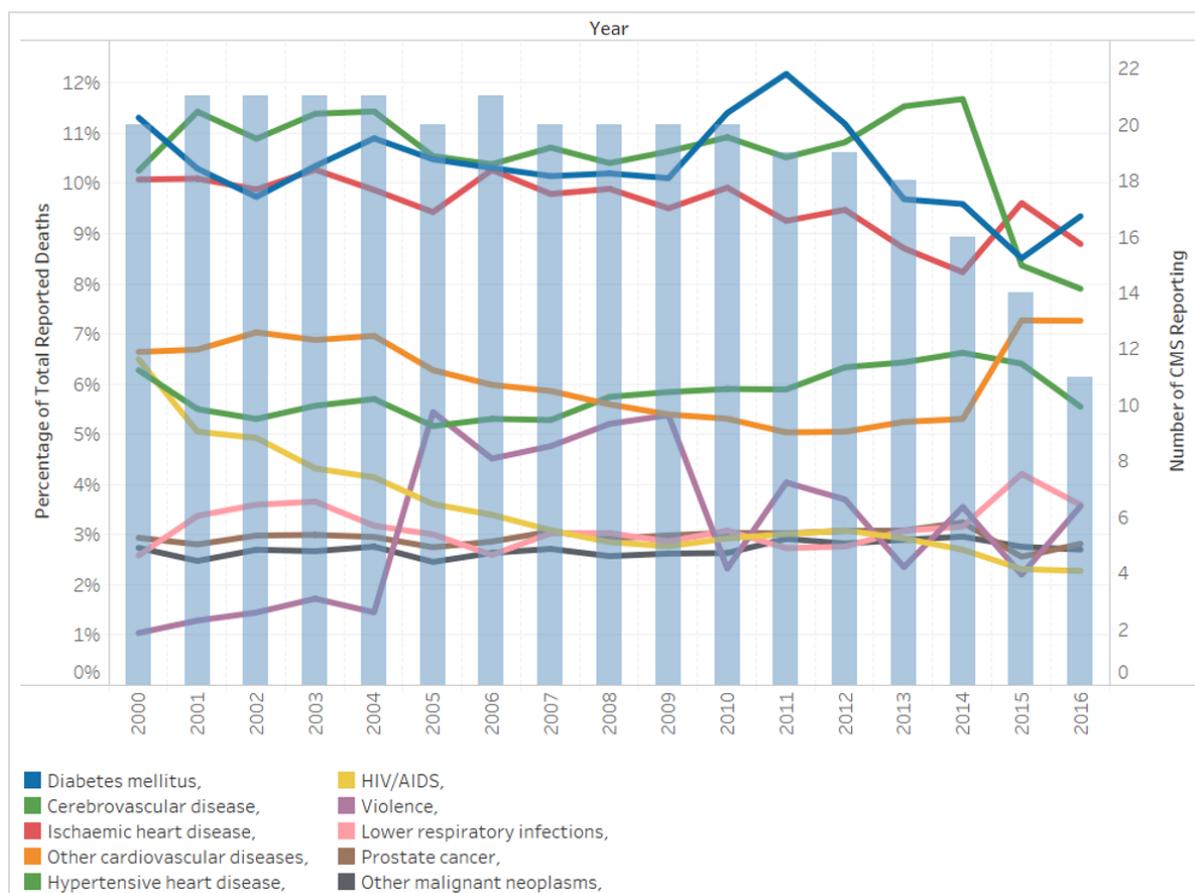
**FIGURE 25: PERCENTAGE CONTRIBUTION TO TOTAL DEATHS OF BROAD GROUPINGS OF CONDITIONS IN THE ENGLISH-AND DUTCH-SPEAKING CARIBBEAN, 2000-2016**



Source: Data reported to CARPHA

Figure 2 shows the 10 major causes of death in the region in the 2000-2016 period. Seven of the ten leading causes of death are NCDs, including the top 5: diabetes, cerebrovascular disease, ischaemic heart disease, other cardiovascular diseases and hypertensive heart disease. The top three of these exceed the percentage of deaths attributable to other causes by a wide margin. HIV/ AIDS and lower respiratory infections are the two communicable diseases that are in the top 10 leading causes of death. HIV/ AIDS has fallen from being the 5<sup>th</sup> leading cause of death at the turn of the century to being the 10<sup>th</sup> cause of death in 2016. This appears to be because of the availability of antiretroviral therapy (Cohen et al., 2011; Harris, Rabkin, & El-Sadr, 2018). Violence has fluctuated widely as a percentage of total reported deaths and has increased its ranking from 10<sup>th</sup> in 2000 to 7<sup>th</sup> in 2016.<sup>14</sup> Prostate cancer and other malignant neoplasms (cancers) ranked 8<sup>th</sup> and 9<sup>th</sup>. The ranking of cancer overall could have been higher had all cancers been grouped together.

**FIGURE 26: TOP 10 LEADING CAUSES OF DEATH IN THE ENGLISH- AND DUTCH-SPEAKING CARIBBEAN, 2000-2016**



Source: Data reported to CARPHA

<sup>14</sup> It should be noted that in some CMS, for deaths due to violence, the cause of death is not reported until court proceedings are concluded. This often results in delays of several years before violent deaths are reported.

Deaths before the age of 70 are considered “premature mortality.”<sup>15</sup> Figure 3 shows the top 10 leading causes of death by sex for people under the age of 70 and compares this with people aged 70 and over.

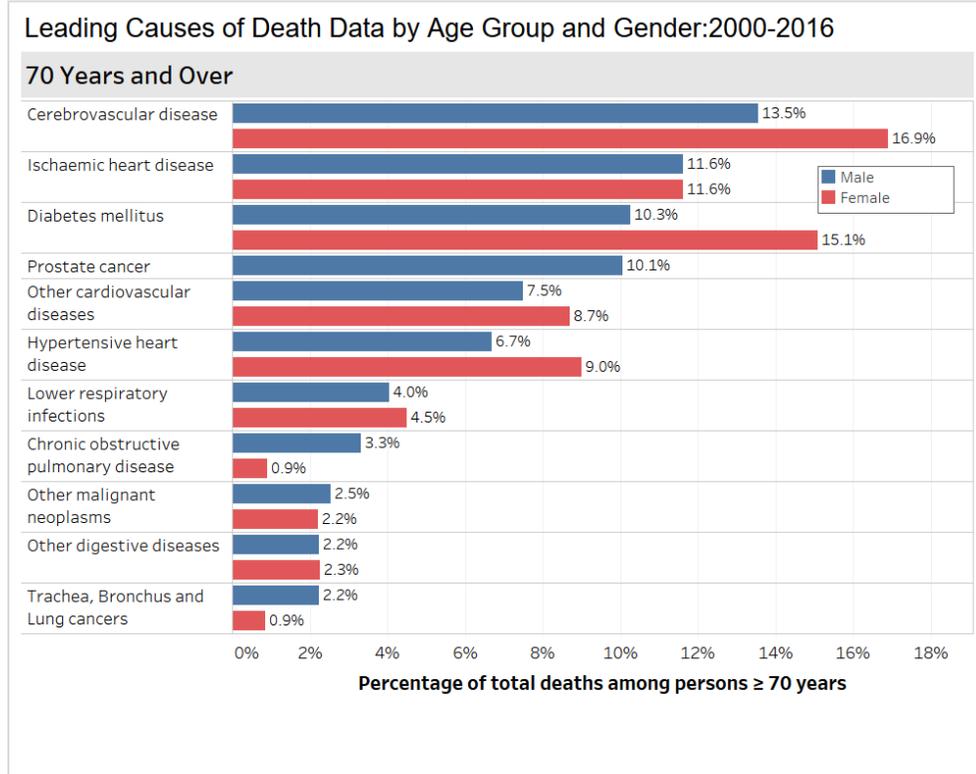
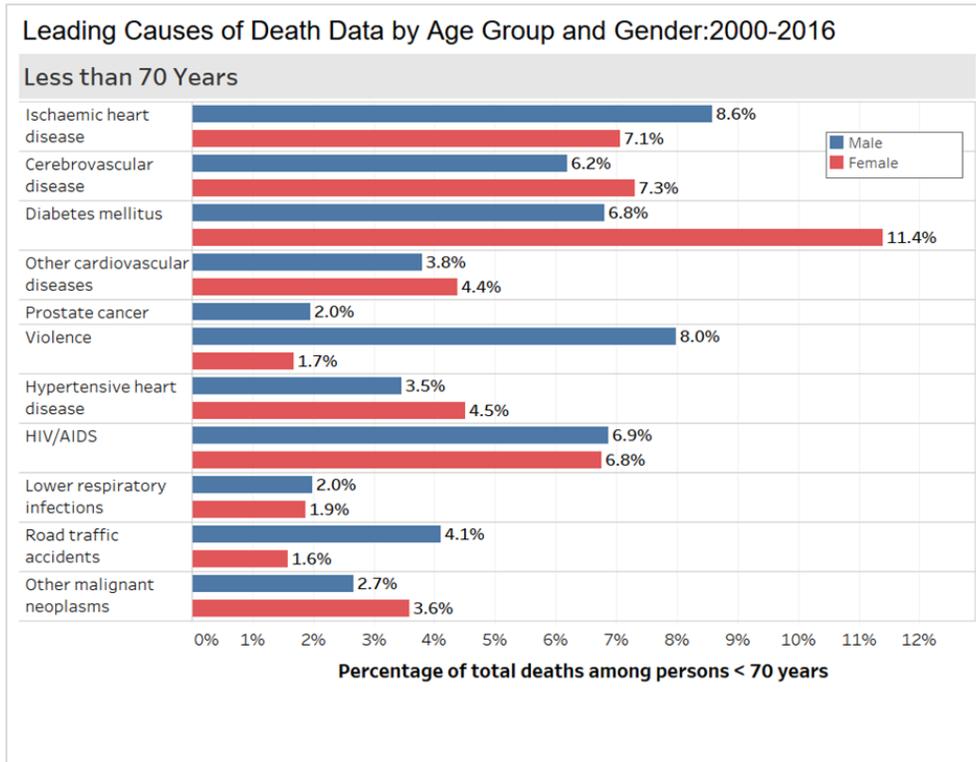
In the period 2000-2016, for women aged under 70, the four leading causes of death were diabetes, cerebrovascular disease, ischaemic heart disease and HIV/ AIDS in that order. For men under 70, ischaemic heart disease was the leading cause of death, with violence being a close second, HIV/ AIDS third and diabetes fourth. Accidents and violence were leading causes of death for both sexes but accounted for far higher percentages of deaths among men prior to age 70. Communicable diseases – lower respiratory infections and HIV/ AIDS – remain important causes of death despite the demographic transition that tends to be associated with a shift towards NCDs as leading causes (see chapter 3).

In the older age group, HIV/ AIDS, accidents and violence are not leading causes of death but survivors of these challenges earlier in life can face challenges in managing these conditions. For women aged 70 and over, NCDs are the leading causes of death: cerebrovascular disease closely followed by diabetes, then ischaemic heart disease, hypertensive heart disease and other cardiovascular disease. For men aged 70 and over, cerebrovascular disease, ischaemic heart disease and diabetes are the three leading causes, with prostate cancer in close fourth place. Trachea, bronchus and lung cancer, and other malignant neoplasms, are also among leading causes of death for both sexes. Trachea, bronchus and lung cancers, and chronic obstructive pulmonary disease account for more of the deaths among older men than older women. This may be related to higher smoking rates among men (see section 2.2.2). Communicable diseases – lower respiratory infections – are also leading causes of death for older men and women. Digestive diseases are leading causes of death among elderly men and women but not for those under the age of 70.

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<sup>15</sup>The age below which deaths are said to be “premature” varies. Some agencies regard deaths before the mean age of death in a population as premature. Some regard 75 as the threshold (National Cancer Institute, 2019). The World Health Organization, in its analyses of deaths from NCDs in developing countries, uses age 70 as the threshold, as does the Organisation for Economic Cooperation and Development in its mortality analyses (OECD, 2009; World Health Organization, nd). In the analyses that follow, we use age 70 as the threshold below which deaths are regarded as premature. This is appropriate for developing country contexts and enables the inclusion of most Caribbean countries in the analyses, since most CMS disaggregate data by age group up to age 70 but fewer do so beyond age 70. This can be seen in the population pyramids in Appendix 1.

**FIGURE 27: LEADING CAUSES OF DEATH BY SEX FOR THE POPULATION LESS THAN 70 YEARS AND 70 AND OVER, DUTCH- AND ENGLISH-SPEAKING CARIBBEAN COUNTRIES, 2000-2016**



Source: Data reported to CARPHA

Diabetes makes a larger contribution to mortality in the Caribbean than in most developing countries (World Health Organization, nd), highlighting the importance of focussing on risk factors for diabetes in health promotion interventions in the region. Ischaemic heart disease is the leading cause of premature mortality among men. Hypertensive heart disease causes more of the deaths among older than younger people, with greater percentages of men dying from this cause. There is a need for attention to risk factors for diabetes among women and ischaemic and hypertensive heart disease among men.

Prostate cancer is a leading cause of death for both age groups but causes a greater percentage of deaths among older men. This is a major men's health issue, and again should be addressed in a gender responsive manner. For instance, there may be gender norms that present obstacles to men coming forward for prostate cancer screening (Aiken & Eldemire-Shearer, 2012; Bourne et al., 2010; Morris, James, Laws, & Eldemire-Shearer, 2011; Willie-Tyndale et al., 2019).

HIV/ AIDS remains a leading cause of death among people under the age of 70 in the Caribbean, though incidence and mortality have dropped as a result of access to antiretroviral therapy. The region continues to have the second highest regional rate of HIV prevalence and second highest ratio of female to male cases after sub-Saharan Africa. The social and cultural drivers of the epidemic are complex, and include Caribbean gender norms (Bombereau & Allen, 2008). With wider access to antiretroviral therapy, people are living for longer with HIV, necessitating consideration of modalities of care and support for older people living with the disease (Harris et al., 2018).

Health care approaches for older persons need to focus on healthy behaviours and social determinants to prevent worsening or new cases of NCDs (CARPHA, 2017; ECLAC, 2016; Theodore et al., 2016; WHO, 2002), and management and reduction of the functional impairments that arise from them.

## 2. Health along the life course

### 2.1 Premature mortality

#### BOX 565: DEFINITION OF POTENTIAL YEARS OF LIFE LOST (PYLL)

**Potential years of life lost (PYLL)** is a summary measure of premature mortality providing an explicit way of weighting deaths occurring at younger ages. The calculation for PYLL involves adding age-specific deaths occurring at each age and weighing them by the number of remaining years to live up to a selected age limit, defined here as age 70. For example, a death occurring at five years of age is counted as 65 years of PYLL (OECD, 2009).

Especially in the context of population ageing, any death before the age of 70 may be considered premature. However, death in childhood and youth can be considered especially untimely. The measurement of Potential Years of Life Lost (PYLL) focuses on deaths among younger age groups of the population. PYLL values are heavily influenced by infant mortality and deaths from diseases and injuries affecting children and younger adults: a death at five years of age represents 65

PYLL; one at 60 years of age only ten (OECD, 2009). Here we present data from Caribbean countries on PYLL by broad grouping of health condition and sex (Figure 4).

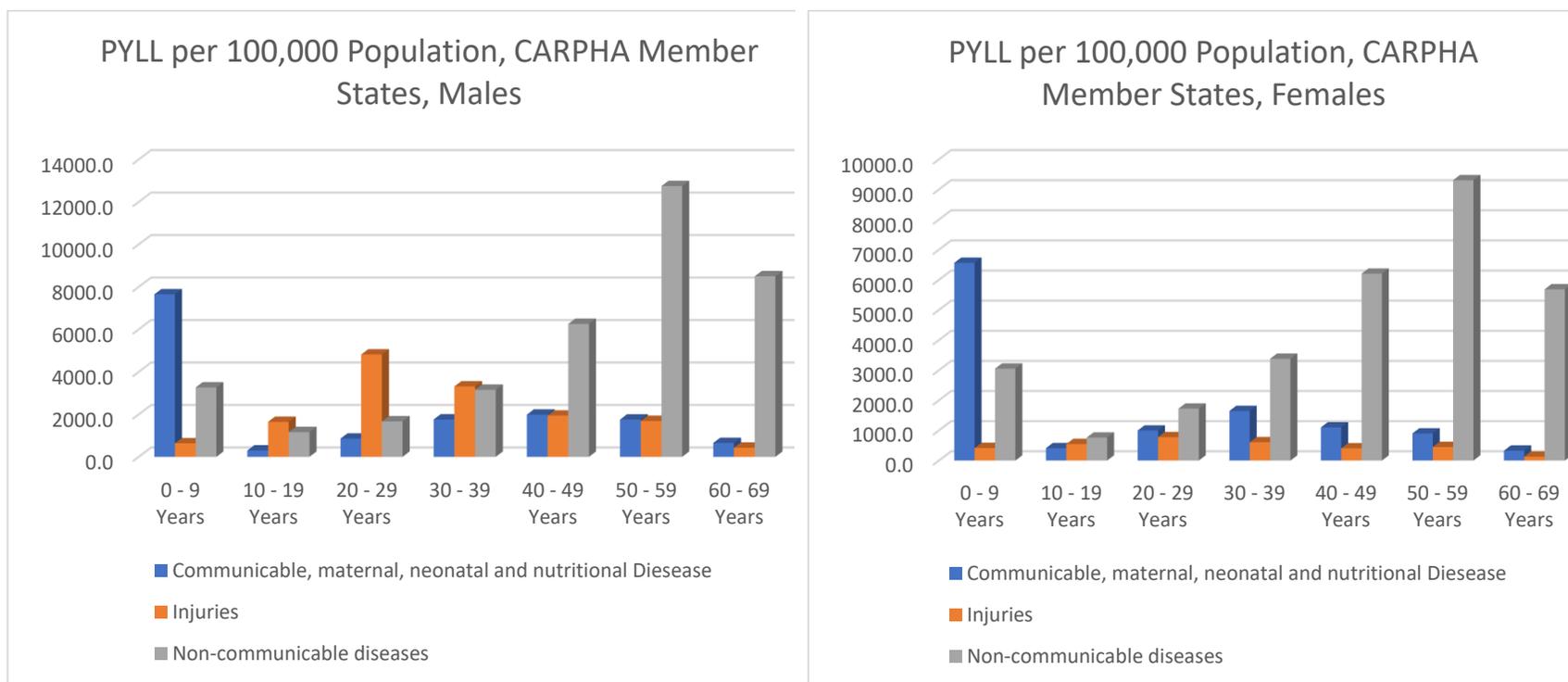
Deaths among young children of both sexes were most often caused by communicable, maternal, neonatal and nutritional diseases. In the 0-9 age group, there were more potential years of life lost from these conditions among boys than girls (7,946 and 6,136 respectively). There were also many PYLL resulting from NCDs – 3,013 among boys and 3,117 among girls. Conditions originating in the perinatal period were the leading cause of death among infants in their first year, while congenital malformations, deformations and abnormalities were the leading case in infants 1 – 4 years old (CARPHA, 2017).

In the adolescent age group 10-19, injuries emerge as the primary cause of PYLL for boys, accounting for 1,488 PYLL. Injuries are also the primary cause of PYLL in the male youth age group 20-29 (4,833 PYLL) and in the men's 30-39 age group (3,916 PYLL). Up to the age of 14, land transport accidents and drowning are the major causes, while among older youth and adults land transport accidents and assault are the major causes (CARPHA, 2017).

NCDs account for increasing numbers of PYLL for both sexes from adolescence until people are in their 50s (50-59 age group). In the 60-69 year age group the number of PYLL falls as people are close to the threshold age of 70. However, NCDs are the leading causes of death for every female age group and for the age groups 40-69 among men. There were more PYLL to NCDs among males aged 10-29 and 50-69 and more PYLL to NCDs among women aged 30-49. The higher rates among women in their later reproductive years may reflect the incidence of gynaecological diseases such as cervical and breast cancer.

More PYLL were attributable to communicable, maternal, neonatal and nutritional diseases among women than men aged 10-29. This may reflect higher incidence of HIV among girls and young women, due to a number of gender-related social and economic vulnerabilities (Bombereau & Allen, 2008; CARPHA, 2017).

**FIGURE 28: POTENTIAL YEARS OF LIFE LOST (PYLL) BY AGE GROUP, SEX AND HEALTH CONDITION, CARPHA MEMBER STATES<sup>16</sup>**

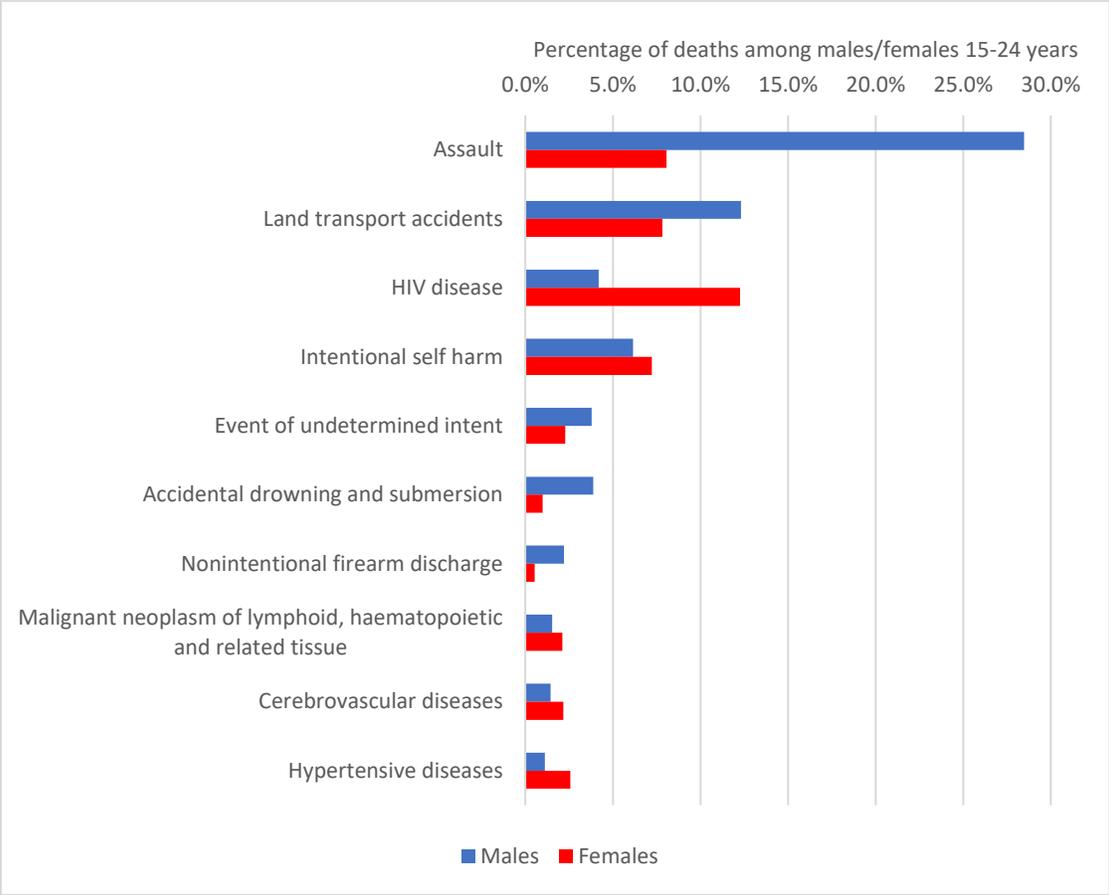


Source: Data reported to CARPHA

<sup>16</sup> PYLL calculations use data from CMS from 2016 or the most recent year prior to 2016. See footnote 2 above for information on the most recent year of mortality data available for each CMS.

The following figure disaggregates causes of death for the youth age group 15-24. Here we see clearly the importance of different factors leading to injury among male youth, while for young women, HIV is the number one cause of death. Accidents and violence and sexual and reproductive health among youth are major Caribbean health issues with long-term consequences as people age.

**FIGURE 29: TOP 10 UNDERLYING CAUSES OF DEATH BY SEX AMONG YOUTH 15 TO 24 YEARS OLD (2000-2016)**

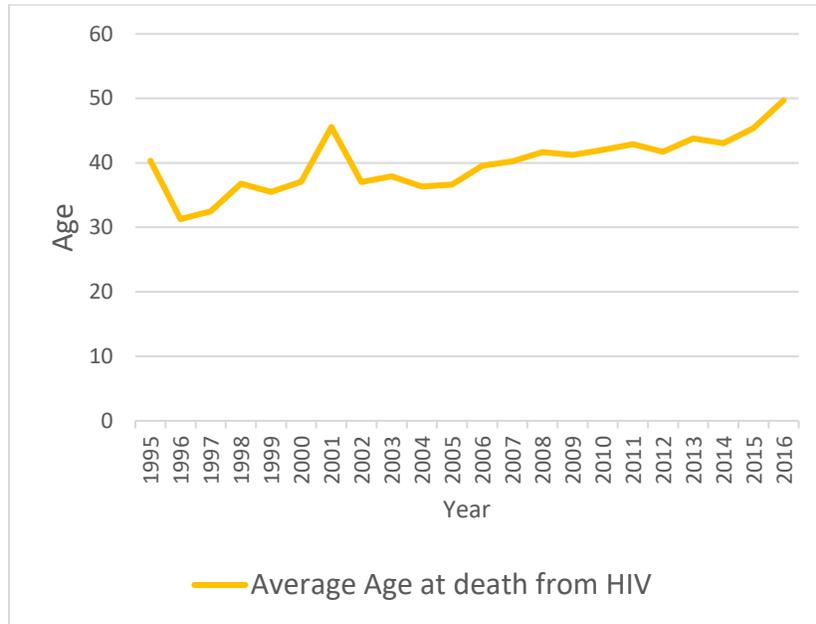


Source: (CARPHA, 2017)

Any ill-health in childhood or adult life can contribute to ill-health in older age. Injuries can result in specific disabilities such as sensory or cognitive impairment and immobility. Communicable diseases can do permanent damage to the body that becomes more difficult to manage with age. For instance, the Caribbean chikungunya epidemic of 2014-'15 led to long-term joint pain and arthritis among some people who had the disease (Peters et al., 2018). Congenital disabilities become increasingly challenging to manage. In 2015-'16, some pregnant women exposed to Zika during the 2015-'16 epidemic in some Caribbean countries (mostly French and Spanish-speaking countries) gave birth to babies with congenital disorders involving microcephaly (small head) (see CARPHA, 2017, Chapter 3). The long-term prognosis for these children is yet to be determined. Zika and chikungunya have long-term consequences for some persons who contracted these vector-borne diseases (CARPHA, 2017).

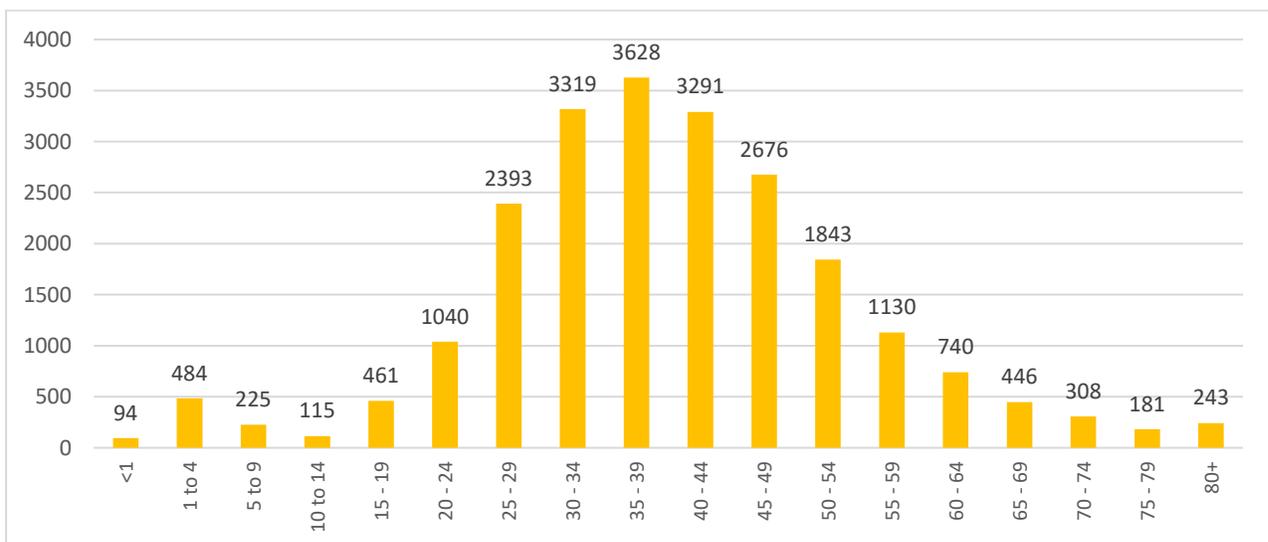
HIV remains a major cause of death in the region. The widespread use of antiretroviral therapy to suppress viral load has led to longer survival among people living with HIV (Figures 6 and 7). There is a need to develop specific care and support strategies for PLHIV who survive into old age, especially as many of them are also living with NCDs (Crabtree-Ramirez, Del Rio, Grinsztejn, & Sierra-Madero, 2014; Harris et al., 2018; Narayan et al., 2014). The impact of antiretroviral therapy itself on the ageing process is an area of increasing research interest (Narayan et al., 2014).

**FIGURE 30: AVERAGE AGE AT DEATH FROM HIV IN CARPHA MEMBER STATES, 1995 - 2016**



Source: (CARPHA, 2017)

**FIGURE 31: HIV DEATHS BY AGE GROUP, CARPHA MEMBER STATES, 1995 - 2016**



Source: (CARPHA, 2017)

There is a considerable body of international research on the **foetal origins of NCDs** in adults. In 1995, David Barker published a paper that argued that undernutrition in utero can lead to coronary heart disease in later life. Barker's research stimulated many similar research projects, exploring the foetal origins hypothesis that proposes that some NCDs diseases originate through adaptations which the foetus makes when it is undernourished. These adaptations may be cardiovascular, metabolic or endocrine, and permanently alter the structure and functions of the body (Barker, 2000).

The importance of events before birth and during childhood for lifetime health, including for disability among older persons, has been confirmed in several populations, including some in Latin America and the Caribbean (Monteverde, Noronha, & Palloni, 2009). In Jamaica, a study examined the effects of birth weight and early life socio-economic circumstances on systolic blood pressure and diastolic blood pressure among Jamaican young adults age 18-20. Systolic and diastolic blood pressure are risk factors for NCDs. This was a longitudinal study of 364 men and 430 women in the Jamaica Birth 1986 Cohort Study. It was found that systolic blood pressure was inversely related to birthweight among both young women and young men. In other words, low birth weight, which may arise from maternal undernourishment, is a risk factor for high blood pressure later in life. Furthermore, participants whose mothers had lower socio-economic circumstances had higher systolic blood pressure compared with those with mothers of high socio-economic circumstances. The results suggest a need to address poverty and improve the socio-economic circumstances and nutrition of women in order to reduce low birthweight and NCD risk (Ferguson et al., 2015).

The United Nations Children's Fund (UNICEF) notes that there is a triple burden of malnutrition that primarily affects children in poor socio-economic circumstances: undernutrition (stunting and wasting); hidden hunger (deficiencies in micronutrients) and overweight (including obesity). Long-term consequences of undernutrition include poor cognition and earning potential; of hidden hunger include poor immunity and tissue development; and of overweight include diabetes and other metabolic disorders (UNICEF, 2019).

The foetal origins hypothesis has helped direct resources towards maternal health, especially that of women who may be undernourished, such as those on low incomes. But some have argued that the hypothesis has become overstretched by being applied inappropriately, without attention to precise cellular and molecular processes and how they relate to specific health outcomes in adulthood (The Lancet Editorial, 2001). It has also been pointed out that risks are modifiable, with the greatest risk having been shown among children born underweight who gain weight rapidly in childhood, highlighting the challenge of **childhood obesity**, especially among people with low access to resources. Individual tailoring of lifestyle and pharmaceutical interventions according to early growth patterns and genetic setting has been recommended (Eriksson, 2005). Eriksson notes:

*“Early risk factors are to a large extent modified by a huge range of factors working during the whole life course and lifestyle matters from the cradle to the grave.” (Eriksson, 2005, p. 1097)*

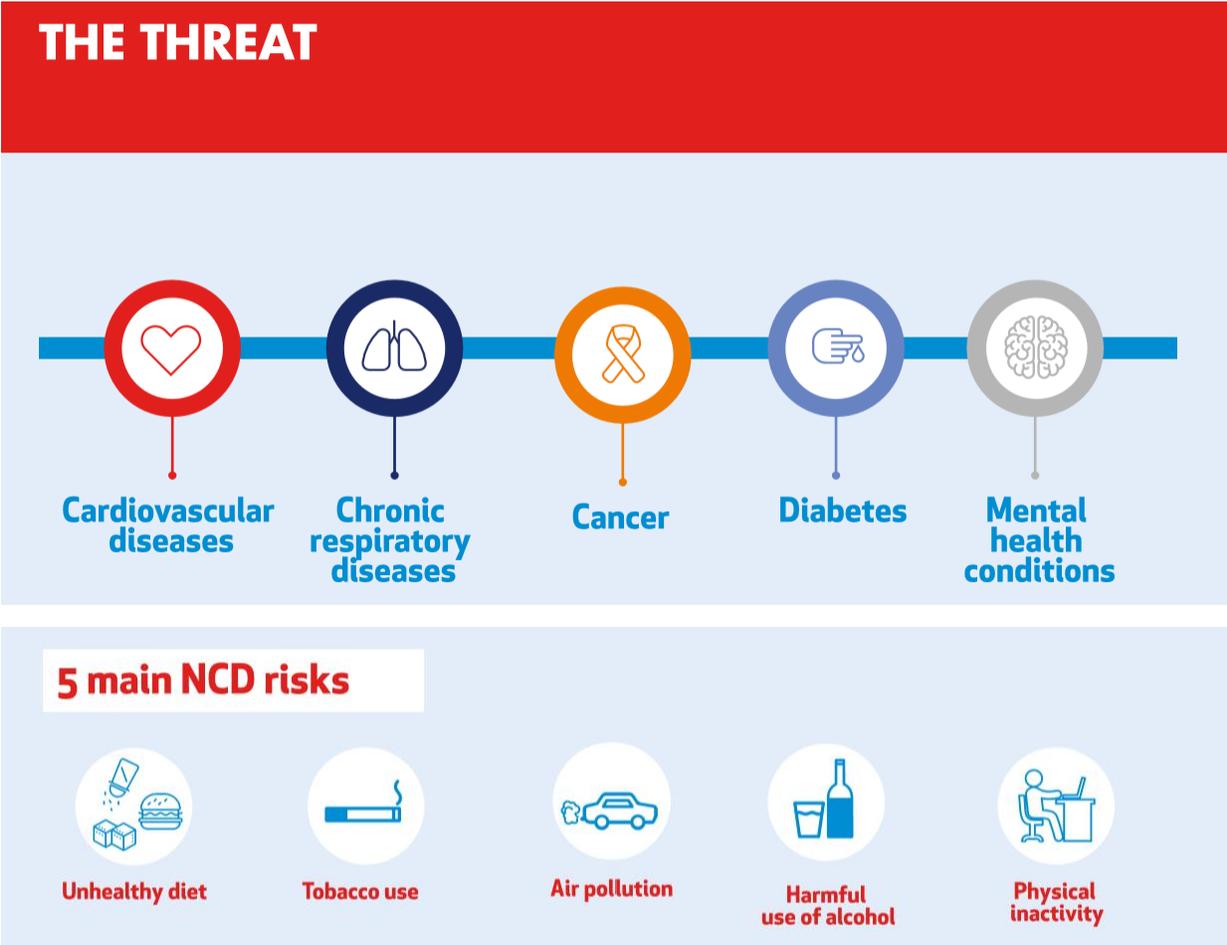
Since NCDs are the main causes of incapacity, illness and death among older persons, working to decrease the risk factors for NCDs in early and adult life is a priority in terms of maintenance and enhancement of functional capacity in older age. We now examine NCD risk factors in the Caribbean. Chapter 4 examines health promotion strategies to address these risk factors.

## 2.2 NCD risk factors

A comprehensive approach to NCDs should encompass the main categories of NCDs (cardiovascular disease, diabetes, cancer, chronic respiratory disease and mental health), risk/ protective factors (physical activity, diet, smoking, harmful use of alcohol and air pollution) and social determinants of health. These NCDs and risk factors were defined as targets for NCD intervention at the Third United Nations High Level Meeting on Non-Communicable Diseases in New York in September 2018 (United Nations, 2018) (see Figure 8).

Risk factors for NCDs include unhealthy nutritional habits leading to obesity (Alley & Chang, 2007; Estruch et al., 2018; Haveman-Nies et al., 2002) and hypertension (Musini, Tejani, Bassett, & Wright, 2009), lack of physical activity (Hrobonova, Breeze, & Fletcher, 2011), use of tobacco (Peto et al., 2000) and misuse of alcohol and inadequate use of primary health services (ECLAC, 2016; Samuels & Unwin, 2016). These risk factors are also shaped by social determinants of health such as socioeconomic status, and social environmental factors such as local access to healthy food (see Chapter 1, sections 2 and 3) (Ferguson et al., 2015; Marmot, 2005).

**FIGURE 32: FIVE MAIN NCDs AND FIVE MAIN RISK FACTORS**



Source: (UN, 2018, pp. 8-9)

NCD risk factors should be addressed throughout the life course, including among older persons. However, there is little Caribbean research on these risk factors among older persons. A large study of persons aged 65 and over in five Latin American countries (Dominican Republic, Cuba, Peru, Puerto Rico and Mexico) investigated the associations of four healthy lifestyle behaviours with healthy ageing and survival (n = 10,900). Participants engaging in physical activity and/ or in a diet with daily consumption of fruits and vegetables had increased odds of healthy ageing and survival. In addition, the more physically active the participants and the higher the number of fruits and vegetables servings, the higher the odds of ageing healthily. Never smoking and moderate alcohol consumption were not individually associated with healthy ageing but all these four behaviours in combination had a positive effect both for healthy ageing and survival. The findings highlight the importance of awareness of a healthy lifestyle behaviour among older people (Daskalopoulou, Koukounari, Ayuso-Mateos, Prince, & Prina, 2018). A longitudinal study in several European countries among 70-75 year olds found that physical inactivity, poor dietary quality and smoking were positively associated with risk of mortality (Haveman-Nies et al., 2002).

To help meet the challenge of NCDs, the WHO and CARPHA have collaborated with CMS to conduct a number of risk factor surveys using the Stepwise Approach to Surveillance (STEPS) methodology. These were conducted with adults aged 15-69 between 2006 and 2016 (see Table 2 for the age range for specific countries). The surveys were designed to assess the prevalence among men and women of risk factors that have been shown to be associated with NCDs, such as smoking, alcohol consumption, physical activity, consumption of fruit and vegetables, overweight and obesity, waist circumference and raised blood pressure. As such they provide pointers as to areas appropriate for health promotion interventions in each country. In the subsections that follow we examine the evidence from the STEPS surveys and other Caribbean research on each of the five main NCD risks.

**TABLE 20: RISK FACTOR SURVEYS COMPLETED IN CARPHA MEMBER STATES USING THE WHO STEPS METHODOLOGY WITH TECHNICAL SUPPORT PROVIDED BY CARPHA (2006-2016)**

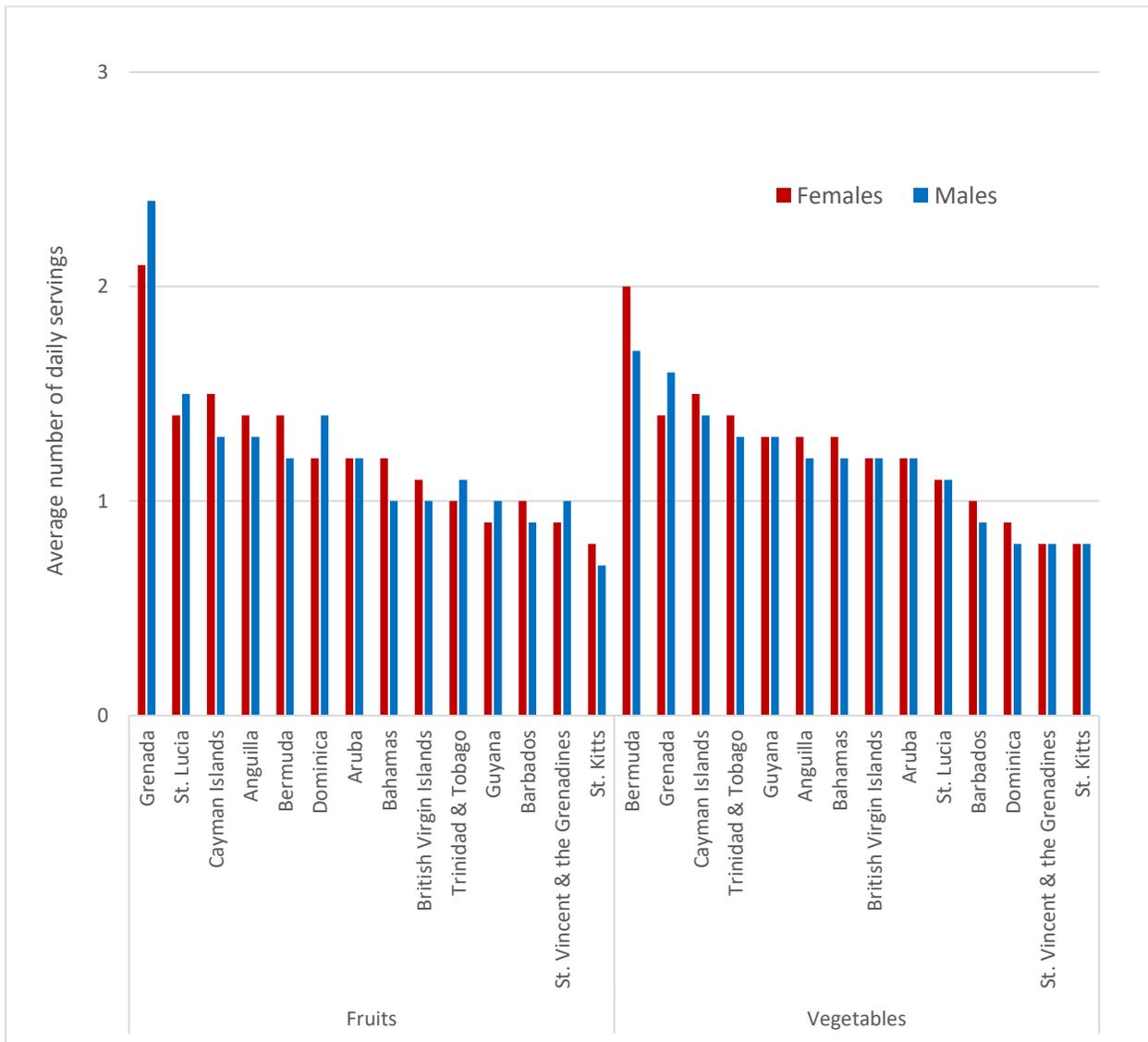
Country	Survey Year	Target Age Group
Aruba	2006	25-64
Barbados	2007	25+
Dominica*	2008	15-64
St. Kitts	2008	25-64
British Virgin Islands	2009	25-64
Grenada	2011	25-64
Trinidad & Tobago	2011	15-64
Bahamas	2012	25-64
Cayman Islands	2012	25-64
St. Lucia*	2012	25-64
St. Vincent and the Grenadines	2014	18-69
Bermuda	2014	18+
Anguilla	2016	18-69
Guyana	2016	18-69
<i>*Response rates too low for survey results to be considered nationally representative</i>		

### 2.2.1 Unhealthy diet

#### Consumption of fruit and vegetables

A dietary recommendation for the prevention and control of NCDs is the consumption of fruits and vegetables, to comprise about half of each main meal plate and five servings per day (Frank et al., 2019). The STEPS surveys found that in all countries, average consumption of either fruit or vegetables is far below the recommended amount of five servings per day. In this case, the gender differences are negligible in most countries, indicating that low levels of consumption of fruit and vegetables apply regardless of gender.

**FIGURE 33: MEAN DAILY SERVINGS OF FRUITS AND VEGETABLES, FROM CARIBBEAN STEPS SURVEYS**



Source: (CARPHA, 2017)

The WHO has carried out analysis of STEPS and other surveys conducted in 28 low- and middle-income countries that included measures of fruit and vegetable consumption (Frank et al., 2019). The proportion (95% Confidence Interval) of individuals aged 15 and over who met the WHO recommendation of 400 g/d of fruits and vegetables (the equivalent of approximately 5 servings per day) was 18.0% (16.6-19.4%). The mean intake of fruits was 1.15 (1.10-1.20) servings per day and for vegetables, 2.46 (2.40-2.51) servings per day. By comparing with this study, we see that consumption of fruit and vegetables in the Caribbean is low. The number of fruits consumed per day is roughly equivalent to that found in the WHO study, but vegetable consumption is lower.

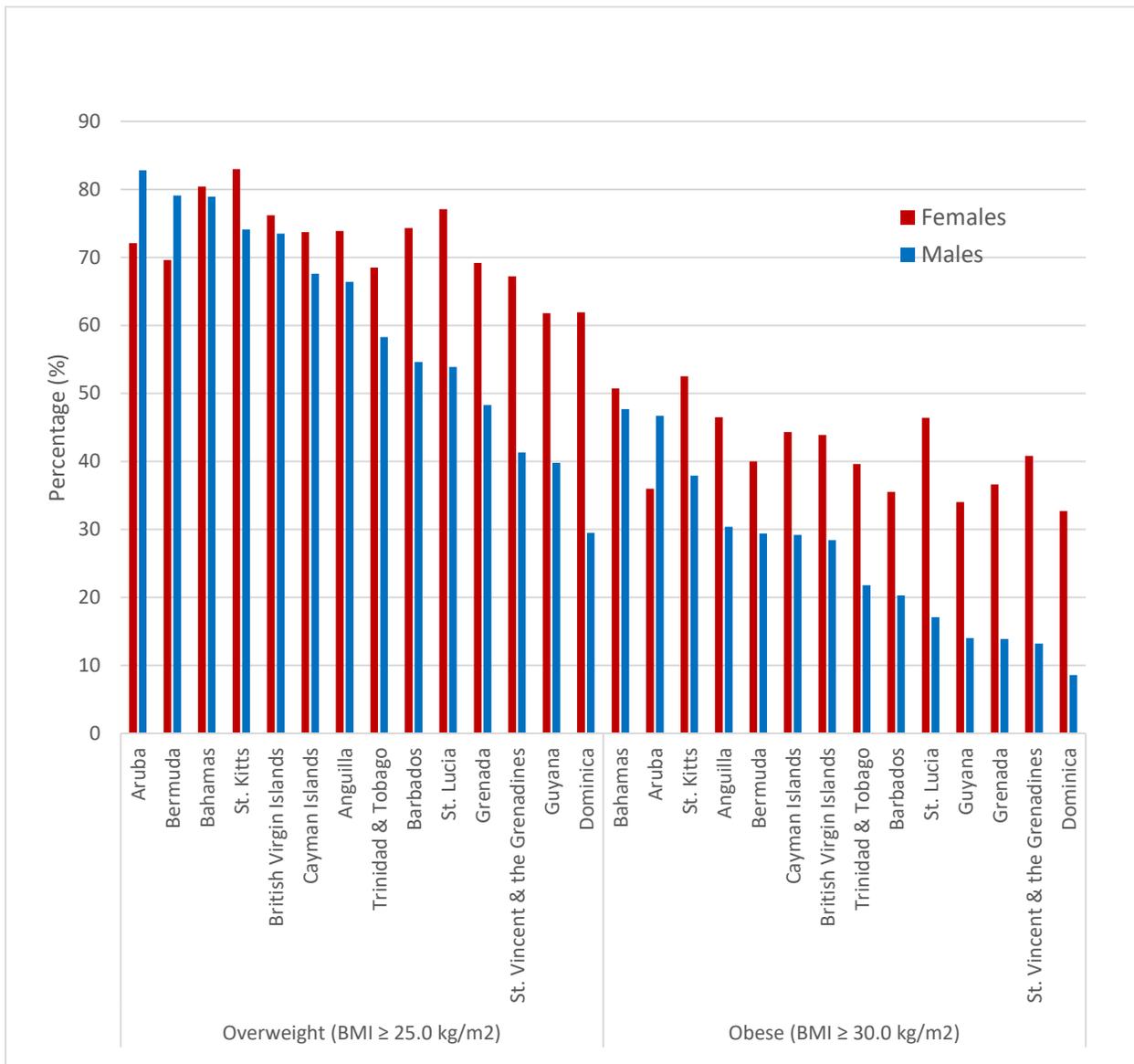
The WHO study also found associations of fruit and vegetable consumption with social determinants of health. The proportion of individuals meeting the recommendation increased significantly with increasing country gross domestic product (GDP) and with decreasing country Food and Agriculture Organization food price index, indicating greater stability of food prices. At the individual level, those with secondary education or greater were more likely to achieve the recommendation compared with individuals with no formal education. Noting the finding that over 80% of individuals consumed lower amounts of fruits and vegetables than recommended, the WHO suggested that policies should promote fruit and vegetable consumption in low- and middle- income countries (Frank et al., 2019). A further implication is that to increase consumption of these nutrients there is a need to increase incomes and education among those at the lower end of the scale of socio-economic status, and to stabilise food prices.

Studies of dietary consumption patterns in the elderly are lacking in the Caribbean. Since diet is a critical factor in maintaining health in old age, greater attention should be paid to research in this area. Efforts should be made to use research methods that seek to include older people with disabilities, for instance by using audio and visual aids where appropriate. Some persons with severe cognitive difficulties may need to be excluded if studies rely heavily on recall.

## Overweight and obesity

In the Caribbean, there has been a growing rise in obesity and diet-related NCDs over the last five decades (CARPHA, 2017). The STEPS surveys showed that over 60% Caribbean adults are overweight and over 30% are obese. In some CMS overweight and obesity prevalence rates exceed 80% and 50% respectively. More women than men are overweight or obese in almost all countries (Figure 10).

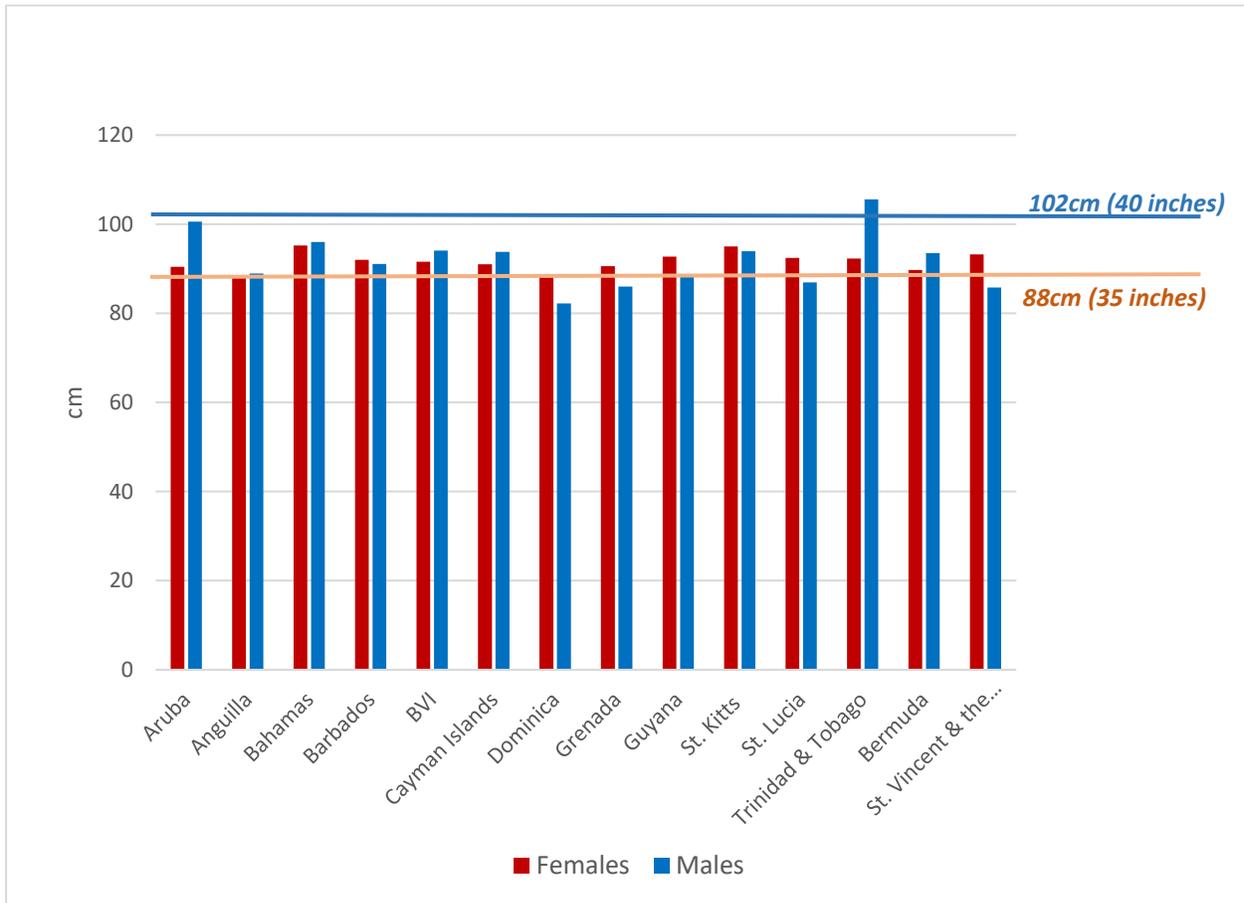
**FIGURE 34: PREVALENCE OF OVERWEIGHT AND OBESITY, FROM CARIBBEAN STEPS SURVEYS**



Source: (CARPHA, 2017)

Average waist circumferences are at or above the 35-inch mark for most countries, according to the STEPS surveys. Two countries had male waist circumferences higher than those of females, with one of these having average male waist circumference size of over 40 inches. In other countries, more often than not, female waist sizes are slightly higher than those of males (Figure 11).

**FIGURE 35: AVERAGE WAIST CIRCUMFERENCE (CM), FROM CARIBBEAN STEPS SURVEYS**

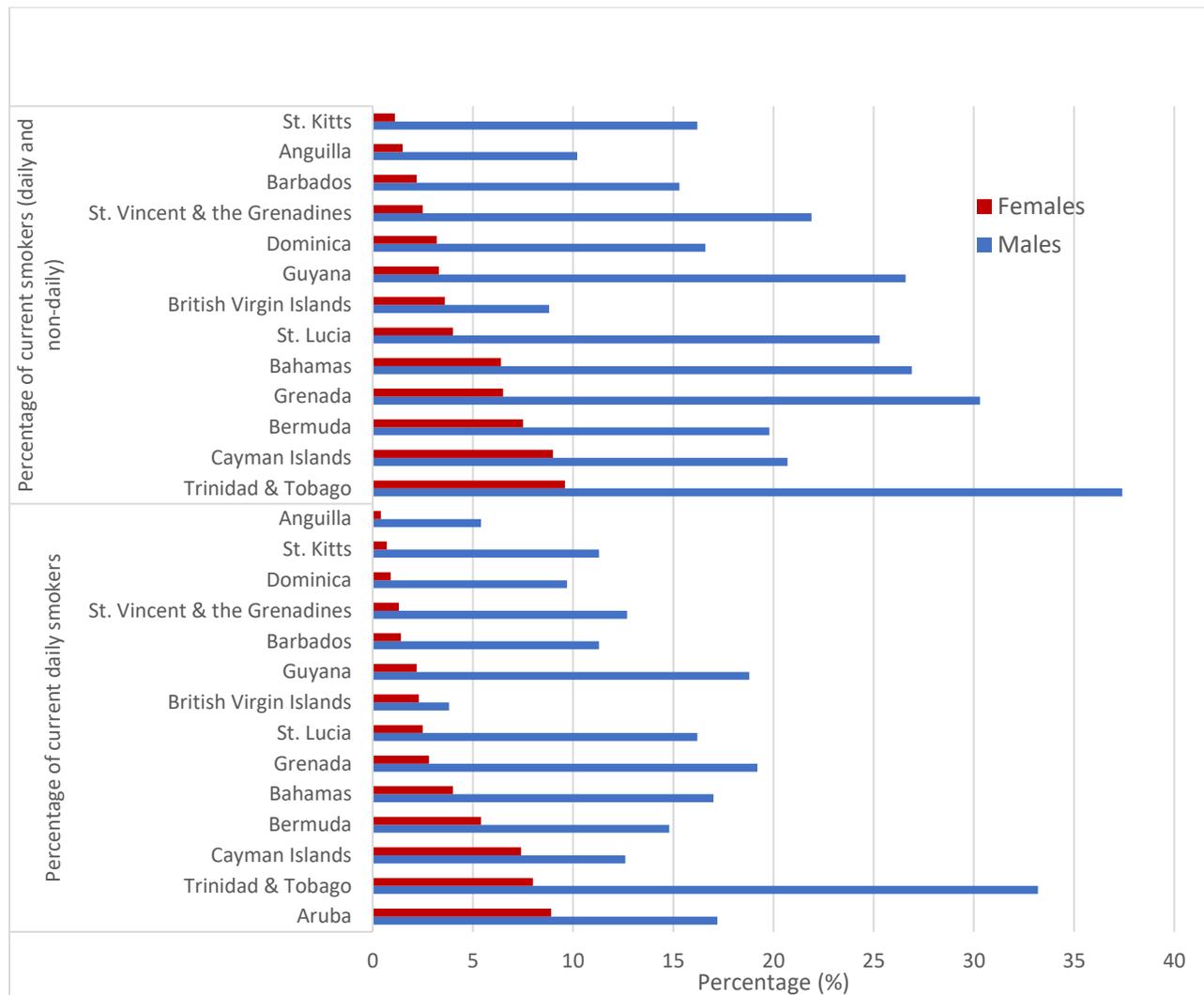


Source: (CARPHA, 2017)

### 2.2.2 Tobacco use

The STEPS surveys showed a wide range in levels of smoking between countries, with a common feature being far higher levels among men than women. This applies to both current smoking and daily smoking (Figure 12).

**FIGURE 36: PREVALENCE OF CURRENT SMOKERS AND CURRENT DAILY SMOKERS, FROM CARIBBEAN STEPS SURVEYS**



Source: (CARPHA, 2017)

### 2.2.3 Air pollution

The STEPS surveys did not provide data on air pollution, as they studied individual behaviours rather than environmental determinants. Air pollution is an increasing concern in the Caribbean, with industrial and vehicle emissions and Saharan dust being important contributors. Weather conditions influence the transportation and concentration of air-borne pollutants including dust, pollen, levels of fossil fuel pollutants and smoke. Climate change is aggravating the challenges (Taylor, Chen, & Bailey, 2010). The CARPHA SPHR, *Climate and Health: Averting and Responding to an Unfolding Health Crisis*, included detail and review of research literature on the air pollution issues facing the Caribbean region, in Chapter 3, section 2.2 (CARPHA, 2018). Following severe weather events such as hurricanes, air pollution challenges are aggravated by factors such as suspension of dust from damaged buildings and trees, mould spores that proliferate following flooding, and smoke from fires set to dispose of solid waste created by the hurricane or not disposed of because of damage to

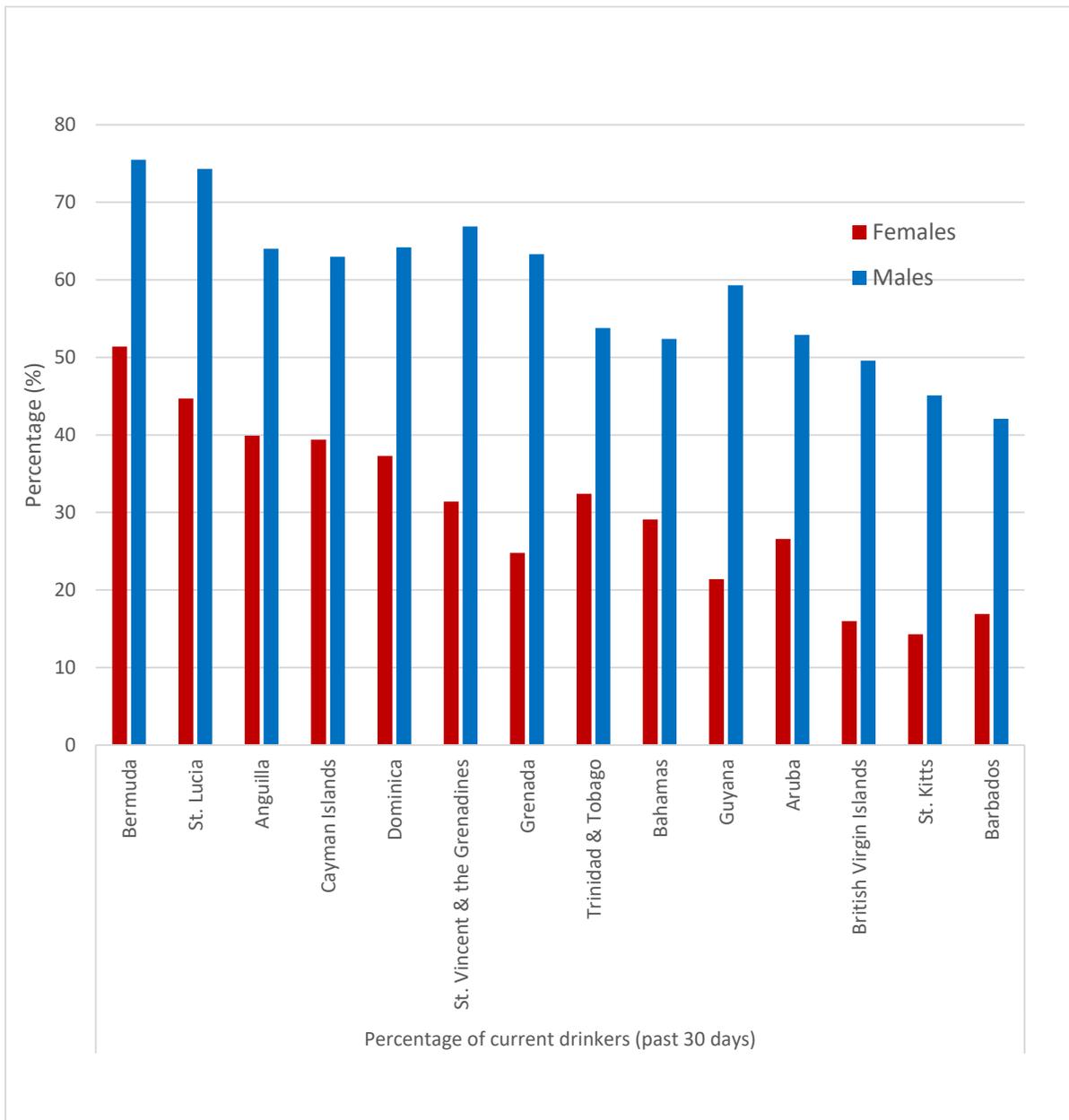
sanitation service infrastructure. These were all outcomes of the massive 2017 hurricanes, Irma and Maria, as detailed in the CARPHA Climate and Health SPHR, Chapter 4 (CARPHA, 2018). Older persons are among the most vulnerable to the impact of air pollution, especially when combined with rising temperatures associated with climate change (Ebi, Lewis, & Corvalan, 2006; Martin-Latry et al., 2007). People who use solid fuels (biomass or coal) for cooking in the home are at risk of disease from smoke inhalation.

Household air pollution through use of solid fuels for cooking is responsible for a larger proportion of the of total number of deaths from ischaemic heart disease, stroke, lung cancer and chronic obstructive pulmonary disease in women compared to men as women generally spend longer at home and carrying out cooking. In Jamaica, it was estimated that 11% of households use solid fuels for cooking (19% in rural areas, 5% in urban areas), and that 9% of deaths due to ischaemic heart disease, stroke, lung cancer, chronic obstructive pulmonary disease (18 years +) and acute lower respiratory infections (under 5 years) are attributable to household air pollution (World Health Organisation, 2017). Use of solid fuels for cooking may be more prevalent among older than younger persons, and this vulnerability may apply especially to those on low incomes. Further research is needed in this area.

#### *2.2.4 Harmful use of alcohol*

The STEPS surveys showed that drinking alcohol is more common among men than women. Greater percentages of Caribbean populations drink than smoke (Figure 13).

**FIGURE 37: PREVALENCE OF CURRENT DRINKERS (PAST 30 DAYS), FROM CARIBBEAN STEPS SURVEYS**

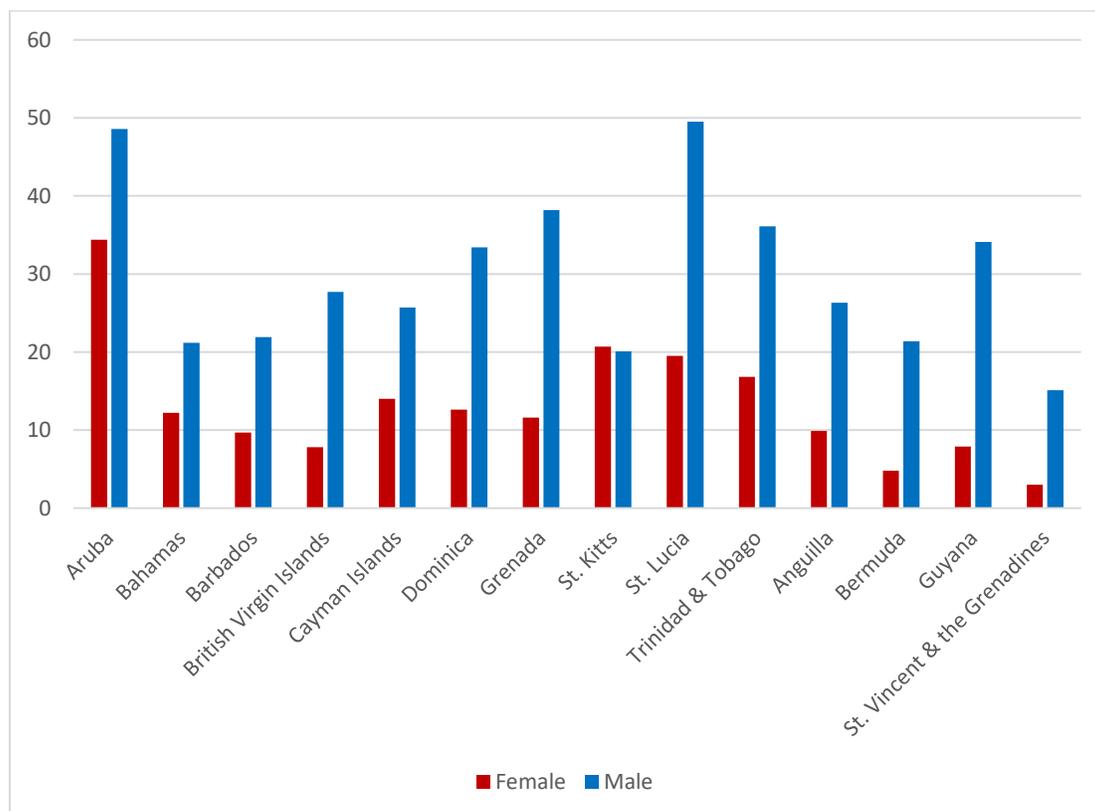


Source: (CARPHA, 2017)

The STEPS surveys also found that harmful use of alcohol is also far more prevalent among men than women, except in St. Kitts and Nevis. In Anguilla, Bermuda, Guyana and St. Vincent and the Grenadines, a more stringent definition of harmful use was used, resulting in lower estimates for those CMS (Figure 14).

The alcohol and smoking data show that men are more involved in the consumption of harmful substances than women. This may also extend to illegal drug consumption, though this is intrinsically hard to measure and was not included in the STEPS surveys.

**FIGURE 38: HARMFUL USE OF ALCOHOL, FROM CARIBBEAN STEPS SURVEYS**



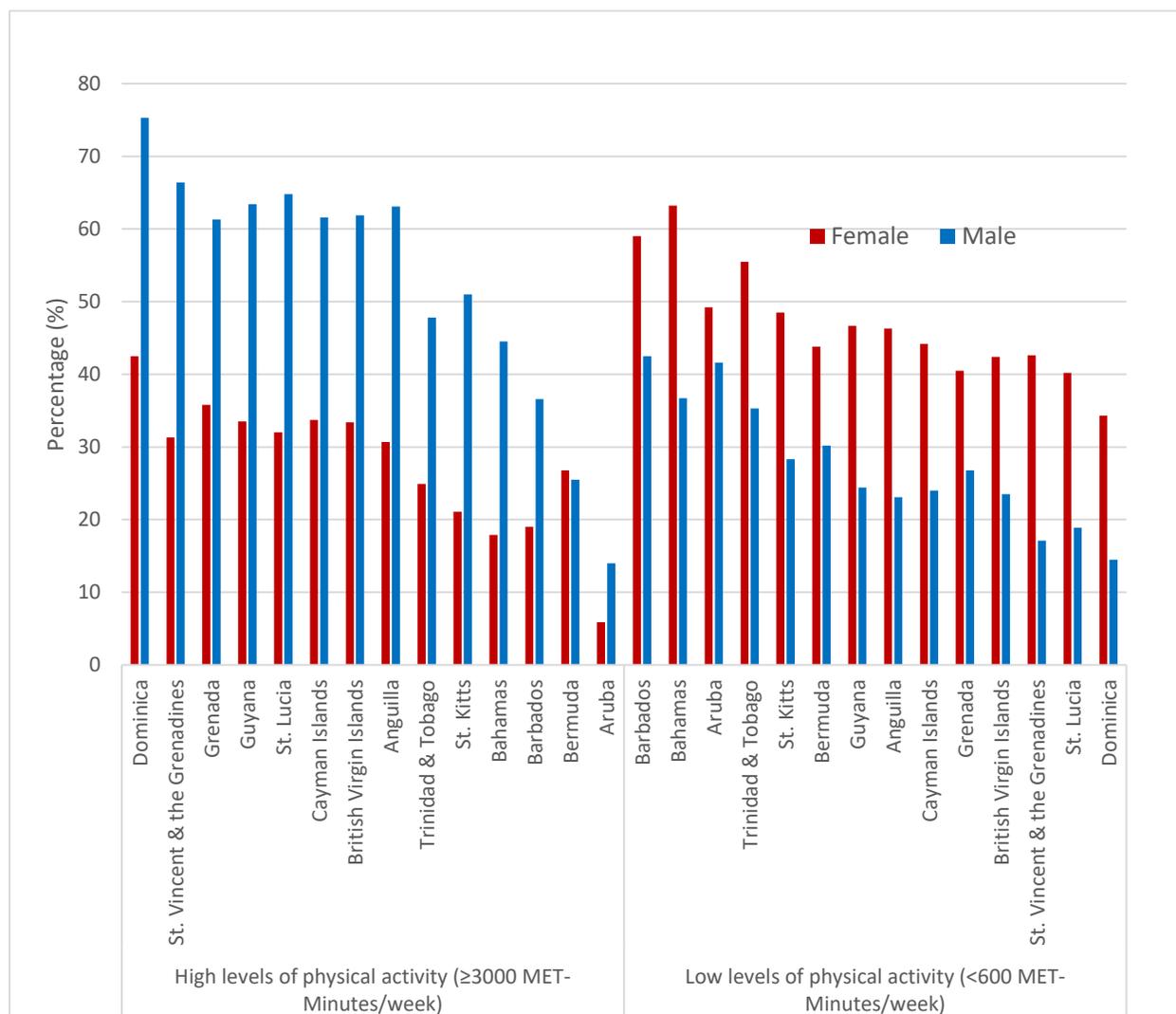
Source: (CARPHA, 2017)

*NOTE: Definitions of harmful use of alcohol differed by country. For Aruba, Bahamas, Barbados, British Virgin Islands, Cayman Islands, Dominica, Grenada, St. Kitts and Nevis, St. Lucia and Trinidad & Tobago, the definitions were: Females having  $\geq 4$  drinks on any day in last week, and Males having  $\geq 5$  drinks on any day in last week. For Anguilla, Bermuda, Guyana and St. Vincent & the Grenadines, the definitions were: Females or Males (having  $\geq 6$  drinks on any occasion in the past 30 days)*

### 2.2.5 Physical inactivity

The STEPS surveys showed wide variability in levels of physical activity between countries, with those of men almost always exceeding those of women. In nine countries, more than half of men were highly physically active. On the other hand, in three countries, more than half of women reported low levels of physical activity (Figure 15).

**FIGURE 39: LEVELS OF PHYSICAL ACTIVITY, FROM CARIBBEAN STEPS SURVEYS**



Source: (CARPHA, 2017)

The STEPS data on individual risk factors present an important counterpoint to mortality data, which tend to show more early deaths among men than women. The risk factors are somewhat more prevalent among women, though they tend to live longer than men. The risk factor data combined with the mortality data suggest that women are more likely to endure long-term illness from NCDs than men. However, men are more likely to use harmful substances, and this may be associated with the high prevalence of accidents and assaults among them, along with other consequences such as lung cancer and cirrhosis of the liver.

### 3. Health conditions among older persons

Evidence presented above shows that NCDs are the leading causes of death among older persons. Other prevalent conditions, such as injuries, communicable and vector-borne diseases, and mental illness, can also lead to a range of health challenges among seniors. Health conditions along the life course affect functional abilities among older persons: the main focus of the healthy ageing approach. NCDs lead to disabilities. For instance:

- Diabetes can lead to blindness and poor circulation which can further lead to amputations and male sexual impotence (Barcelo, Gregg, Pastor-Valero, & Robles, 2007; Hendra & Sinclair, 1997; Lewandowicz, Skowronek, Maksymiuk-Kłós, & Piątkiewicz, 2018; K. Mitchell-Fearon et al., 2014).
- Cardiovascular disease can lead to mobility, cognitive and speech impairments (Andrieu et al., 2011).
- Persons with mobility issues, including those resulting from injuries, communicable diseases or NCDs, tend to have reduced physical activity which is, in turn, a risk factor for NCDs (ECLAC, 2016).

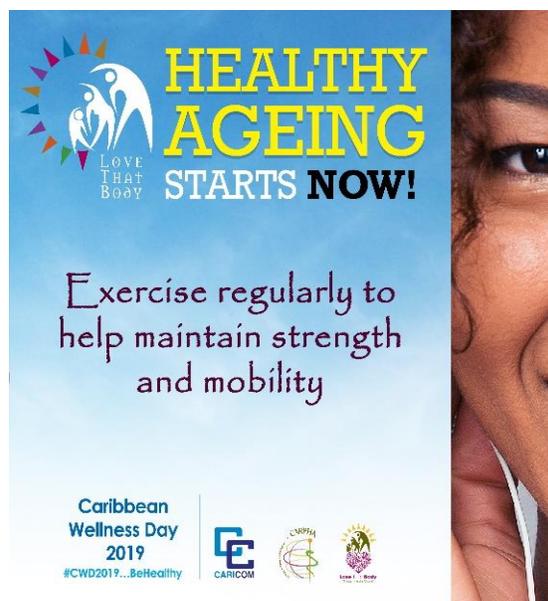
Geriatric Giants, as described in Chapter 1 of this SPHR, are conditions concentrated among older people and especially towards the end of life. Often they affect the middle and oldest old age categories (75-84 and 85+) severely. However, with the high prevalence of NCDs in the region, there is vulnerability to disabilities, including the Geriatric Giant conditions, at younger ages (Mitchell-Fearon et al., 2015). Associated physical and emotional discomfort and pain can be severe.

As outlined in the introduction, a healthy ageing approach needs to have both preventive and supportive elements. Prevention continues into later life, preventing chronic conditions, ensuring early detection and control and promoting capacity-enhancing behaviours. For those with potentially disabling conditions, support must be provided, removing barriers to participation, compensating for loss of capacity, and ensuring dignity in late life.

## 3.1 Chronic and acute health conditions

### 3.1.1 NCDs, chronic conditions and risk factors

NCDs continue to be prevalent in later years, and their continued prevention and clinical management is necessary, using age-appropriate strategies. To illustrate this point, a nationally representative survey among 2,943 adults aged 60 and over in Jamaica found 75.3% living with at least one NCD; 47.5% reported comorbidities (more than one). High blood pressure (61%), arthritis (35%) and diabetes (26%) were the most reported conditions, peaking in the 70–79 age group. Females reported higher rates of disease than males. Significant increases in prevalence occurred for all conditions except arthritis; the most significant were in diabetes (157%) and cancer (118%). Having previously conducted a national survey of older persons in 1989, Jamaica was able to determine that there were increases in prevalence of NCDs over 23 years: the most significant increases were in diabetes (157%) and cancer (118%) (Mitchell-Fearon et al., 2015).



Source: <http://carpha.org/>

Older people engaging in physical activity has many benefits which include

- Improvement of physical and mental capacities – e.g. maintaining muscle strength and cognitive function, reducing anxiety and depression, improving self-esteem
- Prevention of disease and reducing risk – e.g. NCDs such as cardiovascular disease, stroke and diabetes
- Improvement of social outcomes – e.g. increased community involvement, social networks and intergenerational links (WHO, 2002, 2015):

Physical inactivity has been shown to account for up to 20% of the population-attributable risk of dementia (Blondell, Hammersley-Mather, & Veerman, 2014). Strokes, which cause one of the greatest burden of disease in older people, can have their risk be reduced by 11-15% with moderate exercise and 19-22% with vigorous physical exercise (Norton, Matthews, Barnes, Yaffe, & Brayne, 2014).

Physical activity and a healthy diet can reduce the risk of diabetic complications. A groundbreaking recent study in Barbados examined whether diabetes could be reversed by lifestyle changes. During the study, 25 participants with Type 2 diabetes were put on an eight-week diet and their medication was stopped. They were then given support to sustain the diet and increased physical activity. After the eight weeks, 15 participants (60%) reduced their blood sugar to non-diabetic levels. Those who had hypertension were able to lower, or even stop, blood pressure medication as an added benefit. Participants ranged in age from 26 to 68, with a mean age of 48 (Bynoe et al., 2019; One Caribbean Health, 2019). The findings may not be exactly applicable to older persons, some of whom may be too frail to adjust to drastic lifestyle changes such as those in the study. However, the study is promising in demonstrating that lifestyle changes can be powerful in treating NCDs as well as in prevention.

A review of studies of hypertension that included Caribbean populations of African descent was conducted (Bidulescu et al., 2015). The twenty-one studies showed higher prevalence of hypertension among Caribbean blacks compared to West African blacks and Caucasians.

#### BOX 566: ORAL HEALTH ISSUES

Poor oral health and dental health in older people is reflected by high levels of tooth decay, a high prevalence of gum disease, tooth loss, dry mouth and oral precancer or cancer.

Older persons can have difficulties in chewing, inflamed gums and a monotonous diet leading to malnutrition. Also, painful eating, not wanting to smile or talk due to missing or damaged teeth can lead to isolation and depression.

The risk factors for chronic diseases and oral diseases are the same. Diets high in sugar are a major cause of dental caries. Periodontal disease has been linked to tobacco use, excessive alcohol use, obesity and diabetes. Alcohol and tobacco use are also risk factors for oral cancer.

Therefore, integration for the prevention of chronic and oral diseases is highly recommended for both general and older population, but especially for the older population as they are at a higher risk for oral diseases and tend to be underserved with regard to dental care.

(WHO, 2015)

Hypertension and its related complications were highest in persons with low socioeconomic status. Gap analysis showed limited research data reporting hypertension incidence by sex. No literature was found on disability status. An interesting finding was that hypertension was lower among West Africans than among Caribbean people of African descent and was highest among African Americans - strongly suggesting factors other than genetics were at play. The importance of diet and physical exercise in the prevention of NCDs and their health outcomes in the Caribbean was once again highlighted (Bidulescu et al., 2015).

In the elderly poor nutrition can also lead to malnutrition:

- Reduced taste and/or smell and poor oral and dental health can result in loss of appetite.
- Reduced vision and hearing may limit mobility and ability to shop and purchase food.
- Insufficient calcium and vitamin D from poor diet is associated with bone loss, especially in women, and can potentially lead to increased pain, falls and reduced mobility.
- Mental health issues such as loneliness, isolation, depression and inadequate finances may also have an impact on diet. (WHO, 2002, 2015)

Malnutrition in the general population, throughout the life course, can be as a result of having limited access to food, lack of knowledge about balanced diets, and poor food choices (high fat, high salt); malnutrition can also lead to poor oral health. The ageing process brings about shifts in sensory abilities. Changes in smell and taste may result in lack of appetite. Impaired gastric secretions may lead to reduced absorption of iron and vitamin B12. Poor nutritional intake can also result from isolation, loneliness, depression, reduced income, emergencies and disasters (Denise Eldemire-Shearer & Mona Ageing and Wellness Centre Team, 2017; WHO, 2002, 2015). For instance, after the passage of Hurricane Irma in Sint Maarten in 2017, it was found that patients with diabetes presented with more complications, including some necessitating amputation. After the hurricane, dietary regulation and medication adherence were disrupted, and there were difficulties in accessing health care: all these factors lead to complications of diabetes (Kishore et al., 2018; Sint Maarten Ministry of Public Health Social Development and Labour & PAHO, 2019).

In older age malnutrition leads to reduced muscle mass and bone density which increase fragility and the risk of falls. Poor nutrition has also been associated with diminished cognitive function, reduced ability to care for oneself and increased risk of becoming dependant on someone for basic, everyday tasks (WHO, 2015).

In a nationally representative study in Jamaica, current alcohol use in residents aged 60-103 years old was found to be 21.4%. It declined with age and was more prevalent in men than in women (37.6% versus 6.2%). Here we see a continuation of gendered patterns of alcohol consumption found in the STEPS surveys with younger people. Current alcohol use was also more prevalent among persons who were either highly satisfied or highly dissatisfied with their lives, compared to others who had levels of life satisfaction between these two extremes, but bore little relation to prevalence of depression (Gibson et al., 2017). Among older people who continue to consume alcohol, metabolic changes can increase their chances of acquiring alcohol-related diseases such as malnutrition and liver, gastric and pancreatic diseases. Injuries such as alcohol-related falls and complications due to mixing and adherence of medications may also occur leading to increased disability and morbidity in the elderly (WHO, 2002).

Tobacco smoking increases the risks of lung cancer, cardiovascular disease and respiratory diseases. Smoking is cumulative and disease risk assessments must take into account this habit over the lifetime. In Trinidad, Thorington et al assessed the prevalence of Chronic Obstructive Pulmonary

Disease (COPD) in participants over 18 years (average age was 55 years old) attending chronic disease clinics throughout the island. The study recorded demographic and medical history of both COPD and non-COPD patients. COPD was found to be higher in females and those with a history of smoking. It was noted that the gender difference may be associated with greater longevity among women and because women are more affected by adverse respiratory effects of smoking (Thorington et al., 2011). Smoking among the elderly can accelerate reductions in bone density and muscular strength, and potentially interact and interfere with medications. Second-hand smoking can also exacerbate asthma and other respiratory diseases in older people (WHO, 2002).

There may be various challenges to mental health that accompany ageing, based sometimes on regrets that people are not able to achieve as much as before, and that some aspirations are unfulfilled. A healthy ageing approach to enhance functional abilities, accompanied by opportunities to work and participate, will help protect and enhance mental health. An associated challenge is loneliness and lack of social participation. This may, for some, be associated with living alone. However, a study among older persons in Trinidad found that while 16% of the sample lived alone, 33% reported that they were lonely, including 28% of those who did not live alone (Rawlins, Simeon, Ramdath, & Chadee, 2008). The most frequent reason given for loneliness was that family and friends were too busy. A much higher percentage of older women lived with their children and their family (62%) compared with elderly men (39%). More men than women reported feeling lonely. The reason for this was thought to be that older women still had sufficient “roots” in the community to allow them to have persons visit them, or they were able to visit friends, family, churches and non-governmental organisations. People said that they felt especially lonely when eating alone. The authors note that there is evidence that loneliness is associated with depression, high blood pressure, poor sleep, accidents and substance abuse (Rawlins, 2014; Rawlins et al., 2008).

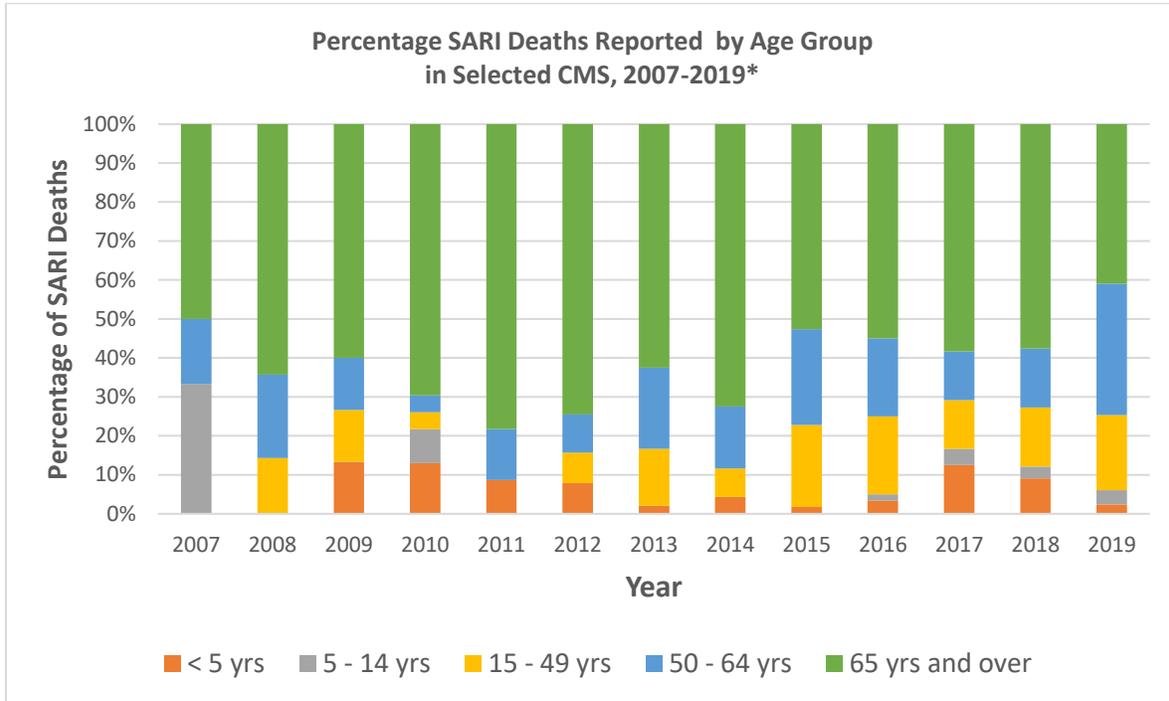
These results suggest the need for interventions to promote participation by older persons, especially to enable them to socialise with peers. A national survey among older persons in Jamaica found that around two-thirds regularly participate in social activities, including attending religious services and being visited by friends at least once a month. The variables independently associated with social participation varied depending on the type of social activity considered. Persons who were screened positive for depression were less likely to be visited by friends, while persons who received an income through livestock/farming were more likely to visit or be visited by friends. Attendance at meetings of formal organisations was less likely among men, people with no post-secondary education, persons not in a union, and those with less functional independence. The findings suggested that strategies to increase social participation need to be targeted according to social factors such as gender, union status and education as well as facilitating the functional abilities of older persons (Willie-Tyndale et al., 2016).

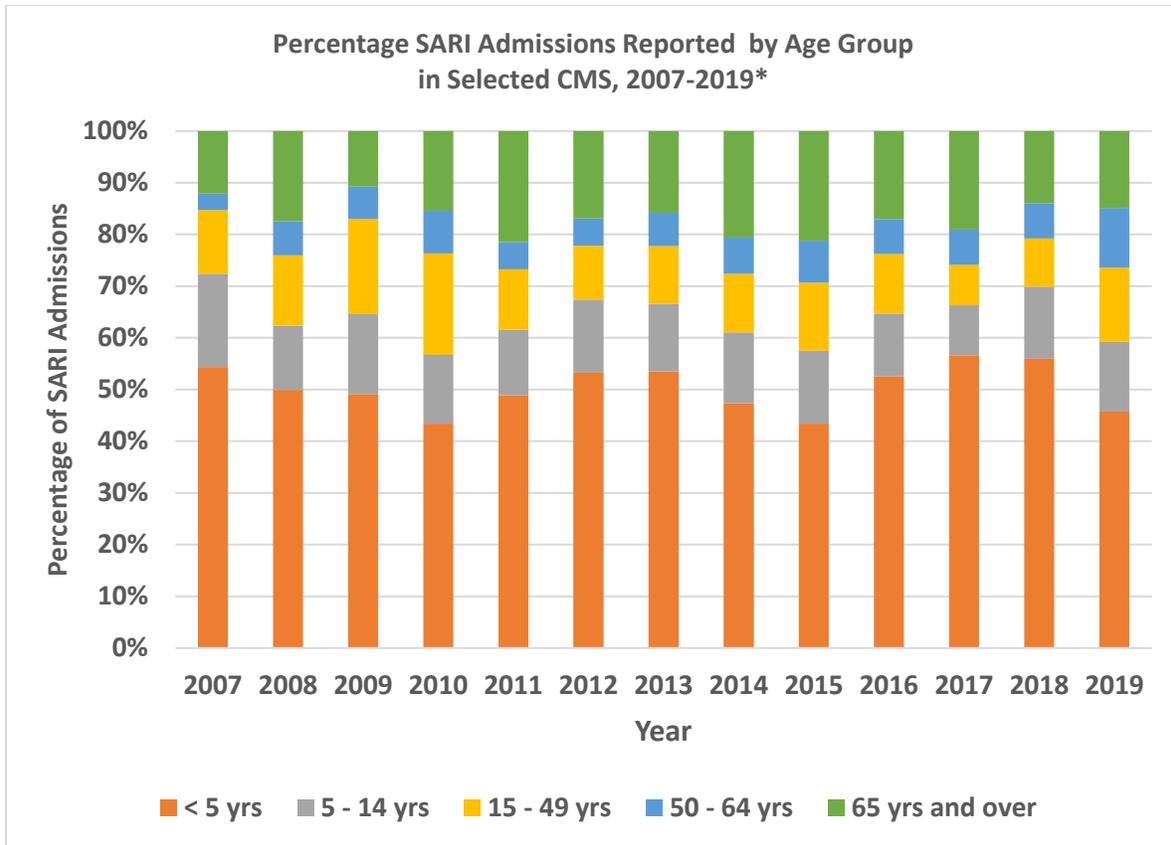
### *3.1.2 Acute conditions*

Challenges of acute episodes of illness should also be addressed, given higher prevalence of frailty among older persons. CARPHA collects syndromic data on symptoms of communicable diseases, such as Severe Acute Respiratory Infections. Figure 16 shows that older persons comprise the majority of deaths from SARI each year, but they are a minority among persons admitted to health facilities with SARI. This may suggest some inequity in access, and a need to conduct outreach to ensure that older persons can receive the care needed to prevent deaths from acute infections. It may also be that some older persons lack social support to enable them to access health care facilities when they are unwell with an infection, whereas children are generally taken to these facilities by family members. Limitations in access to immunisation against influenza and other causes of SARI may also be a contributor to mortality among the elderly. Further research is needed to identify the

causes of these patterns. The impact of acute conditions on the elderly has not been a major topic of research in the Caribbean.

**FIGURE 40: DISTRIBUTION OF DEATHS AND HEALTH CARE FACILITY ADMISSIONS ATTRIBUTABLE TO SEVERE ACUTE RESPIRATORY INFECTIONS BY AGE GROUP, CMS 2007-2019**





### 3.2 Geriatric Giants and functional abilities

Major health concerns that affect some older persons are physiological/mobility problems (stroke, arthritis, disability), sensory impairment, and mental illness (depression, dementia, and Alzheimer’s and Parkinson’s disease) (Theodore et al., 2016). Mental illnesses can result from isolation and loneliness, leading to poor quality of life in older persons.

As noted above, the major causes of death among older persons are NCDs (see sections 1 and 2), which can cause or aggravate various conditions associated with ageing, known as Geriatric Giants (Box 3). These are not usually fatal, but some of them carry a risk of death, especially falls and cognitive impairment. Major causes of cognitive impairment in the elderly are dementia of various types (Alzheimer’s, vascular, Lewy-body, alcoholic, and frontotemporal) and Parkinson’s Disease.

Mortality data reported to CARPHA were analysed to determine the contribution of geriatric conditions to mortality among people aged 60 and over. There were no deaths reported for most of the geriatric International Classification of Disease (ICD) codes. Some deaths were reported for falls and under the various causes of cognitive impairment.

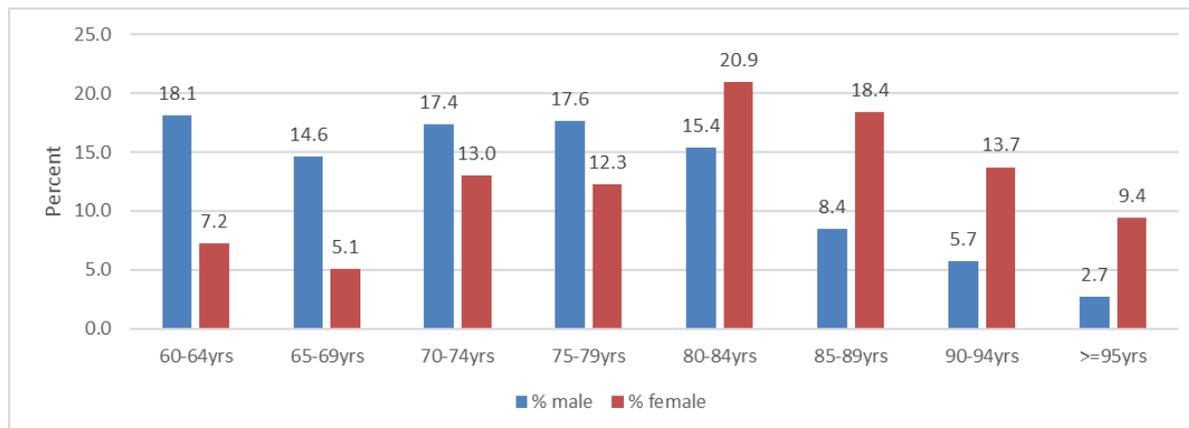
Across all CMS from 2000-2016 among people aged 60 and over, there were 680 deaths from falls reported, including 403 among men and 277 among women. That the majority of injury deaths were among males reflects the gendered pattern of injuries across the life course. There were more deaths among men than women from falls between the ages of 60 and 84, after which there were larger numbers of women, possibly reflecting greater longevity among women. The highest number of falls were in the 80-84 age group (120), closely followed by the 75-79 age group (105) and the 70-74 age group (106). The following diagram shows the distribution of the deaths from falls by 5-year age groups, showing a gendered pattern by age. The implication is that men are vulnerable to falls, especially in the “young and middle old” age groups, and special attention should be paid to prevention of falls among men and the oldest women.

#### BOX 567: GERIATRIC GIANTS

MOBILITY DISORDERS  
INSTABILITY AND FALLS  
SARCOPENIA  
FRAILTY  
ANOREXIA OF AGEING  
VISUAL AND AUDITORY DISTURBANCE  
DEPRESSION  
COGNITIVE IMPAIRMENT  
URINARY INCONTINENCE  
STOOL INCONTINENCE

*SOURCE: (BARTOSZEK, NIEDORYS, & SZALAST, 2019; MORLEY, 2017)*

**FIGURE 41: PERCENTAGE DISTRIBUTION OF REPORTED DEATHS FROM FALLS AMONG OLDER PERSONS BY AGE GROUP AND SEX, 2000-2016, ALL CMS**

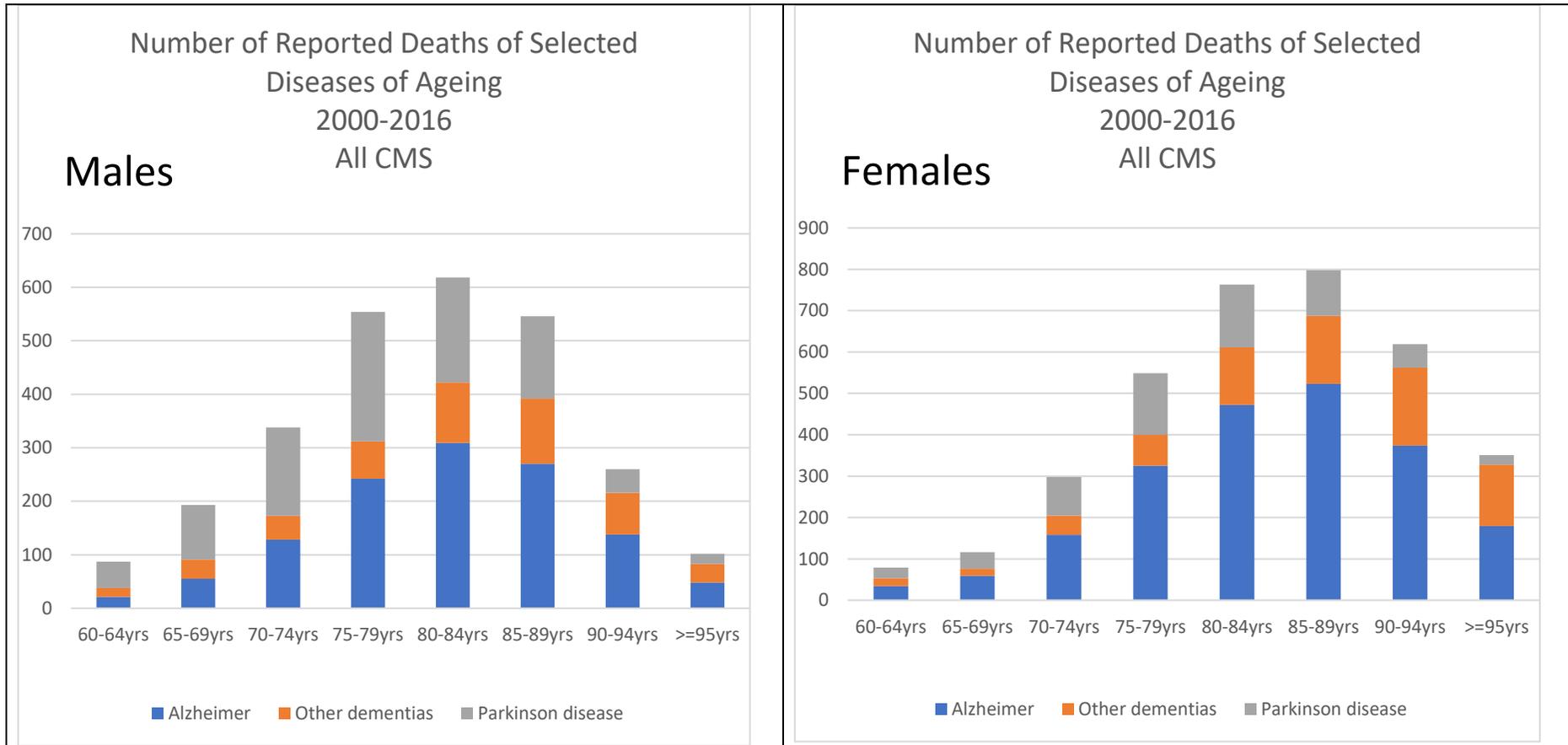


Source: Data reported to CARPHA

Analysis of the Jamaica 2012 survey of 2,943 persons aged 60 and over looked at determinants and correlates of falls. The fall prevalence in the past 6 months was 21.7%. One third (34.6%) of participants reported restriction of activities due to fear of falling. Logistic regression found sex (female), area of residence (rural), eyesight problems, cataracts, high blood pressure, and depression to be independently positively associated with factors for falling (Kathryn Mitchell-Fearon et al., 2014). The finding regarding sex is in contrast with gendered patterns along the life course and in CARPHA mortality data showing higher prevalence of injuries among men. The Jamaica study showed morbidity rather than mortality, and it may be that women are more likely to fall but their injuries are less likely to be fatal. The authors also note that most falls occurred at home (63.6%). The home is therefore a key area to be assessed for fall hazards and targeted for fall-proofing through both pre-emptive and corrective measures. The authors note that such efforts may extend to changing cultural norms and preferences. For example, in the Jamaican setting, great value is placed on highly polished, shiny floors, signifying a well-maintained house. However, these very smooth surfaces increase the risk of falling. The authors also note that poorer infrastructure in rural areas, such as lack of sidewalks, can contribute to greater risk in these areas.

Over the 2000-2016 period, 6,216 deaths among persons aged 60 and over across CMS were attributed to various sorts of cognitive decline, of which 2,698 were among men and 3,573 were among women. There were more deaths among women from dementia (Alzheimer's and other) than among men (2,923 and 1,727 respectively), while deaths from Parkinson's disease were mostly among men (971 among men and 650 among women). Among men, Alzheimer's disease accounted for 44.9% of deaths, other dementias 19.1% and Parkinson's disease 36.0%. The equivalent percentages for women were 59.4%, 22.4% and 18.2% respectively. The highest occurrence of death from these diseases was in the age group 80-84 among men and 85-89 among women. Figure 18 shows the frequencies graphically.

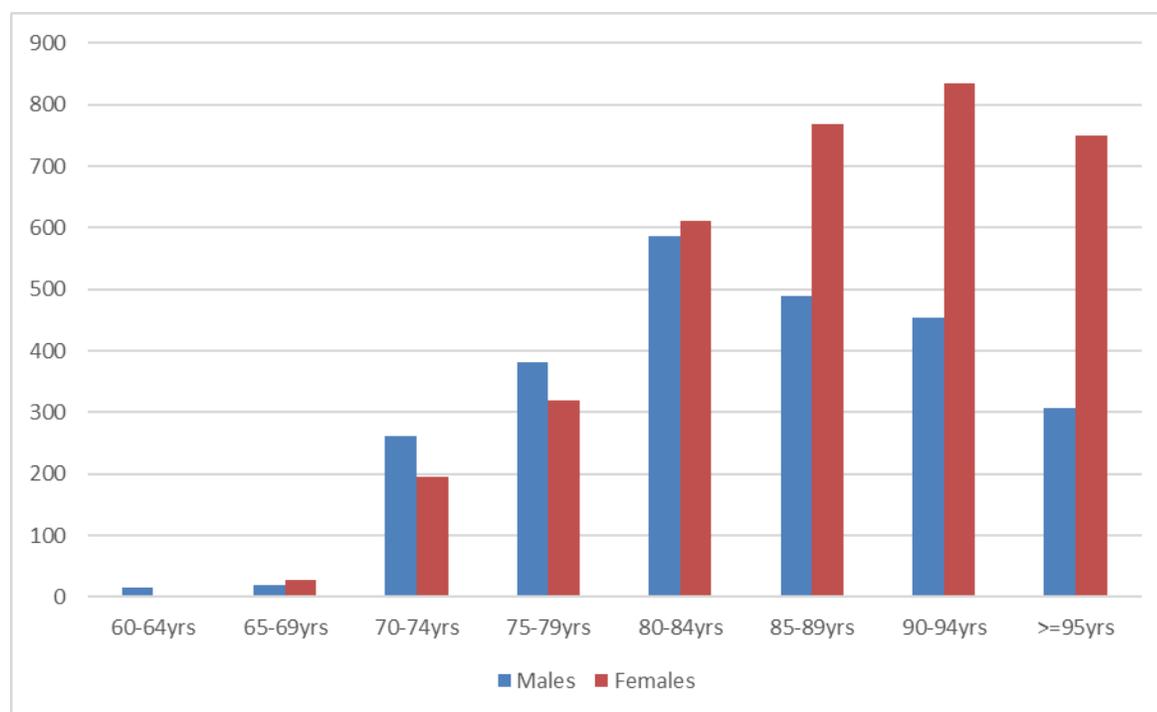
**FIGURE 42: NUMBERS OF DEATHS FROM ALZHEIMER'S DISEASE, OTHER DEMENTIAS AND PARKINSON'S DISEASE, BY SEX AND AGE, 2000-2016, ALL CMS**



Source: Data reported to CARPHA

There are indications that deaths from these and other conditions affecting the elderly may be under-reported or be reported under “symptoms, signs and ill-defined conditions.” Many deaths in the Caribbean are classified under the category “senility”, which has been classified as an ill-defined condition, which includes “senescence” and “old age.” In the 2000-2016 period, 6,022 deaths among persons 60 and over were categorised as being due to “senility” – 2,514 males and 3,508 females – without any clearly defined disease as cause of death. Some of these may be as a result of cognitive decline, or other disease conditions, but it is not possible to determine. The numbers of deaths recorded under the senility category give cause for concern about the quality of registration of cause of death in the region.<sup>17</sup> It may also result from challenges in diagnosis as the symptoms of diseases may differ among older persons, and they are more likely than younger persons to live with multiple health conditions (co-morbidities) (Bartoszek et al., 2019). It may be that some of these deaths are regarded as natural outcomes of ageing, so that the persons registering the death do not define the underlying cause. It is notable that the number of deaths reported under senility increases with age, suggesting that attribution to “old age” or “senescence” increases with age. Training of health care workers and registrars and an increase in the availability of forensic and pathology services may help address these challenges in the region.

**FIGURE 43: NUMBER OF DEATHS ATTRIBUTED TO “SENILITY” BY SEX AND AGE GROUP, 2000-2016, ALL CMS**



Source: Data reported to CARPHA

<sup>17</sup> National mortality data is submitted yearly to CARPHA. For the period 2000-2016, the range of reported deaths coded to the group symptoms, signs and ill-defined conditions, was between 0.9% and 9.7% with an average of 3.7% of reported deaths.

Surveys have been conducted in Jamaica and Trinidad and Tobago to measure the prevalence of cognitive impairment among older persons. In the Jamaica Study of Older Persons 2012 included (Waldron et al., 2015), cognitive impairment was assessed using the Mini-Mental State Examination tool (see Chapter 1 for a description of this tool). More than one fifth (21.2%, n = 591) of older adults had mild cognitive impairment and more than one tenth (11.0%, n = 307) had severe impairment, giving prevalence of 32.2%. Prevalence was higher among women than men (Table 3). Levels of impairment were independent predictors of cognitive impairment, which was positively associated with age and negatively associated with levels of education. Specifically, people with only primary education had significantly higher levels of cognitive impairment than those with secondary or higher education. The finding on education draws attention to the importance of social determinants of health. Education may be associated with levels of income, which are difficult to measure in surveys. People with cognitive impairment were significantly more likely to live in rural areas, to be depressed, to have been hospitalized in the last three years, to have fallen in the past three months, to have limited activity for fear of falling in the past three months and to have self-reported diabetes. They were also more likely to report functional impairment/ dependence on at least one of the Activities of Daily Living on the KATZ-ADL scale (see Introduction, section 3.1). The study drew attention to socio-economic correlates of cognitive impairment and to associations with NCDs, another Geriatric Giant (falls), daily functioning and health care impacts.

**TABLE 21: PREVALENCE OF COGNITIVE IMPAIRMENT BY SEX AMONG OLDER PERSONS IN JAMAICA, 2012**

	Male	Female	Total
Severe	9.1	12.9	11.0
Mild	19.8	22.6	21.2
Total	28.9	35.5	32.2

Source: (Waldron et al., 2015)

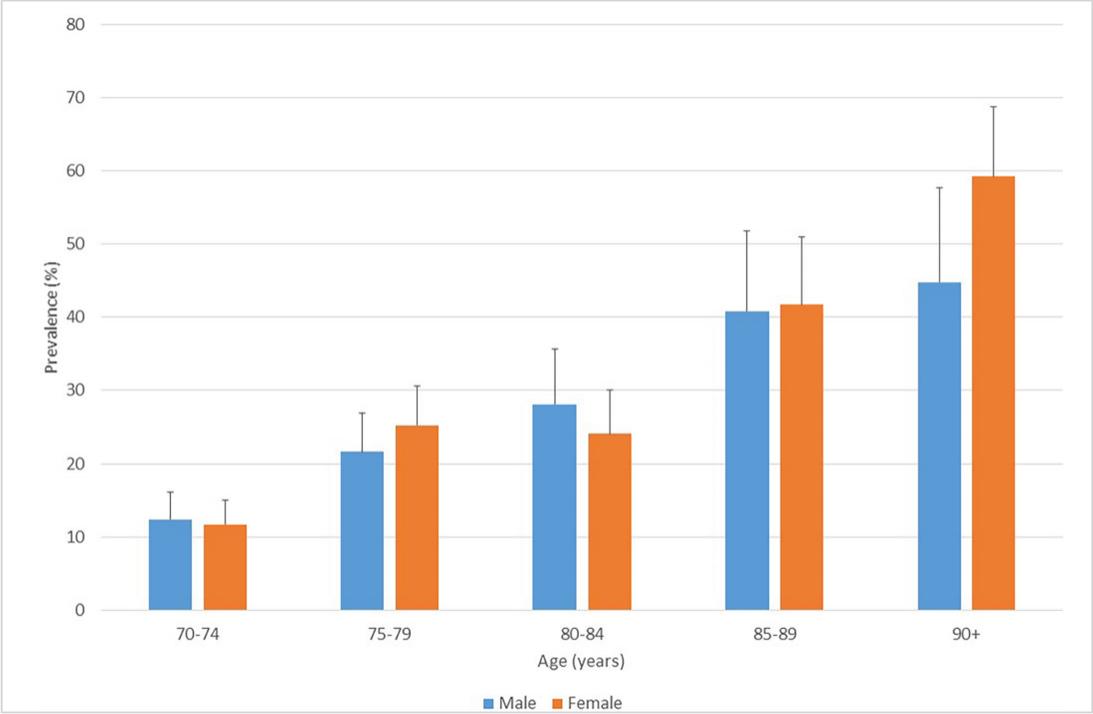
An embedded case-control design was used to investigate dementia among three hundred and one adults aged 60 years who participated in the Jamaica Study of Older Persons. Cases (Mini-Mental Scores  $\leq 20$ ) and controls (Mini-Mental Scores  $> 20$ ) were evaluated for dementia using the Diagnostic and Statistical Manual of Mental Disorders, 4th. Edition (DSM IV) protocol and magnetic resonance imaging (MRI). Using DSM IV criteria, 11.4% of the participants in the case-control study had dementia. Translated to the larger Jamaican population, this equated to a national population prevalence of 5.9%. This was substantially lower prevalence than found in the Trinidad dementia survey some years later (2018; see below in this section). Dementia prevalence was found to be positively associated with age and was similar between men and women. However, vascular dementia was more commonly seen among males, and Alzheimer's more commonly seen among females. Dementia was associated with vascular conditions. Nationally, 37% of dementia cases were vascular dementia and 58% Alzheimer's disease. Almost half 48.3% of the Alzheimer group also had significant vascular changes. On MRI examination, 47.3% of the study group had vascular ischaemic changes. The authors concluded that strengthening current efforts at prevention and reduction of vascular risk factors is warranted in addressing dementia in Jamaica (D. Eldemire-Shearer & James, 2017).

Given these findings and others that vascular dementia is more common among people of African descent than among Caucasians (Miles, Froehlich, Bogardus, & Inouye, 2001), it is remarkable that mortality data for 2000-2016 reported to CARPHA only included five cases of vascular dementia. It has been noted that vascular dementia has a lower public profile than Alzheimer's and thus may not

be diagnosed. It is important to identify the precise causes of cognitive impairment and associated mortality and morbidity in the Caribbean, as they may indicate specific prevention and treatment strategies. Vascular dementia is easier to prevent and treat than Alzheimer’s and Lewy Bodies dementia, so there are likely to be concrete health benefits from better diagnosis of vascular dementia by health personnel, improved surveillance of types of dementia, and improved certification of causes of death among the elderly.

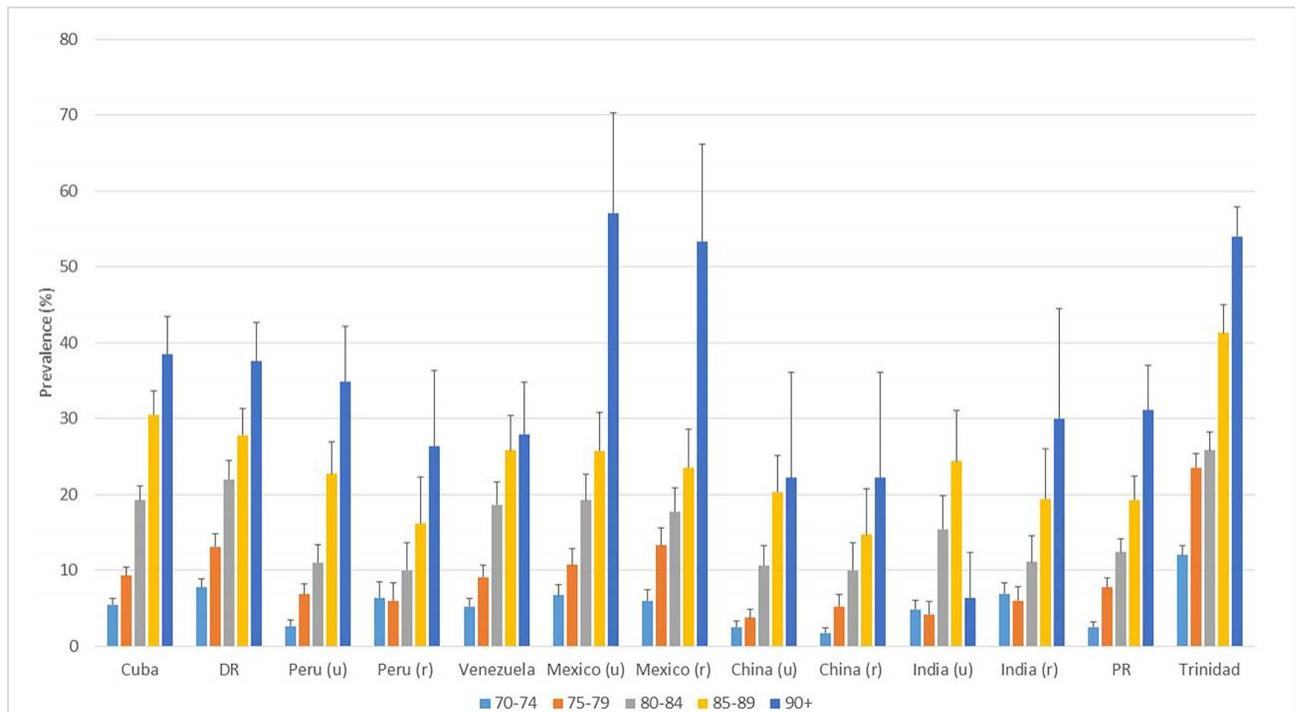
The Trinidad survey (Davis, Baboolal, Mc Rae, & Stewart, 2018) was carried out in a nationally representative sample (excluding Tobago) of people aged ≥70 years using household enumeration. Dementia status was ascertained using standardised interviews and algorithms from the 10/66 schedule (Stewart, Guerchet, & Prince, 2016) and age-specific prevalence was compared with identically defined output from the 10/66 surveys of 16,536 residents in eight other low income and middle-income countries. Of 1832 participants (77.0% response rate), dementia was present in 442 (23.4%). Prevalence increased with age, from 12.0% in persons aged 70–74 years, 23.5% at 75–79, 25.8% at 80–84, 41.3% at 85–89 and 54.0% in those aged 90 and over. Sex was not significantly associated with dementia prevalence, except among the oldest old, age 90 and over, among whom prevalence was higher among men (Figure 21). Echoing findings from Jamaica, dementia prevalence was found to be positively associated with age and negatively associated with level of education. Reinforcing the importance of social determinants, it was found that dementia prevalence was higher in lower status, lower paid occupations (highest in self-employed agricultural workers, lowest in those reporting clerical or professional occupations). Confirming association with some NCDs, dementia prevalence was higher in people for whom heart disease, stroke or diabetes was reported, and was not associated with angina, high cholesterol or hypertension. The associations with stroke and diabetes remained significant and relatively unaltered in strength following statistical adjustment for demographic and other health factors.

**FIGURE 44: DEMENTIA PREVALENCE (%) BY AGE AND GENDER (WITH UPPER 95% CONFIDENCE INTERVAL) IN TRINIDAD, 2017**



An important finding from the Trinidad survey was that dementia prevalence was significantly higher in every age group than had been found in similar surveys using 10/66 methodology in other developing countries and in the USA/Canada. The authors concluded that the higher prevalence is associated with high cardiovascular risk in Trinidad (Davis et al., 2018). As shown in the STEPS surveys described above (section 2.2), behavioural risks in Trinidad and Tobago do not differ greatly from those in other Caribbean countries, so the results are instructive in highlighting the risks to health in older age of NCD risk behaviours.

**FIGURE 45: PREVALENCE OF DEMENTIA (% AND STANDARD ERROR BARS) BY AGE GROUP ACROSS 10/66 CONSORTIUM SURVEY SITES AND THE TRINIDAD SURVEY**



Source: (Davis et al., 2018)

## Conclusion

NCDs are the leading causes of death in the Caribbean, both in the population over and under 60 years of age. In the older population, 8 of the 10 top causes of death are NCDs; others are lower respiratory infections and digestive diseases. Under the age of 60, violence, road traffic accidents, lower respiratory infections and HIV/AIDS are in the top 10. Injuries can cause impairment to functional abilities in older age. Living with HIV into older age requires careful management and monitoring of the progress and effects of adherence to antiretroviral medication.

Analysis of patterns of disease and risk factors indicates major gender differences throughout the life course, which suggest the need for gender-responsive approaches to each health condition in older age. There are also gender-related differences in social participation and thus access to social support to assist with ill-health.

Information on some conditions concentrated among older persons – the Geriatric Giants – is limited. Available evidence, mostly on falls and cognitive impairment, suggests the need for a broad health response informed by the Social Ecological Model, principles of Universal Health Coverage and United Nations Principles of Action for Older Persons (UN, 1991). Attention should be paid to physical environments, such as safety features in the home and surroundings, and social environments, such as opportunities for social participation, psychological stimulation and mutual support by senior citizens in partnership with family members, friends and professional carers. Climate change brings additional concerns about the vulnerability of older persons, and adaptation and preparedness strategies should include attention to issues of elder safety and participation.

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## Chapter 5: Care and Support of Older Persons

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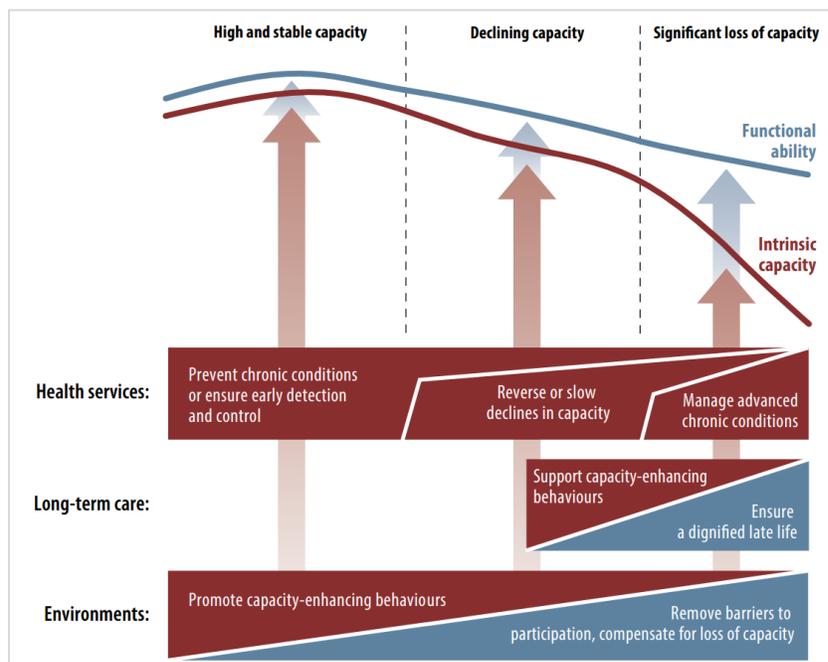
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## Background: conceptual and ethical frameworks

Healthy ageing requires adequate care and support so that the impact of harmful health conditions on functioning are minimised and infirmities or disabilities are addressed. The emphasis is on minimizing the length of time, especially at the end of life, when individuals are in a dependent state due to disease or disability. The desired outcome is a higher quality of life, and a more economically feasible late life experience (Neil Henderson & Carson Henderson, 2010, p. 12; WHO, 2002, 2015, 2017a, 2017b, 2019c, nd). A health promotion approach, enabling the adjustment of environments and behaviours to prevent disease and optimise functioning throughout the life course, is part of what is necessary to achieve this. Health promotion strategies are presented in Chapter 4. Care of the elderly has been defined as, “activities undertaken by others to ensure that people with, or at risk of a significant ongoing loss of intrinsic capacity can maintain a level of functional ability consistent with their basic rights, fundamental freedoms and human dignity” (WHO, 2015, p. 127).

In this chapter we focus on care and support strategies to maximise functional abilities among older persons and to compensate for loss of capacity. This comprises care and support provided by older persons (self-care and peer support), families, communities, and formal health and social services. The healthy ageing framework presented in Figure 1 and described in detail in the Introduction to this report is the main framework guiding the analyses. This framework presents a holistic approach to healthy ageing by combining health promotion approaches, indicated in red, with healthcare measures to increase functional capacity where this is impaired, indicated in grey. It may be noted that a variety of actors, including older persons themselves, can help maximise functional capacity through the actions specified in the diagram. A society-wide approach to ageing involves health and social care agencies among many others.

**FIGURE 46: A PUBLIC-HEALTH FRAMEWORK FOR HEALTHY AGEING: OPPORTUNITIES FOR PUBLIC-HEALTH ACTION ACROSS THE LIFE COURSE**



Source: (WHO, 2015, p. 33)

In the period of **high and stable capacity**, action focuses on prevention of chronic conditions, ensuring early detection and control and promoting capacity-enhancing behaviours. The promotion of capacity-enhancing behaviours is addressed mainly in Chapter 6 of this report. The primary healthcare approach involves engaging in activities such as identifying risk factors, providing diagnostic tests, screening for markers of disease and providing health education and counselling. Given that these activities generally require technical knowledge and facilities (e.g. medical equipment, laboratories), they are usually carried out by trained health professionals. Formal health and social care and support approaches are covered in section 3 of this chapter. There are also important roles for community actors, including older persons and their families, in providing support for healthy behaviour, monitoring health status and in health-care seeking behaviour. Informal care and support are explored in section 2.

In the period of **declining capacity**, the main goals become the reversal or slowing of the decline in capacity and supporting capacity-enhancing behaviour. There are roles for health services in providing access to medication, for instance to control blood sugar, and to therapy to restore and maintain functioning. A variety of professional and non-professional actors can be involved in supporting capacity enhancing behaviours. The focus of environmental action shifts towards removing barriers to participation (for instance by providing transport to people who can no longer drive or installing wheelchair ramps) or compensating for loss of capacity (for instance providing spectacles to people with vision loss).

If and when there is **significant loss of capacity**, the removal of barriers to participation is essential so that older persons can retain their independence for as long as possible. Compensation for loss of capacity entails assistance with activities of daily living such as shopping, cooking, domestic chores and bathing for people who cannot manage these adequately. An ethical approach to care and support becomes especially important, so that people who have lost capacity can receive humane and empathetic care and support and be enabled to make and implement their own decisions whenever possible. Once capacity has been lost, systems must be in place to ensure that decisions are made in line with the persons previously stated wishes or, if not previously stated, in their best interests.

When considering the concept of care for the elderly the following must be taken into consideration (UN, 2015a; UNECE, 2015):



The healthy ageing framework highlights the need to organise a spectrum of prevention, care and support approaches and services to respond to different levels of functional ability.

(WHO, 2015)



- Care is not just for those who are care-dependent but also for those who may develop or who have significant loss of capacity and become care-dependent without the necessary interventions. Appropriate interventions may include, for example, ensuring that older persons have access to safe housing and healthcare and can socialise with peers.
- Care dependency is fluid. By implementing certain interventions for some older people, care dependency may be reversed. For example, healthy eating and physical activities may prevent or slow the progression of diabetes or cardiovascular disease.
- Caregivers need to be available, accessible, appropriately skilled and supported to ensure that older people can meet their basic needs and retain as much of their functional ability as possible.

#### **BOX 568: RANGE OF CARE PROVIDERS**

Care may be provided by:

- Health or social care professionals
- Primary, secondary or tertiary care
- Private, public or civil society
- Formal or informal caregivers
- Ambulatory, institutional or home-based carers

(UN, 2015a; UNECE, 2015).

In the Introduction, we detailed a variety of ethical principles that should guide approaches to ageing. These are especially important to guide action as functional ability declines and persons become more dependent on others. They should also provide guidance for professional action and partnerships between agencies. They include:

- United Nations Principles of Action for Older Persons: dignity, independence, participation, self-fulfilment and care (UN, 1991).
- Pillars of Active Ageing: participation, health, security (WHO, 2002)
- Principles of quality healthcare: access, acceptability, appropriateness and equity (Eldemire-Shearer, 2011; Eldemire-Shearer & Mona Ageing and Wellness Centre Team, 2019b; WHO, 2008, 2012)
- Equity for all regardless (especially) of age and gender (Marmot, 2005; WHO, 2011b)
- Respect for persons/ do no harm (World Medical Association, 1964)
- Health in All Policies, Universal Health Coverage, Primary Health Care approach, sustainability (WHO, 2014)

These principles are integrated into the analyses of this chapter.

While care and support can be provided by a wide variety of agencies, in this chapter we separate the analysis of informal and formal care. Formal care is generally provided by trained, qualified and (sometimes) licensed professionals who are usually paid. The services are controlled by the state or other organizations, and caregivers are generally protected by labour rights and work regulations. Informal care is mainly provided by family, friends or other caregivers, usually with little or no official care expertise. The work is generally unpaid (although informal carers may receive financial contributions); there is no contractual agreement and no formal entitlement to social rights or applicability of working regulations. (UNECE, 2015).

This Chapter is divided into sections on informal care, formal health and social care, and end-of life care issues. All are informed by the healthy ageing approach and principles described above.

## 1. Informal care



**FIGURE 47: INTERGENERATIONAL RELATIONSHIPS AND PARTICIPATION**

*Source: (PAHO, 2015)*

Informal care is not a one-way process. Complete dependence of one person on others is usually only for short periods of extreme illness. Since healthy ageing is about maximising functional abilities, it is also about enabling older people to care as well as be cared for, and to sustain and alter their roles and responsibilities as they see fit and according to their abilities within their families and communities.

Mutuality and reciprocity in providing and receiving care are associated with pillars of the active ageing approach: participation, health and security (WHO, 2002). Old age can be valued as a time when persons can impart their

knowledge and values to the younger generations and ideally spend time with people they love. Part of what is valued is intergenerational sharing and interdependence in care and support. This may be aspired to as part of healthy ageing (McKoy Davis et al., 2017).

In practice, socio-cultural norms – especially gender norms - economic resources and health status influence the respective roles of members of families in providing care. Caribbean socio-cultural norms are largely supportive of caring for older persons at home. For instance, in a study in Belize carers identified psychological rewards of caring. They identified positively with the role of care provider, did not describe it as burdensome and did not describe role strain. Religious beliefs were salient to how the carers regarded their care role. However, some complained of poor physical health which might indicate strain (Vroman & Morency, 2011). Caregiver burden appears to vary according to the functional capacities of the person being cared for. In a survey of caregivers in Jamaica, it was found that caregiver burden<sup>18</sup> was significantly higher among those caring for someone who was not able to use the toilet independently, but was not independently related to the care recipient's capacities to carry out other activities of daily living (James et al., nd). Children/grandchildren had higher caregiver burden scores than formally employed caregivers (James et al., nd; James et al., 2020).

Carers of senior citizens in the Caribbean are most often wives, daughters or daughters-in-law of the person receiving care, and care is most often provided at the home of the senior citizen or one of their children. The provision of care by daughters-in-law is more common among people of East Indian descent than among those of African descent (J. M. Rawlins, 2001, 2010; Joan M. Rawlins & Spencer, 2002). In African-descended multigenerational households of the Caribbean, elderly women are often deemed to be the central figures and may retain a strong role in household management and provision of care as long as they remain able (St. Bernard, 2003).

Historically, and for low-income households in the region, the informal labour of older people has been critical to survival and family health. Often, they assist in enabling their adult children and

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<sup>18</sup> Caregiver burden was measured using the Zarit Burden Interview, available at: [http://dementiathways.ie/filecache/edd/c3c/89-zarit\\_burden\\_interview.pdf](http://dementiathways.ie/filecache/edd/c3c/89-zarit_burden_interview.pdf)

others in the family or community to participate in the formal labour market by looking after their grandchildren, and sometimes children from other households (McKoy Davis et al., 2017; Thomas, 2014). Some older people provide full-time care to children whose parents have migrated in search of better economic opportunities (McKoy Davis et al., 2017; J. M. Rawlins, 2014; Senior, 1991). The majority of people providing care are women. The importance of women's formal and informal labour is highlighted by the high proportion of female-headed households in the region (see Table 1). Female-headed households tend to be more economically vulnerable than male-headed households, with higher child and age dependency ratios, and lower incomes. Some older women, and far less commonly older men, may look after both younger and older relatives (Rawwida Baksh and Associates, 2016).

**TABLE 22: PERCENTAGE OF FEMALE-HEADED HOUSEHOLDS IN SELECTED CARIBBEAN COUNTRIES**

	Percentage of female-headed households (%)
Antigua and Barbuda	48.4 <sup>19</sup>
Dominica	39.2 <sup>20</sup>
Guyana	35.2 <sup>21</sup>
Jamaica	41.0 <sup>22</sup>
Saint Lucia	43.6 <sup>23</sup>

Source: (International Labour Organization, 2018)

The considerable formal and informal work responsibilities of carers of relatives at home, and especially of those carers who are female heads of households, can take a toll on their health. The health vulnerabilities tend to increase as the carers get older. NCDs, such as hypertension, diabetes and arthritis, have been found to be common among family carers of older persons (Joan M. Rawlins & Spencer, 2002). Likewise, among grandparents providing care for co-resident grandchildren, hypertension, diabetes and arthritis have been found to be the most common NCDs (McKoy Davis et al., 2017).

Informal care to older persons (and others in society) is a highly gendered activity. In the Caribbean, as in many places in the world, women comprise the majority of informal carers and spend more time on caring and domestic tasks than men (International Labour Organization, 2018; J. M. Rawlins, 2014; Stuart, 2014). This is associated with the traditional (in most cultures) gender division of labour, with men largely working outside the home and in the formal economy, and women carrying out domestic and caring duties, mostly in the household (Reddock, 2008). The gender division of labour is upheld by conceptual dichotomies that ascribe certain roles to men and women, and which are reproduced through socialisation. This includes the belief that it is acceptable for reproductive labour to be unpaid or paid less than productive labour (Exploring Economics, 2019; Seguino, 2003). It should be noted that some reproductive labour is paid, such as that of people employed as cleaners. However, jobs that focus on tasks involving care and domestic work such as cleaning tend to be paid less than those that produce goods to be traded for profit.

<sup>19</sup> Huggins, T (2014), Country Gender Assessment: Antigua and Barbuda. Wildey, Barbados: Caribbean Development Bank.

<sup>20</sup> Baksh, R. (2014) Country Gender Assessment: Dominica. Wildey, Barbados: Caribbean Development Bank.

<sup>21</sup> World Bank Databank. Female headed households (% of households with a female head) <http://data.worldbank.org/indicator/SP.HOU.FEMA.ZS>.

<sup>22</sup> UNICEF (2005) Multiple Indicator Cluster Survey: Jamaica. <http://statinja.gov.jm/Publication/Mics%20Report.pdf>

<sup>23</sup> Ranjitsingh, A. (2014) Country Gender Assessment: Saint Lucia. Wildey, Barbados: Caribbean Development Bank.

**TABLE 23: STEREOTYPICAL GENDER ROLES ASSOCIATED WITH CARING**

	Roles stereotypically ascribed to men	Roles stereotypically ascribed to women
Type of labour	Productive	Reproductive
Work ethos	Rationality	Caring
Recognition by government institutions	Formal	Informal
Responsibility for economic support of the family	Breadwinner	Dependent
Sphere of operation	Public	Private
Remuneration	Remunerated/ well paid	Unpaid/ low paid
Stereotypes about work	Hard work	Soft work
Role in the labour force	Active	Inactive

Source: (Exploring Economics, 2019)

Caribbean gender relations do not fit neatly into the stereotypes, though the norms associated with them appear to influence the low pay levels or non-existence of remuneration for caring tasks that are more often than not carried out by women. Partly associated with the relatively high proportion of female-headed households is a high level of engagement of women in income-earning activities outside the home to make ends meet and for the economic advancement of their families. In practice the breadwinners are often women, but women still are ascribed primary responsibility for care (Clarke, 1966; Hart, 1996; J. M. Rawlins, 2014; Safa, 1995). The result is a *double burden* of work in the household and outside (Stuart, 2014). Recent trends, involving girls and women surpassing the educational achievements of boys and men and advancing in their careers into some senior positions in Caribbean society have generally not been accompanied by men taking on a greater amount of caring work (Bailey, 2014; International Labour Organization, 2018). An associated issue is that of social isolation of men as they get older. As many men focus on their work and careers throughout most of their adult lives, and some do not retain strong bonds with the mothers of their children, men are generally more socially isolated, with fewer sources of support, during old age (Eldemire-Shearer, Paul, & Morris, 2002; J. M. Rawlins, 2014).

The institutional and legal environment in the Caribbean is not generally supportive of reducing the difficulties in achieving work-life balance for persons with high levels of responsibility for both productive and reproductive work. For instance, few employers provide flexibility in working hours and locations or extensive leave to care for dependent relatives, and there are few day care options for older persons (or children) that facilitate their carers engaging in full-time employment. Women who are successful in their careers generally rely on female relatives or employ other women as domestic helpers and carers to enable their careers to continue (International Labour Organization, 2018; Reddock, 2008). At the same time, there are increasing economic opportunities in care work, accompanying trends such as services becoming major contributors to economic development in Caribbean societies. Care activities, including activities such as cleaning and care of the elderly, are increasingly monetized, so that it is possible to gain remuneration from these activities. Health and social care of the elderly offer expanding opportunities for employment, and women are best placed to avail themselves of these opportunities as a result of their socialisation (Chaitoo & Allen, 2016). The gender pay

gap, however, remains, and is largely based on the concentration of women's employment in jobs associated with caring (International Labour Organization, 2018; Rawwida Baksh and Associates, 2016).

Caring responsibilities take a toll on incomes and economic opportunities throughout life. This applies to people who continue to care into old age and those who receive care as their health declines. National Insurance systems are more beneficial to men than women, given that employment rates are higher among men and they have fewer career breaks, thus accumulating more contributions (Rawwida Baksh and Associates, 2016). There are a wide variety of schemes to assist the poor via non-contributory schemes, assistance with job-seeking, training and micro-enterprise loans. These are often not well coordinated, and it is difficult to navigate the systems. Given generally higher poverty among women and their greater responsibility for care of children and the elderly, the inefficiencies in poverty alleviation strategies affect them more (Caddle, 2010; International Labour Organization, 2018).



FIGURE 48: GENDER ROLES IN THE HOUSEHOLD  
Source: (PAHO, 2015)

Informal workers have low or no integration into social security systems and formal systems of labour protection. Unpaid reproductive labour without income-earning activities leaves many carers extremely vulnerable economically, with some falling into poverty. This applies to many people, mostly women, looking after relatives who have low levels of functional ability. Other carers, such as domestic workers, may be paid but not integrated into the social security system and have little or no protection of labour rights. For example, studies in several English-speaking Caribbean countries show that domestic workers experience considerable job insecurity. They are often only paid for days worked and do not receive paid vacation, sick leave or maternity leave. Substantial minorities do not have work permits and are undocumented migrants, or are not covered by national insurance as their employers do not pay it (Cumberbatch, Georges, & Hinds, 2013; Dunn, 2014; Samuel-Fields & Peters, 2012).

Older persons live in a wide variety of family and household configurations and this, along with gender roles, will affect the availability of care within the household for a person as their functional capacity diminishes (ECLAC, 2012). Rawlins (1999) highlighted several scenarios:

*“The ageing married couple might be living on their own, in their own home, after their children have established their own homes. Older couples might also be living together in a common-law relationship. However, the older woman who has spent most of her youthful days in a common law relationship might now be without that male partner through divorce, separation or death; she might then be living on her own or with one of her children and the grandchildren. Occasionally the older woman has to take back into her household an errant husband from whom she has been separated for ten or fifteen years. Most often he is seriously ill when he returns. This can be extremely stressful for an older woman, who might not be in perfect health herself. Because this is the age in which women are most likely to be widowed, there will be widowed women living on their own or with an offspring, either in the offspring's home or in her own home. Older persons, in the region, who live on their own (the minority situation) are more likely to be men.” (J. M. Rawlins, 1999, pp. 5-6)*

Most Caribbean people spend most of their later years living in their own homes (rented or owner-occupied) or that of a family member, with only a small minority living in nursing or residential care settings (J. M. Rawlins, 1999). Therefore, the issue of informal care within the home is critical to healthy ageing, and support needs to be provided to ensure that adequate care is available. With evolving social roles and a trend towards smaller households and away from extended family co-residence there are likely to be increasing challenges in the availability of care and support at home. These may be exacerbated if members of the family migrate (J. M. Rawlins, 2014). It is notable that around 20% of older persons in English-speaking Caribbean countries live alone and thus have difficulty in immediately accessing informal care (J. M. Rawlins, 2010).

If strife and poor relationships exist in the family setting, these will affect the care of the elderly, and may lead to elder abuse. Abuse may also result from the strains of caring itself. Sometimes the caring relationship may be unwelcome to one or both participants. This can give rise to conflict, which may make the older person vulnerable to abuse. Abuse can take the form of neglect, of taking material advantage (financially, for example) or of physical, emotional or sexual abuse. Neglect may also occur due to ignorance, lack of skills in caregiving or lack of external support or supervision. Neither the older person nor the caregiver may mention abuse to the health worker. Observational information based on the behaviour of the older person, the behaviour of their caregivers or relatives, or from signs of physical abuse should be used to identify potential abuse. Referral should be made to appropriate local services. All this depends on the establishment of contact and relationships between carers and professional services (WHO, 2019a).

Given the value placed on older persons being cared for by family at home, it is critical to ensure that family members providing care be provided with adequate support, to ensure the sustainability and continued accessibility of informal care. In the 2012 Vienna Ministerial Declaration, the goal of supporting family carers was agreed upon: “Recognizing and supporting family carers, who are mostly women, in accomplishing their demanding tasks, including provisions for reconciliation of work and family duties, as well as social protection measures” (UNECE, 2015, p. 12). Support for carers is a vital component of strategies to achieve “Ageing in Place,” where older persons are able to stay in their homes and an escalating variety of support strategies becomes available according to the level of capacity of the person. Ageing in place is explored further later in this chapter. Following are some areas for action in support of carers.

**TABLE 24: RECOMMENDED ACTIONS FOR SUSTAINABILITY OF INFORMAL CARE OF OLDER PERSONS**

<b>Challenge</b>	<b>Actions</b>
<b>Lack of coordination between informal carers and formal agencies providing care and support</b>	<ul style="list-style-type: none"> <li>- Needs assessment, case management, care plans, monitoring and referrals to coordinate strategies between the informal carers and other care providers</li> <li>- Coordination of public, private and NGO providers of support</li> </ul>
<b>Carer burnout and perceived burden</b>	<ul style="list-style-type: none"> <li>- Respite care, domestic help, counselling, training and the availability of relevant supplies, medication and equipment</li> <li>- Information on how carers can protect their own mental and physical health</li> </ul>
<b>Lack of social contact for carers and care recipients</b>	<ul style="list-style-type: none"> <li>- Support groups and respite care for carers</li> <li>- Provision of day care, outings and age-appropriate activities for seniors</li> </ul>
<b>Low functional abilities among recipients of care</b>	Compensatory and adaptive measures to address “Geriatric Giants”: <ul style="list-style-type: none"> <li>- Adaptations to the home, such as grab rails and higher toilet seats</li> <li>- Caregiver education to provide skills, management strategies and coping mechanisms for the condition</li> <li>- Basic training from care and health professionals about the disease or health impairment of the person for whom they are caring</li> </ul>

Challenge	Actions
	<ul style="list-style-type: none"> <li>- Provision of information and support on websites and via chats and helplines.</li> <li>- Training on ways to address and cope with behavioural difficulties among people with chronic conditions, such as refusal to take medication or inappropriate behaviour in public</li> <li>- Donation or fixed and efficient purchase and delivery mechanisms for necessary supplies, e.g. <ul style="list-style-type: none"> <li>o Medication for NCDs</li> <li>o Diapers, urinals and incontinent pads for people with incontinence</li> </ul> </li> <li>- Establishment of professionally approved and feasible schedules for taking medication and activities of daily living such as meals, toileting and bathing, in consultation with the carer and care recipient</li> </ul>
<b>Financial burden of care</b>	<ul style="list-style-type: none"> <li>- State provision or subsidisation of medication, supplies and equipment</li> <li>- Provision of domestic help, meals-on-wheels and transport services for the elderly</li> </ul>
<b>Economic vulnerability of carers</b>	<ul style="list-style-type: none"> <li>- Formalise and provide labour rights to domestic workers. Adopt, ratify and implement the ILO Domestic Workers Convention, 2011 (No. 189) concerning decent work for domestic workers.</li> <li>- Establish and update lists of persons providing care to older persons. Integrate them into the social security system through active outreach and assistance in organising payment of national insurance contributions (if in paid work) and in accessing non-contributory benefits for themselves and the care recipient</li> <li>- Provide adequate levels of non-contributory benefits and pensions to ensure affordability of nutritious food, decent housing and other basic necessities plus all necessary medications, equipment and supplies not readily accessible from the state</li> <li>- Coordinate and streamline access to state benefits, grants and subsidised/ donated products</li> </ul>
<b>“Double burden” of formal and informal work</b>	<ul style="list-style-type: none"> <li>- Legal entitlement to a specified period of leave to care for “dependents”</li> <li>- Assistance in identifying and recruiting reliable, skilled and trustworthy domestic help and care assistance, e.g. register of approved professionals</li> <li>- Flexible working arrangements regarding working hours and places of work</li> <li>- Periods of paid leave for employed persons with care responsibilities for persons with chronic conditions.<sup>24</sup> Pay may be at 100% or a proportion (e.g. 80%) or tapered depending on the length of time taken.</li> <li>- Human Resource Department staff trained in providing support to people with care obligations, e.g. via referral to appropriate sources of assistance.</li> <li>- Care leave as a pre-retirement option</li> </ul>

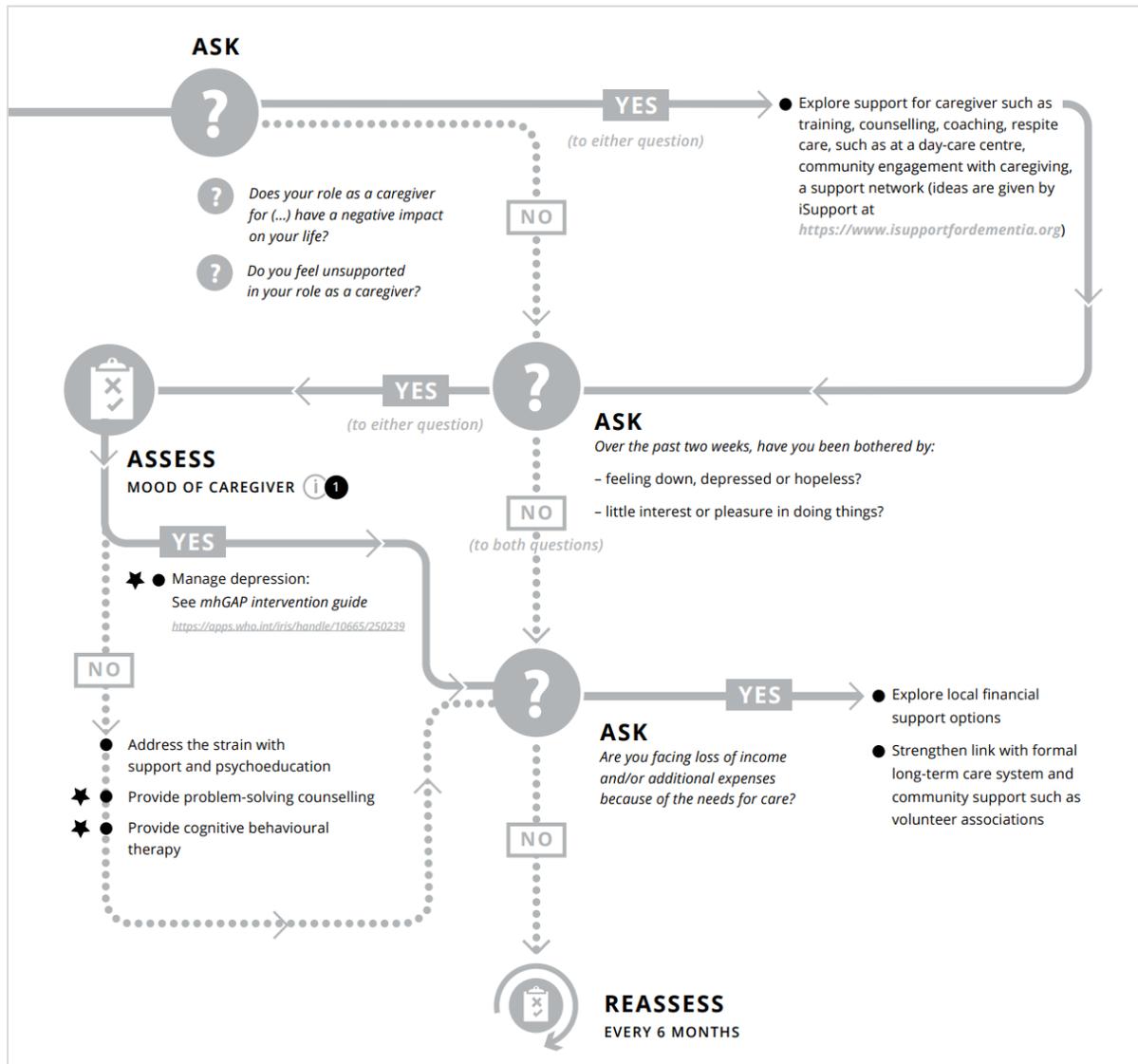
Sources: (Caddle, 2010; James et al., 2012; James et al., nd; Knapp et al., 2018; UN, 2015b; UNECE, 2015; WHO, 2019a)

The World Health Organization has developed tools to assist in the development of Integrated Care for Older People (ICOPE) (WHO, 2017c, 2019a). Figure 4 provides the ICOPE flow chart with

<sup>24</sup> Examples of leave provisions for workers to provide care: Belgium, France, Spain and Hungary provide 12 months or more; Austria and Germany provide 6 months; USA provides 3 months. Norway provides 100% of pay and Sweden provides 80% of pay (UNECE, 2015). No similar information was found for developing country contexts.

recommended procedures for professionals to ensure support for carers. These are consistent with recommendations provided in Table 3 but focus on what professionals managing the care and support of older persons can do.

**FIGURE 49: CARE PATHWAYS TO SUPPORT THE CAREGIVER**



Source: (WHO, 2019a, p. 74)

Overall, the findings of this section suggest the need to strengthen support of informal carers and the availability of members of the community and professional carers who can help look after the growing older population. An example of an innovative scheme to increase the number of people with skills to provide care and support while building intergenerational solidarity is the Geriatric Adolescent Partnership Programme in Trinidad and Tobago. Young people aged 17-30 are provided with training to develop practical skills in geriatric care, and a placement agency assists in placing

GAPP graduates in the community to provide companionship and support to senior citizens (Government of the Republic of Trinidad and Tobago, 2019). Building the human resources needed to provide care and support in the economically constrained contexts of the Caribbean needs to draw on the goodwill of Caribbean people towards senior citizens, a spirit of volunteerism and creative development of systems of support for carers, informed by good practice around the world.

## 2. Formal health and social care

Above we observed that most care and support for older persons in the Caribbean context is provided by family members, and that older persons also have a role in providing care. We also noted that demographic and social changes are making reliance on informal care increasingly precarious, and that professional care is also necessary, to complement and assist informal care and substitute when informal care is unavailable or insufficient. The ideal may be care in the community, but a variety of measures should be in place to facilitate this (Knapp et al., 2018). In practice informal and formal care are generally complementary rather than alternative options.

In this section we detail formal health and social care modalities and issues, presenting evidence from the Caribbean. We look at the spectrum of care and support options that accord with the levels of functional capacity of older persons and explore specific technical and managerial issues such as access to medications and technologies, human resource capacity and the interface between public, private and NGO provision.

### 2.1 The elderly and the Primary Health Care System

The Primary Health Care (PHC) system is the gateway enabling access to a range of services that can assist older persons. It is the first point of call for people seeking assistance for health issues, and also provides outreach to vulnerable communities to ensure that they have access to preventive, curative and palliative services. PHC focusses on the needs of the individual, families and communities, aiming to ensure equitable access to all, and that *'no one is left behind'*, regardless of age, disability, ethnicity, gender or other social differences. Adequate primary health care helps people maintain independence and remain resident in their homes and communities as long as possible.

#### BOX 569: COMPONENTS OF PRIMARY HEALTH CARE

*The WHO has developed a cohesive definition of PHC based on three components:*

*- Meeting people's health needs through comprehensive promotive, protective, preventive, curative, rehabilitative, and palliative care throughout the life course, strategically prioritizing key health care services aimed at individuals and families through primary care and the population through public health functions as the central elements of integrated health services;*

*-Systematically addressing the broader determinants of health (including social, economic, environmental, as well as people's characteristics and behaviours) through evidence-informed public policies and actions across all sectors; and*

*-Empowering individuals, families, and communities to optimize their health, as advocates for policies that promote and protect health and well-being, as co-developers of health and social services, and as self-carers and care-givers to others.*

(WHO, 2019b)

In the Caribbean, healthcare systems are a mix of the private and public sectors, with some civil society involvement. Approximately 60% of total healthcare expenditure is public and 40% private which is mostly out-of-pocket expenditure. The public sector is the main provider for maternal, child, adolescent, young adult, adult and elderly care (ECLAC, 2016; Quashie, Jones, Gény, & Abdullahi, 2018). Elderly utilisation rates of publicly provided healthcare have been found to vary from country to country and within country (Bushelle-Edghill, Laditka, Laditka, & Brunner Huber, 2015; Cloos et al., 2010).

Ambulatory or outpatient care refers to health services provided to patients who are not confined to an institutional bed as inpatients during the time the services are rendered. Ambulatory care includes medical services of general (primary) and specialized (secondary) nature. Ambulatory Care Sensitive Conditions (ACSC)<sup>25</sup> are “conditions for which good outpatient care can potentially prevent the need for hospitalisation or for which early intervention can prevent complications or more severe disease” (WHO Regional Office for Europe, 2016, p. 6). ACSC resulting in hospitalisation, or Ambulatory Care Sensitive Hospitalisations (ACSH), are considered to indicate unnecessary admissions.

In Barbados a national review of all hospitalisations found a substantially high proportion of ACSC – unnecessary hospitalisations - suggesting insufficient utilisation or access to PHC. Of the Barbadian population ages 50 years and over, 9.5% had ACSC admissions, making up 33% of all hospital admissions (Bushelle-Edghill et al., 2015), suggesting a need to increase the focus of PHC on the specific needs of older persons. Also in Barbados, it has been noted that less than 5% of the government funding for health is allocated for prevention (4% via the polyclinics and the Health Promotion Unit), as opposed to 67% to curative care (the majority of which is for inpatient attention). The Government of Barbados is acting to reduce this imbalance by providing alternatives to hospitalisation and emphasising a preventive approach (Phillips, 2019).

A Caribbean multi-country study<sup>26</sup> among people 60 years and over (88% were between 60-79 years old) demonstrated great variability between countries concerning availability of, access to, use of and satisfaction with public sector PHC services. For example, in one country there was high satisfaction with polyclinic care, whereas in another, transport to access PHC was lacking and there were shortages of medical technologies and equipment. Primary care services in a did not appear to cater specifically for older persons (Cloos et al., 2010).

Most Caribbean states have specific chronic disease programmes offered as part of PHC. Given the high prevalence of NCDs and other chronic conditions among the elderly, it is helpful to present information about some of the strategies in place by country.

**TABLE 25: EXAMPLES OF CARIBBEAN NCD OR CHRONIC CARE PLANS AND STRATEGIES, 2017**

Country	Programme
Anguilla	Non-Communicable Disease Action Plan 2016-2025
Antigua & Barbuda	2015 National Policy on the Prevention and Control of NCDs

<sup>25</sup> ACSC include angina, diabetes and diabetic complications, hypertension, hypertension, poor nutrition, dental conditions and other conditions that can be treated outside a hospital setting (WHO Regional Office for Europe, 2016, pp. 33-36). Examples of facilities where ambulatory care may be provided include a doctor’s office or community health clinic (WHO Regional Office for Europe, 2016, p. 42).

<sup>26</sup> The Bahamas, Barbados, Guyana, Jamaica, Suriname, and Trinidad & Tobago

Country	Programme
<b>Aruba</b>	Aruba National Plan 2009-2018 aims to address overweight, obesity and other health problems
<b>Bahamas</b>	Healthy Bahamas Coalition 2017  National Prescription Drug Plan and MedCard Assistance which provides medication and medical services including x-rays and blood tests.
<b>Barbados</b>	Non-Communicable Disease Programme
<b>Belize</b>	Non-Communicable Disease Protocol with an ageing component
<b>Bermuda</b>	At least three free weekly clinics specifically for older persons exist, where there is screening for blood pressure and blood sugar.  STEPS to a Well Bermuda programme provides an assessment of chronic NCDs and their risk factors including older persons over the age of 60 years old
<b>Guyana</b>	In 2013, the “Guyana Health Vision 2020” strategy was rolled out, outlining strategies to address chronic diseases; accidents, injuries, and violence; and mental health.
<b>Montserrat</b>	2016-2019 Strategic Plan focuses on reducing communicable and non-communicable diseases
<b>St Maarten</b>	Older persons can qualify for medical costs related to chronic care based on through an arrangement with a specialised insurance company
<b>Trinidad &amp; Tobago</b>	National Strategic Plan for the Prevention and Control of NCDs 2017-2021

Source: (ECLAC, 2017; PAHO, 2017)

Most Caribbean countries have adopted specific measures on HIV, such as development of the institutional frameworks, access to testing and medication, and awareness-raising. With the advent of antiretroviral therapy there is an ageing cohort of people living with HIV, yet very few Caribbean countries have developed strategies aimed specifically at older persons living with HIV. This relatively new area is receiving increasing attention internationally, with evidence that there are co-morbidities associated with ageing and long-term use of antiretroviral medication. In Barbados there is a Seniors HIV Drama Group that sensitises communities through stage production and skits (ECLAC, 2017). A specific issue that should also be addressed at the PHC level is that of sexual health among older persons. A study in Trinidad and Tobago demonstrated that primary care physicians found it difficult to undertake sexual health consultations with older patients (45 years and older). It was found that most doctors felt uncomfortable discussing issues of sexual health, possibly indicating ageist attitudes about sexuality. The doctors also suggested that lack of time and inappropriate conditions for privacy affected their abilities to provide the necessary consultations and services (Rabathaly & Chattu, 2019).

#### **BOX 570: RECOMMENDATIONS FOR AGE-FRIENDLY PHYSICAL ENVIRONMENTS IN HEALTH CARE FACILITIES**

A study in Jamaica found good clinical practice in PHC settings for older persons (50 years and older), but there was little provision of advice on modifiable health behaviours. Good clinical practice included that over 85% of the participants were having their blood pressure and glucose checked, 80% being weighed and 91% seeing a doctor during their clinic visit. Dietary advice was offered to more than half of the users (56.5%) but only 5.1%, 24.5% and 9.6% of older persons reported receiving advice on smoking, physical activity and alcohol use respectively (Eldemire-Shearer, Holder-Nevins, Morris, & James, 2009).

Barriers to quality, access and availability of PHC services in the Caribbean identified through research include: short consultations, long waiting periods to see the doctor, lack of privacy, lack of affordable or available transport to and from the clinic, communication skills of both staff and older persons, lack of properly maintained and equipped bathrooms, uncertainty about seeing the doctor, rapid turnover of doctors, not enough staff for the number of patients, poor referral services and poor perception of staff of the older person's ability to take care of themselves. (Cloos et al., 2010; Eldemire-Shearer et al., 2009; Rabathaly & Chattu, 2019; UN, 2015a;

The following adaptations and designs of PHC settings are recommended to enable access by older persons:

Ramps at the entrance of facilities

Handrails or grab bars to help ensure safe and independent movement

Floor plans and simple signage to assist older persons to navigate the health care facility

Non-slippery floors

Doors should be wide enough for easy movement including for wheelchairs or for supportive assistance of an older person by another person

Toilet area must be roomy with enough space for a wheelchair to move in and around. Doors must also be as wide as all other doors

If a PHC facility has more than one floor, stairs with handrails and a lift or ramps must be available.

(WHO, 2008; Eldemire-Shearer and Mona Ageing and Wellness Centre, 2019)

WHO, 2008). There is also a lack of adaptation of the physical environments of PHC centres to the mobility challenges and risks of falling faced by many older persons. Box 3 provides recommendations for design of age-friendly facilities.

There have been efforts to design basic health care packages suitable for older persons. Case Study 1 shows work done in Jamaica.

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**Box 571: CASE STUDY 1: DEVELOPMENT OF A MINIMUM PACKAGE OF CARE FOR THE ELDERLY IN JAMAICA**

*In an effort to promote healthy ageing in older persons, the Mona Ageing and Wellness Centre at the University of the West Indies has proposed to the Government of Jamaica a Minimum Package of Care for Population 60 years and older. The Package has been designed for primary, secondary and tertiary care (Ministry of Health and Wellness, 2019). Primary care is defined as basic or general healthcare provided by doctors and other member of the health team. It is offered through a series of clinics: community, district and comprehensive. Secondary care is treatment by a physician acting as a consultant at the request of the primary physician and which may require hospitalization. Tertiary care is a higher level of specialty care that requires hospitalization and highly specialized equipment and expertise.*

*Jamaica's Minimum Package for persons 60 and over is part of the overall benefits package of the Ministry and has elements to help older persons maintain function, treat illness and access long term care. Long term care begins in the community providing support to the elderly person and their caregivers. Persons identified during clinic as needing care at home and/or recently discharged from hospital will be placed on a visiting roster and monitored by staff of the nearby health centre. The PHC services will provide referrals to all other social services (Eldemire-Shearer & Mona Ageing and Wellness Centre Team, 2019a).*

*The Package is consistent with the Ministry of Health and Wellness's Ten-Year Strategic Plan that has as one of its four strategic lines a Standard Comprehensive Essential Benefits Package (SCEBP). The Plan states the necessity to restructure the health delivery network. A major component of the SCEBP is to strengthen the first level of care (PHC). The SCEBP takes a life course approach organized by population groups and the proposed Minimum Packages for 60 and over is an essential component. The Ministry plan recognizes the importance of healthy ageing to delay the onset of functional decline and to prevent chronic disease. Provision of community based long term care is included (Ministry of Health and Wellness, 2019).*

*Table 5 presents elements of the Minimum Package for primary, secondary and tertiary health care settings.*

**TABLE 26: JAMAICA MINISTRY OF HEALTH AND WELLNESS BASIC PACKAGE OF HEALTH SERVICES FOR THE ELDERLY IN PRIMARY, SECONDARY AND TERTIARY HEALTH CARE SETTINGS**

Primary	Secondary/Tertiary
<p><i>Health Promotion</i></p> <ul style="list-style-type: none"> <li>• NCDs</li> <li>• Lifestyle management</li> <li>• Mental Health</li> </ul>	<p><i>Chronic Disease Management</i></p> <ul style="list-style-type: none"> <li>• Physician Clinic Visit</li> <li>• Diagnostic Testing</li> <li>• Outpatient Treatment</li> <li>• Basic Lab &amp; X-ray</li> <li>• Tertiary Care</li> <li>• Physiotherapy</li> </ul>
<p><i>Primary and secondary prevention</i></p> <ul style="list-style-type: none"> <li>• NCD Management</li> <li>• Breast/Prostate screening</li> <li>• Fall Prevention</li> <li>• Cognitive Screening</li> <li>• Nutrition Counselling</li> </ul>	
<p><i>Clinical Care</i></p> <ul style="list-style-type: none"> <li>• Physician Visits</li> <li>• Cancer Screening</li> <li>• Detection and Management of</li> <li>• Diabetes</li> <li>• Hypertension</li> <li>• Cardiovascular Disease</li> <li>• Sexual Health</li> <li>• Pharmaceuticals</li> </ul>	
<p><i>Geriatric Care – as for clinical care plus:</i></p> <ul style="list-style-type: none"> <li>• Geriatric Assessments</li> <li>• Referrals &amp; Management</li> <li>• Geriatric Giant Prevention</li> <li>• Caregiver Support</li> <li>• Dementia Care</li> <li>• Palliative Care</li> <li>• Foot Care</li> <li>• Physiotherapy</li> <li>• Social Risk assessment &amp; Referrals</li> <li>• Pharmaceutical Support</li> </ul>	
<p><i>Long Term Care</i></p> <ul style="list-style-type: none"> <li>• Home Visits</li> <li>• Management of disabilities/loss of functions</li> </ul>	
<p><i>Environmental</i></p> <ul style="list-style-type: none"> <li>• Universal Design</li> <li>• Age-friendly design</li> <li>• Adequate signage</li> <li>• Environmental public health services</li> </ul>	

Source: (Eldemire-Shearer & Mona Ageing and Wellness Centre Team, 2019a)

The Jamaican Ministry of Health and Wellness also recently announced the addition of an elderly clinic to the to the Primary Health Care system which will offer geriatric assessments and management targeting clinical management to improve functionality.

## 2.2 Access to medications and technologies

Access to quality medications and technologies is a core aspect of healthy ageing and, in the absence of state support, can be unaffordable for the elderly. Some may only have small incomes from pensions and do not have medical insurance. Being dependent on family members for medical expenses may result in a loss of autonomy and independence in being unable to make decisions about one's own health.

Some countries have specific drug access programmes which make medications, particularly those for NCDs and HIV, available to all citizens, including the elderly, through public sector programmes. (See Box 4). There are also systems of regulation of drugs to ensure safety and efficacy (CARPHA, nd; Preston et al., 2016).

There are also systems that allow for the purchase of medicines through pooled regional procurement mechanisms such as the Organisation for Eastern Caribbean States'<sup>27</sup> (OECS) Pharmaceutical Procurement Service (PPS)<sup>28</sup> and the PAHO Strategic Fund<sup>29</sup> (Spence et al., 2019).

### BOX 572: EXAMPLES OF NATIONAL DRUG ASSISTANCE PROGRAMMES

Bahamas: National Prescription Drug Plan and MedCard Assistance which provide medication and medical services such as x-rays and blood tests.

Barbados: Barbados Drug Service supplies free medication to patients over 65 and those diagnosed with hypertension, diabetes, asthma, glaucoma and epilepsy.

Jamaica: Under Jamaica Drugs for the Elderly Programme and National Health Fund, older persons can obtain health cards that assist with the cost of medications.

Trinidad and Tobago: Chronic Diseases Assistance Programme provides free medications at certain pharmacies for all people, including the elderly, for NCDs, mental illnesses, high blood pressure, arthritis and other diseases.

Source: (ECLAC, 2017)

Among the elderly, use of medications varies. For example, in Jamaica it was found that use of medication for chronic conditions increases with age – 66% of those 60-64 years old, 74% of those 65-79 years old use and 79% of those 80 years and older use them. The poorest older persons were found to use medications the least (Eldemire-Shearer & Mona Ageing and Wellness Centre Team, 2017). Another study of Jamaican men over the age of 55 years demonstrated that only 8.5% of the men eligible for the Jamaica Drugs for the Elderly Programme were registered for the Programme (Morris, James, Laws, & Eldemire-Shearer, 2011). Yet another study in rural Jamaica showed that literacy of the elderly was a concern. It is believed that if older persons can understand the type of medications that they were

<sup>27</sup> Antigua and Barbuda, Dominica, Grenada, Montserrat, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, British Virgin Islands, Anguilla, Martinique and Guadeloupe

<sup>28</sup> Given the small populations of each individual OECS member state and the lack of bargaining power, in 1986, the OECS pooled the procurement and management of pharmaceuticals and medical supplies. This has resulted in an annual approximate savings of US\$4 million (OECS, nd).

<sup>29</sup> The PAHO Strategic Fund was created in 2000 to improve access to quality, safe and effective medicines and health supplies, while ensuring affordability, and promoting efficient and sustainable health systems. It is open to all member states of PAHO and allows for the procurement of over 250 medical products including medicines for NCDs and HIV. Benefits of using the Fund include competitive prices, assured quality, financial support and access to limited-source products (PAHO, nd).

taking, and why, they would be more likely to use them as scheduled. This study also revealed that the elderly believed that visual medication aides such as illustrated medication instructions, would help them to take their medications as prescribed (Converson, 2015).

Despite the wide range of prescription pharmaceuticals available on the national drug programmes some Caribbean countries may not have the more recent medications available, resulting in some older persons spending on newer and more effective prescribed medications.

The use of Information, Communication and Technology (ICT) can be used to enhance ageing in place. This can be made possible through the use of e-health and m-health technologies (e.g. health hotlines, medical alerts and telehealth). WHO defines e-health as, “*the use of information and communication technologies for health*” (WHO Global Observatory for eHealth, 2008, p. vii); this definition is purposely broad as the uses are vast. m-health or mobile health is a sub-set of e-health and is medical health that is support by the use of mobile devices. It make use of voice and short messaging services (SMS), general packet radio service (GPRS), global positions systems (GPRS) and Bluetooth technology (WHO, 2011a). Functional abilities should be considered in the design of m-health and e-health technologies for use by older persons themselves. For instance, most smartphones require the use of fine motor skills that may be challenging for some persons.

e-health and m-health technologies can be used by carers and healthcare professionals as well as older persons themselves. They can assist in building communication and engagement while monitoring safety and ensuring the security of older persons. For example, text messages can be sent reminding elderly patients to take medications. Other more elaborate technologies may include sensors that monitor motion and falls. Some of the most sophisticated technologies involve the use of robotics and do not appear to be available in the Caribbean. For instance, Hybrid Assistive Limb (HAL) technology consists of a robotic frame around the body of a carer to give her or him the stability and strength they need to lift and move patients from bed to chair to bath (WHO, 2019a). Technologies vary in expense and affordability, but all require training of carers, staff and sometimes patients in how to use them correctly (Theodore et al., 2016; Tsang, 2012).

Some simple technologies make a great deal of difference to people with sensory and other impairments, such as hearing aids, eyeglasses, dentures, wheelchairs and walking aides (Tsang, 2012). Some Caribbean countries offer eyeglasses and hearing aids free of charge to the elderly on the basis of means tests. Mobile phones can be used to keep in touch with family friends thus preventing loneliness and depression. However, touch screens may need to be adapted for the use of persons with limited fine motor skills. Another commonly used device is that on an emergency key, which is linked to a security firm. Elderly people living at home can use this key, usually by just pressing it, to alert emergency services in the event of an intruder or a fall.

Some older persons are reluctant to use new technologies for fear of not being able to learn how to use, understand how they operate or the cost. They may also believe that monitors in the home will take away some of their privacy. When planning the introduction of new technology in the healthcare of an older person, they must participate in the decision-making that goes along with the choosing and introduction of such aides.

### 2.3 Ageing in place and assisted living

Ageing in an environment that is familiar and safe is attractive to most people. **Ageing in place** is being able to live in one’s home and community, feeling safe, socially connected and independent as one ages (Morley, 2012). As noted in the section on informal care, social changes are tending to reduce the sizes of households, except perhaps those on lowest incomes where extended family arrangements remain more common. There is a need to provide a variety of support modalities in

accordance with the size and characteristics of households where older persons live and their abilities to carry out activities of daily living (CDB and the Government of Belize, 2010; WHO, 2015). As functional abilities change it is important to ensure that the physical environment is safe and secure, and transport is accessible for necessary tasks such as visits to the health services or shopping for food. This is further discussed in Chapter 4, section 2. Ageing in place provides options of long term and flexible care and support in response to changing health needs while enabling life to continue as normally as possible.

It may be noted that ageing in place strategies often assume the availability of informal carers, but this cannot be taken for granted, and the strength of older persons' support network should be investigated as a pre-requisite to the development of a community-based care package. Participants from a multi-country Caribbean study expressed concern and commented on having to depend on family or more specifically those from the younger generation (Cloos et al., 2010, p. 90):

*“Children have to leave the island to make a life, so they are not here to help their parents and care for them”*

*Bahamian man living in the rural area*

*“It would be helpful if there was someone at the clinic especially for home care, because what will happen to you if you are sick and if your family moved to town and you do not have anybody to look after you? You will just be sick with no help”*

*Surinamese man living in the rural area*

Ageing in place allows for healthy ageing as it allows the older persons to access care while still participating in home and community life. This prevents major causes of psychological and physical ill-health such as loneliness and depression (Theodore et al., 2016). Ageing in place may be facilitated with assistance with activities of daily living, such as cleaning, cooking and shopping for groceries, which become more difficult as functional capacities diminish. Assistance with bathing and toileting is generally needed when low levels of functional capacity are reached. Meals-on-wheels and domestic cleaning are among services provided by governments and NGOs in some parts of the Caribbean, but with patchy coverage. Generally state provision of this is via ministries responsible for social care. Most of the home care services cater to persons 80 years and older (ECLAC, 2016).

Assisted living facilities are purpose-built housing units for older persons or persons with disabilities, generally with features such as on-call care staff, provision of domestic help, medical alarms and wheelchair access. To date there are few examples of these types of housing options for older persons in the Caribbean. With the generational trend towards more independent living arrangements, such options may be seen more frequently in the future.

## 2.4 Care for people to maintain independence

Some older persons who are sufficiently functional, relatively mobile and wish to remain in their homes may need no or only minor assistance with daily tasks such as cleaning, cooking, shopping for groceries. Many English-speaking Caribbean countries have been providing home care services, home nursing care, day care activities and activity centres for a long time. This allows older persons to retain their autonomy and independence (ECLAC, 2012, 2016).

**FIGURE 50: PLAYING PAN AT PEARL GOMEZ-JAMES SENIOR ACTIVITY CENTRE, BARATARIA, TRINIDAD AND TOBAGO**



The Division of Ageing in Trinidad and Tobago was established in 2003, as an outcome of the MIPAA. Initially it had a staff of only one person, the Director, and no dedicated budget for activities. The Director, who had studied public policy on ageing for her doctorate, set about identifying suitable approaches to addressing ageing in the country, given demographic trends and limitations of economic resources.

An evidence-based approach was used. The Director examined the results of the 2000 census and determined that most older persons are in the young old age category 60-74, implying that functional incapacities are generally not severe. From this it was decided to focus on developing opportunities for participation and health – two of the three pillars of the Active Ageing Framework. Senior

Activity Centres (SACs) were the means chosen to achieve elder participation and health. Since resources were scarce, the Director set about building social networks of activists and non-governmental organizations who would support and develop the concept. She gave talks to the media, at the University of the West Indies, in churches and schools and to a variety of faith-based, community-based and non-governmental organisations. Senior Activity Centres were identified as part of a continuum of health and social support services for older persons to be developed in Trinidad and Tobago, developed in collaboration with the Director of Research and Policy Planning. A concept note gave the following objectives for the project:

1. To allow older persons to continue to lead healthy, active and fulfilling lives within their communities.
2. To encourage a sense of self-worth and dignity among older persons.
3. To provide an environment that promotes the social integration and continued functional capabilities of our older persons.
4. To provide preventive measures to avoid depression and loneliness associated with ageing by reducing the sense of social isolation experienced by older persons.
5. To foster intergenerational relationships. (Rouse, 2005)

The census results were also used to map clusters of older people geographically, with Senior Activity Centres ideally to be located in areas of "young old" population concentration. Non-governmental, community-based and faith-based organisations were invited to respond to Requests for Proposals with Terms of Reference to establish SACs. The Requests for Proposals included a profile of an ideal SAC, based on analysis of international research. The Division of Ageing screened the applications to ensure that proposals were technically sound and met project objectives. In the period 2005-'13, thirteen (13) SACs were set up in various parts of the country, focusing on education, health and social activities with seniors. The characteristics of each SAC were diverse, in response to the ethnic and other forms of diversity in the

**FIGURE 51: 99TH BIRTHDAY CELEBRATION FOR AN INDIGENOUS LEADER, AT THE PEARL GOMEZ-JAMES SENIOR ACTIVITY CENTRE, BARATARIA, TRINIDAD AND TOBAGO**

country and the objectives of the partner organisations. Once the implementing agencies met basic requirements, they were provided with a subvention based on the number of clients served. This was granted by the government following lobbying by the Division of Ageing.

The Division worked with the implementing agencies to provide technical support and training in management and budgeting. Word spread and some Members of Parliament started to call the Division of Ageing to ask how to establish SACs in their constituencies. In 2006, the SACs received the Prime Minister's Service for Excellence award in recognition of their achievements.

The SACs offered a number of health-related and cultural activities. Tai-chi, yoga, batik, computer and steel pan classes and outings were reported to be popular. Meals and spaces to socialise featured in all. Via collaboration with the Public Transport Service Corporation, buses were provided to provide transport to older persons – the ELDAMO service (Elderly Disabled Mobile)



From 2016, the government began requiring audited statements and other measures of accountability for the organisations implementing the SACs. Few had the capacity to meet all the stringent requirements and some began to shut down. In 2016, subventions for the SACs were suspended and this resulted in the closure of most of them. Lessons learned were reported to include the need to provide technical support and training to non-governmental organisations and to establish regimes of governance that are not excessively burdensome for people who are mainly volunteers.

Source: Interview with J. Rouse, 2019

Table 6 gives some examples of Caribbean home care programmes. Generally, these involve collaboration or a combination of state and non-state actors.

**TABLE 27: EXAMPLES OF CARIBBEAN HOME CARE PROGRAMMES BY STATE AND NON-STATE ACTORS, 2017**

Country	Programmes
<b>Anguilla</b>	'Upkeep assistance' is a government programme for poorer persons and their families so that they can meet the cost of care in their own homes.
<b>Antigua &amp; Barbuda</b>	Government Assistance and Residential Care for the Elderly and Eligible (GRACE).
<b>Bahamas</b>	Government of the Bahamas in collaboration with the Red Cross provides home care services.
<b>Barbados</b>	The National Assistance Board provides home care to older persons and those with disabilities including cooking, washing, personal care and shopping.  Basic nursing care, including dressing wounds, checking blood pressure and glucose levels is also provided. Advice on nutrition, sanitary standards and

Country	Programmes
	<p>other health issues are addressed. Caregivers look for and report medical conditions, neglect, abuse and malnutrition.</p> <p>In order to assist caregivers in reaching remote locations a minibus was purchased.</p>
<b>Belize</b>	Non-state community-based organisations such as HelpAge, Port Lolya Organisation for Women, Living Independently and in Full Existence, and Ageing with Grace and Enthusiasm, help meet the basic needs of older persons. Services include domestic tasks, transportation to doctors' appointments and in-home vital checks and readings.
<b>Bermuda</b>	<p>Case management is offered to older persons and family caregivers are also eligible for the Ageing and Disability Services in the Ministry of Health and Seniors.</p> <p>A Person Home Care Benefit was introduced in 2015 which subsidises a healthcare insurance programme for those in need of long-term care at home.</p> <p>Government provides grants to various charities: 'Meals on Wheels' which provides cooked meals to older persons in their homes and Age Concern which provides a handyman programme to assist older persons who remain in their homes.</p>
<b>Dominica</b>	'Yes We Care' is a government community-based programme which provides care and support to older persons in their homes.
<b>Grenada</b>	Government Geriatric Caregivers Programme
<b>Guyana</b>	Government Home-based Health Care programme in six regions
<b>Jamaica</b>	Limited programme run by the National Council on Ageing
<b>St Kitts &amp; Nevis</b>	Government Home Care Programme for the Aged
<b>Saint Lucia</b>	<p>Government Home Givers Programme</p> <p>Government provides assistance to HelpAge St Lucia National Council of and for Older Persons which provides daily care in the community with food and social interaction.</p>
<b>St Vincent &amp; the Grenadines</b>	<p>Government offers some help programmes, from domestic chores to personal hygiene.</p> <p>Basic nursing care is also provided. This can include dressing wounds, checking blood pressure and glucose levels. Advice on nutrition, sanitary standards and other health issues are addressed. Caregivers are trained to detect and report illnesses, neglect, abuse or malnutrition.</p>
<b>Trinidad &amp; Tobago</b>	Government Geriatric Adolescent Partnership Programme (GAPP) provides geriatric nursing and personal care

*Source: (ECLAC, 2016, 2017)*

Home care services vary in availability from country to country and within countries. For example, in Belize, home care services offered by a non-state community-based organisation are limited to the capital, Belize City and not available in rural areas. Variation in coverage between and within

countries, and deficits in coordination, were reported in the Caribbean Ageing Study in six countries (Cloos et al., 2010, p. 89). The number of professional caregivers per older person with care needs has been found to vary widely by country (ECLAC, 2016).

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**Box 574: CASE STUDY 3: YES WE CARE PROGRAMME, DOMINICA**



The Government of Dominica, through the Ministry of Social Services, Community Development and Gender Affairs initiated the Yes We Care Programme in 2009. The Programme assists elderly and disabled persons that are house bound. Care is provided on a daily basis and includes cleaning, bathing and cooking. Caregivers help the clients with their medications, going to the health centres, purchasing medication and generally talking and socialising with them. "These [older and disabled] people had no one to talk to and the caregivers would keep them company", Programme Coordinator (Dominica Government Information Service, 2015).

Source: <http://news.gov.dm/news/2563-yes-we-care-programme-doing-exceptionally-well-coordinator>

Caregivers are given on-going training in areas such as the ageing process, healthcare, pedi and mani care and nutrition. "We have had persons who could not walk...[but] because of the training...the people [clients] can now walk", Programme Coordinator (Dominica Government Information Service, 2015). They also assist in ensuring that the physical environment is safe. "Some of the homes were in terrible condition... we were able to get housing...Some people had no water, which is still a challenge, but they were able to get water and electricity", Programme Coordinator (Dominica Government Information Service, 2015).

The caregivers are considered to be diligent, believing that if they do not tend to the needs of the elderly, they will not be taken care of. Communication between supervisors and caregivers is thought to be key to the success of the Programme. "Caregivers are very good and hardworking. They communicate because communication is key. For example, I was on leave in May, but a caregiver would call to let me know that one of the client's blood pressure was high so then I would visit him or that a client had no more adult diapers and I would bring some over." District Supervisor (Dominica Government Information Service News, 2016). The caregivers are employed directly by the Ministry of Social Services, Community Development and Gender Affairs (Dominica Government Information Service, 2015; Dominica Government Information Service News, 2016).



Photo: Yes We Care Programme  
Source: <https://www.dominicavibes.dm/news-115660/>



Photo: Yes We Care Programme  
Source:

<https://www.dominicavibes.dm/news-115660/>

Geographically, the Programme covers the entire island including the Kalinago Territory of indigenous people who are particularly vulnerable due to high levels of poverty within this community (PAHO, 2017).

In order to enter the Programme persons must be destitute, disabled or an older person who is housebound with no one to care for them. They can then apply directly to the Programme or through the Ministry of Social Services, Community Development and Gender Affairs. After receiving the application, a supervisor conducts a site visit and then the application is referred back to the Ministry for approval (Dominica DaVibes News, 2013).

Even though very satisfied with the work of the Programme, the coordinator still believes that there is much more to be done in terms of growing numbers of clients and taking care of more elderly and disabled persons, "Persons in the village councils and the health teams

should [be able to] report to the Programme in there are persons in the community in need of the programme", Programme Coordinator (Dominica Government Information Service, 2015). With assistance of other sectors and the community there is a constant examination of the environment for households with elderly housebound or disabled clients to come enter the Programme (Dominica DaVibes News, 2013).

**KEY ELEMENTS OF GOOD PRACTICE**  
Yes We Care Programme

1. Regular training of caregivers
2. Committed staff
3. Continuous screening of communities for potential clients
4. Increased access to care for highly vulnerable older persons

the

Activity or day care centres which provide educational and recreational activities are a way of providing social interaction among older persons in the community. They generally provide a meal and sometimes offer health checks. These centres can also enable family members to work or even take a break from the chores of looking after the elderly. Day care reduces isolation, assists with depression and increases self-worth in older persons.

**TABLE 28: EXAMPLES OF CARIBBEAN GOVERNMENT ACTIVITY CENTRES FOR OLDER PEOPLE, 2017**

Country	Activity centres
<b>Barbados</b>	There are at least two state operated Elderly Day Care Centres
<b>Bermuda</b>	The Ageing and Disability Services in the Ministry of Health and Seniors oversees the K. Margaret Carter Centre which provides ability-focussed programmes and training as well as a day care centre for older persons 60 year and over.
<b>Cuba</b>	<i>Casas de Abuelos</i> (Grandparents' Homes) is network of government run non-residential facilities where older persons receive medical services, meals and certain social amenities as day visitors. Fees are charged on ability to pay.

Country	Activity centres
	<p>The Catholic Church also operate a network of non-residential homes – <i>Programa de la Tercera Edad de Caritas en Cuba</i>. Fees are charged for those who can afford to pay.</p> <p>A pilot state-run project is the <i>Hogares de Ancianos</i> (Homes for the Aged) which is both a residential and non-residential facility. User fees apply. Even though this initially is a state-run facility, the hope is for more such dual care homes to be built and eventually state funding to be reduced when higher income families pay more.</p>
<b>Trinidad &amp; Tobago</b>	The Government operates day care centres for the elderly in at least nine districts in Trinidad and four districts in Tobago. Activities include computer literacy, art and craft, gardening, yoga, and dance.

Source: (Díaz-Briquets, 2016; ECLAC, 2017)

### 2.5 Residential long-term care

The major factors that cause older persons to have to move into residential care usually exist when there are no family or friends to tend to their basic needs in their own home or they have health conditions and functional impairments that cannot be taken care of by family members. Major predictors of placing an older person in a residential care home are not being able to use the toilet, mobility and balance challenges and mental health illnesses such as dementia (Morley, 2012). When deciding to place someone into care, the financial, medical and social, and human rights elements of the decision must be taken into consideration. Residential care homes need to have proper legal mechanisms in place to ensure that there is informed consent and freedom of choice thus allowing the older person to live a dignified life. Autonomy must be protected when it comes to any decision-making concerning the living arrangements of older persons.

Residential care may be operated privately, publicly or by NGOs. Most Caribbean countries have a small number of publicly funded and private homes. In some of these homes there have been reports of overcrowding, inadequate building safety, inadequately trained staff, lack of equipment, problems relating to sufficiently healthy meals and medical care, and, occasionally, reports of abuse (ECLAC, 2016). Some Caribbean private residential homes are unable to charge sufficiently high fees to provide optimal care, such as private rooms for clients, as their clientele are not in the high-income bracket. Other private homes may be too expensive for the average retired or even working citizen (ECLAC, 2016, 2017).

In the Caribbean, many states have laws and regulations pertaining to long-term residential care homes. Despite this there is uncertainty as to whether these regulatory policies have a human rights approach built into them that will guarantee the human rights and fundamental freedoms of the older persons living in these residential care homes. Laws and regulations usually include the registration of residential homes, the implementation of a minimum set of standards or guidelines, and obligations to be monitored through government inspections. Even though legislation is in force, not all residential homes satisfy the minimum standards to which they have agreed. Reasons include that not all residential care homes are registered, that inspections are irregular or that recommendations proposed at the last inspection have not been completed (ECLAC, 2016, 2017). Table 8 shows some of the legislation governing residential care homes and programmes in the Caribbean.

**TABLE 29: EXAMPLES OF CARIBBEAN LEGISLATION GOVERNING RESIDENTIAL CARE HOMES, 2017**

<b>Country</b>	<b>Residential care homes and legislation</b>
<b>Anguilla</b>	<p>Regulations in draft for care offered to older persons but not adopted as of 2017.</p> <p>Miriam Gumbs Home for the Elderly plus three other privately owned and operated residential homes are available to older persons. The cost is covered by the Social Security Board or directly by the Government.</p>
<b>Antigua and Barbuda</b>	<p>Regulations exist for care offered to older persons.</p>
<b>Bahamas</b>	<p>Regulations (2006) exist for care offered to older persons.</p>
<b>Barbados</b>	<p>Regulations (2005) exist for care offered to older persons.</p> <p>Health Service regulations have been adopted for private hospitals, nursing homes and residential homes under the Health Service Act.</p> <p>There are approximately 60 public and private homes (2012), including four residential care facilities.</p> <p>The Ministry of Health oversees the Geriatric Hospital and District Hospitals which care for older persons in medical facilities. The Ministry also has responsibility for private sector nursing homes and senior citizens residential homes.</p> <p>Barbados also has an Alternative Care of the Elderly Programme where the government pays accommodation expenses for older persons admitted into private senior citizens care homes. The Ministry of Health inspects and monitors the homes in the programme.</p>
<b>Belize</b>	<p>Regulations (2000) exist for care offered to older persons.</p> <p>There are three main residential care homes which are based on collaboration between the public sector and civil society, and have long waiting lists. Private residential care homes exist but the cost is prohibitive for most local families.</p> <p>Draft regulations for residential care homes are in existence for use by inspectors.</p>
<b>Bermuda</b>	<p>The Residential Care Home and Nursing Home Act 1999 and Regulations 2001 are being revised to raise the standards of care homes.</p> <p>Ageing and Disability Services are responsible for the registration and monitoring of care homes, including personal care providers who receive payment through a government benefit.</p> <p>The cost of residential care homes is covered by the Department of Financial Assistance.</p>

Country	Residential care homes and legislation
	<p>There are two long term care facilities operated by the Department of Health, which also provides grants to four registered charity care homes.</p> <p>In 2017, the government approved an action plan for long term care needs and further initiatives to include the private sector in long-term care.</p>
<b>Cayman Islands</b>	<p>The government provides public residential care facilities and support to those in need at the privately-operated Pines Retirement Home.</p> <p>The Standards for Operation and Management of Residential Care facilities for Older Persons are used to monitoring quality of care of older persons by the Department of Children and Family Services.</p> <p>Homes are regularly inspected by the Fire Services.</p>
<b>Dominica</b>	<p>There are no publicly operated residential care homes.</p>
<b>Grenada</b>	<p>Regulations (2002) exist for care offered to older persons.</p> <p>There is only one publicly operated and five NGO operated residential homes.</p> <p>There are several nursing homes in Grenada and Carriacou but poor quality has been reported. Reports include poorly trained staff, lack of basic amenities, no programmes or activities for residents that will provide stimulation, and no privacy for the terminally ill and dying to preserve their dignity.</p>
<b>Guyana</b>	<p>Regulations exist for care offered to older persons.</p> <p>The Government adopted set on Minimum Standards for Elderly Residential Facilities in 2016 with a Visiting Committee to monitor operations of residential care homes for older persons. This visiting Committee includes a gerontologist, dietician, representatives from the fire services, social services department and Commission for the Elderly.</p>
<b>Jamaica</b>	<p>Regulations (2004) exist for care offered to older persons.</p> <p>The Ministry of Health is responsible for establishing and undertaking monitoring mechanisms for the standards of older persons in public and private care facilities.</p> <p>There exists a committee that makes decisions regarding the monitoring and setting of standards for residential care homes. This is led by the Ministry of Health with representation by the National Council for Senior Citizens.</p>

Country	Residential care homes and legislation
<b>St Maarten</b>	<p>The government subsidises the White and Yellow Cross Foundation that provides residential housing and care to older persons and persons with specific needs.</p> <p>The White and Yellow Cross Foundation is also responsible for setting standards of care and evaluation care provided to older persons.</p>
<b>Trinidad and Tobago</b>	<p>Regulations (2007) exist for care offered to older persons.</p> <p>The Community Care Programme operated by the Regional Health Authorities and the Division of Ageing are responsible for placing medically discharged and socially displaced persons into long term care facilities.</p> <p>There are about 85 private and public residential care homes.</p> <p>The Division of Ageing has established an Inspectorate which works with the Ministry of Health’s multidisciplinary team to assess and inspect the standards of care in residential homes.</p>

Source: (ECLAC, 2016, 2017)

With an ageing population, and increased separation of families due to work or having moved far away from elderly relatives, the need for residential care homes in the Caribbean is likely to increase. In order to ensure quality of these care homes, legislation is needed, alongside enforcement capacity, to guide and monitor the management of the care homes. Attention should be paid primarily to the human rights of older persons, along with the needs of the caregivers and general safety precautions.

2.6 Human resource capacity

The need to incorporate trained medical professionals into community care has long been recognised in the Caribbean. For example, in the 1990s it was suggested that geriatricians and diabetic nurse specialists be incorporated into the local diabetes care teams (Hendra & Sinclair, 1997). Care of the elderly, whether at home or in residential care homes, whether they are paid or unpaid, requires adequately trained caregivers. Caregivers may include family members, friends, members of the local community, community visiting healthcare professionals such as medical doctors, nurses, nutritionists, physiotherapists or general caregivers.

**FIGURE 52: PARTICIPANTS IN THE UWI OPEN CAMPUS COURSE ON CARE OF THE ELDERLY, CAYMAN ISLANDS**

Source: <https://www.open.uwi.edu/openonline/articles/open-campus-cayman-launches-caring-elderly-certificate-course>



Caribbean SIDS face human resource challenges, including lack of local educational options to provide requisite skills and small numbers of appropriately skilled staff. Emigration of trained staff is a serious challenge. Many healthcare professionals are recruited from the Caribbean, to work in developed countries such as the USA, the UK and the Middle East countries; lured away by prospects of higher salaries and a better standard of living. This is particularly true for nurses. Another issue arises when medical doctors who have qualified and have worked abroad, return to the Caribbean and do not receive the salaries and recognition that they believe they deserve. There are also too few posts in specialist fields such as Geriatrics to which people can apply. The result is that often qualified people migrate or return to foreign countries, or do not train in fields that would be useful to provide care and support to older persons (Ramsay, 2019). Caribbean countries are highly vulnerable to global economic fluctuations and to severe weather events that devastate economic prospects and encourage emigration. On the other hand, as noted in chapter 3, immigrants form a major part of the workforce in some Caribbean countries and can be integrated in plans for elderly care if there is monitoring of their numbers, qualifications and other characteristics.

Medical trainees are frequently not taught the complex physiological and psychosocial approach needed to ensure healthy ageing in the older population. Barriers to training a health workforce in gerontology<sup>30</sup> and geriatrics include lack of academic programmes, insufficient qualified teaching staff, lack of funding, inadequate time built into curricula and poor recognition of the importance of such training (WHO, 2018). The Caribbean already suffers from a shortage of medical staff, and even more so specialists in care of the elderly. For example, in Belize there are no geriatric nurses or

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<sup>30</sup>Geriatrics is the medical specialty focused on care and treatment of older persons. Gerontology is a multidisciplinary and is concerned with physical, mental and social aspects and implications of ageing. Researchers in gerontology are diverse and are trained in areas such as physiology, social science, psychology, public health, and policy. <http://iog.publichealth.uga.edu/what-is-gerontology/>

doctors in the country (ECLAC, 2017), in Barbados there is one Geriatrician (Ramsay, 2019) and in Trinidad and Tobago, one Geriatric Psychiatrist.

**BOX 575: CHALLENGES IN HUMAN RESOURCE CAPACITY TO ADDRESS CANCER IN SIDS: THE CASE OF SINT EUSTATIUS**

Cancer is a disease that generally requires specialist human and other resources, such as mammogram machines and chemotherapy, to detect and treat. SIDS often lack some of the specialist resources needed. A case in point is Sint Eustatius, which is 21km<sup>2</sup> in size with a population estimated to be 3,300 people. Only one secondary school exists on the island and there are currently no tertiary educational institutions except a vocational training school, so it is necessary to travel abroad for higher education. No oncologists (doctors specialising in cancer care) are resident on the island. The oncologist resident in nearby Sint Maarten provides care for persons from Sint Eustatius, Sint Maarten and Saba. Usually he does not visit Sint Eustatius and patients must travel to Sint Maarten to access his services.

Blood is taken for some medical tests for cancer and sent abroad for testing. Prostate cancer screening is not part of routine medical care for men. The Island Government is working to have it included in national screening for the Dutch Caribbean islands, given the higher prevalence of prostate cancer in men of African descent. There is also a plan to start screening locally for other cancers: breast, cervical and colon. Many patients are sent to Columbia for diagnostics and then referred to an oncologist in Sint Maarten for treatment and follow-up. Local doctors do not often provide referrals for the additional visits for which the insurance company, ZVK, would have to pay. Some cancer patients experience anxiety when doctors do not refer them for these follow-up visits. Patients who need chemotherapy are sent to Colombia for the whole duration of their treatment, which can take months.

Proposed solutions include the development of online training modules in cancer (and other NCDs and conditions affecting the elderly) for locally based staff, and importation of diagnostic equipment and medical supplies. However, major challenges in resource availability are a structural feature of SIDS. A local NGO comprising cancer survivors, the Golden Rock Cancer Foundation, campaigns for improved access to diagnostic tests, treatment and follow-up visits. Sint Eustatius has recently developed a National NCD Multisectoral Action Plan (NCD MAP) in collaboration with PAHO.

Source: (Sint Eustatius Department of Public Health & PAHO, 2019a, 2019b)

Training and education of the health-care workforce should be invested in. Using cancer as an example, there are needs for training in pathology, diagnostics, medical and radiation oncology, surgery, and palliative medicine. This education will require engagement with national and regional training institutions (e.g. the University of the West Indies). Spence et al (2019) suggest engagement with the regional heads of health ministries through CARICOM for health workforce planning for cancer control, along with agreements with neighbouring high-income countries (HICs) to help develop human resources and training. In the short term, focusing on multiskilling existing health-care personnel should be prioritised. The long-term goal is not only a well trained workforce, but also to build capacity in terms of intraregional training networks (Spence et al., 2019).

This shortage of healthcare professionals, both caregivers and medical staff, has been recognised by the Caribbean's ministries responsible for health and social care, and the medical boards responsible

for Continuing Professional Development (CPD). In Jamaica, the proposed Strategic Plan on Healthy Ageing 2019 recommends that all healthcare workers have training in gerontology and geriatrics. The five-year action plan includes specific workforce development activities whereby Community Health Aides will be trained to manage the health of older persons, in the community, in such a way that promotes their physical and psychological wellbeing. Support to the caregiver will be strengthened by providing training on NCD monitoring, medication regimes and foot care examinations (Eldemire-Shearer & Mona Ageing and Wellness Centre Team, 2019b). Table 9 gives some Caribbean examples of training programmes caregivers and medical professionals.

**TABLE 30: EXAMPLES OF CARIBBEAN TRAINING PROGRAMMES FOR FORMAL AND INFORMAL CAREGIVERS, 2017**

<b>Country</b>	<b>Training and support programmes</b>
<b>Anguilla</b>	Government does not provide training for caregivers. However, the Anguilla Community College and Health Authority of Anguilla has offered training to caregivers of older persons but not on a regular basis.
<b>Barbados</b>	Formal gerontological training is offered by the Barbados Community College – Post Associate Degree Diploma in Gerontological Nursing.
<b>Belize</b>	Healthcare professionals are provided with training in geriatrics and gerontology.
<b>Bermuda</b>	<p>Providers of the government Personal Home Care Benefit in collaboration with the charity, Action on Alzheimer’s and Dementia provides training for informal and formal caregivers. Formal caregivers receive training from the Bermuda College, King Edward Memorial Hospital and other programmes, in addition to monthly in-service training.</p> <p>The Bermuda National Standards Committee (a charity group) has a voluntary accreditation scheme for residential care home providers.</p> <p>Family members can receive training in support of older persons through the Department of Health Community Nursing Programme and Community Health Workers.</p> <p>Bermuda’s Hospital Board, is responsible for continuing medical development of medical practitioners including the specialised areas of geriatric and gerontological care.</p>
<b>Cayman Islands</b>	<p>Training for informal caregivers is coordinated through the University of the West Indies and the University College, as well as other private institutions.</p> <p>The University of the West Indies Open Campus, under its Continuing Education Programme, offers a Certificate in Care of the Elderly for health and social care professionals interested in caregiving.</p>
<b>Cuba</b>	Training for informal caregivers is offered for home-based community care.
<b>Grenada</b>	Grenada Association of Retired Persons supports diabetic limb and wound treatment training for nurses.
<b>Guyana</b>	Government training is offered to caregivers of older persons and as part of care assistant programmes.

Country	Training and support programmes
<b>Jamaica</b>	<p>Allied healthcare workers, e.g. nursing assistants, are regulated by the Ministry of Education.</p> <p>National Council of Senior Citizens coordinates workshops for informal caregivers of older persons.</p> <p>The Faculty of Medical Sciences, University of the West Indies, Mona Campus offers a postgraduate in Diploma in Gerontology and master's level training for Gerontological Clinical Nurses.</p>
<b>St Maarten</b>	<p>The White and Yellow Cross Foundation provides geriatric and gerontological training for healthcare providers through government subsidies. There is a particular focus on dementia in older persons in the residential and non-residential care homes.</p>
<b>Trinidad &amp; Tobago</b>	<p>The GAPP programme conducts annual training in basic healthcare and geriatric care for persons aged 17-35 years old to provide means testing for older persons living in their home.</p> <p>The government has acknowledged the shortage of geriatricians in the country and a proposal has been put forth (2017) that recommends that training in geriatric care be made available to all healthcare professionals to meet the increasing demand.</p>

*Source: (Díaz-Briquets, 2016; ECLAC, 2012, 2016, 2017; University of the West Indies Mona Campus, nd; University of the West Indies Open Campus, nd )*

With the increasing older population, in order to fully implement Universal Health Coverage, it will be necessary to ensure that there are sufficient caregivers, especially if governments wish to move towards enabling 'ageing in place'. There is already the need for more geriatricians and the incorporation of geriatric and gerontology concepts in the training of all care professionals. This projected increase in trained personnel will have implications on caregiving and medical training programmes and recruitment and retention policies. Other potential strategies to increase training availability includes offering of national scholarships and south-to-south cooperation.

### 2.7 Mixed economy of care

The relative contributions of formal and informal care vary between countries and cross-culturally. For instance, in Northern Europe care is mainly provided by the public sector and is characterized by a high share of formal care and lower family engagement in day-to-day care. In Southern and Eastern Europe, the family is the main provider of care services. While cultural norms and family structures, as discussed above, have large parts to play in determining the balance between formal and informal care, policy decisions also make a difference. In Northern Europe there was a move towards "de-institutionalisation" of long-term residential care patients and towards care in the community in the late 1980s and 1990s. There were also moves towards a "mixed economy of care" involving a range of informal and formal providers across the private, non-governmental and government sectors, with the government assuming more of an enabling and regulatory role than being a direct provider of care (Knapp et al., 2018; Gerald Wistow, Knapp, Hardy, & Allen, 1992; Gerald Wistow, Knapp, Hardy, & Allen, 1994). These trends have continued in Northern Europe and have influenced policy in other countries towards care in the community and mixed economy of care models (Powell, 2007).

In the Caribbean, large residential care institutions are mostly mental hospitals, some of which include geriatric facilities for older persons with mental health challenges. Some of these patients have had learning difficulties throughout their lives, some have major cognitive impairment caused

by Alzheimer's or other neurological disease. Only a few were admitted because of mental illnesses such as schizophrenia, psychoses or major depression. Issues of care dependency arise for older patients in these institutions, with progressive decline in abilities to carry out activities of daily living. Adherence to human rights principles for elder care such as dignity and respect are questionable in some of these hospitals, often lacking in privacy and individualised care, with some instances of abuse.

Beyond mental hospitals and a few residential care homes, most care is already provided in the community in the Caribbean. Extended family households and close-knit local communities have facilitated provision of care to older persons. But these arrangements are eroding, with trends towards one- or two-generation households and families increasingly scattered across and between countries. These social trends, along with population ageing, make it important for the state to extend its involvement in management of care, and provision of complementary, supportive and occasionally alternative care to that provided in the older person's home and community. As in other parts of the world, there are moves towards de-institutionalisation and increasing focus on ambulatory, home-based and community-based care (UNECE, 2015). For instance, in October 2019 the Trinidad and Tobago Minister of Health announced that the St. Ann's Psychiatric Hospital will be decommissioned and patients moved to satellite units in or close to their former communities where they can be progressively re-integrated with their families (Sant, 2019).

This move in Trinidad and Tobago is consistent with previous initiatives to manage care in the community by non-state providers. In 2014, the Ministry of Health launched the Extended Patient Programme (EPP). If a patient has been waiting in the public system for more than three months for a particular treatment, s/he is eligible to apply to the Ministry of Health, and once proved to be a suitable candidate for the EPP, they are eligible to have the treatment completed at a private healthcare institution. The Programme aims to provide assistance for angiograms, coronary artery bypass grafting, dialysis, cataract surgery, CT/MRI scans, vitreoretinal surgery, corneal transplant and joint replacement surgery and prostheses among other medical diagnostics and care (Lord, 2014; Ministry of Health, nd). These conditions and types of care are especially relevant to older persons.

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**Box 576: CASE STUDY 4: PUBLIC-PRIVATE PARTNERSHIP: THE ALTERNATIVE CARE OF THE ELDERLY PROGRAMME IN BARBADOS**

*In Barbados, the Alternative Care of the Elderly Programme involves public/ private partnership. Oversight responsibility for the programme rests with the Ministry of Health. The programme was established in 2003 and is governed by the Health Services (Private Hospitals and Nursing and Senior Citizens Homes) Regulations 2005. It is designed for older persons with moderate levels of dependency and a need for medium to long-term care who can be placed in a private nursing home regulated and monitored by the government. Persons with pensions over \$2,000 BDS are not offered a position in the programme. The principle objectives are to:*

- *Provide an alternate source of high-quality long-term care for elderly individuals 65 years and over.*
- *To reduce the burden on the public sector long stay care that frequently is limited with respect to bed availability.*
- *To act as a cost saving measure for Government as it has been established that it is less costly to maintain a person in a private care facility rather than the public sector Geriatric long term care or the Queen Elizabeth Hospital.*

*The government pays a fixed amount per day for long term inpatient care for approved patients. Remuneration for doctor's visits are also of a fixed monetary amount, with clients eligible for these visits usually every 3 months for the well elderly and sometimes more frequently for the ill elderly. Other costs covered are: travel to and from the nursing home to the Polyclinic or the Queen Elizabeth Hospital in cases of emergency; travel of the Advisory and Inspection Committee Coordinator, and a small monthly grant to cover toiletries for indigent persons.*

*Patients with very high dependency are referred to the government geriatric hospital. Admissions depend on medical referral followed by assessment by a social worker and the Consultant Geriatrician. Since 2013 the decision was made that all persons entering ACEP will have to be approved by the Permanent Secretary Ministry of Health. The Senior Medical Officer of Health for NCDs is responsible for the programme and the Admissions Committee. At its peak of operation around 2010 there were 262 persons on the programme, but this has been cut to 135 available places based on assessment of the amount of care needed and the human and other resources available at the private homes. Twenty-seven private senior citizens' nursing homes are in the programme. Visits to the facility to provide additional care, assessments and monitoring are provided by a Nurse, an Environmental Health Officer and a Nutritionist. Training sessions are provided by the government for owner-operators and staff.*

*Source: (Ministry of Health Barbados, 2018) and interviews with Dr. A. Phillip and Dr. A. Ramsay, 2019.*

## 2.8 End of life care

NCDs and other conditions affecting the elderly may be incurable and lead to pain and distress. The purpose of palliative care, in contrast to curative care, is to improve the quality of life of patients, and to prevent and relieve pain and suffering. It seeks neither to hasten nor postpone death. It may be provided alongside curative care for other conditions, such as infections. However, when a person is deemed to be terminally ill, there is usually a transition to palliative only care. “End-of-life” or hospice care is to help people who are dying to have peace, comfort and dignity. Hospice care can be provided at a designated hospice facility, at a hospital, in a care facility, or at a patient’s home (ECLAC, 2016).

Despite high prevalence of NCDs and other conditions such as HIV/ AIDS that can cause considerable pain and distress at advanced stages of the diseases, availability of palliative care services in the Caribbean is low (ECLAC, 2016). An examination of palliative care provision by the World Palliative Care Alliance in Caribbean countries and territories in 2011 revealed only one territory as having preliminary integration of palliative care, involving provision of all types of palliative care by multiple service providers; broad awareness of palliative care on the part of health professionals, local communities and society in general; and unrestricted availability of morphine and other pain relieving medicines. Nine Caribbean countries and territories were classified as having isolated provision, including the development of palliative care activism that is patchy and not well supported; sourcing of funding that is often donor dependent; limited availability of morphine; and a small number of hospice-palliative care services that are limited relative to the size of the population. Four Caribbean countries or territories were deemed to have capacity building only, involving wide-ranging initiatives designed to create the organisational, workforce and policy capacity for hospice-palliative care services to develop, though no service has yet been established. The developmental activities include: attendance at, or organisation of, key conferences; personnel undertaking external training in palliative care; lobbying of policy-makers and ministries of health; and incipient service development. No known palliative activity was found for eleven Caribbean countries, though the Alliance acknowledged that there may be activities that were unrecognised despite their research (World Palliative Care Alliance & World Health Organization, 2014). There is also a shortage of palliative care specialists in the region; a survey of ten CARICOM countries found only six palliative care specialists employed in fifteen facilities for a population of 5.4 million. Annual per capita use of opiates (pain-relieving drugs) is considerably below the global mean (ECLAC, 2016; Macpherson, Chiochankitmun, & Akpinar-Elci, 2014; Maharaj & Harding, 2016). The findings on the low availability of palliative care may be placed within the context of WHO’s estimate that only 14% of people globally in need of palliative care have access to this care. Nevertheless, the shortfall indicates that many older persons in the Caribbean may be experiencing extreme suffering, especially at the end of life, because of a lack of such care. The World Palliative Care Alliance has worked with WHO to advocate for an provide technical support for the development of palliative care services.

Palliative care is not just about the relief of physical pain; it broadly addresses quality of life for people with incurable conditions. Psychosocial and spiritual support may be provided, working with mental health services and faith-based organisations along with a range of agencies that can bring relief and serenity. In recent years the scope of palliative care has expanded to include family members, caregivers and a range of care settings. Now, it also addresses the wellbeing of families. Palliative care involves an inter-disciplinary approach and collaboration between professionals, family members, volunteers and patients is important (WHO, 2015).

A systematic review of studies of palliative care in the Caribbean revealed only nine studies. Themes emerging from these studies include:

- Patients have insufficient access to pain control and analgesics

- Patients and their families expressed needs for financial, emotional and spiritual support. Financial needs included funeral expenses and emotional and spiritual support included bereavement counselling
- There was evidence of lack of knowledge or priority given to palliative care by some healthcare professionals
- There were insufficient staff and trained staff in palliative care
- Healthcare policy has generally not addressed the need for palliative care (Maharaj & Harding, 2016)

The limitations of palliative care imply that many Caribbean people suffer physical and psychological pain at the end of their lives, especially in older age groups. Characteristics of a good death are said to be good quality of life during the end-of-life phase; comfort; preparation; fulfilment of life roles; welcomed with clarity of mind, and non-stigmatized. Whether or not in the context of a formal palliative care package or programme, it is important that health systems include care and support tailored to this highly important and emotional final stage of life (Greaves, 2012).

## Conclusion

Previous chapters indicated that Caribbean populations are ageing and outlined the health conditions that are associated with this shift. In section 1 of the current chapter, we showed that these changes are taking place while the landscape of informal care is also changing in the Caribbean. Traditional community-based modes of care for older persons, involving extended family and small geographical communities, are no longer so readily available. While Caribbean cultural preferences remain in favour of care in the community, there is a need to direct additional attention and resources to support this. Gender-responsive strategies are needed in recognition of the greater care responsibilities assumed by women than men, and should include measures such as integration of informal carers into the social security system, and flexible working arrangements to enable carers to carry out their duties in the workplace and at home with minimal stress and adverse health consequences while achieving economic security.

Within formal care systems, high costs are incurred via hospitalisation of older persons who can be provided with the necessary prevention, care and treatment services via ambulatory care options. In the Caribbean, as elsewhere, there are moves towards de-institutionalisation and to increased collaboration between the State, private and non-governmental organisations in the provision of care. There are examples of excellent strategies of coordination and cooperation between the sectors, both in the establishment of facilities for people with high levels of functioning, such as the SACs in Trinidad and Tobago, and those with medium levels of functioning, such as the Alternative Care of the Elderly Programme in Barbados. Partly in recognition of the challenges in maintaining the dignity and human rights of older persons in highly institutional residential care settings, increased attention is being paid to regulation, and enforcement of regulation, of private care settings, and to reducing the older populations resident in long-stay hospitals.

Human resource strategies to meet the needs of the growing elderly population are important to ensure access to the necessary care and support. Especially in the smallest territories and countries of the Caribbean, strategies will need to be based on cooperative arrangements between states. There is also a need to pay increased attention to the human rights of persons with incurable and terminal conditions, and the availability of palliative care to ease their suffering and that of their families.

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## Chapter 6: Healthy ageing: health promoting environments and self-care

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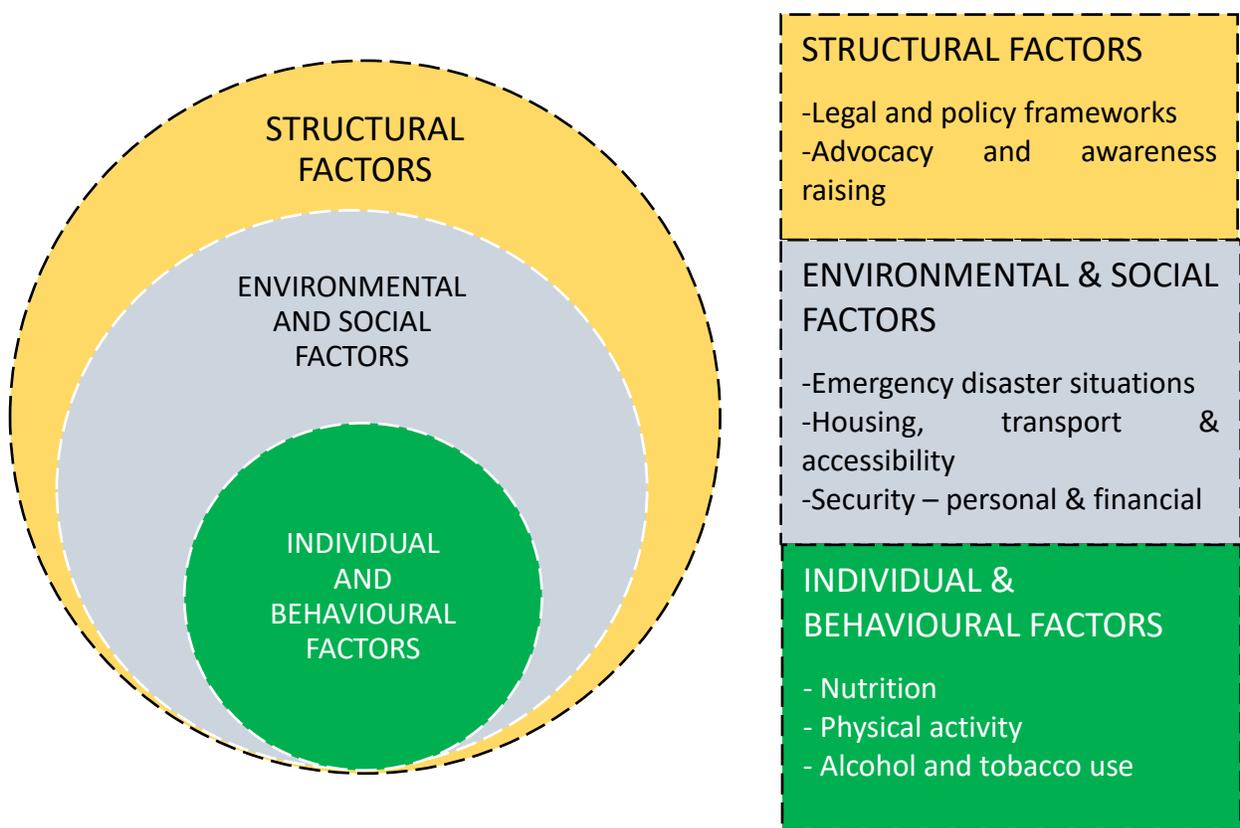
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In order to maintain intrinsic capacity and functional ability in older years it is necessary to have in place health promotion strategies and programmes across the life-course (Michel et al. (2008), targeting individual behaviours, environments and structural factors - in keeping with the Social Ecological Model (SEM) (See Figure 1). Addressing health issues among older persons also means enhancing equity, addressing differences based on, for example, gender, wealth and education. This is consistent with the social determinants of health approach.

This chapter will use the SEM to frame the most important factors and their strategies and programmes that promote healthy ageing throughout the life-course. The factors that impact *healthy ageing* and *active ageing* overlap (see the introduction). This chapter will focus mainly on those that seek to ensure an enabling environment for healthy ageing.

**FIGURE 1: SOCIAL ECOLOGICAL MODEL ILLUSTRATING LEVELS OF FACTORS AFFECTING HEALTHY AGEING**



Sources: Adapted from (Poundstone et al., 2004, McLeroy et al., 1988)

We start with the structural level, by looking at health promotion initiatives that have been implemented at regional level, including the Nassau Declaration, the Port of Spain Declaration on NCDs and the civil society partnership, the Healthy Caribbean Coalition. We also look at progress in implementing MIPAA and other frameworks relating to ageing (introduced in the introduction chapter), in terms of creation of a supportive environment for healthy ageing. Section 2 looks at environmental and social interventions. In section 3, we examine programmes that focus mainly at the individual behavioural level to address specific risk factors.

## 1. Addressing structural factors

### 1.1 Regional frameworks for health promotion across the life course

The regional health promotion response to NCDs was framed by the 2001 ***Nassau Declaration on Health: The Health of the Region is the Wealth of the Region***. This Declaration was historic in establishing the principle of an expanded, multi-sectoral response to health, bringing together a variety of government ministries alongside other agencies within and outside government. It was also important in being based on the recognition of the profound costs of ill-health to Caribbean development. The Declaration, *“Recognis[ed] the need to place emphasis on the access to services for vulnerable groups...and to promote the improvement, wellbeing and security of [the Caribbean] peoples...”* (CARICOM, 2001, Art 111). It also recognised the importance of preventing and controlling NCDs and mental health in the role of ensuring the health of the region’s population by mandating that regional strategic plans be developed for the prevention and control of NCDs and for mental health (CARICOM, 2001).

In September 2007, a regional summit of the Heads of Government was held in Port of Spain, Trinidad and Tobago in acknowledgement of the threat to health and socio-economic development posed by the burden of NCDs. This was the world’s first summit of regional heads of governments to be held specifically on NCDs. This summit led to the ***Port of Spain Declaration: Uniting to Stop the Epidemic of Chronic Non-Communicable Diseases*** which called on the CARICOM Member States to strengthen regional health institutions, provide leadership to reduce the burden of chronic NCDs and establish NCD National Commissions. Again, a multi-sectoral approach was espoused. Through this Declaration the Heads of Governments of the Caribbean Community (CARICOM), were, *“...determine[ed] to reduce the suffering and burdens caused by NCDs on the citizens of [the Caribbean] Region, which is one of the worst in the Americas”* (CARICOM, 2007).

#### *Evaluation of the Port of Spain Declaration 2014-2016*

CARICOM and the Pan American Health Organization (PAHO) undertook to conduct regular monitoring and evaluation of the Port of Spain Declaration. Twenty-six indicators were created from the Declaration’s 15 mandates (Samuels and Unwin, 2018). Coming up to the 10<sup>th</sup> anniversary it was thought prudent to conduct an extensive evaluation. The main aim of this evaluation was, *“to evaluate, seven years on, the implementation of the Caribbean NCD Summit Political Declaration in order to learn lessons that will support and accelerate its further implementation and will inform the attainment of the United Nations High Level Meeting (UNHLM) NCD commitments.”* (Samuels and Unwin, 2016).

Major conclusions and observations from the evaluation indicated that among the 20 Caribbean states there were large variations in NCD-related morbidity with high prevalence of risk factors including obesity, hypertension and diabetes. It was found that NCDs were given relatively low political priority, both within countries and regionally. In fact, interest seems to have waned, as seen from the attendance of at least nine CARICOM Heads of Government at the 2011 UNHLM on NCDs compared to no CARICOM Heads of Government at the 2014 UNHLM on NCDs. There were higher levels of implementation when there were specific actions and support from regional and international organisations, such as for Caribbean Wellness Day (CWD), PAHO’s Stepwise Approach to Surveillance (STEPS) risk factors surveys and WHO’s Framework Convention on Tobacco Control (FCTC). Lower levels of implementation were among those indicators concerned with diet and physical activity such as food labelling, trade agreements, and exercise and healthy eating programmes. Financing NCD prevention and control were thought to be feasible through increased taxes on tobacco and alcohol (Samuels and Unwin, 2018, Murphy et al., 2018, Foucade et al., 2018).

The Port of Spain Declaration evaluation demonstrated that:

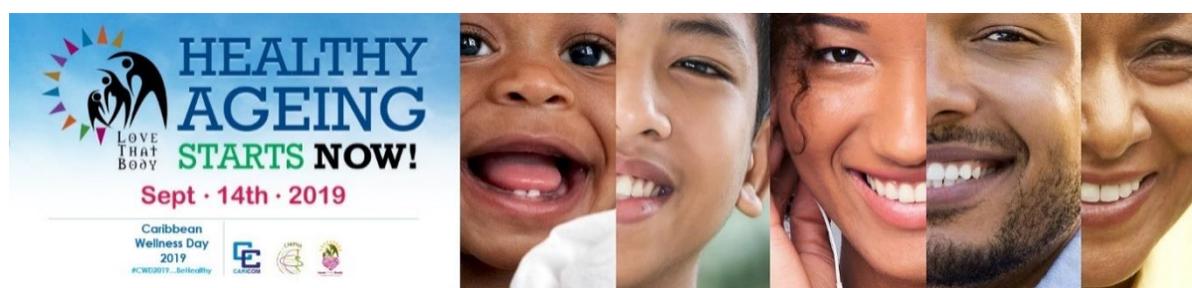
- The international FCTC has been ratified in 13 Caribbean countries. However, based on data up to 2014, only a small minority had implemented banning of smoking in public places, and compliance with tobacco advertising, health warnings on cigarette packages; none of the countries had taxation at the recommended 75% of retail prices. There was somewhat higher compliance with services for smoking cessation (Samuels and Unwin, 2016).
- With regard to measures to prevent obesity, challenges arose due to the region's reliance on food imports from international trade agreements which limited availability, quality and affordability of healthy foods (Murphy et al., 2018). However subsequent to this evaluation a 10% Sugar Sweetened Beverage (SSB) tax was implemented in Barbados and Dominica. Political will to prevent corporate opposition and support allocation of financial resources was needed, e.g. in Barbados, the soft drink company, Big Soda tried to persuade government not to introduce the tax by offering assistance in promoting physical exercise (Foster et al., 2018).
- Alcohol as a risk factor was hardly addressed. This was believed to be as a result of the region being a major exporter of rum, and the rum industry having links with the tourism industry (Samuels and Unwin, 2016)

### *Caribbean Wellness Day (CWD)*

One of the mandates of the Port of Spain Declaration was the establishment of CWD which is held every year on the second Saturday in September. The aim is to increase awareness of NCDs in the Caribbean through multi-sectoral activities in support of wellness. The first CWD was held in 2008 and for the first four years, until 2011, the goal was to raise awareness of health issues in general via the event. In 2012, the focus shifted to preventing and controlling NCDs throughout the life course (Healthy Caribbean Coalition, 2017a).

In 2015, the theme for CWD was 'Health Lifestyles, Health Ageing' (CARPHA, 2015) and then again in 2019, the theme was 'Healthy Ageing' (CARPHA, 2019) emphasising the importance of the demographic and epidemiological transitions occurring in the Caribbean.

**FIGURE 53: BANNER FOR HEALTHY AGEING CARIBBEAN WELLNESS DAY 2019**



*Source: (CARPHA, 2015, CARPHA, 2019)*

The evaluation of the Port of Spain Declaration demonstrated that CWD branding materials, designed by PAHO, CARICOM, Ministries of Health and civil society, were largely well received. Most of the events were related to physical activity (such as 5K walks, football matches and mass media public exercise sessions), and diet and nutrition with weight loss competitions and/or healthy cooking demonstrations. Health screenings, health fairs and health exhibitions also formed part of the activities. Most of the events were held in the city centres, but some activities have occurred in rural and indigenous areas. The success of CWD has promoted PAHO to initiate a 'Wellness Week in the Americas' which includes CWD and is promoted across the Americas. The main challenge for CWD is funding as the Port of Spain Declaration is a non-funded mandate; only Suriname has a special budget for CWD. Future recommendations include sourcing sufficient resources and evaluating CWD against its impact on NCD prevalence. (Bartholomew et al., 2018).

### *Healthy Caribbean Coalition*

Arising out of the Port of Spain Declaration, the **Healthy Caribbean Coalition** (HCC) was formed in 2008. HCC is a civil society alliance established to combat NCDs and their associated risk factors and conditions. It is the only regional umbrella organisation for civil society organisations doing such work. HCC's membership consists of over 60 health NGOs, over 65 non-health NGOs and more than 350 individual members in the Caribbean and internationally.

The Strategic Plan 2017-2021 has accountability, advocacy, capacity development, communication and sustainability as its strategic pillars. Out of this are the following strategic goals (Healthy Caribbean Coalition, 2017b):

- Ensure consistent demonstration of shared ownership, transparency, and accountability for commitments, resources, and results, as well as management of conflicts of interest that may arise.
- Develop and implement advocacy strategies to drive national, regional, and global political and policy momentum towards multisectoral action – including the critical role of civil society – for an effective NCD response, reduction of health inequities, and wellness.
- Strengthen the capacity of members and the secretariat to effectively perform key functions, to influence policies, and to develop and implement programmes that contribute to national and regional NCD responses.
- Enhance networking among HCC members, key external stakeholders, and the secretariat, and increase communication and communication products related to NCDs, their risk factors, the social determinants of health, successful NCD interventions, and HCC's work.
- Strengthen and sustain HCC's capacity to undertake targeted, effective, civil society-led actions that contribute to national, regional, and global objectives for NCD prevention and control.

HCC collaborates closely with national, regional and international partners from Ministries of Health throughout the Caribbean, inter-governmental organisations such as CARPHA, PAHO and WHO and international NGOs such as the NCD Alliance (Healthy Caribbean Coalition, 2017c). To date it has not had a major focus on health of older persons.

## 1.2 Legal and policy frameworks on ageing

International legal policy strategies on the elderly are the primary frame of reference for the regional and national strategies. The most important international and regional declarations to date are the **2002 Political Declaration and the Madrid International Plan of Action on Ageing** (UN, 2002); the

**2015 OAS Inter-American Convention on Protecting the Human Rights of Older Persons;** (OAS, 2015) and the **2003 Regional Strategy for the Implementation in Latin America and the Caribbean of Madrid International Plan of Action on Ageing** (ECLAC, 2003). These have been described in the introduction.

Regarding the integration of international and regional treaties and strategies into national/domestic law, in the Caribbean, and especially the Commonwealth Caribbean, there is a dualist legal system. Even though a country may have signed onto an international treaty, domestic law must be passed in order to enact the international treaty. Policies surrounding the treaty may be formulated and hence national programmes may exist. However, this effectively limits the effectiveness of international treaties and strategies at national level. National Constitutions in the Commonwealth Caribbean countries provide protections for basic civil and political rights. However, no Caribbean constitutions contain protections for the economic, social and cultural rights, or the rights of older persons. There is legislation which indirectly refers to the rights of older people but not explicitly to human rights and thus the states are seen as being in compliance with treaty obligations (ECLAC, 2016).

Some states have adopted national policies on ageing, while some have only drafted their policies, while others are in the process of reviewing previous plans/policies/strategies. As of 2016, only 12 Caribbean states and territories had adopted or drafted policies or strategies on ageing –(ECLAC, 2017b). Table 1 provides some examples of national plans, policies and strategies.

**TABLE 31: EXAMPLES OF CARIBBEAN NATIONAL PLANS/POLICIES/STRATEGIES ON AGEING, 2017**

Country	Plan/policy/strategy
<b>Anguilla</b>	National Policy on Ageing (2009)
<b>Antigua and Barbuda</b>	National Policy on Ageing (2013)
<b>Bahamas</b>	Rationale for Proposed Legislation for Older Persons Draft (2016)  Third reading of the Older Persons Bill in the Legislative Assembly (2017)
<b>Barbados</b>	National Policy on Ageing: Towards a Society for all Ages (2013)
<b>Belize</b>	National Council on Ageing's strategic plan 2015-2019
<b>Bermuda</b>	Draft National Ageing Strategy is being reviewed
<b>Cayman Islands</b>	Older Persons Policy (2016)  Older Persons Law (2017)
<b>Dominica</b>	National Policy on Ageing (1999)
<b>Grenada</b>	National Policy on Ageing (2009)
<b>Jamaica</b>	National Policy for Senior Citizens of 1997 is being reviewed  National Policy for Senior Citizens 2018 Green Paper  Draft Strategic Plan for the Health of Older Persons 2019 <sup>31</sup>
<b>Montserrat</b>	Recent review of draft National Policy on Care of Older Persons (2007)
<b>St Kitts and Nevis</b>	National Policy on Ageing (in draft stage since 2009)
<b>Saint Lucia</b>	National Policy on Ageing (in draft stage since 2006)
<b>St Maarten</b>	Recently in the process of drafting a policy based on research conducted 2012-2013
<b>St Vincent and the Grenadines</b>	National Policy on Ageing (in draft stage since 2012)
<b>Suriname</b>	National Policy on Ageing (in draft stage since 2006)
<b>Trinidad and Tobago</b>	National Policy on Ageing (2007) is being reviewed  Homes for Older Persons Act (2007) (as of 2017 this Act was awaiting proclamation or operationalisation) and Homes for Older Persons Regulations (2009) <sup>32</sup>

Source: (ECLAC, 2017b, Eldemire-Shearer and Mona Ageing and Wellness Centre Team, 2019, Government of the Republic of Trinidad and Tobago, 2007b, Government of the Republic of Trinidad and Tobago, 2007a, Cayman Islands Government, 2017, Ministry of Labour and Social Security, 2018, The Joint Select Committee on Social Services and Public Administration, 2017)

<sup>31</sup> ELDEMIRE-SHEARER, D. & MONA AGEING AND WELLNESS CENTRE TEAM 2019. Proposed Strategic Plan on Healthy Ageing 2019 Jamaica Care of Elderly Persons. Kingston, Jamaica: Ministry of Health.

<sup>32</sup> GOVERNMENT OF THE REPUBLIC OF TRINIDAD AND TOBAGO 2007b. The Homes for Older Persons Regulations, 2009. Port of Spain, Trinidad and Tobago: Government of the Republic of Trinidad and Tobago, GOVERNMENT OF THE REPUBLIC OF TRINIDAD AND TOBAGO 2007a. The Homes for Older Persons Act, 2007. Port of Spain, Trinidad and Tobago: Government of the Republic of Trinidad and Tobago, THE JOINT SELECT COMMITTEE ON SOCIAL SERVICES AND PUBLIC ADMINISTRATION 2017. Examination of Existing Arrangements and Possible Options for Regulating Geriatric Care Facilities/Old Age Homes Port of Spain, Trinidad and Tobago: Parliament of the Republic of Trinidad and Tobago.

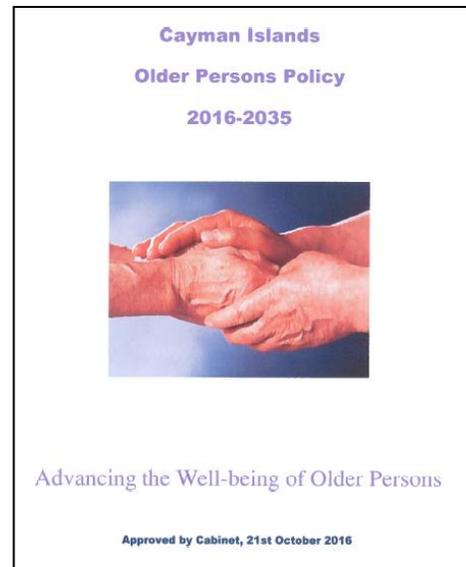
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*BOX 577: CASE STUDY 1: CAYMAN ISLANDS OLDER PERSONS POLICY 2016-2035*

*Vision: Advancing the wellbeing of older persons in the Cayman Islands*

*Goals:*

- *Ensure older persons enjoy their highest level of independence and autonomy*
- *Provide and promote opportunities for older persons to participate and enjoy full inclusion in society*
- *Improve accessibility to and affordability of health and social care for older persons*
- *Improve accessibility and engagement of older persons in educational, cultural, spiritual and recreational activities*
- *Ensure fair, equitable and respectful treatment of older persons is maintained and preserved*



*The following activities are included as part of the implementation of the Policy:*

- *Physician visits are made to all retirement facilities (Pines – twice weekly; Sunrise Cottage and Golden Age Home - monthly or on request)*
- *Home Care Visits to older persons in all districts of the Cayman Islands are made by Primary Care Physicians (weekly) and Nurses (daily)*
- *Older persons visiting the Acute Care Clinic in General Practice Clinic are expedited*
- *Dementia training of some general practitioners has been accomplished. This was sponsored through the Alzheimer's and Dementia Association of the Cayman Islands. Pharmacy services are offered in each District Clinic on Grand Cayman.*
- *Dental services are offered in George Town, West Bay and Bodden Town – providing comfort, easier access and less waiting time.*
- *Patient Portal is accessible to technologically savvy older persons.*
- *Mental Health Clinic is offered.*
- *Referred patients are seen regularly by Mental Health Nurses in the Districts.*
- *Physician services offered at the Mental Health Outpatient (George Town, Health Services Authority), West Bay Health Centre, and Faith Hospital (Cayman Brac).*
- *Occupational therapists are referred by Primary Care Physicians as needed to assess and improve home safety (grab bars for showers and toilets, ramps and railings)*
- *Nutritionist visits are made to District Clinics*

*In order to facilitate healthy ageing throughout the life course, there are also the following programmes and activities:*

- *During Breast Cancer Awareness Month (October), middle aged women, 40 years and over are offered vouchers for mammograms to assist with early detection of breast cancer.*

- *Health Services Authority offers the Virgin Pulse Wellness Programme for its employees.*
- *Public Health's Smoking Cessation Programme, which began in 2014*

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### *KEY ELEMENTS OF GOOD PRACTICE*

*The development of the Cayman Older Persons Policy was based on*

- 1. United Nations Principles for Older People (independence, participation, care, self-fulfilment and dignity)*
  - 2. Key national research documents (e.g. Cayman Islands Government 2015/16 Strategic Policy Statement. Cayman Islands Disability Policy 2016-2035, an Attitudes Towards Older Persons survey 2016)*
  - 3. Stakeholder workshop (participants were from multisectoral government agencies and ministries, NGOs, faith-based organisations, corporate sectors, service clubs, academia, as well as older persons, middle-aged and youth)*
  - 4. Focus groups on older persons with older persons were conducted throughout the islands*
  - 5. Enhancing access through outreach.*
- 

*Sources: (Cayman Islands Government, 2016; Prehay, 2019)*

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- Prehay, T. (2019). Cayman Island's response on healthy ageing interventions in George Town, Grand Cayman, Cayman Islands: Cayman Islands Health Services Authority.
- Cayman Islands Government. (2016). Cayman Islands Older Persons Policy 2016-2035. In. George Town, Grand Cayman, Cayman Islands: Cayman Islands Government.
- Cayman Islands Government. (2017). Older Persons Law Comes Into Effect. Retrieved from <http://www.gov.ky/portal/page/portal/cighome/pressroom/archive/201706/Older%20Persons%20Law%20is%20Enacted#content>

At national level in the Caribbean there are also plans/policies/strategies that relate to areas of concern about older persons (ECLAC, 2017b). Some of these documents are presented in Table 2.

**TABLE 32: EXAMPLES OF ADDITIONAL CARIBBEAN NATIONAL PLANS/POLICES/STRATEGIES THAT MAKE REFERENCE TO AGEING, 2017**

Country	Plan/policy/strategy
<b>Antigua &amp; Barbuda</b>	Mental Health Strategy 2013
<b>Barbados</b>	National Strategic Plan of Barbados 2005-2025 <sup>33</sup>
<b>Belize</b>	Horizon 2030 <sup>34</sup>
<b>Bermuda</b>	Long Term Care Action Plan 2017
<b>Curacao</b>	National Development Plan 2015-2030 <sup>35</sup>
<b>Grenada</b>	Growth and Poverty Reduction Strategy <sup>36</sup>
<b>Guyana</b>	Green State Development Strategy 2017-2030 <sup>37</sup>
<b>Jamaica</b>	Vision 2030: Jamaica National Development Plan <sup>38</sup>
<b>St Kitts &amp; Nevis</b>	National Social Protection Strategy and Plan of Action: Making St Kitts and Nevis a great place to grow up and grow old 2012-2017
<b>St Vincent &amp; the Grenadines</b>	National Economic and Social Development Plan 2013-2025 <sup>39</sup>

*Source: (ECLAC, 2017b)*

In most Caribbean states the main responsibility for coordinating and implementing policies related to older persons lies with ministries of social development or health. Some states have developed specific organisations such as councils or commissions in charge of monitoring the implementation of national policies on ageing and giving advice to the government. Other states have departments or divisions within the ministries to lead on certain issues that impact the health and well-being of older persons.

The involvement of older persons has been stressed throughout international and regional meetings and subsequent strategies and action plans. All Caribbean public institutions relating to older persons appear to have a multi-stakeholder and participatory approach involving older people themselves. (ECLAC, 2017b, Montes-de-Oca et al., 2018, ECLAC, 2003, ECLAC, 2008, ECLAC, 2012, ECLAC, 2017a, UN, 2002).

<sup>33</sup> In line with 2030 Agenda for Sustainable Development

<sup>34</sup> Ibid

<sup>35</sup> In line with 2030 Agenda for Sustainable Development

<sup>36</sup> Ibid

<sup>37</sup> Ibid

<sup>38</sup> Ibid

<sup>39</sup> Ibid

**TABLE 33: EXAMPLES OF CARIBBEAN MINISTRIES AND ORGANISATIONS RESPONSIBLE FOR PROGRAMMES RELATED TO OLDER PERSONS: 2017**

<b>Country</b>	<b>Ministries/organisations</b>
<b>Anguilla</b>	Elderly and Disabled Unit in the Department of Social Development – develops and consolidates a social intervention for the elderly and people with disabilities and the ensuring the creation of a national minimum standard of care for care homes for older persons.
<b>Antigua and Barbuda</b>	In the process of planning to establish a specific organisation to develop and coordinate the wellbeing of older persons.
<b>Bahamas</b>	National Council on Older Persons – includes participation of older persons in the development of Universal Health Care.  Senior Citizens Division in the Ministry of Social services and Community Development – in charge of the wellbeing of older persons.
<b>Barbados<sup>40</sup></b>	Ministry of Social Care, Constituency Empowerment and Community Development has a National Assistance Board – maintains the dignity of older persons through the provision of social support and recreational services including day care centres and home care programmes.  National Committee on Ageing – monitors the implementation of the National Policy on Ageing.
<b>Belize</b>	National Council on Ageing (2003) connected to the Ministry of Human Development, Social Transformation and Poverty Alleviation. Older people are represented on the Council’s Board. The main roles of the Council are related to the implementation, monitoring and evaluation of the National Policy for Older Persons.
<b>Bermuda</b>	Ageing and Disability Services in the Ministry of Health and Seniors – provides general information to older persons and persons with disabilities about existing government and community services, and facilities development of policies and programmes for these groups.
<b>Cayman Islands</b>	Department of Children and Family Services in the Ministry of Community Affairs, Youth and Sports – responsibility for coordinating programmes for older people.
<b>Dominica</b>	National Council on Ageing
<b>Grenada</b>	National Council on Ageing (2013) works closely with the Ministry of Social Development
<b>Guyana</b>	National Commission for the Elderly – main objective is to improve the wellbeing of the elderly and provide advice to the government in the formulation of policy for the care of older persons.
<b>Jamaica</b>	National Council for Senior Citizens (1976) established by the Ministry of Labour and Social Security – advises the Ministry about issues related to the wellbeing of older persons and to implement the National Policy for Senior Citizens.

<sup>40</sup> More recently, a Ministry of People’s Empowerment and Elder Affairs has been established in Barbados.

Country	Ministries/organisations
<b>St Maarten</b>	Department of Social Development of the Ministry of Public Health, Social Development and Labour is responsible for promoting the general wellbeing of everyone in society and developing and coordinating policies for the integration and improvement of vulnerable groups including older persons.
<b>St Vincent and the Grenadines</b>	In the process of planning to establish a specific organisation to develop and coordinate the wellbeing of older persons.
<b>Trinidad and Tobago</b>	Division of Ageing (2003) in the Ministry of Social Development and Family Services – designs and develops programmes and policies for older persons.

Source: (ECLAC, 2017b, Rouse, 2019, UNISDR, 2015)

### 1.3 Advocacy and awareness raising

Several states have conducted awareness raising on issues related to older persons. Most centre around international days related to the elderly, such as International Day of Older Persons (1<sup>st</sup> October) and Elder Abuse Awareness Day (15<sup>th</sup> June). On these days, seminars, recreational activities and workshops among other things are held in Anguilla, Antigua and Barbuda, the Bahamas, Bermuda, Barbados, the Cayman Islands, Guyana, St Kitts and Nevis, Saint Lucia and Trinidad and Tobago (ECLAC, 2017b, Staff Reporter, 2018, Prehay, 2019). Awareness-raising by these means assists in reducing ageism, showing the continued contributions to society of older persons through formal and informal avenues (Eldemire-Shearer et al., 2014).

As mentioned above, HCC has accountability, advocacy, capacity development, communication and sustainability as its strategic pillars (Healthy Caribbean Coalition, 2017b). For example, in terms of childhood obesity, HCC launched a Civil Society Action Plan 2017-2021: Preventing Childhood Obesity. In 2018 the HCC created a CSO Regional Action Team for Childhood Obesity Prevention from eight countries – Antigua and Barbuda, Barbados, the Bahamas, Belize, Grenada, Jamaica, St Lucia and St Kitts and Nevis. They created social media video messages, coordinated volunteer outreaches, mobilised local media, visited schools and advocated for support from both public and private sectors. Regionally coordinated activities have included letters to Heads of Governments using video messages by children; online regional media sensitisation; media outreach through partnership building with the media to facilitate interviews and talk shows; volunteer outreach to garner signatures for the HCC Childhood Prevention Call to Action<sup>41</sup> and a schools outreach where children and secondary schools were visited by the CSOs to raise awareness on the importance of unhealthy eating and lack of physical activity (Health Caribbean Coalition, 2019).

<sup>41</sup> <https://www.toomuchjunk.org/>



collectors of Bajan stamps (Taggart, 2018).

In 2016, the Barbados Postal Service honoured those centenarians who had made an outstanding contribution to Barbados by releasing 20 stamps of persons who were 100 years old at the time of printing, and a remaining seven stamps of those who were 'semi-super centenarians' (105-109 years old) and 'super centenarians' (110 years and older). The 27 stamps were representative of those older Bajans who had died as well as those who were still living at the time (Barbados Stamps, 2017).

Elaine Ometa Walkes turned 104 years old in January 2018. One of her nephews described her as, "still sharp, witty and very funny...told me she can see better than me" (Barbados Postal Service, Taggart, 2018).

Costing just 65 cents each, this limited edition was the largest stamp issue ever released on the island, entitled, 'Centenarians of Barbados'. Even though no longer available, they can still be found on [Barbados Stamps](#), a free online resource for

#### 1.4 Case studies of inclusive programmes for healthy ageing

Most Caribbean states have established organisations that assist with the process of healthy ageing for older people. These organisations may have been developed, or assisted by, governmental ministries, NGOs, or the private sector. The programmes implemented may be focussed on one, or a few specific factors which can enhance healthy ageing, e.g. exercise and nutrition programmes, or they may be inclusive and target a specific geographical area aimed at enhancing the quality of life in the elder population in that community.

Following are two case studies that provide examples of community programmes for older persons.

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*BOX 579: CASE STUDY 3: CIRCLE OF GRANDPARENTS: CUBA*

*The Circle of Grandparents is a Cuban institution that seeks to giving meaning to the lives of older people. As of 2017, the southwestern Cuban province of Santiago de Cuba had more than 50,000 elderly members in 2,004 official Circles. Here they look forward to the daily physical exercise sessions, and the organisation of excursions and cultural activities such as hiking, visits to historical sites and twinning with other provinces.*

*Mirtha Alfaro a 75-year-old grandmother, gets up every day at dawn and joins a group of other elderly members for their morning exercises in a park in Havana.*

*"I arrived at the Circle depressed and without much expectations, but meeting people of equal interests and age and eager to live, made me rethink my life...now I cannot conceive without doing my exercises and sharing with these friends."*

*Mirtha Alfaro, a member of a Circle in Havana  
(Dependencia social media, 2018)*



*Photo: Jorge Matos*

*Source: (Panadero and Matos, 2017)*

*The members are also involved in social impact work such as the 'Giving Life' and 'Active Heart' projects. The Giving Life project includes visiting sick children with cancer.*

*One of the circles conducts an educational programme, involving 30 people spending 3 days a week with a local academic, increasing their knowledge and attending classes.*

*One of the many positive experiences includes the building and maintaining of friendships.*

*"Here we carry out many cultural-recreational activities, such as...singing and acting. Look, right now we are [organizing] the Day of Love. [...] we also do not overlook a birthday of one of our partners. Many are surprised when they see us dancing and enjoying like any young man"*

*Maria Brigida Pérez, a grandmother, Circle of Guiller món Moncada  
(Panadero and Matos, 2017)*



Source: <http://www.dependenciasocialmedia.com/wp-content/uploads/2017/04/mayores-cuba.jpg>

*The Circle of Grandparents of the Alex Urquiola health area in the Holguin municipality, was evaluated in 2008 to identify the benefits of physical exercise within the Circle of Grandparents. 102 older persons were interviewed from the Alex Urquiola Polyclinic and belonging to the area's Circle: 21 males (60-89 years old) and 81 females (60-90+ years old). The perception by the members in this Circle was that the physical exercise improved their physical health resulting in an increase in muscle tone and mass, improvement in flexibility, balance and joint mobility together with a decrease in blood pressure and also better control of diabetes (Bruzón-Cabrera et al., 2012).*

*Another longitudinal and prospective study was carried out with 60 grandparents (ages between 65 and 69 years old, 37 female and 27 male) at the Alberto Fernandez Montes de Oca Polyclinic in Santiago de Cuba. At the beginning of the study, before joining the Circle, of the joint diseases, osteoarthritis was the most predominant (58%), most of the grandparents were depressed and anxious, and 90% did not use a cane. After joining the Circle there was a vast improvement with mental state, with the participants indicating that, "they were now calm and in a good mood." After joining the circle, the participants reported that there was an improvement in the state of joint pain (Montes de Oca García et al., 2004).*

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### *KEY ELEMENTS OF GOOD PRACTICE*

#### *Community based programmes for older persons*

- 1. Encouragement of healthy lifestyles through sessions of physical activity and information on healthy eating*
  - 2. Intergenerational activities leading to a reduction of ageism*
  - 3. Continuing education that is up to date and relative to older persons*
  - 4. Spiritual and mental wellbeing through social participation and relationship building*
-

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**BOX 580: CASE STUDY 4: THE BIABOU SENIOR CITIZENS GROUP, ST VINCENT AND THE GRENADINES**

*In 2008, in response to Port of Spain Declaration and as part of the Caribbean Wellness Day, the Biabou Senior Citizens Group was formed in St Vincent and the Grenadines. The Group is an initiative of the Health Promotion Unit of the Ministry of the Health, Wellness and the Environment. The Biabou community of St Vincent and the Grenadines was chosen with the input of the community itself, for an intervention with senior citizens.*

*The Group meets every Thursday at the Biabou Learning Centre, and as of 2015, had grown to 51 active members, with new people coming and older ones passing away (Health Promotion Unit, 2015). In keeping with the holistic concept of health, before any physical exercise their spiritual well-being is taken care of through meditation, prayers and songs led by members of the group.*

*Forever wanting to learn, the Group has requested and received assistance in how to write wills. Many questions were asked and answered by a professional Attorney-at-Law.*

**FIGURE 54: THE BIABOU SENIOR CITIZENS GROUP BEING TAUGHT ABOUT MAKING A WILL**



*Source: (Health Promotion Unit, 2015)*

*The Group participates in the island's Caribbean Wellness Day fun walk and has won several awards for the oldest walker and the largest group. Support is provided by the Nutrition Unit and the Community Nursing Service of the Ministry of Health, Wellness and the Environment, with nutrition education and health screening respectively. Other assistance includes the Department of Sports in the Ministry of Tourism, Sports and Culture for support with the exercise programme, and the Ministry of National Mobilisation and Social Development for the use of the Learning Resource Centre.*

*There is intergenerational mixing. In 2013 the Group supported the New Adelphi Secondary School Young Leaders Programme by facilitating discussions on a life in the past and the students also joined the senior citizens for some of their exercise classes. The Group has further strengthened the link with the younger generation by having the youngsters on exchange visits to golden age homes in rural areas.*

*The members of the Group have proven their ability to give back to the community. Many of the members are retired farmers and give generously of their produce to each other. They also donate to victims of disaster, such as those of the 2010 Haiti earthquake.*

*In this small island community friendships persist, and home visits are regularly made to those who can no longer come to the weekly sessions.*

**FIGURE 55: ACTIVITIES OF THE BIABOU SENIOR CITIZENS GROUP, ST VINCENT AND THE GRENADINES**



Source: (Health Promotion Unit, 2015)

In summary, at the structural level, there have been important regional frameworks and action plans for overall health and those specific to older persons such as the **2003 Regional Strategy for the Implementation in Latin America and the Caribbean of the Madrid International Plan of Action on Ageing** and the **2015 OAS Inter-American Convention on the Protecting the Human Rights of Older People**. However, the latter has not been ratified by Caribbean countries. There is a growing awareness for the need for specific laws to protect the rights of older people as well as to ensure that they receive the necessary services for healthy ageing within a quality framework of life. As of 2017 only about half of the Caribbean states had passed laws, policies or strategies specifically on ageing with additional strategies related to ageing that take in the needs of older people such as mental health policies. The agencies responsible for developing and implementing programmes on ageing are in the ministries responsible for social development or health and are either Councils, Committees or Commissions on Ageing. Challenges arise when enacting international law into domestic law as this can be a long process. However, with the increasing need for such laws, due to the rapidly growing older populations it is imperative that this stumbling block be acknowledged at the regional level by CARICOM Heads of Government.

Community programmes for the elderly all have a multi-stakeholder and participatory approach that allows for consultation with older persons and civil society organisations. However, more information regarding indicators for monitoring purposes against regional and international treaties would be useful. Additionally, it would be interesting to get reports on official evaluations and budget expenditure to assist with the way forward in expanding these initiatives, either nationally or regionally. There is a need for increased coordination and knowledge of the various agencies offering healthy and active ageing opportunities.

## 2. Environmental and social interventions and strategies

To relieve functional disabilities and promote health, the creation of supportive environments is necessary. Globally, the Age-Friendly Cities initiative has been developed to improve urban environments for older people. To date Caribbean countries have not participated in this initiative (WHO, 2017c, WHO, 2007, WHO, nd, WHO, 2018, WHO, 2019). However, there have been efforts within the Caribbean to create age-friendly environments.

Supportive environments in the health care sector are examined in Chapter 3. Here we examine three aspects of the creation of supportive environments:

- Physical accessibility in housing and transport;
- Support in the context of emergency and disaster situations, and
- Personal and economic security.

### 2.1 Housing, transport and accessibility

**Housing** is an important aspect of healthy ageing, potentially affecting physical and mental health. One of the most important goals of older Caribbean people is to buy and own their own home, and specifically to do so before they retire. A home not only holds a lifetime of memories but represents personal safety and security. Location and living in proximity to other family members and friends, services, and transportation are important for positive social interaction and prevention of loneliness (WHO, 2002, ECLAC, 2012).

With regard to **transport**, attention must be given to older persons living in both rural and urban areas with the need for accessible and affordable public transport, private transport or transport provided for by family, friends or neighbours. This is important for access to services, for example shopping for food and visiting health clinics and ensuring participation in community and family life well into the later years (WHO, 2002, ECLAC, 2012, WHO, 2015b).

The right to safe and secure living conditions, transport and accessibility have been included in all major international and regional frameworks, strategies and plans of action relating to ageing, starting with the MIPAA. (ECLAC, 2008, ECLAC, 2012, ECLAC, 2017a, ECLAC/CDCC, 2015, OAS, 2015, PAHO, 2019, UN, 2002, WHO, 2002, WHO, 2017b, WHO, 2017a, ECLAC, 2003).

The MIPAA's, third strategic priority, 'ensuring enabling and supportive environments' focusses on housing and transport concerns for the elderly. Table 4 shows what was agreed upon on in some these major legislative documents that were outlined in the introduction to this SPHR. For example, access to decent housing was a topic of interest in the Regional Strategy (ECLAC, 2003, Art 39), Brasilia Declaration (ECLAC, 2008, Art 16) and San José Charter (ECLAC, 2012, Art 10) but only

considered in terms of access in the Asunción Declaration (ECLAC, 2017a, Art 9). The Regional Strategy also considered aspects of financing for ownership and national construction standards (ECLAC, 2003, Art 43).

The MIPAA specifically mentions improving transport accessibility for older persons while the IAC is more general in its considerations of healthy environments and access to personal mobility. The Regional Strategy (ECLAC, 2003, Art 40 & 43), Brasilia (ECLAC, 2008, Art 16) and the Asunción Declaration (ECLAC, 2017a, Art 8) discuss the adaption and importance of the physical environment as a whole whereas the San José Charter specifically address transport facilities and services (ECLAC, 2012, Art 10).

**TABLE 34: HOUSING AND TRANSPORT CONSIDERATIONS OF THE MIPAA AND SUBSEQUENT REGIONAL DOCUMENTS ON OLDER PERSONS<sup>42</sup>**

MIPAA 2002	IAC 2015	Regional Strategy 2003	Brasilia 2007	San José 2012	Asunción 2017
Consider housing preferences for the elderly regarding suitability and location	Art 23. Right to property. Art 24. Right to housing.	Accessibility of housing, financial initiatives for ownership, and national building standards for safe housing	Accessibility to housing and adaptation for the elderly according to their needs	Improving housing and environmental conditions	Housing accessibility
Transportation improvement	Art 25. Right to a healthy environment. Art 26. Right to accessibility and personal mobility	Physical environment adaption for the characteristic and needs of the elderly	Accessibility to public spaces	Access to transport facilities	Healthy, accessible and suitable environments

Source: Adapted from (Montes-de-Oca et al., 2018)

<sup>42</sup> MIPAA 2002: Madrid International Plan of Action on Ageing

Regional Strategy 2003: Regional Strategy for the implementation in Latin America and the Caribbean of the MIPAA

Brasilia Declaration 2007: Regional review and contribution to the 1st global review of the MIPAA (2008)

San José Charter 2012: Regional review and contribution to the 2<sup>nd</sup> global review of the MIPAA (2013)

Asunción Declaration 2017: Regional review and contribution to the 3<sup>rd</sup> global review of the MIPAA (2018)

IAC 2015: Inter-American Convention on Protecting the Human Rights of Older Persons

Persons living in rural areas may be more prone to poor quality housing. In 2004, 300 elderly pensioners (between 65 and 103 years old) in rural Trinidad were interviewed as to their satisfaction with housing. While the majority (68%) were satisfied with their housing, 46% believed the quality of their housing was poor.<sup>43</sup> The elderly persons interviewed were mostly retired farmers on low incomes, who believed that they were in poorer health relative as compared with the general US population but with the same mental health (Francis-Granderson et al., 2017).

Considerations, such as appropriate building codes should be taken into account so that elderly people are able to age safely and with sufficient economic stability within their own surroundings. Additionally, household hazards can cause painful injuries from falls and permanent damage to housing through, for example, fires. A study of over 3000 older persons, 60 years and over, in Jamaica reported that approximately 20% of the study population had falls within the last six months, with greater number of women having fell compared to men. Over 50% of the falls occurring inside the home (versus outside the home) (Eldemire-Shearer and James, 2017). Examples of precautionary measures would include ensuring that all steps are even, addition of rails, removal of clutter and other debris, use of non-glare lighting, non-slip tiles and lower level shelves, to homes may become necessary in order to ensure safety, and regular checks of household appliances and electrical systems (WHO, 2002, ECLAC, 2012, James et al., 2012).

None of the Caribbean countries have indicated that they have standards of universal design in building codes and urban planning. More information is needed to assess the physical environment and housing of older persons living in rural areas and how adequate is the accessibility of infrastructure to services and facilities (ECLAC, 2017b).

With regard to availability of housing some Caribbean states have identified housing as a critical issue for older persons. For example, in Belize, maintenance, repair and adaptation of homes belonging to older persons is a common problem and the need for a financial or technical housing assistance plan has been acknowledged. Similarly in Grenada, it has been observed that among people on low incomes, home maintenance or adaptation is not a priority (ECLAC, 2017b). However, some Caribbean states have made specific arrangements for older persons – see Table 5.

**TABLE 35: EXAMPLES OF ADDITIONAL CARIBBEAN ACTIONS FOR IMPROVED AVAILABILITY OF SAFE HOUSING FOR OLDER PERSONS: 2017**

Country	Activities
<b>Bahamas</b>	Low income rental units for older persons, rental assistance and small home repair and urban renewal house repair programmes are available.
<b>Barbados</b>	Through the Poverty Alleviation Plan, the Ministry of Social Care, Constituency Empowerment has assisted older persons with repairs to their house.

<sup>43</sup> A Housing Quality Index Score was determined using questions relating to housing tenure, type of dwelling and the physical characteristics of the house which included the physical structure, types of materials used, number of rooms, utilities and basic amenities present FRANCIS-GRANDERSON, I., PEMBERTON, C. & DE SORMEAUX, A. 2017. Satisfaction and Quality of Housing among Older Persons in Rural East Trinidad. *Farm and Business - The Journal of the Caribbean Agro-Economic Society* [Online], 09.

Country	Activities
<b>Bermuda</b>	<p>The Bermuda Housing Corporation provides adequate and affordable housing for older persons that promotes independent living that enhances quality of life.</p> <p>Research has been conducted (2017) to identify the need for home adaptations, and the mechanisms and incentives to make these adaptations more attractive to older persons.</p>
<b>Cayman Islands</b>	<p>There is a Housing Repairs Assistance Programme under the Needs Assistance Unit of the Ministry of Community Development, Youth and Sport for older persons. Those who qualify for financial assistance are also eligible to receive housing assistance.</p>
<b>Dominica</b>	<p>The Government is introducing a programme to build new home and renovate existing ones. There is also a programme to eliminate pit latrines.</p>
<b>Jamaica</b>	<p>Social assistance with housing is provided through specific government agencies and local authorities.</p>
<b>St Maarten</b>	<p>The Community Development, Family and Humanitarian Services has implemented a Social Bank project to assist older persons with short-term housing needs.</p> <p>There is also a home repair programme for older persons if they meet specific selection criteria. There are plans to build more social housing.</p>
<b>Trinidad and Tobago</b>	<p>The Ministries of Housing and Social Development and Family Services, through a 'means-test', will assist eligible candidates with a grant that will allow them to adapt their homes to facilitate their ageing needs.</p> <p>Older persons are eligible for housing through the Housing Development Corporation's Housing Allocation Programme. 5% of each Housing Development Corporation's housing stock is allocated to older persons. Furthermore, the mortgage can be transferred to the older person's next of kin if the mortgage has not been paid off at the time of death.</p> <p>A Granny Suite Programme exists whereby adult children of dependant older parents or relatives can apply for a means-tested soft loan to extend their property to accommodate elderly relatives.</p>

Source: (ECLAC, 2017b)

Some Caribbean countries (The Bahamas, Barbados, Belize, Guyana, Jamaica and Trinidad and Tobago) have some sort of free or reduced cost transportation scheme for older persons. However, among other countries older persons have to use private or public transport to attend medical appointments for example and this can be beyond their financial means. In a multi-country study<sup>44</sup>, a woman from the urban area of Suriname said, *"I need to visit the doctor regularly and I do not have*

<sup>44</sup> The Bahamas, Barbados, Guyana, Jamaica, Suriname, and Trinidad & Tobago

transportation. The amount of money spend on taxis is more than my old age pension” (Cloos et al., 2010). Table 6 details activities for improved access to transportation for older persons in the Caribbean.

**TABLE 36: EXAMPLES OF CARIBBEAN ACTIVITIES FOR IMPROVED ACCESSIBILITY TO TRANSPORT FOR OLDER PERSONS AND PERSONS WITH DISABILITIES: 2017**

Country	Activities
<b>Anguilla</b>	The government, itself, has no specialised public transport system for older persons, persons with disabilities or those requiring assistance for medical reasons. The government is however in collaboration with the Red Cross to provide transportation for older persons as they have transportation equipped with lifts.
<b>Barbados</b>	Persons over 65 years can travel free on public buses.
<b>Belize</b>	The National Council on Ageing is in the process (2017) of launching a national campaign that would give priority to older persons for essential services including public transportation.
<b>Bermuda</b>	Public transport is free to all persons over 65 years old. In 2014/2015 the Ministry of Health and Seniors provided a grant to Project Action which provides affordable and accessible transportation to older people and those who are physically challenged.
<b>Cayman Islands</b>	Public transport is privately-owned and there is no specialised transport services for older persons or those with disabilities.  The 2016 Older Persons Policy seeks to improve availability and accessibility of transportation for older persons.
<b>Dominica</b>	Public transport is privately-owned and costly. This has a negative impact on older persons’ mobility.
<b>Grenada</b>	Public transport is privately-owned and there are no specialised transport services for older persons or those with disabilities.
<b>Jamaica</b>	Through the National Council for Senior Citizens, older persons can access a special card which will provide reduced fares on government-owned public buses within the Kingston Metropolitan area and three other parishes.
<b>St Maarten</b>	The Government is in the process of implementing a pilot project that will involve special transportation facilities for older persons and persons with disabilities.  Another pilot project will be implemented which seeks to investigate options for special transportation needs of older persons.
<b>Trinidad and Tobago</b>	In 2012 the Elderly and Differently Abled Mobile Transport Shuttle was established. This is a ‘dial-a-ride’ service for the elderly and those with disabilities.  Persons 60 years and older can travel free on the Public Transport Service Corporation (PTSC). During non-peak hours, there is free bus travel on the Deluxe Coach Service between Port of Spain and San Fernando and on the Ferry Service between Port of Spain and Scarborough.

Source: (ECLAC, 2017b)

Following is an example of a transport scheme for senior citizens in Bermuda.

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*BOX 5: CASE STUDY 3: PROJECT ACTION, BERMUDA*



Source: <https://www.bermudareal.com/generous-donors-put-project-action-back-behind-the-wheel-in-new-van-for-seniors/>

*“Transportation is a necessity for all, but especially for seniors and the physically disabled in Bermuda. The public buses are not wheelchair accessible, while many seniors do not live near a bus stop or cannot drive anymore”*

*Cindy Swan, Cofounder and Chairwoman of Project Action  
(Zacharias, 2016)*

*Founded in 1999, Project Action is a registered charity which provides a free transportation service to the elderly and persons with disabilities. Transport is offered for visits to medical and physiotherapy appointments, errands such as grocery shopping, and a drive-out excursion when possible (Government of Bermuda, nd, Ministry of Health, nd). This service is for residents, not visitors (Government of Bermuda, 2019).*

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**KEY ELEMENTS OF GOOD PRACTICE**  
*Project Action*

- 1. Multi sectoral participation – private and public*
  - 2. Focussed solely on older persons and those with disabilities*
  - 3. Fosters a culture of volunteerism*
- 

*“We start out in the early morning getting folks to dialysis and their medical appointments. We usually bring in six to eight people every day, Monday through Friday, and take them home, finishing up at 1pm or 2pm. We start at around 3.30am and it doesn’t stop. We go back and forth until we get them all back home. Sometimes we also help out getting people to church fairs*

*and things like the End to End<sup>45</sup> and we try to help out the rest homes as much as we can, getting people out and letting them get some fresh air. You wouldn't believe how grateful they are. A lot of them cannot thank you enough. They appreciate being able to see a little bit of Bermuda."*

*Ernest "Shuby" DeGrilla, Volunteer Bus Driver, Project Action  
(Johnston-Barnes, 2016)*

*Project Action undertakes more than 1,500 trips a year and costs US\$100,00 annually to run. Presently they are in need of a full-time driver (Bell, 2019).*

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## 2.2 Emergency and disaster situations

The Caribbean is a region of high vulnerability to seismic activity the impacts of climate change (CARPHA, 2018). The San José Charter, "*dr[e]w attention to the vulnerability of older persons in emergency situations and specifies that governments will* (ECLAC, 2012, article 13):

- a. Include priority and preferential assistance for older persons in disaster relief plans;*
- b. Prepare national guidelines that include older persons as a priority group given preferential treatment in disaster preparedness, relief worker training and the availability of goods and services;*
- c. Give priority and preferential treatment to the needs of older persons during post-emergency or post conflict reconstruction."*

Older persons are affected by natural disasters as they affect their chances of survival through (WHO, 2015b):

- Disaster-related injuries;
- Poor basic surgical care;
- Emergency induced mental health and psychological challenges, and
- Breakdown in services for preventing and managing chronic care conditions and for the providing social support

Additionally, post the immediate effects of natural disasters, older persons who are physically frail, possibly with pre-existing chronic health conditions, are more susceptible to outbreaks of communicable diseases such as vector-borne diseases and respiratory infections. Flooding, which can lead to poor water quality and contaminated food can have detrimental effects on senior citizens (Watts et al., 2015, WHO, 2015a, IPCC, 2014, United States Global Change Research Program, 2016).

Caribbean countries provide varying levels of support to older persons pre- and post- emergency and disaster situations. Following is a table providing some examples.

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<sup>45</sup> End to End is an annual charity fundraiser in Bermuda. It involves walking, riding or swimming across Bermuda while raising funds for charities. <http://www.bermudaendtoend.bm/about-end-to-end/>

**TABLE 37: EXAMPLES OF CARIBBEAN STRATEGIES AND PLANS FOR OLDER PEOPLE IN TIMES OF EMERGENCY AND DISASTER SITUATIONS: 2017**

Country	Strategy/plan
<b>Anguilla</b>	National Disaster Preparedness Plan: register of older people
<b>Barbados</b>	<p>A Vulnerable Persons Committee meets monthly and is led by the Ministry of Social Care, Constituency Empowerment and Community Development, and the National Assistance Board.</p> <p>National Disaster Response System: At-risk register for vulnerable groups and Evacuation of Vulnerable Persons Plan (since 2012) which includes older persons and those with disabilities.</p> <p>The aim of these plans is to increase public awareness and education directed to older persons in times of emergencies, especially those living alone.</p>
<b>Bermuda</b>	<p>There is no formal policy for older persons however there is an inter-ministerial Emergency Measures Organisation. Actions include ageing and disability services that assist care homes pre-and post-storm.</p> <p>Community Nursing Program, Department of Health which also responds to at-risk clients pre- and post-disaster.</p> <p>Pre- and post-storm public advisory announcements which encourage neighbours to check-in on the elderly.</p>
<b>Cayman Islands</b>	National Hurricane Plan: identifies older persons as a priority for shelter.
<b>Guyana</b>	<p>During the observance of the International Day for Disaster Reduction, the Civil Defence Commission has conducted workshops with older persons and the Ministry of Social Protection, highlighting the importance of cultural shift in environmental management and transferring knowledge from the elderly to the young people.</p> <p>Emergency kits including basic supplies, have been distributed to older persons.</p>
<b>Jamaica</b>	<p>Ministry of Labour and Social Security coordinates Parish Shelter and Welfare Committees at which needs of older persons are presented.</p> <p>Even though there are no specific activities that gives preference to older persons during times of disaster assessment, this is stated to be case-specific.</p>
<b>St Maarten</b>	<p>There is a disaster plan for the entire population, including older persons. This includes health service support, social aid support and shelters.</p> <p>Crisis Care Service provides services to documented as well as undocumented residents within 24 to 72 hours following a disaster and assists in restoring an adequate level of living as quickly as possible.</p> <p>The Red Cross provides supplies as part of the government's relief effort.</p>

Country	Strategy/plan
<b>Trinidad and Tobago</b>	National Policy on Ageing: priority on disaster preparedness includes actions, personnel and amenities needed for shelters and coordinated responses for older persons.  Homes for Older Persons legislation (proposed for proclamation in 2017): includes bi-annual drills for evacuation of older persons that should be conducted by homeowners.

Source: (ECLAC, 2017b, ECLAC, 2017a)

### 2.3 Security

Security can refer to **personal or financial security**. Personal security refers for example to abusive behaviour towards older persons and prevention of injury in the environment. Financial security refers to having enough economic resources throughout older life.

**Personal security** for older persons involves their being and feeling safe, and avoiding harm, in their homes and communities. This involves prevention of injuries, elder abuse, crime and environmental disasters to older persons including those with physical and mental disabilities (WHO, 2015b, WHO, 2002).

To address personal security concerns, Caribbean states have implemented various programmes, including those in Table 8.

*BOX 581: ASPECTS OF PERSONAL SECURITY IN OLDER PERSONS*

- Injuries – falls and road traffic accidents
  - Elder abuse – violation of human rights through physical, sexual, psychological and emotional abuse, abandonment and neglect, deprivation and misuse of finances and personal material items and a lack of respect to make one’s own choices and decisions
  - Crime – robbery, assault and homicide
  - Environmental disasters – leading to direct and indirect impacts
- (WHO, 2015b)

**TABLE 38: EXAMPLES OF CARIBBEAN PROGRAMMES AND STRATEGIES TO ASSIST WITH THE PERSONAL SECURITY OF OLDER PERSONS: 2017**

Country	Programmes/strategies/legislative documentation
<b>Anguilla</b>	Dependent Adult Act covers issues of neglect, abuse and violence against older persons.  There is a domestic violence training programme for front line workers including medical staff, social workers and police workers.
<b>Barbados</b>	National Disabilities Unit provides medical devices for older people e.g. prostheses, canes, grab bars, and wheelchairs.

Country	Programmes/strategies/legislative documentation
	A national Anti-Elder Abuse Programme Coordinating Committee has been established.
<b>Belize</b>	The Senior Citizens Division of the Department of Social Services has been mandated to investigate and resolve complaints regarding the well-being of older citizens.
<b>Bermuda</b>	<p>Senior Abuse Register Act, 2008 allows for the raising awareness of abuse, investigating alleged senior abuse, and establishing a register of those convicted of abuse of older persons.</p> <p>The Manager of Ageing and Disability Services, the Senior Abuse Registrar, is responsible for receiving senior abuse referrals, under Senior Abuse Register Act, 2008, investigating referrals, and case management maintenance of a register of those convicted of abuse, including financial abuse, of older persons. 33 cases were investigated in 2016. The Registrar also raises awareness of elder abuse and the process in place to deal with such abuse.</p> <p>Specific police officers have been trained in how to respond to elderly abuse and persons with disabilities.</p>
<b>Cayman Islands</b>	The Older Persons Policy and Bill together with the Protection from Domestic Violence Law, 2010 aims to address abuse and neglect in older persons.
<b>Guyana</b>	<p>There are no specific programmes of polices to address elderly abuse. However, the Maintenance Act, Poor Relief Act, the Old Age Pension Act and the Domestic Violence Act addresses aspects of neglect, abuse and violence in the elderly.</p> <p>In 2015, the Ministry of Social Protection, created a mechanism that investigates reports of abuse, including financial abuse, and the neglect of older persons. As of 2017, there were at least four instances of financial exploitation which have been investigated and are being monitored.</p> <p>The government-run Palms Geriatric Facility provides shelter, meals medical services and recreational activities for older persons who have been subjected to elder abuse, neglect and violence.</p> <p>In 2016, the Ministry of Social Protection implemented a ‘Stop Senior Citizens Abuse’ campaign. This included the use of posters, pamphlets and bumper stickers. The aim was to sensitise and educate the general public on all forms of elder abuse.</p>
<b>Jamaica</b>	<p>There is no specific legislation on abuse of older persons. The National Policy for Senior Citizens, together with the Domestic Violence Act, the Offences Against the Person Act and the Sexual Offences Act protect older persons from abuse and violence.</p> <p>All citizens are protected from finance and inheritance exploitation under the Law Reform – Fraudulent Transaction, Special Provision-Act, 2013.</p>

Country	Programmes/strategies/legislative documentation
	The Major Organised Crime and Anti-Corruption Task Force investigates all cases of fraud and scamming.
<b>St Maarten</b>	<p>Older persons can receive devices for walking, wheelchairs, adjustment to their homes, special transportation and home care.</p> <p>There is a 'Women's Desk' which operates from the Community Development, Family and Humanitarian Affairs unit. This provides support to women in need, including older women.</p> <p>Safe Haven, an NGO, offers shelter, counselling and support services to victims of domestic abuse. Crisis care is a government service that is offered, so that within 72 hrs after emergency health or police care attendance or reports, anyone going through a crisis can receive assistance. This includes older persons in times of neglect, abuse or violence. Crisis care can be received for persons up to three months where temporary shelter and counselling are offered.</p> <p>In order to prevent financial abuse between married persons, pensions are sent to separate accounts.</p>
<b>Trinidad and Tobago</b>	<p>Means-tested grants are available to provide free medical equipment such as wheelchairs, eyeglasses and hearing aids.</p> <p>Homes for Older Persons Act, 2007 makes elderly abuse in a long-term care institution punishable by law. There is an Older Persons information centre which serves as a referral agency to link older persons to goods and services. However, over the past decade there has been an increase in elderly abuse, especially in the community by relatives of the older person. The Division of Ageing, together with the Community Police and District Health Nurses/Visitors, investigate these claims of elderly abuse. The Division of Ageing also offers counselling to those who have been abused.</p> <p>There is a Direct Deposit programme within the Social Welfare Division in the Ministry of Social Development and Family Services, which facilitates approximately 85% of senior citizens (aged 65 and over) to have their monthly Senior Citizens Pension be deposited directly to their bank accounts rather than for it to be mailed in the post.</p>

Source: (Government of St Maarten, nd, Tanner, nd, Staff Reporter, 2018, ECLAC, 2017b, ECLAC, 2016)

Having **financial security** in later life has been known to reduce mental health problems caused by anxieties about nutrition and food security, care-dependency, housing, health care and medications, and overall quality of life through community and family participation. Such anxieties can eventually lead to isolation and depression (WHO, 2015b). Financial security is also based on a person's ability to continue working. Age of retirement varies throughout the Caribbean but is generally set between

60 and 65 years old except for Haiti where it is 55 years of age<sup>46</sup>. Flexibility is needed with respect to allowing older persons to work as long as they want to, both for self-fulfilment and to alleviate the costs of population ageing (Jones, forthcoming 2020). Other reasons included inability to access social security benefits or those benefits being insufficient (ECLAC, 2016).

All Caribbean countries have some form of social security or national insurance scheme which is usually financed by both the employer and the employee (contributory scheme). Initially focussed on old-age pensions, these schemes have expanded and now include other support, such as for maternity, employment injury. Contributions vary across the Caribbean states and are made by both employer and employee, and the self-employed. However the most significant benefit is that of some form of old age pension (Nassar Koffie et al., 2016, ECLAC, 2016).

Coverage of contributory old age pension schemes (the percentage of persons over retirement age who are in receipt of old age pensions) varies from state to state. For example, in Guyana, Barbados and the Bahamas, at last two-thirds of the population over the country's retirement age receives a contributory old age pension whereas in Saint Lucia, Belize and St Vincent and the Grenadines, approximately one-third or less receive a contributory old age pension (ECLAC, 2016).

Other forms of income support for older people include transfers from family members, remittances from family members overseas or in-kind support. While this is welcome, it causes the elderly to be dependent on children or family members and can often lead to tensions and discomfort. In some countries there is also some forms of subsidies, rebates or free provision of a particular utility service. Some countries have introduced other forms of income support.

**TABLE 39: EXAMPLES OF CARIBBEAN TYPES OF INCOME SUPPORT OTHER THAN CONTRIBUTORY AND NON-CONTRIBUTORY OLD AGE PENSION SCHEMES: 2017**

Country	Programmes and strategies
<b>Antigua and Barbuda</b>	Senior Citizens Utilities Subsidy Programme through which a monthly subsidy is provided for utility bills to all pensioners registered with the Social Security Board.
<b>Bahamas</b>	Introduced indexation <sup>47</sup> in order to ensure that the real value of the pension is kept in line with the cost of living.
<b>Barbados</b>	Introduced indexation <sup>48</sup> in order to ensure that the real value of the pension is kept in line with the cost of living.
<b>Bermuda</b>	Since 2012, cash poor, land rich seniors are now able to receive assistance.

<sup>46</sup> In Haiti then life expectancy at birth is only 60.9 years for men and 65.2 years for women SOCIAL SECURITY ADMINISTRATION & INTERNATIONAL SOCIAL SECURITY ASSOCIATION 2017. Social Security Programs Throughout the World: the Americas. Washington, DC: Social Security Administration and the International Social Security Association.

<sup>47</sup> Indexation allows the countries to automatically increase the pensions to account for inflation. They are based on having a reliable Consumer Price Index and this may explain why so few countries have introduced this concept ECLAC 2016. Ageing in the Caribbean and human rights of older persons: Twin imperatives for action. Santiago, Chile: United Nations Economic Commission for Latin America and the Caribbean..

<sup>48</sup> Ibid.

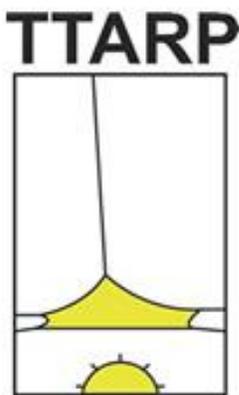
Country	Programmes and strategies
<b>Cayman Islands</b>	Social assistance is provided to older persons in need of financial assistance, housing support, and other assistance such as food.
<b>Dominica</b>	Introduced indexation <sup>49</sup> in order to ensure that the real value of the pension is kept in line with the cost of living.
<b>Guyana</b>	A universal water subsidy to assist senior citizens with their water bills.
<b>St Maarten</b>	There is a relief programme to reduce the utility bills of older persons.
<b>St Vincent and the Grenadines</b>	The government provides a means-tested water rebate to some elderly homeowners.  There is a Social Safety Net Programme which provides assistance to older persons including a monthly allowance. It also helps with housing, transportation, education and meals.
<b>Suriname</b>	The government provides electricity free to elderly homeowners whose bill does not exceed a certain amount.
<b>Trinidad and Tobago</b>	The Public Assistance Programme for Older Persons grants discounts on water and electricity. There are also social welfare grants for eyeglasses, hearing aids, house repairs and burial costs.  The National Social Development Programme provides free electrical re-wiring and plumbing to households, particularly those that are headed by pensioners.  The Targeted Conditional Cash Transfer Programme provides a tiered monthly payment system for the purchase of food at designated groceries.

*Source: (ECLAC, 2016, ECLAC, 2017b).*

Throughout the region there are also agencies advocating for and supporting older persons. Following is information on the work of an Association of Retired Persons' efforts to bring financial security to senior citizens.

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<sup>49</sup> Ibid.



The Trinidad and Tobago Association for Retired People (TTARP) is a legally registered non-profit service organisation incorporated in 1993. It allows mature persons (over 50 years) to access benefits that they may not have enjoyed before.

The objectives of TTARP are to:

- Enhance the quality of life of mature citizens;
- Promote their independence, dignity and purpose;
- Lead in determining their role in society, and
- Improve the image of the Golden Years,

There are four streams of activities to achieve these objectives:

1) Tangible, financial benefits – discounts in over 500 commercial companies in 62 categories throughout Trinidad and Tobago. These include:

- Auto care and services
- Health care and services – e.g. optometrists, wheelchairs, pharmacies, private medical centres, diagnostic services, private dentists, gyms
- Entertainment
- Food products – e.g. groceries
- Professional services – e.g. attorneys-at-law, insurance companies, accounting services, hotels and other accommodation, hairdressers, funeral homes
- Home care – e.g. air condition technicians, furniture and appliances, building and construction, electrical supplies
- Shopping retail stores
- Tuition, education, books and computers

2) Social/cultural activities and involvement – consumer affairs, crime prevention, retirement planning, volunteer experience, social action including financial planning, continuing education etc, cultural programmes and representation to government for retirees

3) Medical assistance plan – hospitalisation assistance plan which started in 1996

4) Death benefit/Term Insurance Plan which caters specifically for senior citizens

TTARP Tour to Dubai with 90 members



Source: <https://ttarp.org/>

## TTARP UPCOMING EVENTS 2019



**Golden 5k Walk/Run**  
Saturday 2nd November 2019  
TTARP Building  
167-169 Belmont Circular Road,  
Belmont (opp. Providence Girls)  
Race starts @ 4:00 p.m.

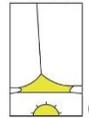


**TTARP Christmas Gala**  
Saturday 23rd November 2019  
Centre of Excellence  
3 p.m.

**Yard SALE / Fundraising BBQ**  
Saturday 7th December 2019  
TTARP Building  
167-169 Belmont Circular Road,  
Belmont (opp. Providence Girls)



TTARP



45 Tragarete Road, Port of Spain  
**622-9223 or 221-7771**  
email: [ttarp1993@gmail.com](mailto:ttarp1993@gmail.com) | website: [www.ttarp.org](http://www.ttarp.org)

 Like us on FACEBOOK - TTARP an Association of Responsible Persons

Source: <https://ttarp.org/>

TTARP organises events throughout the year – these include activities relating to healthy ageing, entertainment and fundraisers.

TTARP membership eligibility is on the basis of age 50 and above. Members can be employed or retired. There is an admission fee (US\$1.50) and the option to pay membership fees for one, two or three years (US\$11.00, US\$21.00, US\$30.00 respectively). Membership fees may be further reduced if the person is over 60 years and has a 'Major League' bank account at a specific one of the major banking institutions in Trinidad and Tobago.

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### KEY ELEMENTS OF GOOD PRACTICE Trinidad and Tobago Association for Retired People

1. Multi sectoral participation – private and public
  2. Financial benefits as well as social participation.
  3. Low joining fees
- 

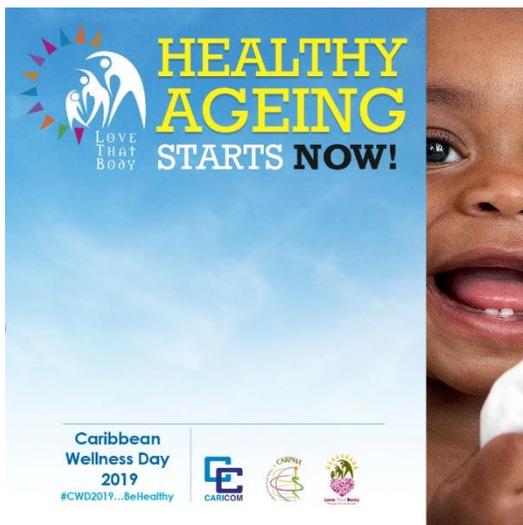
In summary at the environmental and social level, older persons are vulnerable to emergency and disaster situations, housing, transport and accessibility, and personal and financial security. The Caribbean has been experiencing increased and more forceful climatic conditions. Older people are affected by disaster-related injuries, poor basic clinical and surgical care, emergency induced mental health, and a breakdown in services preventing the management of chronic conditions. Some states have national emergency strategies, into which is built in precautions for vulnerable groups including the elderly. Other countries have targeted actions for older people during disasters in their National Ageing Policy. Also, some states also work with local communities and NGOs to ensure that older people are seen to as a priority during emergency disaster situations.

With regard to housing, transport and accessibility it is essential to have safe housing which has been adapted to the needs of older people, accessible transport to services such as medical appointments and food outlets. Most Caribbean states recognise the importance of housing, transport and accessibility to older persons. Access to low cost housing and assistance for repairs and adaptations to suit the needs of elderly are some of the measures provided by government. Transport on public transport is provided for free or at a greatly reduced price for the elderly in some states, while in others, transport is privately owned or costly and, in these cases, there are little or no assistance for older persons. In the Caribbean, even though most of the older persons presently live with family, there is a growing move towards them living on their own. Therefore it is important that all

Caribbean states have in place measures to assess needs, adjust care and support packages accordingly and ensure that the elderly live in safe and secure physical environments.

Personal security from injuries, elder abuse, crime and environmental disasters allows older persons to feel safe from harm in their homes and communities. In most states there are programmes and legislation in regard to elder abuse. Some countries have specific contacts where elder abuse can be reported and investigated and also provide shelter and counselling to those who have been abused. Where there is no specific legislation, other laws dealing with domestic violence, for example, will respond to acts of elder abuse. Financial security, usually through pensions schemes, allows older people to be independent and continue to live and participate within the community. All Caribbean states have some form of social security or national insurance and old age pensions scheme. Income can be also in the form of transfers or remittances from family members or other carers; however, this may cause tensions. Other forms of income support can be in the form of free or subsidised utility bills or grants for housing support or other assistance such as food. Some countries even have measures for depositing pensions into separate accounts of married couples thereby in an attempt to prevent financial abuse. Even though all Caribbean states have some form on contributory and/or non-contributory social security/pension schemes, it is evident that with the demographic changes of a growing elderly population and a reducing working population (as it presently stands) governments need to review their pension schemes in order maintain sustainability.

### 3. Addressing individual risk



In Chapter 2 data on the prevalence of behavioural risk factors for NCDs were presented, mostly from the Caribbean STEPS surveys. In this section we present initiatives aiming to address these risk factors by modifying individual behaviours. These include unhealthy nutritional habits leading to obesity (Haveman-Nies et al., 2002, Estruch et al., 2018, Alley and Chang, 2007) and hypertension (Musini et al., 2009), lack of physical activity (Hrobonova et al., 2011), use of tobacco (Peto et al., 2000), misuse of alcohol and inadequate use of primary health services (ECLAC, 2016, Samuels and Unwin, 2016). Here we provide some examples of interventions with older persons and with younger persons.

Source: <http://carpha.org/>

### 3.1 Physical activity

Across the region, awareness of physical activity as a means of prevention of ill-health in later life appears to have contributed in recent years to a boom in physical activity opportunities and in the market for sportswear and equipment. Gyms and exercise classes appear to have proliferated, and many organisations, charitable or corporate, organise activities such as fun runs and aerobics burnouts. This augurs well for the healthy ageing but must be seen against the background of other risks, such as inadequate fruit and vegetable consumption. Some of the physical activity opportunities require fees for participation, limiting access by those on lower incomes.

Many organisations across the region promote physical activity among older persons. As shown in section 1, promotion of physical activity is sometimes included in a holistic programme for elder empowerment. Physical activity may also be associated with a facility, such as among the activities of a day care facility or activity centres. Care facilities with a health promotion dimension of their work are described in Chapter 3. Non-governmental, community-based or faith-based organisations organise ad hoc events, such as health days with a focus on senior citizens, or exercise classes.

There is evidence that participation in physical activity can reduce the impact of NCDs among older persons. In a study among stroke survivors in Jamaica, half of the 128 participants walked overground for 30 minutes, 3 times per week for 12 weeks. The control group received massage to the side affected by stroke. There was a trend toward greater improvement over time for the Physical Health Component of the SF-36 health-related quality of life scale and significantly greater improvement over time for distance walked in 6 minutes in favour of the walking group. The authors concluded that aerobic walking should form part of a comprehensive health promotion strategy and that it improves the physical health component of quality of life and endurance in persons with chronic stroke (Gordon et al., 2013)



Source: <http://carpha.org/>

Following are examples of initiatives to promote physical activity and participation by older persons.

*BOX 583: SOME NATIONAL PROGRAMMES THAT PROMOTE PHYSICAL ACTIVITY AMONG THE ELDERLY*

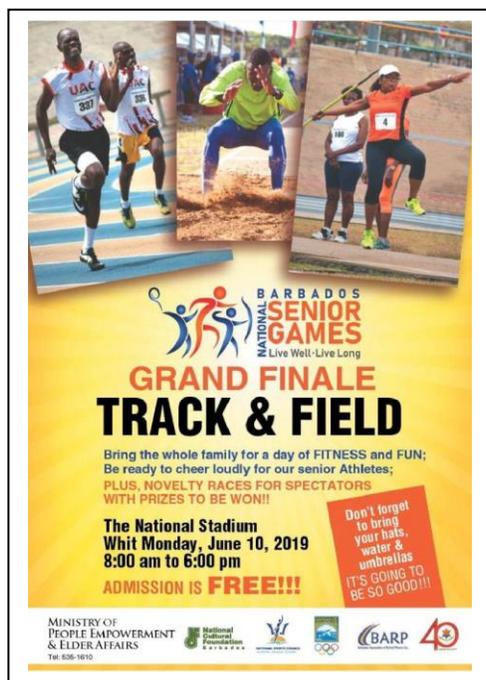
Bermuda: The Government of Bermuda has a 'Well Bermuda National Health Promotion Strategy' which centres on healthy people, healthy families and healthy communities. Goal 11 focusses on, 'the promotion of a better life for older persons.'

Dominica: NGOs have dedicated radio programmes to promote exercise sessions and healthy and active ageing.

St Maarten: the 'Movement for the Elderly' project is currently being coordinated by the Collection Prevention Services of Ministry of Public Health, Social Development and Labour and several NGOs. The project aims to encourage physical activity among seniors 60 years and older. Free activities include D'OGA (dance yoga), exercise classes and Parkinson's & dance classes.

(ECLAC, 2017b, CBC, 2019)

*BOX 584: CASE STUDY 6: NATIONAL SENIOR GAMES, BARBADOS*



Since 2011 the Government of Barbados has hosted Annual National Senior Games with over 300 participating athletes. In addition to the usual track and field, other sporting events include lawn tennis, table tennis, road tennis, cycling, basketball, squash, dominoes, netball, archery, bridge, chess, darts and a 5K run and walk (ECLAC, 2017b, CBC, 2019).

The Games last for approximately six weeks; encouraging participation from persons 40 years and older. At the launch of the 2019 Games, the Minister responsible for Elder Affairs stressed the importance of exercise and diet for good mental and physical health.

*“There are too many thousands of our citizens who are living longer, but they are generally plagued with numerous ailments, diseases and challenges, which impact on the quality of life.”*

Source: <https://whatsoninbarbados.com/event/38133-National-Senior-Games-Grande-Finale-National-Stadium/>

Additionally, the Government of Barbados also financially sponsors approximately 25 athletes to attend the Huntsman World Senior Games in St George, Utah, United States which began in 1987 and is open to athletes 50 years and over (ECLAC, 2017b).

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*KEY ELEMENTS OF GOOD PRACTICE  
National Senior Games*

- 1. Encouragement of healthy lifestyles*
- 2. Focus on older persons specifically*
- 3. Generates social participation and mental health*
- 4. Multisectoral – ministries responsible for health, the elderly and sport*

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### 3.2 Nutrition

The Caribbean has been undergoing a nutritional transition as it faces a dual burden of under- and over-nutrition (CARPHA, n.d.) (see Chapters 3 and 4). Presently the shift is towards obesity, at all stages of life. Socio-economic determinants such as poverty result in the inability to purchase quality food, and these combine with the geriatric giants of frailty, mobility disorders and cognitive impairment to increase risk of malnutrition in the older population. Factors influencing food intake in the region may include attitudes towards body weight and shape, media, parental, religious, educational influences, availability and price of fresh foods, and limited food choices – ‘food deserts’ – usually resulting in foods only of low nutritional value being available.

Despite poor eating habits being a risk factor for NCDs throughout the life course, nutritional programmes tend to be targeted towards the younger generations, particularly within the school environment. Such programmes do exist for the elderly but generally only in social clubs and community programmes (see Case Studies 3 and 4, in Cuba and St Vincent and the Grenadines, respectively).

In the Caribbean, trade liberalisation and globalisation has been linked to an increased dependence on export crops and food imports thus creating challenges for food security, nutritional quality, and food prices in the region. In the 1980s and 1990s there was a large influx of multinational fast food chains – the “Coca-Colonisation” and the “McDonaldisation” – of the Caribbean. This allowed for the growth of cheap food and drinks that are high in fat, salt and sugar.

The evaluation of the Port of Spain Declaration tells us that throughout the Caribbean nutrition-related action was less frequently implemented than other commitment. There were low levels of action with regard to: policies to reduce salt, limit saturated fats and eliminate trans fats and increase fruits and vegetables; Ministry of Health presence during negotiations on food security; implementation of WHO recommendations on the marketing of foods and beverages to children, and front-of-package labelling for easy identification of unhealthy foods (Samuels and Unwin, 2016).

**BOX 585: CASE STUDY 7: FARM TO FORK PROJECT AIMED AT REDUCING CHILDHOOD OBESITY IN TRINIDAD AND TOBAGO, ST KITTS AND NEVIS, GUYANA AND SAINT LUCIA**

The Farm to Fork project was a collaboration between the International Development Research Centre (IDRC), in Canada and the University of the West Indies which used a “farm to fork” approach to support the production of healthy fruits and vegetables and improve nutrition and health outcomes in the Caribbean. The project, which ran between 2011 and 2014, focussed mainly on Trinidad and Tobago and St Kitts and Nevis; there was limited work done in Guyana and Saint Lucia. It involved ministries responsible for food production, health and education.



**FIGURE 56: CHILDREN GROWING THEIR OWN FRUIT AND VEGETABLES IN A SCHOOL IN TRINIDAD**

Copyright Jeff Mayers

Source: International Development Resource Centre & Global Affairs Canada, Government of Canada

It was believed that offering a healthy lunchtime meal to children in schools could reduce consumption of high-energy unhealthy foods while teaching children about healthy eating. Interventions, aimed at primary school children (ages 5-9) and their parents, were implemented in St Kitts and Nevis and Trinidad and Tobago. Schools not involved in the intervention were monitored to provide a comparison. School meal menus were revised and tested for nutritional quality and acceptability by the children, and local farmers were included to increase the quantity and variety of fruits and vegetables used in school lunches and at school meal centres. Over a 15-month period, menu changes integrated approximately 20,000 kg of fruit and vegetables into the School Meals Centre in St. Kitts and Nevis, which feeds approximately 800 children (Granderson et al., 2014).

In Trinidad and Tobago, children in the intervention consumed 55% more fruit in a day than the control schools. There was an increase in vegetable servings, typically by an additional half a cup of vegetables per child; local fruits such as watermelons, bananas, tangerines and oranges were introduced (typically half a large fruit or one whole small fruit per child per day), and a weekly serving of fish. In St Kitts and Nevis, children in the intervention schools consumed 75% more vegetables in a day than those in non-intervention schools. Initially only imported vegetables such as carrots, onions and Irish potatoes were offered. As the project was implemented local fruits and vegetables such as tomatoes, cucumbers, string beans, sweet potatoes, cabbage and watermelon was introduced into the school menus (Granderson et al., 2014).

*In Trinidad and Tobago, approximately 135 parents were taught about balanced diets and portion control, as well as what would constitute a healthy snack for their children and how to manage food costs. In the classroom approximately 290 children were taught about serving sizes, the six major food groups, healthy snacking, how to read food labels, physical activity, home gardening, food safety and hygiene, and cooking methods. Registered dietitians and teachers who were trained by the dietitians conducted the classroom teaching. One school allowed the children to work on an old school garden, growing their own food, preparing and eating it (see Figure 4). Upon analysis of the nutritional knowledge there was an improvement among those children who received the intervention compared to those who did not, demonstrating that changes in the school menu alone do not improve nutritional habits among school children (Phillip et al., 2014).*

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**KEY ELEMENTS OF GOOD PRACTICE**  
*Farm to Fork Project*

- 1. Regional – four countries throughout the Caribbean*
  - 2. Multi-sectoral collaboration – ministries responsible for health, education and agriculture as well as civil society participation*
  - 3. Knowledge increase in a young population as well as parents as to the benefits of healthy eating and food preparation.*
- 

*Small local farmers in Trinidad and Tobago and St Kitts and Nevis were given the opportunity to learn new agricultural technologies such as drip irrigation. This demonstrated an increase in tomato yields from 18 to 32 metric tonnes/hectare, string beans from 3 to 10 metric tonnes/hectare and pumpkin from 17 to 25 metric tonnes/hectare. This increase in fresh vegetables allowed for a continual supply throughout the year (Phillip et al., 2014).*

*Based on the positive outcomes of this project – improved healthy school menus for children and increased food security through increasing knowledge and introducing new and improved farming technologies for the local market, it has been suggested that the ‘farm to fork’ project be regionally scaled up (Phillip et al., 2014).*

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### 3.3 Alcohol and tobacco

Alcohol and tobacco are both risk factors associated with NCDs and ill health in older persons. Yet most prevention programmes target youth and young adults, usually through mass media. The legal age for drinking alcohol or buying cigarettes in the Caribbean is generally 18 years of age, but this may not be strictly enforced.

A Caribbean study has shown that increases on taxes would reduce alcohol and tobacco consumption. These taxes together with reduced consumption can generate sufficient revenue to cover the cost of the NCD response. However, this will require multi-sectoral corporation on behalf of the finance, health and other sectors involved in the NCD response (Foucade et al., 2018).

In the Caribbean, programmes are centred around international and regional awareness days such as World No Tobacco Day and HCC’s Caribbean Alcohol Reduction Day.

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### Box 586: CASE STUDY 8: WORLD NO TOBACCO DAY SCHOOL'S ART COMPETITION

Every year, on 31 May, the World Health Organisation and other anti-tobacco agencies around the world, celebrate World No Tobacco Day (WNTD). The Lung Cancer Unit at the North Central Regional Health Authority of Trinidad and Tobago in collaboration with the Thoracic Society of Trinidad and Tobago, work to commemorate WNTD through an art competition for primary school children.



**FIGURE 5: WINNER OF 2019 WORLD NO TOBACCO DAY ART COMPETITION**

Source: Corporate Communications, NCRHA

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#### KEY ELEMENTS OF GOOD PRACTICE World No Tobacco Day Art Competition

1. National competition involving schools throughout the country
2. Multi sectoral participation – ministries responsible for health and education as well as civil society
3. Knowledge increase in a young population – instilling dangers of smoking at a very young age.

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The aim of the competition is to raise awareness on the harmful effects of tobacco cigarettes and deter smoking initiation in children aged 9-12 years old. Students are asked to prepare a peer-friendly poster which illustrates the dangers of smoking on the human body. The competition is open to all primary schools in Trinidad and Tobago. The 2019 competition, whose theme was

“Tobacco and Lung Health”, received 108 entries from 17 schools in seven of the eight school districts. The competition, which was judged by two local artists (Marsha Trepte and Fitzroy Hoyte) and a child art therapist (Danielle Du Boulay), awarded first place to a 11-year old boy from El Socorro Central Government. The title of his piece was, “Find it hard to quit? Soon it will be hard to breathe.” (See Figure 5). First, second and third prize winners were awarded a computer tablet with the winning school receiving a challenge championship trophy. Next year TSOTT is attempting to take this competition to other schools in the region, and the theme will be “Tobacco Breaks your Heart”. (Lung Cancer Unit at the North Central Regional Health Authority of Trinidad and Tobago, 2019).

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In summary, since most older people have a high prevalence of one or more NCDs it is useful to prevent or control risk factors for these illnesses throughout the life course – from in-utero to childhood, through adolescence, into adulthood and into older age. NCDs are controlled primarily by increased physical activity, balanced diet and good oral health, measured use of alcohol and tobacco. Most countries have interventions targeting individual NCD risk factors usually through the Health Promotion Units. Even though these interventions have been directed towards all age groups, they tend

*to be focussed more on children and youth. Programmes targeting individual risk behaviour for older people are usually through community programmes which centre around networking and social events. Despite some of these community programmes being well attended and organised, more resources need to be directed to such programmes to enable universal coverage and sustainability.*

## **Conclusion**

In Chapter 1, the concept of healthy ageing was introduced, showing the interaction between the intrinsic capacity of the individual, his/her functional ability and the environment in which the older persons lives, works and plays. Regional and international treaties, strategies and polices have sought to create an enabling environment for health and quality of life among senior citizens. National strategies, policies and programmes have likewise been developed and implemented in most Caribbean states.

In CMS, national laws, plans and policies on ageing have been completed, though some remain in draft form. Agencies responsible for developing and implementing programmes on ageing are usually in the ministries responsible for social development or health and are either Councils, Committees or Commissions on Ageing. Having legislation specifically for older persons is imperative in protecting the human rights, dignity and autonomy of this group.

There are many initiatives and examples of good practice with regard to the elderly in the region – a selection has been presented in this chapter. A limitation is the lack of evaluation and evidence on the impact of these initiatives. More attention should be paid to the outcomes of interventions and to measuring effectiveness in promoting health and quality of life among older people. This will assist in the rational allocation of resources.

At the environmental and social level, older persons are susceptible to emergency and disaster situations, environmental risks from the characteristics and availability of housing and transport, and personal and financial security. Social determinants of health such as socioeconomic status and gender have major impacts on the levels of vulnerability experienced. For example, having financial security throughout the life-course allows for safe housing with the necessary adaptations, such as handrails, so that older persons are safe in their homes.

Factors at the individual and behavioural level – physical activity, nutrition and oral health, alcohol and tobacco use – are important throughout the life-course. Prevalence of NCDs in the elderly tends to be very high; controlling risk factors such as childhood obesity will help prevent NCDs such as diabetes and its complications later in life.

In conclusion there are examples of good practice that facilitate an enabling environment for the elderly that have been described in this chapter. These often involve government, civil society and community partnerships. These can be further devaeloped or adapted for use in other places. A starting point is political will and allocation of resources to achieve healthy ageing.

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## Chapter 7: Health systems and policy implications for older persons

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## Introduction

The Caribbean is very diverse and there are variations in the rate of change, but the general trend towards population ageing in the region is clear. Most countries are in the period of “demographic dividend” with a relatively large working age population and a 60+ population of less than 15%. As at the most recent censuses (around 2010), 63.2% of the Caribbean population was in the 15-59 age group, and 11.6% aged 60 and over (Chapter 1, Table 1). The time is now to make the most of the relatively large working age population to develop strategies for and age-friendly health systems and societies.

Such strategies should be informed by the healthy ageing framework that emphasises the importance of promoting health along the life course, to prevent disease and disabling conditions and minimize the length of time, especially at the end of life, when individuals are in a dependent state due to disease or disability. The efforts of Caribbean people to develop strategies and enabling environments to prevent NCDs, notably since the Port of Spain Declaration in 2007, are to be applauded in seeking to address the main causes of death and disability among older persons. In Chapter 2 we saw that NCDs are highly prevalent across age groups and contribute to many potential years of life lost.

Efforts to address NCDs must be continued and strengthened by orienting attention to NCDs among older persons and their debilitating effects. Increased attention should be paid to the prevention, treatment and modes of care and support for people living with the “geriatric giants” such as mobility disorders, cognitive impairment, incontinence, sensory impairment, frailty, anorexia, muscle wasting and depression, some of which are brought on or aggravated by NCDs. The role of communicable diseases, accidents and violence in contributing to the geriatric giants should also be examined and addressed with prevention and care tailored to the elderly. Prevalent health conditions in the Caribbean, such as HIV, road traffic accidents and violence, should be appraised in terms of their health outcomes as people age, and specific strategies developed to address them among older people. Gender responsive approaches are needed as patterns of health conditions and life expectancy differ between men and women and their access to social and economic resources also differs.

The care landscape is shifting in the Caribbean, with changing residential and work patterns affecting the availability of informal care in the community for older persons. These changes must be recognised to give impetus to efforts to support community-based care with appropriate complementary health and social care services (see Chapter 5, sections 2.3, 2.4 and 2.8 regarding community-based care). Environments also need to be adapted to facilitate the continued independence and wellbeing of older persons and enable their participation in health promotion (see Chapter 5, Box 3 for examples of physical environmental adaptations, and Chapter 6, section 2, for examples of interventions to adapt the social and physical environment for older persons).

In this final chapter we appraise the evidence presented in previous chapters against leading frameworks to guide the development of health systems. In section 1 we examine the Decade of Healthy Ageing 2020-2030 (DHA) - which is set to start in the coming year under the leadership of the WHO - and present the major features of recommended action during this decade. We then examine the WHO Building Blocks of Health Systems. These frameworks are used in section 2 to appraise Caribbean progress in healthy ageing strategies in service delivery; health workforce; information; medical products and technologies; financing, and leadership and governance. Limitations of the analysis are that the information in this report is based on documentary and statistical review and advice from Caribbean experts who could be consulted in the timeframe for development of this report.

## 1. Health systems frameworks

### 1.1 The Decade of Healthy Ageing 2020-2030

The framework for the ***Decade of Healthy Ageing 2020-2030 (DHA)*** (WHO, 2019) (see Figure 1) was introduced by the WHO to make a concerted effort to capture a window of opportunity that will ensure that older persons age with **dignity, independence, participation, self-fulfilment and care** – UN principles for Older Persons (UN, 1991). The DHA follows on from other international strategic plans and plans of action such as the ***Madrid International Plan of Action on Ageing (MIPAA)*** (UN, 2002) and the ***Global strategy and action plan on ageing and health 2016-2020: towards a world in which everyone can live a long and healthy life*** (GSAPAH) (WHO, 2017b). The MIPAA and GSAPAH were described in Chapter 2. Achievements in three main action areas are regarded as necessary to healthy and active ageing (WHO, 2019).

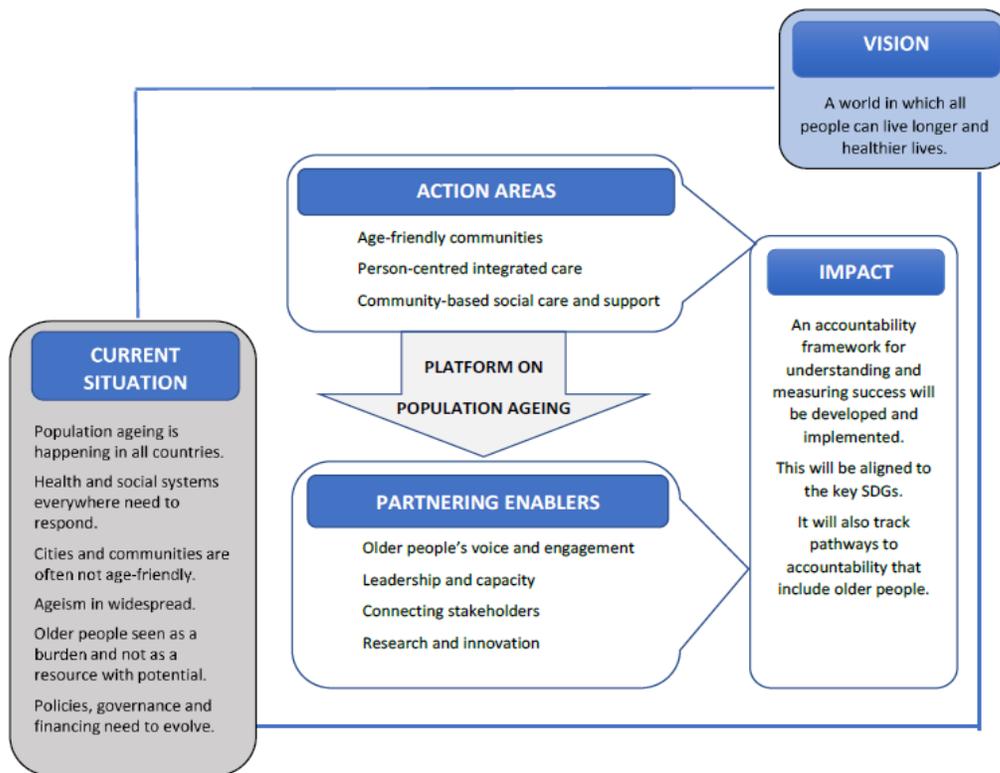
- 1. Age-friendly communities:** Having age-friendly communities is important to maintain functional ability and intrinsic capacity. Fundamental to this is the concept of ‘ageing in place’, usually in one’s home and/or community. Environmental changes to the home, community and urban infrastructure, such as adaptations to ensure wheelchair access, are included in strategies to develop age-friendly communities. Strategies to enable the participation of older persons in health, employment and life-long learning are also included. They allow older persons to continue to contribute to the community with autonomy and dignity.
- 2. Person-centred integrated care:** Comprehensive coordinated care approaches to prevent, slow down or reverse declines in intrinsic capacity are vital to healthy ageing. Usually care is focussed on individual acute conditions. This needs to be changed to a more managed and long-term approach that takes care of the whole person and recognises how health conditions relate to each other. There should be increased focus on chronic conditions and the participation of the older person in decision-making and planning about their healthcare. Integral to this shift is a removal of systemic ageism in the healthcare system and in society.
- 3. Community-based social care and support:** Long-term care for older persons can be provided in the home, in the community setting, in non-residential or residential homes. A goal should be to maintain the older person’s residence in and/ or strong links with their community. With the changes in demographics (an increasing ageing population and decreasing child population) and lifestyle (families, who usually take on the responsibility of looking after the elderly in the home, are busy in employment or moving farther away), the need for long-term social and health care support is increasing. This involves health care, assistance with activities of daily living and personal care. The maintenance of residence and strong links with the community also has the benefit of sustaining relationships which

-Focuses on people and their goals  
-Goal is to maximise intrinsic capacity and functional ability  
-Older person is an active participant in planning and self-management of their care  
-Care is integrated across medical conditions; professional medical workers and caregivers; home-based settings and non-residential and residential care homes; and the life-course  
-Links exist between healthcare and long-term care  
-Ageing is valued and part of the life course

Source: (WHO, 2015)

prevent loneliness and depression in older persons. Long-term care has a gender aspect that must be taken into account, as most of the caregivers are female. Women must be supported in their caregiving work, and men provided with facilitation to extend their provision of care.

FIGURE 57: FRAMEWORK FOR THE DECADE OF HEALTHY AGEING 2020-2030

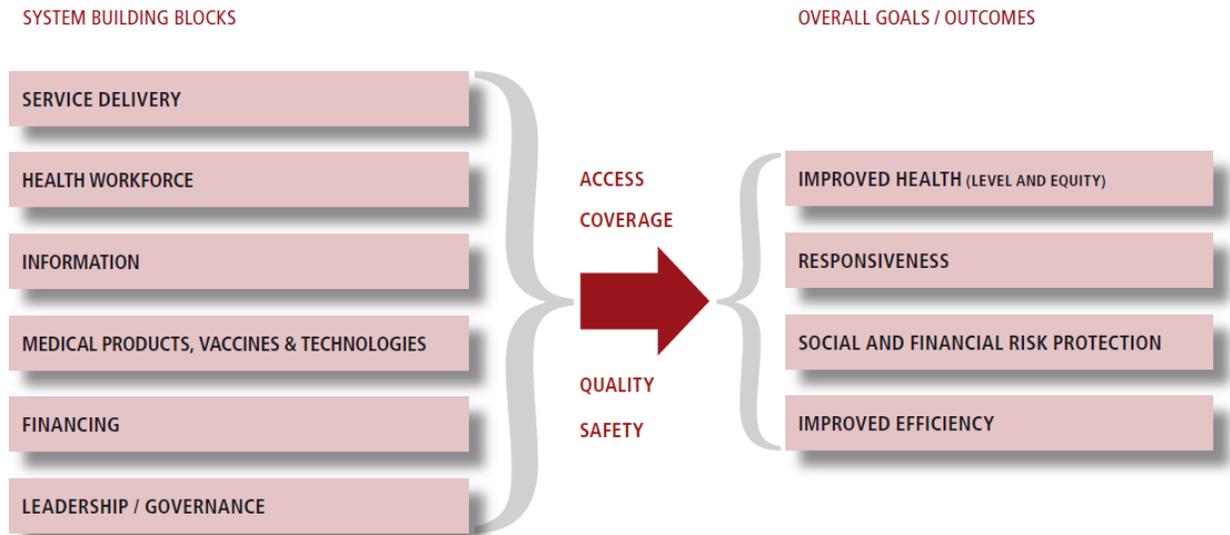


Source: (WHO, 2019)

## 1.2 The WHO Health Systems Framework

To implement the DHA's action areas countries must have a coordinated and well-functioning health system. Health systems can be defined as, "all organizations, people and actions whose primary intent is to promote, restore or maintain health" (WHO, 2007, p. 2). For this to occur care services must be provided; health workers trained; finances mobilised and efficiently allocated; information collected, analysed and disseminated to use in policies and programmes; and medical products and technologies made accessible. This can only be completed with effective leadership and governance. These elements make up the framework of '**building blocks**' that will ensure that the health system's overall goals are achieved: improved health; responsiveness; social and financial risk protection; and improved efficiency, as depicted in Figure 2 (WHO, 2007). Subsequent to the development of this original framework it has been suggested that improved communication and patient participation be taken on board when developing health systems (Lazarus & France, 2014).

**FIGURE 58: THE WHO HEALTH SYSTEMS FRAMEWORK**



Source: (WHO, 2007)

The health system’s building blocks are relevant to ensuring age-friendly health responses.

- **Health service delivery:** Health services must be delivered effectively and safely to those who need it, where and when they need it, with minimum waste of resources. They may be delivered at the primary, secondary or tertiary levels by public or private sectors, or civil society organisations and they should complement care provided by families and communities. For older persons, delivery of chronic and NCD services are especially important. Services should be available, accessible, acceptable, appropriate and available to all older persons. In order to achieve Universal Health Coverage resources should be distributed equitably especially to those who are most in need such as older and disabled persons. Involving older persons in the decision-making process of their own care ensures autonomy, independence and better outcomes. Services should enable privacy and be timely. Both community-based and inpatient/ residential care options should be available, while aiming to prevent hospitalisation and removal of older people from their home settings.
- **Health workforce:** To deliver health services effectively, there must be adequate numbers of adequately trained medical professionals, allied health care workers and caregivers. Shortages undermine delivery efficiency leading to poor health outcomes. Training and Continued Professional Development (CPD) for the health workforce, including informal carers, should be implemented. Health care workers should be responsive and distributed according to need and where their services can be most effectively deployed.
- **Health information systems and research:** A well-functioning health information system is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health systems performance and health status. It is necessary to have up to date research in order to inform evidence-based policies and programmes. Research needs to be not only current but available to those who can make use of it. Older persons should be included as designers and users of research, with communications strategies suited to their interests and varying levels of ability. The health

information system should have monitoring and evaluation mechanisms, including trials of interventions, and mechanisms to ensure the use of findings in development and implementation of action.

- **Access to essential medicines and technologies:** Accessibility and availability of high quality and safe medications can prevent disease and their progression. Technologies can be used for screening and monitoring of health outcomes. For example, with older people free NCD medications and regular screening for diabetes can prevent adverse consequences. It is also necessary to provide access to assistive technologies such as walking frames.
- **Financing:** Health services need to be financed as, for example, staff must be employed, and medications and technologies bought and paid for. Funding for the older persons must take multisectoral approach. It involves not only funding directed towards ministries responsible for health and community and home-based care, but also towards tertiary education for training and skills development, and government agencies responsible for building and transport to ensure safe and secure homes and access to services. There is also a need to ensure that social security systems are designed in such a way as to assure economic security among older persons.
- **Leadership and governance:** Laws, policies and strategies must be developed and supported at the highest political level. Policies on the human rights of older persons with an emphasis on combatting ageism and regulations for residential care homes is very relevant to healthy ageing. Systems must be developed, with adequate resources, to ensure the implementation and monitoring of policies.

In the remainder of this chapter we examine how the Caribbean can move forward and take advantage of the ageing ‘window of opportunity’ to ensure that its health systems are oriented to healthy ageing.

## 2. Health systems for healthy ageing

### 2.1 Service delivery

There are a number of service delivery issues and recommendations suggested by the findings of this report.

#### 1. Strengthen primary health care responses oriented to prevention and care of older persons

Health care resources tend to be focused on inpatient care and acute conditions. Available information suggests that there may be deficits in utilisation of primary health care by older persons in the Caribbean, since some conditions that could be diagnosed and treated using ambulatory services such as polyclinics and community health outreach, or prevented through health promotion measures, result in high numbers of inpatient of hospital admissions and extended hospital stays by older persons. This imposes high costs on health care systems as tertiary care is relatively expensive. This finding supports the policy and advocacy efforts of Caribbean governments and civil society organisations to allocate more of the available resources towards prevention and health promotion.

There is now a need to focus more attention on the older population, ensuring that they know about and are linked with available services, so that health challenges can be identified and treated at an early stage, and there is follow up and support to ensure management of health conditions. There are parallels here with what has come to be known as the treatment cascade or continuum: a series of steps that should be taken to achieve control of a disease. These steps were developed for HIV (Gardner, McLees, Steiner, del Rio, & Burman, 2011) (Figure 3) but have been generalised for the management of other chronic conditions including NCDs. They generally involve the steps of screening, diagnosis, linkage to care, retention, treatment and disease control. At each stage there may be people who do not receive the necessary care: for example they may not present for screening, they may be screened but undiagnosed, they may be diagnosed but untreated, they may be treated but uncontrolled (Berry et al., 2017). Deficits and losses along the continuum have costs in terms of illness and progression of the disease (D. Spence et al., 2019).

**FIGURE 59: EXAMPLE OF A TREATMENT CASCADE**



Source: <https://www.avert.org/sites/default/files/field/image/HIV-treatment-cascade.jpg>

First, people must be screened, so that they can be diagnosed. Thus, older persons must be encouraged to present for screening and tests. They must then be linked to the appropriate care, which in the case of older persons may mean more than one service, as there may be more than one condition and specific conditions may lead to functional incapacities requiring assistance. Services must be available and ready to accommodate the needs of older persons. Patients must be treated with dignity and respect to ensure presentation for screening, retention in care and their adherence to any medication or health advice they are given (Allen, Leon, Wilson, & Kitson-Piggott, 2019). The outcome of an age-friendly primary health care system would be improved health outcomes, including disease-specific outcomes (e.g. control of blood sugar in a person with diabetes) and avoidance/ reduction of disability. Adequate communication and ethical treatment of older persons are important so that they will access primary and secondary health services whenever needed, and only access tertiary care after using these services if this proves necessary.

Another aspect of primary prevention is immunisation. Older persons must be encouraged to present for available immunisations, especially given the evidence presented in Chapter 4, section 3.1.2 about the relatively high rates of mortality of elderly persons from Severe Acute Respiratory Infections. Influenza and other vaccinations may help prevent some of the deaths of older persons. Immunisation services need to be publicised and promoted to older persons.

For immunisation, screening, and general uptake of primary health care for both acute and chronic conditions, specialised support services may be needed for older persons. Community health workers may need to conduct visits, especially to people who are housebound, and transport may be needed for older persons to attend services.

## **2. Improve communication and coordination between different parts of the health system**

Person-centred integrated care requires an individual to transition and move between different parts of the health system according to need. This is especially important for older persons given their diverse and sometimes multiple health conditions, the need for medium- to long-term follow up and the progressive nature of some health conditions, especially the Geriatric Giants. **Strong communication and referral mechanisms between different parts of the health system are critical to the establishment of person-centred integrated care.** This includes mechanisms between primary, secondary and tertiary institutions and between public, private and civil society providers. Older persons themselves, their informal carers and families should be provided with adequate information to understand and choose between care and support options.

## **3. Develop communication methodologies suitable for older persons with diverse needs**

Communication with older persons plays an important role in their utilisation of health care and adherence to health recommendations. Attention should be paid to ways to communicate and support health promoting behaviour. Face-to-face communication may be especially effective, meaning that outreach should be conducted to reach those older persons who do not or have difficulty in attending health institutions. Research should be conducted to identify the types of media most often used by older persons. Anecdotally, in the Caribbean, radio, television and newspapers are popular media for the current older generation. Health information, including opportunities to access suitable services and health events, should be actively promoted via media commonly used, identified via research. Research should also investigate the utility and acceptability of using social media and digital technologies, with possible adaptations and support according to special needs. The goal should be greater inclusion of older persons in health systems, avoiding communication methods that are unfamiliar or difficult to use (see Chapter 5, section 2.2).

## **4. Focus on medium to long-term care**

There is a need for increased focus on medium- to long-term care, since the health challenges of older persons are generally not short episodes that are easily cured (see the health profile of older persons in Chapter 3, section 3). Older people often experience multiple and cascading conditions, and it is not efficient to treat each individually; a holistic approach is needed with each patient (D. Eldemire-Shearer et al., 2011). Increased focus on medium- to long-term care is needed at the primary and secondary health care levels and there should be moves away from treatment of these conditions in tertiary institutions and residential homes.

**Case management** has been identified as a suitable approach for the care and support of older persons, as it enables professionals to focus on the range of health issues of an individual and develop an integrated and appropriate **care package** rather than treatment

for individual episodes of disease. Since older people tend to have complex needs, care packages should involve the services of **multidisciplinary teams** under the direction of a case manager (Knapp et al., 2018; WHO, 2017a, 2019). Since some issues concern loss of capacity rather than specific diseases, such as inability to cook meals, there is a need for collaboration between health and social service providers. For instance, a government social services department or a non-governmental organisation may provide meals-on-wheels.

The need for medium- to long-term care means that older persons have to have the means to attend follow-up appointments over an extended period. Transport costs alone can be considerable, so attention should be paid to providing transport directly, via a vehicle, or to subsidising costs of transport for older persons (see Chapter 6, section 2.2). Generally, assuring the economic security of older persons is a vital component in enabling their access to services (see Chapter 6, section 2.3). For people with deficits in functional capacity, adjustments to services should be made to assure their inclusion. These may include, for example, outreach to people with mobility or cognitive challenges, ramps at health care centres, and the provision of information using a variety of audio and visual media.

## 5. Respond to diversity and special needs

There is a need to diversify suppliers of care in response to the diverse needs of older persons and to mitigate high expenditures by the state resulting from population ageing. Private and non-governmental providers can provide specialised and effective services to meet specific needs (Dingle Spence et al., 2019), sometimes at a fraction of the cost. The Alternative Care of the Elderly Programme in Barbados (see Chapter 5, Box 9) is an example of public-private partnership that expanded access to care through partnerships with private residential homes while assuring quality by implementing rigorous screening and monitoring procedures and reducing state expenditure on hospital care. There may be similar examples around the region of innovative intersectoral partnerships with quality control that respond to older person's needs efficiently. Further research and communication of good practice across the region are important for further progress. Overall management of the diverse suppliers is necessary to ensure person-centred integrated care – an action area of the Decade of Healthy Ageing. Currently there are challenges of articulation between various levels of the healthcare system and the public and private sectors (Rouse, 2013). **Development of a mixed economy of care** is important in responding to diversity while targeting state resources efficiently (see Chapter 5, section 2.7).

## 6. Scale up services for older persons, while developing the managerial role of the State

There is a need to scale up prevention, care and treatment options for older people, given that this population is expanding and there is commitment to the principle of Universal Health Coverage. This report showed examples of good practice in elder care and support from several countries and agencies in the region (in Chapters 5 and 6), but coverage appears to be uneven, leading to inequity in access. The scale of ageing in an individual country may be too large for the government of that country to address through direct finance. Multi-sectoral collaboration is necessary, with government playing a coordinating and supportive role, and assisting private and civil society in attracting and retaining funding if their own funding falls short. This extends the role of the state as a manager rather than a direct provider of services

and goods. Nevertheless, government would retain its ultimate responsibility of Universal Health Coverage and needs to ensure that consistent and sustained funding is available for high quality care and support.

## **7. Develop regional and international collaborative networks**

Regional and extra-regional collaboration between governments and experts can strengthen the network of resources available for care of the elderly. The International Agency for Research on Cancer, for instance, has collaborated with Caribbean regional agencies to assess resources for cancer care and provide technical and financial support for strengthening health systems for cancer. For instance, training on palliative care and development of resource-appropriate clinical guidelines were provided via the collaboration (Dingle Spence et al., 2019; D. Spence et al., 2019). The development of regional networks of professionals working on ageing and geriatric health may assist in the strengthening of national strategies.

Regional agencies such as CARPHA and CARICOM can play important roles in the development of regional strategies to support the older population in the region. Currently, the governments of the region have a diverse array of institutional arrangements to address issues of concern to senior citizens, as detailed in tables in Chapters 5 and 6. While these may have developed in line with national needs, there is scope for sharing of experiences and coming together to agree on principles and strategies to develop collective Caribbean approaches. Suggestions are provided below in section 2.6.

## **8. Address migration issues in national strategies on healthy ageing**

Migration (emigration or immigration) is an issue that must be considered in the development of age-friendly health systems. Most Caribbean countries are affected by emigration or immigration (see Chapter 3). The human resource implications are considered below. It is also important to consider the emigration or immigration of older persons.

Emigration may be a response to perceived inadequacies in health care and support, such as lack of specialised treatment for a major health condition. Systems should be put in place for collaboration between countries to supply specialised services that are not available in the country or territory (Dingle Spence et al., 2019). In Sint Maarten and Sint Eustatius, for example, there are arrangements with Bonaire, which is also in the Dutch Caribbean, to supply specific NCD and mental health services that are unavailable locally. Arrangements have also been made with Colombia and Guadeloupe for provision of some treatments (Sint Eustatius Department of Public Health & PAHO, 2019; Sint Maarten Ministry of Public Health Social Development and Labour & PAHO, 2019). Such arrangements can enable older persons to be treated abroad and then return home, which is consistent with the age-friendly communities action area of the Decade of Healthy Ageing. It enables the continuation of strong inter-generational support and ties that are important for social and cultural cohesion.

Immigration is also a major feature of several Caribbean countries and territories. This includes immigration of older persons, who come with varying levels of family, social and economic support. Some, from the Caribbean diaspora, may come to retire in the region while having few ties in their destination country because they have been away for so long. They may have little knowledge of the health care system and should be provided with information to link them with diagnostic, treatment and care options available.

There are also people from other countries who retire in the region because they view it as an attractive destination, having perhaps enjoyed vacations in the region. These people tend to be wealthy but questions arise as to the availability of care for them if they experience extended or grave illness and cannot pay, out-of-pocket or from insurance, for the necessary care. Others may come to the country as part of families seeking a better economic future. In all these cases there may be challenges in providing care, especially because contributions to national health insurance are likely to be small or non-existent. It should be noted that immigrants, even those in the older age groups, can contribute to the economy and the availability of human resources in the country, which are especially important if there is underlying ageing of the local population. Systems should be put in place with clear guidelines regarding the care and treatment of non-nationals, including specific guidelines concerning older age groups.

## **9. Establish systems for the participation of older persons in health decision-making**

Participation and involvement of older persons are key to establishing age-friendly communities and person-centred integrated care, as recommended in the DHA initiative. Older persons should be integrated into decision-making processes for design and monitoring of health and social care. They should be actively consulted regarding existing challenges and proposed solutions and invited and encouraged to propose innovations. This means overcoming any ageist attitudes that may exist and actively seeking and facilitating participation of elders, providing assistive support if necessary.

## **10. Develop gender-responsive services**

Large differences between men and women in life expectancy and in health conditions in the Caribbean have been shown in Chapters 3 and 4. Chapters 1 and 4 also noted differences in health-seeking behaviour between men and women, with Caribbean evidence that men are less frequent users of formal health care services than women. Services should be developed in line with the different needs identified. For instance, given that women participate to a lesser extent in the workforce than men and live for longer (generally), the economic security of older women is of special concern. The implication is that strategies to address and compensate for lower incomes among women, such as development of income-earning opportunities and subsidised services such as transport, should receive attention. Services to address the needs of the older old population should pay attention to how the “geriatric giants” and other health conditions present among women. To increase male participation in the health system, outreach strategies to the older male population should be developed.

## **11. Develop palliative care and end-of-life services**

In Chapter 5, section 2.8, we saw that there is a dearth of services dedicated to supporting older persons with incurable and terminal health conditions. Medication for pain management is scarce, implying that many older persons die in pain and distress. There is little coordination of the range of human and other resources needed to help older persons and their families cope with and have positive experiences at the end of life. Models of palliative care, involving multi-disciplinary and cross-agency collaboration to provide physical, social, emotional and spiritual support, should be examined with a view to strengthening service provision to people with incurable and terminal conditions.

## 2.2 Health workforce

A dearth of personnel specialising in care of the elderly, or with skills to provide geriatric care, has been identified in some parts of the Caribbean (see Chapter 5 section 2.6) (Rouse, 2013; Sint Eustatius Department of Public Health & PAHO, 2019; Sint Maarten Ministry of Public Health Social Development and Labour & PAHO, 2019). **There is a need to boost the complement of adequately trained staff in geriatric medicine and gerontology in the Caribbean, and in the availability of professionals trained in specialisms that can assist with elder care and support and be included on multi-disciplinary teams (e.g. chiropodists, cleaners, cooks, doctors specialising in NCDs, drivers, home care assistants, nurses, nutritionists, occupational therapists, orthopaedic doctors, physiotherapists, psychologists, psychiatrists). Geriatric medicine and gerontology should also be infused into the curricula for general medical training in the Caribbean.**

Informal carers should also be provided with skills so that care in the community can be strengthened (see Chapter 5, section 1). In view of the difficulties in recruiting professional staff, it is especially important to support informal carers, who continue to provide the majority of care for elderly persons in the Caribbean. As detailed in Chapter 5, supportive measures include flexible working hours and locations and periods of paid leave for those informal carers who are also employed, improved integration into the social security system for informal carers including domestic workers, respite care, training in skills needed for care of the elderly, and psycho-social support services. These are especially important for women who comprise the bulk of informal carers. **Plans for informal carers should form part of overall human resource development strategies in response to the needs of older persons.** Training in geriatric care should be provided for family members as well as care providers and healthcare workers (Rouse, 2013).

A starting point for the development of appropriate human resources is a **human resource planning audit focussing on the numbers of required personnel overall in geriatric care and by specialism.** Population data can be used to estimate and project the number of older persons by age group and by geographical area of the country. If available and feasible, local research should be used to develop an epidemiological profile of older persons and from that derive estimates of numbers of staff of each specialty needed and where they should be located. In the absence of such research, the age profile of the population may give an adequate assessment of the types of prevention and services care needed, focussing especially on NCDs for the young old population (60-74) and especially on the geriatric giants for the population 75 and over. Such an approach, based on census data, was used by the Division of Ageing in Trinidad and Tobago in deciding to develop Senior Activity Centres as a response to the majority of the older population being in the young old category (see Chapter 5, Box 6) (Rouse, 2005, 2013). **Assessments of human resource needs should be regularly updated. The health information system should be designed to provide such information** (see section 2.3).

**The availability of training in geriatric care and related specialisms needed should be assessed.** In terms of medical and nursing education, the Caribbean is well supplied, with 80 medical schools (21 public and 59 private) across the region, and 32 nursing schools (D. Spence et al., 2019). Some of the medical schools, however, are offshore branches of universities based in metropolitan countries and have a limited role in educating local populations (Sint Maarten Ministry of Public Health Social Development and Labour & PAHO, 2019). An assessment of what is available and accessible to Caribbean nationals, the entry criteria and costs should be made. Human resource development plans should cover school curricula as well as higher education options. Consultations and collaboration with Caribbean-based higher education institutions to develop and agree human resource development plans can assist in developing the required resources. Since there are needs

for a full spectrum of low-skilled to highly skilled workers for the care of older persons, a range of collaborations may be needed, from vocational skills training institutions to universities in the region and beyond for postgraduate training.

Some Caribbean countries may find it especially difficult to retain resident specialists as a result of their size or other features such as vulnerability to severe weather events (CARPHA, 2018b, Chapter 4). Challenges of size have been illustrated in the case of Sint Eustatius (Chapter 5, Box 8). In these cases, collaborative arrangements can be made with countries and territories where the services of specialists can be accessed. A schedule of visits by specialists may also be developed. Mechanisms for financing travel and accommodation of patients and specialists need to be identified. The variety of arrangements in place should be appraised with a view to boosting the types of care that are suitable and available to older persons. One concern is that travel may not be feasible for frail elderly patients. Costs and travel may be reduced by providing training in specific areas to local staff. For instance, care and social services staff may be trained in basic elements of dementia care.

**The human rights of older persons, and strategies to combat ageist attitudes and practices, should be included in the curricula of training of all health care workers.** Chapter 1, section 2 provides examples of the ethics, human rights and other principles relevant to older persons.

**The advent of online training, from short courses to postgraduate degrees, opens up possibilities for training of locally-based personnel at low cost and at a variety of skill levels.** For instance, PAHO has developed a Virtual Campus for Public Health with self-learning courses and courses with tutoring in areas such as: Family, Health Promotion and Life Course; Non-Communicable Diseases and Mental Health, and Health Systems and Services (see <https://www.campusvirtualsp.org/en>). A further example is the IARC Cancer Registry Hub at CARPHA provides technical support to the development of cancer registries around the region; an important component of health information systems. CARPHA is also involved in providing a variety of short courses in person and online to strengthen human resource capacity in public health. While this has included relevant issues such as NCD care and management, to date there has been little direct focus on healthy ageing

It is estimated that 50% of Caribbean tertiary education graduates who are eligible to enter or continue in the labour force are lost to emigration (Misha, 2006), and that there is an average vacancy rate of 42% for nursing posts in the region (Salmon, Yan, Hewitt, & Guisinger, 2007 ). In the face the depletion of human resources for health, Caribbean countries have developed collective strategies (such as the Managed Migration Programme (Salmon et al., 2007 )) and national strategies to attract and retain their human resources. Low pay, poor career prospects, and lack of education opportunities locally are among the reasons for emigration of nurses and other health personnel. There are also pull factors such as the operations of recruitment agencies in the Caribbean aiming to attract candidates, including people currently working in the health care system, to work in the United Kingdom, Canada, the United States, and other countries. Compounding the situation is the lack of resources to train nurses to fill the vacancies. Issues such as low pay are difficult for some Caribbean countries to address. Some have adopted complementary strategies, such as improving working conditions in terms of hours, transport and flexibility (CARPHA, 2018b, Chapter 4), and requiring scholarship recipients to return to their countries to work for fixed periods following graduation. **The drain of human resources for health is a systemic challenge that Caribbean countries must continue to seek to address in the face of population ageing.** It has been noted that nurses and other health personnel who live outside the region do contribute through periodic return to work in their countries of origin, remittances and contribution to human resource development through formal and informal training (Blouin & Debnath, 2011). **There are**

**possibilities for health care workers based abroad to contribute further by providing online training and consultations.**

Net immigration is a feature of the demography of several Caribbean countries (see Chapter 1). The majority of immigrants are in the working age group 15-59 and present a potential resource for employment relating to healthy ageing. Policies to recruit foreign workers in areas needed by the health care system have been implemented in some Caribbean countries. For instance, Barbados signed an agreement with Ghana in November 2019 to recruit 120 Ghanaian nurses (GhanaWeb, 2019). Policies to recruit from within the Caribbean region may also be considered, especially given the scale of human resources needed to support ageing populations. **The potential of recruiting workers from other countries, including from current immigrant populations, can be considered as part of human resource development strategies for healthy ageing.**

## 2.3 Health information systems and research

### 2.3.1 Health information systems

**Health information systems should be geared to the following two objectives concerned with healthy ageing:**

- 1) Assisting with health systems decision-making and rational allocation of resources, and**
- 2) Empowering older persons with information.**

Surveillance systems for NCDs are being developed around the Caribbean with technical assistance of agencies including CARPHA and PAHO but are still relatively new and coverage is patchy. An important development is the International Agency for Research on Cancer (IARC) Caribbean Regional Hub for Cancer Registration, based at CARPHA and launched in 2018. The Hub is a partnership between IARC, CARPHA, the US Centers for Disease Control and Prevention (CDC), the US National Cancer Institute (NCI) of the National Institutes of Health, and the North American Association of Central Cancer Registries (NAACCR). Activities performed under the Hub by the partners include technical training workshops, assessments of cancer registry operations in several countries, statistical analysis of cancer registry data and development of standard operations manual for registries. Cancer registries assist national stakeholders in developing evidence-based approaches to cancer (CARPHA, 2018a).

Information on other NCDs mostly relies on individual surveys and studies that are generally not repeated or replicated, making it difficult to identify trends or differences between settings and countries. Surveys enabling comparisons between countries, such as the STEPS surveys on NCD risk behaviour (see Chapter 4, section 2.2), rely on national stakeholders working alongside regional and international agencies such as CARPHA and WHO. Data on mortality are reported to CARPHA, enabling analyses of causes of death as presented in chapter 4. Timeliness of reporting varies between countries, bringing challenges in presenting up-to-date information. Causes of death among the older population appear to be underreported, with substantial numbers being classified under “old age” or “senescence” which are regarded as ill-defined conditions as there is no attribution to any specific diseases. **Surveillance systems should be strengthened, including improving the timeliness of national reporting in general (see Chapter 4, section 1), and increased attention to data quality for persons aged 60 and over (see Chapter 4, section 3.2). Accurate reporting of cause of death should occur throughout the life course. Increased attention should also be**

**paid to accurately diagnosing the disease conditions associated with cognitive decline, such as types of dementia and Parkinson’s disease, as they imply different strategies for secondary prevention and treatment.** Thus, there should be less reporting of deaths occurring due to “old age”, “senescence” and “senility”.

Mapping of most health conditions by age and geographical location is largely limited to mortality data, making it difficult to respond to current patterns of illness among the elderly. Use of population data such as censuses is important in mapping age groups between locations, between the sexes and over time, from which patterns of NCDs and the geriatric giants can to some extent be surmised, enabling some rationality in resource allocation.

There is a lack of documentation and publication of information on activities and interventions to address health among older persons. Monitoring and evaluation of these activities are scarce, and measurement of impact using rigorously designed trials of interventions and treatments is even more rare (Dingle Spence et al., 2019). For evidence-based practice and efficient resource allocation, monitoring and evaluation systems for health-related action among older persons are needed. **Trials of interventions, both clinical and population-based, to improve health among older persons should be developed to strengthen the evidence base. These should include measurement of impact on diseases and on functional capacities. They should also include behavioural research and identification of social environmental and demographic factors influencing behaviour change. Health systems should include monitoring indicators and evaluation methods specific to geriatric health. Mechanisms for data analysis, reporting and incorporating into decision-making are essential.**

Information is also critical for the empowerment of senior citizens and their effective participation and decision-making in the health system. **Information on health must be presented in various ways in line with the diverse abilities of older persons.** For example, information presented orally, in large letters or in braille will be needed for people with visual impairment. There may be a need to simplify information for people with cognitive impairment and to work with carers to transmit information and solicit decisions. For older persons with relatively high levels of intrinsic capacity and functional ability, there is potential for the use of the Internet and cell phone applications to provide information tailored to the health issues affecting older persons. Health care workers can use these technologies to provide bulletins and reminders and to link persons to care more effectively. However, these technologies may be economically inaccessible or difficult to learn or use for some older persons, creating further disparities in access. In some cases, there may be no substitute for interacting with a health care worker who provides information and communicates it through interaction. Such interactions can be facilitated through outreach and provision of transport. **There is also a need to improve health literacy among older persons, and to facilitate the provision of this education by health workers by enabling time and training to be devoted to patient and client education.**

### *2.3.2 Research gaps*

Healthy ageing is not an area that is researched extensively in the Caribbean, though a few Caribbean researchers have done important research in several of the countries, as presented throughout this report and especially in chapters 3 to 6. An agenda for research on ageing should be developed by Caribbean countries, facilitated by regional agencies. A few initial suggestions are presented here.

**Overall, there is a need for more research on the prevalence, characteristics and experiences of older people living with the Geriatric Giants and NCDs, and for the development of evidence-based practices and policies from the experiences of older persons. Outcomes of other health**

**conditions in later life, such as HIV, other communicable diseases and injuries, should also be further explored.**

**Specific topics for future research, some of which builds on existing research, are suggested as follows:**

- Risk factor studies should be conducted among older people. There is little research on risks specific to older persons. Notably, the STEPS survey age groups only went up to 69 years old (see Chapter 4, section 2.2). Risks associated with the Geriatric Giants should be assessed, especially in “older old” populations.
- Quality of life studies among older people are needed, to assess their engagement in activities and their happiness, especially given social changes that increasingly entail families living in different places and consequent shortfalls in informal care provision.
- Dementia and other mental health conditions are little researched in the Caribbean context (see Chapter 4, section 3.2). There is scope for research on their prevalence, their symptoms, risk factors, and modes and availability of care and support. Improvement in Diagnosis of different clinical causes of cognitive impairment should be improved, to facilitate disease-specific interventions for secondary prevention and care.
- Informal care is the backbone of care for older persons, and there is scope for more exploration of caregiver needs and burden (see Chapter 5, section 1).
- The sexual health and needs of older persons should be examined, looking at differences between men and women and suitable health promotion and care strategies, including facilitating supportive practices by health care workers.
- The economic burden of disease in 60 and over should be researched, to recommend strategies to prevent and address this burden in an equitable manner (see below, section 2.5).
- Health care utilization, and progress along the “treatment cascade” should be explored, disaggregating data by age group (five-year age bands), sex and disease condition.

**Methodological recommendations include:**

- Conduct regular surveys of the state of older persons by country, to enable monitoring and allocate resources according to need. Surveys should include morbidity data and quality of life indices.
- Present gender- and age-disaggregated data whenever possible. Age should be disaggregated by five-year age groups throughout the life course. As shown in Appendix 1, some Caribbean countries continue to group persons 65 and over, making it impossible to distinguish between younger and older old persons.

## 2.4 Medical products and technologies

**In the older population the prevalence of chronic conditions and NCDs is high and therefore there is a need for timely access to quality medications.** Older persons often have multiple and complex medical conditions and therefore take more than one type of medication at a time (known as polypharmacy). With age the body’s physiology changes and so do the effects of the medications (WHO, 2015). **The need to monitor the efficacy of prescribed medications, potential new side effects and drug interactions becomes essential.** The cost of medications can be high and unaffordable relative to an older person’s income. **Ensuring access to free medications allows**

**older persons to be more financially secure, enabling them to dedicate resources to other contributors to healthy ageing such as nutritious food and social participation.**

**There is also a need to monitor and understand the use of herbal and complementary medicine and functional foods among older persons, so that changes in clinical status and possible interactions with conventional medicines can be monitored and managed** (Y. Clement et al., 2016; Y. N. Clement et al., 2005). There is scope for research on use and impact of herbal and complementary medicine among older people in the Caribbean,

Presently some Caribbean countries provide free access to medication for chronic NCDs and HIV through the public sector. Also, most Caribbean states can make use of pooled regional procurement mechanisms such as the OECS's Pharmaceutical Procurement System and the PAHO Strategic Fund, which allow for lower costs of quality medications. **Basic products to facilitate independence, such as eyeglasses, hearing aids and walking frames should be available.** In the Caribbean many of the basic technologies are available free or at subsidised costs through the ministries responsible for health and social care.

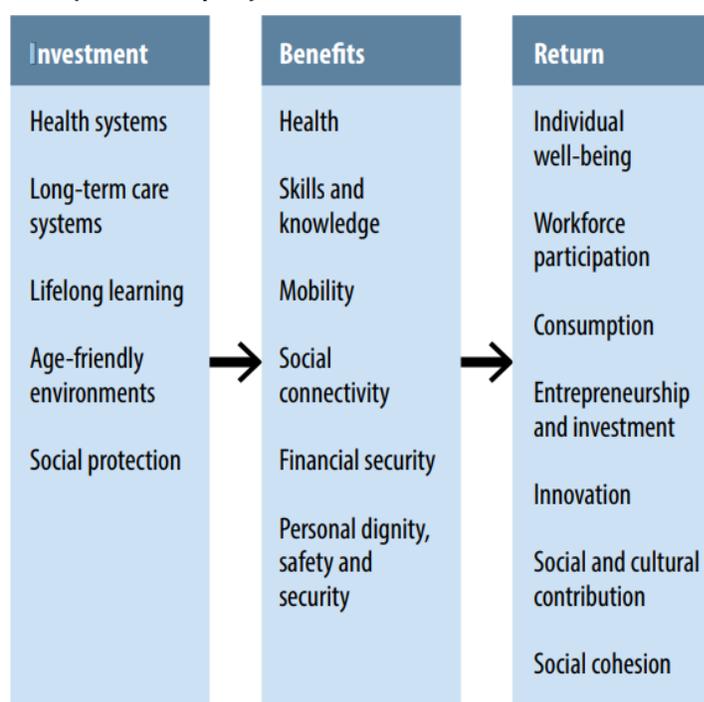
**Caribbean models for free chronic disease and NCD medications should be evaluated in terms of coverage and access by older persons and possibly adopted and adapted in countries that do not yet have such provisions** (WHO, 2019). The greater use of regional pooled procurement of assistive devices, medical products and pharmaceuticals should be encouraged.

**Quality and safe medicines and other technologies should be accessible where older persons live. Delivery systems may need to be devised for some patients.** ICT systems such as camera monitors and wearable alert devices should be used to ensure that older persons are safe in and around their homes and in care homes. Monitors can show older persons who have fallen, and wearable alert devices can send signal to family members or caregivers at a remote location to render assistance. Homes and care facilities should also be adapted with ramps and railings to assist with mobility. Governments should ensure that these options made more widely available; either free or through subsidies.

## 2.5 Financing

**FIGURE 60: RETURN ON INVESTMENT IN AGEING POPULATIONS**

Source: (WHO, 2015, p. 17)



Source: adapted from unpublished information from the World Economic Forum's Global Agenda Council on Ageing, 2013.

The healthy ageing approach encourages investment in health along the life course to prevent ill-health and incapacity in old age. Returns on such investment are depicted in Figure 4. Removal of barriers to participation of older persons in economic activity are among the pre-requisites for returns on such investment. **Mandatory retirement ages and other age-related barriers should be reviewed so that older persons can retain rights to work (see Chapter 3, section 6). At the same time, older persons should be enabled to make active choices on the level of economic activity they wish to have, in line with their human rights and values such as dignity and respect. Gender-related barriers to employment and to participation in the care economy should also be addressed (discussed in Chapter 5, section 1).**

While the Caribbean is in a period of “demographic dividend”, it must also be acknowledged that the countries of the region face varying levels of economic constraint. Resources must be rationally allocated in line with efficiency in achieving positive health outcomes while respecting of older persons’ rights to choose and participation in decisions. **Given resource constraints, countries should seek to establish guidelines for ‘health rights’ and access to essential packages of care by older persons. Universal access to these packages of care should be designed to be given current and future projections of the balance between public, private and civil society provision** (see Chapter 5, section 2.1 and Box 4) (Cumberbatch, Metivier, Malcolm, Koma, & Lalta, 2013; Denise Eldemire-Shearer & Mona Ageing and Wellness Centre Team, 2019).

**With the private sector as a key player in the healthcare arena, governments should seek to establish and monitor quality standards for care as well as develop public-private financing options** (Cumberbatch et al., 2013). **Non-governmental, community-based and faith-based organisations also have key roles to play in the provision of social and health care for older persons, and their provision should likewise be subject to quality standards and efficiency criteria** (Theodore et al., 2016). However, civil society organisations are economically and organisationally vulnerable as funding streams are often discontinuous. In the Caribbean they usually rely to a major extent on volunteers and are led by one or two charismatic individuals without a great deal of succession planning. Over-regulation and heavy bureaucratic requirements can lead to the collapse of some projects (Wistow, Knapp, Hardy, & Allen, 1994). This can be seen from the eventual decline in the number of civil society organisations participating in the Division of Ageing’s Senior Activity Centre project in Trinidad and Tobago following the imposition of major financial and

other reporting requirements (see Chapter 5, Box 6). **A careful balance must be struck between assuring quality and stifling action and innovation through bureaucratic requirements.** The possible negative effect of the latter can be alleviated by government officers in collaboration with management experts providing training and technical assistance to NGOs to fulfil reporting requirements and apply for funding.

In practice, the majority of care and support of older persons is financed, not by organisations or the state, but by older persons and their families. Everyday expenses and minor medical expenses are generally met this way. If and when major illness or disability occur, ability to access services depends on the person's access to insurance to pay private providers and/ or their access government services. Inequitable treatment results from unequal access to finance among potential patients. **The minimum package of care provided by the state must be universally accessible in order to reduce inequity between people with differing levels of income and wealth and family or community support.**

**Economic security of older persons needs to be assured by providing adequate levels of pensions and other forms of social security such as disability allowances.** These are especially important for women given their generally lower accumulation of wealth and insurance contributions than men over their lifetime, and their longer life expectancies. Non-contributory pensions in some Caribbean countries have been found to be inadequate to provide economic security, and access to some benefits is a lengthy and bureaucratic process that disadvantages the most vulnerable the most severely (Caddle, 2010; ECLAC, 2016). **Simplified procedures designed to maximise access are necessary to assure the human rights of vulnerable older persons, especially those with functional impairments.** Attention should be paid to legal procedures to grant powers of attorney to trusted persons for the conduct of the financial affairs of people who have lost the capacity to conduct their economic affairs independently. It has been suggested that social security agencies assume greater responsibilities for senior citizen health care financing (Theodore et al., 2016). However, it may be necessary to address inefficiencies in social security systems in order to make this feasible and equitable in delivery.

## 2.6 Leadership and governance: healthy ageing policies and plans

Specifically related to ageing, there have been several crucial international and regional strategies and frameworks. The most important are the *2002 Madrid International Plan of Action on Ageing* and recently the *Decade of Healthy Ageing 2020-2030*. Regionally there was the *Regional Strategy for the Implementation in Latin America and the Caribbean of the Madrid International Plan of Action on Ageing* (2003) and the *PAHO Plan of Action on the Health of Older Persons, including Active and Healthy Aging 2009-2018* (detailed in Chapter 2). Caribbean national plans and strategies have been based on these international and regional plans and frameworks. In 2015, member states of the Organisation of American States approved the *Inter-American Convention on Protecting the Human Rights of Older Persons*. However, to date this Convention has not been adopted by any Caribbean country (ECLAC, 2016; OAS, 2019). **To establish a framework to protect and advance the human rights of older persons in the Caribbean, it is suggested that Caribbean governments review the *Inter-American Convention on Protecting the Human Rights of Older Persons* and other human rights instruments relevant to older persons with a view to developing a Caribbean-specific agreement and convention.**

Caribbean states and territories have acknowledged the importance of having national policies and strategies for older persons in place. As of 2016, 12 Caribbean states implemented national laws, policies or strategies on ageing (see Chapter 6, Table 1) (ECLAC, 2017). Programmes and activities concerned with the implementation of ageing policies are multisectoral. Some countries have created special councils or commissions on ageing within ministries responsible for health or social care who

coordinate implementation, in collaboration with other ministries such as planning, infrastructure, transport and housing. Specific policies on ageing have been augmented by other national policies or plans that indirectly relate to ageing and older persons such as national development plans, national health and social strategies, NCD and mental health plans. **Further development of ageing policies and plans should be supplemented by human and other resource development and enforcement capacity to ensure implementation. They should incorporate models and strategies for public-private partnerships and intersectoral working.**

**In order to ensure quality of care homes and tertiary health care settings for older persons, legislation is needed, alongside enforcement capacity.** Some Caribbean states have specific legislation and regulations covering ageing and elder abuse and neglect in care homes including regular monitoring and inspection schedules. For example, in Trinidad and Tobago the Division of Ageing established an Inspectorate which works with the Ministry of Health's multidisciplinary team to assess and inspect the standards of care in residential homes (ECLAC, 2017). Barbados also has legislation which governs an Advisory and Inspection Committee, contracts with standards of care and systems for investigating and addressing complaints (Government of Barbados, 2005). The stage that the legislation process has reached varies across the Caribbean. In countries where these laws have been enacted, there is uncertainty as to whether these regulatory policies have a human rights approach built into them that will guarantee the human rights and fundamental freedoms of the older persons living in these residential care homes.

Older persons are generally protected from financial and personal abuse through legislation relating to fraud and domestic violence to protect all citizens. However there are relatively few human rights policies specifically for the elderly (ECLAC, 2016). Oftentimes, claims of abuse are difficult to prove. They may be perpetrated by family members or caregivers, and people with deficits in functional capacity are especially vulnerable. Financial security is important to the autonomy and independence of older persons, allowing them to make their own decisions and remain in their own house into later life; this allows for participation in community life, enhanced feelings of safety and security and overall wellbeing. **Policies and enforcement mechanisms should be developed to protect older persons from all kinds of abuse.**

The Caribbean is vulnerable to changes in climatic conditions and over recent years has experienced increasing frequency of severe weather events, including Category 4 or 5 hurricanes. In times of emergency and disaster situations, older persons are considered highly vulnerable due to their reduced functional ability. Several Caribbean national emergency disaster plans refer specifically to the elderly, and include having community registries of older persons so that rescue teams can make targeted efforts to ensure their safety prior to and after a disaster (CARPHA, 2018b). **Caribbean climate change strategies and disaster response mechanisms should incorporate consideration of the specific needs for protection and participation of older persons.**

**An overall recommendation is for national councils and commissions on ageing to advocate to their Heads of Governments to come together at the regional level and review the *Caribbean Charter on Health and Ageing (1999)* in light of the *Nassau Declaration: the Health of the Region is the Wealth of the Region (2001)* and the *Port of Spain Declaration: Uniting to Stop the Epidemic of Chronic Non-Communicable Diseases (2007)*. Since strong programmes for ageing begin with strong leadership, in the case of the Caribbean, this would be at the sub-regional level of the Caribbean Community (CARICOM). The Caribbean Charter on Health and Ageing was launched in 1999 and focusses on, “supportive environments for older persons at home, in the community, and in long term care facilities; primary health care and health promotion; and economic security, employment and other activities for healthy ageing” (CARICOM, 1999, p. 1).**

Even though the focus areas of the original Charter remain relevant, since 1999 there have been demographic, environmental, epidemiological and social changes that should be taken into account. The CARICOM region is made up of SIDS and is quite distinct historically, culturally, socially, economically, and to some extent linguistically, from Latin America and North America, therefore a distinctly Caribbean Charter would be appropriate. The renewed Charter should enhance the previous strategic areas in line with the sub-regional changes highlighted above. Focus needs to be placed upon availability, accessibility, acceptability, appropriateness and quality of health and social care and to facilitate ageing in place. For ageing in place, there is a need for medical professionals, allied health care workers, case management workers and caregivers to be accessible and conduct outreach and visits in the community. Other important recommendations would include the need to conduct evidence-based research, at the national level, that can inform policies, programmes and interventions for the elderly. Cross-cutting themes of gender, participation of the elderly at all levels and ageism should also be included.

In conjunction with regional governments focussing on healthy and active ageing, national governments need to review and update their own national plans and policies directly related to ageing. This will provide national frameworks for allocation of budgets for scaling up and making health facilities age-friendly, enhancing access to new medicines and technologies and ensuring an adequate health and social care workforce for the ageing population. Other legislation and policies that need to be reviewed include those relating to financial security, access to affordable housing and available transport and age-related discrimination.

**Safe and affordable housing needs to be made available to the elderly. Building codes must be strictly enforced and incentives such as tax breaks should be available to persons adapting their homes with age-friendly safety features and mobility aids. Transport should be made affordable for all older people as this will allow for regular medical health visits and social participation.**

**To assist in combatting ageism, specific international days honouring the elderly can be celebrated at the highest level, through the country's Prime Minister or President.** International Day of Older Persons is observed each year on 1<sup>st</sup> October and Elder Abuse Awareness Day 15<sup>th</sup> June. Intergenerational programmes need to be encouraged and built into the primary and secondary school curricula and activities. This promotes learning between the generations and prevents loneliness among senior citizens.

**In order to ensure healthy ageing, reviews and development of evidence-based policies that support the development of interventions and programmes at the national level are needed. Having developed such policies, political will and financial allocations are needed to ensure implementation. To ensure accountability, there must be regular reviews with robust evaluations and next steps that are documented and presented before government or parliament.** For example, in Trinidad and Tobago the Joint Select Committee: Social Services and Public Administration has conducted an assessment of existing arrangements for regulating geriatric care facilities/old aged homes and provided recommendations to improve these long-term residential care facilities for older persons (The Joint Select Committee on Social Services and Public Administration, 2017).

## Conclusion

Older persons are diverse and have complex and multiple needs, and the Caribbean is a diverse region, so “one size fits all” recommendations are inappropriate. Respect for diversity and the development of suitably tailored approaches should be built into strategies for healthy ageing. Robust information systems, monitoring and evaluation are important for the rational allocation of resources in response to diverse needs. In older age, individuals tend to develop a range of medium- to long-term conditions, making case management models of care more appropriate than existing models geared to the treatment of acute illness. In line with the action areas of the forthcoming Decade for Healthy Ageing, community-based health promotion, care and support are the way to go to ensure that Caribbean people can continue to reap the benefits of close family and cultural ties. Human resource development is needed to support care in the community and provide access to primary, secondary and tertiary care in line with levels of need. Given trends in working practices and the geographic dispersal of families, it is clear that governments have a vital strategic role in regulating and managing a variety of providers who can respond to diverse needs and protect the most vulnerable.

The potential benefits of healthy ageing are numerous, including extension of the period over which individuals can be independent and pursue their own goals and aspirations. Healthy ageing incorporates human rights, as people should be enabled to maintain and develop their capacities to pursue their goals and not to experience physical and emotional pain as they age. Choices may include continuing to work formally in older age, which can contribute to national wealth and the range of services and goods available. Provision of informal care to grandchildren and others continues to be an important contribution of older persons to society. It is hoped that the information provided in this report assists Caribbean people in developing strategies for healthy ageing, to the benefit of each individual and each society as they age.

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## Appendix 1: Population Pyramids, total populations and age dependency ratios by Caribbean Country

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## Data sources

Country	Census years			Data sources
Aruba	1991	2000	2010	<a href="https://cbs.aw/wp/index.php/category/population/census/">https://cbs.aw/wp/index.php/category/population/census/</a>
Bahamas	1990	2000	2010	Source : 1990, 2000, 2010 Table 1.2 <a href="https://www.bahamas.gov.bs/wps/wcm/connect/a6761484-9fa0-421d-a745-34c706049a88/Microsoft+Word+-+2010+CENSUS+FIRST+RELEASE+REPORT.pdf?MOD=AJPERES">https://www.bahamas.gov.bs/wps/wcm/connect/a6761484-9fa0-421d-a745-34c706049a88/Microsoft+Word+-+2010+CENSUS+FIRST+RELEASE+REPORT.pdf?MOD=AJPERES</a>
Barbados	1990	2000	2010	2010 Population and Housing Census Volume 1 (Barbados Statistical Service) Table pg iv Table D
Belize	1991	2000	2010	2010 Population and Housing Census Volume 1 (Barbados Statistical Service) Table pg iv Table D
				2010: Table P2.3
				2000 and 1991: <i>Abstract of Statistics Belize 2001 Table 1.12 pg 14</i> [Hardcopy at CARPHA]
BES Islands	1992	2001	2011	1992: <a href="http://digitallibrary.cbs.cw/CBS0000004/00003?search=census">http://digitallibrary.cbs.cw/CBS0000004/00003?search=census</a>
				2001: <a href="https://www.cbs.cw/document.php?m=1&amp;fileid=4390&amp;f=d53c2cd7432f01920d9cbbe9e73b2fd3&amp;attachment=0&amp;c=1222">https://www.cbs.cw/document.php?m=1&amp;fileid=4390&amp;f=d53c2cd7432f01920d9cbbe9e73b2fd3&amp;attachment=0&amp;c=1222</a>
				2011: <a href="https://opendata.cbs.nl/statline/#/CBS/en/dataset/80534ENG/table?fromstatweb">https://opendata.cbs.nl/statline/#/CBS/en/dataset/80534ENG/table?fromstatweb</a>
Cayman Islands	1989	1999	2010	1989 and 1999: <a href="https://www.eso.ky/populationandvitalstatistics.html#4">https://www.eso.ky/populationandvitalstatistics.html#4</a>
				2010: <a href="https://www.eso.ky/populationandvitalstatistics.html#4">https://www.eso.ky/populationandvitalstatistics.html#4</a>
Curacao	1992	2001	2011	1992: <a href="http://digitallibrary.cbs.cw/CBS0000004/00003?search=census">http://digitallibrary.cbs.cw/CBS0000004/00003?search=census</a>
				2001: <a href="https://www.cbs.cw/document.php?m=1&amp;fileid=4390&amp;f=d53c2cd7432f01920d9cbbe9e73b2fd3&amp;attachment=0&amp;c=1222">https://www.cbs.cw/document.php?m=1&amp;fileid=4390&amp;f=d53c2cd7432f01920d9cbbe9e73b2fd3&amp;attachment=0&amp;c=1222</a>
				2011: <a href="http://digitallibrary.cbs.cw/CBS0000406/00003">http://digitallibrary.cbs.cw/CBS0000406/00003</a>
Guyana	1991	2002	2012	<a href="https://statisticsguyana.gov.gy/census.html">https://statisticsguyana.gov.gy/census.html</a>

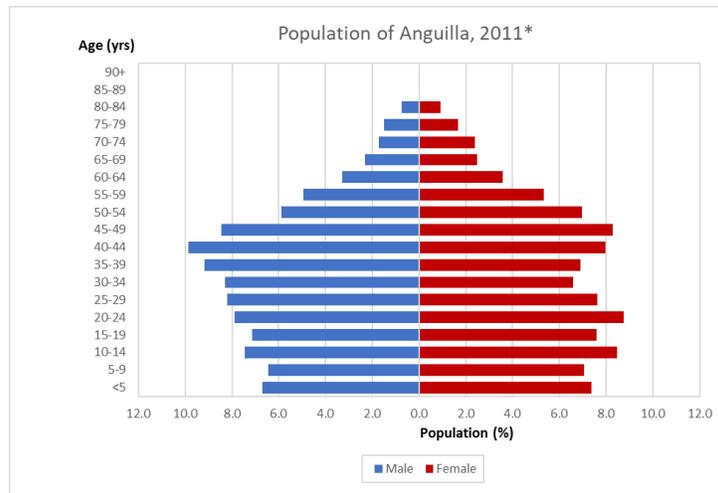
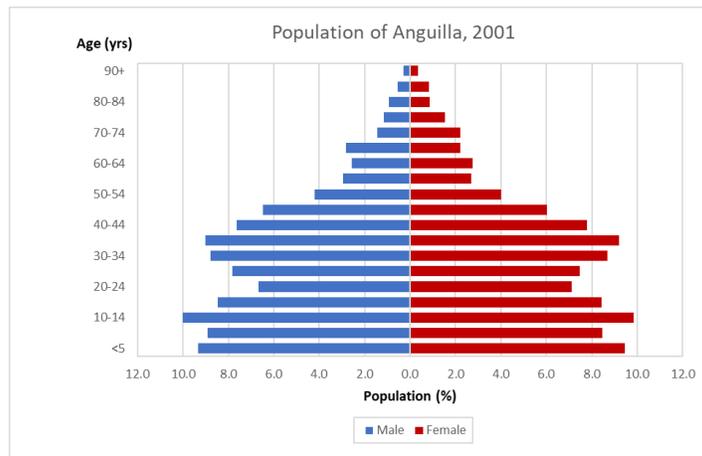
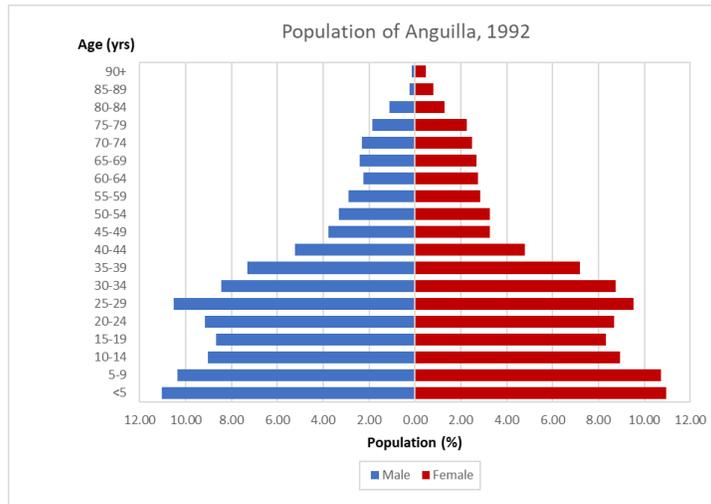
Country	Census years			Data sources
				"2012 Census final results" Table 6 (1991, 2000, 2012)
Jamaica	1991	2001	2011	<a href="https://statinja.gov.jm/Census/PopCensus/Populationbyfiveyearsagegroup.aspx">https://statinja.gov.jm/Census/PopCensus/Populationbyfiveyearsagegroup.aspx</a> Website for 2011; Population Census 2001 Jamaica [Hardcopy at CARPHA for 2001 and 1991]
St. Lucia	1991	2001	2010	<a href="https://data.govt.lc/dataset/census-population">https://data.govt.lc/dataset/census-population</a> <a href="https://statistics.caricom.org/Files/Meetings/4th%20ResearchSeminar/StLuciaCensus2010Presentation.pdf">https://statistics.caricom.org/Files/Meetings/4th%20ResearchSeminar/StLuciaCensus2010Presentation.pdf</a> 1991: Vital Statistics Report 1992 [Hardcopy at CARPHA]
St. Vincent and the Grenadines	1991	2001	2012	<a href="http://stats.gov.vc/stats/?page_id=256">http://stats.gov.vc/stats/?page_id=256</a>
Trinidad and Tobago	1990	2000	2011	<a href="https://cso.gov.tt/census/2000-census-data/">https://cso.gov.tt/census/2000-census-data/</a> <a href="https://cso.gov.tt/census/2011-census-data/">https://cso.gov.tt/census/2011-census-data/</a> Used figures from Table 1.4 in Trinidad and Tobago 2011 Population and Housing Census Demographic Report
Suriname	1980	2004	2012	1980, 2004, 2012: Table 1.1: <a href="https://www.statistics-suriname.org/wp-content/uploads/2019/02/DEMOGRAFISCHE-DATA-2013-2016.pdf">https://www.statistics-suriname.org/wp-content/uploads/2019/02/DEMOGRAFISCHE-DATA-2013-2016.pdf</a> <a href="https://statistics-suriname.org/en/the-census/">https://statistics-suriname.org/en/the-census/</a>
Antigua and Barbuda	1991	2001	2011	<a href="https://statistics.gov.ag/wp-content/uploads/2017/11/2011-Antigua-and-Barbuda-Population-and-Housing-Census-A-Demographic-Profile.pdf">https://statistics.gov.ag/wp-content/uploads/2017/11/2011-Antigua-and-Barbuda-Population-and-Housing-Census-A-Demographic-Profile.pdf</a>
Bermuda	1991	2000	2010	<a href="https://www.gov.bm/bermuda-census">https://www.gov.bm/bermuda-census</a>
Montserrat	1991	2001	2011	Table 1: <a href="https://statistics.gov.ms/census/">https://statistics.gov.ms/census/</a>
Anguilla	1992	2001	2011	<a href="http://gov.ai/statistics/census/Demography%20&amp;%20Culture%20tables.htm">http://gov.ai/statistics/census/Demography%20&amp;%20Culture%20tables.htm</a>
Turks and Caicos	1990	2001	2012	<a href="https://www.gov.tc/stats/statistics/social-statistics/5-population">https://www.gov.tc/stats/statistics/social-statistics/5-population</a> 2012: <a href="https://docs.google.com/spreadsheets/d/1vWgKqXT2sx00JUtoYAcPLLl5EetEmLLjyO8TdtsTeiE/edit#gid=0">https://docs.google.com/spreadsheets/d/1vWgKqXT2sx00JUtoYAcPLLl5EetEmLLjyO8TdtsTeiE/edit#gid=0</a>

Country	Census years			Data sources
				2001: Table 1.5 <a href="http://www.caribbeanelections.com/eDocs/statistics/tc_stats/tc_population_housing_census_2000.pdf">http://www.caribbeanelections.com/eDocs/statistics/tc_stats/tc_population_housing_census_2000.pdf</a>
				1990: Turks and Caicos Housing and Population 1990 [Hardcopy at CARPHA]
BVI		2001	2010	Table 67 <a href="https://bvi.gov.vg/sites/default/files/resources/virgin_islands_population_and_housing_census_2010.pdf">https://bvi.gov.vg/sites/default/files/resources/virgin_islands_population_and_housing_census_2010.pdf</a>
				2001: Table 1.6b/c National Population Census Report 2001, The British Virgin Islands
Dominica	1991	2001	2011	1991: Commonwealth of Dominica Demographic Statistics No. 1 1993, Central Statistics Office 2001: Table 14 Commonwealth of Dominica Demographic Statistics No. 4 2004, Central Statistics Office
Grenada	1991	2001	2011	2001 and 2011: Page 5 <a href="https://www.finance.gd/images/Censussubmissionfinal.pdf">https://www.finance.gd/images/Censussubmissionfinal.pdf</a>
St. Kitts and Nevis	1991	2001	<a href="#">2011</a>	2001: Table 1.7 <a href="http://www.caribbeanelections.com/eDocs/statistics/kn_stats/kn_population_housing_census_2000.pdf">http://www.caribbeanelections.com/eDocs/statistics/kn_stats/kn_population_housing_census_2000.pdf</a>
St. Maarten	1992	2001	2011	1992: <a href="http://digitallibrary.cbs.cw/CBS0000004/00003?search=census">http://digitallibrary.cbs.cw/CBS0000004/00003?search=census</a>
				2001: <a href="https://www.cbs.cw/document.php?m=1&amp;fileid=4390&amp;f=d53c2cd7432f01920d9cbb9e73b2fd3&amp;attachment=0&amp;c=1222">https://www.cbs.cw/document.php?m=1&amp;fileid=4390&amp;f=d53c2cd7432f01920d9cbb9e73b2fd3&amp;attachment=0&amp;c=1222</a>

KEY:

	3 pyramids available to at least 80+
	3 pyramids available to at least 80+ but census years are very different from other member countries
	3 pyramids available only to 70+
	3 pyramids available but projection data used in one
	at least one pyramid available
	Census data not available

# Anguilla

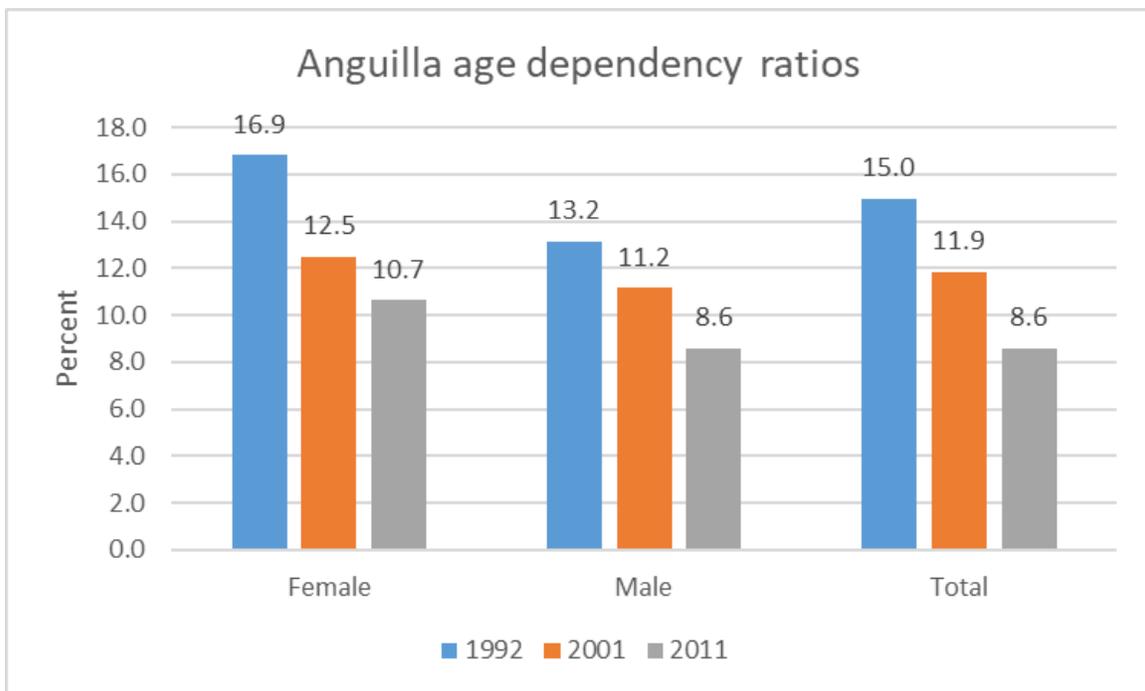


\*2011 Projected population: <http://gov.ai/statistics/census/index.htm>

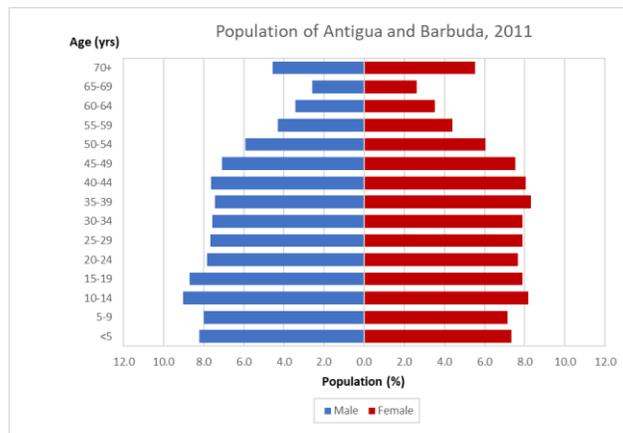
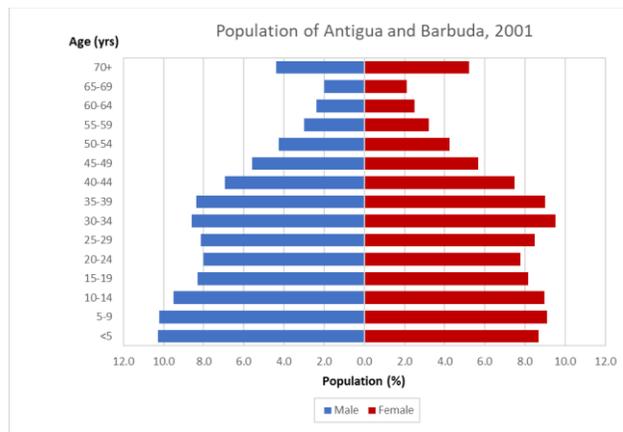
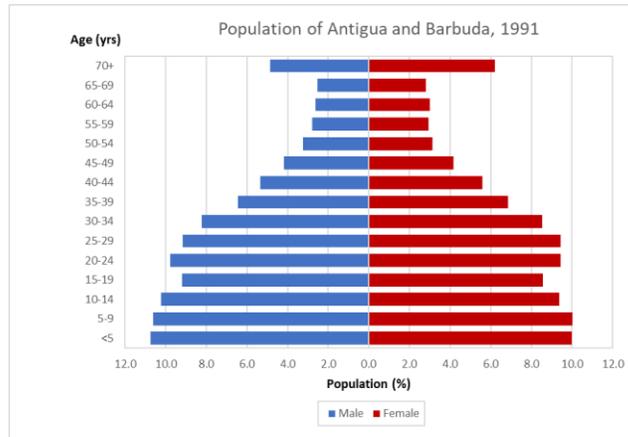
## Total population

	Female	Male	Total
<b>1992</b>	4487	4473	8960
<b>2001</b>	5802	5628	11430
<b>2011</b>	6800	7441	14241

## Age dependency ratios



## Antigua and Barbuda

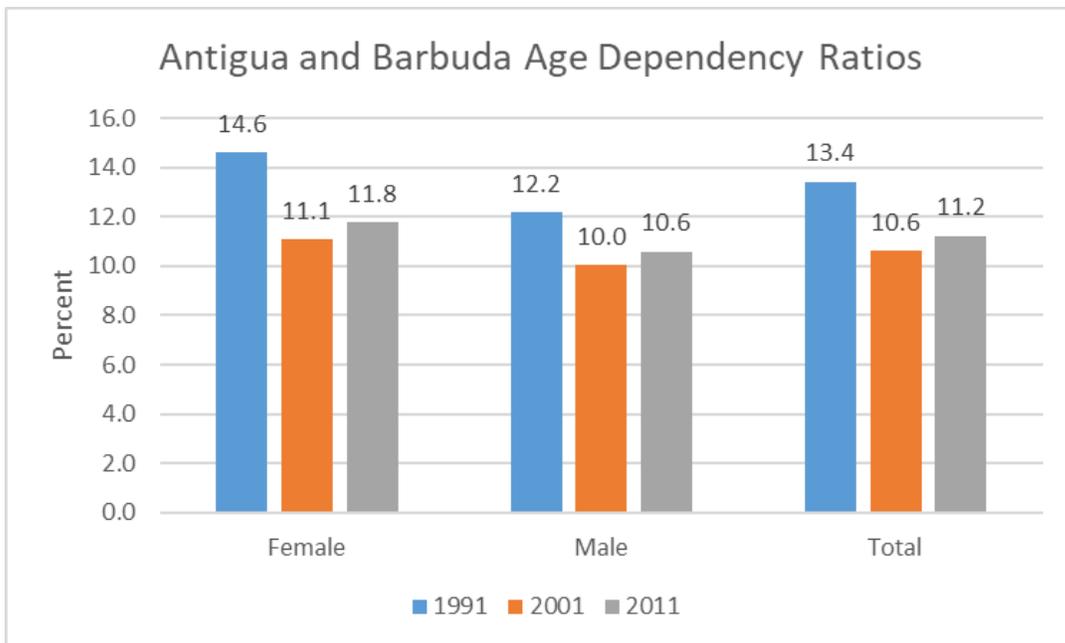


Note: Available data for Antigua and Barbuda are not disaggregated into 5-year age groups from 70 years and above.

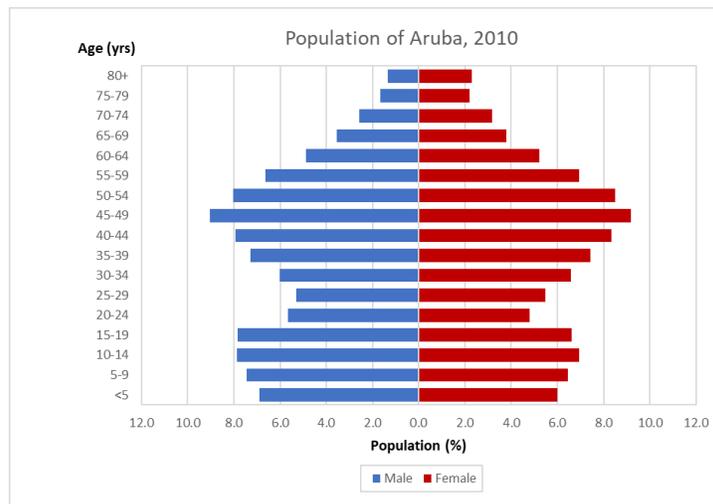
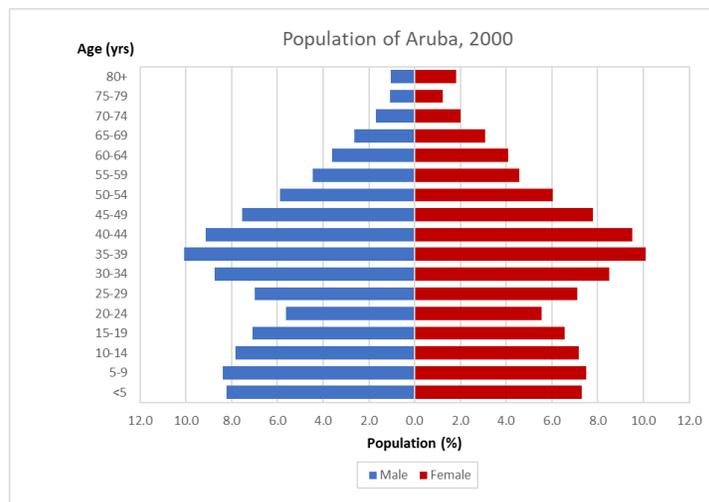
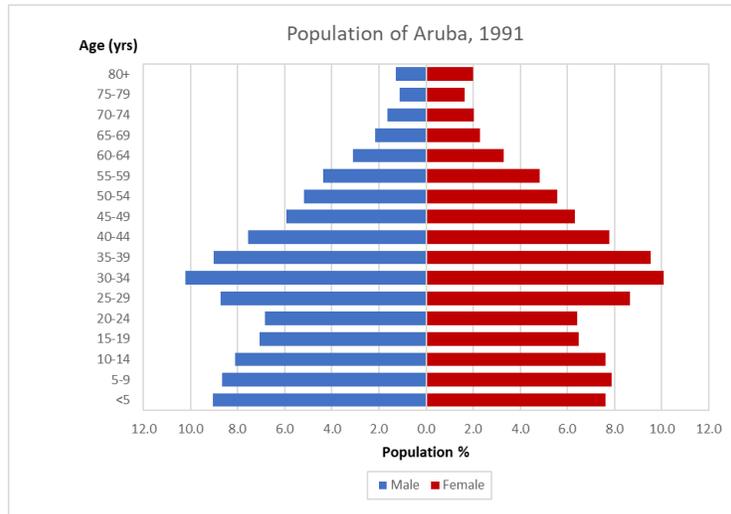
## Total population

	Female	Male	Total
<b>1991</b>	33085	30793	63878
<b>2001</b>	40779	36109	76888
<b>2011</b>	44579	40986	85565

## Age dependency ratios



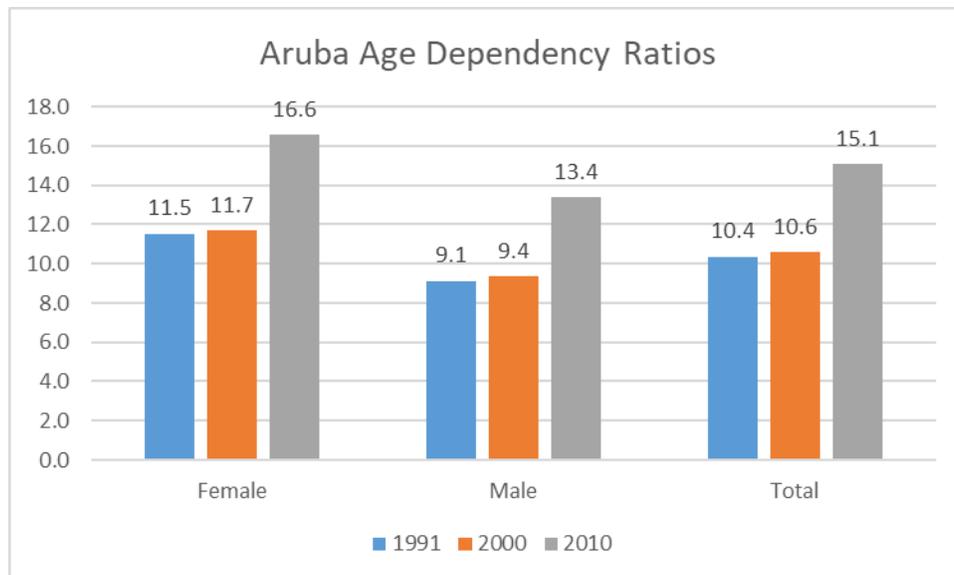
# Aruba



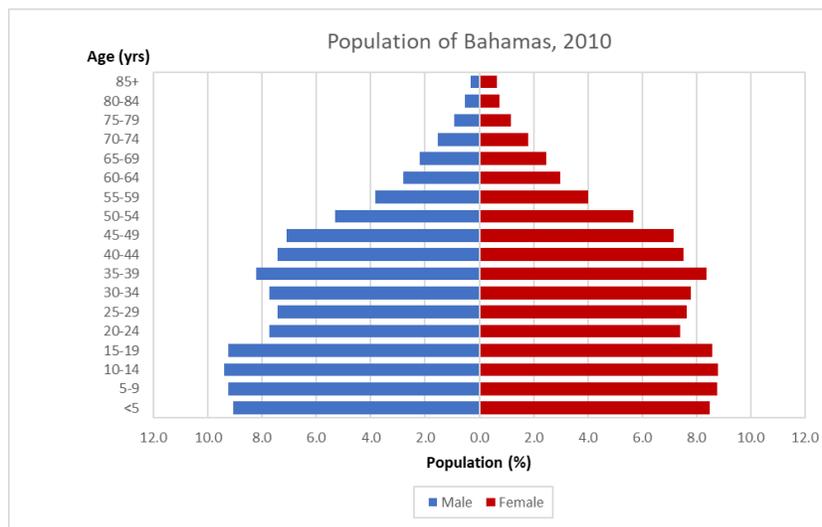
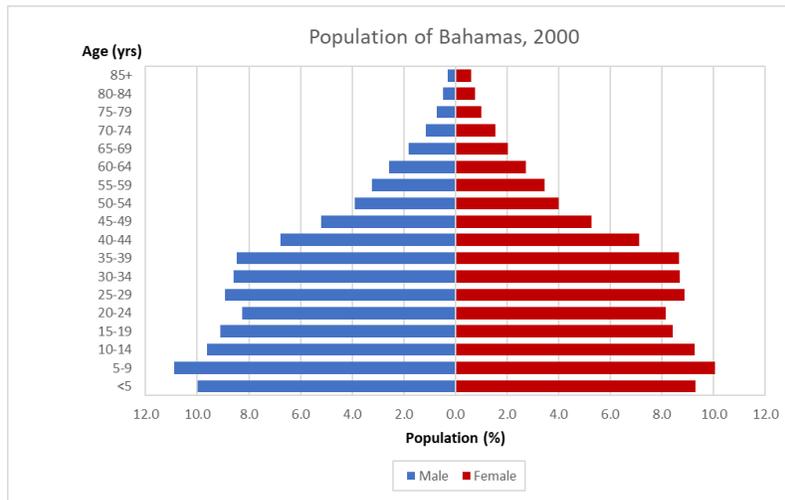
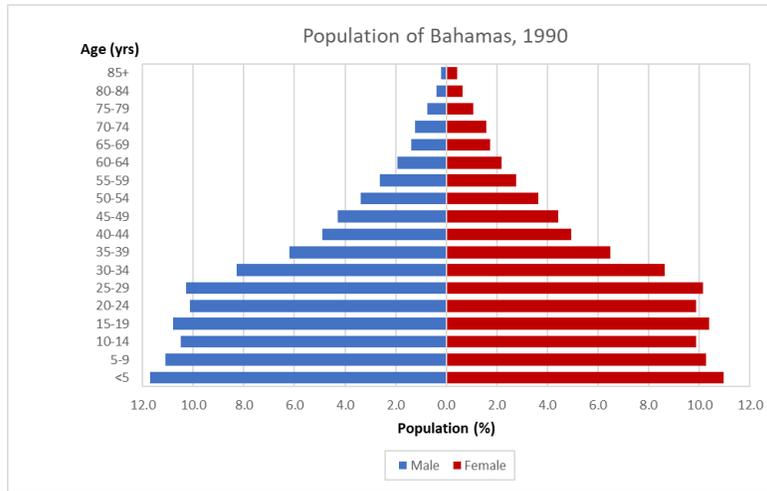
## Total population

	Female	Male	Total
1991	33785	32761	66546
2000	46897	43253	90150
2010	53213	48198	101411

## Age dependency ratios



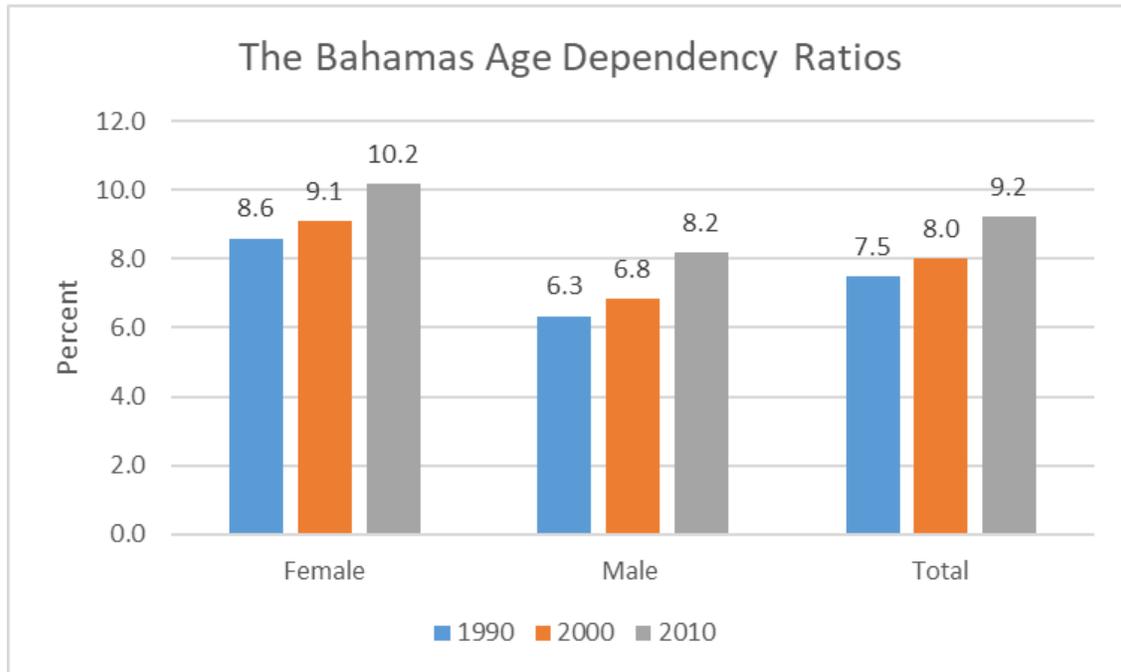
# The Bahamas



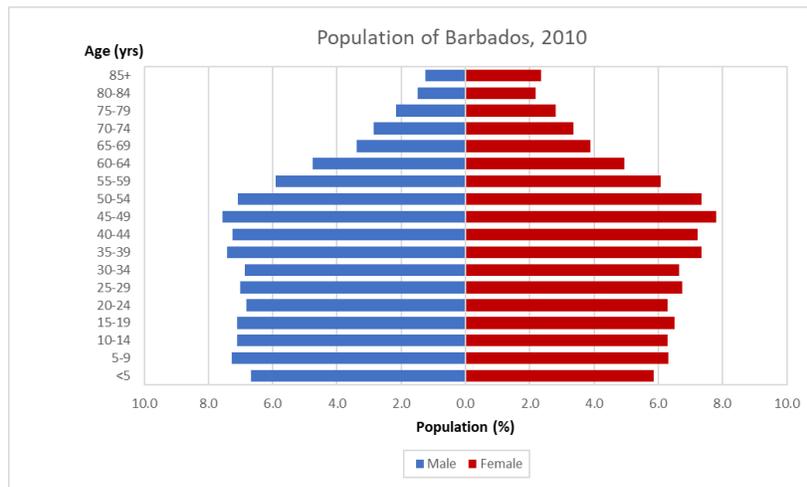
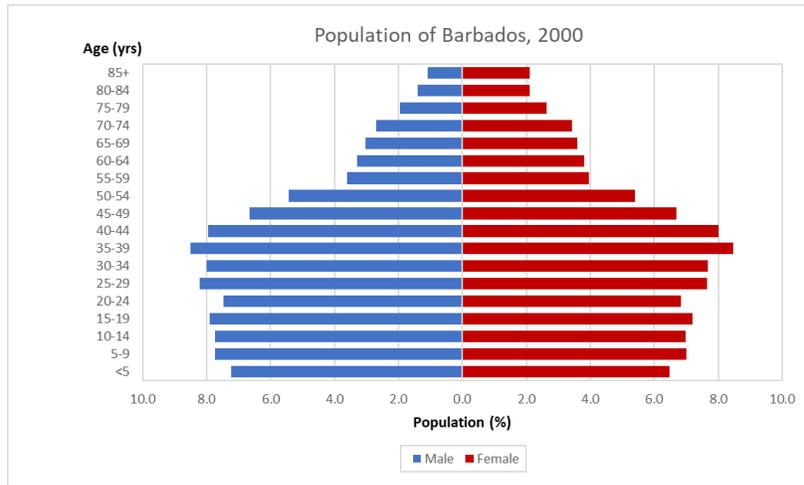
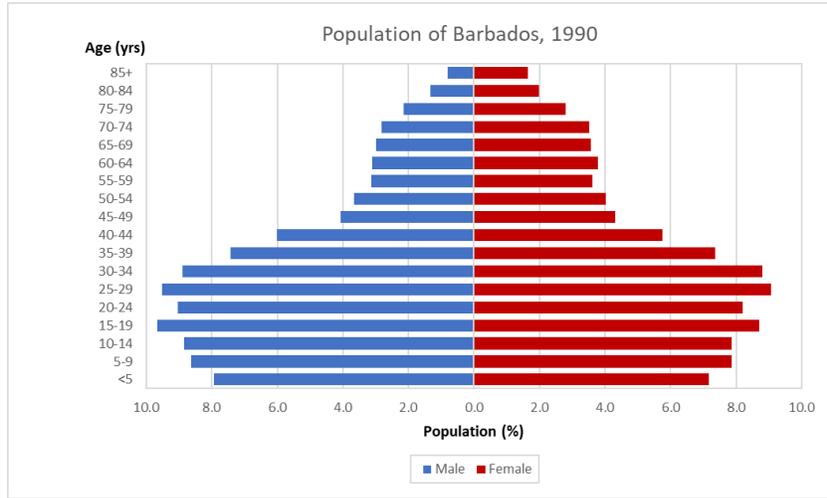
## Total Population

	Male	Female	Total
1990	120006	115268	235274
2000	155346	146851	302197
2010	180747	169745	350492

## Age dependency ratios



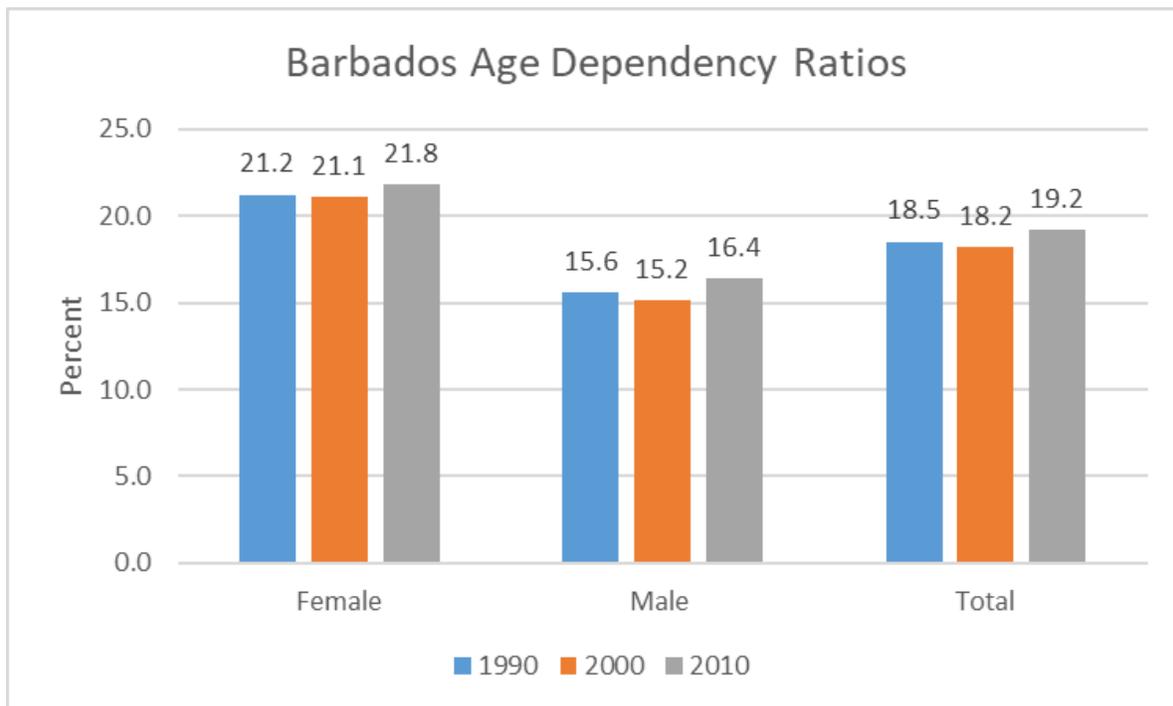
# Barbados



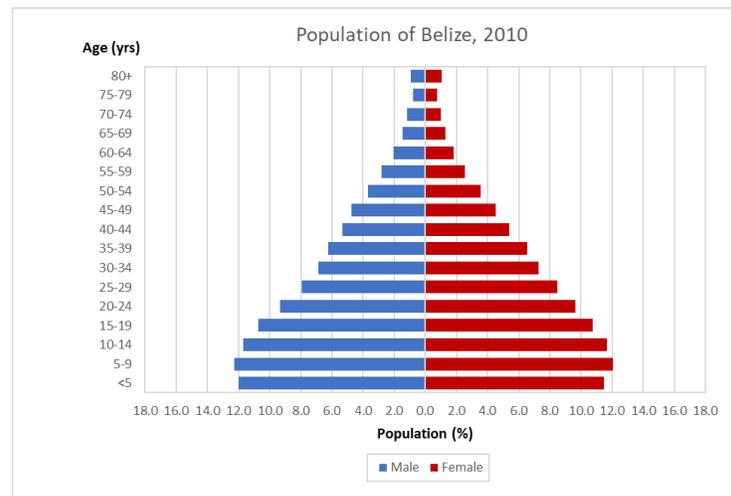
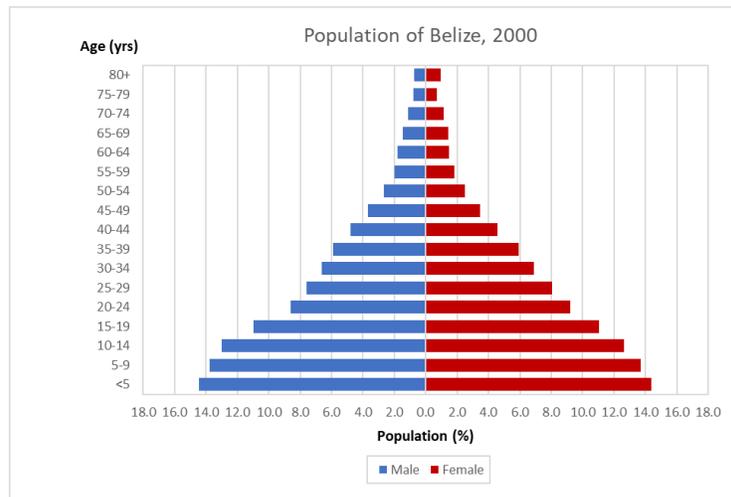
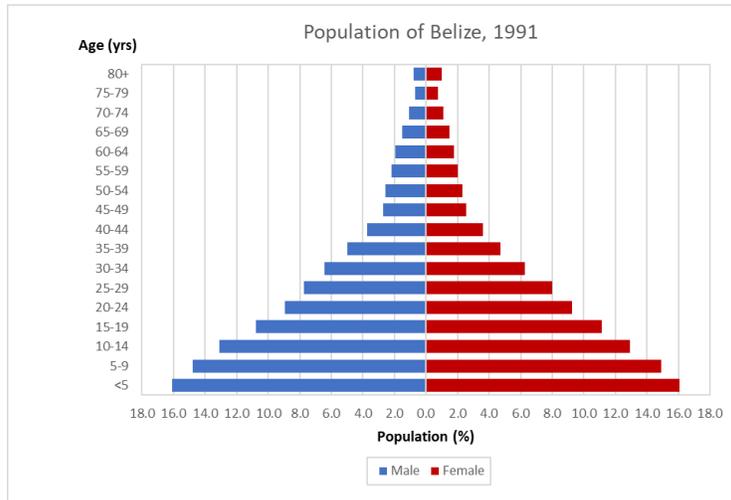
Total population

	Female	Male	Total
<b>1990</b>	135920	124571	260491
<b>2000</b>	139551	129241	268792
<b>2010</b>	144803	133018	277821

### Age dependency ratios



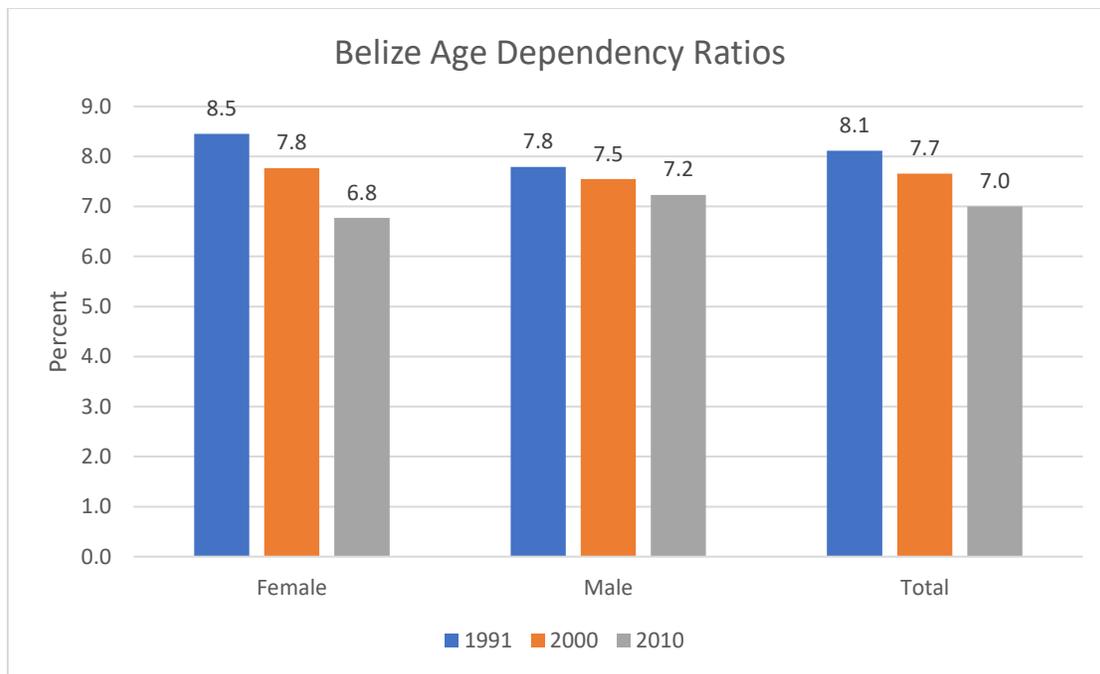
# Belize



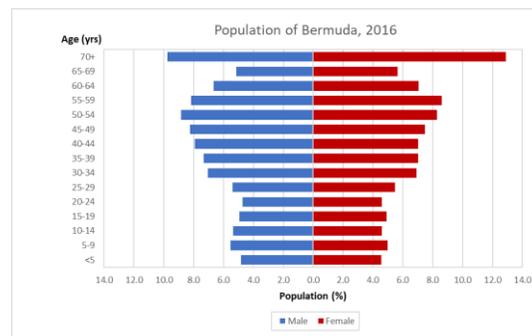
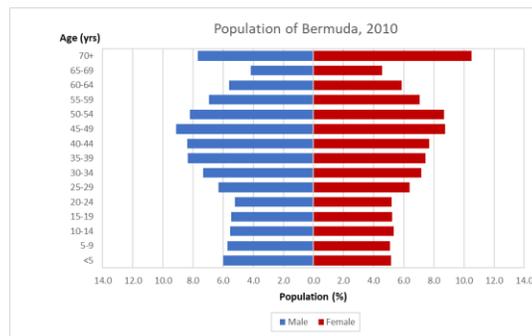
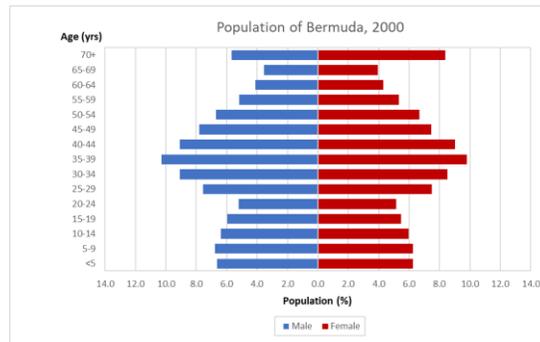
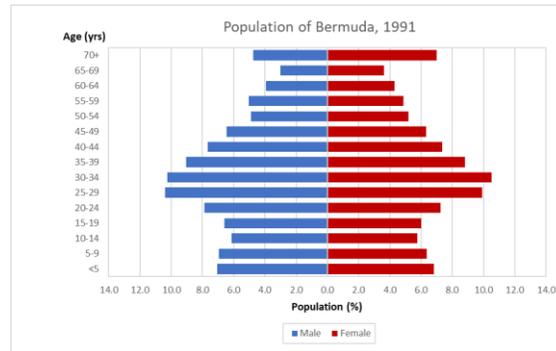
## Total population

	Female	Male	Total
<b>1991</b>	93067	96325	189392
<b>2000</b>	115442	116669	232111
<b>2010</b>	161221	161219	322440

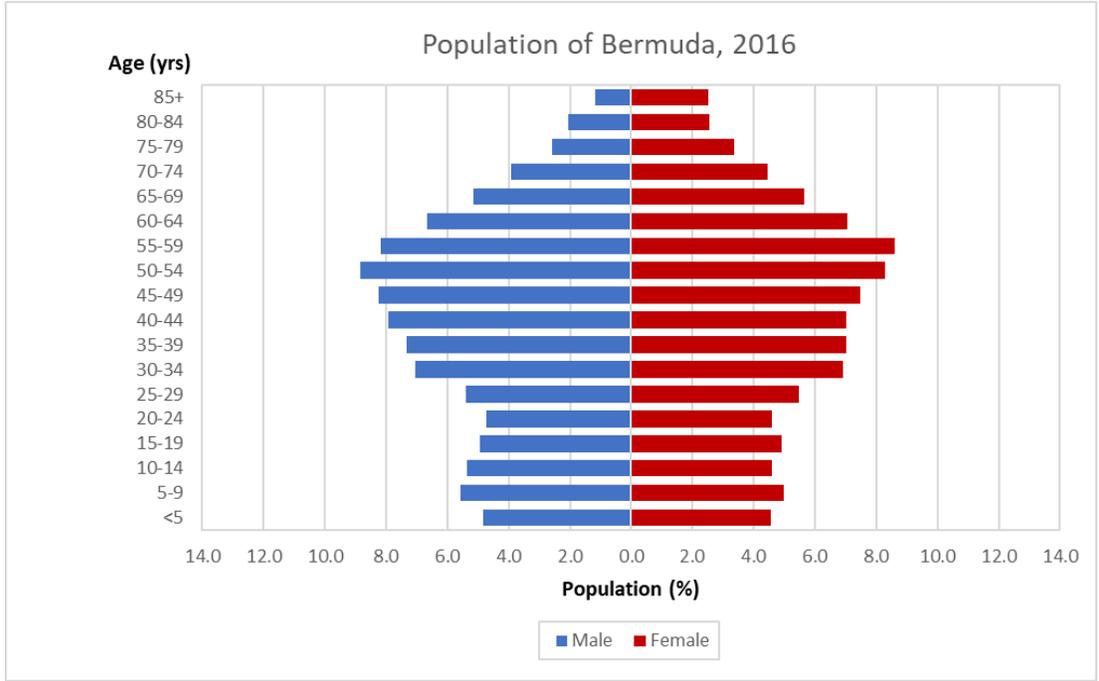
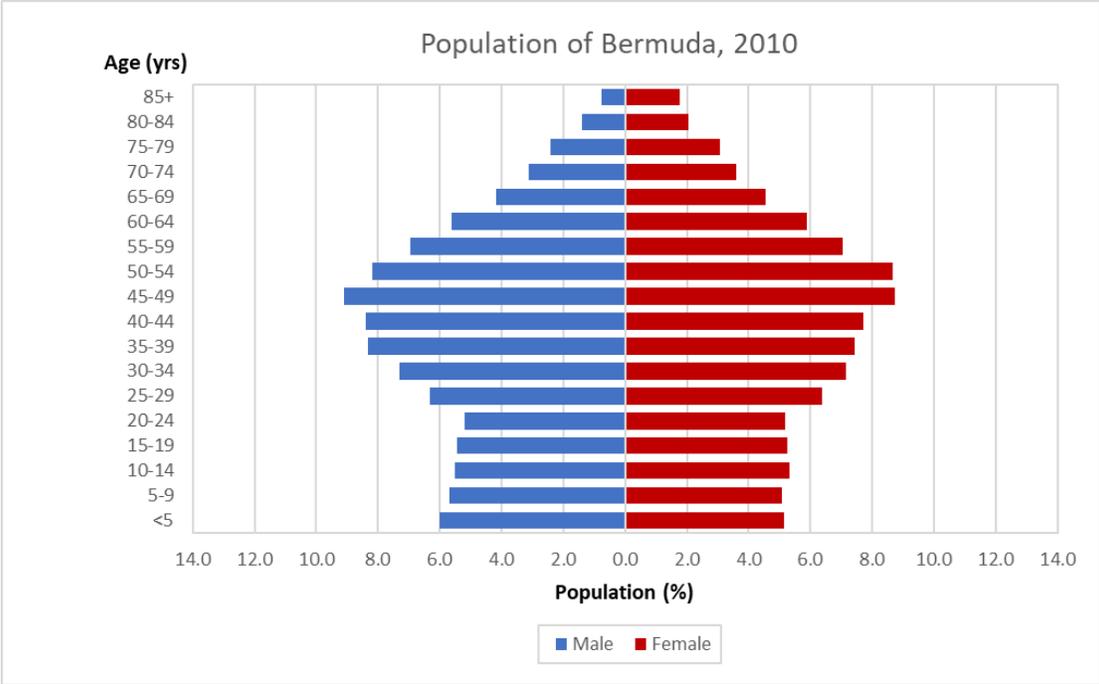
## Age dependency ratios



## Bermuda



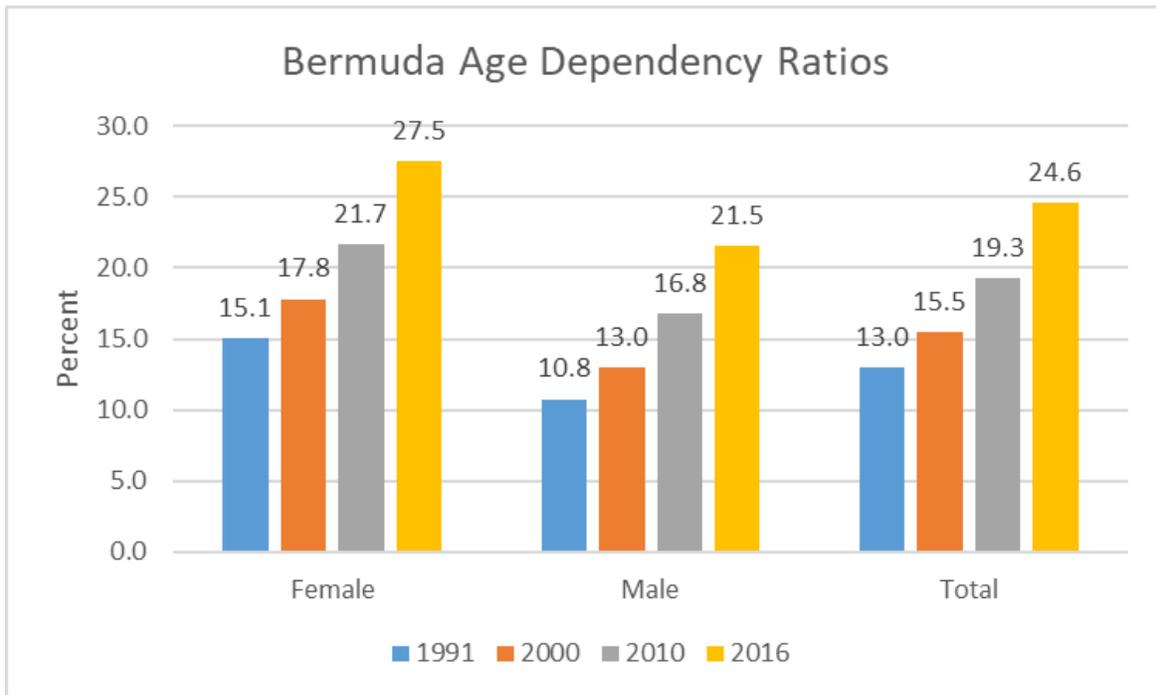
Note: Available data for Bermuda for 1991 and 2000 are not disaggregated into 10-year age groups from 70 years and above. The data for 2010 and 2016 are presented above the same way, to ease comparison. On the following page the population pyramids for 2010 and 2016 show the 10-year age groups from age 70 onwards.



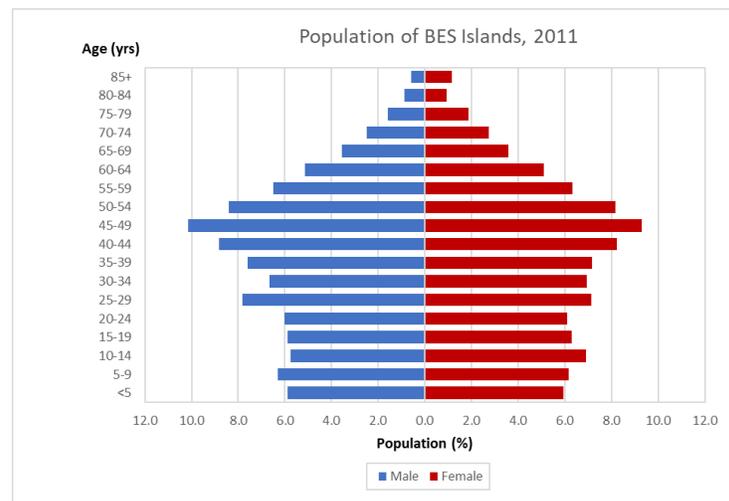
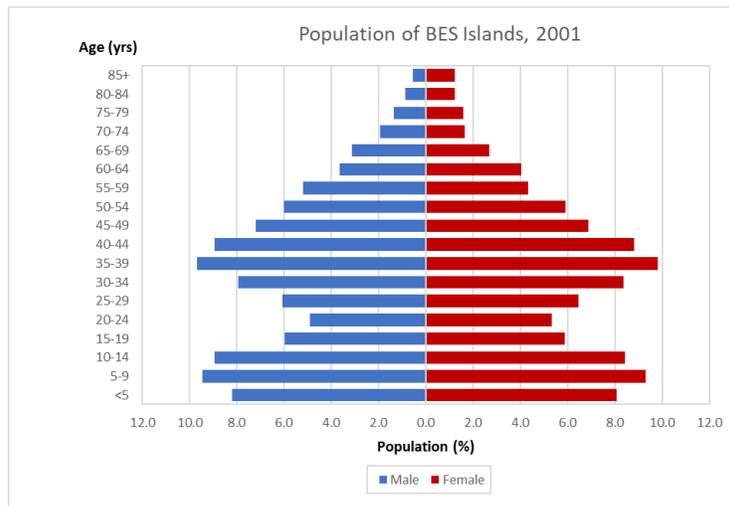
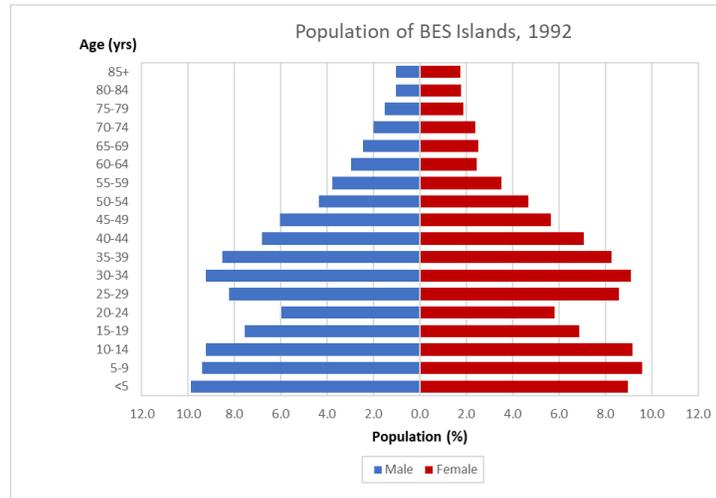
## Total population

	Female	Male	Total
<b>1991</b>	30115	28345	58460
<b>2000</b>	32257	29802	62059
<b>2010</b>	33379	30858	64237
<b>2016</b>	33089	30690	63779

## Age dependency ratios



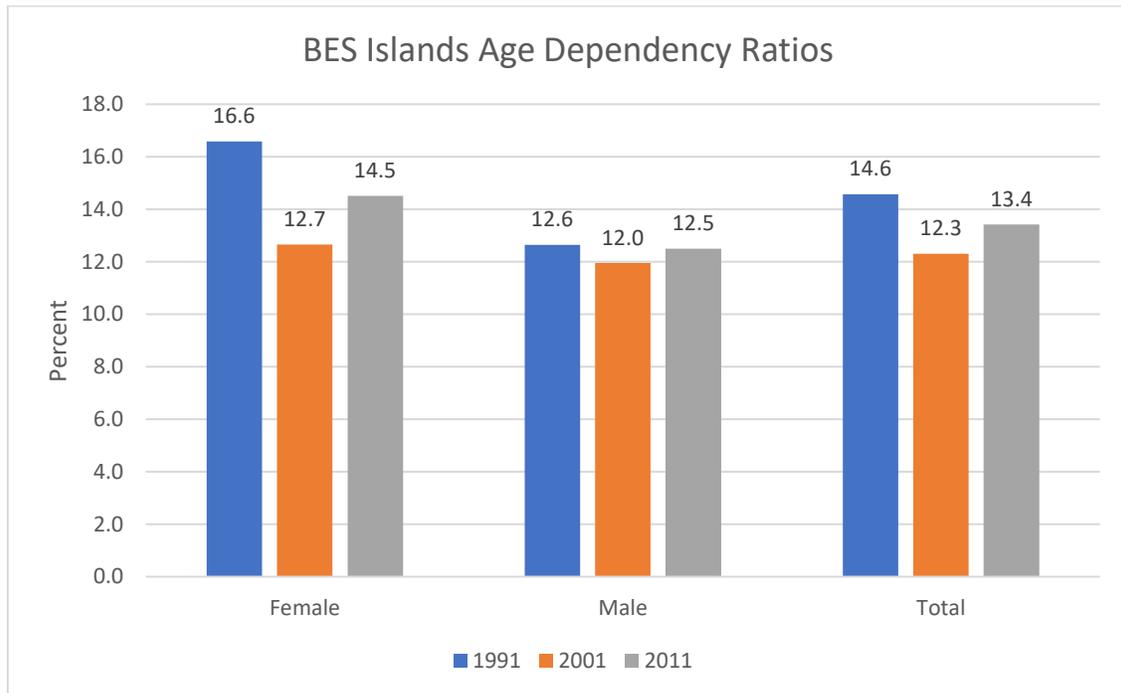
## Bonaire, Sint Eustatius and Saba (BES Islands)



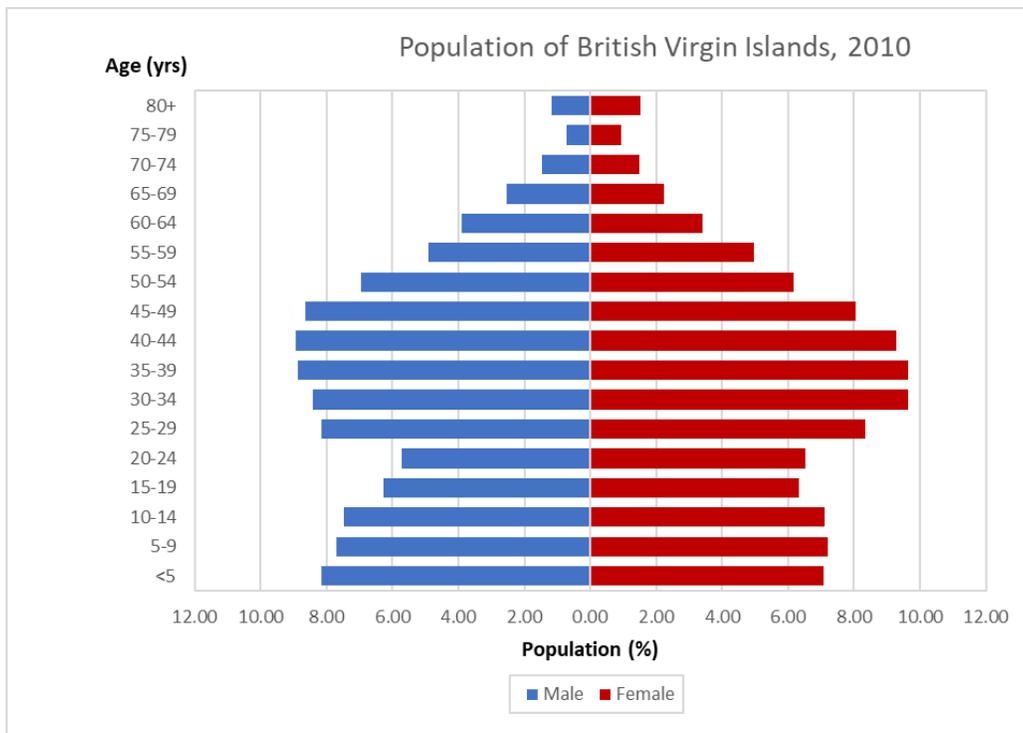
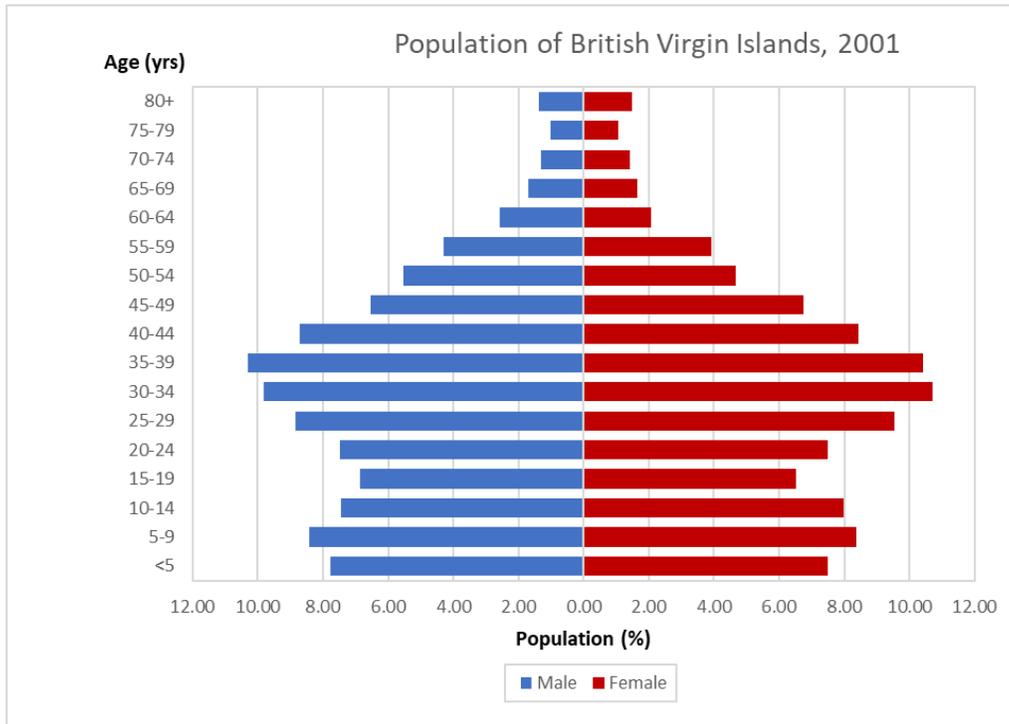
## Total population

	Female	Male	Total
<b>1991</b>	6526	6630	13156
<b>2001</b>	7310	7122	14432
<b>2011</b>	9972	11373	21345

## Age dependency ratios



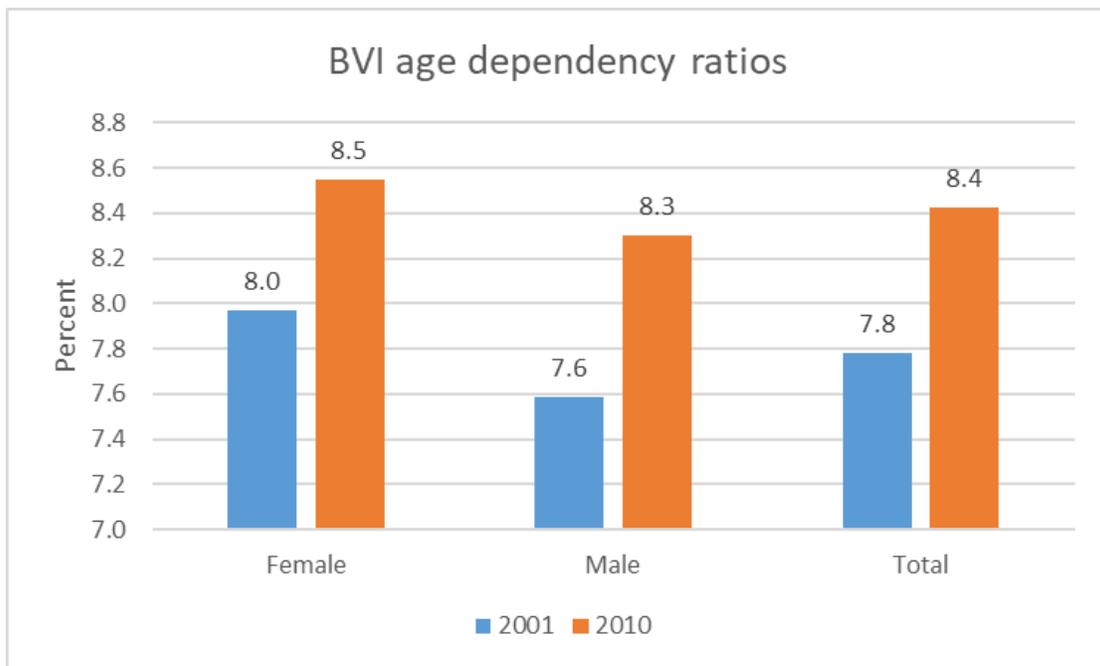
## British Virgin Islands



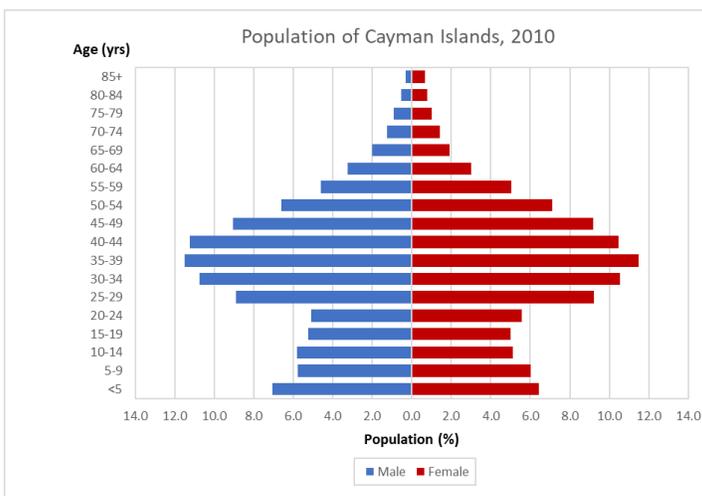
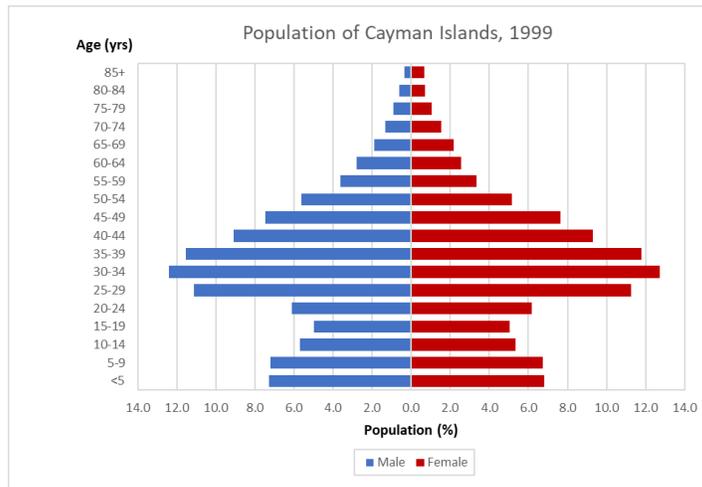
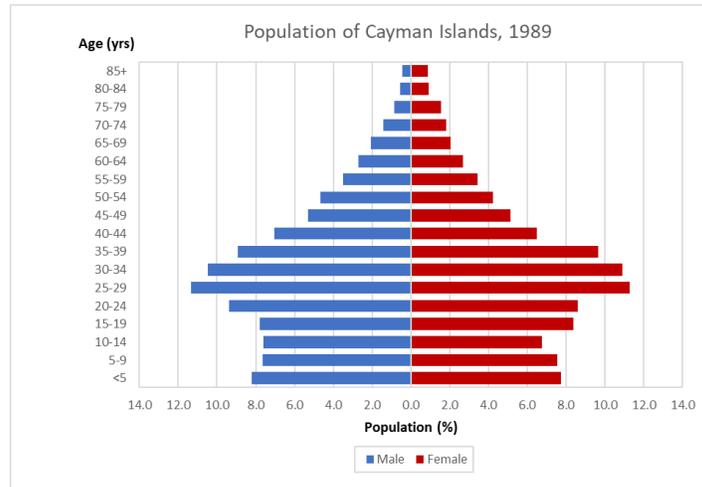
## Total population

	Female	Male	Total
2001	11725	11436	23161
2010	14234	13820	28054

## Age dependency ratios



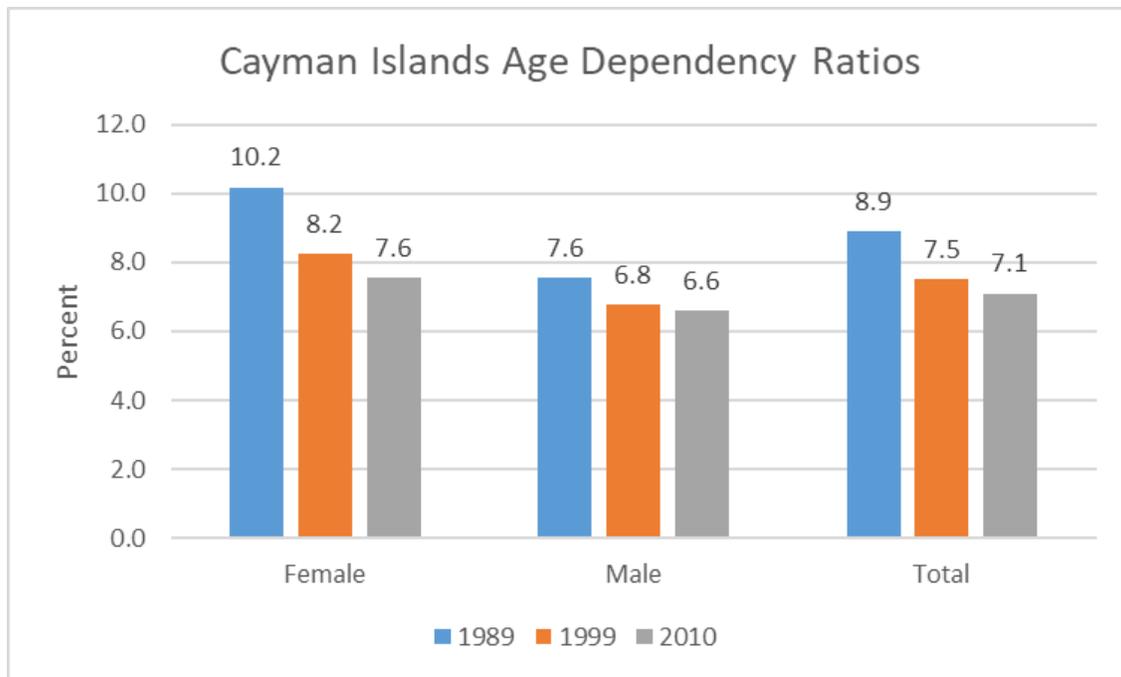
# Cayman Islands



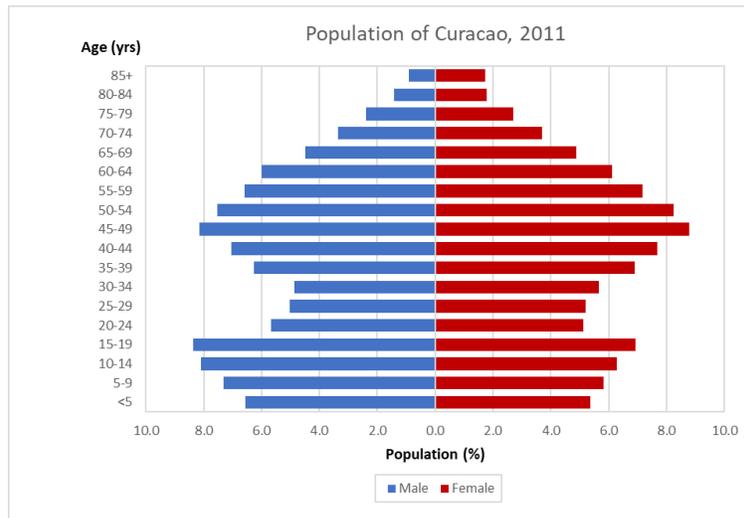
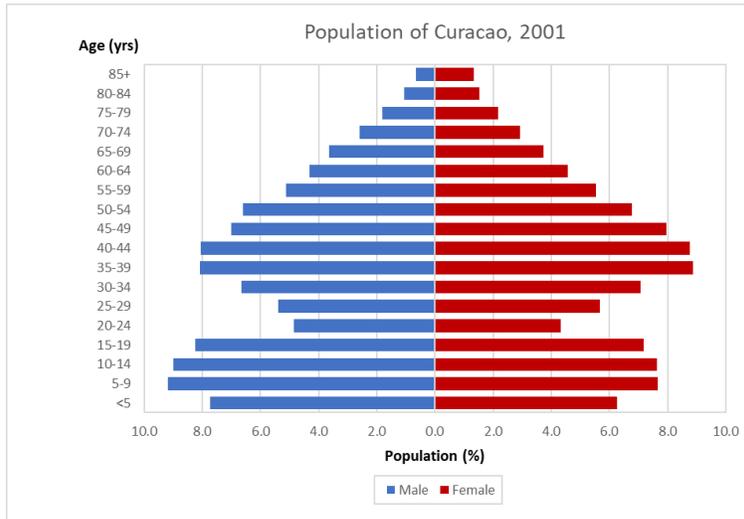
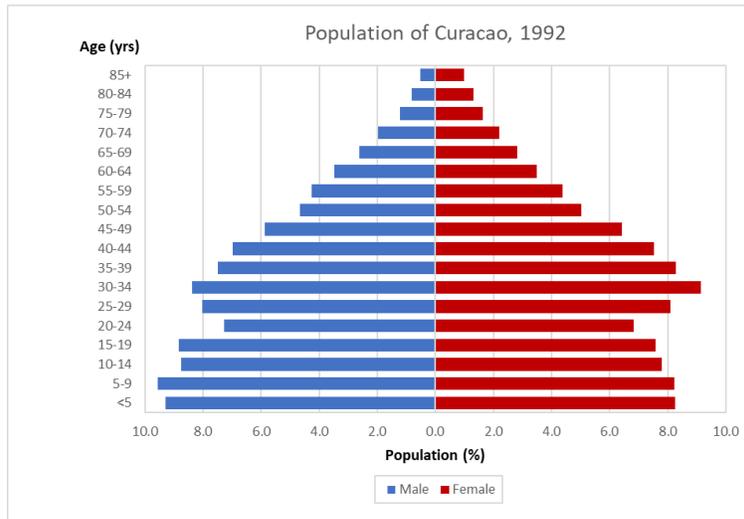
## Total population

	Female	Male	Total
1989	12,983	12,372	25,355
1999	19,952	18,998	38,950
2010	27,817	27,219	55,036

## Age dependency ratios



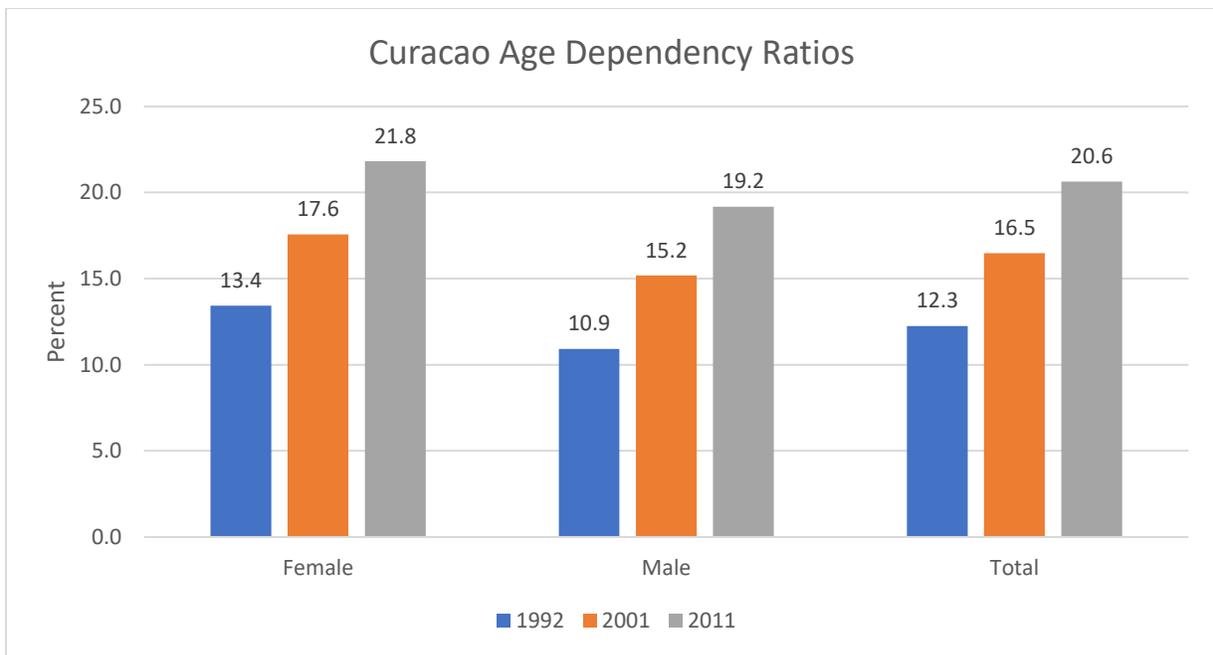
# Curacao



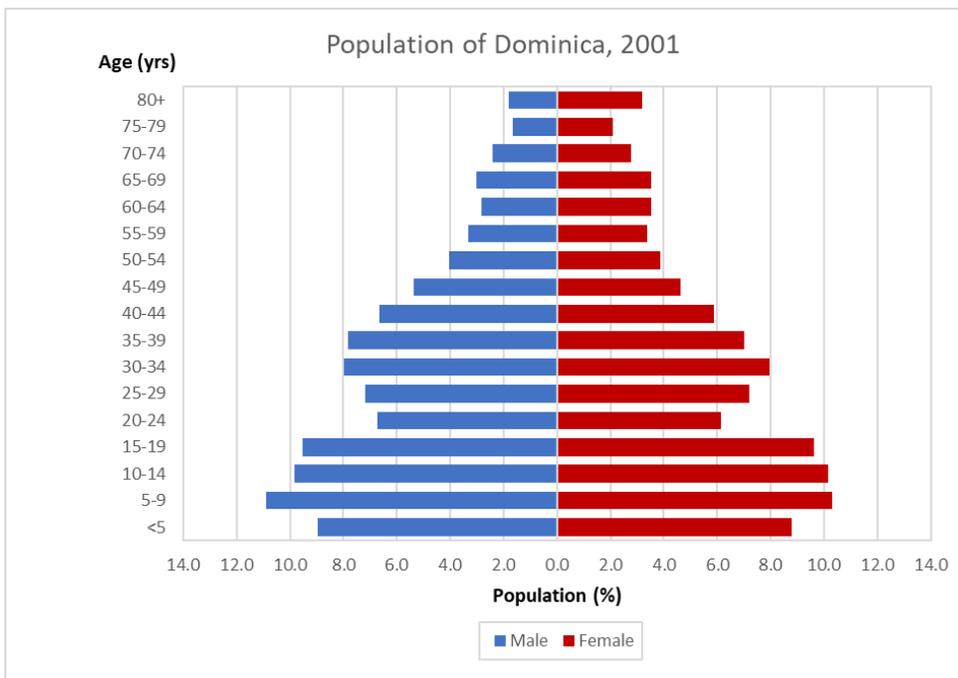
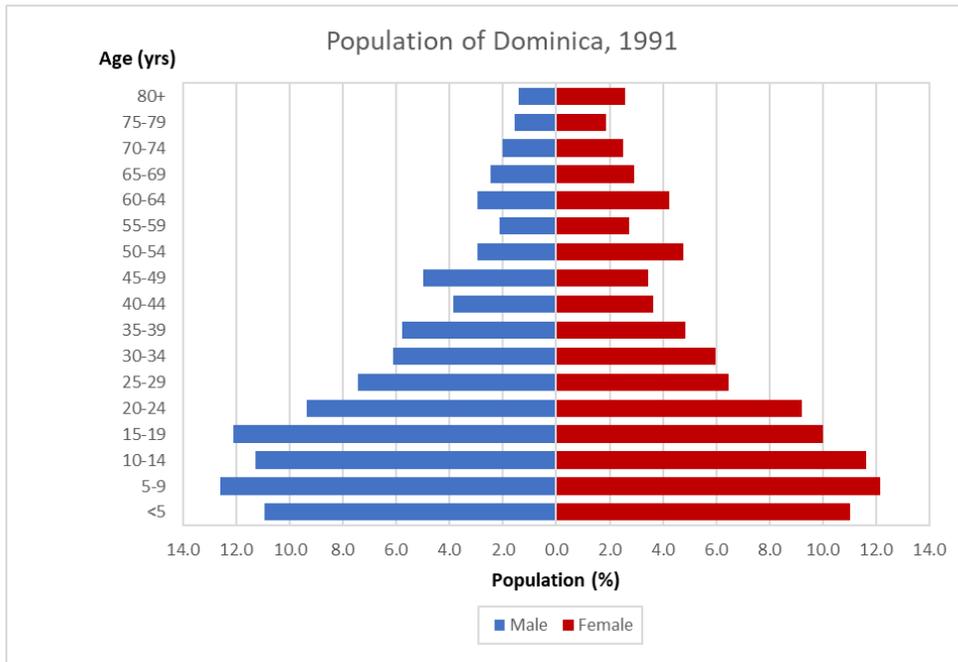
## Total population

	Female	Male	Total
1992	75921	68176	144097
2001	70118	60509	130627
2011	81715	68848	150563

## Age dependency ratios



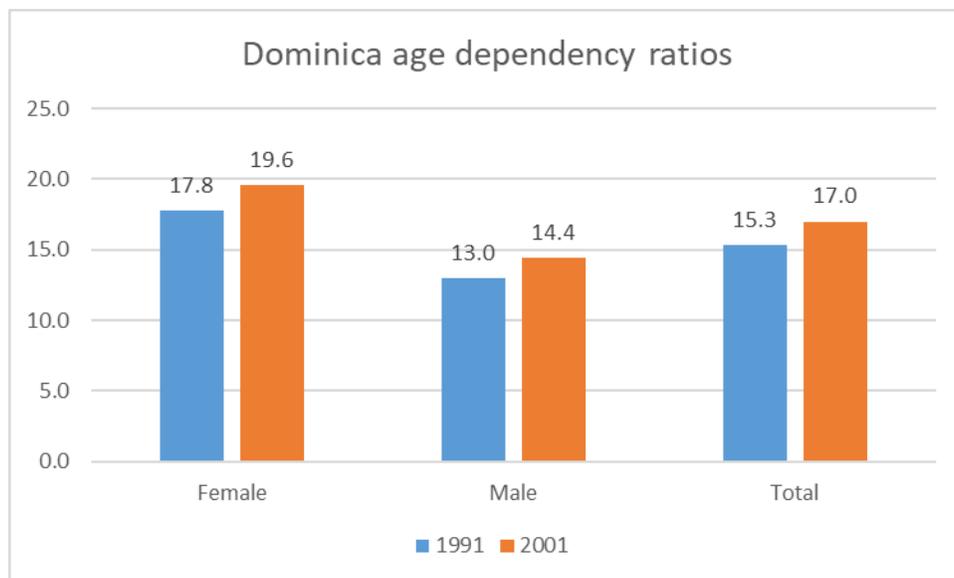
## Dominica



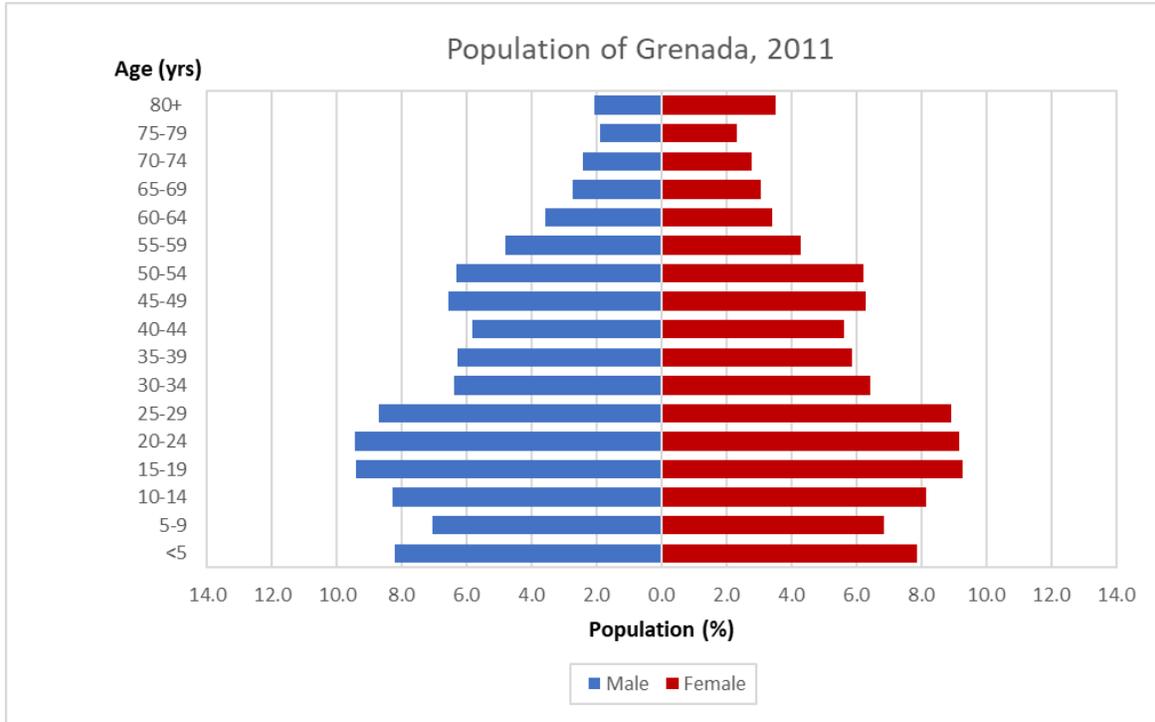
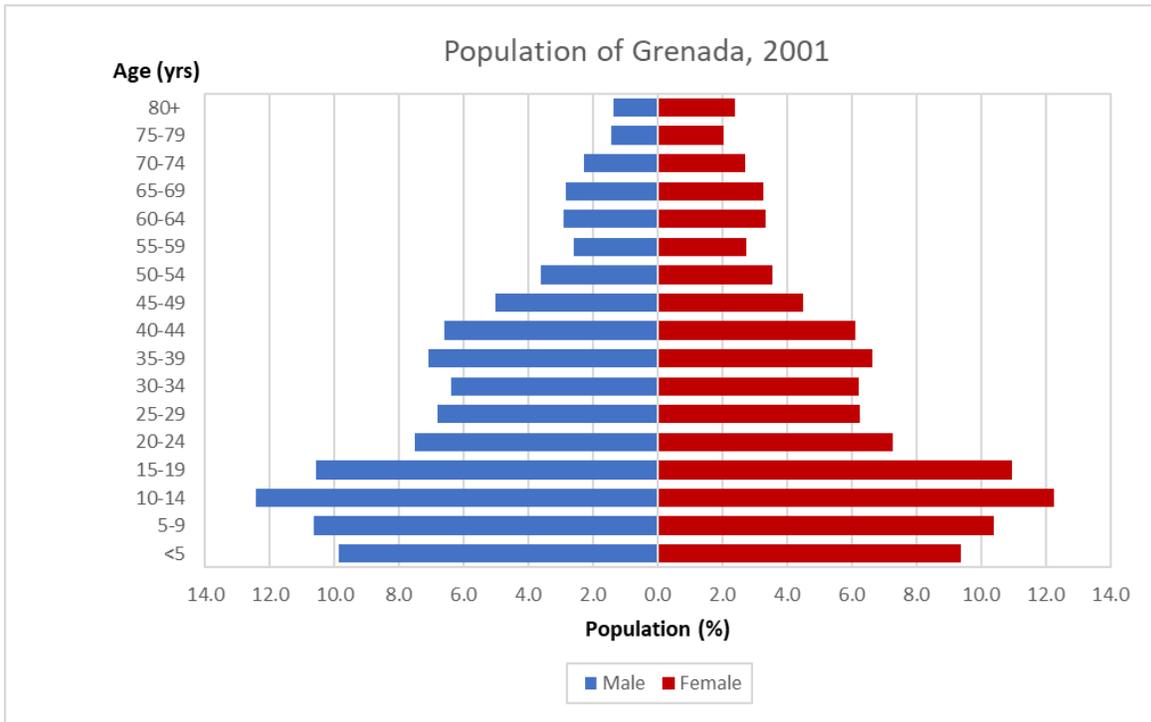
## Total population

	Female	Male	Total
1991	35714	35504	71218
2001	34665	35110	69775

## Age dependency ratios



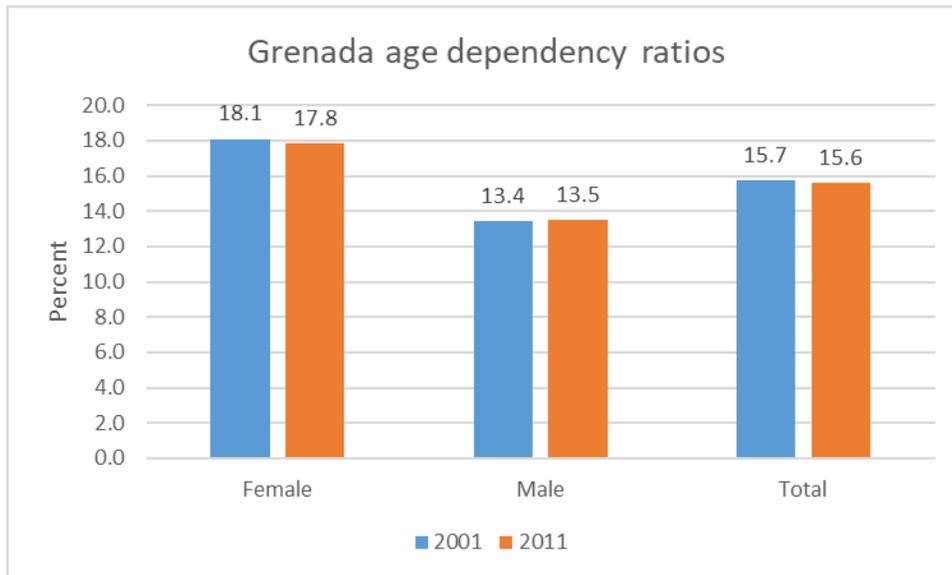
## Grenada



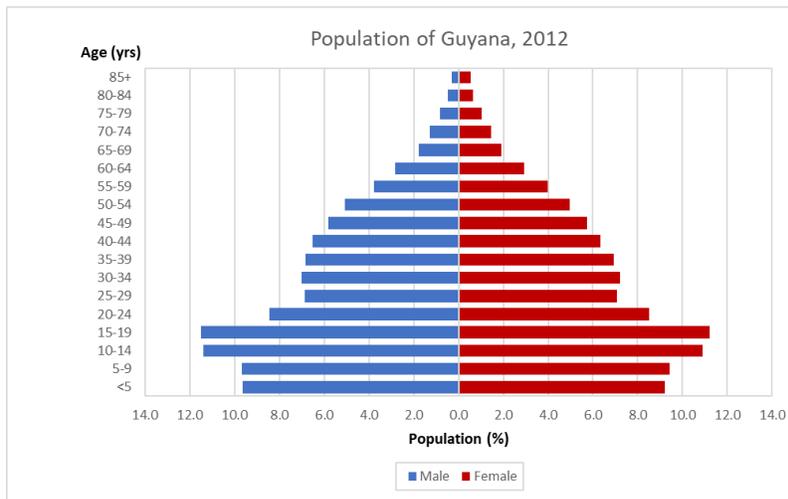
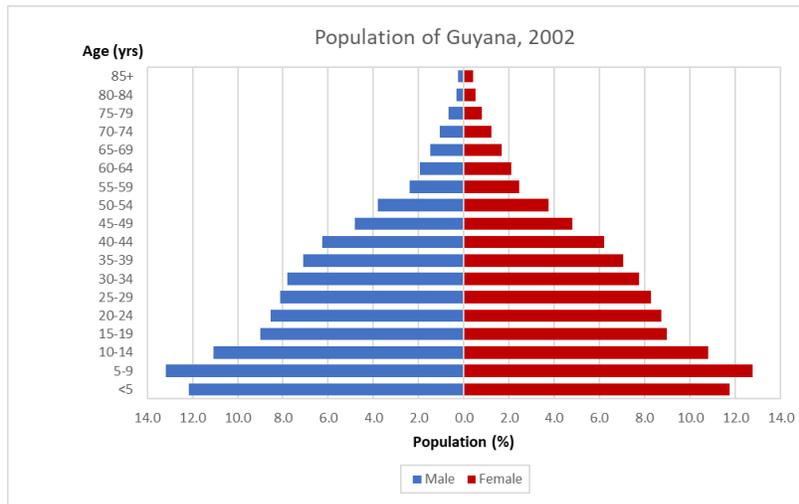
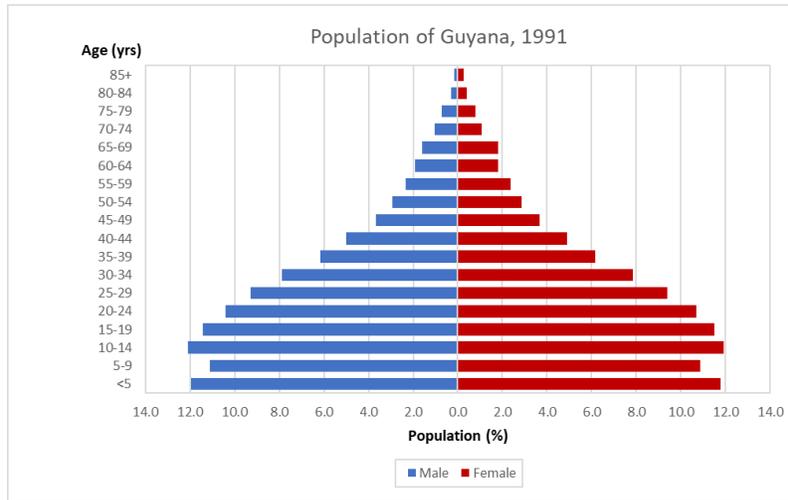
## Total population

	Female	Male	Total
2001	51753	51381	103134
2011	52531	53008	105539

## Age dependency ratios



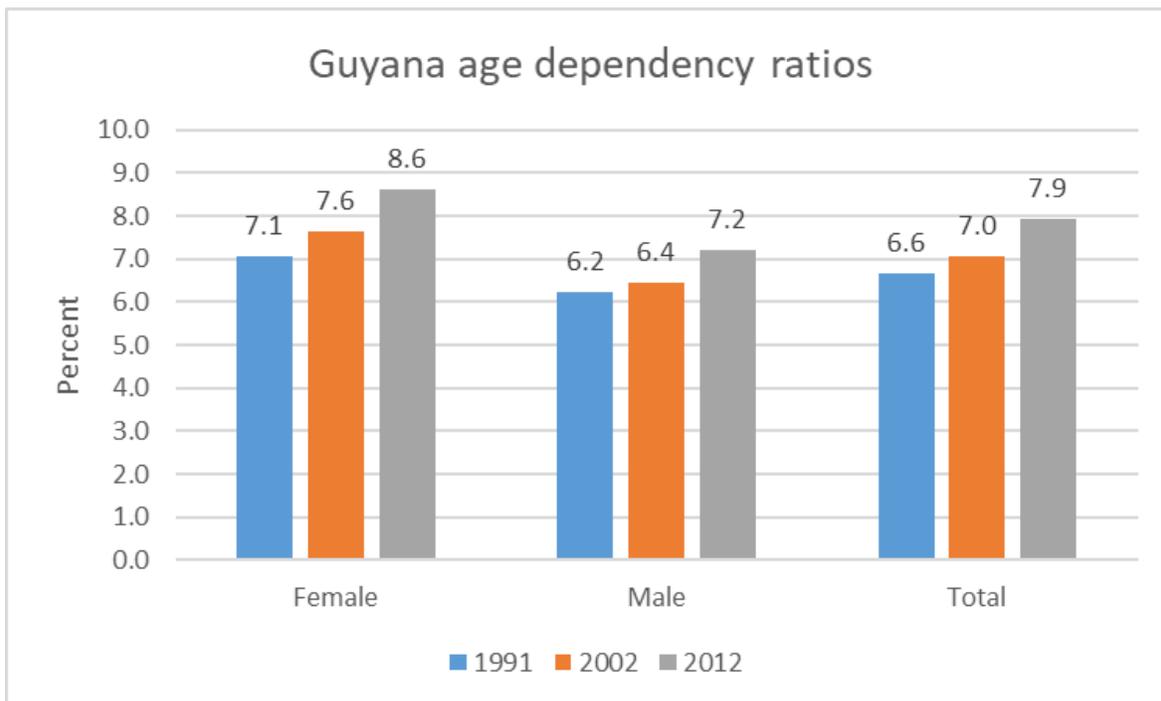
# Guyana



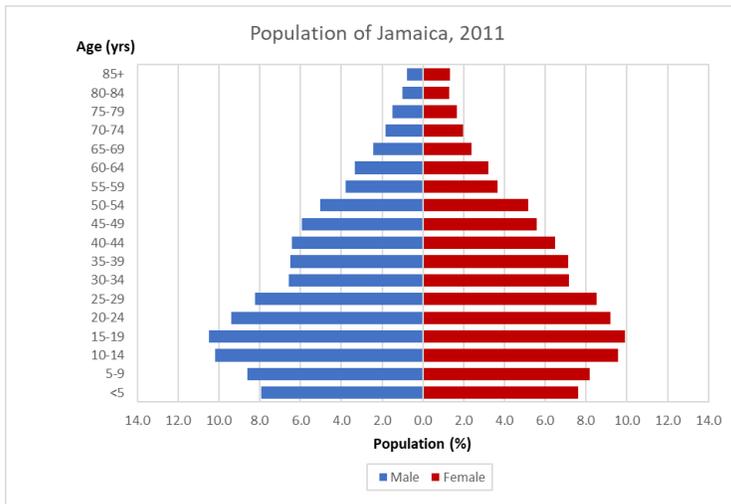
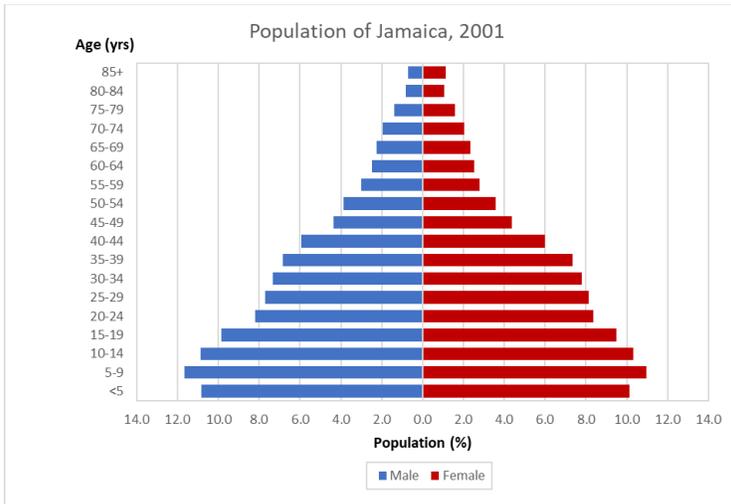
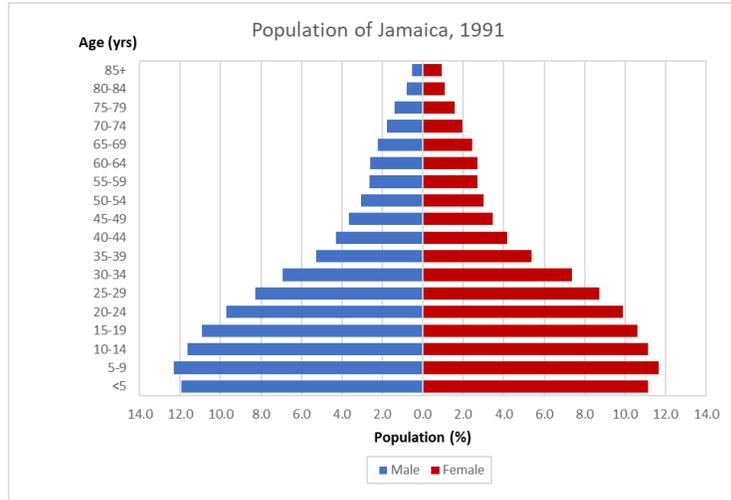
## Total population

	Female	Male	Total
1991	367133	356540	723673
2002	375189	376034	751223
2012	375150	371805	746955

## Age dependency ratios



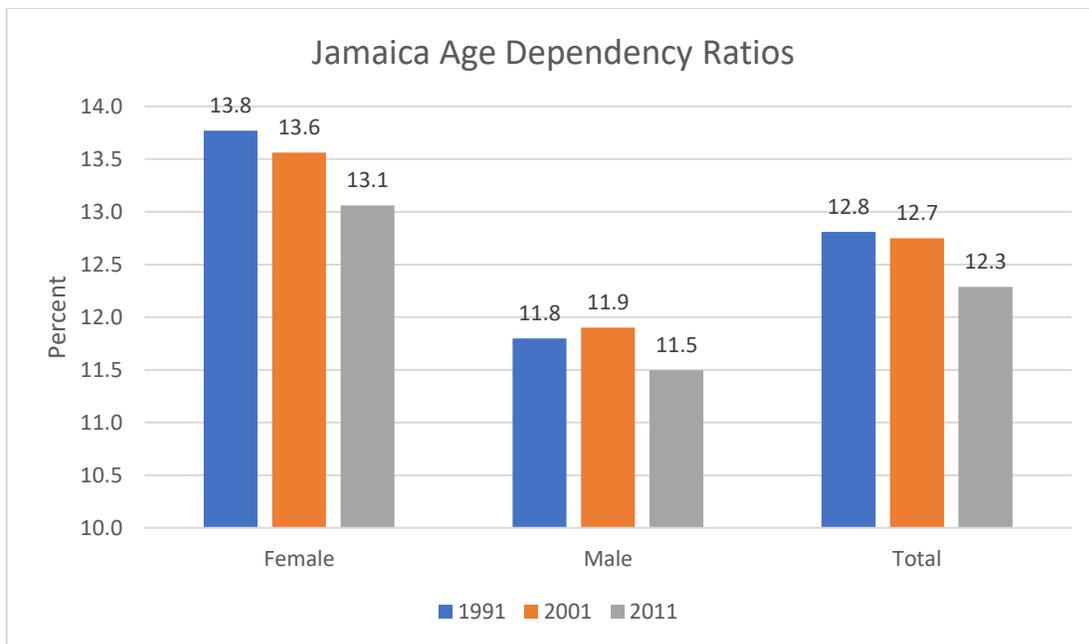
# Jamaica



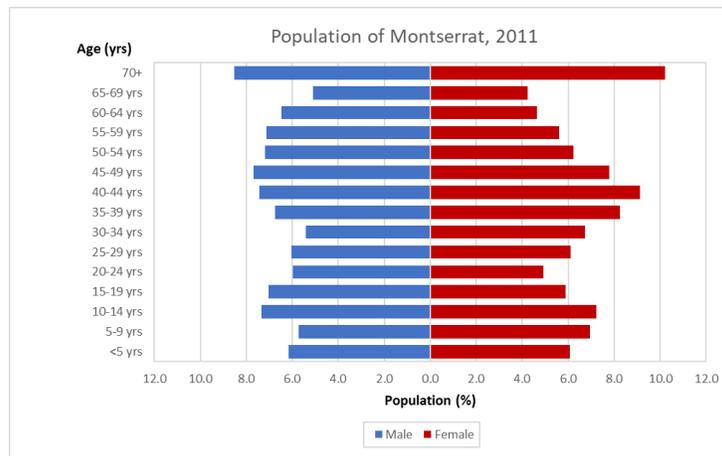
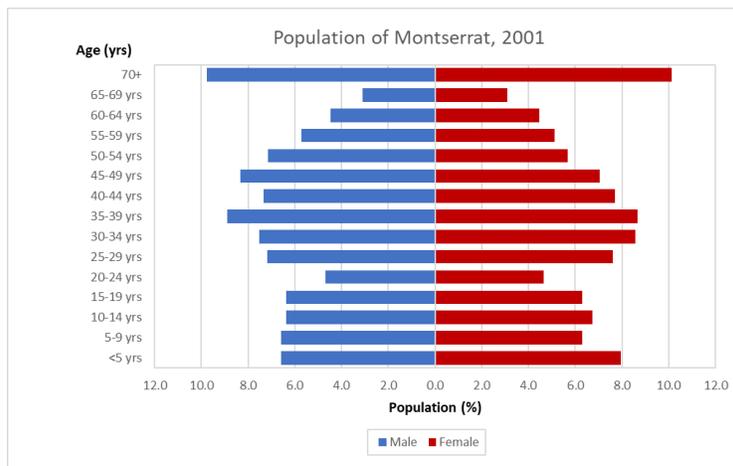
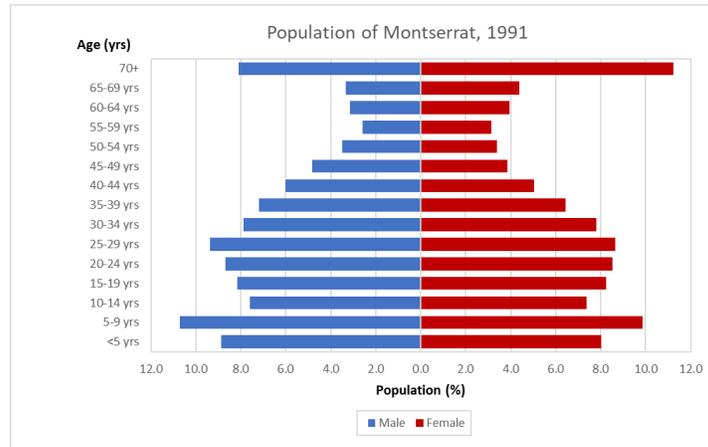
## Total population

	Female	Male	Total
1991	1213171	1167495	2380666
2001	1324085	1283547	2607632
2011	1363450	1334536	2697986

## Age dependency ratios



# Montserrat

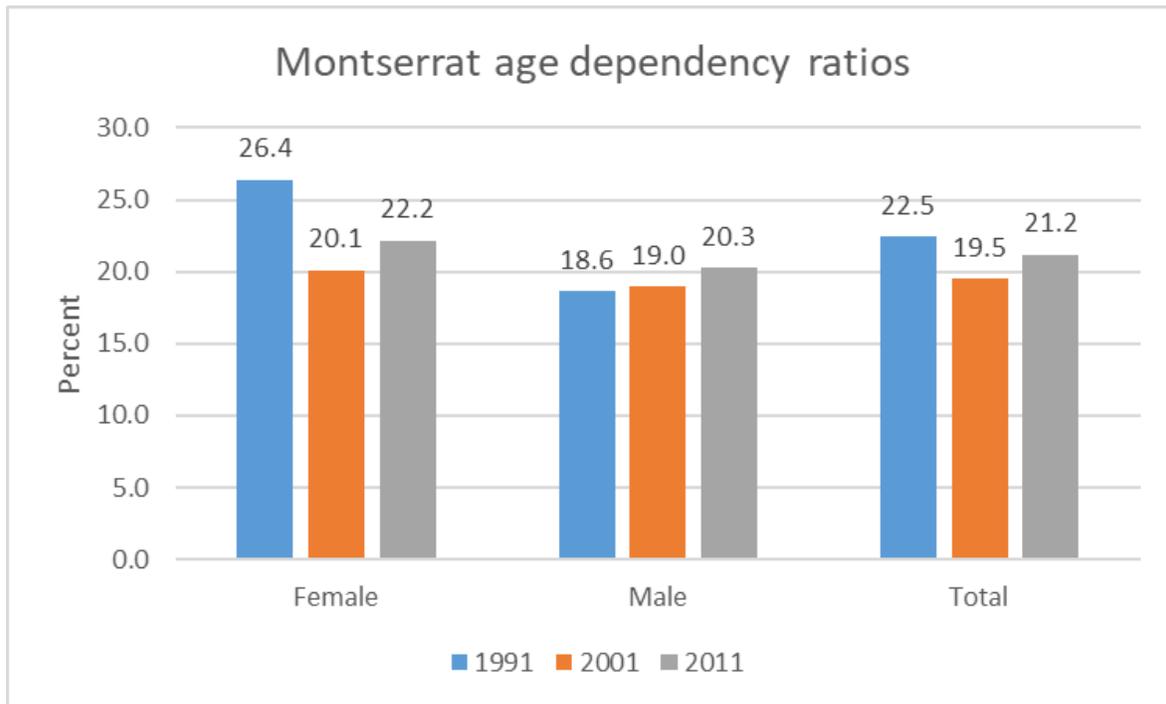


Note: Available data for Montserrat are not disaggregated into 10-year age groups from 70 years and above.

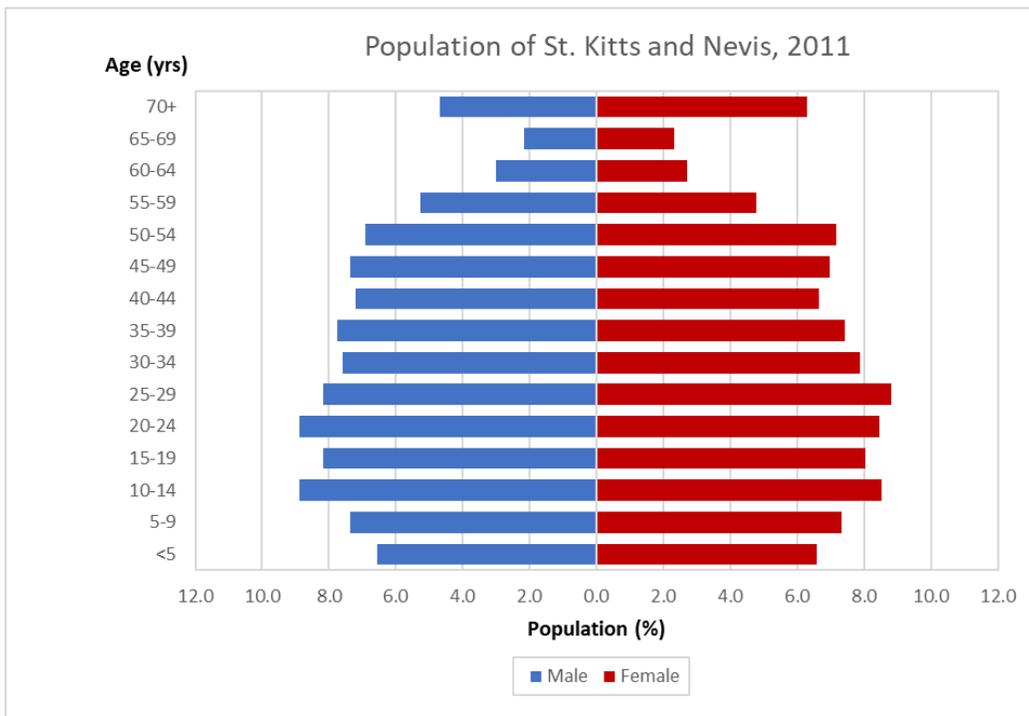
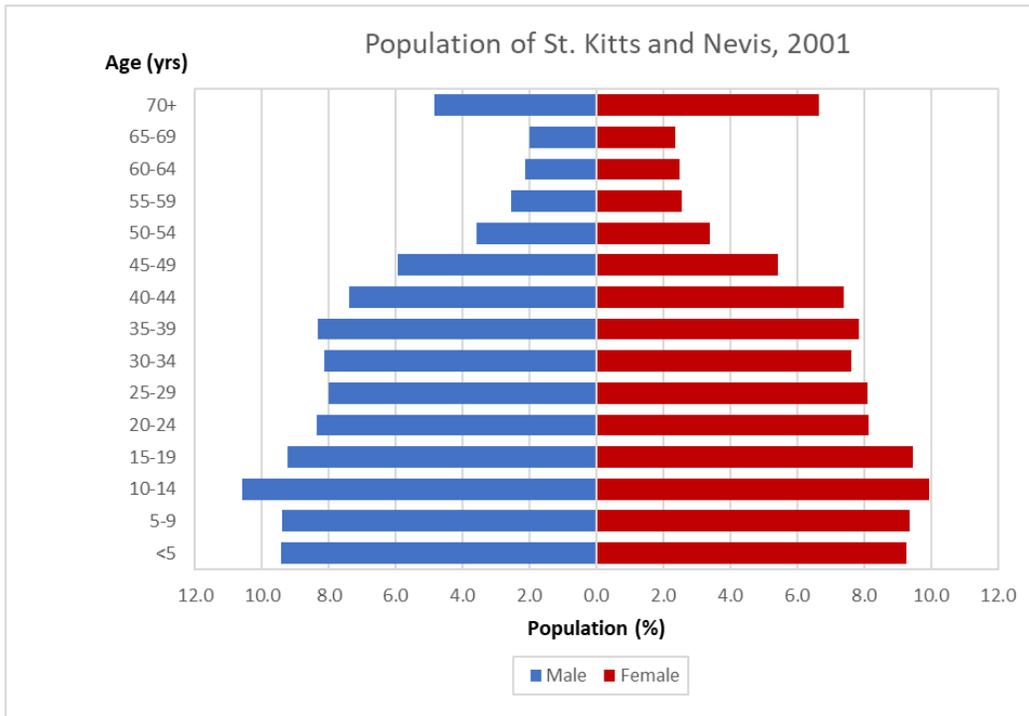
## Total population

	Female	Male	Total
1991	5349	5289	10638
2001	1973	2327	4300
2011	2376	2546	4922

## Age dependency ratios



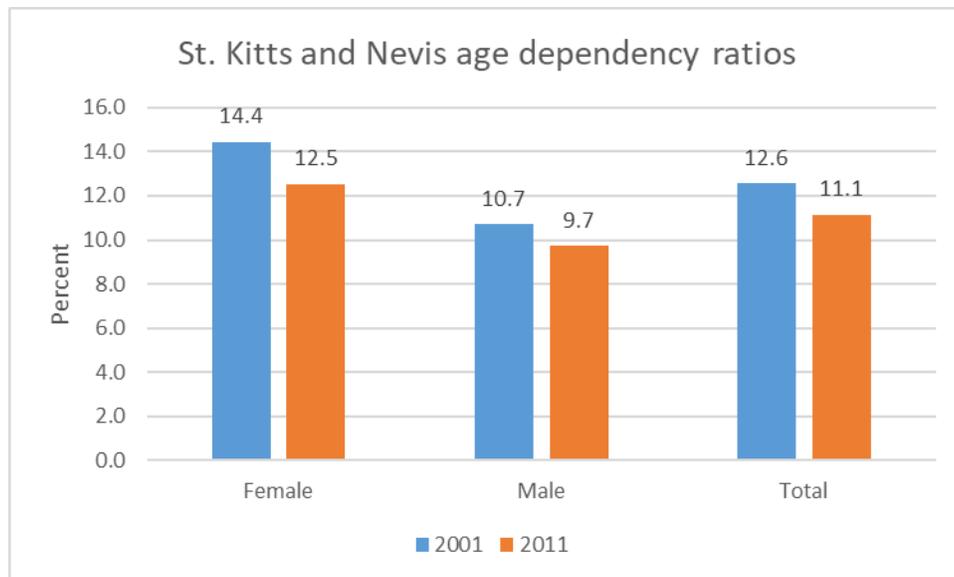
## St. Kitts and Nevis



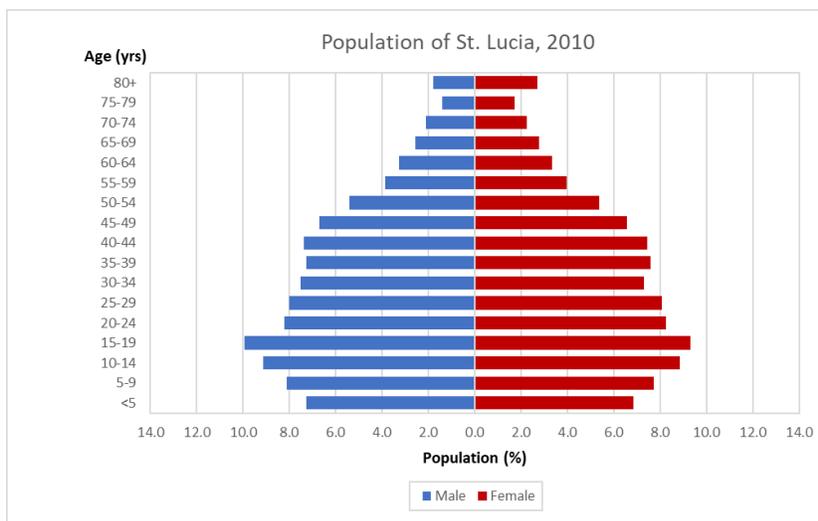
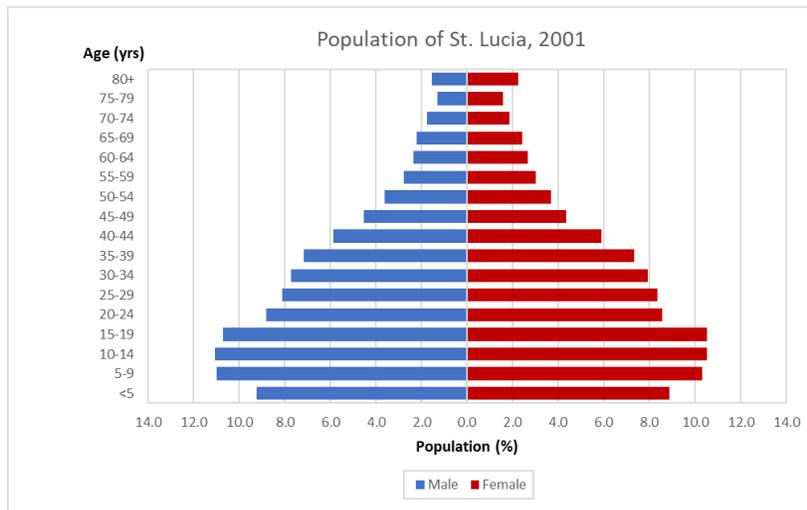
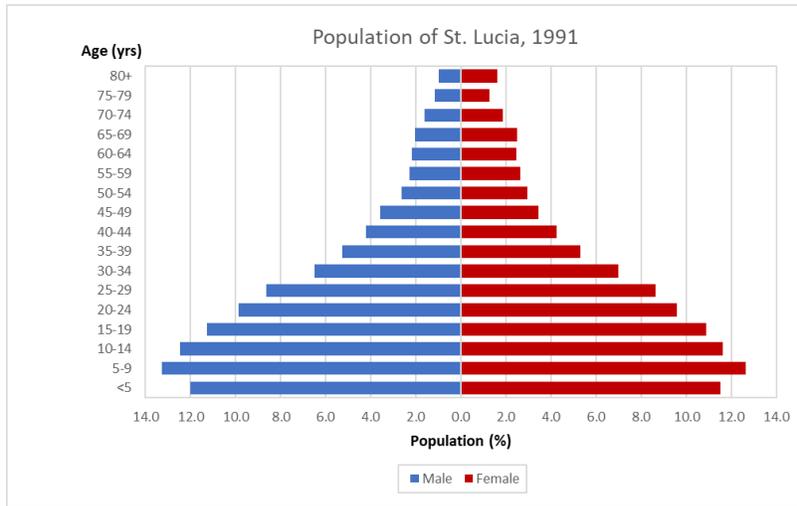
## Total population

	Female	Male	Total
2001	23352	22973	46325
2011	24183	23012	47195

## Age dependency ratios



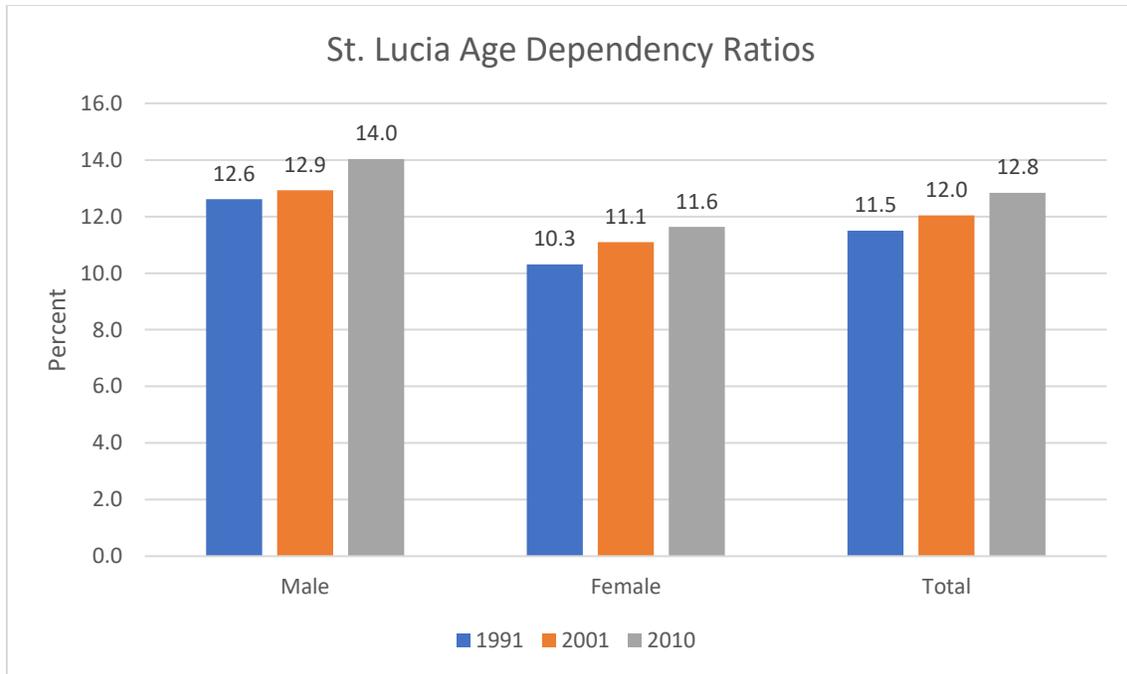
# St. Lucia



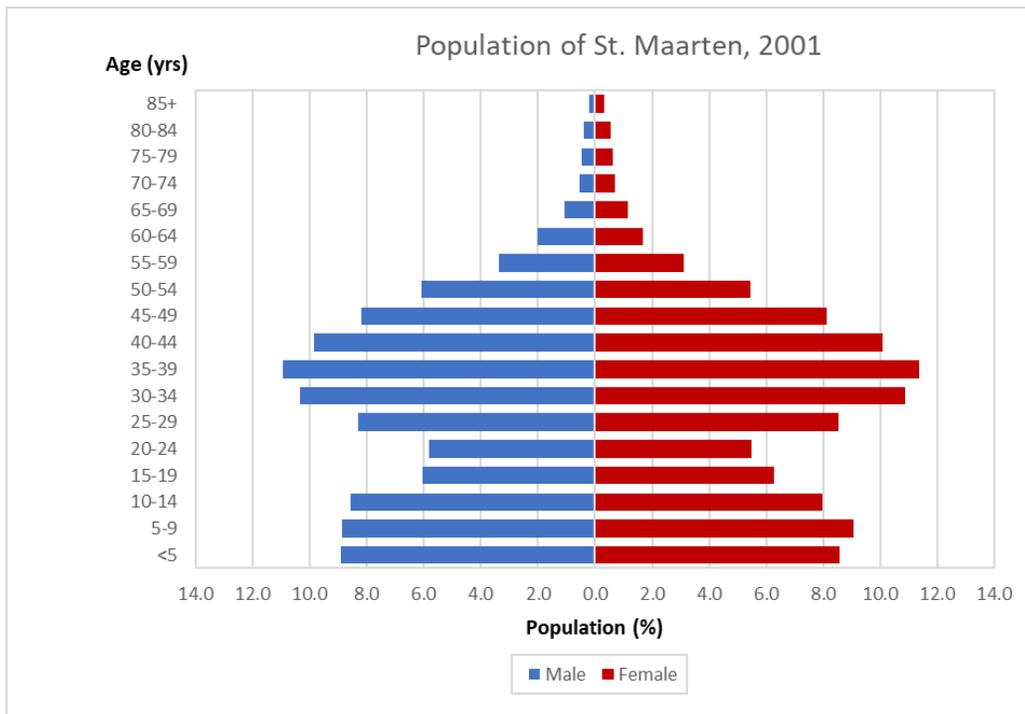
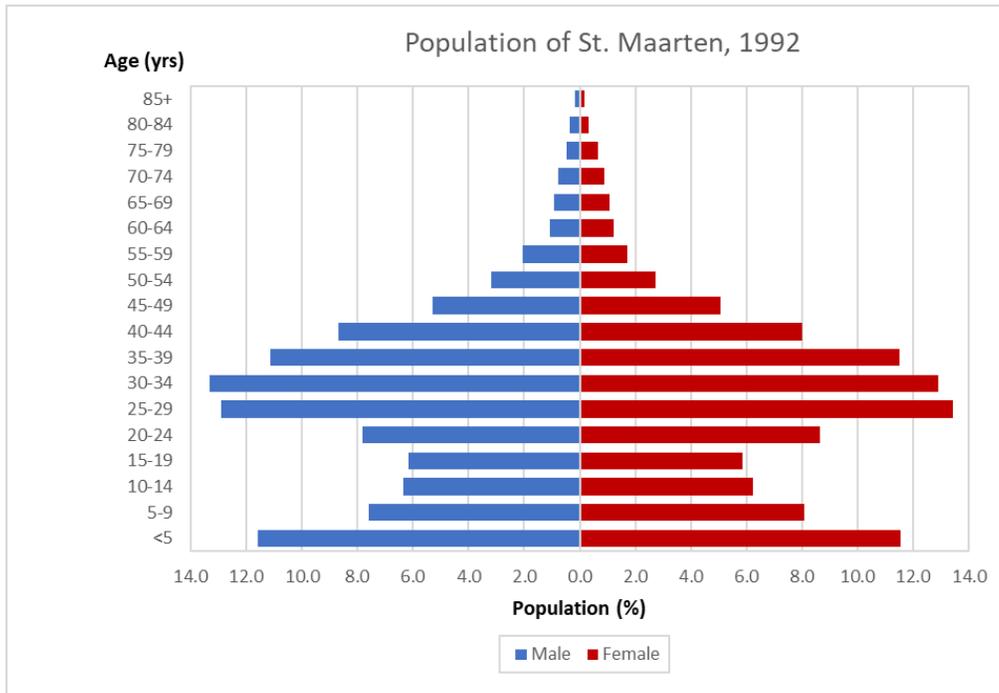
## Total population

	Male	Female	Total
<b>1991</b>	70039	65932	135971
<b>2001</b>	78779	75112	153891
<b>2010</b>	83366	82224	165590

## Age dependency ratios



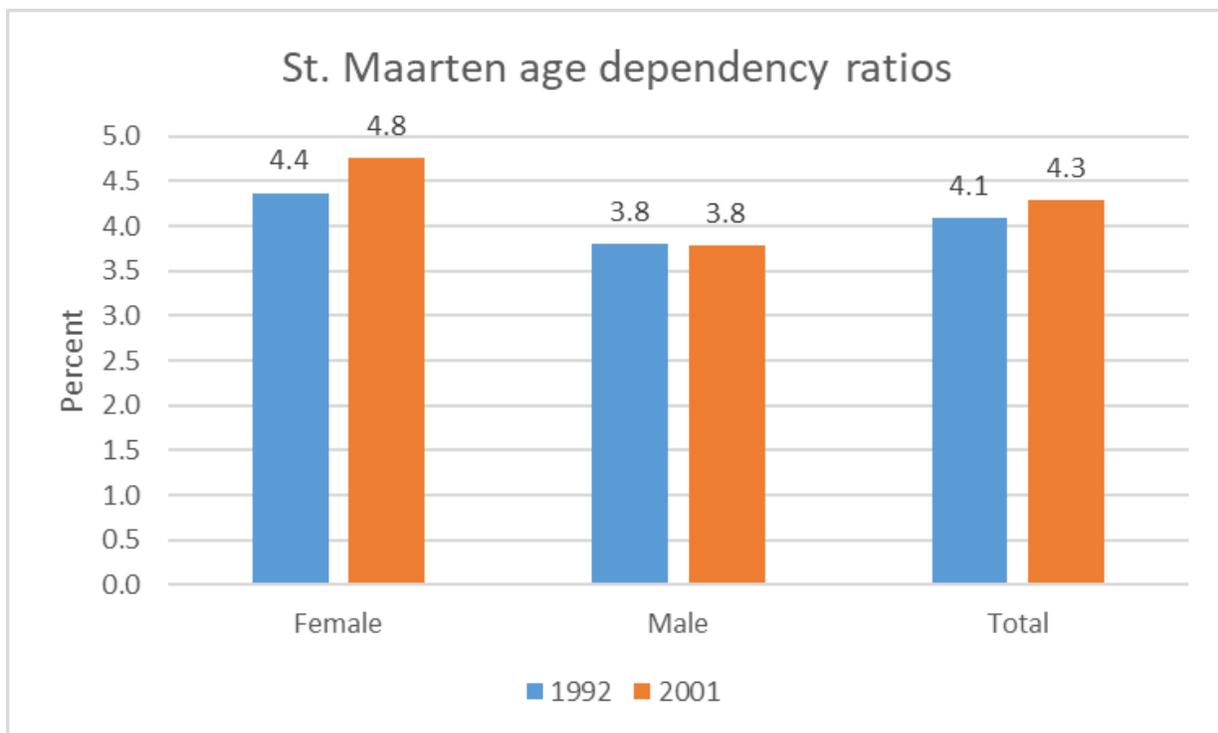
## St. Maarten



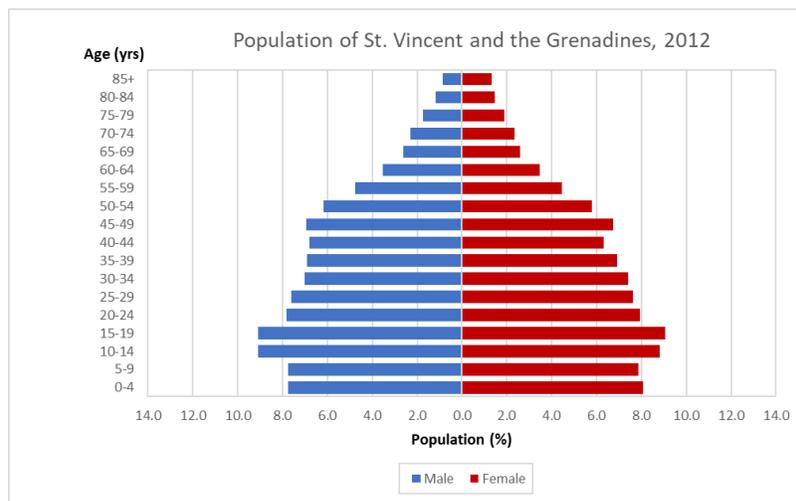
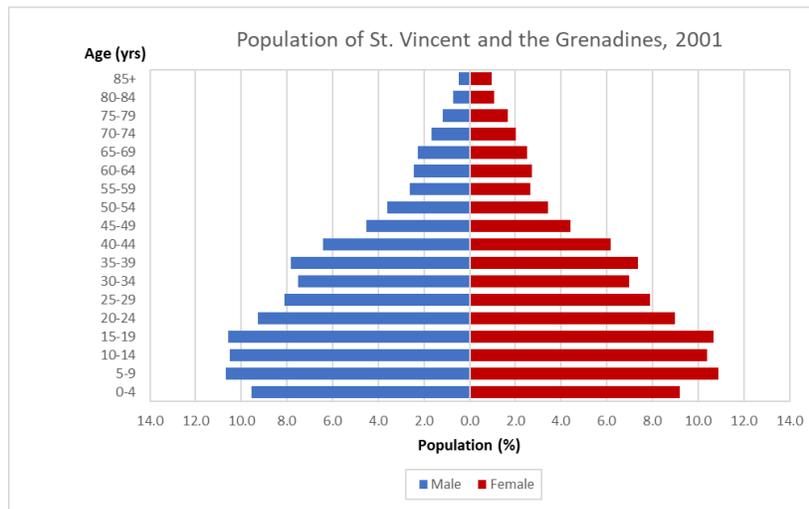
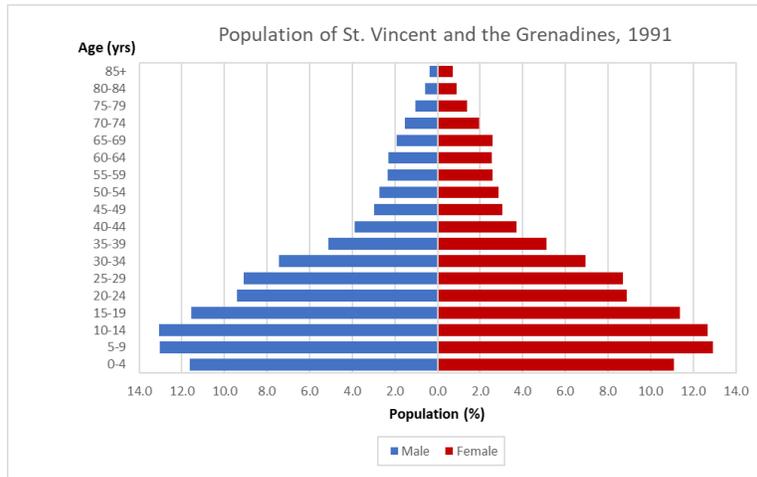
## Total population

	Female	Male	Total
1992	16320	15901	32221
2001	15704	14890	30594

## Age dependency ratios



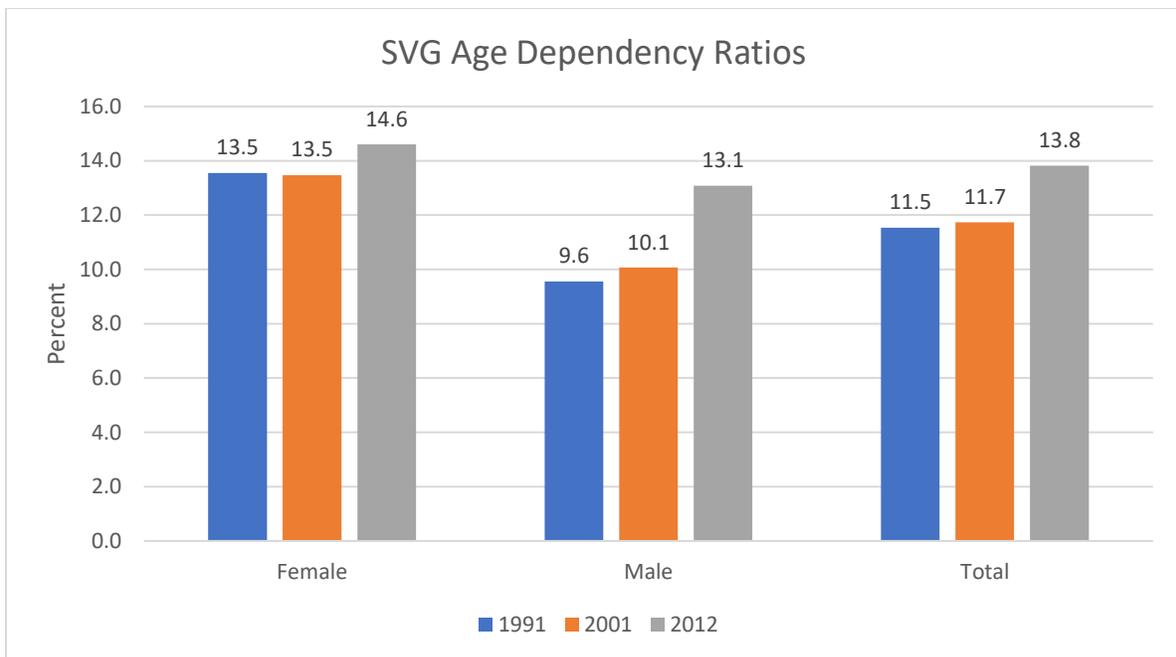
## St. Vincent and the Grenadines



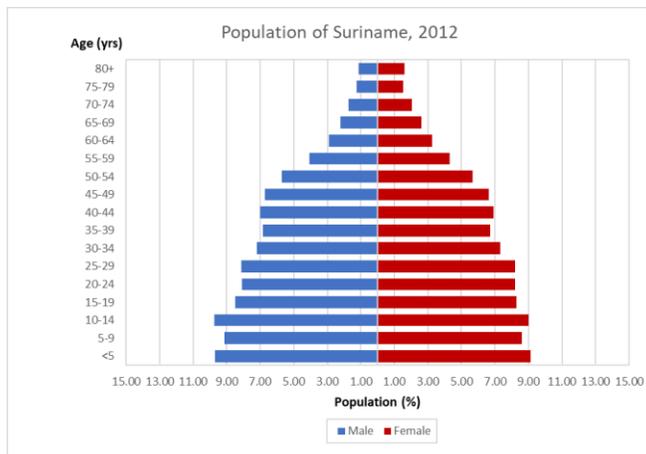
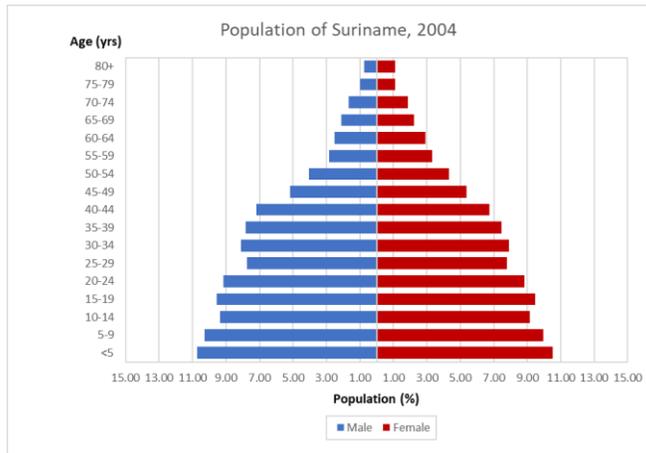
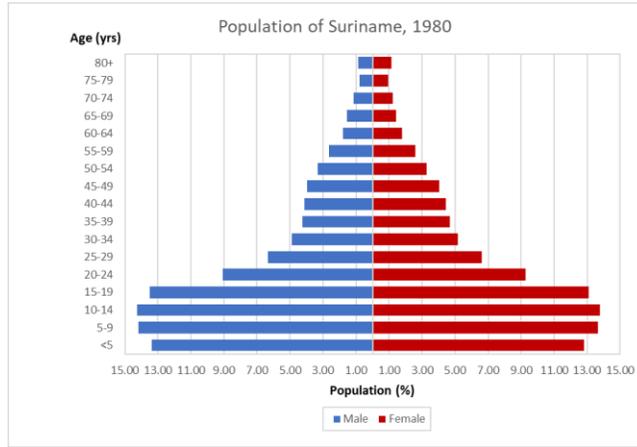
## Total population

	Female	Male	Total
1991	53,329	53,153	106,482
2001	53,408	54,427	107,835
2012	53,637	55,551	109,188

## Age dependency ratios



# Suriname

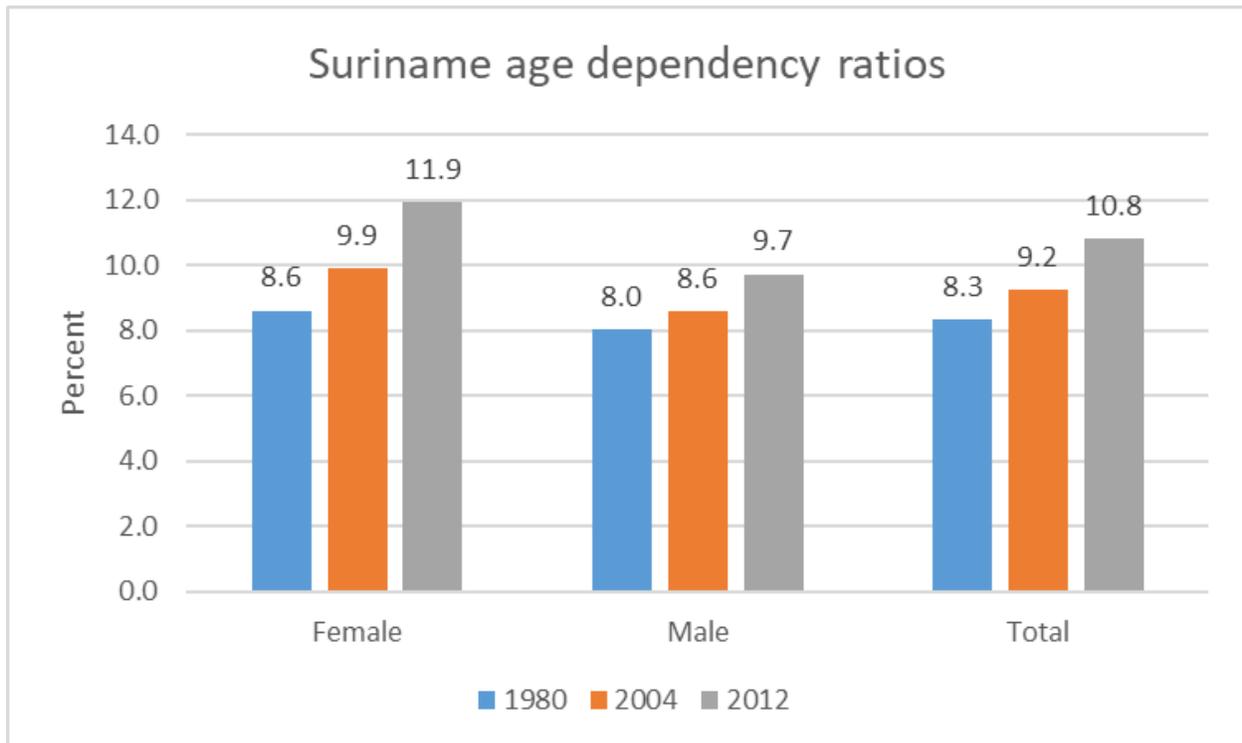


It should be noted that the census years in Suriname are very different from those in the other countries included in the analyses.

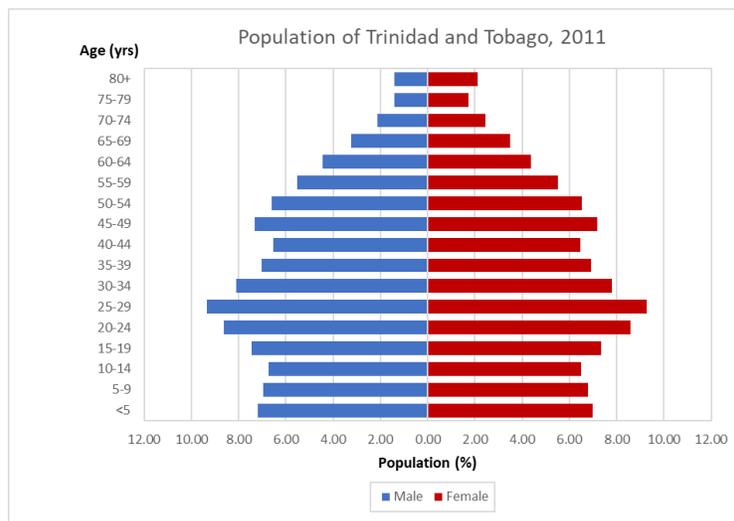
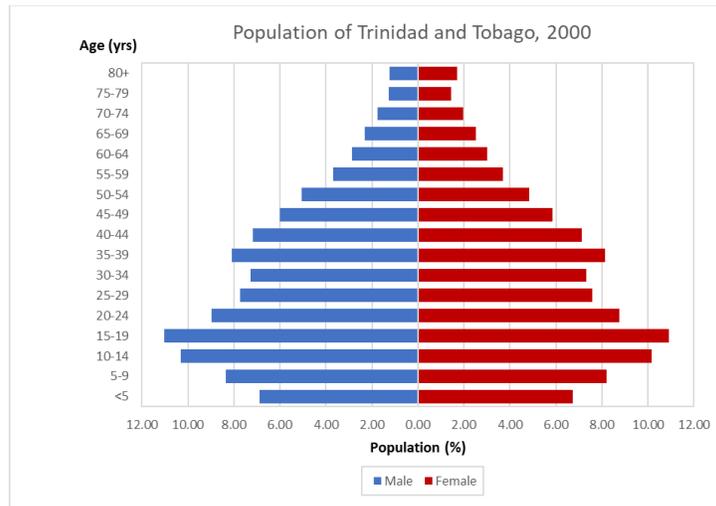
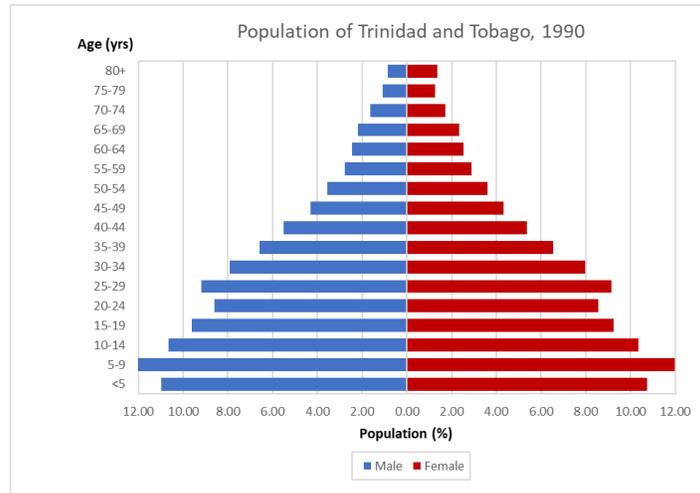
## Total population

	Female	Male	Total
1980	179421	175819	355240
2004	244,782	248,047	492829
2012	271,009	270,629	541638

## Age dependency ratios



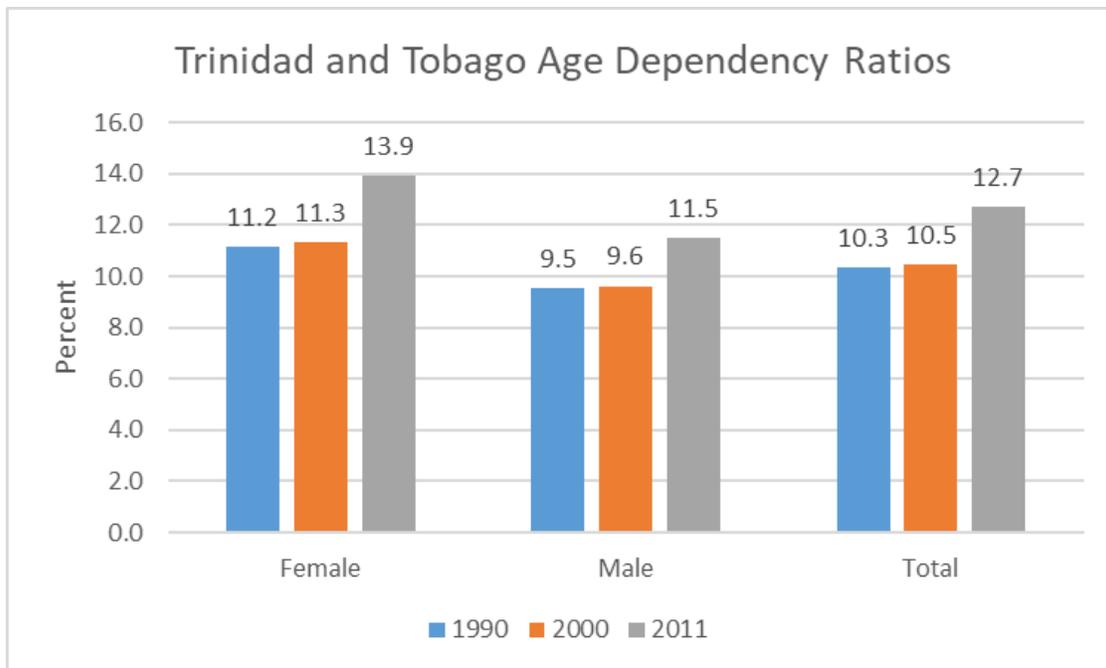
# Trinidad and Tobago



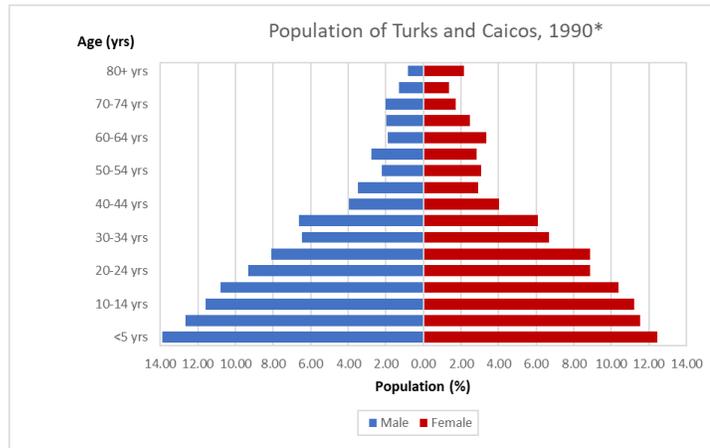
## Total population

	Female	Male	Total
<b>1990</b>	607345	606388	1213733
<b>2000</b>	629315	633051	1262366
<b>2011</b>	661714	666304	1328018

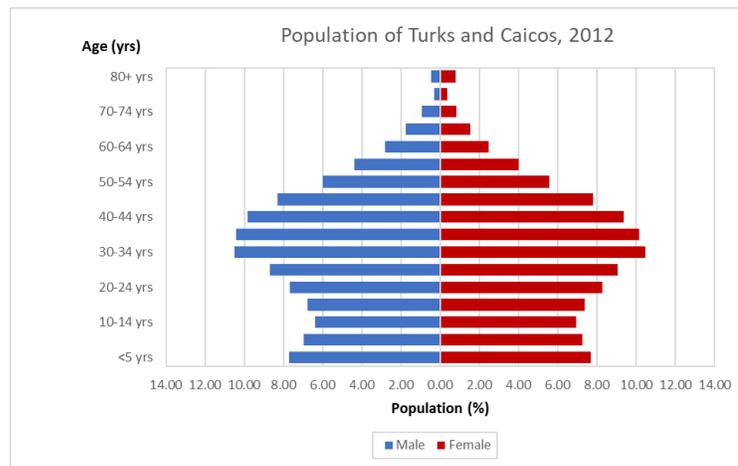
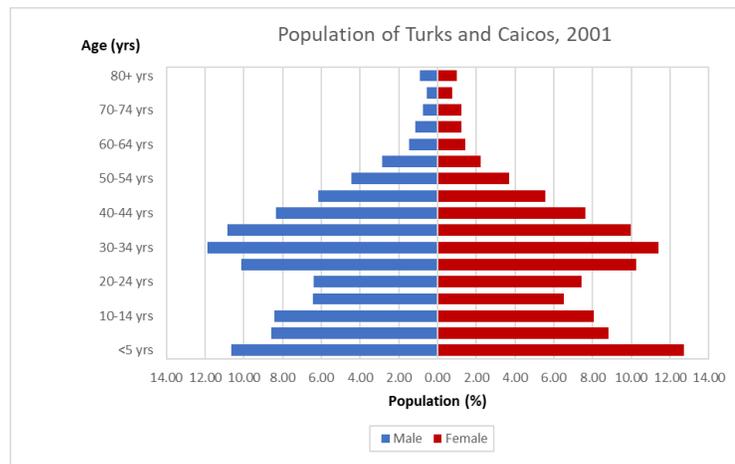
## Age dependency ratios



## Turks and Caicos



Note: Only "Belonger" population i.e. a citizen of Turks and Caicos Islands, either by parentage, birth or naturalisation, were included in these 1990 figures.



Total population

	Female	Male	Total
<b>1990</b>	4044	3857	7901
<b>2001</b>	9990	9894	19884
<b>2012</b>	15834	16365	32199

### Age dependency ratios

