Population and development: the effects of the pandemic on the region's population dynamics -
Effects of the pandemic on persons with NCDs; effect population dynamics in the Caribbean, access to and quality of care and the impact on wellbeing
Outline

• Caribbean states – diversity; multiple groupings; SIDS
• Inequalities
• Demographic patterns
  – Fertility
  – Mortality, morbidity
• Policies,
  the impact of the pandemic on short, medium and long term trends
• Preparing for the future
THE CARIBBEAN

- MULTIPLE GROUPINGS; DIVERSITY; SIDS
The Caribbean – geographic, political

- **CARICOM** (Caribbean Community) Full Members (15)
- **CARICOM Associate** Members: UK Overseas Territories (5)
- **American** territories: Puerto Rico, U.S Virgin islands (2)
- **French** territories: Guadeloupe, French Guyana, Martinique (3)
- **Spanish speaking**: Cuba, Dominican Republic (2)
- **Dutch speaking**: Aruba, Bonaire, Curacao, St Maarten (4)
Very diverse region

Population
• Cuba, Haiti, DR: ~10 million each
• Monserrat: 5,000

Income groupings Per capita GNI (World Bank 2020)
• High Income ~ half
  – Bermuda PPP 83,000
• Upper middle income ~ half
• Lower middle income - 0
• Low income (1)
  – Haiti PPP 3,100

Languages
• English, Spanish, Dutch French

Ethnicity
• All ethnicities, all mixtures

Demographic transition
Population pyramids

Epidemiologic transition complete
NCD dominant

Food Imports as % consumption (FAO 2011)
• St Kitts, Bahamas, Antigua >90%
• Belize, Cuba, Guyana ~40%
Small Island Developing States (SIDS) share similarities and vulnerabilities:

- Highly vulnerable to climate change and natural hazards
- **Economically vulnerable**, high reliance on tourism
- **Nutritionally vulnerable**, high levels of nutritionally related diseases
- Highest rates of **obesity** globally – both among adults and in children, very high rates of diabetes, heart attack, stroke
- Small populations, **unstable numbers**
  - No population projections for countries <90,000 (eight Caribbean Islands)
Inequalities

History of Inequality

• History of slavery, indentured labour, and colonialism
• Legacy of wide disparities

Impact of COVID-19

• Increase in unemployment, some recovery now
• High SES worked remotely, saved money, did relatively well
• Low wage workers, casual labour hit hard.
• Increased in income disparities
DEMOGRAPHIC PATTERNS
Population Pyramids

Antigua and Barbuda  Aruba  Bahamas  Barbados  Belize
Cuba  Curacao  Dominican Republic  Grenada  Guadeloupe
Guyana  Haiti  Jamaica  Martinique  Puerto Rico
SVG  Saint Lucia  Suriname  Trinidad and Tobago  United States Virgin Islands

Males
Females
Demographic transition advancing
Impact of pandemic on demographics Covid 19 and fertility

• Monthly number of births in many countries fell sharply
• Across 17 countries with lower fluctuations in births, the number of births fell 5.1% in November 2020, 6.5% in December 2020 and 8.9% in January 2021
• No validated 2020 2021 Caribbean data
  – Anecdotal reports of increase in teenage pregnancy
• Temporary effect. Catch up is likely
Impact of pandemic on demographics
COVID-19 and mortality

Deaths
Excess mortality is triple reported COVID mortality: direct, indirect 2020 and 2021

Reported global COVID-19 deaths = 5.94 million,
Estimated excess mortality = 18.2 million

Life Expectancy loss in 2020

• COVID-19 pandemic reduced the world’s life expectancy by about 2 years
  – Life expectancy declined from 2019 to 2020 and again from 2020 to 2021 but appeared to stabilize by the end of 2021

• Reductions were mostly attributable to increased mortality >60 years and to official COVID-19 deaths.

• No data for Caribbean

MORTALITY, MORBIDITY,
• In the Caribbean, morbidity and mortality from NCDs are the highest in the region of the Americas
• 40% of NCD deaths occur prematurely, in those < 70 - double North American rates.
• Major NCDs include Heart attacks, stroke, diabetes and cancers
• Hypertension - leading risk factor for death.
• Diabetes prevalence - double global rates
• Drivers: high levels of risk factors in adults and children
• UNHEALTHY DIETS leading risk for premature mortality
PAHO/WHO Advisory Group on Advancing the Noncommunicable Diseases Agenda in the Caribbean

Dr. Anselm Hennis
Director, Department of Noncommunicable Diseases and Mental Health
Pan American Health Organization
| Causes of mortality in the Caribbean, 2019 |

150,507
Estimated total deaths

Noncommunicable diseases 69%
Communicable, mat, perin, nutri 20%
Injuries 11%

Cardiovascular diseases 45%
Cancer 19%
Diabetes 10%
Respiratory diseases 5%
Other NCDs 21%

Caribbean countries: Antigua and Barbuda, Bahamas, Barbados, Belize, Grenada, Guyana, Haiti, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.
Risk of dying prematurely due to the main four NCDs (CVDs, Cancer, Diabetes and Chronic Respiratory Diseases), 2019 – SDG 3.4.1

## Leading causes of Years of Life Lost (YLLs)—Caribbean countries, 2019

(Age-standardized rates per 100,000 population)

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Interpersonal violence</td>
<td>2,546.4</td>
</tr>
<tr>
<td>2</td>
<td>Ischaemic heart disease</td>
<td>2,090.8</td>
</tr>
<tr>
<td>3</td>
<td>Neonatal conditions</td>
<td>1,611.3</td>
</tr>
<tr>
<td>4</td>
<td>Stroke</td>
<td>1,560.4</td>
</tr>
<tr>
<td>5</td>
<td>HIV/AIDS</td>
<td>1,393.6</td>
</tr>
<tr>
<td>6</td>
<td>Diabetes mellitus*</td>
<td>1,331.8</td>
</tr>
<tr>
<td>7</td>
<td>Road injury</td>
<td>984.8</td>
</tr>
<tr>
<td>8</td>
<td>Kidney diseases</td>
<td>805.2</td>
</tr>
<tr>
<td>9</td>
<td>Prostate cancer</td>
<td>772.7</td>
</tr>
<tr>
<td>10</td>
<td>Self-harm</td>
<td>728.1</td>
</tr>
</tbody>
</table>

*Excluding CVD due to diabetes.

Caribbean countries: Antigua and Barbuda, Bahamas, Barbados, Belize, Grenada, Guyana, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.


Underlying causes of deaths grouped using the "Standard list for leading causes of death" (Becker et al., 2006)
Hypertension prevalence, awareness, treatment and control in Caribbean countries

Variation of age-standardised prevalence of hypertension, awareness, treatment, and control among population aged 30-79 by sex, Caribbean countries, 2019

<table>
<thead>
<tr>
<th></th>
<th>females</th>
<th>males</th>
</tr>
</thead>
<tbody>
<tr>
<td>hypertension</td>
<td>38% (BLZ) 50% (DOM)</td>
<td>37% (VCT) 48% (GRD)</td>
</tr>
<tr>
<td>awareness</td>
<td>66% (HTI) 80% (LCA)</td>
<td>43% (HTI) 62% (BRB)</td>
</tr>
<tr>
<td>treatment</td>
<td>33% (HTI) 68% (BRB)</td>
<td>21% (HTI) 51% (BRB)</td>
</tr>
<tr>
<td>control</td>
<td>9% (HTI) 38% (BRB)</td>
<td>8% (HTI) 29% (BRB)</td>
</tr>
</tbody>
</table>

Countries included: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago

Prevalence of overweight and obesity among adults aged 18+ years, age-standardized estimates. Region of the Americas, 2016.

Prevalence of overweight and obesity among adolescents aged 10-19 years, BMI > +1 standard deviations above the median (crude estimate) (%). Region of the Americas, 2016.
Causes of the Causes

• According to the FAO, almost one-third of food imported into the region is energy dense and high in fat, sugar and sodium$^2$.

• Diets consisting largely of processed and ultra-processed foods dramatically increase overweight and obesity.

• Unhealthy diet is leading modifiable risk factors for NCDs diabetes, heart attack, stroke
  – 8 out of every 10 deaths in the Caribbean
  – 40% of premature deaths
  – consume 60% of health budget
Link between food systems and high burden of NCDs in SIDS

% Overweight and Obesity

Caribbean Institute for Health Research, University of the West Indies

Source: Global Burden of Disease Study 2014

Source: FAO 2016
Impact of COVID

• Some tourist countries had initial glut of food as the tourist industry closed down
• Domestic productions continued
• Increased unemployment, increased poverty, increased purchase of cheaper calorie dense, ultra-processed foods
• Some unhealthy food companies took the opportunity to donate their products to COVID-19 vaccination efforts
Caterers to the world

Number of establishments*

<table>
<thead>
<tr>
<th>Restaurant</th>
<th>'000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subway</td>
<td>30</td>
</tr>
<tr>
<td>McDonald’s</td>
<td>20</td>
</tr>
<tr>
<td>KFC</td>
<td>10</td>
</tr>
<tr>
<td>Starbucks</td>
<td>8</td>
</tr>
<tr>
<td>Pizza Hut</td>
<td>6</td>
</tr>
<tr>
<td>Burger King</td>
<td>4</td>
</tr>
<tr>
<td>Domino's Pizza</td>
<td>2</td>
</tr>
<tr>
<td>Taco Bell</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Company reports
*September 30th 2012 or latest
Unhealthy food companies target children
Impact of COVID-19 on Household Food Security in the Caribbean
(Data collection June-July 2020)

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>N</th>
<th>%</th>
<th>MALE HH</th>
<th>FEMALE HH</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAMAICA</td>
<td>402</td>
<td>17.8</td>
<td>61.2</td>
<td>38.8</td>
</tr>
<tr>
<td>BELIZE</td>
<td>313</td>
<td>13.9</td>
<td>64.2</td>
<td>35.8</td>
</tr>
<tr>
<td>BARBADOS</td>
<td>295</td>
<td>13.1</td>
<td>45.8</td>
<td>54.2</td>
</tr>
<tr>
<td>TRINIDAD &amp; TOBAGO</td>
<td>295</td>
<td>13.1</td>
<td>60.3</td>
<td>39.7</td>
</tr>
<tr>
<td>St. KITTS &amp; NEVIS</td>
<td>269</td>
<td>11.9</td>
<td>46.8</td>
<td>53.2</td>
</tr>
<tr>
<td>ANTIGUA</td>
<td>245</td>
<td>10.9</td>
<td>42.9</td>
<td>57.1</td>
</tr>
<tr>
<td>GUYANA</td>
<td>228</td>
<td>10.1</td>
<td>56.6</td>
<td>43.4</td>
</tr>
<tr>
<td>ST. VINCENT &amp; THE GRENADINES</td>
<td>210</td>
<td>9.3</td>
<td>41.9</td>
<td>58.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2257</td>
<td>100</td>
<td>52.5</td>
<td>47.5</td>
</tr>
</tbody>
</table>
Impact of COVID-19 on Household Food Security in the Caribbean – Key Findings

- Mean HH Income fell by 26% from US$346 to US$255 per month
- 62% used up savings and 21% borrowed
- 30% sought official assistance and 29% received
- Inverse relationship between need for support and receipt of support
- 40% experienced some form of hunger and 42% said it was moderate to severe
- In 16%, diet was not good or poor

Fitzroy J. Henry et al; Impact of COVID-19 on Household Food Security in the Caribbean College of Health Sciences, University of Technology, Jamaica
CARIBBEAN RESPONSES
## Marketing regulation in SIDS

### TABLE 1. Country noncommunicable diseases (NCDs) profiles in a study of regulatory measures to fight obesity in Small Island Developing States of the Caribbean and Pacific, 2015–2017

<table>
<thead>
<tr>
<th>Country</th>
<th>Obesity prevalence</th>
<th>% deaths from major NCDs</th>
<th>% risk of premature deaths from major NCDs</th>
<th>Breast-milk substitutes code implemented</th>
<th>WHO marketing recommendations implemented</th>
<th>Taxes on sugar sweetened beverages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbados</td>
<td>33.2%</td>
<td>83%</td>
<td>16%</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Dominica</td>
<td>25.9%</td>
<td>—</td>
<td>—</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Jamaica</td>
<td>26.8%</td>
<td>79%</td>
<td>15%</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Fiji</td>
<td>35.9%</td>
<td>93%</td>
<td>10%</td>
<td>Yes</td>
<td>No, but draft legislation on advertising</td>
<td>Yes</td>
</tr>
<tr>
<td>Nauru</td>
<td>45.1%</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Tonga</td>
<td>41.1%</td>
<td>81%</td>
<td>24%</td>
<td>—</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>


Caribbean Institute for Health Research, University of the West Indies
Healthy Caribbean Coalition: Tackling childhood obesity through the life course
Bermuda taxes sugar by 75%

More sweet treats to be hit by 75% sugar tax

Fiona McWhirter

Created: Feb 23, 2019 08:00 AM
COVID Response “The region’s high food import bill and its high cost of prevention and treatment of NCDs are inextricably linked”

- The Ministerial Taskforce on Food Production and Food Security, in collaboration with the CPSO, identified poultry meat, corn, soybeans and rice for feed production, meat (beef, pork and mutton), niche vegetables and coconut products
- Import substitution
- Hi salt, sugar, fat Ultra Processed, health retarding food being imported unchecked to meet consumer demand
Barbados SSB tax
2015 10%; 2022 20%

• 10% SSB tax (6% passed to consumers) associated with
  o 4% decrease in the sales of SSBs
  o 8% increase in the sales of water

IMPACT VERY SIMILAR TO MEXICO
10% SSB tax (10% passed to consumers)
  o 6% decrease in the sales of SSBs

2022: PM MOTTLEY 20% SSB TAX
Preparing for the future

THANK YOU