MINISTRY OF
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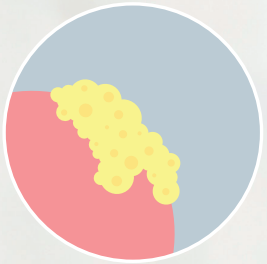
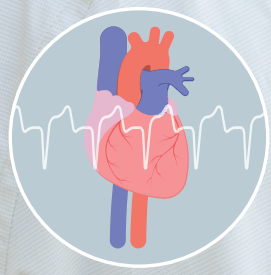


CANCER

CHRONIC RESPIRATORY DISEASE

MENTAL HEALTH CONDITIONS



CARDIOVASCULAR DISEASE

DIABETES

MENTAL HEALTH

Facts

NON COMMUNICABLE DISEASES EDITION

APRIL 2023
ISSN 0799-5083

Vitals

NON COMMUNICABLE DISEASES EDITION

A QUARTERLY REPORT OF THE

MINISTRY OF HEALTH AND WELLNESS

JAMAICA 2023

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website: www.moh.gov.jm

ISSN 0799-5083
Printed in Jamaica by
Jamaica Information Service
58A Half Way Tree Road, Kingston 10

PUBLISHED BY
MINISTRY OF HEALTH & WELLNESS

APRIL 2023

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PUBLISHED BY **MINISTRY OF HEALTH & WELLNESS** | A QUARTERLY REPORT | APRIL 2023
ISSN 0799-5083

Editorial

We have a Non-Communicable Disease (NCD) epidemic in Jamaica. The same is true for countries around the world as seven out of 10, or 41 million persons worldwide die annually from a non-communicable disease such as cardiovascular disease, diabetes, chronic respiratory diseases and cancers. The most recent Jamaica Health and Lifestyle Survey (JHLS) reveals that one in three Jamaicans has hypertension, one in two is overweight or obese, and one in eight has diabetes. This is telling us in no uncertain terms that we have a crisis of NCDs.

Too many Jamaicans are unaware of their condition and are engaging in behaviours likely to increase their risk of NCDs. NCDs often take years to develop and cause symptoms, therefore many persons live with an NCD and are unaware that they have one until they are diagnosed in its advanced stage. Regular health checks help to reduce the risk of developing these conditions and their complications by identifying risk factors that make persons more likely to develop major NCDs and detecting potential health problems early.

At the same time, estimates have shown that the economic impact of NCDs in Jamaica, including mental-health conditions, will lead to a lost output of US$17.2 billion over the next 15 years. We must, therefore, see NCDs as an economic problem as well and as a challenge for development, more broadly.

The household burden of NCDs has pushed a significant number of persons globally into poverty. It has also affected labour productivity and the earning and saving potential of many Jamaicans. A healthier population and greater longevity can lead to increases in our national saving rates. Healthy people have a greater incentive and the potential to save. The East Asian economic success has been partly attributed to this critical factor. What all of this means is that as a matter of urgency, the Government of Jamaica, through the Ministry of Health & Wellness must drive the NCDs agenda forward. We must design plans and implementation strategies that make behavioural science a central focus. NCDs can be prevented by adopting healthy lifestyle habits such as eating healthier foods, increasing physical activity, avoiding excess alcohol and not smoking, among other lifestyle changes.

Prevention, screening and early detection are important strategies in the reduction of the burden of NCDs, as well as the empowerment of persons living with these conditions to take control of their health to avoid complications and live long healthy lives.

Dr. the Hon. Christopher Tufton, MP
Minister of Health & Wellness

ISSN 0799-5083

Noncommunicable Diseases (NCDs) at a Glance

Prevalence of NCD Risk Factors in Jamaicans aged 15 years and older: 2017

NCD Risk Factors	Prevalence (%)		
	Male	Female	Total
Unhealthy Diet:			
Consume the recommended amount of fruits per day	24.4	26.8	25.7
Consume the recommended amount of vegetables per day	36.5	38.5	37.5
High Salt/Sodium Consumption	72.8	60.7	67.0
Physical Inactivity:			
Low Physical Activity Levels	27.7	43.8	35.6
Smoking:			
Current Tobacco Use	26.0	4.7	14.8
Alcohol Consumption:			
Binge Drinking	13.8	3.5	8.5
Heavy Episodic Drinking	13.0	3.4	8.1

Prevalence of NCDs in Jamaicans aged 15 years and older: 2017

NCDs	Prevalence (%)		
	Male	Female	Total
Obesity	14.9	41.2	28.6
Diabetes	9.0	14.6	11.9
Hypertension	31.7	35.8	33.8
Depression	9.9	18.5	14.3
Asthma (Self-reported)	9.9	10.9	10.4
Sickle Cell Disease SS	1.3	0.04	0.7
Cancer (Self-reported)	0.2	1.3	0.8

Source: Jamaica Health and Lifestyle Survey III (2017), JHLSIII Unpublished data
Image from: www.freepik.com

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Introduction

Communicable diseases of infectious origin were for many centuries the leading cause of morbidity and mortality globally[1]. A number of changes in the twentieth century including the emergence and advancement of antibiotics, vaccines and medicines have resulted in increased life expectancy, and have contributed to a shift in the disease profile to non-communicable diseases (NCDs) as leading causes of death and disability[1].

NCDs are conditions which occur over a long duration and are usually incurable[2]. Generally, they are not caused by an acute infection, and result in long-term health consequences, often requiring long-term treatment and care. NCDs result in 41 million deaths each year (approximately 74% of all deaths globally). The World Health Organization (WHO) estimates that approximately 17 million persons die from NCDs before the age of 70 years on an annual basis[2]. Cardiovascular disease, cancers, chronic respiratory diseases and diabetes account for over 80% of all NCD deaths[2].

Many NCDs may be averted by reducing common risk factors and promoting healthier lifestyles. A risk factor is defined as a characteristic associated with a higher likelihood of a negative outcome, and may be classified as *modifiable* (denoting that the condition can be changed) or *non-modifiable.* The table below summarises risk factors for NCDs. Despite the wide range presented, the World Health Organization has proposed that many NCDs can be prevented by reducing four main factors. These are: physical inactivity, tobacco use, harmful use of alcohol and eating an unhealthy diet[4].

Risk Factors and Determinants of Non-Communicable Diseases

Genetic	Environmental	Sociodemographic	Lifestyle	Medical Conditions	Societal
Family disease history	Air pollution	Age	**Tobacco Use**	Medications	Trade policy
Genetic inheritance	Weather changes	Gender	**Harmful Use of Alcohol**	Viruses	Urban design
Epigenetic changes	Sunlight (UV radiation)	Race	**Physical inactivity**	Blood pressure	Transportation
Environment (e.g. exposure to radiation)		Ethnicity	**Unhealthy diet**	Lipids	Media and cultural influences
Toxic material-based mutations		Education	Overweight	Obesity	
		Income	Dental health care	Stress	

Adapted from: a. Budreviciute A et. al[2]; b. Srinath Reddy K[4]

This document presents an epidemiological overview of NCDs in Jamaica beginning with risk factors, followed by prevalence and ending with mortality.

Sources:

1. Phaswana-Mafuya, Nancy, Tassiopoulos, Dimitri.(2011); Non-Communicable Diseases (NCDs) in Developing Countries. Nova Science Publishers, Inc
2. Budreviciute A et. al. Management and Prevention Strategies for Non-Communicable Diseases (NCDs) and Their Risk Factors. Front. Public Health 8:574111. doi: 10.3389/fpubh.2020.574111
3. (Mikkelson 2019) (Fall 2013)
4. Srinath Reddy K. Prevention and Control of Non-Communicable Disease. Chapter in. Oxford Textbook of Global Public Health p. 1476-1483. https://doi.org/10.1093/med/9780199661756.003.0237

Basic Facts

How to Beat NCDs

- Eat Healthy
- Be Physically Active (Everyday, Your Way)
- Stop Smoking
- Avoid Excess Alcohol
- Manage Stress & Mental Health
- Regular Health Checks
- Know Your Numbers: Blood Pressure, Blood Sugar, Cholesterol, BMI, Waist Circumference
- Get Vaccinated
- Always Wear A Seat Belt
- Always Wear A Helmet (Cycling, Bike Riding)

ISSN 0799-5083

NCD Risk Factors - Unhealthy Diet

An unhealthy diet is a major modifiable risk factor for NCDs. Surveys among children and adults in Jamaica have focused on select indicators, including low fruit and vegetable intake as well as fast food, and sodium and potassium consumption.

Fruit and Vegetable Consumption

The World Health Organization recommends eating 400g (or 5 portions) of fruits and vegetables per day excluding potatoes, sweet potatoes, cassava and other starchy foods[1].

Frequency (%) of Fruit Consumption in Children and Adults: 2017

Characteristic	Total (%)	Male (%)	Female (%)
Children Aged 13-17 Year[2]			
Did not eat fruit	17.8	18.8	17.1
Less than once per day	22.1	18.4	25.2
One or more times per day	60.0	62.8	57.6
Two or more times per day	28.7	32.2	25.3
Three or more times per day	14.2	18.3	10.1
Jamaicans Aged 15 Years and Older[3]			
Less than once per week	18.4	18.7	18.1
2-6 times per week	54.4	53.9	54.9
Once per day	22.2	22.6	21.8
Greater than 2 times per day	5.0	4.8	5.2
Jamaicans Aged 15 Years and Older[3]			
Consume the Recommended Servings of Fruit Per Day	25.7	24.4	26.8

Sources: a. Global School Health Survey (2017) [2]; b. Jamaica Health and Lifestyle Survey (2017)[3]

In 2017, approximately four in ten (39.9%) children aged 13 to 17 years (Global School Health Survey) indicated that they *did not eat fruit or ate fruit less than once per day*. Additionally, approximately one in three (32.6%) children *did not eat vegetables or ate them less than once per day*.

Frequency (%) of 100% Fruit Juice Consumption, 15 years and older:2017

Characteristic	Total (%)	Male (%)	Female (%)
Jamaicans Aged 15 Years and Older[3]			
Less than once per week	54.4	55.0	54.0
2-6 times per week	35.2	34.3	36.1
Once per day	7.9	8.4	7.5
Greater than 2 times per day	2.4	2.4	2.5

Source: Jamaica Health and Lifestyle Survey (2017)[3]

Sources:
1. Healthy Diet. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/healthy-diet
2. National Council on Drug Abuse, Global School-based Student Health Survey 2017
3. Jamaica Health and Lifestyle Survey (2017) (JHLSIII) unpublished data.
4. Get the Facts: Sugar-Sweetened Beverages and Consumption. Centers for Disease Control and Prevention. Get the Facts: Sugar-Sweetened Beverages and Consmption | Nutrition | CDC

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NCD Risk Factors - Unhealthy Diet

Among Jamaicans aged 15 years and older only 5% reported eating fruits greater than two times per day, while one in every ten reported consuming 100% fruit juice once or more daily. Approximately one in every four Jamaicans (25%) consumed the recommended serving of fruits per day; while about 38% consumed the recommended servings of vegetables.

Frequency (%) of Vegetable Consumption in Children and Adults:2017

Characteristic	Total (%)	Male (%)	Female (%)
Children Aged 13-17 Years[2]			
Did not eat vegetables	13.6	13.6	13.7
Less than once per day	19.0	16.2	21.8
One or more times per day	67.4	70.1	64.6
Two or more times per day	30.7	31.5	29.9
Three or more times per day	15.5	17.7	13.4
Jamaicans Aged 15 Years and Older[3]			
Consume the Recommended Servings of Vegetables Per Day	37.5	36.5	38.5

Sources: a. Global School Health Survey (2017) [2]; b. Jamaica Health and Lifestyle Survey (2017)[3]

Fast Food Consumption

Approximately four in ten (41.3%) children aged 13-17 years[2]; and 61% of Jamaicans aged 15 years and older did not eat fast food[3].

Six in ten (58.7%) children added 13-17 years reported eating fast food one or more times per day, while one in three children (34.3%) reported eating fast food two or more times per day. The frequency of fast food consumption was lower among older Jamaicans (15 years and older) with only three percent reporting fast food consumption greater than two times per day.

Frequency (%) of Fast Food Consumption in Children and Adults: 2017

Characteristic	Total (%)	Male (%)	Female (%)
Children Aged 13-17 Years[2]			
Did not eat fast food	41.3	44.1	39.0
One or more times per day	58.7	55.9	61.0
Two or more times per day	34.3	33.7	34.9
Three or more times per day	21.6	20.1	22.8
Jamaicans Aged 15 Years and Older[3]			
Never	61.4	60.5	62.4
1-6 times per week	30.8	31.7	29.9
Once per day	4.5	4.7	4.3
Greater than 2 times per day	3.3	3.2	3.4

Sources: a. Global School Health Survey (2017) [2]; b. Jamaica Health and Lifestyle Survey (2017)[3]

Sources:
1. Healthy Diet. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/healthy-diet
2. National Council on Drug Abuse, Global School-based Student Health Survey 2017
3. Jamaica Health and Lifestyle Survey (2017) (JHLSIII) unpublished data.
4. Get the Facts: Sugar-Sweetened Beverages and Consumption. Centers for Disease Control and Prevention. Get the Facts: Sugar-Sweetened Beverages and Consmption | Nutrition | CDC

NCD Risk Factors - Unhealthy Diet

Carbonated and Sugar Sweetened Beverage Consumption

According to the Centers for Disease Control and Prevention (CDC) 'sugar sweetened beverages are any liquids that are sweetened with various forms of added sugars like brown sugar, corn sweetener, corn syrup, dextrose, fructose, glucose, high-fructose corn syrup, honey, lactose, malt syrup, maltose, molasses, raw sugar, and sucrose'[1]. Examples of sugar-sweetened beverages include carbonated soft drinks or soda, sweetened water, energy drink and fruit drinks[1]. High consumption of sugar-sweetened beverages is associated with obesity, tooth decay, as well as increased risk of NCDs.

Fifteen percent (15.2%) of children (13-17 years) did not consume carbonated beverages. In contrast, 45.6% consumed carbonated beverages two or more times per day. Meanwhile, 12.3% of Jamaicans 15 years and older consumed sugar sweetened beverages two times or more per day.

Frequency (%) of Carbonated and Sugar Sweetened Beverage Consumption in Children and Adults: 2017

Characteristic	Total (%)	Male (%)	Female (%)
Frequency of Carbonated Beverage Intake			
Children Aged 13-17 Years[2]			
Did not drink carbonated soft drinks	15.2	12.7	17.6
Less than once per day	16.4	15.3	17.5
One or more times per day	68.4	72.0	64.9
Two or more times per day	45.6	48.6	42.9
Three or more times per day	26.7	27.2	26.1
Frequency of Sugar Sweetened Beverage Consumption			
Jamaicans Aged 15 Years and Older[3]			
Never	20.6	19.9	20.4
Less than once per week	16.4	6.0	16.7
2-6 times per week	15.2	42.8	34.0
Once per day	15.6	20.7	15.8
≥2 times per day	12.3	10.6	13.1

Sources: a. Global School Health Survey (2017) [2]; b. Jamaica Health and Lifestyle Survey (2017)[3]

Sources:

1. Get the Facts: Sugar-Sweetened Beverages and Consumption. Centers for Disease Control and Prevention. Get the Facts: Sugar-Sweetened Beverages and Consmption | Nutrition | CDC
2. National Council on Drug Abuse, Global School-based Student Health Survey 2017
3. Jamaica Health and Lifestyle Survey (2017) (JHLSIII) unpublished data.

ISSN 0799-5083

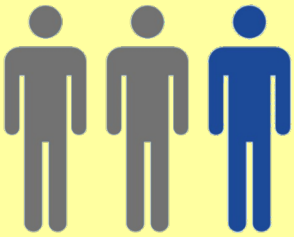
NCD Risk Factors - Unhealthy Diet

Sodium and Potassium Consumption among Jamaicans 15 years and older:

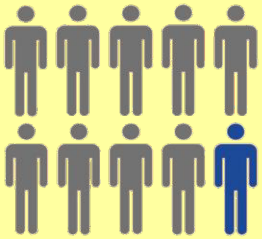
High sodium consumption and low potassium intake contribute to high blood pressure and increase the risk of heart disease and stroke.[1] The Jamaica Health and Lifestyle Survey (JHLS III) findings on sodium and potassium intake are presented below:

Average Intake of salt in Jamaica is almost Twice as high as the Recommended level of intake[2]

Average intake of Potassium in Jamaica is 3/5 the Recommended level of intake[2]



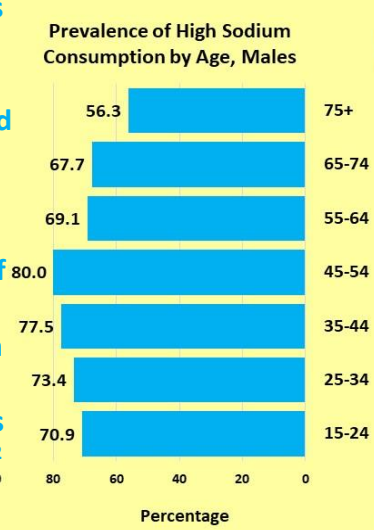
2 out of 3 (67%) of Jamaicans consume more than the recommended sodium intake[2]

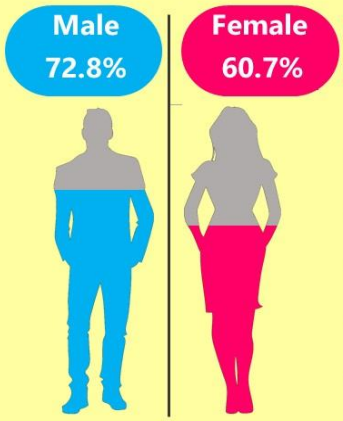


9 out of 10 (90%) of Jamaicans consume less than the recommended potassium intake[2]

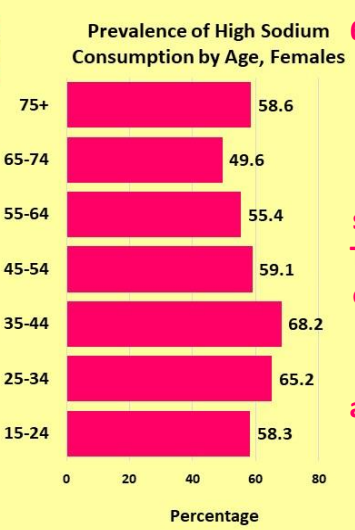
Prevalence of High Sodium Consumption among Jamaicans[2]

73% of males have higher than recommended levels of sodium intake. The prevalence of high sodium consumption was greatest among males 45-54 years.[2]





2 out of 3 Jamaicans (67%) consume more than the recommended sodium intake



61% of females have higher than recommended levels of sodium intake. The prevalence of high sodium consumption was greatest among females 35-44 years.[2]

Sources:
1. WHO. Salt Reduction. April 2020. https://www.who.int/news-room/fact-sheets/detail/salt-reduction
2. Ferguson et al. (2021). Sodium and Potassium Consumption in Jamaica: National Estimates from the Jamaica Health and Lifestyle Survey 2016-2017

ISSN 0799-5083

NCD Risk Factors - Unhealthy Diet

Reduce Your Salt/Sodium Consumption and Increase Your Potassium Intake

It is recommended that persons consume less than 1 teaspoon of salt per day. Persons with hypertension should have less than half a teaspoon of salt per day.[1]

Sources of Potassium

Fruits

Vegetables

Staples:
Ground Provisions

Legumes, Peas, Beans and Nuts

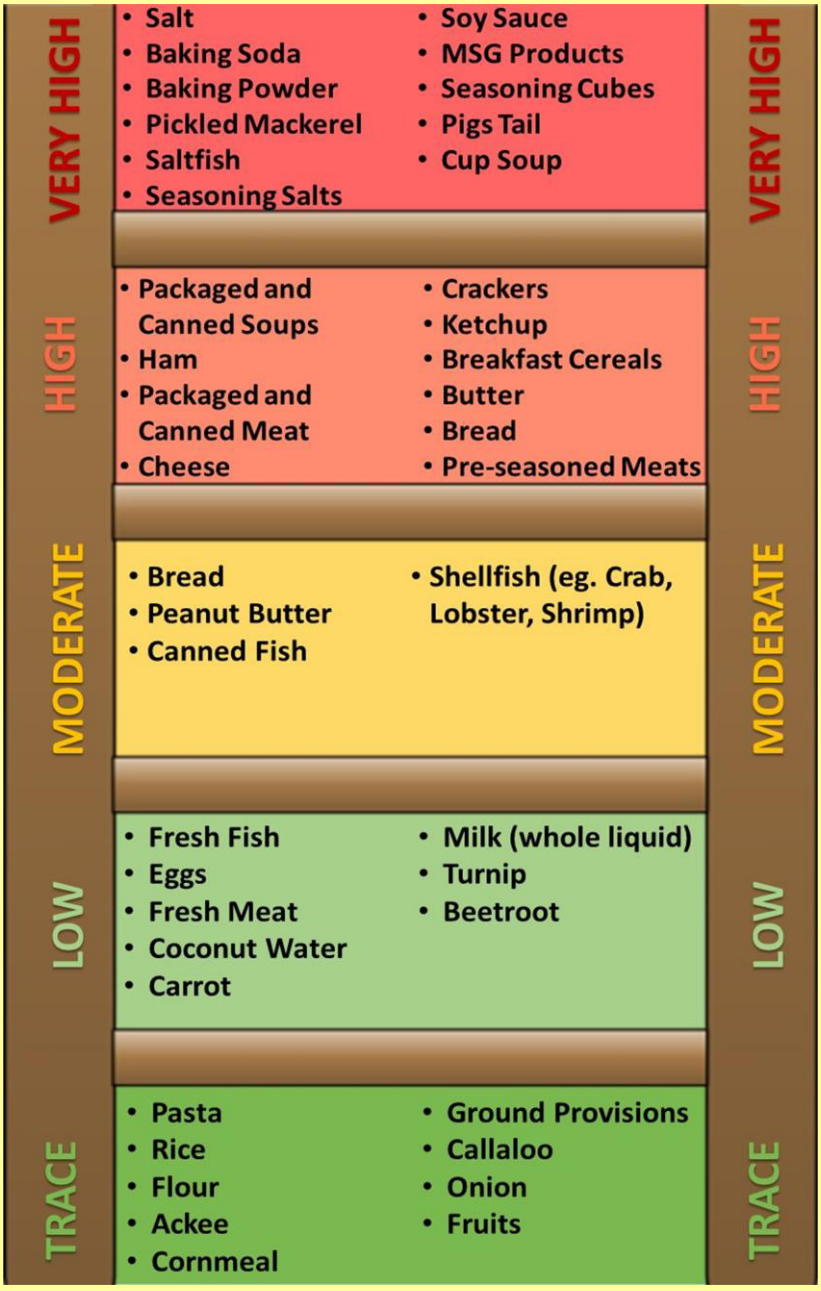
Fats and Oils:
Avocado/Pear

Foods from Animals:
Meats, Poultry, Fish, Milk and Yogurt

Source: https://www.gundersenhealth.org/health-wellness/eat/8-surprising-sources-of-sodium/ , https://www.cdc.gov/salt/sources.htm , https://ods.od.nih.gov/factsheets/Potassium-Consumer/
Images from: www.vecteezy.com, www.istockphoto.com

The Sodium Ladder[2]

(Sources and Amount/Levels of Sodium in Food)



- **Consult qualified nutrition practitioners for personal guidance**

Sources:
1. American Heart Association
2. Adapted with permission from Patricia Thompson 2022, Jamaica Island Nutrition Network/Institute of Nutrition and Wellness Studies (JINN/INWES)

NCD Risk Factors - Physical Inactivity

Definition and Recommended Levels

Physical activity is defined by WHO as *'any bodily movement produced by skeletal muscles that requires energy expenditure'*[1]. It is important for healthy ageing and may serve to reduce the risk of NCDs, as well as premature mortality[2]. The WHO estimates a 20-30% increased risk of death in persons who are insufficiently physically active[1]. The CDC estimates that 110,000 premature deaths in the United States per year could be prevented if adults were more physically active[2]. The WHO recommends varying physical activity for specific age categories and/or special groups. These recommendations are outlined below:

Physical Activity Recommendations for Age Categories and/or Special Groupings

Age Group/Characteristic	Physical Activity Recommendation
Infants Less Than 1 year	▪ Children **should be physically active several times throughout the day** in a variety of ways, particularly through interactive floor-based play; ▪ For those not yet mobile, this includes at least 30 minutes in prone position (tummy time) spread throughout the day while awake.
Children 1-2 years	▪ Children should spend **at least 180 minutes (3 hours)** in a variety of physical activities at any intensity, more is better.
Children 3-4 years	• Children should spend **at least 180 minutes (3 hours)** in a variety of physical activities at any intensity, of which **at least 60 minutes (1 hour)** is moderate-to-vigorous intensity physical activity.
Children 5-17 years	▪ Children should participate in **at least an average of 60 minutes (1 hour) per day** of moderate-to-vigorous intensity, mostly aerobic, physical activity.
Adults Aged 18-64 years	▪ Adults in this age group should do **at least 150–300 minutes (2.5-5 hours)** of moderate intensity aerobic physical activity per week; **or** at least 75–150 minutes (1.25-2.5 hours) of vigorous intensity aerobic physical activity per week; or an equivalent combination of both types of exercise.
Adults Aged 65 years +	▪ Adults in this age group should do the same for those aged 18-64 years while also focusing on functional balance and strength training at moderate or greater intensity, on 3 or more days a week, to enhance functional capacity and prevent falls.
Pregnant and Postpartum Women	▪ Pregnant women should participate in **at least 150 minutes (2.5 hours)** of moderate intensity aerobic physical activity throughout the week while incorporating a variety of aerobic and muscle-strengthening activities.

Source: Physical activity. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/physical-activity

A 10% relative reduction in physical inactivity levels is one of the global voluntary targets to be attained by 2025[3].

Sources:
1. Physical activity. World Health Organization. https://www.who.int/news-room/fact-sheets/detail/physical-activity
2. About Physical Activity. Centers for Disease Control and Prevention. https://www.cdc.gov/physicalactivity/about-physical-activity/index.html
3. NCD Global Monitoring Framework. World Health Organization. https://www.who.int/publications/i/item/ncd-surveillance-global-monitoring-framework

Reported Levels of Low Physical Activity and/or Sedentary Behavior in Jamaican Children and Adults

Greater than half or 56.4% of children aged 13-17 years reported spending three or more hours per day sitting and watching television, playing computer games or talking with friends. Prevalence of this sedentary behavior was higher in older children aged 16-17 years (60.2%) when compared with their younger counterparts aged 13-15 years (53.4%).

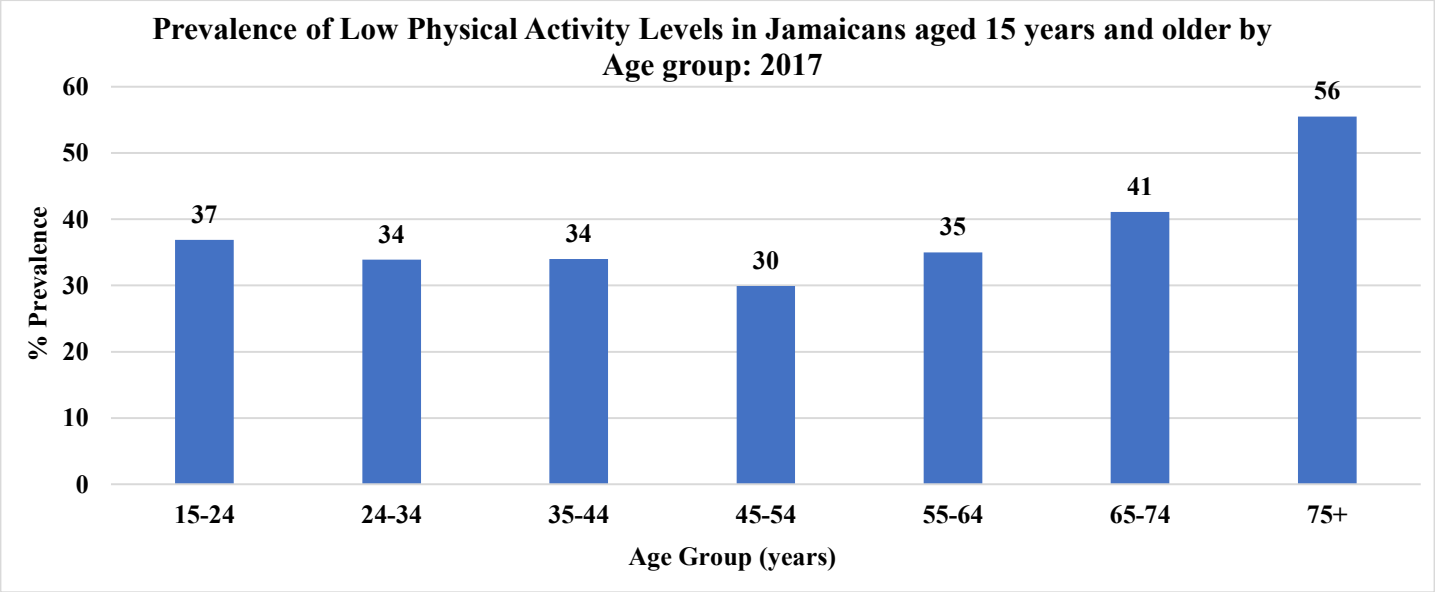
Greater than one in three (35.6%) Jamaicans aged 15 years and older had low levels of physical activity. Females had a higher prevalence of low physical activity (43.8%) when compared with males (27.7%). Prevalence of low physical activity levels declined in the overall population, as well as males aged 15-74 years between the period 2008 and 2017. However, prevalence of low physical activity levels among females increased by 24.7% over the same period.

Low Physical Activity and/or Sedentary Behavior in Jamaican Children and Adults: 2008 and 2017

Characteristic	Age (Years)	Year	Total	Male	Female
Spent three or more hours per day sitting and watching television, playing computer games, or talking with friends, when not in school or doing homework during a typical or usual day	13-15[1]	2017	53.4	47.1	59.2
	16-17[1]	2017	60.2	53.2	67.4
	13-17[1]	2017	56.4	49.8	62.7
Low Physical Activity Levels*	15-74[2]	2008	38.4	29.2	34.4
	15-74[2]	2017	34.7	26.5	42.9
	>= 15[2]	2017	35.6	27.7	43.8

*Based on the International Physical Activity (IPAQ) Questionnaire
Sources: a. Global School Health Survey 2017[1] ; b. Jamaica Health and Lifestyle Survey 2008 & 2017[2]

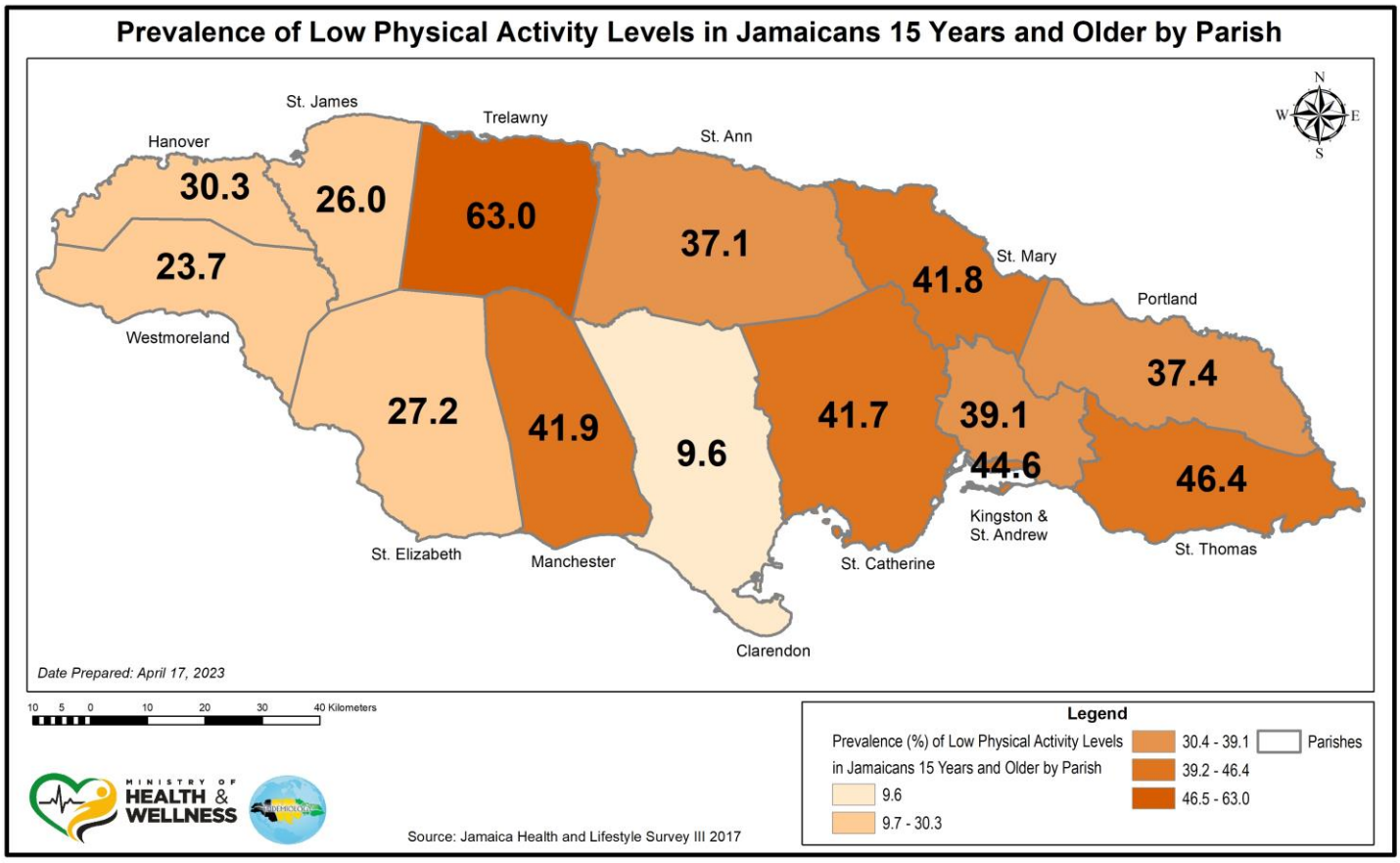
When disaggregated by age category, in general, the prevalence of low physical activity increased with increasing age. Jamaicans aged 45-54 years had the lowest prevalence of low physical activity levels (29.9%).



Source: Jamaica Health and Lifestyle Survey 2017, unpublished data

NCD Risk Factors - Physical Inactivity

Low physical activity was most prevalent in Trelawny (63%) followed by St. Thomas (46.4%) and Kingston (44.6%); while parishes with the lowest prevalence were Clarendon (9.6%), Westmoreland (23.7%) and St. James (26.0%).



Source: Jamaica Health and Lifestyle Survey (2017) unpublished

ISSN 0799-5083

NCD Risk Factors - Smoking

Tobacco use is a major risk factor for NCDs such as chronic respiratory diseases, cancers, heart disease and stroke[1]. An estimated one in six NCD deaths are related to tobacco use[2]. According to WHO tobacco is responsible for over 8 million deaths annually. Of these deaths, over 7 million are from direct tobacco use, while 1.2 million are due to exposure to secondhand smoke[3]. A 30% reduction in tobacco use is a global target to be attained by 2025[2].

In 2013, the Public Health (Tobacco Control) regulations were passed in Jamaica prohibiting smoking in specified spaces, such as enclosed public and work spaces, public conveyances as well as facilities for health and sports[4]. The "Tobacco Control Act, 2020" was tabled in Parliament, and is being considered by a Joint Select Committee, chaired by the Minister of Health and Wellness.

Smoking Initiation

The majority of Jamaicans aged 15 years and older who smoked initiated after age 16 years. Notably, 9.6% reported initiating smoking at 10-11 years, 12% at 12-13 years, and 9.9% at 14-15 years. Among males who smoked, 16.7% initiated smoking at age 11 years or younger.

Given Age of Smoking Initiation Among Jamaicans Aged 15 Years and Older: 2017

Given Age (Years) When Smoking Was Initiated	Total	Male	Female
3-7	2.3	3.2	1.6
8-9	2.3	3.4	0.5
10-11	9.6	10.1	8.5
12-13	6.3	8.8	3.7
14-15	9.9	15.0	8.7
>= 16	69.4	59.6	77.0

Source: Jamaica Health and Lifestyle Survey

Current Cigarette and/or Tobacco Use

In 2017, approximately one in seven (14.9 %) children aged 13-17 years reported smoking cigarettes in the past 30 days. This proportion was higher in males (19.1%) than females (11.0%). A 45% reduction in current smoking prevalence was observed among 13-15 year olds, moving from 23.9% in 2010 to 13.1% in 2015.

Similar to children, fifteen percent (14.7%) of Jamaicans aged 15 years and older used tobacco products. This proportion was higher in males (26.0%) than females (4.7%), with approximately one in four males reporting current tobacco use. There was a 15% decline in current smoking between 2001 and 2017; this was followed by a 2% increase between 2008 and 2017.

Source:
1. Tobacco. Global Health Protection and Security. Centers for Disease Control and Prevention. Tobacco | Division of Global Health Protection | Global Health | CDC
2. Global NCD Targets. NCD Alliance. https://ncdalliance.org/global-ncd-targets
3. Tobacco. World Health Organization. Tobacco (who.int)
4. Smoking is Still Prohibited in Public Spaces. Ministry of Health and Wellness. Smoking is Still Prohibited in Public Places – Ministry of Health – Ministry of Health & Wellness, Jamaica (moh.gov.jm)

NCD Risk Factors - Smoking

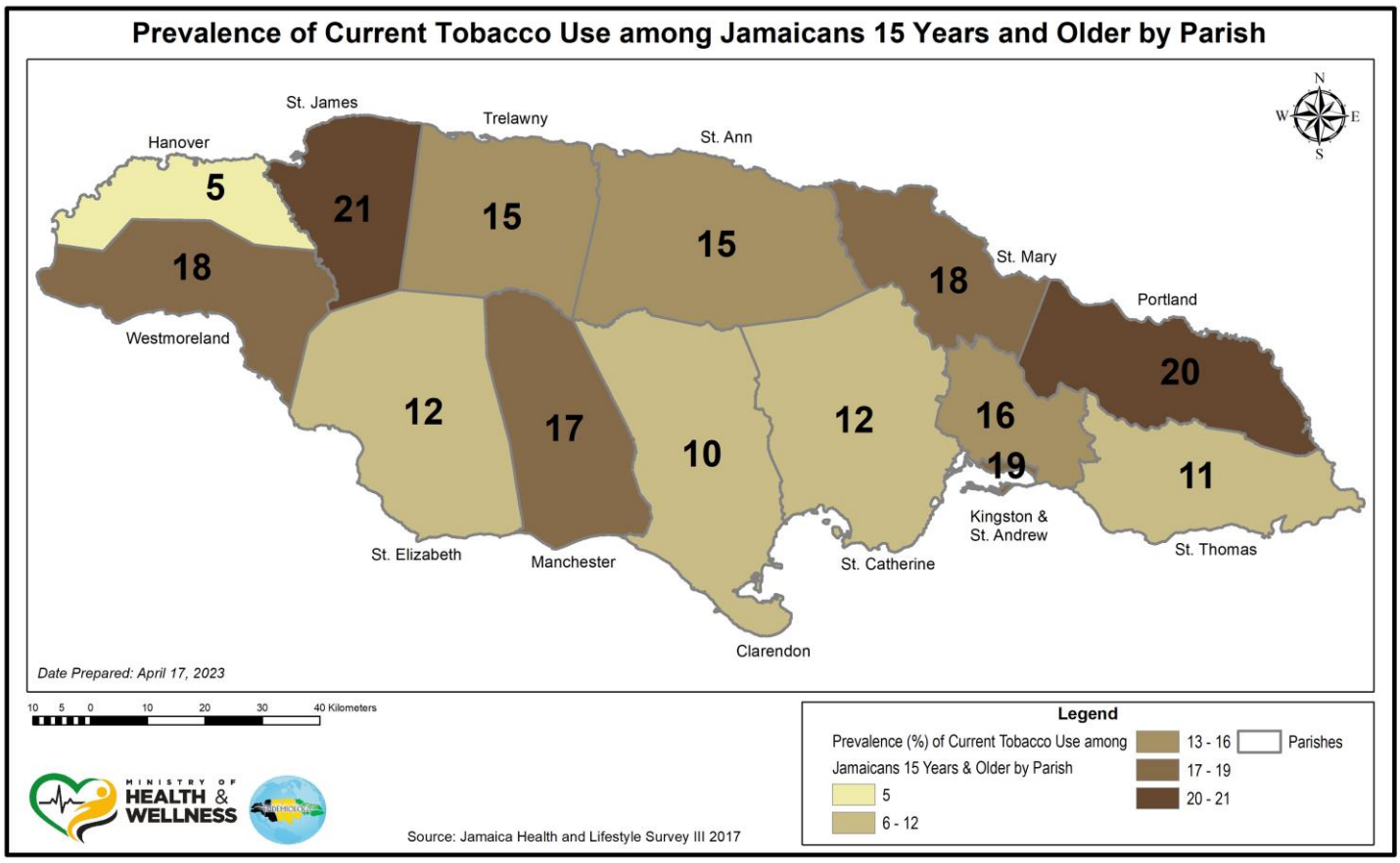
Prevalence of Cigarette and/or Tobacco Use Among Children and Adults: 2010 – 2017

Characteristics	Age (Years)	Year	Total	Male	Female
Current cigarette use	13-15[1]	2010	23.9	31.0	16.9
	13-15[1]	2017	13.1	17.9	8.7
	13-17[1]	2017	14.9	19.1	11.0
Current use of Tobacco Products	13-17[1]	2017	19.4	25.5	13.7
	15-74[2]	2001	17.7	28.4	7.1
	15-74[2]	2008	14.5	22.1	7.2
	>= 15[2]	2017	14.8	26.0	4.7

Source: Jamaica Health and Lifestyle Survey (2017) unpublished

Current Tobacco Use by Parish

In 2017, the greatest proportion of current tobacco users resided in St. James (21%); while the lowest proportion (5%) were from Hanover.



Source:

1. Tobacco. Global Health Protection and Security. Centers for Disease Control and Prevention. Tobacco | Division of Global Health Protection | Global Health | CDC
2. Global NCD Targets. NCD Alliance. https://ncdalliance.org/global-ncd-targets
3. Tobacco. World Health Organization. Tobacco (who.int)
4. Smoking is Still Prohibited in Public Spaces. Ministry of Health and Wellness. Smoking is Still Prohibited in Public Places – Ministry of Health – Ministry of Health & Wellness, Jamaica (moh.gov.jm)

Exposure to Secondhand Smoke

In 2017, approximately two-thirds (67.4%) of children aged 13-17 years reported that persons smoke in their presence on one or more days within the past week. More males (69.6%) than females (65.6%) were exposed to secondhand smoke.

Approximately seven out of ten (69.8%) males and 61.7% of females aged 13-15 years reported that persons smoked in their presence in the past week in 2017.[4] Between 2010 and 2017 there was a 5.6% decrease in exposure to secondhand smoke. A greater decline was observed among females (11.1%) than males (0.1%)[3].

Prevalence of Cigarette and/or Tobacco Use Among Children and Adults: 2010 – 2017

Characteristics	Age (Years)	Year	Total	Male	Female
Proportion (%) who reported that persons smoked in their presence on one or more days during the past 7 days	13-15[1]	2010	69.5	69.9	69.4
	13-15[1]	2017	65.6	69.8	61.7
	13-17[1]	2017	67.4	69.6	65.6

Source: Global School Health Survey

Source:
1. Global NCD Targets. NCD Alliance. https://ncdalliance.org/global-ncd-targets
2. Tobacco. Global Health Protection and Security. Centers for Disease Control and Prevention. Tobacco | Division of Global Health Protection | Global Health | CDC
3. Tobacco. World Health Organization. Tobacco (who.int)
4. Smoking is Still Prohibited in Public Spaces. Ministry of Health and Wellness. Smoking is Still Prohibited in Public Places – Ministry of Health – Ministry of Health & Wellness, Jamaica (moh.gov.jm)

ISSN 0799-5083

Exposure to Secondhand Smoke

In 2018, the most common settings where persons saw others smoking included; public places (75.5%), inside the home (46.2%), bus stops (29.8%) and an indoor area where persons worked (27.0%). Less than one percent (0.7%) and 7.0% of respondents saw others smoking in government buildings and on public transportation respectively.

Where Persons See Others Smoking

At the Bus Stop
(29.8%)

Government Building
(0.7%)

Public Place
(75.5%)

Inside the Home
(46.2%)

Indoor area where you work
(27.0%)

Public Transportation
(7.0%)

Source: Jamaica Survey of Living Conditions, Planning Institute of Jamaica and Statistical Institute of Jamaica (2018). Images from: www.freepik.com

ISSN 0799-5083

NCD Risk Factors - Alcohol Consumption

Harmful use of alcohol is a leading cause of death, disability and premature mortality globally [1-2]. Alcohol use is estimated to cause greater than 3 million deaths annually [1], with an unequal distribution of deaths occurring in low and middle income countries[3]. The risk of mortality due to alcohol is highest in the working age population. This is mostly due to injuries[3]. However, alcohol is also a risk factor for a number of non-communicable diseases such as cardiovascular disease, digestive diseases, mental health disorders and cancers[3]. According to the International Agency on Research for Cancer (IARC) alcohol consumption is associated with cancers of the mouth, pharynx, oesophagus, colorectum, liver, larynx, pancreas, breast and prostate[4]. Rumgay et. al (2020) reported that 741,300 new cases of cancer in 2020 were attributable to alcohol consumption[5].

The WHO Global Strategy to reduce the harmful use of alcohol was adopted in 2010[3]. This initiative has been superseded by the WHO Global Alcohol Action Plan 2022-2030. Alcohol consumption is also addressed in the sustainable development agenda through the introduction of specific targets. One Sustainable Development Goal (SDG) Target is to *strengthen the prevention and treatment of substance abuse including narcotic drug abuse and harmful use of alcohol*.

Defining Harmful Use of Alcohol

Harmful alcohol use is defined as *'drinking that causes detrimental health and social consequences for the drinker (harmful drinking), the people around the drinker and society at large, as well as patterns of drinking that are associated with increased risk of adverse health outcomes'* [6]. Heavy episodic drinking is defined as '*the proportion of adults who have had at least six alcohol drinks or 60 grams of pure alcohol on at least one occasion in the past 30 days*' while binge drinking is defined as '*consuming five or more drinks on an occasion for men and four or more drinks on occasion for women*'[6-7].

Current Alcohol Use

In 2017, approximately one in two (48.9%) adolescents aged 13-17 years reported consumption of at least one drink containing alcohol on one or more days during the past 30 days. There was a 7.4 percentage point or 14.1% decline in prevalence of current alcohol use among 13-15 year olds between the period 2010 and 2017.

Current Alcohol Use in Children and Adults

Age (Years)	Year	Total (%)	Male (%)	Female (%)
13-15	2010[1]	52.5	57.8	47.1
13-15	2017[1]	45.1	54.8	36.1
16-17		53.7	63.3	44.9
13-17		48.9	58.7	39.9
15-74	2000[2]		78.0	50.6
15-74	2008[2]	64.3	49.2	80.1
15-74?	2017[2]	41.2	58.3	25.0

Sources: a. Global School Health Survey (2010); b. Global School Health Survey (2017); c. Jamaica Health and Lifestyle Survey (2000) d. Jamaica Health and Lifestyle Survey (2008); e. Jamaica Health and Lifestyle Survey (2017)

Source:

1. Harmful Use of Alcohol. The Global Health Observatory. World Health Organization. Harmful use of alcohol (who.int)
2. Ayenigbara I. Chronic Alcohol Use and Accompanying Non-communicable Diseases. Croat Nurs J. 2020; 4(2): 227-242
3. Alcohol Use. NCD Alliance. Alcohol use | NCD Alliance
4. (IARC)
5. Rumgay et. al. Global burden of cancer in 2020 attributable to alcohol consumption: a population-based study. Lancet Oncol 2021; 22: 1071–80
6. Alcohol, heavy episodic drinking (population) past 30 day. The Global Health Observatory. World Health Organization. Alcohol, heavy episodic drinking (population) past 30 days (who.int)
7. Binge drinking. Centers for Disease Control and Prevention. Binge Drinking | CDC

NCD Risk Factors - Alcohol Consumption

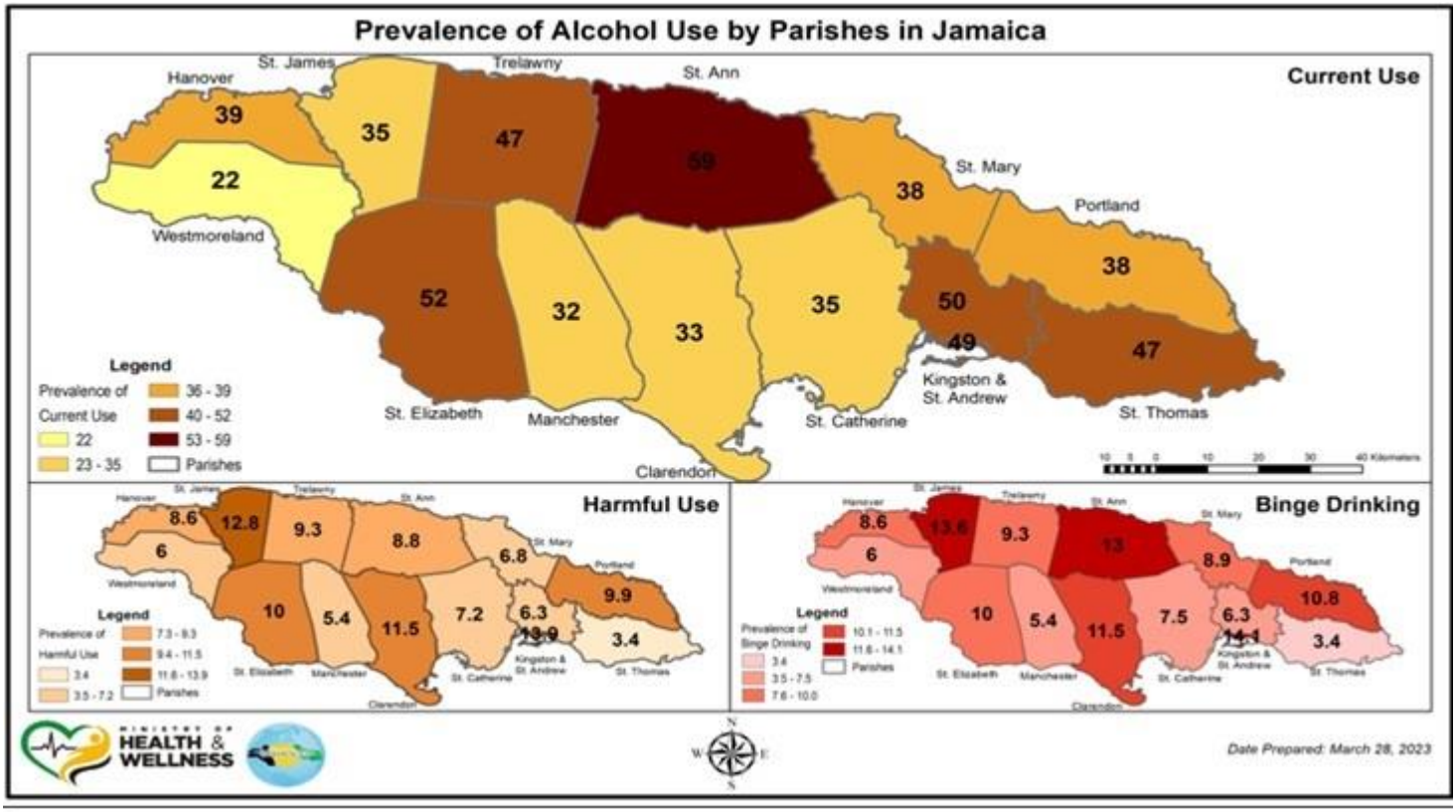
Current Alcohol Use

Approximately four out of ten (41.0%) Jamaicans aged 15 years and older reported current alcohol use. Prevalence was highest among persons aged 25-34 years and generally declined with increasing age.

Current Alcohol Use in Children and Adults by age

Age (Years)	Prevalence (%)
15-24	40.4
25-34	51.4
35-44	47.2
45-54	41.8
55-64	33.4
65-74	25.3
75+	14.6

The parish of St. Ann had the highest prevalence of self-reported alcohol consumption (59.0%), while Westmoreland had the lowest prevalence (22.0%). Prevalence of current alcohol use declined by 23 percentage points or by 36% between 2008 and 2017.



Source: Jamaica Health and Lifestyle Survey (2017) unpublished

ISSN 0799-5083

NCD Risk Factors - Alcohol Consumption

Harmful Use of Alcohol

In 2017, 29% of children aged 13-17 years reported being drunk one or more times over their lifetime. The prevalence was greater among males (43.5%) than females (27.0%). Approximately, one in four (25.3%) children in the 13-15 year age group also reported alcohol consumption leading to drunkenness. Relative to 2010, this represents a ten percentage point decline in the prevalence of drunkenness.

Approximately one in 12 or 8.1% of Jamaicans aged fifteen years and older reported having six or more drinks in one sitting at least monthly. The prevalence of heavy episodic drinking was greater among males (13%) than females (3.4%). A prevalence of 8.5% was reported for binge drinking.

Heavy Alcohol Use in Children and Adults

Characteristic	Age (Years)	Year	Total	Male	Female
		(%)	(%)	(%)	(%)
Percentage of students who drank so much alcohol that they were really drunk one or more times during their life	13-15[1]	2010	35.3	43.5	27.0
	13-15[1]	2017	25.3	33.2	17.8
	16-17[1]	2017	33.8	41.7	26.5
	13-17[1]	2017	29.0	37.0	21.5
Binge Drinking	>= 15 years[2]	2017	8.5	13.8	3.5
Heavy Episodic Drinking	>= 15 years[2]	2017	8.1	13.0	3.4

Sources: a. Global School Health Survey (2010 & 2017)[1]; b. Jamaica Health and Lifestyle Survey (2017)[2]

ISSN 0799-5083

NCD Prevalence - Overweight and Obesity

Overweight or obesity are defined as '*abnormal or excessive fat accumulation that may impair health*'[1]. This results from an energy imbalance where more calories from food are consumed than expended[1]. The WHO estimates that the prevalence of obesity tripled over the period 1975 to 2016. In 2016, greater than one third (39%) of the global population of adults aged 18 years and older were overweight, while a further 13% were obese[1]. Over 340 million children and adolescents were estimated to be overweight/obese in the same year. The shift in the health status of the world's population has resulted in more persons being obese than underweight[1].

Overweight and obesity are risk factors for a number of NCDs such as cardiovascular disease, diabetes, arthritis and some cancers.

Defining Overweight and Obesity

Body Mass Index (BMI) is a simple method used to assess nutritional status. It measures weight relative to height and can indicate low, normal or high levels of body fat. It can be used to determine whether an individual is overweight or obese[(1,2)]. BMI is calculated by dividing weight in kilograms divided by height in metres squared (kg/m^2) [2]. It also provides a useful measure of overweight and obesity in populations as it is applicable to both sexes and adults of all ages[1]. For adults overweight is defined as having a BMI greater than or equal to 25 kg/m^2, while obesity is having a BMI greater than or equal to 30 kg/m^2 [1].

Classification of Adults According to BMI

Nutritional Status	BMI (kg/m^2)
Underweight	Below 18.5
Normal Weight	18.5 – 24.9
Overweight (BMI ≥ 25 kg/m^2)	
Pre-obesity	25.0 – 29.9
Obesity class I	30.0 – 34.9
Obesity class II	35.0 – 39.9
Obesity class III	Above 40

Source: WHO (2000) Obesity: preventing and managing the global epidemic Report of a WHO Consultation (WHO Technical Report Series 894)

Obesity and overweight in children under five years of age are computed from weight and height measurements which are compared with WHO Child Growth Standards. In children aged five to 19 years BMI measurements are compared with WHO Growth Reference Standards. This data is summarised below:

Classification of Children and Adults

Classification	Measure
Children Under 5 Years	
Overweight	Weight for height > 2 SD above WHO Child Growth Standards median
Obese	Weight for height > 3 SD above WHO Child Growth Standards median
Children Aged 5-19 Years	
Overweight	BMI for age > 1 SD above WHO Growth Reference Median
Obese	BMI for age > 2 SD above WHO Growth Reference Median

Key: SD – Standard Deviation

Source:

1. WHO. https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight
2. PAHO. https://www.paho.org/en/topics/obesity-prevention#:~:text=A%20simple%20way%20to%20measure,than%2025%20is%20considered%20overweight.
3. WHO. https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases
4. PAHO, CFNI. https://iris.paho.org/bitstream/handle/10665.2/34123/PAHOCAR310101-eng.pdf?sequence=2

NCD Prevalence - Overweight and Obesity

Waist Circumference (WC) is an indicator of intra-abdominal fat and serves as a good indicator of abdominal fat. Having a high waist circumference is associated with an increased risk for NCDs such as; type 2 diabetes, high blood pressure, high cholesterol and cardiovascular disease [4]. The waist-to-hip ratio is a method for assessing body fat distribution and serves as an indirect indicator of intra-abdominal fat. High waist-to-hip ratio indicates increased risk of obesity-related health conditions [4].

MINISTRY OF HEALTH & WELLNESS

NON-COMMUNICABLE DISEASE & INJURY PREVENTION AND CONTROL

Waist Circumference

Measuring waist circumference helps with screening for possible health risks that are associated with overweight and obesity. An abnormally high waist circumference (especially in comparison with your hips) means that most of your fat is around your waist. This puts you at greater risk for type 2 diabetes, high cholesterol, high blood pressure and cardiovascular disease.

ABNORMAL WAIST CIRCUMFERENCE MEASUREMENT	
Men	>94cm (37in)
Women	>80cm (32in)

You can measure your waist circumference at home (or at your next health check) using a tape measure:

- Stand and place a tape measure above your hip bones, around the middle of your abdomen
- Make sure the tape measure is horizontal around the waist, and level with your belly button
- Keep the tape measure snug around the waist, but not too tight
- Check the number on the tape measure just after you breathe out

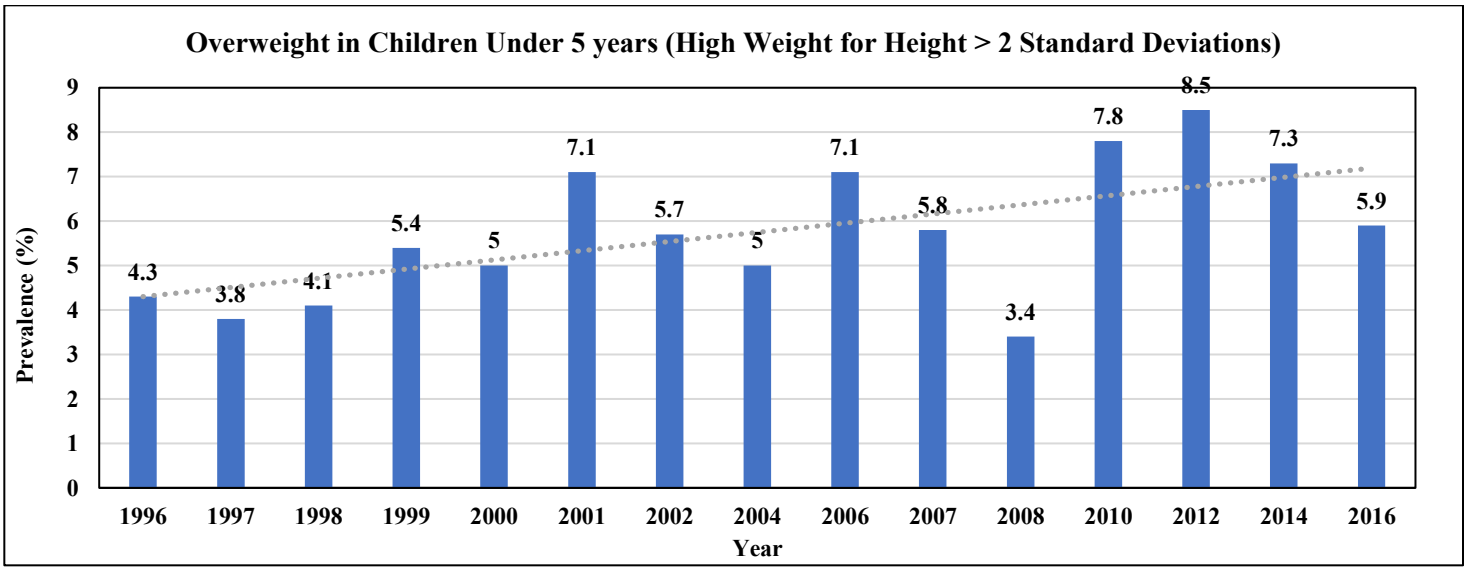
If you have a high waist circumference, you may want to talk with your doctor about losing weight and changing your lifestyle.

Source: Non-Communicable Disease & Injury Prevention and Control Unit, Ministry of Health & Wellness, Jamaica. https://ncdip.moh.gov.jm/know-your-numbers/body-mass-index-bmi-waist-circumference/

NCD Prevalence - Overweight and Obesity

Overweight in Children Under 5

In general, the prevalence of overweight in children increased over the twenty-year period of 1996 to 2016, peaking at 8.5% in 2012. In 2016, approximately one in twenty (5.9%) children were overweight. This was a decline of 2.6 percentage points since 2012.



Source: Jamaica Survey of Living Conditions. Planning Institute of Jamaica and Statistical Institute of Jamaica

Overweight and Obesity in Children and Adults

In 2017, approximately one in four (23.3 %) children were overweight while approximately one in ten (9.2%) children were obese. More females (26.4%) than males (20.0%) were overweight. Meanwhile, 9.5% of females and 9.0% of males were obese [(2)].

Overweight and Obesity in Children and Adults

Characteristic	Age (Years)	Year	Total (%)	Male (%)	Female (%)
Overweight	13-15[1]	2010	21.7	18.1	25.2
	13-15 [1]	2017	25.6	22.8	28.2
	16-17[1]	2017	20.5	16.6	24.1
	13-17[1]	2017	23.3	20.0	26.4
	>= 15[2]	2017			
Obesity	13-15[1]	2010	6.0	5.3	6.7
	13-15[1]	2017	10.1	10.3	9.9
	16-17[1]	2017	8.2	7.3	9.0
	13-17[1]	2017	9.2	9.0	9.5
	15-74[2]	2000	19.7		
	15-74[2]	2008	25.3		
	15-74[2]	2017	28.9		

Sources: a. Global School Health Survey (2010 & 2017)[1]; b. Jamaica Health and Lifestyle Survey (2000, 2008 & 2017)[2]

Source:
1. Jaaica Survey of Living Conditions
2. Jamaica Health and Lifestyle Survey 2017 (JHLSIII) unpublished data

NCD Prevalence - Obesity

In 2017, just over one in four or 28.6% of Jamaicans were obese. More females (41.2%) were obese than males (14.9%). Males 45-54 years of age had the highest prevalence of obesity (22.0%), while the lowest prevalence (7.7%) was observed among those in the 65-74 year age group.

Prevalence (%) and estimated population count of obesity in Jamaicans 15 years and older by age and sex

Age group (10-year)	Prevalence (%)			Estimated Population (n)		
	Male	Female	Total	Male	Female	Total
15 - 24	10.8	19.2	15.0	28,077	50,183	78,260
25 - 34	12.2	43.7	29.2	22,914	96,477	119,391
35 - 44	20.6	55.1	38.7	34,631	102,777	137,408
45 - 54	22.0	52.0	37.1	33,988	81,028	115,016
55 - 64	13.9	54.1	34.3	13,679	55,083	68,763
65 - 74	7.7	47.9	28.2	4,704	30,482	35,186
75 & Older	15.8	28.2	23.3	6,194	17,122	23,315
Total	**14.9**	**41.2**	**28.6**	**144,188**	**433,152**	**577,340**

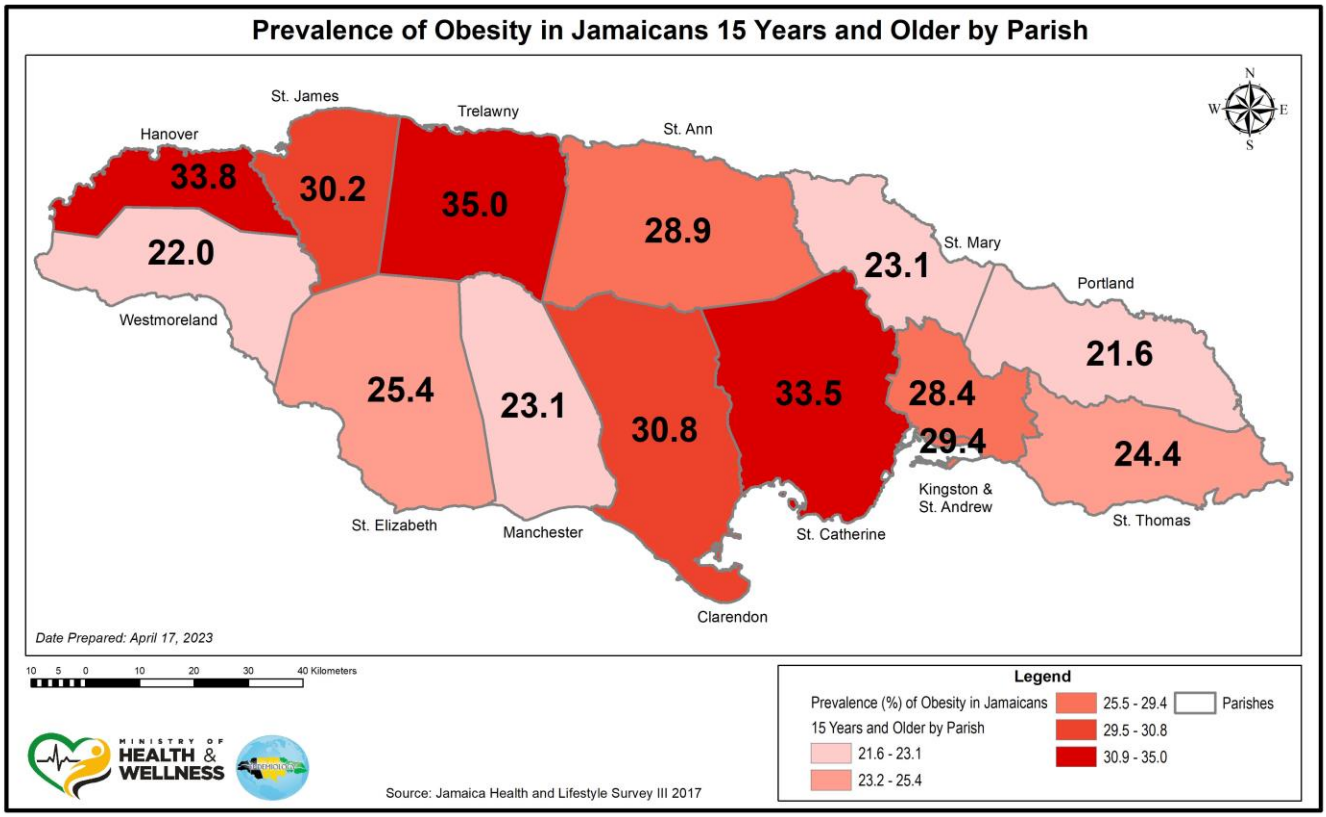
Source: Jamaica Health and Lifestyle Survey III 2017 (JHLSIII), unpublished data.

What to check?	Why should you check it?	How is it checked?
Weight, Height and Body Mass Index (BMI) 	A BMI value of 25.0-29.9 means you are overweight and a value ≥30.0 means you are obese. Overweight and obesity are major risk factors for several major chronic illnesses, such as diabetes, hypertension, heart disease and cancer.	Measure and record your weight in kilograms and your height in metres. BMI is calculated as: weight / (height)^2. You can check it at home, or at your next check-up. Talk with your health care provider about your results.

ISSN 0799-5083

NCD Prevalence - Obesity

Trelawny (35.0%) had the highest prevalence of obesity followed by Hanover (33.8%) and St Catherine (33.5%). The lowest prevalence (22.0%) was reported in Portland.



Prevalence (%) and estimated population count of obesity in Jamaicans 15 years and older by parish and sex

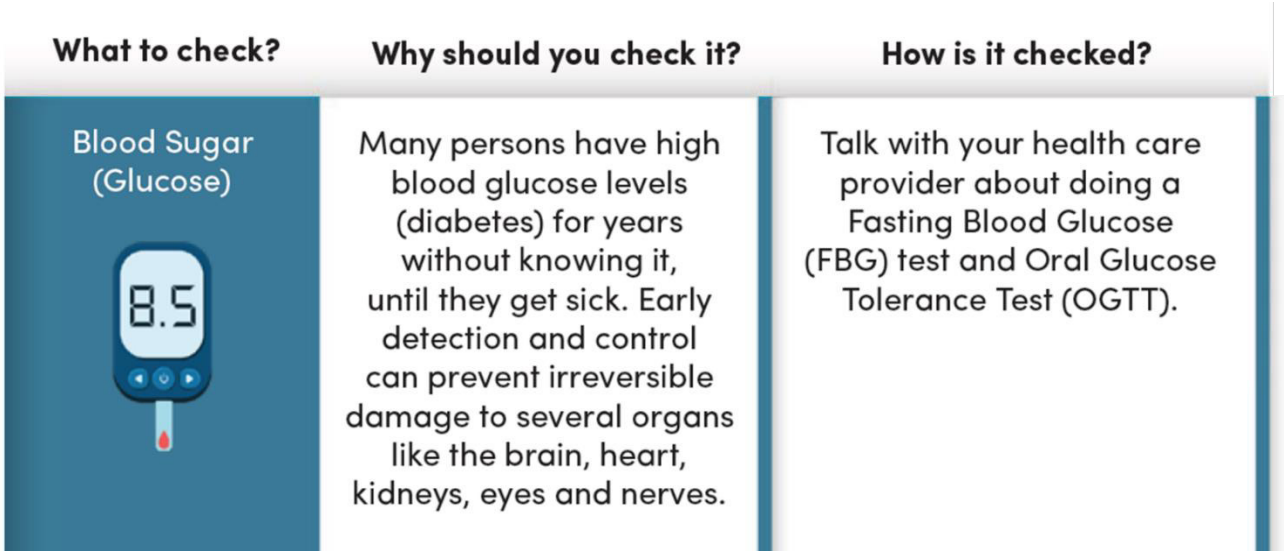
Parish	Prevalence (%)			Estimated Population (n)		
	Male	Female	Total	Male	Female	Total
Kingston	12.7	46.1	29.4	4,181	14,987	19,168
St. Andrew	18.1	37.6	28.4	39,156	91,389	130,546
St Thomas	7.6	41.1	24.4	2,680	14,683	17,363
Portland	4.2	37.8	21.6	1,241	11,805	13,047
St. Mary	11.2	34.5	23.1	4,601	14,853	19,454
St Ann	19.5	36.6	28.9	10,277	23,655	33,932
Trelawny	12.8	58.0	35.0	3,676	16,040	19,716
St James	12.4	47.0	30.2	8,389	33,558	41,947
Hanover	22.9	44.9	33.8	5,740	11,016	16,756
Westmoreland	2.0	43.1	22.0	1,085	22,349	23,434
St Elizabeth	9.4	42.0	25.4	5,475	23,510	28,985
Manchester	14.0	32.2	23.1	10,273	23,564	33,837
Clarendon	16.0	45.8	30.8	14,724	41,212	55,936
St Catherine	20.2	44.0	33.5	32,690	90,531	123,221
Total	**14.9**	**41.2**	**28.6**	**144,188**	**433,152**	**577,340**

Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

NCD Prevalence - Diabetes

Diabetes is a chronic, metabolic condition where persons experience elevated blood sugar (glucose) levels. The most common form of diabetes is Type 2 diabetes (T2D), where the body becomes resistant to the hormone insulin or doesn't produce enough. Type 1 diabetes, once known as juvenile diabetes or insulin-dependent diabetes, is a chronic condition in which the pancreas produces little or no insulin by itself. Uncontrolled diabetes often leads to serious damage to the heart, blood vessels, eyes, kidneys and nerves[1].

According to the WHO, in the past three (3) decades the prevalence of T2D has increased dramatically in countries of all income levels including Jamaica. There is a globally agreed target to halt the rise in diabetes and obesity by 2025[1].



Approximately one in ten males (9.0%) males and one in seven females (14.6%) aged fifteen years and older had diabetes. The prevalence of diabetes increased with increasing age, with 18.4% in the 45-54 age group, 21.2% in the 55-64 age group, 27.5% in the 65-74 age group and 42.9% in the 75 years and older age group had diabetes.

The prevalence of diabetes was higher in females for all age categories. Diabetes prevalence in females was approximately twice that of males among persons aged 35-75 years of age.

Prevalence (%) and estimated population count of diabetes in Jamaicans 15 years and older by age and sex

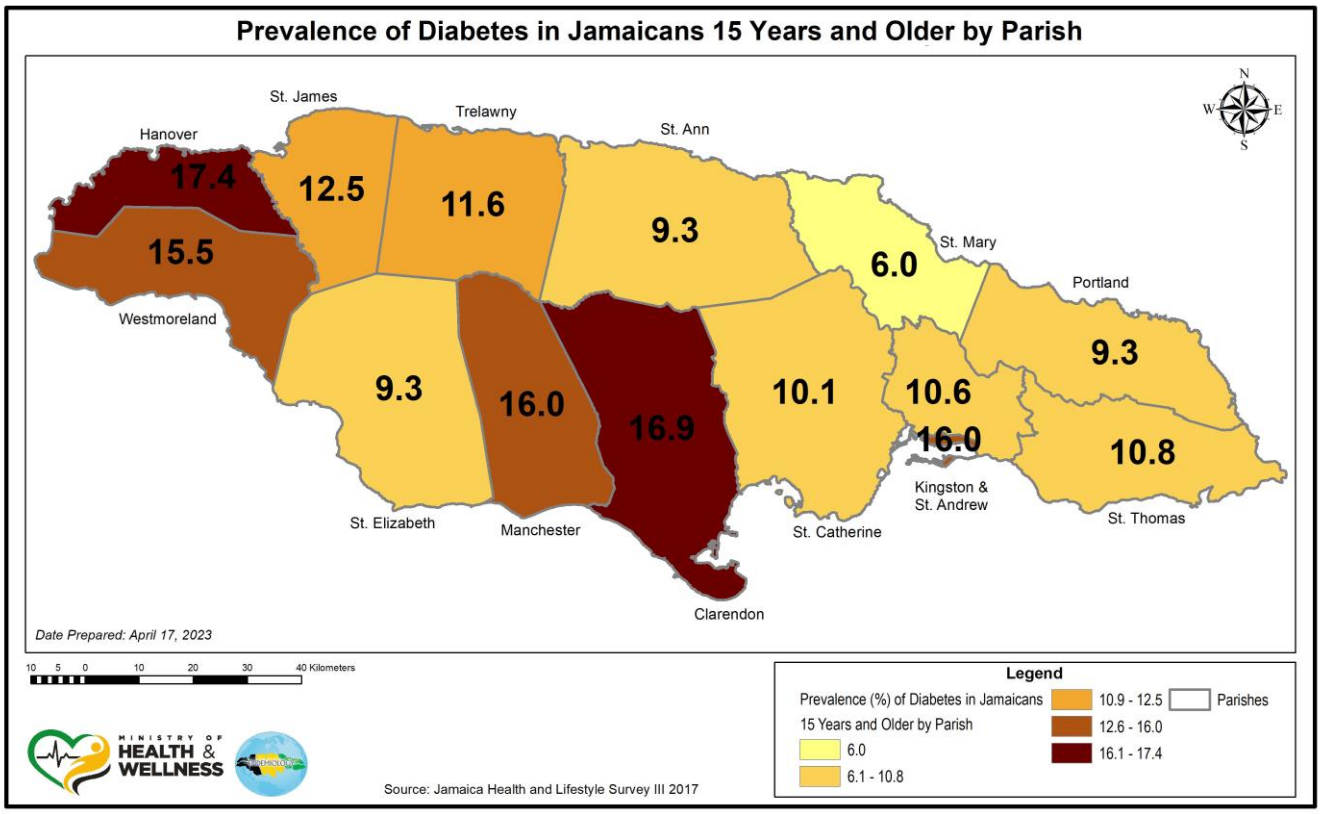
Age group (10-year)	Prevalence (%)			Estimated Population (n)		
	Male	Female	Total	Male	Female	Total
15 – 24	1.6	1.5	1.5	4,046	3,800	7,847
25 – 34	5.3	5.8	5.6	9,241	12,827	22,067
35 – 44	7.6	9.8	8.8	12,484	18,252	30,736
45 – 54	13.5	23.3	18.4	20,913	35,417	56,330
55 – 64	14.8	27.5	21.2	14,724	27,959	42,683
65 – 74	14.7	40.3	27.5	8,968	24,699	33,667
75 & Older	38.3	45.9	42.9	15,030	27,832	42,862
Total	**9.0**	**14.6**	**11.9**	**85,406**	**150,786**	**236,191**

Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

Source:
1. Global Health Observatory – Non-communicable diseases. https://www.who.int/data/gho/data/themes/noncommunicable-diseases

NCD Prevalence - Diabetes

In 2017, Hanover (17.4%) had the highest prevalence of diabetes followed by Clarendon (16.9%), Kingston (16.0%), Manchester (16.0%) and Westmoreland (15.5%). The parish of St Mary (6.5%) had the lowest prevalence.



Prevalence (%) and estimated population count of diabetes in Jamaicans 15 years and older by parish and sex

Parish	Prevalence (%)			Estimated Population (n)		
	Male	Female	Total	Male	Female	Total
Kingston	16.8	15.1	16.0	5,516	4,916	10,432
St. Andrew	7.0	13.7	10.6	15,151	33,429	48,580
St Thomas	2.1	18.6	10.8	672	6,639	7,312
Portland	6.5	12.0	9.3	1,905	3,733	5,638
St. Mary	3.9	8.0	6.0	1,610	3,459	5,068
St Ann	10.2	8.6	9.3	4,150	4,259	8,409
Trelawny	4.2	19.2	11.6	1,206	5,322	6,528
St James	11.0	13.9	12.5	7,437	9,939	17,376
Hanover	18.7	16.0	17.4	4,470	3,926	8,396
Westmoreland	10.8	20.5	15.5	5,905	10,663	16,568
St Elizabeth	5.1	13.7	9.3	2,975	7,648	10,623
Manchester	10.4	21.6	16.0	7,636	15,817	23,452
Clarendon	18.6	15.1	16.9	17,109	13,577	30,686
St Catherine	6.0	13.4	10.1	9,665	27,458	37,123
Total	**9.0**	**14.6**	**11.9**	**85,406**	**150,786**	**236,191**

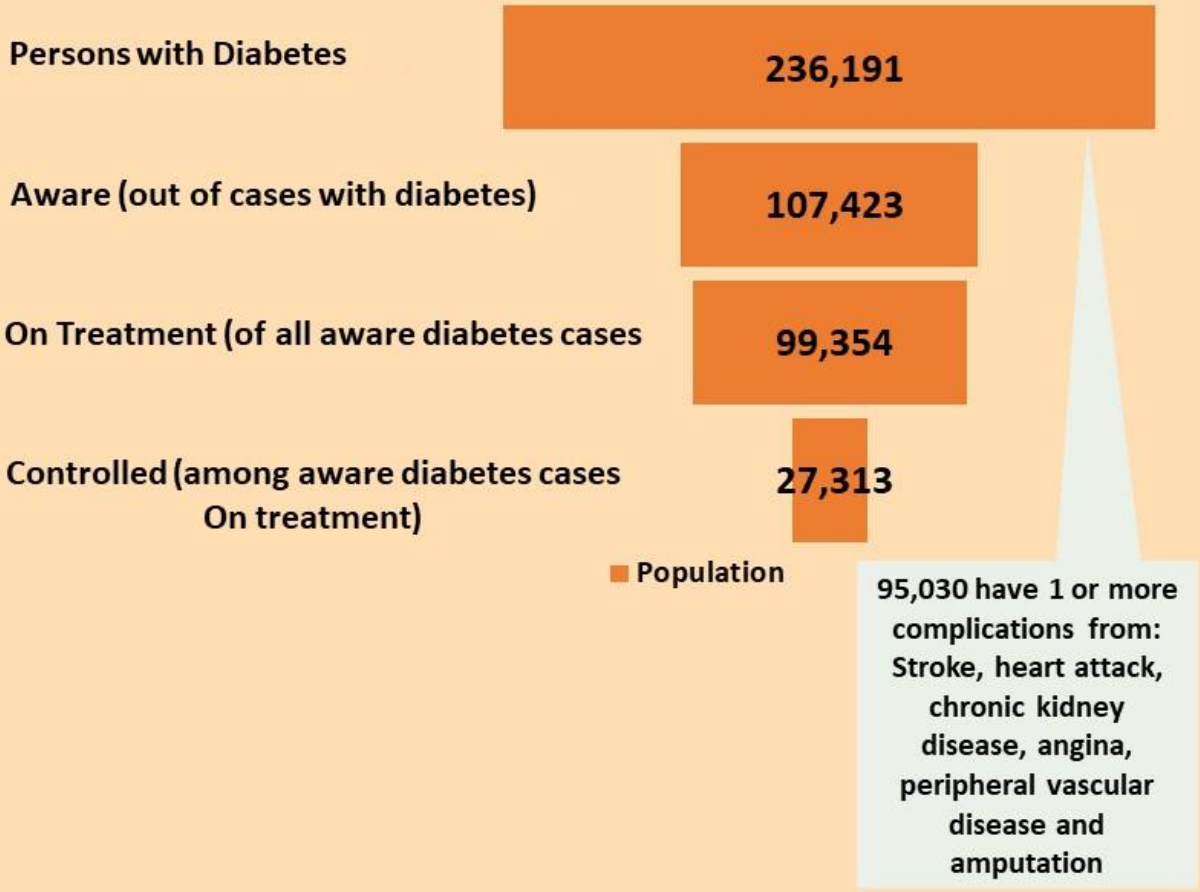
Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

NCD Prevalence - Diabetes

In 2017, there was an estimated 236,191 persons living with diabetes in Jamaica. Of that number, 107,423 were aware of their medical condition and approximately 99,354 were on medication. However, less than one-third (27,313) had their diabetes under control.

Diabetes Cascade

Number of Jamaicans 15yrs & older with Diabetes



Category	No. of Males	No. of Females
Persons with Diabetes	85,406	150,786
Aware (out of cases with diabetes)	28,331	79,093
On Treatment (of all Aware diabetes cases)	25,852	73,502
Controlled (among aware diabetes cases on treatment)	7,504	19,810

Source: Data from Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII).

NCD Prevalence - Diabetes

Living with diabetes, particularly uncontrolled diabetes, may lead to several complications such as **amputation, chronic kidney disease, stroke, heart attack, angina and peripheral vascular disease**. Among persons living with diabetes, the number of Jamaicans with complications were as follows: More than one complication (95,030), peripheral vascular disease (73,607), angina (41,764), stroke (9,712), heart attacks (4,553), chronic kidney disease (5,428) and amputation (1,412).

Diabetes Cascade

Complications and Disabilities among Jamaicans 15yrs & older with Diabetes

Category	No. of Males	No. of Females	No. of Both Sexes
 Persons with Diabetes	85,406	150,786	236,191
 1. Amputation	172	1,127	1,412
 2. Chronic Kidney Disease	1,320	4,108	5,428
 3. Stroke	3,143	6,569	9,712
 4. Heart Attack	1,698	2,856	4,553
 5. Angina	11,025	30,739	41,764
 6. Peripheral Vascular Disease	15,697	57,910	73,607
 7. Having 1 or more of complications 1 to 6	23,112	71,917	95,030

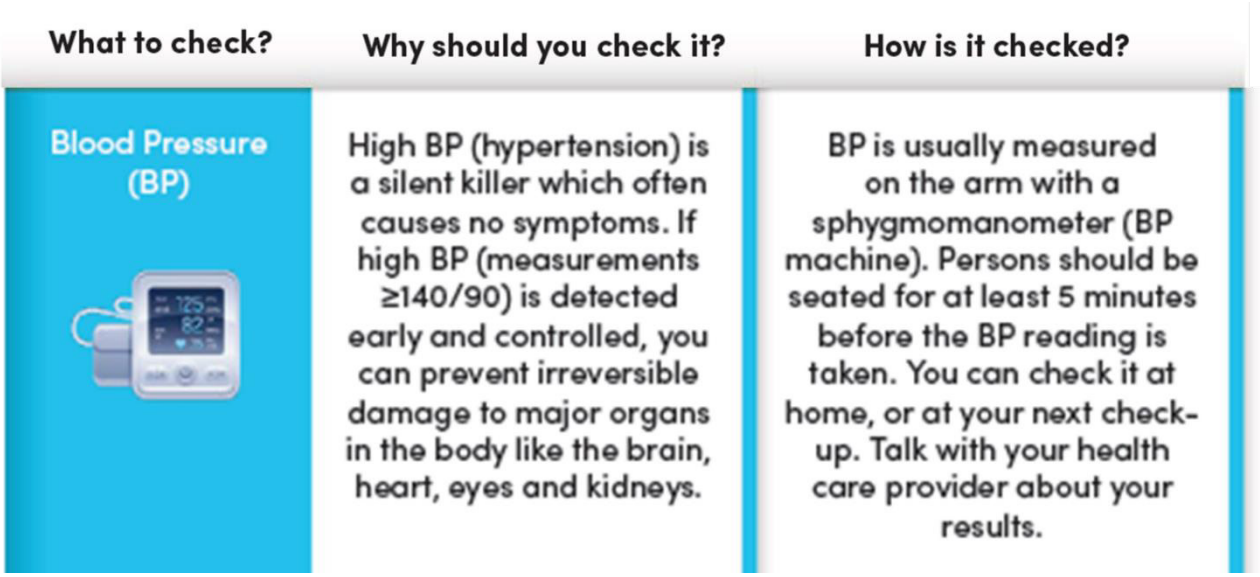
Source: Data from Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII). Images from www.freepik.com

ISSN 0799-5083

NCD Prevalence - Hypertension

Hypertension or elevated blood pressure, is a condition in which blood vessels persistently experience higher pressures while blood is transported from the heart to the rest of the body[1].

Hypertension is a serious medical condition and can increase the risk of heart, brain, kidney and other diseases. The burden of hypertension disproportionately affects low and middle-income countries. It is a major cause of premature death worldwide, with upwards of 1 in 4 men and 1 in 5 women (over one billion people) having the condition[1].



In 2017, there was an estimated 684,882 (33.8%) of Jamaicans 15 years and older living with hypertension. More females (375,696, 35.8%) than males (309,186, 31.7%) had hypertension.

The prevalence of hypertension increases with age across all age groups. In 2017, the lowest prevalence of hypertension was observed among persons 15-24 years of age (8.1%) and over 75% of individuals 75 years and older had hypertension. The highest prevalence of hypertension was observed among females aged 75 years or older (83.9%) and among males aged 65-74 years (68.6%).

Prevalence (%) and estimated population count of hypertension in Jamaicans 15 years and older by age and sex

	Prevalence (%)			Estimated Population (n)		
Age group (10-year)	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
15 - 24	7.8	8.3	8.1	20,293	21,720	42,013
25 - 34	20.2	16.1	18.0	38,516	35,560	74,076
35 - 44	27.7	31.5	29.7	46,529	58,796	105,324
45 - 54	45.1	53.7	49.4	69,619	83,628	153,246
55 - 64	64.3	75.8	70.0	65,922	77,140	143,062
65 - 74	68.6	75.5	72.1	41,948	47,968	89,916
75 & Older	67.1	83.9	77.3	26,359	50,886	77,245
Total	**31.7**	**35.8**	**33.8**	**309,186**	**375,696**	**684,882**

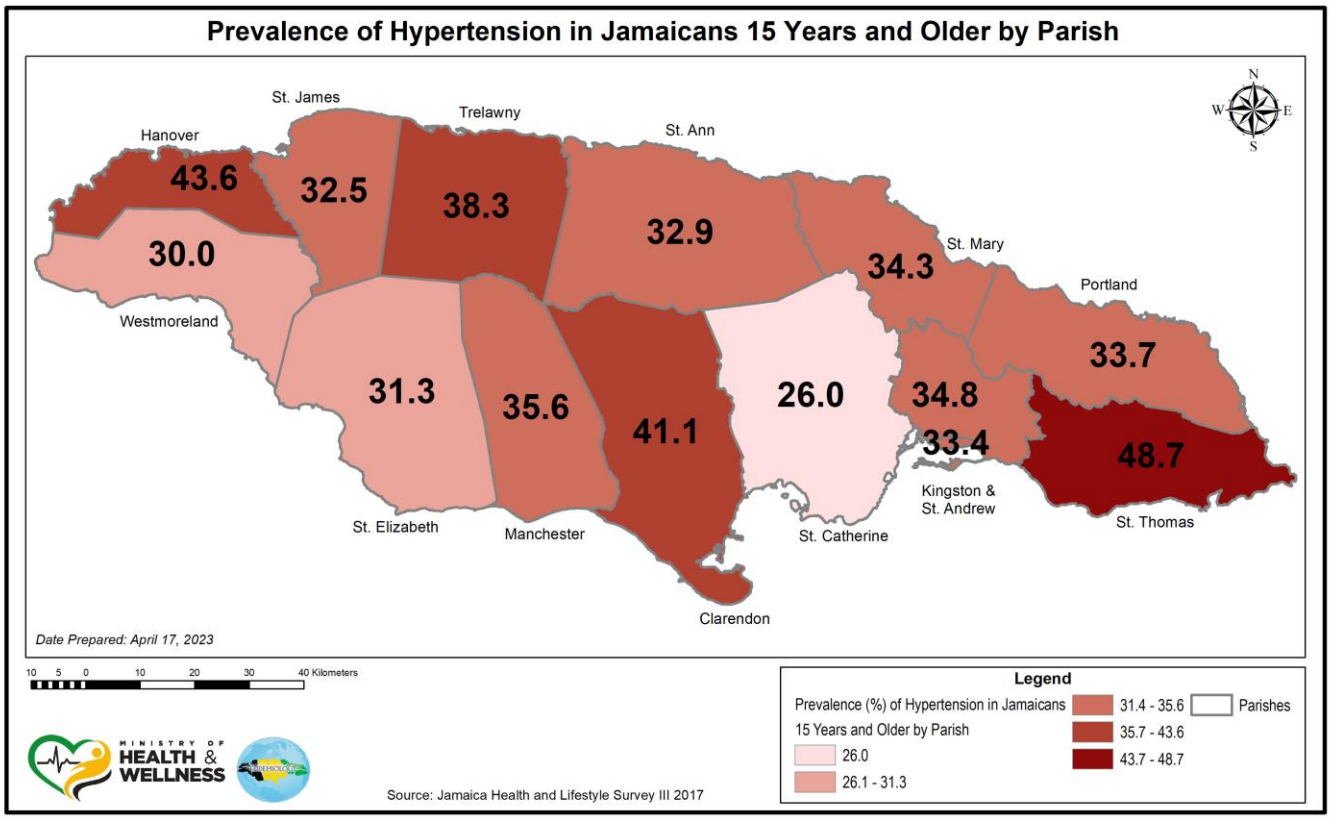
Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

Source:

1. Global Health Observatory – Non-communicable diseases. https://www.who.int/data/gho/data/themes/noncommunicable-diseases

NCD Prevalence - Hypertension

St. Thomas has the highest prevalence (48.7%) of hypertension, followed by Hanover (43.6%), Clarendon (41.1%) and Trelawny (38.3%). St. Catherine is the parish with the lowest prevalence (26.0%).



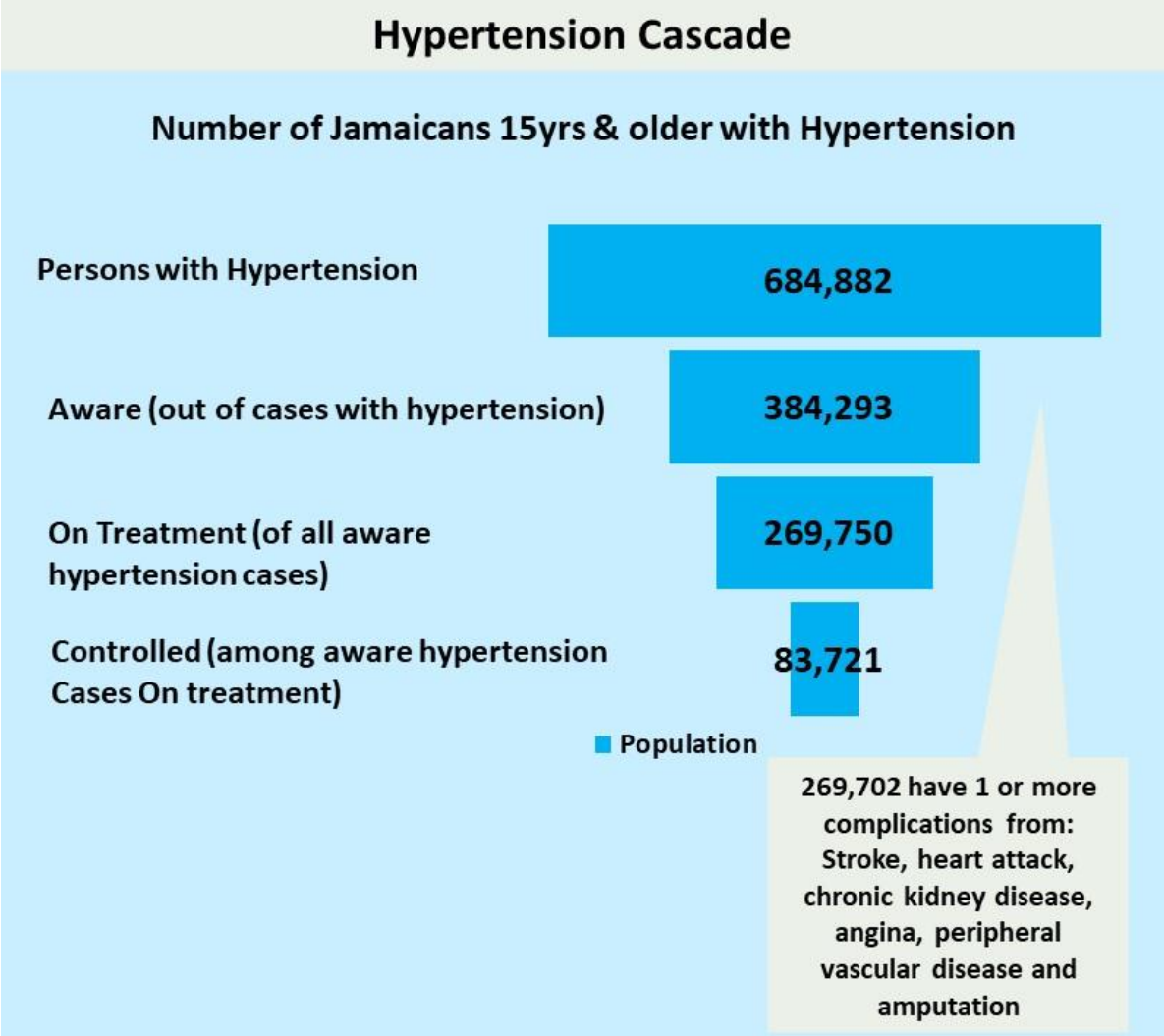
Prevalence (%) and estimated population count of hypertension in Jamaicans 15 years and older by parish and sex

Parish	Prevalence (%)			Estimated Population (n)		
	Male	Female	Total	Male	Female	Total
Kingston	35.9	30.8	33.4	11,785	9,998	21,782
St. Andrew	27.5	41.2	34.8	59,566	100,289	159,855
St Thomas	51.3	46.0	48.7	18,146	16,454	34,600
Portland	29.6	37.9	33.7	9,452	11,834	21,286
St. Mary	39.9	28.9	34.3	16,407	12,429	28,836
St Ann	37.0	29.2	32.9	20,915	18,881	39,796
Trelawny	37.3	39.3	38.3	10,718	10,886	21,604
St James	29.6	35.2	32.5	19,998	25,143	45,141
Hanover	42.5	44.7	43.6	10,653	10,965	21,619
Westmoreland	19.9	40.6	30.0	10,905	21,067	31,972
St Elizabeth	27.7	35.1	31.3	16,142	19,616	35,758
Manchester	33.3	38.0	35.6	24,364	27,822	52,186
Clarendon	40.9	41.4	41.1	37,501	37,226	74,727
St Catherine	26.3	25.8	26.0	42,635	53,085	95,720
Total	**31.7**	**35.8**	**33.8**	**309,186**	**375,696**	**684,882**

Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

NCD Prevalence - Hypertension

In 2017, approximately 684,882 of Jamaicans 15 years and older had hypertension. More females (375,696) than males (309,186) were hypertensive. Approximately 56% or 384,293 of Jamaicans with hypertension were aware of their medical condition; of this number, more females (267,424) indicated awareness. Most persons who were aware of their hypertension were on treatment (269,750). However, only 31% or 83,721 had their hypertension under control with three females (64,787) to every 1 male (18,934) under control.



Category	No. of Males	No. of Females
Persons with Hypertension	309,186	375,696
Aware (out of cases with hypertension)	116,869	267,424
On Treatment (of all Aware hypertension cases)	73,997	195,753
Controlled (among aware hypertension cases on treatment)	18,934	64,787

Source: Data from Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII) unpublished.

ISSN 0799-5083

NCD Prevalence - Hypertension

Poorly controlled hypertension can lead to several complications. In 2017, hypertension related complications among Jamaicans 15 years and older were as follows: more than one complication (269,702), peripheral vascular disease (189,273), angina (129,175), stroke (22,599), chronic kidney disease (14,323), heart attacks (7,054) and amputation (3,467). An estimated 173,652 females and 96,049 males experienced 1 or more hypertension related complication.

Hypertension Cascade

Complications and Disabilities among Jamaicans 15yrs & older with Hypertension

Category	No. of Males	No. of Females	No. of Both Sexes
 Persons with Hypertension	309,186	375,696	684,882
 1. Amputation	2,340	1,127	3,467
 2. Chronic Kidney Disease	3,806	10,518	14,323
 3. Stroke	12,177	10,422	22,599
 4. Heart Attack	3,821	3,233	7,054
 5. Angina	50,972	78,203	129,175
 6. Peripheral Vascular Disease	50,268	139,005	189,273
 7. Having 1 or more of complications 1 to 6	96,049	173,652	269,702

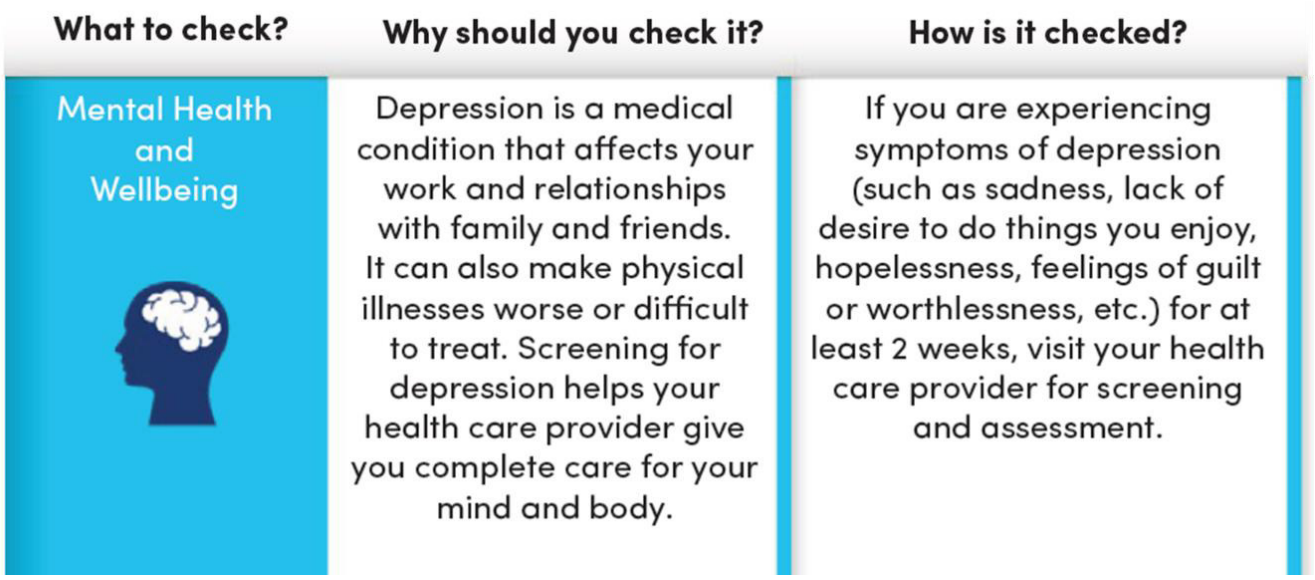
Source: Data from Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII). Images from www.freepik.com

ISSN 0799-5083

NCD Prevalence - Depression

Depression is a common mental disorder characterised by a depressed mood or loss of pleasure or interest in activities for long periods of time. Depression is different from regular mood changes and feelings about everyday life, instead a person may experience feeling sad and irritable for a significant part of the day and week[1].

Depression can affect all aspects of life, including relationships with family, friends and community leading to problems at school and at work[1].



In 2017, approximately 1 in 7 (14.3%) Jamaicans suffered from depression. More females (18.5%) than males (9.9%) were assessed as having depression.

Across all age groups, more females than males were depressed with lowest prevalence (6.9%) occurring in the 55 to 64 age group and highest prevalence in (24.5%) in the 75 and older age group. Depression among men was highest in the 75 years and older age group (15.1%), and the lowest among those who were 65-74 years of age (7.9%).

Prevalence (%) and estimated population count of depression in Jamaicans 15 years and older by age and sex

	Prevalence (%)			Estimated Population (n)		
Age group (10-year)	Male	Female	Total	Male	Female	Total
15 - 24	8.4	22.1	15.3	21,889	57,734	79,623
25 - 34	10.4	23.0	16.9	21,868	50,743	72,611
35 - 44	9.0	16.4	12.9	15,182	30,559	45,741
45 - 54	8.5	16.1	12.3	13,152	25,068	38,220
55 - 64	15.0	6.9	11.0	15,541	7,045	22,586
65 - 74	7.9	13.0	10.5	4,951	8,277	13,228
75 & Older	15.1	24.5	20.8	5,933	14,856	20,789
Total	**9.9**	**18.5**	**14.3**	**98,516**	**194,283**	**292,799**

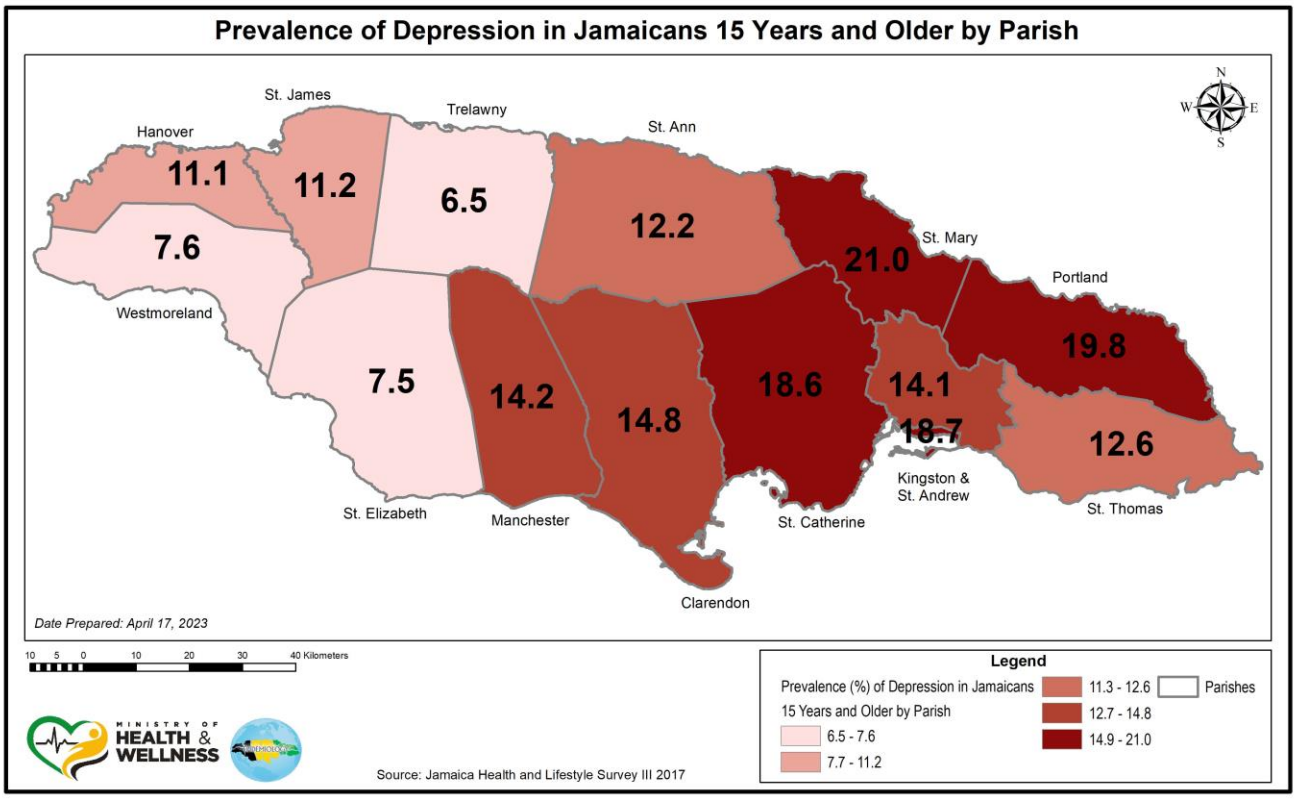
Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

Source:

1. WHO. https://www.who.int/news-room/fact-sheets/detail/depression

NCD Prevalence - Depression

St. Mary reported the highest prevalence at 21.0%, followed by Portland (19.8%), Kingston (18.7%) and St Catherine (18.6%). The parish of Trelawny recorded the lowest prevalence (6.6%).



Prevalence (%) and estimated population count of depression in Jamaicans 15 years and older by parish and sex

Parish	Prevalence (%)			Estimated Population (n)		
	Male	Female	Total	Male	Female	Total
Kingston	9.5	28.0	18.7	3,131	9,110	12,242
St. Andrew	9.5	18.3	14.1	20,438	44,452	64,890
St Thomas	6.7	18.3	12.6	2,385	6,547	8,932
Portland	15.3	24.3	19.8	4,885	7,595	12,480
St. Mary	13.1	28.9	21.0	5,602	12,445	18,048
St Ann	8.4	15.6	12.2	4,727	10,103	14,830
Trelawny	8.3	4.7	6.5	2,380	1,313	3,693
St James	5.1	17.0	11.2	3,474	12,132	15,606
Hanover	4.3	18.4	11.1	1,134	4,506	5,641
Westmoreland	2.9	12.6	7.6	1,607	6,515	8,122
St Elizabeth	2.8	12.4	7.5	1,624	6,957	8,581
Manchester	16.7	11.8	14.2	12,205	8,660	20,864
Clarendon	7.1	22.7	14.8	6,521	20,403	26,924
St Catherine	15.6	21.2	18.6	28,403	43,545	71,948
Total	**9.9**	**18.5**	**14.3**	**98,516**	**194,283**	**292,799**

Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

NCD Prevalence - Asthma

Asthma is a chronic respiratory condition affecting children and adults characterised by episodes of shortness of breath, chest tightening and wheezing. The air passages in the lungs become narrow due to inflammation and tightening of the muscles around the small airways. Asthma symptoms are sporadic and are often worse at night or during exercise. Common triggers of asthma are viral infections (colds), dust, smoke, fumes, changes in the weather, grass and tree pollen, animal fur and feathers, strong soaps and perfume[1].

Asthma is included in the WHO Global Action Plan for the Prevention and Control of NCDs and the United Nations 2030 Agenda for Sustainable Development[1].

Asthma is a respiratory condition with a self-reported prevalence of 10.4% in Jamaicans 15 years and older, with 9.9% males and 10.9% females.

Asthma prevalence in general decreased with increasing age. Prevalence was highest in the 15-24 age group (14.8%) and lowest among Jamaicans 65-74 years of age (5.4%).

Self-Reported prevalence (%) and estimated population count of asthma in Jamaicans 15 years and older by age and sex

	Self-Reported Prevalence (%)			Estimated Population (n)		
Age group (10-year)	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
15 - 24	18.9	10.8	14.8	49,130	28,190	77,320
25 - 34	6.4	12.9	9.7	13,459	28,502	41,961
35 - 44	6.5	11.8	9.2	10,875	21,917	32,793
45 - 54	10.1	9.0	9.6	15,602	14,095	29,697
55 - 64	5.0	9.7	7.3	5,141	9,835	14,976
65 - 74	3.9	6.8	5.4	2,472	4,293	6,765
75 & Older	6.6	12.5	10.2	2,593	7,574	10,167
Total	**9.9**	**10.9**	**10.4**	**99,273**	**114,406**	**213,679**

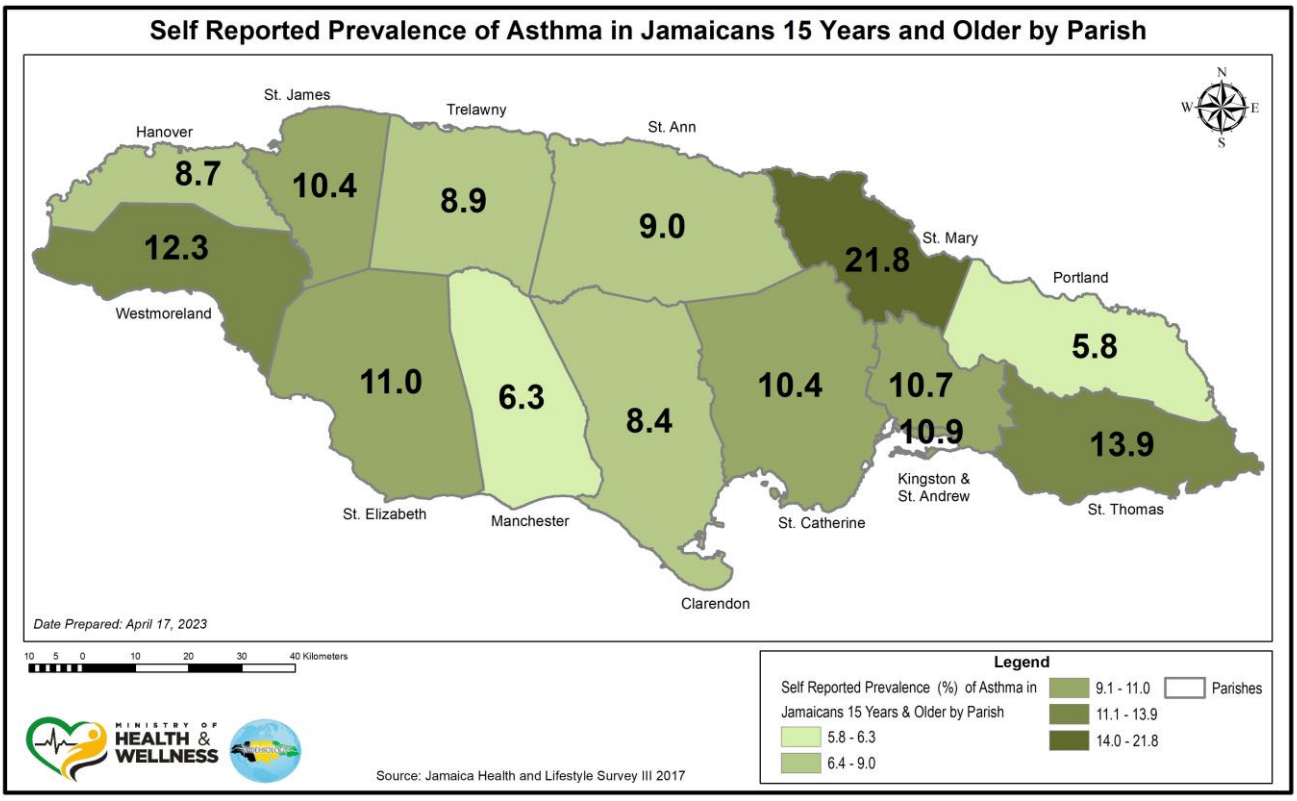
Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

Source:
1. WHO. https://www.who.int/news-room/fact-sheets/detail/asthma

ISSN 0799-5083

NCD Prevalence - Asthma

Asthma prevalence was greatest in St. Mary (21.8%) followed by St. Thomas (13.9%), Westmoreland (12.3%) and St Elizabeth (11.0%). The lowest prevalence of 5.8% was reported in Portland.



Self-Reported prevalence (%) and estimated population count of asthma in Jamaicans 15 years and older by parish and sex

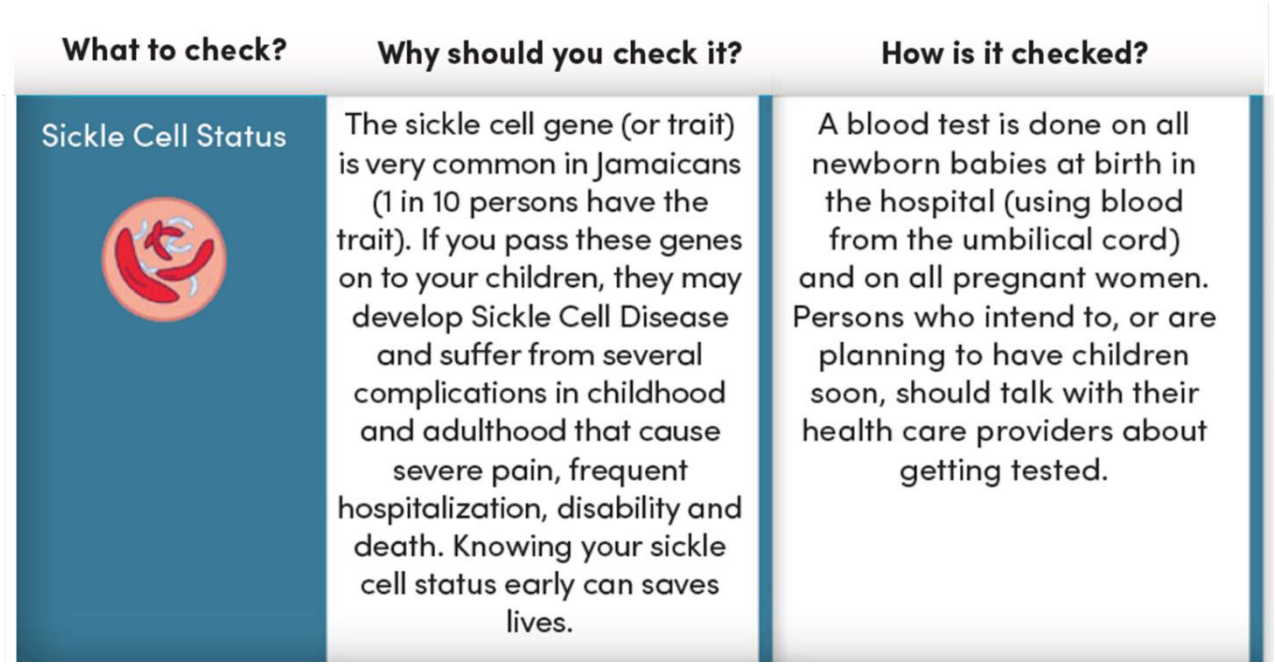
Parish	Self-Reported Prevalence (%)			Estimated Population (n)		
	Male	Female	Total	Male	Female	Total
Kingston	11.7	10.0	10.9	3,830	3,255	7,085
St. Andrew	14.4	7.4	10.7	31,197	18,017	49,215
St Thomas	8.0	19.7	13.9	2,818	7,062	9,879
Portland	5.8	5.9	5.8	1,848	1,835	3,682
St. Mary	13.6	29.9	21.8	5,818	12,891	18,709
St Ann	8.5	9.5	9.0	4,778	6,110	10,888
Trelawny	11.9	5.8	8.9	3,420	1,612	5,032
St James	8.9	11.9	10.4	5,981	8,518	14,499
Hanover	12.1	5.2	8.7	3,154	1,271	4,425
Westmoreland	16.3	8.2	12.3	8,915	4,230	13,145
St Elizabeth	13.7	8.1	11.0	7,996	4,532	12,527
Manchester	5.7	6.8	6.3	4,173	5,010	9,183
Clarendon	3.3	13.6	8.4	3,007	12,193	15,199
St Catherine	6.8	13.6	10.4	12,339	27,872	40,211
Total	**9.9**	**10.9**	**10.4**	**99,273**	**114,406**	**213,679**

Source: Jamaica Health and Lifestyle Survey III 2016/2017 (JHLSIII), unpublished data.

NCD Prevalence - Sickle Cell Disease

Sickle cell disease (SCD) is an inherited blood disorder that can lead to deformity in the red blood cells. The red blood cells supply oxygen to the body and becomes deformed when oxygen levels are low. These deformed cells form a sickle shape and are then difficult to move throughout the circulatory system/blood vessels. The severity of sickle cell disease differs from person to person[1].

The Sickle Cell Unit in Jamaica conducted a seminal study between 1973 and 1981. Data from this seminal study, informed resolutions by the National Institutes of Health (NIH), USA (1987), the World Health Organization (WHA59.20, 2006) and the United Nations (A/63/L.63, 2008), which all declared SCD to be a global public health issue[2]. An estimated 15% of Jamaicans are at risk of having a child with SCD. Approximately 1 in every 150 Jamaicans are born with SCD[2].



There are approximately 5,877 (0.7%) Jamaicans 15 years and older that have sickle cell disease. More males (5,682, 1.3%) than females (195, 0.04%) have sickle cell disease.

Prevalence (%) and estimated population count of sickle cell disease in Jamaicans 15 years and older

	Prevalence (%)			Estimated Population (n)		
	Male	Female	Total	Male	Female	Total
Trait: AS	9.3	12.4	10.9	40,489	54,364	94,852
Trait: AC	2.5	2.2	2.4	10,981	9,704	20,684
Sickle Cell Disease SS	**1.3**	**0.04**	**0.7**	**5,682**	**195**	**5,877**

Source: Jamaica Health and Lifestyle Survey III 2017 (JHLS III), unpublished data.

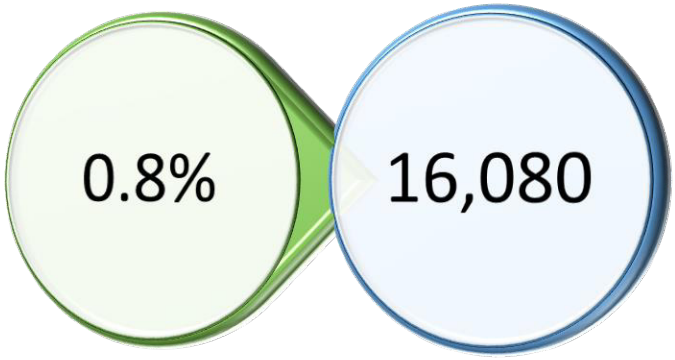
Sources:

1. Science Direct. https://www.sciencedirect.com/topics/pharmacology-toxicology-and-pharmaceutical-science/sickle-cell-mia#:~:text=Sickle%20cell%20disease%20refers%20to,the%20beta%20chain%20of%20hemoglobin.
2. CAIHR. https://uwi.edu/caihr/about/pg-scu.php

NCD Prevalence - Cancer

Cancer is a non-communicable disease with a self-reported prevalence of 0.8% in the Jamaican population. An estimated 16,080 persons reported a diagnosis of cancer. More females (1.3%) than males (0.2%) reported a cancer diagnosis.

Self-Reported prevalence (%) and estimated population count of cancer in Jamaicans 15 years and older



Cancer Prevalence **Estimated Population**

What to check?	Why should you check it?	How is it checked?
Breast Colon (Large Bowels) Cervix Prostate	Breast, Colon, Cervical and Prostate Cancers are leading causes of death in men and women in Jamaica, and each year about half of all new cancer cases are due to these 4 cancers. Too many cancer cases are detected when the disease is far advanced. Early screening before you experience symptoms of cancers is essential for early detection and initiation of life-saving treatment that can cure cancers and minimize pain and suffering.	Talk with your health care provider about your risk of getting these cancers and doing your routine screening tests: - Mammogram for breast cancer - Stool test or colonoscopy for colon cancer - Pap smear +/- Human Papillomavirus (HPV) test for cervical cancer - Digital rectal examination (DRE) and Prostate Specific Antigen (PSA) blood test for prostate cancer

ISSN 0799-5083

NCD Mortality and Burden of Diseases

Every year, thousands of Jamaicans die prematurely due to injuries and illnesses. The loss of a healthy life year or a premature death is called 'burden of disease' by epidemiologists. Burden of disease assesses how ill-health and early death due to disease and injury, prevent us from living longer and healthier lives.[1]

Epidemiologists separate disease burden into the following three key categories of disabilities and diseases: [1]

- Non-communicable diseases (NCDs);
- Communicable, maternal, perinatal and nutritional conditions; and
- Injuries

A detail breakdown of the disease sub-categories within each key category are shown below[2].

Non-communicable diseases (NCDs)	**Communicable, maternal, perinatal and nutritional conditions**	**Injuries**
Cardiovascular diseases (stroke, heart disease and heart failure)	Diarrheal, lower respiratory & other common infectious diseases	Violence (assault)
Cancers	Human immunodeficiency virus	Conflict & terrorism (war)
Respiratory diseases	Tuberculosis	Self-inflected injuries
Diabetes mellitus, endocrine and blood disorders	Childhood cluster diseases or vaccine preventable diseases	Poisoning
Mental and substance abuse disorders	Vector-borne diseases (dengue, malaria)	Road traffic accidents
Sense organ diseases	Maternal conditions	Fall
Skin and musculoskeletal diseases	Perinatal conditions (low birth weight, birth asphyxia and birth trauma)	Fire, drowning, natural disasters
Genitourinary diseases	Nutritional deficiencies	Exposure to mechanical forces
Digestive diseases		

Sources:
1. *Roser, M., Ritchie, H., & Spooner, F. (2021) - Burden of disease. Our World In Data. Retrieved March 23, 2023, from* https://ourworldindata.org/burden-of-disease
2. World Health Organization. List of causes and corresponding ICD-10 codes. World Health Organization. Retrieved March 23, 2023, from https://platform.who.int/mortality/about/list-of-causes-and-corresponding-icd-10-codes

NCD Mortality and Burden of Diseases

The Top-10 Causes of Deaths in Jamaica

Death ranking gives a clearer picture of a country's disease burden. The most frequent causes of death and changes in disease trends are assessed over time.[1] The diseases and injury below denote the most frequently occurring causes of death in Jamaica.

Rank	2010	2015	2020
1	Cerebrovascular diseases, **2056**	Cerebrovascular diseases, **2359**	Diabetes mellitus, **2829**
2	Diabetes mellitus, **2051**	Diabetes mellitus, **2123**	Cerebrovascular diseases, **2474**
3	Assault, **1476**	Ischemic heart diseases, **1483**	Hypertensive diseases, **1697**
4	Hypertensive diseases, **1082**	Hypertensive diseases, **1416**	Ischemic heart diseases, **1689**
5	Ischemic heart diseases, **1045**	Assault, **987**	Assault, **934**
6	Malignant neoplasm of digestive organs, **752**	Malignant neoplasm of digestive organs, **818**	Malignant neoplasm of digestive organs, **919**
7	Malignant neoplasm of prostate, **590**	Malignant neoplasm of prostate, **666**	Malignant neoplasm of prostate, **736**
8	Chronic respiratory diseases, **581**	Other forms of heart diseases, **587**	Other forms of heart diseases, **530**
9	Other forms of heart diseases, **558**	Human immunodeficiency virus, **539**	Chronic respiratory diseases, **483**
10	Human immunodeficiency virus, **506**	Malignant neoplasm of respiratory organs, **460**	Malignant neoplasm of breast, **472**

The number of death as a result of six leading causes increased significantly from 2010 to 2020:

- Breast cancer by 63%
- Ischemic heart diseases by 62%
- Hypertensive diseases by 57%
- Diabetes by 37%
- Prostate cancer by 25%
- Stroke by 20%

Sources:

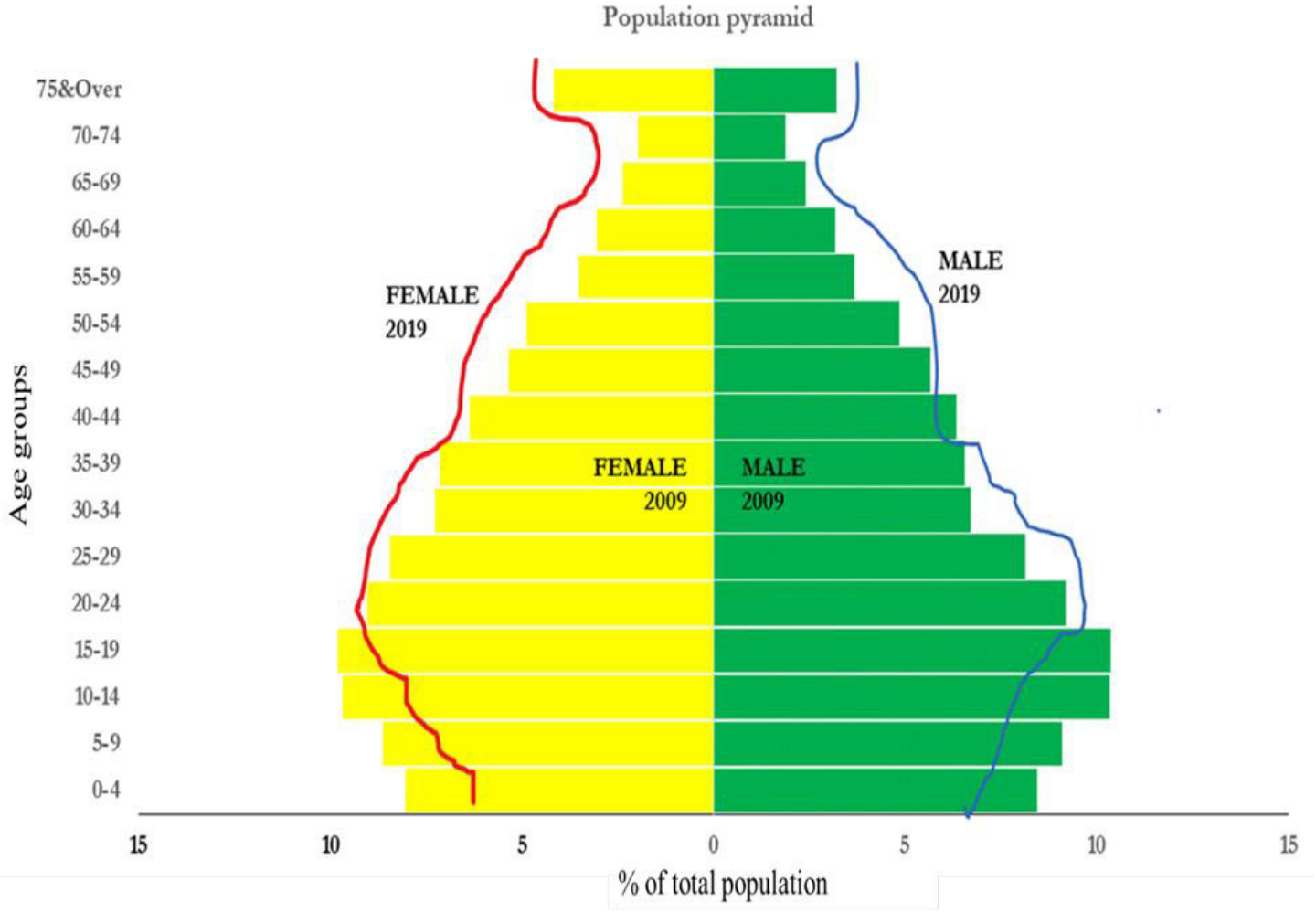
1. Xu, J.Q., Murphy, S.L., Kochanek, K.D., & Arias, E. Deaths: Final data for 2019. National Vital Statistics Reports; vol 70 no 08. Hyattsville, MD: National Center for Health Statistics. 2021. https://dx.doi.org/10.15620/cdc:106058

NCD Mortality and Burden of Diseases

Changes in leading specific causes of death over time

Due to an ageing population, a country with a higher proportion of elderly persons may have higher death rates compared to other countries with younger population, simply because the elderly are more likely to die. Jamaica has an **ageing population**. [1] The proportion of Jamaicans who are 65 years and older has increased from 8% in 2009 to 10% in 2019.

The population age structure of Jamaica



Because of the changing age structure of the Jamaican population, we utilise a method called **Age-Standardisation**, which adjusts deaths to make a better comparison between groups or time periods (e.g., years) with different age distribution. This helps to visualise the impact of disease burden on specific groups.

Sources:

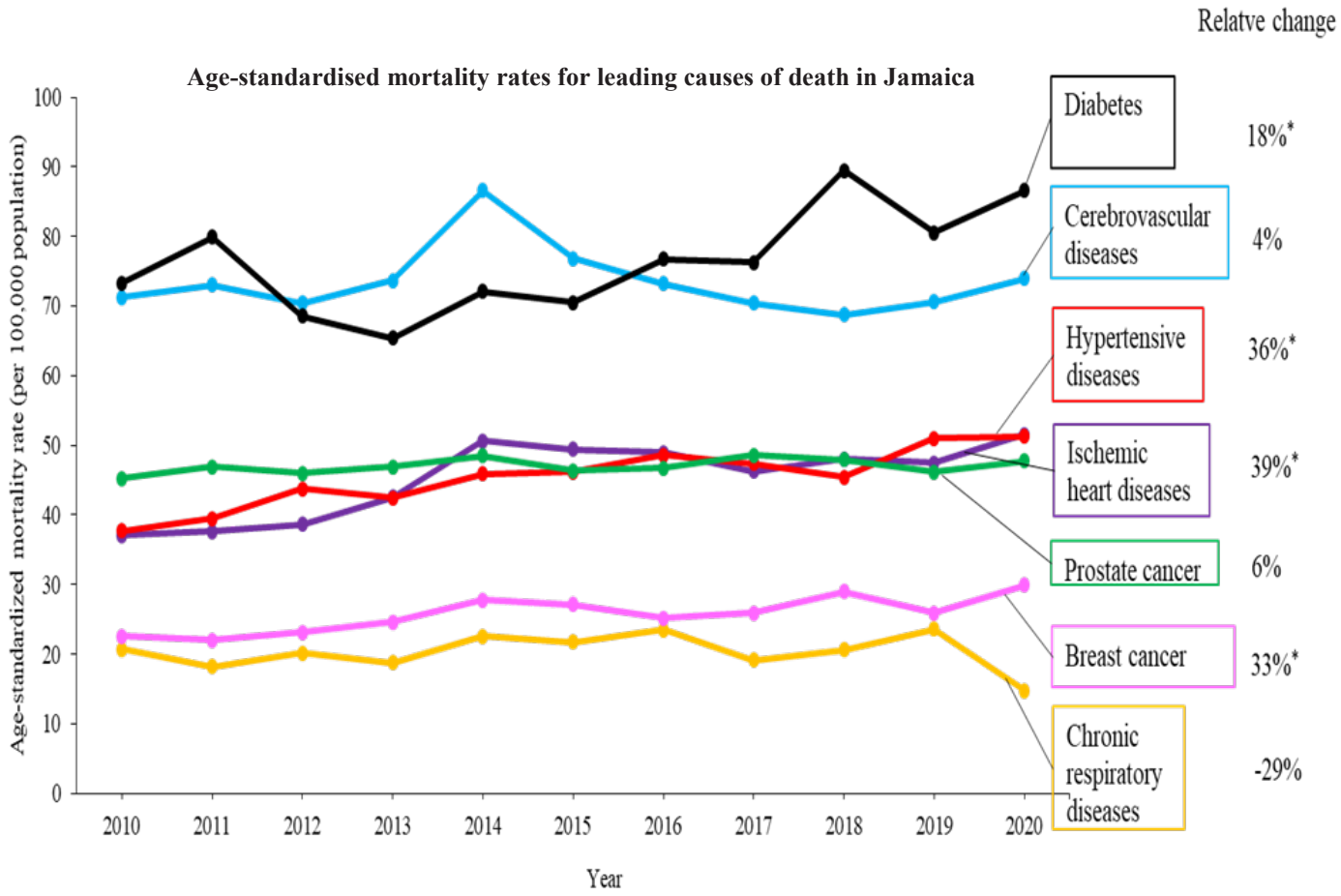
1. Age-Adjusted Rate Definitions. Bureau of Health Care Analysis & Data Dissemination. Retrieved March 23, 2023, from https://health.mo.gov/data/mica/CDP_MICA/AARate.html
2. [1] World Health Organization. Ageing: Global population. World Health Organization. Retrieved March 23, 2023, from https://www.who.int/westernpacific/health-topics/ageing#tab=tab_1

NCD Mortality and Burden of Diseases

Changes in leading specific causes of death over time

Over the past decade, age-standardised mortality rates show that the significant increase in deaths from diabetes, hypertensive diseases, ischemic heart diseases and breast cancer were not as a result of an ageing population. Rather, it was due to an incremental rise in deaths from these conditions regardless of age. For example, diabetes the number one killer in Jamaica, led to the death of two additional Jamaicans per week over the past decade.

Age-standardised mortality rates for selected leading causes of death in Jamaica



Note. * denotes a statistically significant upward trend.

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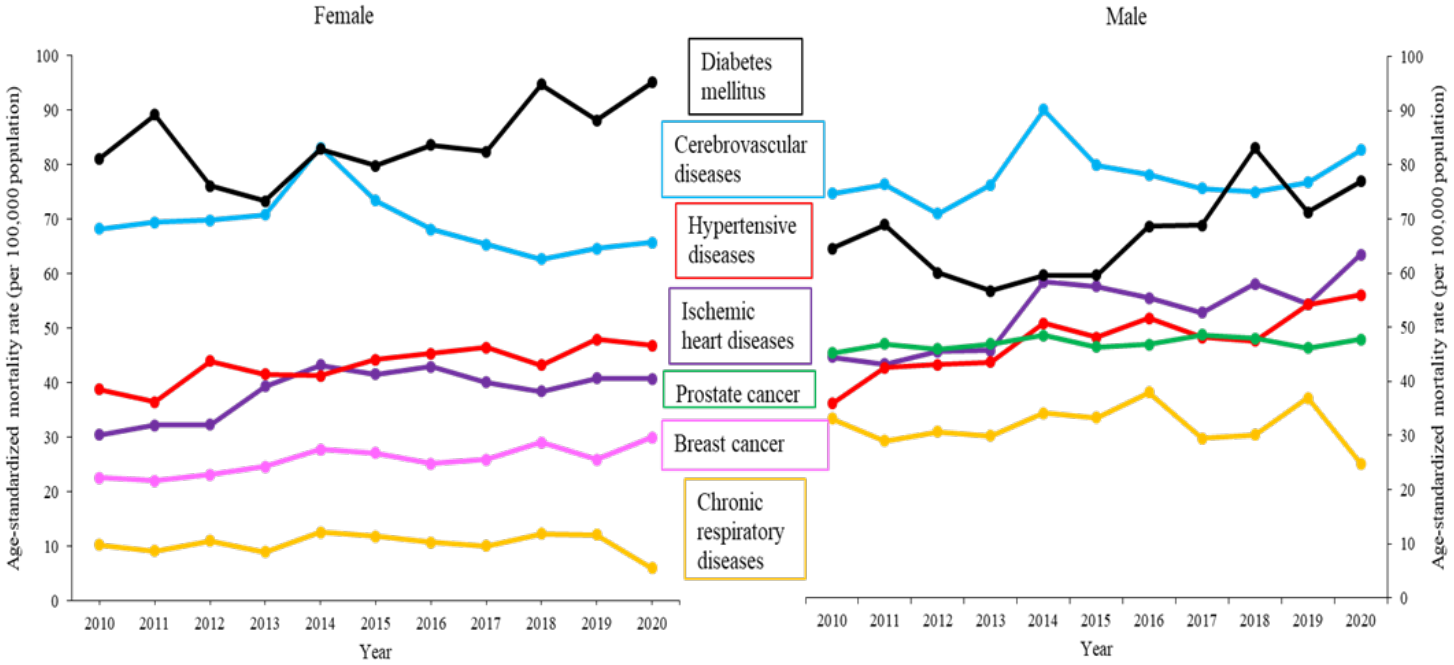
NCD Mortality and Burden of Diseases

Sex Comparison in leading causes of death

The leading cause of death between 2010 and 2020, was cerebrovascular diseases (stroke) for males and diabetes for females. Cerebrovascular diseases decreased among females but increased among males. There were significant upward trends in diabetes, ischemic heart diseases and hypertensive diseases. Notably there was a greater increase in death rates among males than females for these diseases except for diabetes.

The leading cause of death for males is Stroke and for females is Diabetes

Age standardised mortality rates for selected leading causes of death in females and males



Age-standardised mortality rates for selected leading causes of death by sex in 2020 were:

	Female	Male	Both sexes
Cerebrovascular diseases	65.7	82.7	73.9
Ischemic heart diseases	40.8	63.4	51.6
Hypertensive diseases	46.8	56.0	51.3
Diabetes mellitus	95.0	77.0	86.6
Chronic respiratory diseases	6.0	24.8	14.8
Prostate cancer	0.0	47.8	47.8
Breast cancer	29.9	0.0	29.9

NCD Mortality and Burden of Diseases

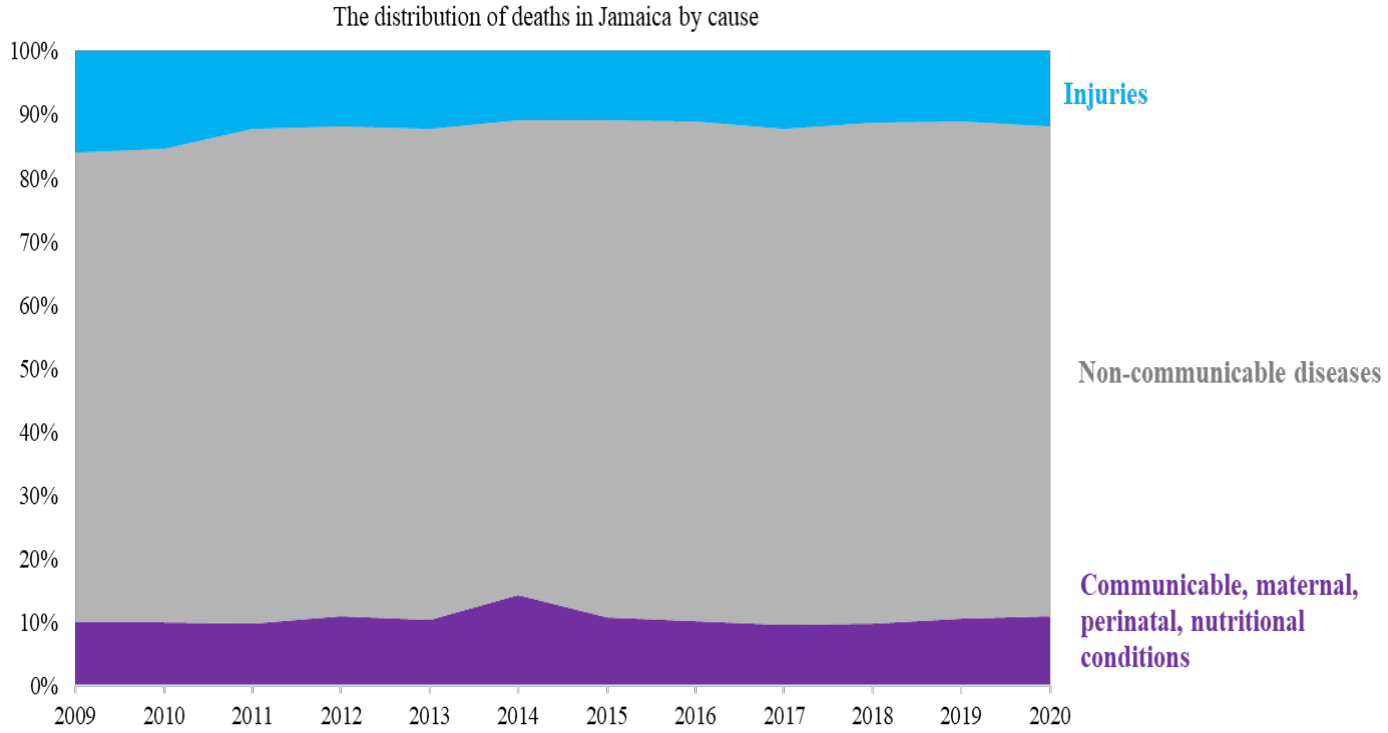
Impact of NCDs on Jamaica's Mortality Rate

The chart below shows that over the last decade on average

- 77% of all deaths in Jamaica were due to NCDs;
- 11% were due to communicable, maternal, perinatal, nutritional conditions; and
- 12% were due to injuries

77% of all deaths in Jamaica were due to NCDs

The distribution of deaths in Jamaica by cause



Categories of Diseases or Disabilities

	2010	2012	2014	2016	2018	2020
Communicable, maternal, perinatal and nutritional conditions	1,721	1,861	2,825	1,983	1,932	2,392
Non-communicable diseases	12,696	13,014	14,798	15,494	15,501	16,918
Injuries	2,645	2,019	2,152	2,182	2,213	2,587
All deaths	**17,394**	**16,999**	**19,775**	**19,761**	**19,762**	**22,022**

NCD Mortality and Burden of Diseases

NCDs cause the most deaths

In 2020, NCDs killed **16,918** Jamaicans, equivalent to **77 out of every 100 deaths** in the country. Compared to a decade ago this represents more deaths from NCDs. In 2010, NCDs killed **12,696** Jamaicans, equivalent to **73 of every 100 deaths** in the country. This is a significant increase in the number of NCD deaths by 30%, and translates to on average **one (1) more person dying from NCDs each day over the past decade.**

In Jamaica one more person died from NCDs each day over the past decade

Non-communicable disease death as a proportion of all cause deaths in Jamaica

	2010			2020		
	No. of deaths	Proportion of NCD deaths (%)	Proportion of all deaths (%)	No. of deaths	Proportion of NCD deaths (%)	Proportion of all deaths (%)
Cardiovascular diseases	5,028	39.1	30.3	6,825	40.8	32.4
Cancer	3,124	24.3	18.8	3,969	23.7	18.9
Diabetes mellitus	2,051	16.0	12.4	2,829	16.9	13.4
Chronic respiratory diseases	581	4.5	3.5	481	2.9	2.3
Four major NCDs	10,784	83.9	65.1	14,104	84.3	67.0
All other NCDs	2,065	16.1	12.5	2,619	15.7	12.4
All NCD deaths	12,849	100.0	77.5	16,723	100.0	79.4

In Jamaica, the four major NCDs: cardiovascular diseases, cancers, diabetes and chronic respiratory diseases contributed to as much as:

- **8 out of every 10 (or 80%) of all NCD deaths; and**
- **6 out of 10 (or 60%) of all causes of deaths**

Cardiovascular diseases as a group of disease accounted for most of the NCD deaths in Jamaica (40.0%) followed by cancers as a group of disease (24.0%), diabetes a single disease (16%) and chronic respiratory diseases as a group of disease (3.7%).

Of all the NCD deaths in Jamaica:

- **CVDs killed 2 in 5 people**
- **Cancer killed 1 in 4 people**
- **Diabetes killed 1 in 6 people**
- **Chronic respiratory diseases killed 1 in 27 people**

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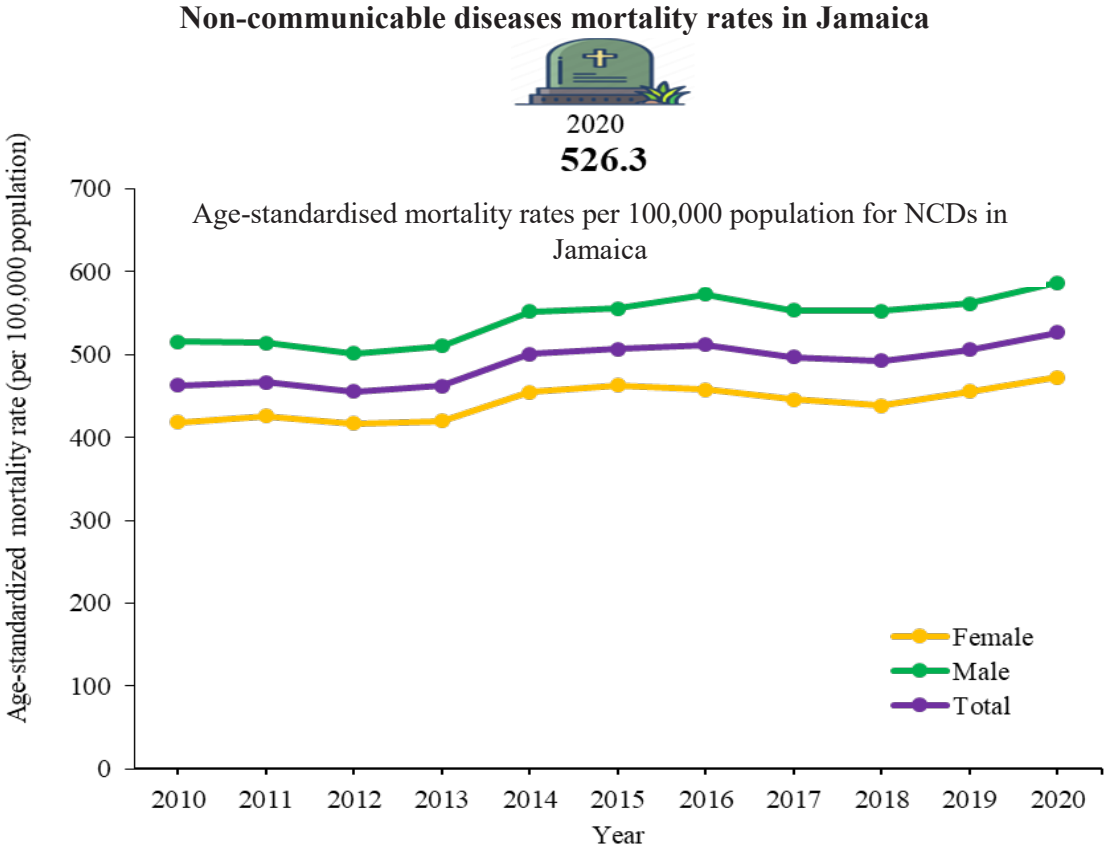
NCD Mortality and Burden of Diseases

NCD mortality rates changed over time

Over the past decade, age-standardised mortality rates significantly increased by 13% from 462.8 per 100,000 population in 2010 to 526.3 per 100,000 population in 2020. This revealed that a significant increase in the number of NCD deaths over the decade was not due to elderly deaths, but resulted from deaths across all age groups.



NCD mortality rates were higher in males (average 543.2 per 100,000 population) than females (average 442.4 per 100,000 population). The sex gap remained similar over the decade, where for every 92 females who died from NCDs 100 males died.

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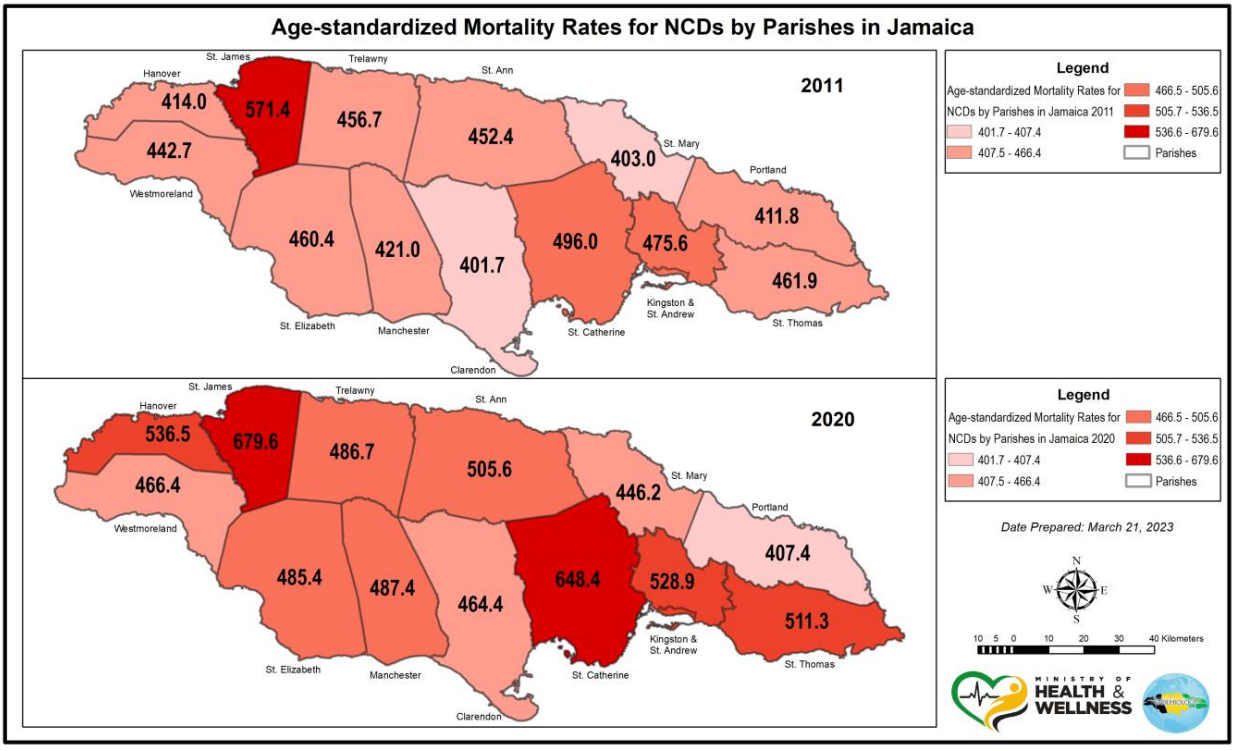
NCD Mortality and Burden of Diseases

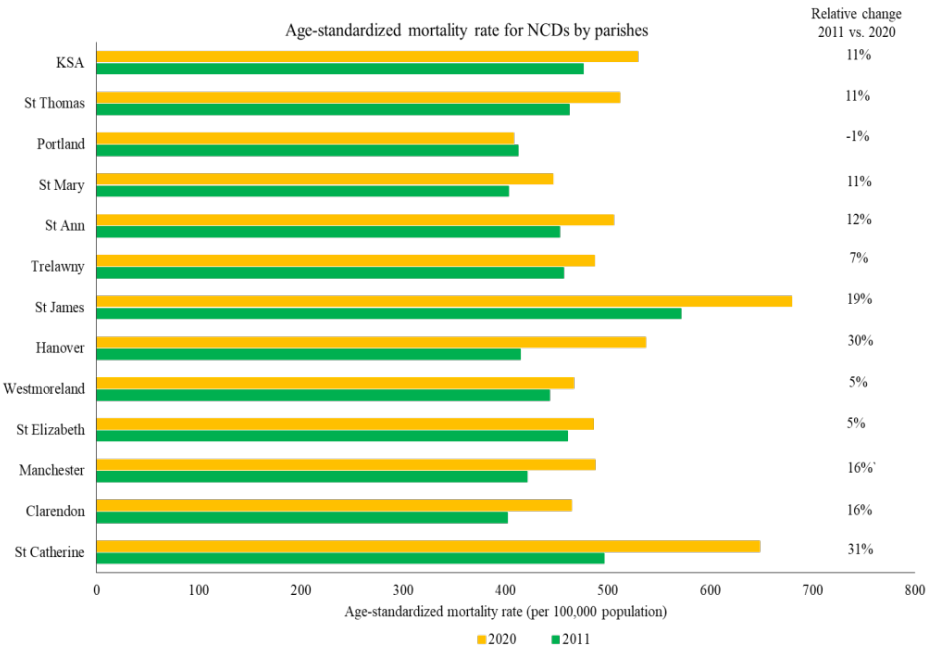
NCD mortality rates differ based on geographic regions

Non-communicable disease mortality rates varied by parishes in Jamaica. Parishes with the highest NCD mortality rates were as follows:

- **St James, 679.6 per 100,000 population**
- **St Catherine, 648.4 per 100,000 population**



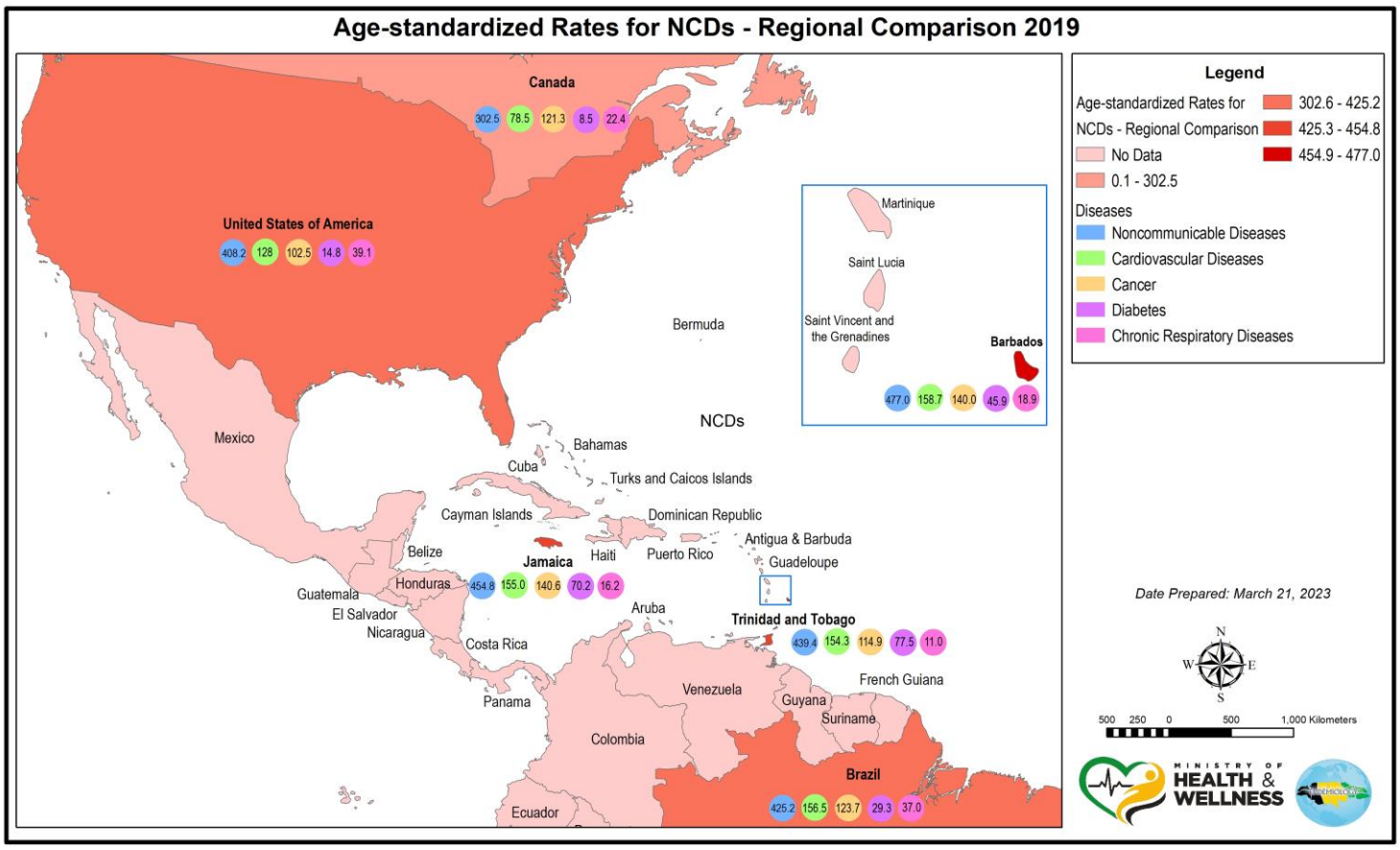
Non-communicable disease mortality rates increased for all parishes in Jamaica except for Portland. St Catherine and Hanover saw the greatest increases in NCD mortality rates over the past decade.



NCD Mortality and Burden of Diseases

NCD mortality rates differ based on geographic regions

The map below present NCD mortality rates for Jamaica relative to other countries in the Region of the Americas. NCD mortality rates varied across the region with Jamaica presenting similar NCD mortality rates to its Caribbean counterparts: Barbados and Trinidad and Tobago.



Source: ***Core indicators dashboard*. PAHO/EIH Open Data. (2023, February 28). Retrieved March 3, 2023, from https://opendata.paho.org/en/core-indicators/core-indicators-dashboard**

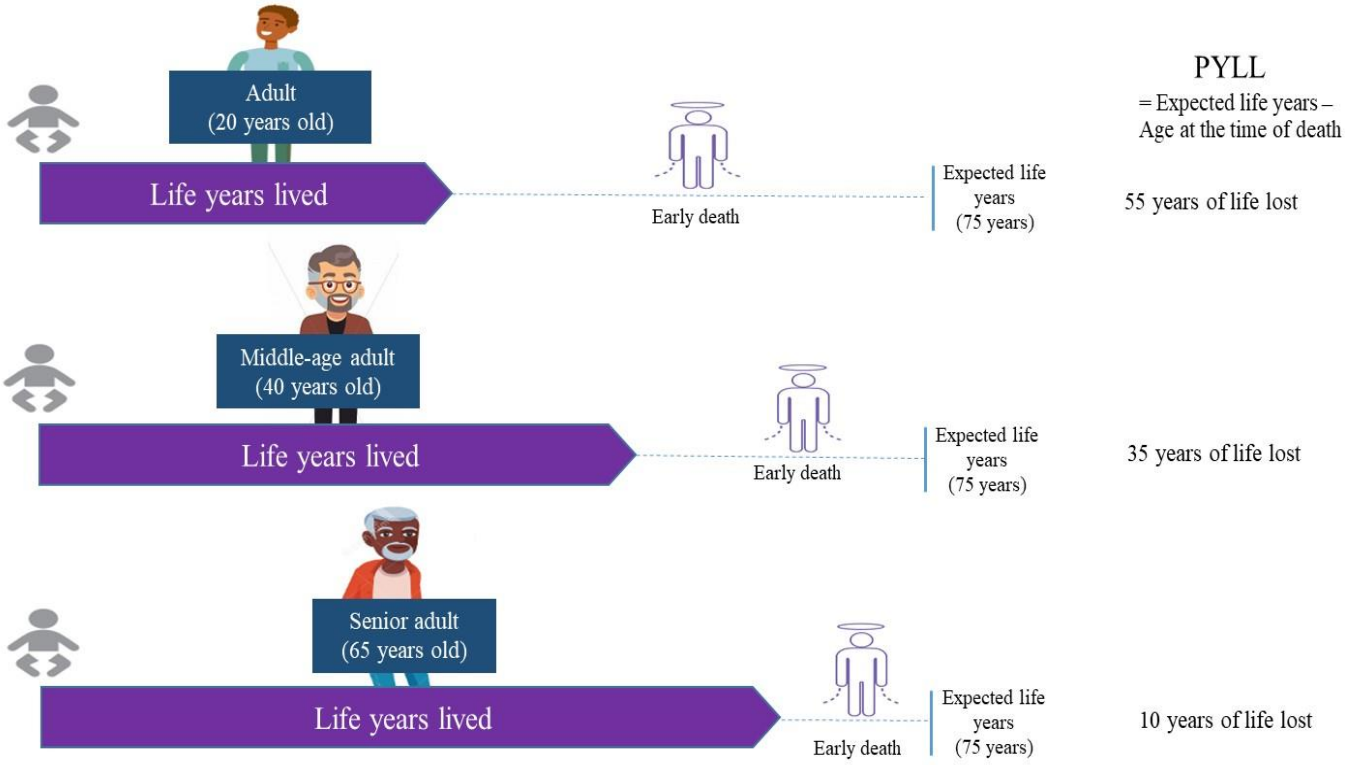
Canada, the United States of America and Brazil have lower NCD mortality rates than Jamaica. In Jamaica, Barbados and Trinidad and Tobago, CVD accounted for most of the NCD deaths followed by cancer, diabetes and chronic respiratory diseases. This was different for Canada, the United States of America and Brazil, where chronic respiratory diseases killed people at a greater rate than diabetes.

NCD Mortality and Burden of Diseases

Measuring potential years of life lost

The concept of potential years of life lost (PYLL) measure disease burden by emphasising premature deaths or specific causes of death affecting younger age groups in a population. It is a summary measure of **healthy life years lost** from illnesses. It measures this by summing the difference between each person's age of death and their life expectancy at that age.[1] PYLL gives us an idea of specific diseases and disabilities killing people too young in a population.

The concept potential years of life lost



Globally, individuals are expected to live on average to 75 years. For example, if three individuals die within a population: one at age 20 years, the other at age 40 years and another at age 65 years, they would have all experienced early death as they would have failed to attain the life expectancy of 75 years. The 20-year old lost 55 healthy life years, the 40-year old lost 35 healthy life years and the 65-year old lost 10 healthy life years. The resultant PYLL in such a scenario would be a total of 110 healthy life years lost by these three individuals.

Sources:

1. Health status - potential years of life lost - OECD Data. The OECD. Retrieved March 23, 2023, from https://data.oecd.org/healthstat/potential-years-of-life-lost.htm

NCD Mortality and Burden of Diseases

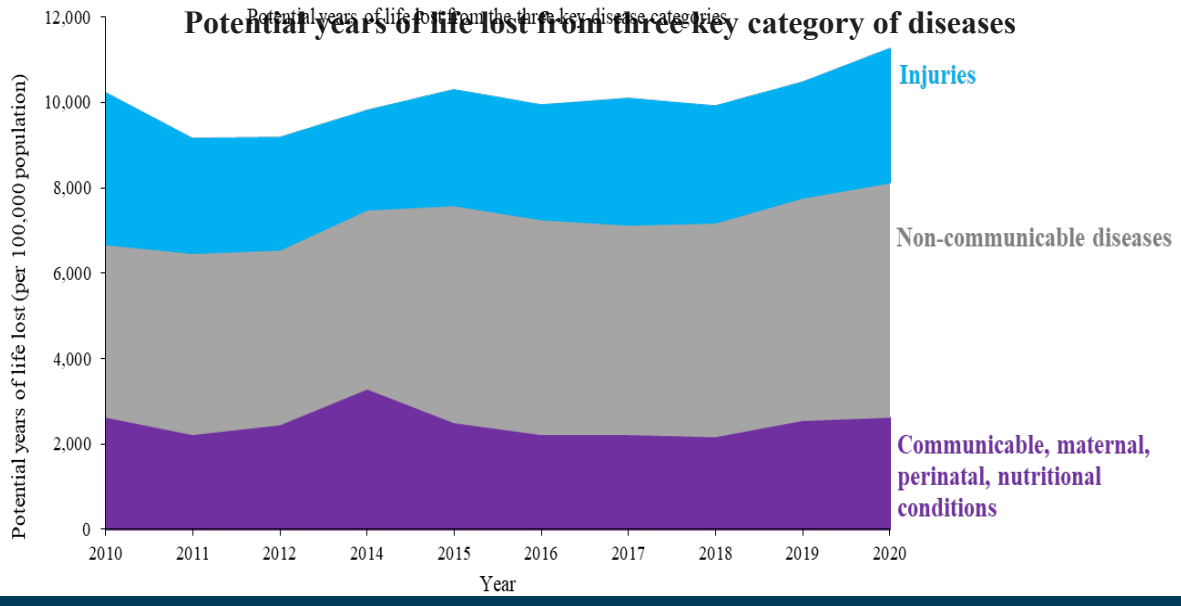
The Severe Impact of NCDs on Healthy Life Years Lost in Jamaica

In 2020, more than **quarter million (296,578) years of potential life were lost (or 11,324 PYLL** per 100,000 population) as a result of 12,747 premature (early) deaths in Jamaica. This is a 19% increase and represents an additional **40,830 years of healthy life lost** compared to 2010, when there were 9,623 early deaths. These figures indicate an increase in Jamaica's disease burden and equally alarming, an increase in the number Jamaicans in the prime of their live who are dying too young.

Potential years of life lost from all early deaths and NCD early deaths in Jamaica

Year	2010	2012	2014	2016	2018	2020
Total no. of deaths	17,393	16,892	18,320	19,761	19,762	22,022
Total no. of early deaths	9,623 (55% of all deaths)	9334 (55% of all deaths)	10,456 (51% of all deaths)	10,991 (56% of all deaths)	11,116 (56% of all deaths)	12,747 (59% of all deaths)
Potential years of life lost from all early deaths	255,748	240,120	211,463	260,883	264,763	296,578
No. of early NCD deaths	5,984 (62% of all early deaths)	6,168 (66% of all early deaths)	6,887 (66% of all early deaths)	7,716 (70% of all early deaths)	7,857 (71% of all early deaths)	8,743 (69% of all early deaths)
Potential years of life lost from NCD early deaths	105,650	107,020	109,753	132,335	131,843	144,853

Early deaths from NCDs accounted for almost twice as many potential years of life lost when compared to injuries and communicable, maternal, perinatal and nutritional conditions. In 2020, NCDs cost Jamaica **144,853** healthy life years (or 5,531 PYLL per 100,000 population), while communicable, maternal, perinatal and nutritional conditions cost **68,150** (or 2,602 PYLL per 100,000 population) healthy life years. Rates in 2020 were higher than in 2010, when NCDs cost **105,650** healthy life years (or 4,079 PYLL per 100,000 population), and communicable, maternal, perinatal and nutritional conditions cost **56,168** (2,163 PYLL per 100,000



NCD Mortality and Burden of Diseases

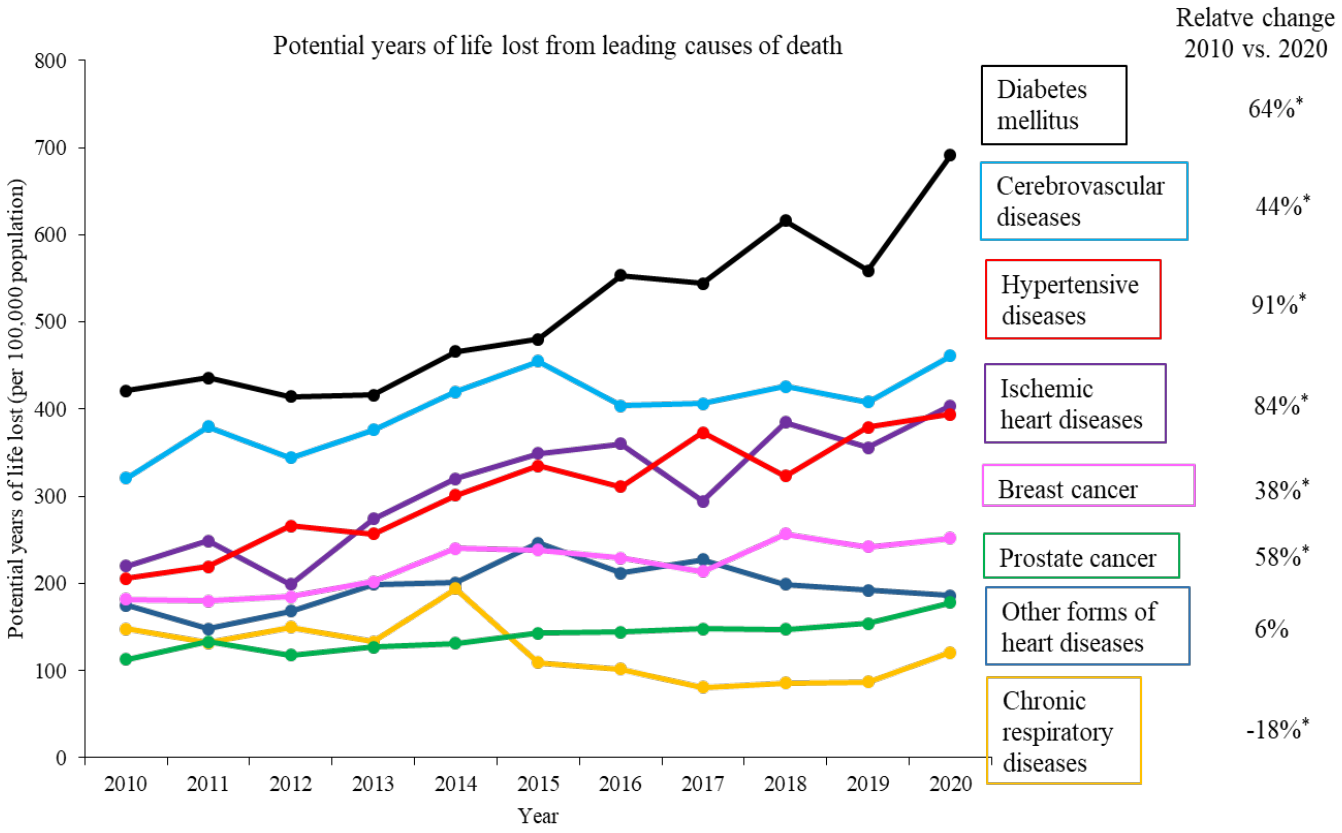
Significant increases in healthy life years lost to NCDs

Over the past decade, potential years of life lost from NCDs significantly increased for all leading causes of deaths except for other forms of heart diseases and chronic respiratory diseases.

PYLL increased the greatest for

- Hypertensive diseases, 91%
- Ischemic heart diseases, 84%
- Diabetes, 64%
- Prostate cancer, 58%
- Stroke, 44%

Potential years of life lost from leading causes of death in Jamaica



Note. * denotes a statistically significant upward trend**.**

There has been an increase in the number of Jamaicans dying too young from NCDs. Although we did not see a significant increase in age-standardised mortality rates for prostate cancer and stroke, there were, significant increases in the potential years of life lost from these conditions. This indicates that individuals died younger from these diseases as the decade progressed.

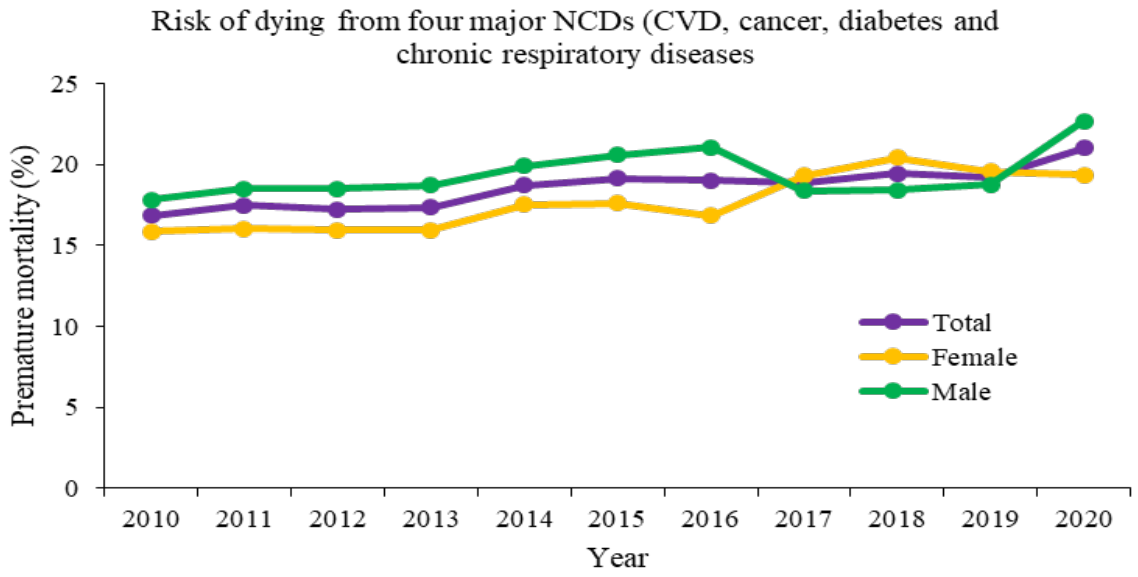
NCD Mortality and Burden of Diseases

Risk of dying from NCDs

The risk of premature death is a measure used to assess the likelihood of a person dying between age 30 and before their 70th birthday from one of the four major NCDs (cardiovascular diseases, cancer, diabetes, chronic respiratory diseases). [1]

In **2020, a 30 year-old individual living in Jamaica had a 21% chance of dying from four major NCDs before age 70 years.** From 2010 to 2020, the risk of dying prematurely significantly increased by 24%.

Premature mortality from four major NCDs (CVD, cancer, diabetes and chronic respiratory diseases)



- **In 2020, the risk of premature death was higher in men (22.7%) than in women (19.4%).**

Premature mortality was higher in males than in females from 2010 (17.8% vs 15.8%) to 2016 (21.1% vs 16.9%).

In the region of the Americas, the estimated risk of dying prematurely from the four major NCDs was 14% in 2019.

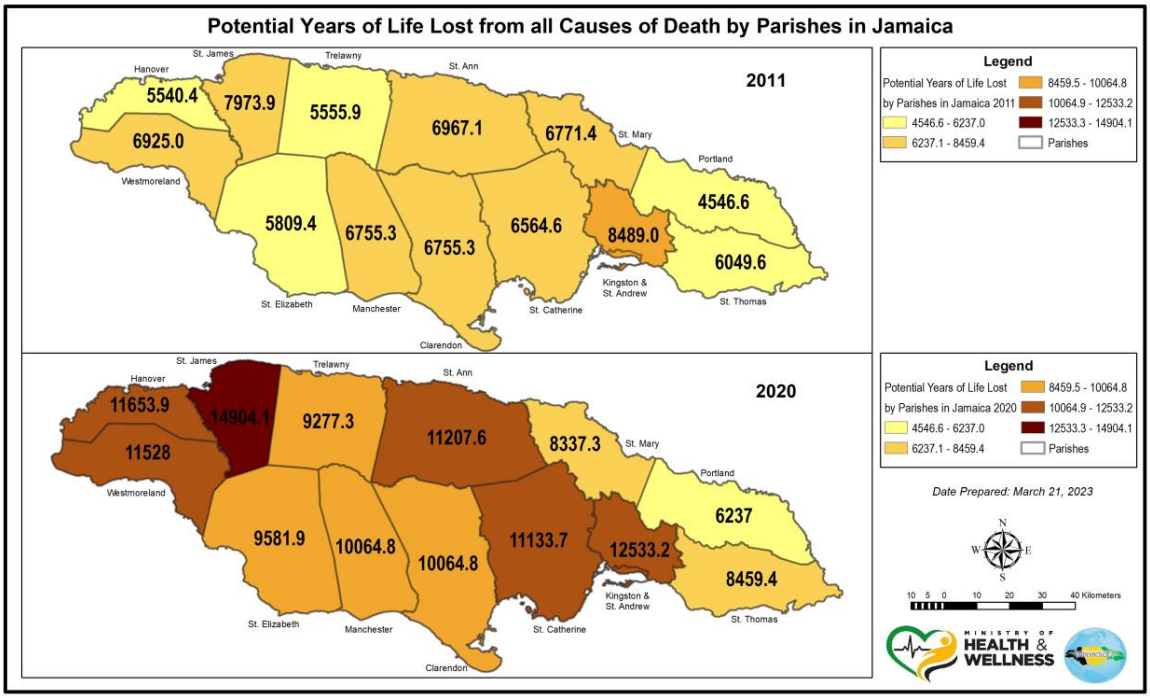
Sources:

1. Risk of dying prematurely from NCDs. Risk of Dying Prematurely from NCDs - PAHO/WHO | Pan American Health Organization. Retrieved March 23, 2023, from https://www.paho.org/en/enlace/risk-dying-prematurely-ncds

NCD Mortality and Burden of Diseases

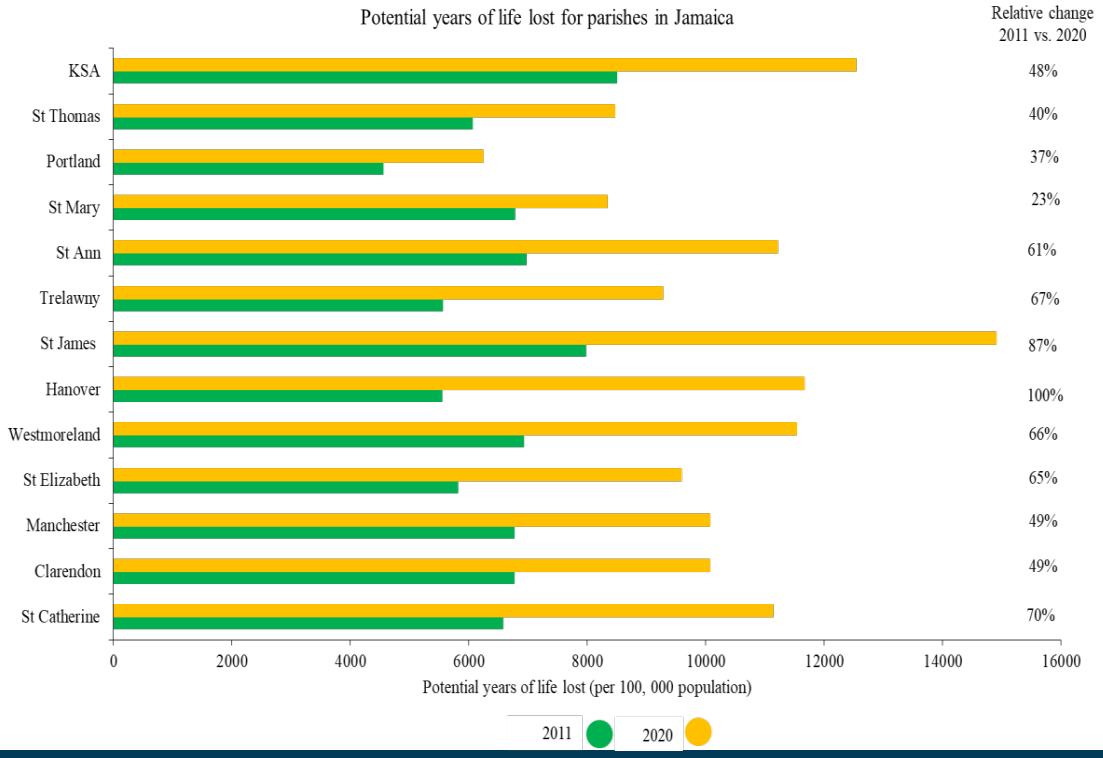
Dying prematurely varied across geographic regions

Parishes with the greatest potential years of life lost were St James, KSA, Hanover and Westmoreland.



The western parishes [Hanover (100%), St James (87%), Trelawny (67%) and Westmoreland (66%)] and St Catherine (70%) had the greatest increases in potential years of life lost over the past decade.

Potential years of life lost for parishes in Jamaica

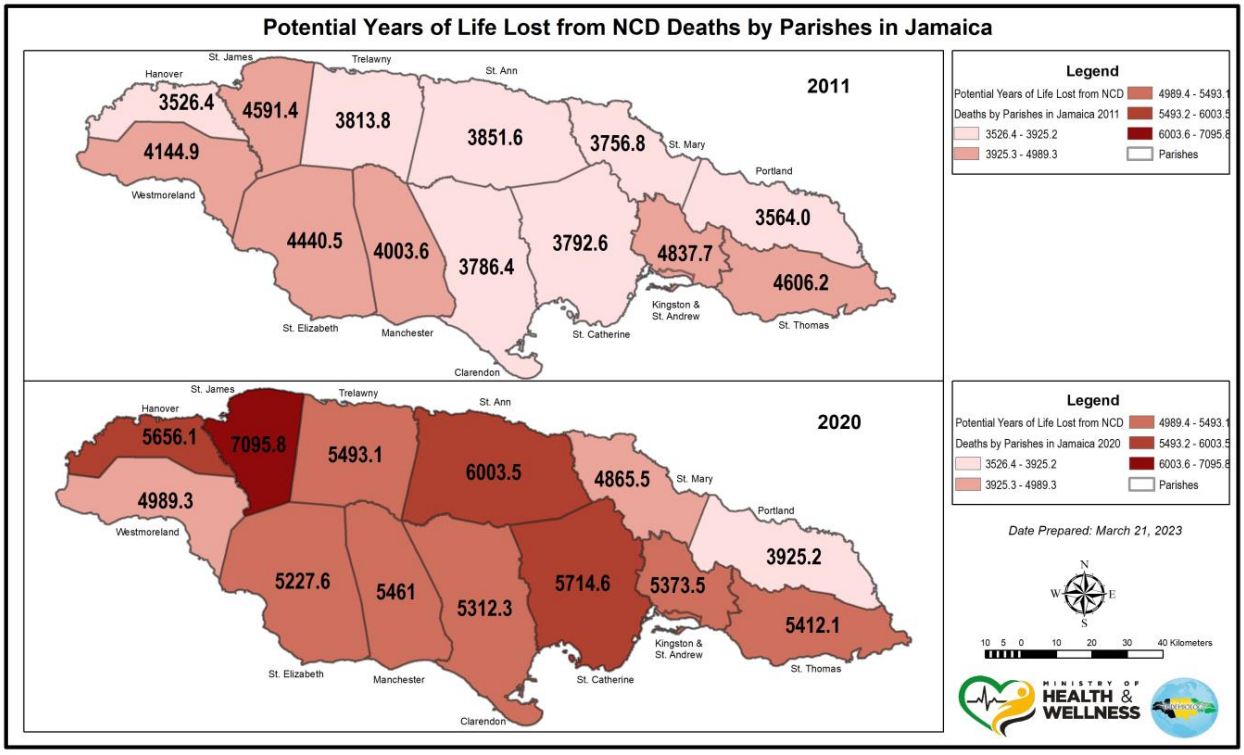


ISSN 0799-5083

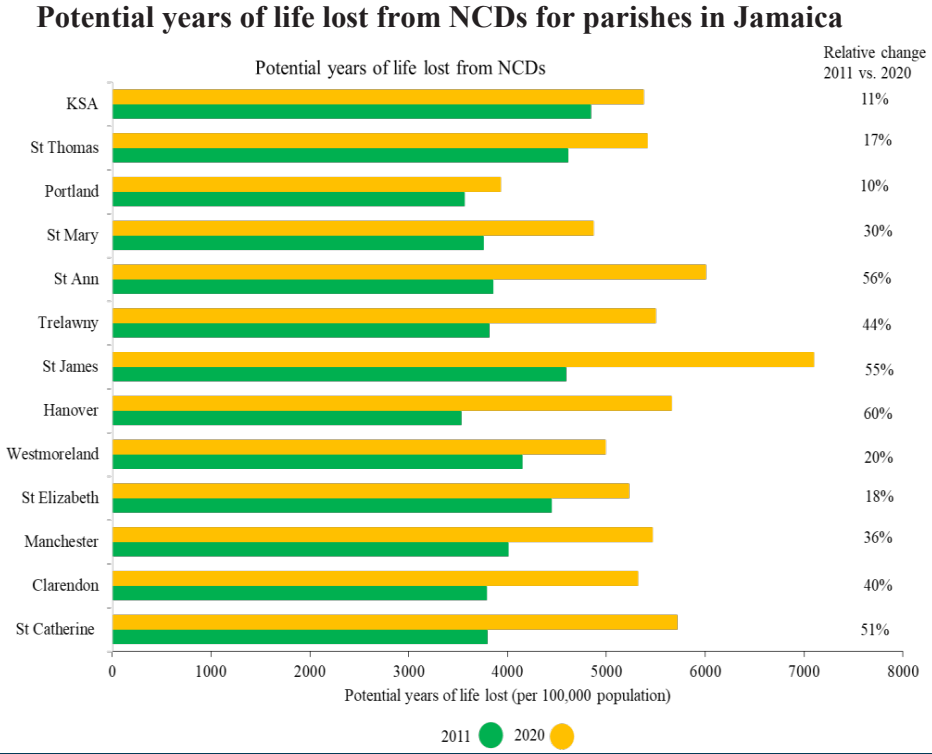
NCD Mortality and Burden of Diseases

Dying prematurely varied across geographic regions

Potential years of life lost from NCD deaths were greatest in Kingston and St Andrew and St Thomas in 2011, but was greatest in St James and St Ann in 2020.



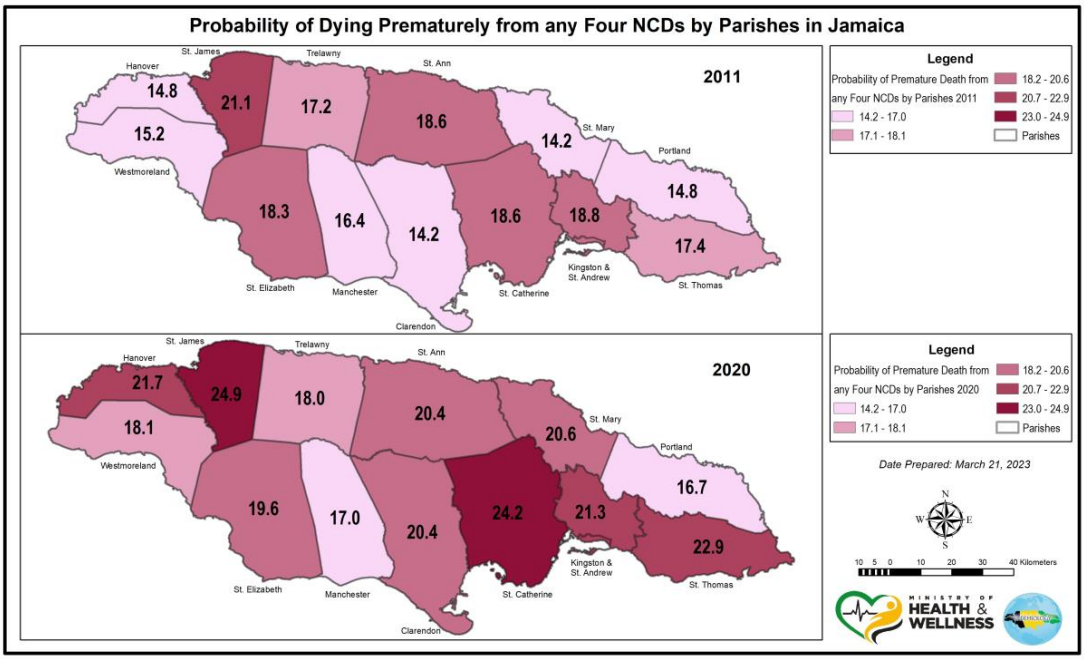
Hanover (60%), St Ann (56%), St James (55%), and St Catherine (51%) had the greatest increase in PYLL from 2011 to 2020.



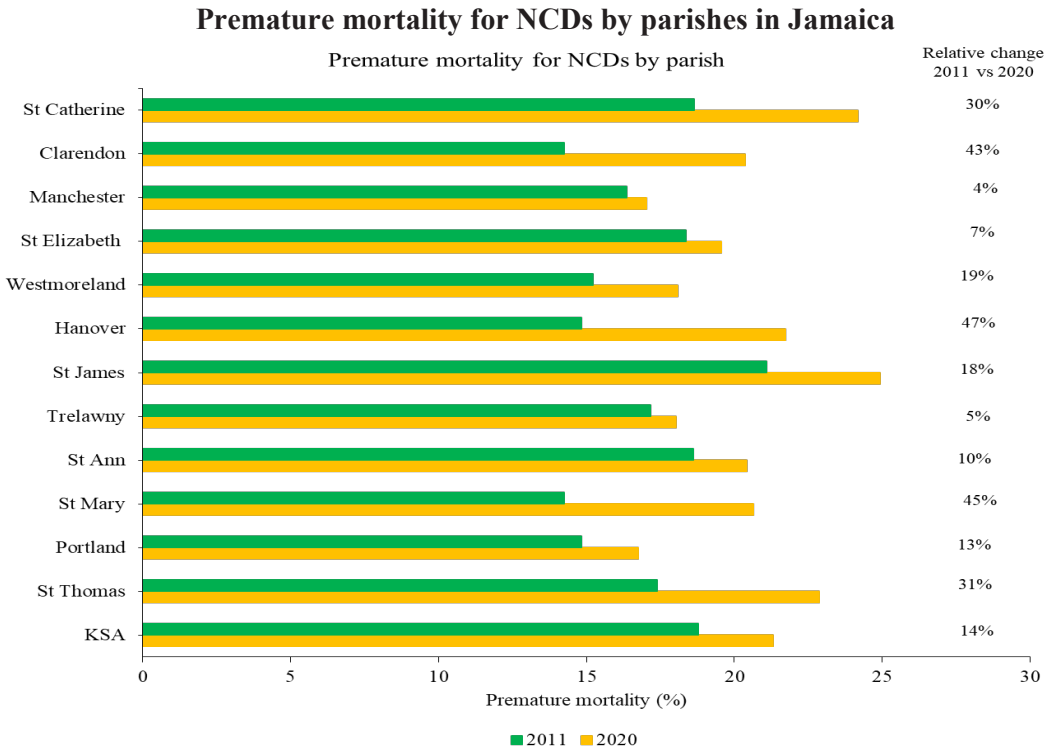
NCD Mortality and Burden of Diseases

Dying prematurely varied across geographic regions

In 2020, the highest probability of dying prematurely from the four NCDs was seen in the parish of St James (24.9%), while the lowest probability was observed in Portland (16.7%). In 2011, St James had the greatest probability of premature deaths from NCDs and St Mary had the lowest probability.



From 2011 to 2020, Hanover (47%), St Mary (45%) and Clarendon (43%) had the greatest increases in premature mortality from the four NCDs (CVDs, cancer, diabetes and chronic respiratory diseases).



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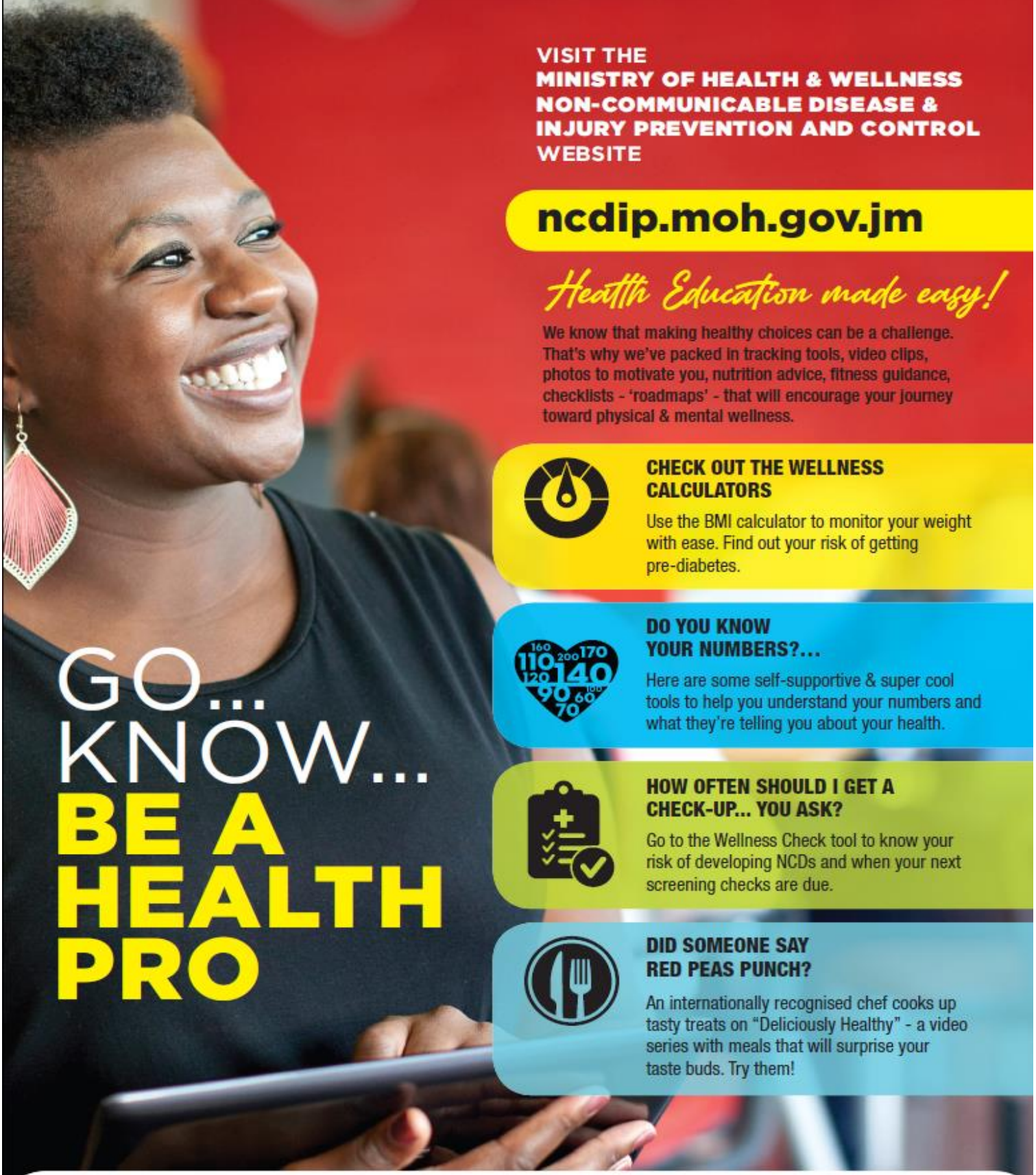

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