# BARBADOS HEALTH REPORT 2020

## Prepared by Ministry of Health and Wellness (MHW)


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# ACRONYMS & ABBREVIATIONS

| | |
|---|---|
| AA-HA | Adolescent Action for the Health of Adolescents |
| ACEP | Alternative Care of the Elderly Programme |
| ACGDC | The Albert Cecil Graham Development Centre |
| AED | Accident and Emergency Department |
| AIDS | Acquired Immune Deficiency Syndrome |
| ARB | Angiotensin II Receptor Blockers |
| ART | Antiretroviral Therapy |
| BCC | Barbados Community College |
| BDS | Barbados Drug Service |
| BDSPHL | Best-dos Santos Public Health Laboratory |
| BFPA | Barbados Family Planning Association |
| BIBA | Barbados International Business Association |
| BNR | Barbados National Registry |
| BWA | Barbados Water Authority |
| CARPA | Caribbean Public Health Agency |
| CD4 | Cluster of Differentiation 4 |
| CDC | Centers for Disease Control and Prevention |
| CNO | Community Nutrition Officer |
| CT | Chlamydia |
| CVD | Cardio Vascular Disease |
| DTHSSC | David Thompson Health & Social Services Centre |
| EMTCT | Elimination of the Mother-to-Child Transmission |
| ENT | Ear Nose and Throat |
| GDP | Gross Domestic Product |
| GH | Geriatric Hospital |
| GIS | Geographical Information System |
| H1N1 | Influenza Swine Flu/ Hemagglutinin 1 Neuraminidase 1 |
| HCTZ | hydrochlorothiazide |
| HIV | Human Immunodeficiency Virus |
| HRH | Human Resources for Health |
| IAEA | International Atomic Energy Agency |
| ICU | Intensive Care Unit |
| IMR | Infant Mortality Rate |
| LRU | Ladymeade Reference Unit |
| MAFS | Ministry of Agriculture and Food Security |
| MHW | Ministry of Health and Wellness |
| MMR1 | Measles, Mumps, Rubella Vaccine |
| MSM | Men who have Sex with Men |
| NCD | Non-Communicable Diseases |
| NG | Gonorrhoea |
| NGO | Non-Governmental Organization |
| NNC | National Nutrition Centre |
| PAHO | Pan American Health Organization |
| PH | Psychiatric Hospital |
| PLHIV | Persons living with HIV |
| PMTCT | Prevention of Mother to Child Transmission |
| PPP | Private Participating Pharmacies |
| QEH | Queen Elizabeth Hospital |
| SPDH | St. Philip District Hospital |
| SSB | Sugar-Sweetened Beverages |
| STI | Sexually Transmitted Infection |
| TB | Tuberculosis |
| THE | Total Health Expenditure |
| TLC | Transplant Links Community |
| UHC | Universal Health Coverage |
| UN | United Nations |
| UNAIDS | United Nations Programme on HIV and AIDS |
| USAID | United States Agency for International Development |
| UWI | University of the West Indies |
| WHO | World Health Organization |
| WSPC | Winston Scott Polyclinic |

# ACKNOWLEDGEMENTS

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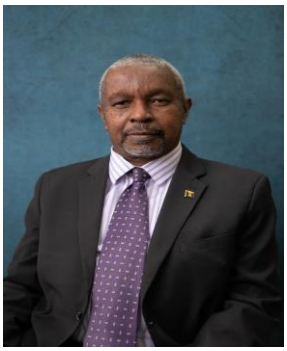
# FOREWORD



Dr Kenneth George, F.B – Chief Medical Officer

It is a pleasure to present this Barbados Health Report 2020 of the Ministry of Health and Wellness, which covers the period 2019 - 2020. The Barbados Health Report aims to provide a picture of our health status that will be accessible to both health care practitioners, partners within and outside of Government and members of the public. It reflects a multi-disciplinary approach to planning in health, that seeks to engage all of our partners at every step of health care delivery. Therefore, this Barbados Health Report is a signal of our commitment to a more dynamic method of engagement.

The report provides relevant information on the health situation in Barbados during the period under review. Indicators for the Sustainable Development Goals (SDGs) and information on significant activities, initiatives, strategies and projects undertaken are included. This report also presents an analysis of data and challenges in the provision of services across the health sector.

For 2020, the central theme at the World Health Assembly was building a fairer, healthier world, and was in keeping with the challenges highlighted by the COVID-19 pandemic. The assembly recognised that COVID-19 had hit all countries hard, but its impact was considerably greater on those communities which were already vulnerable, who are more exposed to the disease, less likely to have access to quality health care services and more likely to experience adverse consequences as a result of measures implemented to contain the pandemic.

In the context of the COVID-19 pandemic, the MHW remained committed to achieving Universal Health Coverage and achieving Sustainable Development Goal 3 to “Ensure

healthy lives and promote well-being for all ages". The Ministry also remained committed to fulfilling its health steering role, particularly as it relates to the issue of immunisation policies, and the provision of appropriate and safe vaccines to the people of Barbados.

The COVID-19 pandemic continued to evolve and as a result, the MHW implemented a comprehensive set of public health measures adapted to the local context and epidemiology of the disease. Several core public health measures that break the chains of transmission were implemented including (i) identification, isolation, testing and clinical care for all cases; (ii) tracing and quarantine of contacts; and (iii) encouraging physical distancing of at least one (1) metre, combined with frequent hand hygiene and respiratory etiquette.

Coupled with our efforts to manage the pandemic, the MHW continued to strengthen its response to the fight against Non-Communicable Diseases (NCDs). A new draft National Strategic Plan for NCDs 2020-2025 was developed, and it is anticipated that this plan would serve as a guide for NCD policy and programmes over the next five years. This Strategic Plan calls on governmental agencies, civil society and the private sector to be the drivers of national prevention and control efforts for NCDs.

The MHW will continue to ensure that the health care system places greater emphasis on promoting wellness and well-being, by creating a vibrant, sustainable behaviour change model. These reports will continue to be a primary resource for information on health in Barbados, providing greater insight into the health status of our country. The MHW anticipates that all health care practitioners in the private and public sectors, NGO partners and Barbados' general public will continue to be motivated, working together to create an environment for a healthier population.

# INTRODUCTION

The Barbados Health Report 2020 gives a comprehensive overview of the health status of Barbados, as achieved through programmatic and policy-based approaches. The report is descriptive and provides a situational analysis of the health of the Barbadian population for the period 2019 to 2020.

Over this review period, we maintained and where applicable, added to partnerships with the private sector and civil society, which both complemented and augmented the national health care programme. These sectors continued to support the work of the MHW in service provision, as well as promote health education and advocacy for the public.

Competing priorities for financial resources saw the need to institute mechanisms which support efficiency savings and best use of available funds. With the ever-rising cost of healthcare and the remit to provide quality services, the MHW endeavoured to maintain a motivated and well-trained workforce in primary, secondary and tertiary care to deliver services across the public sector. Additionally, the services of the Health Economic Unit of the University of the West Indies Trinidad and Tobago were contracted to conduct a costing study of Barbados' public health services to determine the unit costs of operations across health services. From this study, a 'Report on The Efficiency of Key Health Services' was completed.

This process provided information on the costs of delivering services in the public sector, with the aim of allowing the Ministry and the Queen Elizabeth Hospital (QEH) to budget and allocate funds more accurately and efficiently. The MHW remains committed to seeking a new health care financing model to support less reliance on out-of-pocket spending and the establishment of a national health insurance mechanism.

The MHW continued to review and strengthen its public health systems to minimise the possible impact of 2019-nCoV infection on the population of Barbados. The response in Barbados focused on rapidly identifying any case and containing it until infectivity had passed. The Ministry worked with national and international partners on actions, including surveillance and infection control preparedness. Additionally, the MHW reviewed and refined existing plans for detecting and managing infectious diseases of concern. Policies related to strengthened surveillance at ports of entry and modes of quarantine for persons who had potential exposure to the infection were also addressed.

Notwithstanding the Ministry's efforts to reduce the impact of COVID; commendably, the MHW was also able to maintain good public health indicators such as the maternal mortality rate and the infant mortality rate (IMR). Additional successes included:

- Opening of the 24hr service at the Winston Scott Polyclinic.
- Improved Management of Hypertension (PAHO Technical Assistance) through the Global HEARTS Initiative - technical training and equipment purchasing.
- Development of a Human Resources for Health (HRH) Policy and Action Plan.
- Building core capacities through the International Health Regulations.
- Health promotion activities that promote mental and physical health.
- Establishment of the philanthropy committee with the development of a 2020 Prospectus.
- The enhancement of the Rodent Control Programme.
- The establishment of an Insectary-In-A-Box for Barbados under the ZIKA AIRS Project.
- Development of climate change initiatives capable of building resilience in the health sector.
- The recruitment of ninety- five (95) nurses from the Republic of Ghana to augment the local nursing complement. The Ghanaian nurses arrived in Barbados in July

2020 and were attached to the District Hospitals, QEH and polyclinics across the island.

- Construction of the Harrison Point Facility for the hospitalisation of COVID-19 infectious patients, as shown in ***Figure 1***. ***Harrison Point Facility*** below.

Milestones at the QEH included:

- Redevelopment and launch of new procurement guidelines.
- Implementation of an Emergency Services Directorate.
- Development and updating of several nursing policies.


Figure 1. Harrison Point Facility

# ECONOMIC DETERMINANTS

Barbados is considered a high-income country. The economy is service based with tourism being the main driver of economic activity. As a result of the COVID-19 pandemic, Gross Domestic Product (GDP) declined due to a poor tourism performance and other sectors of the economy being affected.

The nominal GDP in 2019 was BBD $10,399.9 million. There was a sharp decline in 2020 to BBD$8,853.2 million. Per capita GDP in 2020 was BBD $28, 658.4. The average rate of inflation decreased from 4.1 % in 2019 to 3.0% in 2020, and the unemployment rate was 10.1% in 2019; as is shown in ***Table 1. Selected Economic & Demographics Indicators, Barbados 2019-2020,*** below.

Expenditure on health, as a percentage of all country spending increased from 7% in 2019 to 10 % in 2020, as greater support was given to the MHW for the COVID-19 pandemic.

Table 1. Selected Economic and Demographics Indicators, Barbados 2019-2020

| Indicator | 2019 | 2020 |
|---|---|---|
| Real Growth (%) | (0.1) | (17.6) |
| Inflation (%) | 4.1 | 3.0 |
| Unemployment (%) | 10.1 | n.a |
| Life expectancy (years) | 79 | 79 |
| Expenditure on health as % of country total | 7 | 10 |
| Nominal GDP (Million BBD) | 10,399.9 | 8,853.2 |
| Per Capita GDP (BBD) | 33,357 | 28, 658.4 |

# DEMOGRAPHICS, MORTALITY AND MORBIDITY

In 2020, Barbados' total population estimate was approximately 271,418 as shown in ***Table 3. Age and Gender Population Distribution 2020***. National population estimates for the years 2018 to 2020 have decreased by almost 2,000 as shown in ***Table 2. Basic Demographic Information 2018-2020***. Females accounted for 51.7% of the total population in 2019 and males 48.3%. The population younger than 15 years represented 19.72% of the total population.

In 2020, the birth rate was 8.8 per 1,000 and the crude death rate, 9.8 per 1,000. That same year, women of childbearing age (15–44 years old) represented 41.6% of the total female population, with an overall fertility rate of 1.4 children per woman; a reduction from 1.5 in 2019. The natural increase rate identifies the rate at which a population is increasing or decreasing and for the second straight year, the natural increase rate has been negative. In 2018, the natural increase was -153 per 1000 persons, however, in 2020, the natural increase was -258. It is a cause for concern that the rate of deaths is increasing at a faster rate than the rate of births, which indicates that the population is decreasing rapidly. Significantly in 2010, as reported in the 2015 Chief Medical Officer report, the rate of natural increase was 1,158, showing a substantial decline over the ten-year period 2010-2020.

Barbados, with a density of 1,731 inhabitants per square mile (668 per km2), is one of the most densely populated countries in the world. The age group 45-49 is the dominant age group, representing 7.69% of the total population. The 2010 population census estimated that the parishes of St. Michael and Christ Church accounted for 51.4% of the population, and approximately 88.7% of the population resided in the urban corridor, stretching from St. James in the north, through St. Michael, Christ Church and St. Philip in the south.

Table 2. Basic Demographic Information 2018-2020

| Indicator | Year | | |
|---|---|---|---|
| | 2020p | 2019p | 2018p |
| Total estimated mid-year population [1] | 271,021 | 272,853 | 273,833 |
| Population under 1 year | 2,355 | 2,590 | 2,416 |
| 1 – 4 years | 14,581 | 14,460 | 14,695 |
| 5 – 14 years | 36,510 | 36,754 | 36,885 |
| 15 – 19 years | 18,415 | 18,539 | 18,581 |
| 20 – 44 years | 94,318 | 94,954 | 95,294 |
| 45 – 64 years | 69,793 | 70,266 | 70,519 |
| 65 years and over | 35,049 | 35,289 | 35,418 |
| Women 15 – 44 years | 57,112 | 57,534 | 57,769 |
| Live births | 2,390 | 2,560 | 2,46 7 |
| Births rate (per 1,000 population) | 8.8 | 9.4 | 9.0 |
| Total Fertility rate (women 15-44 yrs) | 1.4 | 1.5 | 1.4 |
| Deaths occurring during the year | 2,648 | 2,881 | 2,620 |
| Crude Death rate (per 1,000 population) | 9.8 | 10.6 | 9.6 |
| Stillbirths | 17 | 19 | 21 |
| Stillbirth rate (per 1,000 total births) | 0.1 | 7.4 | 8.5 |
| Natural increase | -258 | -321 | -153 |
| Natural increase rate (per 1,000 population) | -1.0 | -1.3 | -0.6 |
| Infant deaths | 24 | 22 | 31 |
| Infant deaths rate (per 1,000 live births) | 10.0 | 8.6 | 12. 6 |
| Perinatal deaths | 28 | 35 | 34 |
| Perinatal death rate (per 1,000 total births) | 11.7 | 13.7 | 13. 8 |
| Neonatal deaths | 18 | 16 | 20 |
| Neonatal death rate (per1,000 live births) | 7.5 | 6.3 | 8.1 |
| Deaths in children Under 5 years | 26.0 | 26.0 | 33.0 |
| Age Specific Mortality rate in children Under 5 years | 1.5 | 1.5 | 1.9 |
| Deaths in Children 1-4 years | 2 | 4 | 2 |
| Age Specific death rate in children 1-4 years (per 1000 population) | 0.1 | 0.3 | 0.1 |
| No. Maternal deaths | 2 | 2 | 1 |
| Maternal Mortality Ratio (per 1,000 live births) | 0.8 | 0.8 | 0.4 |

Source: Barbados Statistical Service & Records Department Planning and Research Unit

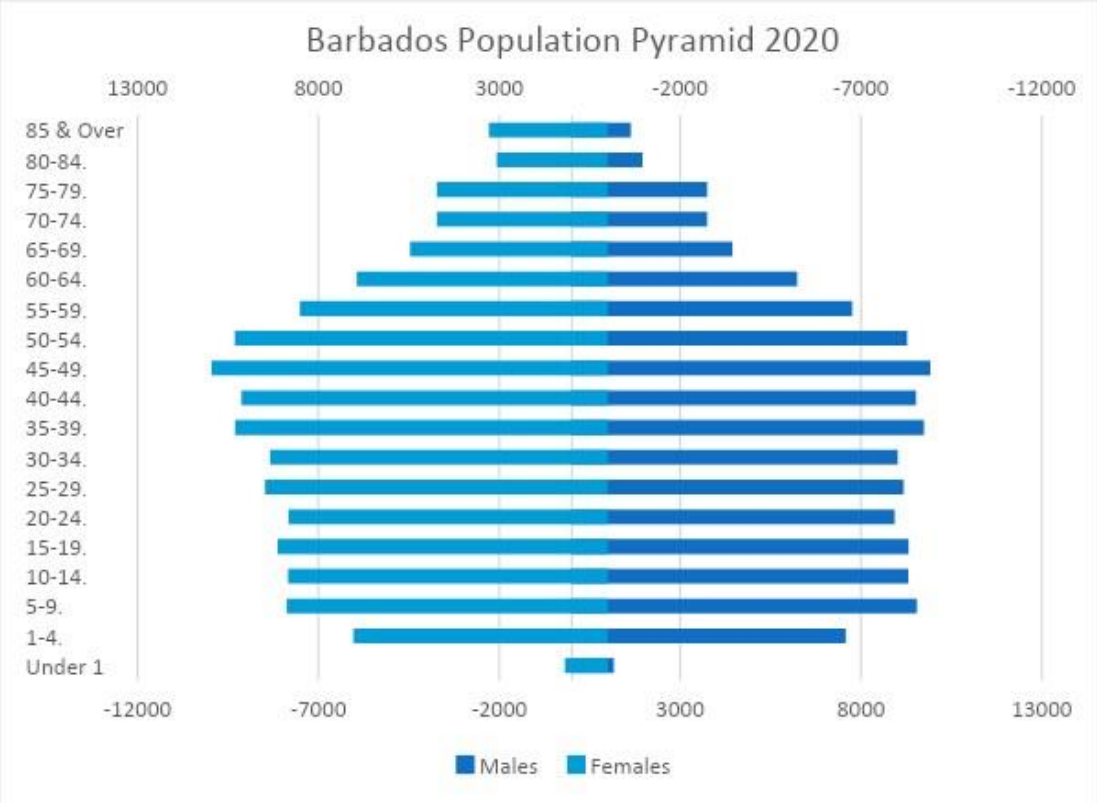



Figure 2. Barbados Population Pyramid 2020

Table 3. Age & Gender Population Distribution 2020

| 5 Year Age-Group | Sex | | | | | |
|---|---|---|---|---|---|---|
| | Both Sexes | % | Males | % | Females | % |
| **All Ages** | **271,418** | **100%** | **131,076** | **100%** | **140,342** | **100%** |
| **Under 1** | 2,355 | 0.87% | 1,167 | 0.89% | 1,188 | 0.85% |
| **1 - 4.** | 14,606 | 5.38% | 7,576 | 5.78% | 7,030 | 5.01% |
| **5 - 9.** | 18,415 | 6.78% | 9,542 | 7.28% | 8,873 | 6.32% |
| **10 - 14.** | 18,148 | 6.69% | 9,307 | 7.10% | 8,841 | 6.30% |
| **15 - 19.** | 18,442 | 6.79% | 9,314 | 7.11% | 9,128 | 6.50% |
| **20 - 24.** | 17,756 | 6.54% | 8,929 | 6.81% | 8,827 | 6.29% |
| **25 - 29.** | 18,651 | 6.87% | 9,177 | 7.00% | 9,474 | 6.75% |
| **30 - 34.** | 18,355 | 6.76% | 9,016 | 6.88% | 9,338 | 6.65% |
| **35 - 39.** | 20,044 | 7.38% | 9,740 | 7.43% | 10,304 | 7.34% |
| **40 - 44.** | 19,650 | 7.24% | 9,522 | 7.26% | 10,128 | 7.22% |
| **45-49** | 20,870 | 7.69% | 9,915 | 7.56% | 10,955 | 7.81% |
| **50 - 54.** | 19,585 | 7.22% | 9,274 | 7.07% | 10,311 | 7.35% |
| **55 - 59.** | 16,268 | 5.99% | 7,756 | 5.92% | 8,511 | 6.06% |
| **60 - 64.** | 13,173 | 4.85% | 6,234 | 4.76% | 6,939 | 4.94% |
| **65 - 69.** | 9,911 | 3.65% | 4,445 | 3.39% | 5,466 | 3.89% |
| **70 - 74.** | 8,474 | 3.12% | 3,748 | 2.86% | 4,726 | 3.37% |
| **75 - 79.** | 6,770 | 2.49% | 2,821 | 2.15% | 3,948 | 2.81% |
| **80 - 84.** | 5,026 | 1.85% | 1,957 | 1.49% | 3,069 | 2.19% |
| **85 & Over** | 4,919 | 1.81% | 1,636 | 1.25% | 3,284 | 2.34% |

Source: Barbados Statistical Service

# HEALTH SYSTEM ORGANISATION

The MHW is the executing agency for the delivery of healthcare in the public sector. It is headed by a Minister whose authority is vested in the Health Services Act Cap 44 of the Laws of Barbados. The Minister has overall responsibility for formulating health policies; setting strategic directions, norms and standards; enforcing regulations and providing the political leadership for the sector. Decision-making is centralised, and there are no local health authorities.

The Permanent Secretary is the administrative head of the Ministry, functioning as the Chief Executive and Accounting Officer, and is responsible for the proper functioning of all sections of the Ministry. The Chief Medical Officer (CMO) is responsible for all technical and professional functions of the health sector. In this regard, the CMO has statutory responsibilities which are wide-ranging, and include oversight of the practice of health care professionals, as well as the standards of clinical practice throughout the sector.

The overarching objectives of the MHW are to promote health, provide comprehensive health care, and to ensure that we consider environmental concerns in all aspects of national development. In addition to these objectives, the draft Barbados Strategic Plan for Health 2020 and the UN Millennium Development Goals have provided strategic directions and programme areas for the promotion of health and the delivery of health services.

## Composition of Health Care Services

The health services are organised into the following programme areas:

- **Primary Health Care** – delivered from the nine (9) polyclinics and three (3) satellite clinics that are strategically located along the major road networks within each catchment area. The polyclinic model; based on the primary health care approach, provides a wide range of preventive and curative services including maternal and childcare, immunisation, family planning, dental care, general practice (GP), nutrition counselling and environmental health.

- **Acute, Secondary, Tertiary and Emergency Care** – supported through the Medical Aid Scheme for services that are not available or provided at the QEH.

- **Mental Health** – provided at the Psychiatric Hospital (PH).

- **Care of the Elderly** – provided through the Geriatric Hospital (GH) and three (3) District Hospitals that provide long-term in-patient care for the elderly. This care includes the Alternative Care of the Elderly Programme which is a partnership arrangement between the MHW and private sector providers of long-term care for the elderly.

- **Care of Persons with Disabilities** – provides for assessment and rehabilitation services for children with disabilities at the Albert Cecil Graham Development Centre (ACGDC) and the Elayne Scantlebury Centre (ESC).

- **Pharmaceutical Services** – provided by the Barbados Drug Service (BDS), which is responsible for the annual production of the Barbados National Drug Formulary, and the procurement and distribution of the drugs listed in the formulary.

- **Laboratory Services** – provided by the Best-dos Santos Public Health Laboratory (BDSPHL), which officially opened in January 2018. The facility is an amalgamation of the Public Health Laboratory, the Leptospira Laboratory and the Ladymeade Reference Unit (LRU) Laboratory, with biosafety level three capacity, improved lab safety and the capability for an enhanced range and quality of tests.

- **Environmental Health Services** – The Environmental Health Department's role is to reduce morbidity and mortality of diseases related to the environment. Environmental Health Services are delivered through the Environmental Sanitation Unit, the Animal Control Centre, the Vector Control Unit and the Polyclinic System's Environmental Unit.

- **Health Promotion Unit** – This programme promotes the adoption of a healthy lifestyle and wellness among the population. The Health Promotion Unit therefore functions in a supportive role to the various programme areas.

## Regulatory Services

The MHW continued to perform the dual role of provider of health care services and regulator of the sector. The Medical Council, the Nursing Council, the Pharmacy Council, the Dental Council and the Paramedical Professional Council were each responsible for setting the standards for professional conduct and registration of physicians, dentists, nurses, pharmacists and allied health professionals respectively.

During the period, the Drug Inspectorate maintained the inspection and licensing programme for pharmacies (public and private) and drug manufacturing plants in keeping with the requirements of the Health Services Act. Similarly, the Environmental Health Officers maintained the inspection and licensing programme for hotels,

restaurants, bakeries, supermarkets and hairdressers, in keeping with the requirements set out in the respective regulations of the Health Services Act.

The Advisory and Inspection Committee comprising a Public Health Nurse, an Environmental Health Officer, a Nutrition Officer and a Drug Inspector was responsible for the inspection, licensing and periodic monitoring of the operations of nursing homes and senior citizens' homes. The Senior Laboratory Technologist similarly headed a team responsible for licensing and providing oversight of the activities of private and public medical laboratories.

The MHW remains focused on creating a transparent and accountable approach to health service delivery, improved health service performance, and enhanced system capacity within the current scale environment. The Ministry is also committed to improving access to services in line with the health reform agenda, and its draft Strategic Plan will serve to guide interventions in health over the next five (5) years. The plan emphasises strategic themes such as governance, cost containment, sustainability, access to care and quality improvements in health. The MHW has therefore prioritised the introduction of several efficiency measures, projects and programmes over the next three (3) financial periods to improve the delivery and management of the Health Sector. It has also made a commitment to developing a new sustainable health-financing framework.

Figure 3. Polyclinics Across Barbados

# HEALTH POLICIES AND PLANS

The MHW made significant strides in developing appropriate plans and strategies to assist in strengthening Barbados' health system during the financial period 2019-2020. There was also greater emphasis applied to the development of mechanisms aimed at supporting health sector reform; having been fuelled by the economic and social challenges the country was experiencing. Reform initiatives sought to address some of the main challenges to the implementation of the MHW's programmes and activities. These included a shortage of human resources, limited funding in the face of competing priorities, high investment costs for service delivery, a broken health infrastructure, insufficient support for planned refurbishment programmes and inadequate replacement for obsolete and nonfunctional equipment.

The aim of the reform programme for the health sector was geared towards developing a stronger regulatory function, capitalising on strategic purchasing of health inputs, and the separation of the MHW's regulatory role from that of service delivery where appropriate; to improve efficiency, transparency and accountability. The MHW continued to collaborate with its partners to reflect this strategic direction and has identified areas for philanthropic involvement.

## Costing Study of Health Care Services

The MHW in collaboration with the University of the West Indies (UWI) Health Economics Unit, St. Augustine Campus commenced the process of assessing the current health financing system in Barbados, which included conducting a costing study of the health services. It is anticipated that the recommendations stemming from the assessment will serve to inform the development of the best health financing model, create a pathway towards developing a National Health Financing Initiative (NHFI), and the development of unit costs and a fee structure at the QEH.

The approval of the recommendations from the study will form the basis for the formulation of a Plan of Action (POA) for a NHFI. This POA will make provisions for the design, development and implementation of the NHFI, based on the principles of equity, solidarity, right to health and financial risk protection. It will also include a comprehensive assessment of inter alia, funding options, package of benefits, beneficiaries, health providers and governance arrangements. A comprehensive actuarial assessment of the various components of the NHFI will also facilitate the modelling of the affordability and sustainability of the NHFI within the context of the macroeconomic profile of Barbados.

## Policy on Access to Public Health Care Services by Migrants in Barbados

A policy was developed to address access to government healthcare by migrants in Barbados. The overall policy aims are:

i. All migrants residing in Barbados have the right to access the same essential primary healthcare services and emergency care services at government facilities to which Barbadians are entitled.

ii. All CARICOM nationals residing in Barbados have the right to access all healthcare services at government facilities to which Barbadians are entitled.

This policy was implemented in accordance with the Pan-American Health Organisation's (PAHO) Guidance Document on Migration and Health, which articulates five (5) strategic lines of action:

- ***Strategic line of Action 1****: Strengthen health surveillance, information management and monitoring.*
- ***Strategic line of Action 2****: Improve access to health services for the migrant and host population.*

- ***Strategic line of Action 3****: Improve communication and exchange of information to counter xenophobia, stigma and discrimination*.
- ***Strategic line of Action 4****: Strengthen partnerships, networks and multi-country frameworks to understand the status, promote, and protect the health of migrants.*
- ***Strategic line of Action 5****: Adapt policies, programs and legal frameworks to promote and protect the health and well-being of migrants*.

## Cardiac Care Programme

Over the last thirty years, the Caribbean region has seen an increase in the incidence and mortality of cardiovascular disease (CV disease) such as coronary artery disease, stroke, heart failure and peripheral arterial disease. A proposal was subsequently developed for a cardiac care programme at the QEH, to reduce the mortality rate due to myocardial infarction (MI). The aim of this project was to:

i. Establish an effective programme for the early detection and management of MI.

ii. Reduce patient wait times to thrombolytic therapy, through effective patient management within the Accident & Emergency (AED) Department.

iii. Decentralise acute ST-elevation myocardial infarction (STEMI) care.

iv. Facilitate further cardiovascular diagnostic testing necessary for appropriate risk stratification and therapeutic interventions such as early percutaneous coronary intervention (PCI) necessary for both adequate therapy and reduction of recurrence.

## Epidemic Preparedness and Pandemic Response

The SARS-CoV-2 national pandemic preparedness and response plans encompass:

i. Barbados National Respiratory Disease (COVID-19) Preparedness and Response Framework.

ii. Procedural Manual for Novel Coronavirus 2019.

The aim of the ***Barbados National Respiratory Disease (COVID-19) Preparedness and Response Framework*** is to provide a coordinated framework for a national response to COVID-19. It offered guidance for stakeholders in developing detailed operational plans for their part of the response. The objectives of the plan were as follows:

i. To rapidly assess the emerging epidemiology of COVID-19 in order to:
   - Mitigate against the importation of COVID-19;
   - Identify the introduction of COVID-19 and associated clinical illness;
   - Minimise the spread of COVID-19;
   - Limit morbidity and mortality due to infection with COVID-19.

ii. To identify the roles and responsibilities of stakeholders in the response to COVID-19.

iii. To provide treatment and care for people with COVID-19 and its complications.

iv. To cope with the eventuality of deaths.

v. To minimise the social and economic impact of the pandemic.

vi. To maintain essential services and government during an outbreak/pandemic.

vii. To provide timely, authoritative and up to date information for professionals, the public and the media.

viii. To collaborate effectively with both national and international partner organisations, in respect of our overarching arrangements for dealing with COVID-19 in Barbados.

The ***Procedural Manual for Novel Coronavirus 2019*** (2019-nCoV) was prepared to facilitate a response from health care institutions, which were both pre-emptive and strategic. It allowed healthcare institutions to be in a position to protect the health of the public and their staff members. By November 2020, the MHW had completed two PAHO facilitated Readiness Assessment Tools for the preparation of health systems for the introduction of COVID-19 Vaccines in Barbados, and work commenced on the drafting of a Vaccine Implementation Plan. Additionally, the Government of Barbados (GOB) indicated its participation in the COVID-19 Vaccines Global Access facility (the COVAX Facility) and entered into a commitment agreement with GAVI, the Vaccine Alliance, for the purchase of vaccines.

## 24-Hour Service: Primary Care Services

The MHW implemented the provision of a 24-hour service at the Winston Scott Polyclinic, in keeping with the GOB's Mission Critical Policies and Actions. The service was one of a number of systems-wide initiatives being executed in an effort to improve access to quality health care services at the Primary Health Care level. Training in urgent care was undertaken by medical personnel in the primary care system and facilitated by emergency care personnel of the QEH. The training syllabus was certified and endorsed by the Barbados Community College (BCC). The 24-hour service at the Polyclinic include:

- **Urgent Care**: including triaging and routine medical assessments; acute asthma management as well as trauma complaints (minor wounds & fractures, lacerations, falls, foreign bodies, stings and envenomation, immobilisation techniques and splintage); and non-trauma complaints: (airway, breathing, circulation, acute infections, abdominal and back pain, headaches, toxicology, weakness, numbness, vertigo and syncope).

- **General Practice**: diagnosing and treating illness (both chronic and acute); providing preventive care through to rehabilitative care when applicable; referring clients to the QEH or other health institutions for advanced care.
- **Point of Care Diagnostic Imaging**: X-rays and ultrasound at the QEH.
- **Point of Care Laboratory**: Urinalysis for multiple diseases (e.g., urinary tract infection, renal diseases, ketones, dehydration, hyperemesis gravidarum, diabetes, acute infection). Testing for cardiovascular (e.g., pulmonary embolism, deep vein thrombosis, myocardial infarction, etc.).
- **Pharmacy**: Counselling and dispensing medication.
- **Health Promotion and Prevention Interventions**: for specific medical conditions encountered during visits to the 24-hour service.

For the QEH and the polyclinics, specific objectives were to:

i. Achieve universal health coverage and guarantee universal access to health care by providing affordable, high-quality health services at more convenient times. This is one of the key targets of the internationally agreed Sustainable Development Goals.
ii. Provide adequate, appropriate and affordable emergency and urgent care services to the public who attend the AED and the polyclinics.
iii. Ease the burden on the AED and reduce waiting times for health care delivery within Government operated urgent care/emergency services.
iv. Make the polyclinics the first point of contact with the health care system.
v. Expansion of the AED at the QEH.

## Organ Transplantation

The Ministry considers organ transplantation a necessary and viable treatment option for those in need of such treatment, and for those who have end stage organ failure;

particularly due to this country's leading cause of morbidity and mortality - NCDs. The Ministry seeks to ensure that all processes are regulated and functioning in accordance with international best practices. In this regard, a draft National Transplantation Policy of Barbados was approved by the Cabinet of Barbados to support the development of a framework for organ transplantation services within the Barbadian healthcare setting. The purpose of the draft National Transplantation Policy of Barbados is to ensure that:

i. Optimal care is given to potential organ donors, recipients and their families and;
ii. Organ donation takes place within a sound legal and ethical framework.

It is important to note that the policy addresses both live and cadaveric donation of organs and tissue. Legislative notes were drafted to give direction to the office of the Attorney General for the preparation of a Human Tissue Transplant Bill. Consideration in this review was given to legislation from developed countries such as the United Kingdom, Canada and Spain, and the Caribbean countries of the Cayman Islands, the Republic of Trinidad and Tobago and Jamaica.

## Antimicrobial Resistance

The BDSPHL continued to develop and implement its Antimicrobial Resistance (AMR) programme in collaboration with PAHO and the Republic of Argentina. The Laboratory also actively pursued the development and implementation of its Quality Management System, with the view of being inspected for international accreditation by August 2020. To this end, BDSPHL will seek to implement several initiatives such as the procurement of proficiency testing materials for all tests analysed; completion of the Quality Manual and Laboratory Standard Operating Procedures (SOPs); a Safety Manual; a User Manual and a fully implemented Maintenance Programme for equipment and building.

# HEALTH OF POPULATION GROUPS

A profile of the population's overall health per age group is summarised below:

## Children 0 – 4 years

Infants and children 0 – 4 years represented 6.25% of the estimated total population in 2020, with males representing 3.22% and females 3.03%, as shown in ***Table 3. Age & Gender Distribution 2020***, above. In 2020, there were 26 deaths in children under five years, a decrease from 33 in 2018. Infant deaths in 2020 were 24, representing a notable reduction from 31 in 2018, as shown in ***Table 2. Basic Demographic Information 2018-2020***, above. The estimated infant mortality rate was 10.0 per 1,000 live births and the age-specific death rate in children 1 – 4 years old was 0.1 deaths per 1,000 population in 2020. The perinatal mortality rate in 2020 was 11.7 deaths per 1,000 births, a decrease from 13.8 reported in 2018. Government clinics routinely monitor children for growth and development. A baby's growth and development within the womb greatly determines the health of future generations, as the success of foetal life significantly affects both the health of the new born, their adult health and disease risk. Good perinatal health is therefore vital to individuals, the society and future generations.

## Children 5 – 14 years

In 2020, the age group 5 – 14 years represented 13.47% of the total population with males representing 6.94% and females 6.53%. In 2020, there were 6 deaths in this age group. The number of deliveries among women younger than 15 years decreased from three in 2018 to 1 in 2020, **(*see Appendices: Table 62. No. Deliveries at QEH 2018-2020*)**. The number of terminations of pregnancy also decreased from eight in 2018 to 1 in 2020 **(*see Appendices: Table 64. Termination of Pregnancies at the QEH 2018-2020).*** At age 11, children are given a booster of diphtheria, tetanus and polio vaccines as part of the entry requirement into secondary school. The overall health status of this group was good.

## Adolescent Health 15 – 24 years

In 2020, persons aged 15 – 24 years represented 13.33% of the total population; males represented 6.71% and females 6.6%. There were 31 deaths in this age group in 2020, (***see Appendices: Table 79. Mortality Data 2020)*** and the cause of death were defined by: symptoms, signs and ill-defined conditions – 1; malignant neoplasm of lymphoid, other hematopoietic and related tissue – 1; pulmonary heart diseases – 2; cerebrovascular diseases – 1; motor vehicle transport accidents – 2; other transport accidents – 1; events of undetermined intent – 13; disease of the digestive system – 1; diseases of the urinary system – 1; congenital malformations, deformations and chromosomal abnormalities – 2; and remainder of all other diseases – 6.

In 2020, there were 734 deliveries to females 15 – 24 years, a decrease from 2018 which recorded 780 deliveries. In 2020, there were 116 terminations of pregnancy to women 15 – 24, compared to 143 in 2018; ***(see Appendices: Tables 62. and 64, respectively)***.

There were no deaths in this age group from HIV in 2020. In 2020, births to teenagers were 203 (9%) of all deliveries, compared to 247 deliveries (10.6%) in 2018. Of the total number of abortions in 2020, 12.4% (40) were in teenage women, representing a decrease from 2018, 10.3% (45), of total abortions.

## Adults 25 – 64 years

In 2020, adults 25 – 64 years represented 54% of the total population, with males accounting for 25.98% and females 28.04%. The total fertility ratio in 2020 was 1.4 children per women 15 – 44 years old, consistent with 2018's 1.4 ratio.

Data from the Barbados Family Planning Association (BFPA) indicated that in 2019, there was an increase in persons accessing non-sexual and reproductive health services as opposed to sexual reproductive health services. General services are inclusive of services delivered in the polyclinic settings as shown in ***Appendices: Table 93***. ***Barbados Family Planning Association Service Statistic Matrix***. In 2020, the family

planning methods preferred by adults were short-acting reversible contraceptives (pills and injections) and emergency contraceptives. With the promotion of early registration for prenatal services, women were seen by the 12th week of gestation and regularly thereafter for monitoring maternal health and foetal growth, as well as to prevent medical complications for both mother and baby during pregnancy. There was 1 maternal death in 2018, 2 in 2019 and 3 in 2020.

In 2020, there were 130 deaths among 25 – 44-years, and the leading causes of death for this age group were: symptoms, signs and ill–defined conditions – 5; other infectious and parasitic diseases – 3; malignant neoplasm of female breast – 6; malignant neoplasm of bladder & other genitourinary organs – 3; malignant neoplasm of lymphoid – 3; malignant neoplasm of other and unspecified sites – 4; pulmonary heart diseases – 9; cardiovascular diseases – 3; motor vehicle accidents – 4; and events of undetermined intent (37); remainder of all diseases – 15.

In the same year, there were 531 deaths among persons 45 – 64 years, and the leading causes were: symptoms, signs and ill–defined conditions – 12; septicemia, except neonatal – 14; acute respiratory infection – 12; malignant neoplasm of colon – 21; malignant neoplasm of digestive organs – 22; malignant neoplasm of female breast – 33; malignant neoplasm of prostate – 27; malignant neoplasm of lymphoid – 10; malignant neoplasm of other and unspecified sites – 22; hypertensive diseases – 21; ischemic heart diseases – 40; pulmonary heart diseases – 40; cardiovascular diseases – 29; and events of undetermined intent (37); diabetes mellitus – 33; and disease of urinary system – 28.

## 65 Years and older

In 2020, the population 65 years and older represented 12.92% of the general population; males accounted for 5.37 % and females 7.56%. In 2020, there were 1,924 deaths among persons 65 years and older, and the leading causes were: acute

respiratory infection – 108; hypertensive diseases – 138; ischemic heart diseases – 143; cerebrovascular diseases – 154; pulmonary heart disease – 82; malignant neoplasm of prostate – 112; and diabetes mellitus – 186. With an increasingly ageing population, there were major challenges for the provision of health care and other social services, especially for persons 65 years and older.

The increasing incidence of NCDs in the general population calls for greater emphasis on promoting wellness and maintaining functionality in this vulnerable population group. For older persons to realise good health, they need to maintain mobility and functionality; decrease risk factors for complications of existing medical conditions; maintain an active social life through recreational activities; and continue to play an active role in the family and community. Having access to comprehensive rehabilitation services is mandatory, especially during and immediately after hospitalisation, to mitigate disability. Comprehensive aftercare plans for the continuation of medical care in the community with adequate support in the home is also necessary. Alternative institutional care in the community is also required to meet the needs of the growing elderly population. Promoting non-institutionalised care, coupled with efforts to remove barriers to independent living and preventing disability would make it possible for more seniors to remain in their homes or homelike communities.


Figure 4. Barbadian Centenarians

# PERSONS WITH DISABILITIES

## Elayne Scantlebury Centre

The Elayne Scantlebury Centre which was situated on the compound of the St. Lucy District Hospital, housed 26 mentally and physically challenged individuals. With the advent of COVID-19 and the decision made to repurpose the St. Lucy District Hospital as a quarantine facility, these patients were transferred to the Psychiatric Hospital, which made way for the accommodation of more quarantine patients.

## Albert Cecil Graham Development Centre

The Albert Cecil Graham Development Centre offered a wide range of services, which included: physiotherapy, medical (service), occupational therapy, psychological services, audiology assessment, speech therapy, neurology, orthopaedics, day care, special (services), education, skills training, social work and counselling. The centre also provided medical services for persons 21 years and over, including hydrotherapy (water) early stimulation, multi-sensory stimulation, hearing aids and ear moulds. By the end of 2020, there were 5,483 registered patients. The list of diagnostic categories of persons served included:

- ASD (Autism Spectrum Disorder)
- ADHD (Attention deficit & Hyperactivity disorder)
- LD (Learning disability)
- Speech/Language impairments
- Sensory impairments
- Congenital syndromes
- Cerebral Palsy
- Downs Syndrome

## Volunteer Programme

The Neurology Clinic was conducted once a month primarily for children with difficult neurological problems, mainly epilepsy. These clients were evaluated by the neurologist and a visiting paediatric neurologist at scheduled appointment times. Parent volunteers attached to the Education Unit and the Vocational Training Centre continued to give much appreciated assistance. Students from the UWI through the 'Give Back Programme' also contributed greatly to the Centre in the first quarter of the year. The Community Service Programme of the Probation Department and the volunteer service provided by senior students from the St. Ursula's Convent School were put on hold initially because of the relocation of the Centre for renovations, and later because of the COVID-19 pandemic.

## Donations by Charities to the Physiotherapy Department

The three charities, which supported the Physiotherapy Department at the Centre during the period under review, were: Because of Jenna Trust, The Sandy Lane Charitable Trust and The Variety Club. Listed below are the areas of support provided:

Table 4: Charity Donations - ACGDC

| Charity | Details of Sponsorship |
|---|---|
| **Sandy Lane Charitable Trust** | Wheelchair Clinics (wheelchairs, seating, flights, accommodation |
| | Special equipment |
| **Because of Jenna Trust** | Special equipment |
| | Bracing material |
| | M R I |
| | Wheelchair clinic (wheel chairs, seating, flights, accommodation) |
| **Variety Club** | Staff |

## Client Referrals and Evaluations

130 new patients were seen and assessed by the multidisciplinary team at the Centre and ***Table 5. Age Distribution of Referrals to ACGDC*** below, shows the age distribution of persons referred. Males outnumbered females 3:1 and approximately 42.3% of persons seen were in the 5–8-year-old category; equalling the 4 years and under categories combined. Another 37 children could not be seen in the year 2020. The COVID-19 pandemic affected the number of referrals seen because of lockdowns and the multidisciplinary team's ability to give therapy was also impacted.

Table 5: Age Distribution of Referrals to ACGDC

| AGE (years) | MALE | FEMALE | TOTAL | % |
|---|---|---|---|---|
| **UNDER 1** | 2 | 4 | 6 | 4.6 |
| **1-4** | 39 | 10 | 49 | 37.7 |
| **5-8** | 40 | 15 | 55 | 42.3 |
| **9-12** | 15 | 2 | 17 | 13.1 |
| **13-16** | 2 | 1 | 3 | 2.3 |
| **>17** | - | - | - | - |
| **TOTAL** | 98 | 32 | 130 | |

***Table 6. Diagnostic Categories of New Patients to ACGDC*** below, shows the diagnostic categories of patients referred to the Centre in 2020. Patients with a diagnosis of poor academic performance are awaiting psychological testing before a definitive diagnosis can be assigned. Over 50% of children referred to the Centre need psychological evaluation. Some children had more than one diagnosis that affected their performance. Compared to 2019, the number of children referred with Autism Spectrum Disorder (ASD) and speech appear to be greater. The Centre continued to be impacted by staff and equipment shortages. With decreased early intervention services such as speech/language therapy, the effect will be seen within the school system.

Table 6: Diagnostic Categories of New Patients to ACGDC

| DIAGNOSTIC CATEGORIES | ICD-10-CM CODE | 2020 |
|---|---|---|
| **Attention Deficit & Hyperactivity Disorder** | F90.9 | 24 |
| **Autism** | F 84 | 21 |
| **Cerebral Palsy** | G80.8 | 1 |
| **Developmental Delays** | R62 | 15 |
| **Down Syndrome** | Q90.9 | 2 |
| **Erbs Palsy** | P14 | 0 |
| **Hearing Impairment** | H91.9 | 3 |
| **Intellectual Disability** | F79 | 8 |
| **Learning Disability** | F81.9 | 6 |
| **Poor academic performance** | F93 | 16 |
| **Normal Development/ At Risk** | H54 | 2 |
| **Seizure Disorder** | G40 | 2 |
| **Speech Impairment** | R47 | 22 |
| **Orthopaedic Abnormality** | Q68 | 1 |
| **Genetic/Dysmorphic Syndrome** | Q86 | 1 |
| **Neurologic insult (CVA, Trauma, infection)** | R29.90 | 4 |

***Table 7. Patient Profile at ACGDC*** below, represents the number of patients registered at the Centre in 2019 and 2020. As presented, the number of persons seen for the first time in 2020 mirror 2019 totals.

Table 7: Patient Profile at ACGDC

| STATISTICAL DATA | YEARS | |
|---|---|---|
| | 2019 | 2020 |
| **Total No. of Persons seen for the first time** | 132 | 132 |
| **No. of Persons Medically Reviewed** | | |
| **No. of No Shows** | | |
| **No. of Recorded Deaths** | 1 | |
| **Overall No. of persons registered at the Centre as of 31, December 2020** | **5,636** | **5,767** |

***Table 8. Age Distribution of New Evaluations*** below, provides information on the distribution of new referrals by age/sex grouping. 131 persons were evaluated in 2020, similar to the 132 evaluations in 2019. Males continued to dominate the referrals to the Centre. The 1-4 age grouping as well as the 5-8 age group had the highest number of evaluations.

Table 8. Age Distribution of New Evaluations

| | 2019 | | | | 2020 | | | |
|---|---|---|---|---|---|---|---|---|
| Age | M | F | Total | % | M | F | Total | % |
| <1 | 7 | | 7 | 5.3 | 2 | 4 | 6 | 4 |
| 1-4 yrs | 48 | 14 | 62 | 47 | 39 | 10 | 49 | 37 |
| 5-8 yrs | 37 | 9 | 46 | 34.8 | 39 | 16 | 55 | 42 |
| 9-12 yrs | 11 | 3 | 14 | 10.6 | 15 | 2 | 17 | 13 |
| 13-16 yrs | 2 | 1 | 3 | 2.3 | 2 | 2 | 4 | 3 |
| >17 yrs | | | | | | | | |
| Total | 105 | 27 | 132 | 100 | 97 | 34 | 131 | |

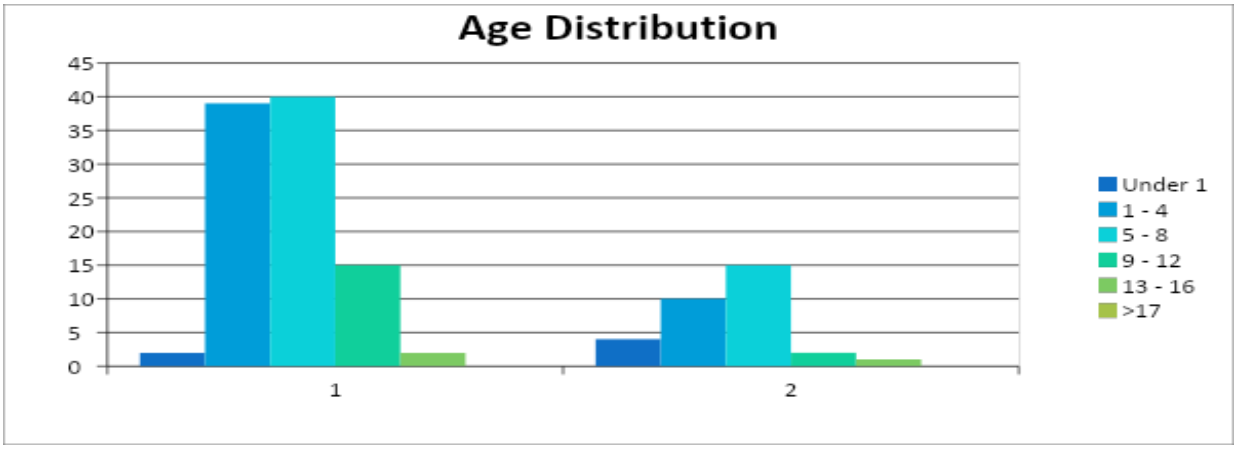



Figure 5. Age Distribution of Clients

As shown by ***Table 9. Distribution of Persons by Parish*** below, the parish of St. Michael continued to represent the highest number of referrals at 55 (42%). Referrals from rural parishes continued to be quite low.

Table 9. Distribution of Persons by Parish

| YEAR | 2019 | | 2020 | |
|---|---|---|---|---|
| PARISH | TOTAL | % | TOTAL | % |
| St. Andrew | 3 | 2.0 | 2 | 2 |
| St. Lucy | | | 1 | 0.75 |
| St. Peter | 3 | 2.0 | 7 | 5 |
| St. James | 14 | 9.0 | 11 | 8 |
| Christ Church | 22 | 14.1 | 19 | 14 |
| St. Philip | 15 | 9.8 | 19 | 14 |
| St. John | 8 | 5.2 | 3 | 2 |
| St. Joseph | 7 | 4.6 | 2 | 1.5 |
| St George | 21 | 12.0 | 8 | 6 |
| St Thomas | 6 | 4.0 | 4 | 3 |
| St. Michael | 54 | 35.32 | 55 | 42 |
| Total | 153 | 100 | 132 | 100 |

Private doctors followed by polyclinics accounted for the highest number of referrals for the year at 49 from private doctors and 27 from the various polyclinics; as is shown in ***Table 10. Sources of Referrals***, below.

Table 10: Sources of Referrals

| SOURCES | TOTAL |
|---|---|
| **Private Doctors** | 49 |
| **Parents** | 1 |
| **Ministry of Education** | 14 |
| **Schools** | 8 |
| **Polyclinics** | 27 |
| **QEH** | 17 |
| **Private Psychologists** | 4 |
| **Psychiatric Hospital** | 1 |
| **Child Care Board** | 1 |
| **Juvenile Liaison Scheme** | 1 |
| **ACGDC staff** | 3 |
| **TOTAL** | **126** |

For the years under review, the Centre was challenged with re-location because of renovations, and this was further compounded by the emergence of the COVID-19 pandemic and national lockdowns. These challenges reduced the number of clients that would normally be seen for therapy but there was an effort to maintain a high quality of care to clients. There were challenges with the Centre operating from three different sites. Patient movement between locations was difficult and therapy services to children in the day care and education units were postponed.

The national lockdown caused by COVID-19 also made the Centre review the way that services were offered, and teleconferencing, online classes and therapy became the norm. The Education and Vocational Units were however, confronted with a lack of technology and technological expertise when having to go to online education. The Day Care and Vocation units remained closed for several months, whilst the Education Unit struggled to acquire devices for their students so that online education could continue. Challenges were dealt with in a professional manner to minimise disruption

of services, which was evident in the maintenance in the number of clients seen for initial evaluations.

## AUDIOLOGY

The Audiology Department sees children who were referred to the Centre with hearing impairment or suspected hearing loss. The main objectives of the department are:

- Early identification of hearing loss in children, those at risk for hearing loss and those with middle ear problems.
- Evaluating and diagnosing children with hearing loss.
- Providing treatment.

### Audiology review

- 3% of the overall number of children seen presented with hearing problems.
- 6% of children seen presented with middle ear problems.
- 84% of children seen in the department were males and 16% were females.
- 3% of children seen could not be conditioned for testing.
- 3% of children seen involved amplification.
- 88% of appointments given were seen.

Table 11: Audiology Patients Seen

| | Males | Females | Seen Overall |
|---|---|---|---|
| **New Patients** | 52 | 05 | 57 |
| **Old Patients** | 36 | 12 | 48 |
| **Total** | 88 | 17 | 105 |

## SPEECH-LANGUAGE PATHOLOGY

The Speech Therapy Department provides speech/language/swallowing evaluations and treatment to children. Most sessions were individual in nature or in small groups. **Tables 12 through 14**, below provide an overview of the speech therapy sessions, speech therapy appointments and speech/language diagnostic statistics for the department.

Table 12: Speech Therapy Sessions

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total No. of Appointments** | 8 | 7 | 15 | | 6 | 18 | 17 | 14 | 7 | 6 | 5 | 4 | 107 |
| **No. of New Evaluations Attended** | | 1 | 8 | | 6 | 14 | 9 | 3 | | | | | 41 |
| **No. of Therapy Sessions Attended** | 4 | 4 | 2 | | | 3 | 7 | 9 | 5 | 4 | 4 | 4 | 46 |
| **No. of Cancellations** | | | 2 | | | | | 2 | 2 | 2 | 1 | | 9 |
| **No. of No-Shows** | 4 | 2 | 3 | | | 1 | 1 | | | | | | 11 |
| **Parent Consultations for Home Programs** | | | | | 4 | 1 | | | | | | | |

Table 13: Speech Therapy

| | |
|---|---|
| **Total No. of Appointments** | 107 |
| **Total No. of Sessions attended** | 87 |
| **Total No. of Cancellations** | 9 |
| **Total No. of No Shows** | 11 |
| **Total No. of rescheduled Appointments** | 0 |

Table 14: Speech/Language Diagnosis

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Speech & Language Delay** | | | 4 | | 1 | 1 | 4 | | | | | | 10 |
| **Speech & Language Impairment** | | | 4 | | 3 | 7 | 2 | 3 | | | | | 19 |
| **Articulation Disorder** | | | | | 1 | | | | | | | | 1 |
| **Dysphagia** | | | | | 1 | | | | | | | | 1 |
| **Speech/language delay & Articulation disorder** | | | | | | 3 | 1 | | | | | | 4 |
| **Expressive language delay** | | | | | | | 1 | | | | | | 1 |
| **Fluency Disorder** | | 1 | | | | | | | | | | | 1 |
| **Speech/Language/ Articulation Impairment** | | | | | | 3 | 1 | | | | | | 4 |

The department was staffed by one Speech-Language Pathologist who also provided speech/language services to two polyclinics on two half days a week, and to the District Hospitals and QEH as needed.

In April 2020, ACGDC was closed as part of the National Lockdown because of COVID-19. The Centre reopened on a limited basis to clients in May, however, due to new protocols, appointments were spaced out and group sessions could not be facilitated. Speech/language services were discontinued in the polyclinics in March and resumed at the end of July because of the COVID-19 pandemic.

## PHYSIOTHERAPY

The goal of the Physiotherapy Department at ACGDC was to enhance the quality of life of children in Barbados who are physically challenged. In 2020, the department was responsible for clinically managing 212 children with conditions that impact mobility and other physical functions. Paediatric physiotherapy, special services and special clinics (***see Tables 15 and 16***) below, are provided to achieve the following:

- to develop child's full potential, especially regarding mobility.
- to gain function and to prevent contractures and deformities.

- to facilitate attendance at schools/Day Care by providing mobility in wheelchairs or with walking aids, special orthopaedic shoes or orthotics.

Frequency of therapy appointments was significantly impacted by the temporary relocation to a smaller treatment area due to renovations and new protocols due to the COVID-19 pandemic.

Table 15: Objectives for Effective Patient Care

| Objectives | Indicator | Activities | Target | Achieved | Limitations |
|---|---|---|---|---|---|
| **1.1 Evaluate newly referred patients)** | Percentage of children receiving evaluation | Interview parents, assessment, home program | 42 | 100% | |
| **1.2 Provide physiotherapy sessions** | Percentage of children receiving therapy sessions | Evaluations, reviews, therapy, special equipment | 1,246 | 86% | • Cancellations by patients<br>• No shows<br>• Lockdown in April and online services during initial stages of COVID-19 pandemic<br>• In depth Inventory Restructuring of department after completion of renovation |
| **1.3 Provide sufficient appointments depending on diagnosis** | Percentage of appointments given considering the diagnosis | Analysing, coordinating and scheduling according to need and availability, Intensive programs or other increased frequency of therapy, group sessions when suitable | 6,300 | 20% | • Availability of treatment space with physical distancing<br>• Insufficient number of staff<br>• Availability of patient and parent<br>• Availability of transportation |
| **1.4 Provide special services and clinics to foster mobility** | Percentage of special services delivered | Planning, coordinating, hosting, participating and documenting of clinics | 80 | 7.5% | • Availability of consultants especially during pandemic<br>• Budget<br>• Insufficient number of staff |
| **1.5 Provide reports and letters** | Percentage of reports and letters provided in a timely manner | Write, print and distribute documents | 51 | 70% | • Printer or Wi-Fi not operational<br>• Limited Human Resources |

Table 16: Physiotherapy Services

| Age | No. of patients | | No. of evaluations | | No. of attended therapy sessions | | No of reports |
|---|---|---|---|---|---|---|---|
| | MALE | FEMALE | MALE | FEMALE | MALE | FEMALE | |
| 0-1 | 19 | 24 | 14 | 14 | 136 | 130 | 28 |
| 1-4 | 27 | 26 | 5 | 6 | 152 | 238 | 12 |
| 5-8 | 25 | 20 | 1 | 2 | 113 | 118 | 5 |
| 9-12 | 21 | 16 | 0 | 0 | 60 | 25 | 0 |
| 13-16 | 16 | 7 | 0 | 0 | 38 | 30 | 0 |
| 17+ | 6 | 5 | 0 | 0 | 16 | 10 | 0 |
| **Total /gender** | **114** | **98** | **20** | **22** | **515** | **551** | |
| **Total** | **212** | | **42** | | **1,066** | | **45** |

## PSYCHOLOGY

The Psychology Department primarily offered services in psychological and neuropsychological evaluations, as well as individual and family psychotherapy for clients and parents of clients. Other services include:

- Consultation with other members of the Multi-Disciplinary Assessment Team.
- Consultation with other external professionals about client treatment and management.
- Public education through lectures on child development (this service is obtained via individual request and time availability of the psychologist).

***Tables 17 through 19*** below, provide a summary of the services provided by the department throughout the review period.

During the year 2020, the Psychologist participated in several activities however, these were restricted by the protocols and restrictions brought on by the COVID-19 pandemic.

**Limitations**

There were several limitations to the optimal achievement of these objectives during the year 2020:

- The COVID-19 global pandemic saw the closing of the Centre in the National shutdown of April 2020. On resumption of duty in May, staff operated on flexible time due to COVID restrictions and space restriction, as the main plant of the Centre was under repair.
- The high number of clients who did not attend either scheduled appointments or defaulted from the services until there was an emergency requiring services. Some clients expressed fear due to COVID-19.
- The continued lack of required materials such as updated tests and testing forms at times delayed the testing of clients. The psychologist is still without the WISC-IV and WRAT5, key elements of the psychological battery of tests.
- The lack of supportive diagnostic services on the island such as genetic testing, impeded the accurate diagnosis of clients with queried congenital syndromes and other such conditions.

Table 17. Psychology Therapy Sessions and Discharges

| No. of Evaluations | | | No. of therapy sessions | No. of Discharges |
|---|---|---|---|---|
| MDT | New Intradepartmental | Existing | | |
| 47 | 5 | 52 | 27 | 5 |

Table 18: Age Distribution - Psychology

| AGE (Years) | GROUPS | MALE | FEMALE | TOTAL |
|---|---|---|---|---|
| 1-3 | | 12 | 0 | 12 |
| 4-8 | | 76 | 14 | 90 |
| 9-11 | | 17 | 4 | 21 |
| 12-16 | | 7 | 3 | 10 |
| Over 16 | | 0 | 1 | 1 |
| Total | | 112 | 22 | 134 |

Table 19. Psychological Diagnoses

| DIAGNOSES (Primary) | MALE | FEMALE | TOTAL |
|---|---|---|---|
| **Autistic Spectrum Disorder** | 25 | 3 | **28** |
| **Attention Deficit/Hyperactivity Disorder** | 28 | 3 | **31** |
| **Neurological Disorders** | 2 | 2 | **4** |
| **Cerebral Palsy** | 2 | 0 | **2** |
| **Developmental Delays** | 9 | 3 | **12** |
| **Intellectual Impairment** | 15 | 4 | **19** |
| **Learning Disorders** | 10 | 4 | **14** |
| **Sensory Deficits** | 2 | 1 | **3** |
| **Other (Syndromes, Social Communication Disorders etc.)** | 3 | 1 | **4** |
| **No Diagnosis** | 3 | 0 | **3** |
| **Diagnosis Deferred** | 13 | 1 | **14** |
| **TOTAL** | **112** | **22** | **134** |

**No Diagnosis -** Client did not meet the criteria for a psychological disorder.

**Diagnosis Deferred -** Due to differential diagnoses, unavailable genetic testing and the non-attendance of scheduled evaluations a clear diagnosis could not be ascertained.

**NB.** Based on primary psychological diagnosis. There is some co-morbidity occurring.

## SOCIAL WORK

During the year 2020 – January to December, 175 clients were assessed and interviewed by the Social Worker. Clients were assessed using a number of methods. Some clients were seen through home visits, via WhatsApp interviews and others were assessed in the office for first visit assessments. The interviews/assessments were conducted to evaluate family dynamics and assess the social/economic conditions under which the clients were living. Based on the type of presenting problem, some clients received continuous assessments, which resulted in multiple home visits. Issues dealt with pertained to parenting concerns, old and new welfare benefits, family, social and financial problems. The relevant information collected assisted in identifying the appropriate interventions required to assist clients.

## Referral/Assistance

Clients were counselled for various issues and some were referred to the agencies listed in the below ***Table 20. Social Work Referrals***, for assistance. The highest number of referrals were to the Welfare Department with 12 client referrals. Clients were referred for financial assistance, school clothing, household items, food vouchers and re-evaluations of grants which had been discontinued. Due to the COVID-19 pandemic, the letters for assistance were put on hold as the Welfare Department carried out interviews via the telephone.

Table 20. Social Work Referrals

| Agency | No. of Referrals |
|---|---|
| Welfare Department | **12** |
| National Insurance Assistance | **4** |
| National Housing Corporation | **2** |
| Disabled Stickers | **6** |
| Wheelchair Assistance | **6** |
| School Placement (Special Unit) | **0** |
| Family Counselling | **1** |
| Agency Assistance | **2** |
| Referral to MOE for Intervention | **0** |
| Financial Assistance for a vehicle | **1** |

# HEALTH CONDITIONS & PROBLEMS

## Communicable Diseases

### New and Emerging Communicable Diseases

**COVID-19**

On 17 March, 2020, the first two (2) cases of COVID-19 in Barbados were confirmed. By 24 March, 2020, there had been eighteen (18) confirmed cases in total, and weekly numbers showed a first peak four weeks after the first case with twenty-three (23) cases. On 26 March, 2020, it was announced that the country had reached twenty-four (24) cases and would be entering stage three of the COVID-19 National Preparedness Plan. A public health emergency was declared and a curfew was in effect from 28 March, 2020 with limited movement during the day. Businesses in the private sector were closed from 28 March, 2020 by 8:00pm until 15 April, 2020, except for those excluded by the GOB such as grocers, pharmacies, gas stations and farms; with specific operating hours identified for each business type. Restaurants were also allowed to remain open for drive-through and take-away services. Persons contravening the order without a reasonable explanation were liable to a fine of BBD $50,000; one year in prison; or both.

Subsequently, Barbados was placed under a 24-hour curfew from 3 April, 2020 at 6:00pm. From that date, all supermarkets, mini-marts, restaurants, government offices, departments and statutory corporations were closed. The sale of alcohol was prohibited, and persons were only allowed to leave their homes to "go to the pharmacy, doctors or if you were part of the essential services". Bakeries, bread depots and "village shops" were allowed to operate during designated hours but could have no more than three people congregating at a time. On 3 April, 2020, the start of the curfew was

delayed until 8:00pm. By 4 April, 2020, there had been fifty-two (52) confirmed cases in total, with ages ranging from 17 to 83 years old, and on the next day, 5 April, 2020, Barbados announced its first COVID-19-related death; an 81-year-old male with underlying conditions. Also, on 5 April, 2020, a team of one hundred (100) healthcare professionals arrived from Cuba to offer support to local frontline medical teams and would start working at the Harrison Point facility upon its completion. On 8 April, 2020, the Harrison Point facility was handed over to the QEH to be outfitted with furniture and equipment. The construction work had taken just under five (5) weeks.

By 18 April, 2020, there had been 1,000 tests performed by the BDSPHL resulting in 75 confirmed cases (38 females and 37 males) ranging from ages 7 to 95 years old. There were 17 recoveries and 5 deaths (1 female, 4 males) with 53 cases still active. The Harrison Point facility received its first patients by 19 April, 2020 and patients continued being transferred to that facility from the Enmore and Blackman and Gollop facilities over the following days. As of that date, the country reported 747 tests, including re-tests of recovered COVID-19 patients. On 20 April, 2020 it was announced that the scope of testing would be widened as the government was in the possession of 27,000 testing kits and 2,800 swabs. By that date, 1,063 tests had been performed over 68 days with 75 positive results. During the following 6 days, 600 additional tests were performed, taking the count to 1,663 completed tests with 79 positive results.

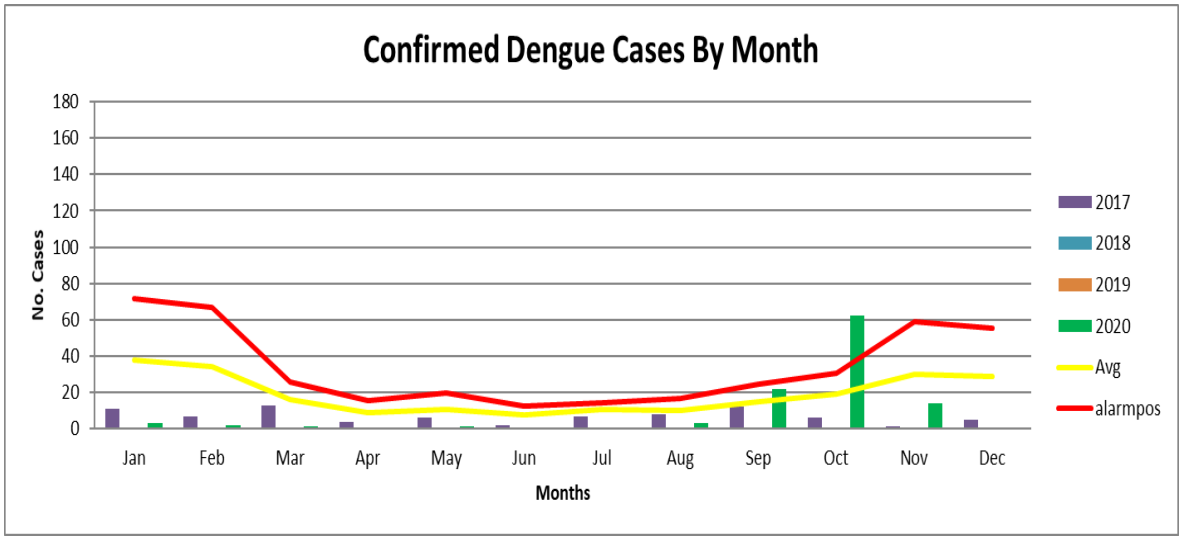
Barbados' commercial airspace was closed to routine traffic on 18 May, 2020 when total cases numbered 92 with 7 deaths. The first 5 cases of the new wave after re-opening of the airspace in June 2020 were detected among repatriated residents from locations with high burden of disease. With persons allowed to arrive without a known negative PCR test, flights arrived from international destinations with up to 7 cases on any one flight, with re-tests among on-board contacts of cases and high-risk travellers

also netting positive results. Cases among travellers peaked in Epi Week 31 in July 2020 with 26 new positives, of which 9 were identified from a chartered flight with Ghanaian nurses. There was one local cluster of 7 cases sparked by a medium-risk (non-quarantined) traveller who tested positive on the second test. A total of 356 positive cases had been recorded by the end of the week ending 26 December, 2020. 2 cases on 30 December, 2020 signalled the beginning of another wave of cases, with over 100 positives recorded on 31 December, 2020.

At December 31, 2020, Barbados had recorded 394 COVID-19 cases, of which 208 were females and 186 males. There were 7 deaths recorded; 5 males and 2 females ranging in age between 52-96 years old. 5 of those deaths were persons over 70 years old.

## Dengue Fever

Barbados continued surveillance for Dengue Fever as it is endemic to Barbados. The last major outbreak year recorded was 2016. However, after two years with no recorded confirmed cases, an outbreak was confirmed in October 2020 as shown in ***Figure 6. Confirmed Dengue Cases 2017-2020***, below. At the end of December 2016, there were 587 confirmed cases of Dengue Fever, compared to the 76 confirmed cases in 2017. 571 cases were suspected of having occurred in 2017. There were no confirmed cases of Dengue Fever in 2018 or 2019, although 66 and 117 probable and suspected cases were recorded in those two years, respectively. By the end of 2020, 109 cases were confirmed, among which were 2 deaths and 1,227 suspected or probable cases.




Source: Surveillance Unit, Ministry of Health and Wellness, 2022

**Figure 6: Confirmed Dengue Cases 2017-2020**

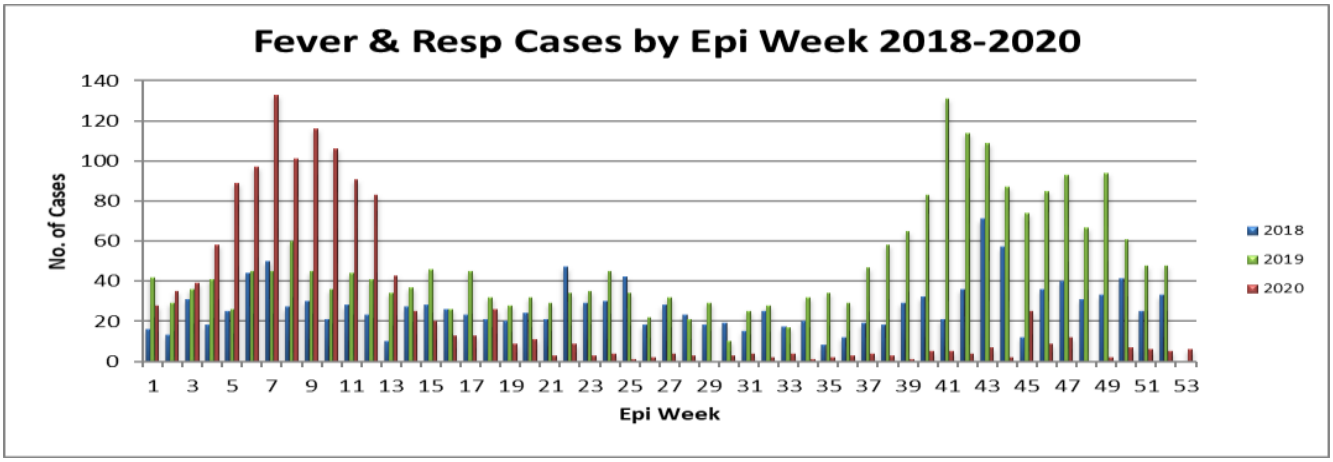
## Chikungunya

There were 8 confirmed and 7 suspected cases of Chikungunya in 2019, followed by 27 confirmed and 94 suspected cases in 2020. There were 27 confirmed cases of Chikungunya in 2018 from routine testing but no clinically suspected cases. After 120 suspected and 4 confirmed cases in 2016, there was only one confirmed case recorded in 2017.

## Respiratory Diseases

Syndromic surveillance also continued for respiratory disease, syndromes indicating other vector-borne diseases and injuries during the year under review. Respiratory infection continued to follow a fifteen-week cycle with three main peaks throughout the year in 2018 and 2019, as shown in ***Figure 7. Fever and Respiratory Cases 2018-2020,*** below. However, levels fell from June 2020 and remained low for the rest of the year, most likely attributable to the infection prevention measures instituted for COVID-19, as well as decreased use of health-care facilities. Influenza was the most common respiratory virus isolated in 2019, with 70 confirmed cases in three distinct virus types: Hemagglutinin 1 Neuraminidase 1 (H1N1), Hemagglutinin 3 Neuraminidase

2 (H3N2) and Influenza B. Laboratory testing for influenza and other respiratory illnesses effectively ceased from June 2020, as resources were concentrated on testing for the COVID-19 virus.




Source: Surveillance Unit, Ministry of Health and Wellness 2022

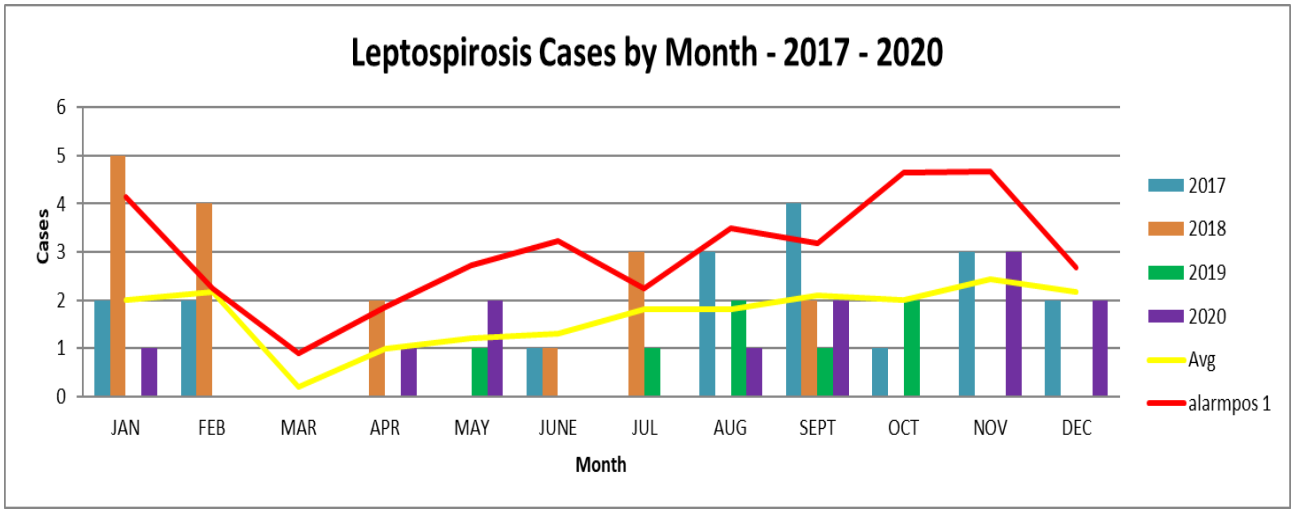
Figure 7. Fever and Respiratory cases 2018-2020

## Tuberculosis

3 cases of Tuberculosis (TB) were confirmed by laboratory testing in 2020, after 0 cases in 2019. Only 1 case of TB was confirmed in 2018. All of these cases were domiciled in Barbados, and none were drug-resistant.

## Leptospirosis

Leptospirosis is a vector-borne disease of rodents, which most often occurs in the rainy season, and may present as fever with jaundice. As shown in ***Figure 8. Leptospirosis Cases 2017-2020***, below, there were 18 confirmed local cases with 1 death in 2017 and 18 confirmed cases with 1 death in 2018. There were 7 cases with 1 death in 2019 and 12 cases without any deaths in 2020. Public education was focused on helping persons discourage rodent proliferation by decreasing breeding sites and food sources, as well as reducing exposure to rodent droppings by using appropriate personal protective equipment while gardening or cleaning animal houses.

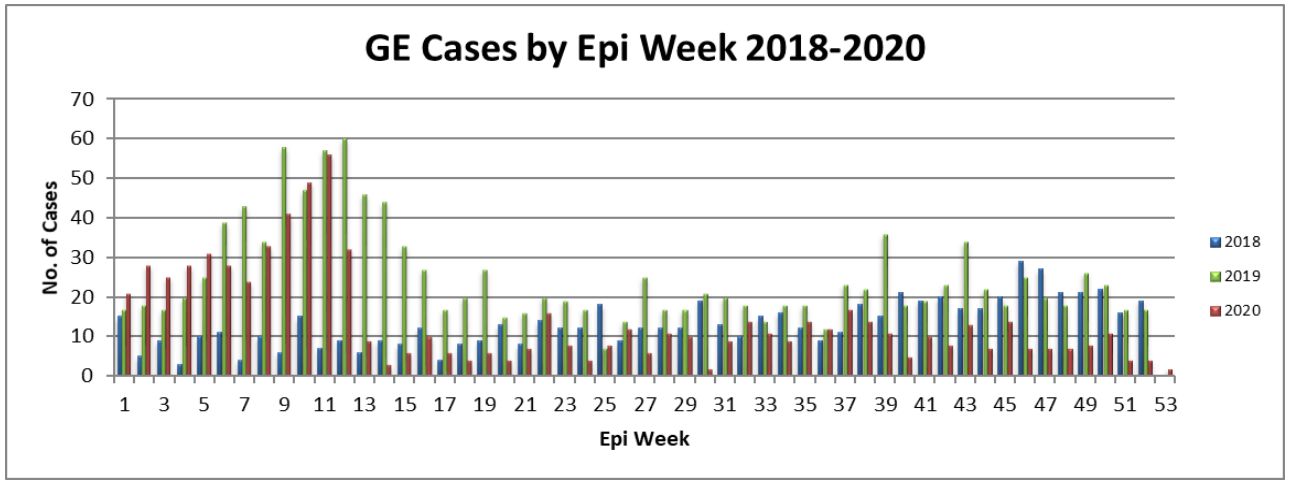



Source: Surveillance Unit, Ministry of Health and Wellness 2022

Figure 8. Leptospirosis Cases 2017-2020

## Gastroenteritis

Vomiting and diarrhoea occurs throughout the year and is associated with bacterial or viral agents. Gastroenteritis outbreaks in Barbados tend to be viral or may be related to contamination of foodstuffs. Salmonella or Campylobacter bacteria were the main organisms identified. Viruses causing gastroenteritis were infrequently identified and were mostly rotavirus or norovirus; for example, in 2020, zero cases of rotavirus and norovirus were diagnosed for the entire year. In 2019, 5 cases of rotavirus and 6 cases of norovirus were diagnosed, while in 2018 these numbers were 7 and 8, respectively. Reports of gastroenteritis were generally lower in early 2018 compared to 2019 as shown in ***Figure 9. Gastroenteritis Cases 2018-2020***, below. After an early spike in cases up to mid-March 2020, Epi Week 12, and which was co-incident with the spike in respiratory disease, gastroenteritis cases remained low for the rest of 2020.




Source: Surveillance Unit, Ministry of Health and Wellness, 2022

Figure 9. Gastroenteritis Cases 2018-2020

In a broader developmental context, the MHW has key roles to fulfil in ensuring the sustained development of Barbados' tourism industry. It continued to support the thrust of a regional CARPHA Tourism and Health project that encouraged local hotels to report the numbers of clients displaying syndromes representing gastrointestinal and respiratory illness. Fortunately, with the new integrated public health lab, the MHW had significant capacity for testing. The competition for testing modalities and tardy (or absent) notification of illness by practitioners are challenges to monitoring sickness and disease. The MHW continued to invest in robust infection prevention control at the QEH, PH and all other institutions. It also continued to roll out aspects of the 2017-2022 Anti-Microbial Plan to support these initiatives.

## HIV and Other Sexually Transmitted Infections

HIV is a significant public health problem in Barbados, with an estimated 1.5% of adults in Barbados living with this chronic disease at the end of 2019. The epidemic started in 1984, and from the start, there was an immediate response by health authorities to prevent HIV transmission, identify new HIV/AIDS cases and manage those who were ill due to HIV. ***Table 21. Cumulative Number of HIV/AIDS Cases &***

***HIV Deaths by Sex 1984-2019*** below, shows the total number of deaths since the start of the epidemic in 1984 and ***Table 22. HIV Cases by Age Group & Sex, 2019*** shows the total HIV cases and age distribution reported in 2019.

Table 21: Cumulative Number of HIV/AIDs Cases & HIV Deaths by Sex:1984 - 2019

| Sex | HIV Cases | | AIDS Cases | | HIV Deaths | |
|---|---|---|---|---|---|---|
| Male | 2,822 | 63.5% | 1,900 | 66.8% | 1,411 | 70.8% |
| Female | 1,625 | 36.5% | 945 | 33.2% | 583 | 29.2% |
| Total | 4,447 | | 2,845 | | 1,994 | |

Table 22: HIV Cases by Age Group & Sex, 2019

| Age Group | Male | Female | Total | |
|---|---|---|---|---|
| | | | n | % |
| 10 - 19 | 1 | 4 | 5 | 5.0% |
| 20 - 29 | 16 | 10 | 26 | 26.0% |
| 30 - 39 | 19 | 8 | 27 | 27.0% |
| 40 - 49 | 11 | 8 | 19 | 19.0% |
| 50 - 59 | 13 | 5 | 18 | 18.0% |
| 60 - 69 | 0 | 2 | 2 | 2.0% |
| 70+ | 1 | 2 | 3 | 3.0% |
| Total | 61 | 39 | 100 | 100.0% |
| No. with AIDS at the time of HIV diagnosis | 11 | 6 | 17 | |
| Median Age (years) at HIV diagnosis | 35.6 | 35.9 | 35.8 | |
| Median CD4 at Diagnosis | 199.5 | 390.5 | 331.5 | |

## Modes of HIV Transmission in Barbados

HIV transmission is almost exclusively sexual in Barbados. Blood donations and products are universally screened for HIV and other blood-borne pathogens, and vertical transmission (from mother to child) remains at less than 2%. There has never been a known case of HIV transmission through the sharing of needles among injecting drug users. The HIV prevalence among female sex workers is also believed to be higher than in the general population.

**Combination HIV Prevention**

The prevention programme aimed to reduce individuals' risk of transmission of HIV and Sexually Transmitted Infections (STIs) through education, distribution of condoms, provision of pre-exposure prophylaxis (PrEP) and post exposure prophylaxis (PEP), and testing for HIV and STIs. HIV testing is also a major aspect of the prevention programme, as it facilitates the entry of persons living with HIV (PLHIV) into all services provided by the HIV/STI programme. Priority populations who are at higher risk of HIV include men and men who have sex with men, sex workers and transgendered individuals.

Health promotion and education efforts targeted at reducing the spread of HIV, STIs and viral hepatitis were ongoing. An HIV/STI communications strategy and health education campaign was developed in 2020 and is being implemented. In March 2018, Barbados became one of the first countries in the region to implement a policy of offering Pre-Exposure Prophylaxis (PrEP) to anyone in Barbados deemed to be at substantial risk for HIV, as part of the package of comprehensive HIV and STI prevention and treatment services. In September 2020, the National HIV/STI Programme sought to expand this service through the provision of training targeting clinicians from both private and public sectors. Additional sites targeted for expansion of the service include the St. Philip Polyclinic and the Barbados Family Planning Association.

**The UNAIDS 90-90-90 HIV Targets**

In concert with many countries, Barbados committed to achieving the UNAIDS 90-90-90 targets by 2020. These targets stated that by the end of 2020, 90% of PLHIV will know their status, 90% of those diagnosed with HIV infection will receive treatment and 90% of all people receiving ART will be virally suppressed. At the end of 2019, the clinical

cascade reflected an attainment of 87% of PLHIV being aware of their HIV status; 59% of those diagnosed with HIV receiving treatment and 77% of those on treatment with antiretroviral regimens, having their viral load fully suppressed.

At the end of 2019, there were 1,566 persons retained in care in Barbados, inclusive of both the public and private sector. Of the persons retained in care, 1,395 were on ARVs resulting in an ARV coverage of 89.1% at the end of 2019.

It is acknowledged that the COVID-19 pandemic affected the response to AIDS locally regionally and internationally, creating setbacks to the achievement of the UNAIDS 90-90-90 targets, and causing concern about measuring progress towards the 95-95-95 targets by 2030. Similar complete data was not available for 2020, which resulted in an inability to provide an accurate measure of achievement against the 90-90-90 targets.

**STIs in Barbados**

STIs carry a significant disease burden in Barbados, especially among young persons. From the point of view of disease surveillance, the main STIs of interest are Chlamydia, Gonorrhoea and Syphilis (including congenital Syphilis). In 2019, the BDSPHL performed Chlamydia trachomatis (CT) and Neisseria gonorrhoea (NG) testing on 3,858 urine samples. 113 positive NG cases resulted in a 2.9% positivity rate, while the 481 positive cases for CT resulted in a 12.5% positivity rate. In 2020, the BDSPHL performed CT and NG testing on 4,744 urine samples. The positivity rates (proportion of samples, which tested positive) are similar to the prevalence figures previously determined; 134 for NG, yielding a positivity rate of 2.8%, while 597 were positive for CT yielding a positivity rate of 12.6%.

In 2019, the median age of NG cases was 27 years, with the majority of cases occurring between the ages of 20 and 34 years (61%). This is compared to the median age of NG cases in 2020 which was 23 years, with the majority of cases occurring between the ages of 15 and 29 (76.9%); see ***Table 23. Number of Persons Testing Positive for NG, 2019 and Table 24. Number of Persons Testing Positive for NG, 2020***, below. The rates of CT were highest among the 20-24 age group in 2019 (23.9%) and 2020 (36.7%). Similarly, the rates of NG were highest among the 20-24 age group in 2019 (23.9%) and 2020 (33.6%). A greater proportion of females (65% and 60%) tested positive for NG in 2019 and 2020 respectively, compared with males (34% and 37%). Similarly, more females tested positive for CT in 2019 and 2020 (69% and 74%), compared with males (29% and 25%), as shown in ***Table 25. Number of Persons Testing Positive for CT, 2019*** and ***Table 26. Number of Persons Testing Positive for CT, 2020***, below.

Table 23. Number of Persons Testing Positive for NG, 2019

| Age Group | Female | Male | Unknown | Total |
|---|---|---|---|---|
| 15 - 19 | 9 | 1 | 0 | 10 |
| 20 - 24 | 18 | 9 | 0 | 27 |
| 25 - 29 | 20 | 6 | 0 | 26 |
| 30 - 34 | 10 | 6 | 0 | 16 |
| 35 - 39 | 7 | 3 | 0 | 10 |
| 40 - 44 | 3 | 2 | 0 | 5 |
| 45 - 49 | 1 | 3 | 0 | 4 |
| 50 - 54 | 2 | 2 | 0 | 4 |
| 55 - 59 | 0 | 1 | 0 | 1 |
| 60+ | 1 | 0 | 0 | 1 |
| Unknown | 2 | 5 | 2 | 9 |
| Total | 73 | 38 | 2 | 113 |
| Median age for NG positive cases | 26 | 32 | | 27 |

Table 24: Number of Persons Testing Positive for NG, 2020

| Age Group | Female | Male | Unknown | Total |
|---|---|---|---|---|
| 15 - 19 | 20 | 12 | 1 | 33 |
| 20 - 24 | 29 | 16 | 0 | 45 |
| 25 - 29 | 16 | 9 | 0 | 25 |
| 30 - 34 | 7 | 2 | 0 | 9 |
| 35 - 39 | 3 | 4 | 0 | 7 |
| 40 - 44 | 0 | 1 | 0 | 1 |
| 45 - 49 | 2 | 1 | 0 | 3 |
| 50 - 54 | 1 | 2 | 0 | 3 |
| 55 - 59 | 0 | 1 | 0 | 1 |
| Unknown | 2 | 1 | 4 | 7 |
| Total | 80 | 49 | 5 | 134 |
| Median age of NG positive cases | 22.5 | 23 | 16 | 23 |

Table 25. Number of Persons Testing Positive for CT, 2019

| Age Group | Female | Male | Unknown | Total |
|---|---|---|---|---|
| 10 - 14 | 3 | 1 | 0 | 4 |
| 15 - 19 | 48 | 20 | 2 | 70 |
| 20 - 24 | 83 | 30 | 2 | 115 |
| 25 - 29 | 68 | 18 | 0 | 86 |
| 30 - 34 | 54 | 24 | 1 | 79 |
| 35 - 39 | 31 | 13 | 0 | 44 |
| 40 - 44 | 19 | 10 | 0 | 29 |
| 45 - 49 | 12 | 7 | 1 | 20 |
| 50 - 54 | 3 | 4 | 1 | 8 |
| 55 - 59 | 0 | 2 | 0 | 2 |
| 60+ | 0 | 4 | 0 | 4 |
| Unknown | 9 | 5 | 6 | 20 |
| Total | 330 | 138 | 13 | 481 |
| Median age for CT positive cases | 26 | 29 | 49 | 27 |

Table 26. Number of Persons Testing Positive for CT, 2020

| Age Group | Female | Male | Unknown | Total |
|---|---|---|---|---|
| 10 - 14 | 1 | 0 | 0 | 1 |
| 15 - 19 | 103 | 21 | 1 | 125 |
| 20 - 24 | 172 | 46 | 1 | 219 |
| 25 - 29 | 84 | 39 | 1 | 124 |
| 30 - 34 | 40 | 14 | 0 | 54 |
| 35 - 39 | 22 | 13 | 0 | 35 |
| 40 - 44 | 8 | 2 | 0 | 10 |
| 45 - 49 | 2 | 4 | 0 | 6 |
| 50 - 54 | 1 | 5 | 0 | 6 |
| Unknown | 6 | 4 | 7 | 17 |
| Total | 439 | 148 | 10 | 597 |
| Median age of CT positive cases | 22 | 25 | 16 | 23 |

***Tables 27. Persons Testing Positive for Syphilis, 2016-2019*** and ***28. Number of Positive Syphilis Cases by Sex, 2016-2019*** below, show the annual number of tests conducted for syphilis, as well as the percentage of persons determined to have positive syphilis tests. In 2019 there were 371 positives of 13,141 tests performed, of which 68% of these persons were male, 22% were female and in 9% of cases, the sex was not stated.

Table 27. Persons Testing Positive for Syphilis, 2016 - 2019

| Year | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|
| ≤1:4 | 137 | 135 | 151 | 156 |
| ≥1:4 | 170 | 186 | 181 | 215 |
| Unknown | 0 | 22 | 0 | 0 |
| Total Positives | 307 | 343 | 332 | 371 |
| Total Positives (%) | 3.0% | 2.9% | 3.1% | 2.8% |
| Total No. per year of VDRL/ RPR tests | 10,337 | 11,856 | 10,635 | 13,141 |

Table 28. Number of Positive Syphilis Cases by Sex, 2016 - 2019

| Year | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|
| Male | 73 | 49 | 111 | 147 |
| Female | 55 | 41 | 48 | 48 |
| Unknown | 42 | 118 | 22 | 20 |
| Total | 170 | 186 | 181 | 215 |

# Non-Communicable Diseases

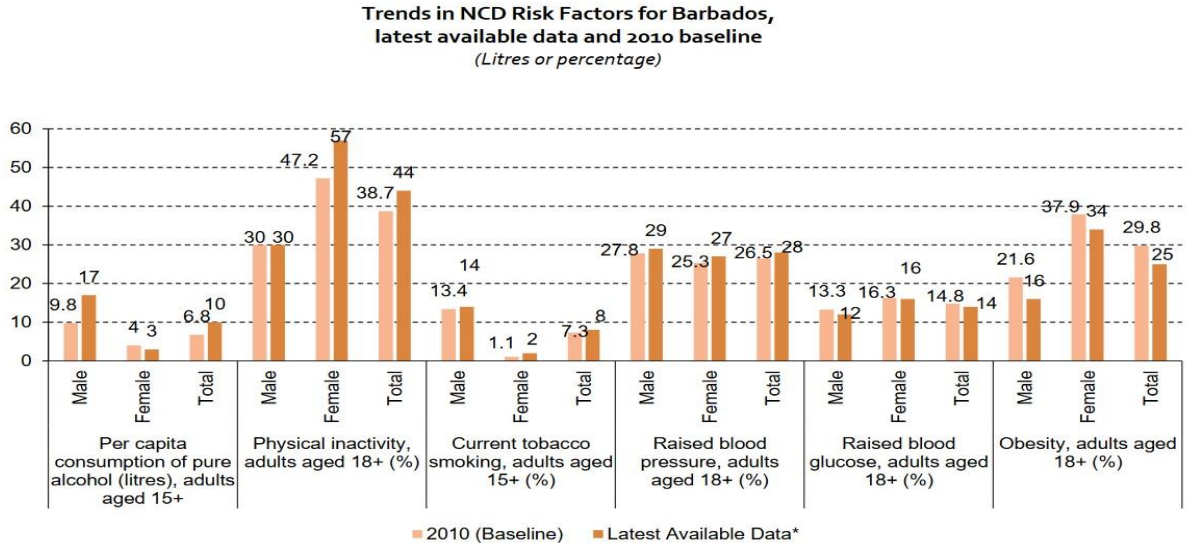
During 2019 and 2020, Barbados continued to progress in implementing goals for combatting NCDs. Although there have been strategic commitments and progress during the past two years, there is still a need for higher levels of individual responsibility, and achieving policy action to create a more supportive environment for the prevention and control of NCDs. The highlights of 2019 to 2020 were the completion of the Cancer Action Plan, the commissioning and stakeholder discussions for the new National Strategic Plan for NCDs and work on the School Nutrition Policy.

If not addressed, the enormous health burden posed by NCDs and their knock-on effects will increase and further threaten national development. 1 in 4 Barbadian adults has at least one chronic disease, which is expected to increase to 1 in 3 three by 2025. NCDs accounted for eight (8) of the top ten (10) causes of death locally, as shown in ***Table 29. Mortality Data 2020-Ten Leading Causes of Death***, below.

As shown in ***Figure 10. Trends in NCD Risk Factors for Barbados*** below, Barbados has recorded a significant reduction in the rate of obesity, more so for men (from 21.6% in 2010 to 16% in 2016) than women (from 37.9% in 2010 to 34% in 2016). Current tobacco use, raised blood pressure and raised blood glucose has remained stagnant or recorded marginal improvement since 2010. On the other hand, the average consumption of pure alcohol increased sharply for men in 2016 (17 litres) compared to 2010 (9.8 litres), while the prevalence of physical inactivity rose sharply for women in 2016 (57%) compared to 47.2% in 2010. The probability of premature death from NCDs was 16%.

Table 29. Mortality Data 2020-Ten Leading Causes of Death

| Rank | Disease Type |
|---|---|
| **1** | Diabetes mellitus |
| **2** | Cerebrovascular disease |
| **3** | Ischemic heart disease |
| **4** | Hypertensive diseases |
| **5** | Pulmonary heart disease, diseases of pulmonary circulation and other forms of heart disease |
| **6** | Malignant neoplasm of prostate |
| **7** | Acute respiratory infection and pneumonia |
| **8** | Nephritic Syndrome and Diseases of the urinary system |
| **9** | Malignant neoplasm of female breast |
| **10** | Malignant Neoplasm of Colon and Rectosigmoid Junction |




*Latest available data: 2016 for all risk factors except; 2015 for raised blood pressure; and 2014 for blood glucose.
Source: ECLAC based on PAHO/WHO data.

Figure 10: Trends in NCD Risk Factors for Barbados

Barbados appeared to be on track to meet the Sustainable Development Goals NCD related targets; however, the Global Action Plan Targets will require acceleration in progress, see ***Figure 11. Trends in the Achievement of Global Targets on NCDs***, below.

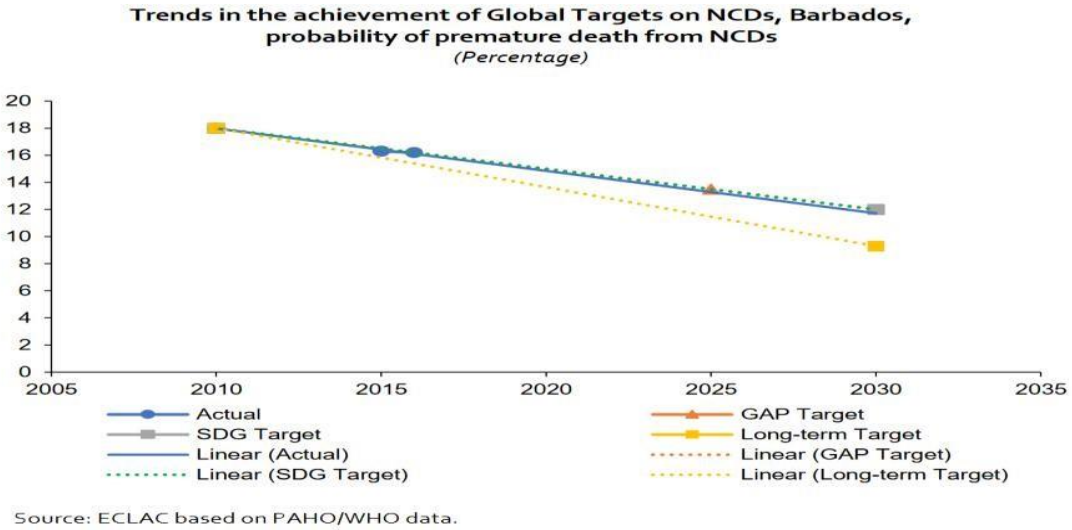



Figure 11: Trends in the Achievement of Global Targets on NCDs

We continued to progress in addressing the four common modifiable risk factors: inadequate physical activity, poor nutrition, use of tobacco products and the harmful use of alcohol. Regionally, Barbados was one of the top implementers of regional NCD commitments; notably, the Bahamas, Barbados, Jamaica and Trinidad and Tobago met at least 65% of the indicators. Factors across all sectors of government and the wider society, including the built environment, economics, education, legislation, and marketing, significantly influenced the determinants of NCDs. As a result, the coordinated efforts must include representation from varying stakeholders.

The NCD Commission and the Task Force on Wellness worked to raise awareness in the public and business community on the effects of NCDs. The partnership continued to be an essential theme with international agencies, health-related NGOs, allied Ministries and academia. The processes and outputs included purchasing specialist services from the Heart and Stroke Foundation of Barbados and the Barbados Diabetes Foundation. The Barbados National Registry (BNR) for NCDs is an international best practice in partnership with the UWI. It facilitated data collection and analysis to support knowledge and decision-making, providing national statistics on the epidemic and information for decision-making on NCD care. The National NCD Commission

coordinated and mobilised stakeholders, while the Wellness Task Force promoted public awareness. These bodies have been raising public awareness, and advising the Minister of Health and Wellness on strategies for prevention and control in addressing the most significant burden of preventable illness.

On the government side, there is a need to enforce legislation for the graphic labelling of tobacco products. There is also a need to further improve the school environment by addressing food and physical activity and understanding NCDs in the Health and Family Life Education and Schools Positive Behaviour Change Programme. The issues of individual responsibility, as well as policy for supporting action will be advanced.

## Burden of Illness During the Period

The patterns of illness are reflected in prescription volumes and costs related to benefit drugs. The benefit categories – hypertension, diabetes, asthma, cancer, epilepsy and glaucoma account for approximately 50% of the prescription volume and 72% of the expenditure in the public sector during the 2019-20 fiscal year, as is shown in ***Table 30. Prescription Activity by Benefit Categories in the Public Sector - 2019/20 Fiscal*** **Year**, below.

Table 30. Prescription Activity by Benefit Categories in the Public Sector - 2019/20 Fiscal Year

| BENEFIT CATEGORY | $R_X$COUNT | COST | Avg. COST/$R_X$ |
|---|---|---|---|
| **Hypertension** | 317,482 | 2,530,096.04 | $7.97 |
| **Diabetes** | 194,812 | 2,861,175.10 | $14.69 |
| **Asthma** | 43,102 | 510,285.00 | $11.84 |
| **Epilepsy** | 23,602 | 359,039.73 | $15.21 |
| **Cancer** | 3,841 | 316,075.77 | $82.29 |
| **Glaucoma** | 14,129 | 166,195.03 | $11.76 |
| **Benefit Drugs Total** | **596,968** | **$6,742,866.67** | **$11.30** |
| **Non-Benefit Drugs** | 597,685 | $2,481,669.86 | $4.15 |
| **TOTAL Drug Count, Expenditure, and Average Drug Cost** | **1,194,653** | **$9,393,824.46** | **$7.72** |

NCDs also dominated the causes of death for 2019 and 2020:

- Cerebrovascular disease
- Diabetes Mellitus
- Cancer of the Prostate
- Disease of Pulmonary circulation and other forms of Heart Disease
- Pneumonia
- Ischemic Heart Disease
- Cancer of the Breast
- Essential Hypertension
- Cancer of the Colon
- Dementia

Other than Pneumonia and Dementia, the top causes of death in Barbados are NCDs.

**Malignant Neoplasms**

The top 10 types of cancer locally in descending frequency were prostate, breast, colon, rectum, uterus (body/corpus), stomach, lung, multiple myeloma, nonHodgkin lymphoma and pancreas. ***Table 31. Top Five Cancers in Barbados, 2013-2018***, below shows the total cancer cases in Barbados during the period 2013-2018. The age-standardised incidence rates (ASIR) from 2013 to 2015 remained stable although prostate and breast cancer numbers rose. While the incidence of prostate cancer remained high at 102 per 100,000, the age-standardised mortality rate decreased from 74 to 42 per 100,000 population; still three times more than that seen in Latin America in 2015. Breast cancer remained the second most common cancer and the most common cancer in women locally with an age-standardised mortality rate at 89 per 100,000. Barbados continued to have a low rate of lung cancer at 11 per 100,000, despite lung cancer being the most diagnosed cancer worldwide. The actions

proposed in the Cancer Plan cover the issues raised, including public education, risk factor reduction, screening and clinical pathway review for the most common cancers.

Table 31. Top Five Cancers in Barbados, 2013 - 2018

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|
| **Totals** | **859** | **861** | **1030** | **816** | **792** | **879** |
| **Prostate** | 178 | 177 | 216 | 234 | 230 | 211 |
| **Breast** | 134 | 151 | 197 | 136 | 149 | 164 |
| **Colo-rectal** | 153 | 130 | 160 | 129 | 119 | 141 |
| **Uterus** | 33 | 37 | 44 | 46 | 35 | 44 |
| **Stomach** | 32 | 33 | 36 | 18 | 19 | 18 |
| **Incomplete cases** | | | | 363 | 261 | 174 |
| **Expected Total** | | | | 977 | 922 | 966 |

## Cardiovascular Diseases

Stroke and Heart Attacks occurred in the older age groups (55 years and older) with a predominance for females, especially persons with a stroke diagnosis. 547 heart attacks (46% female and 54% male) and sudden cardiac deaths were recorded in 2019. There were higher incidence rates in men when compared to women aged 35 – 74 years. There were 653 stroke events, 54% of which occurred in females and 46% in males, thus, for every 100,000 persons in our population, there were 235 stroke events.

With respect to heart attacks (Acute Myocardial Infarctions or AMI), there was a 13% increase in cases of AMI from 2018 to 2019, see ***Figure 12. Number of Men and Women with AMI in Barbados 2010-2020***, below. The number of cases of heart attacks in women exceeded those in men for the first time since BNR started recording in 2010. Of those who were hospitalised with heart attacks, the case fatality rate was approximately 25% in 2019; which is high when compared to developed countries that typically record rates of between 3-12%.

## Cardiovascular Disease Burden – Heart Attacks and Strokes

There is a clear trend in the increase in the total number of heart attack cases over 2010-2019, with 345 and 547, respectively. There were 758 cases of stroke registered in 2019, up from 581 in 2010 as shown in ***Figure 13. Number of Men and Women with Strokes in Barbados, 2010-2020***, below. The cost associated with managing and treating these diseases rises as they become more prevalent in society, thereby increasing the burden on the health system.

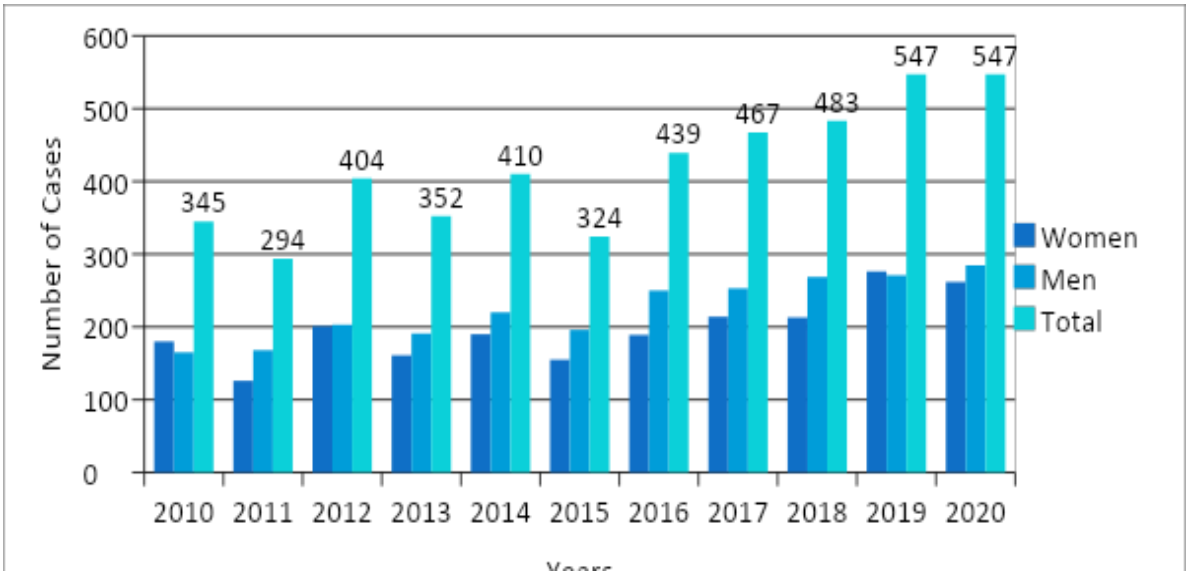



Figure 12: Number of Men and Women with AMI in Barbados 2010-2020.

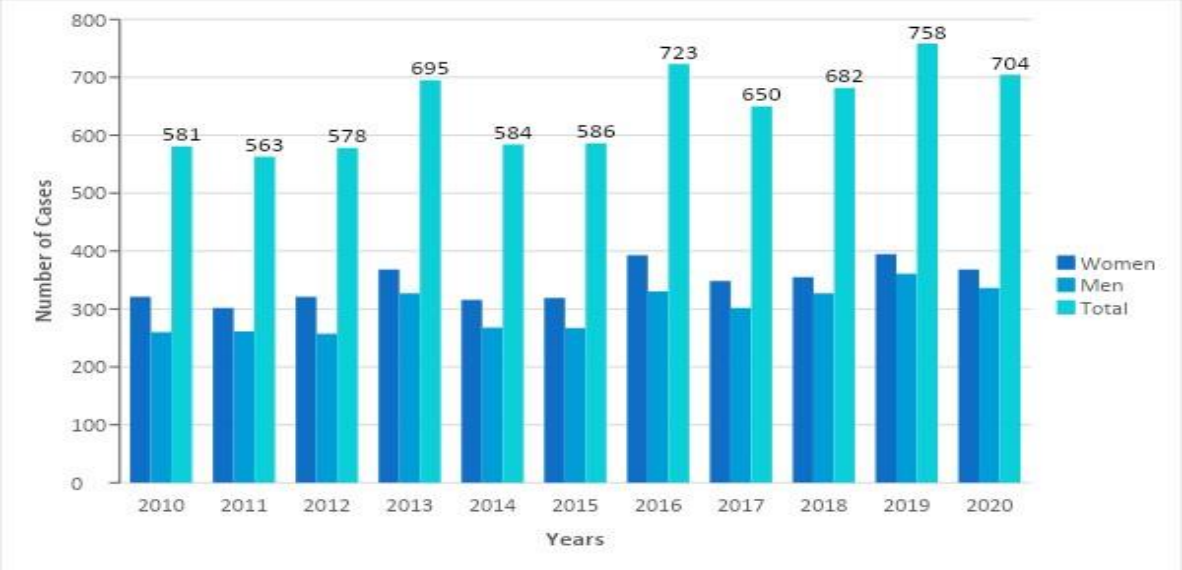



Figure 13: Number of Men and Women with Strokes in Barbados, 2010-2020

Table 32. Summary Statistics for the BNR for Chronic NCDs, 2019

| | Heart Attack | Stroke | First Ever Strokes |
|---|---|---|---|
| Number of registrations[1] | 547 | 758 | 319 |
| Hospital admissions (percentage admitted)[2] | 342 (63%) | 673 (89%) | 319 (100%) |
| Rate per population[3] | 0.19% | 0.26% | 0.11% |
| % Deceased at 28 days | 33% | 31% | 35% |
| % Cases who died[4] | 43% | 18% | 38% |
| Death certificate only[5] | 236 | 136 | n/a |
| Median length of stay[6] | 6 | 8 | 9 |

(1) Total number of registrations as a proportion of the population; (2) Total number of hospital admissions as a proportion of registrations; (3) Total number of deaths as a proportion of registrations; (4) Median and range of length of hospital stay (in days).

## Diabetes

In the last national NCD risk factor survey (2012), Diabetes was estimated to affect 25% of adults. In Barbados, persons can access early detection, treatment and rehabilitation. In the Government operated primary care facilities, there is the management of diabetes and those at high risk or with complications can also be referred for specialist care at the QEH. There is also provision for persons to receive multidisciplinary team care, purchased by the Government from the Maria Holder Diabetes Centre.

Resource mobilisation will be a crucial issue given the burden of NCDs and the current national financial situation. The levels of sin taxes locally were below what is recommended by WHO and academia. There is undoubtedly scope to increase these and influence behaviour, particularly in vulnerable groups while creating revenue; some of which can be directed to strategic health initiatives including education and supporting healthy choices. In the case of the Sugar-Sweetened Beverages (SSB) tax, recently released local evidence on the SSB tax indicates that the tax was associated with increased prices of SSB by 5.9%, decreased sales of SSB by 4.3% and increased sales of bottled water by 7.3%. In short, the tax is working but as international and local research indicates, it needs to cover more items and be at a higher rate (30%).

There is a need for access to data in usable formats for both the public and private sectors. There is also a need to improve the school environment further to promote physical activity and healthy nutrition that promotes health and academic excellence.

## Mental Health

The primary data evaluated is a tabulation of the number of patients admitted and discharged from the Psychiatric Hospital over two years – 2019 and 2020. Admissions of patients were classified into first admissions and re-admissions. First-admissions refer to patients admitted to the PH for the first time as an in-patient, and re-admissions refer to patients admitted to the PH on more than one occasion.

For 2020, the PH recorded 983 admissions, which revealed a moderate decline from 2019, which recorded 1,209 admissions, as shown in ***Table 33. First and Re-Admissions by Sex at the PH, 2019-2020***, below. First admissions for the two years totalled 496 patients, 63% of whom were males and 37% females. Both the first and re-admissions for males and females decreased in 2020 compared to 2019. There was no significant change within the two years in the number of first-admissions and re-admissions of male patients recorded. There was a consistently higher incidence of male to female admissions with a ratio of 2:1 in 2019 and 2020, respectively.

Table 33. First and Re-Admissions by Sex at the PH, 2019-2020

| Category | 2019 | | | 2020 | | |
|---|---|---|---|---|---|---|
| | Male | Female | Total | Male | Female | Total |
| **Total Admissions** | **868** | **341** | **1209** | **692** | **291** | **983** |
| **First Admissions** | 163 | 96 | **259** | 149 | 88 | **237** |
| **Re-Admissions** | 705 | 245 | **950** | 543 | 203 | **746** |

Most patients admitted to the PH were voluntary, as shown in ***Table 34. PH Admissions by Status and Sex, 2019-2020***, below. There was a 23% decline in voluntary admissions in 2020 compared to 2019. Medically recommended recorded the second-highest

number of admissions with an overall 5% increase in 2020. However, there was a slight decrease in the number of Medically Recommended females in 2020, whereas the reverse occurred for males. Overall, there was a slight decline in the number of Hospital Orders for males and females in 2020 by 16%. Bed occupancy ranged from 82% to 96 % over the two years.

Table 34. PH Admissions by Status and Sex, 2019-2020

| Category | 2019 | | | 2020 | | |
|---|---|---|---|---|---|---|
| Type of Admission | Male | Female | Total | Male | Female | Total |
| Voluntary | 593 | 197 | **790** | 443 | 167 | **610** |
| Medically Recommended | 126 | 122 | **248** | 148 | 113 | **261** |
| Hospital Order | 125 | 12 | **137** | 93 | 7 | **100** |
| Certified | 1 | 2 | **3** | 2 | 0 | **2** |
| Emergency Order | 23 | 8 | **6** | 6 | 4 | **10** |
| Total | **868** | **341** | **1209** | **692** | **291** | **983** |

2,226 patients were discharged from the institution within the two years (2019 and 2020). The year 2020 recorded 232 fewer discharges, as shown in ***Table 35. PH Discharges by Age Group and Sex, 2019-2020*** below, which represents an 18.88% decline in the number of discharges. The most significant increase was in the 10-14 age group in 2020. The highest decline was a 29.15% reduction in the 35-44 category within the same year. The number of deaths in 2020 as compared to 2019 decreased by three (3), with 15 persons dying.

Table 35. PH Discharges by Age Group and Sex, 2019-2020

| | 2019 | | | 2020 | | |
|---|---|---|---|---|---|---|
| Age Group | Male | Female | Total | Male | Female | Total |
| <10 | 1 | 0 | **1** | **2** | **0** | **2** |
| 10 - 14 | 5 | 15 | **20** | 15 | 14 | **29** |
| 15 - 19 | 54 | 23 | **77** | 47 | 21 | **68** |
| 20 - 24 | 74 | 9 | **83** | 55 | 26 | **81** |
| 25 - 34 | 179 | 60 | **239** | 132 | 39 | **171** |
| 35 - 44 | 234 | 61 | **295** | 160 | 49 | **209** |
| 45 - 54 | 135 | 54 | **189** | 127 | 65 | **192** |
| 55 - 64 | 124 | 54 | **178** | 86 | 44 | **130** |
| 65+ | 84 | 63 | **147** | 70 | 45 | **115** |
| Totals | **890** | **339** | **1229** | **694** | **303** | **997** |

Schizophrenia was the most common diagnosis with 24% of the total, and the second highest was drug abuse. As shown in ***Figure 14. PH Discharge Diagnosis*** below, other leading diagnoses were Psychotic Disorder and Intellectual Disability (8%), Bipolar and Behavioural problems (4%). Most of these disorders showed a much higher percentage in males. The graph also revealed that marijuana was the most common drug abused by males and females, accounting for 15% of the diagnosis. The ratio of males to females using marijuana is 5:1. Both cocaine and alcohol represented 5%, the second highest drugs abused. Alcohol was the next drug of choice for females and cocaine was third. 4 women were poly substance users compared to 34 males, and the ratio of males to females using nicotine was 5:1. Another drug used was - MDMA methylenedioxy-methamphetamine (ecstasy) and one person had a gambling addiction. Statistics revealed that a high number of persons with drug abuse disorders had comorbid diagnoses.

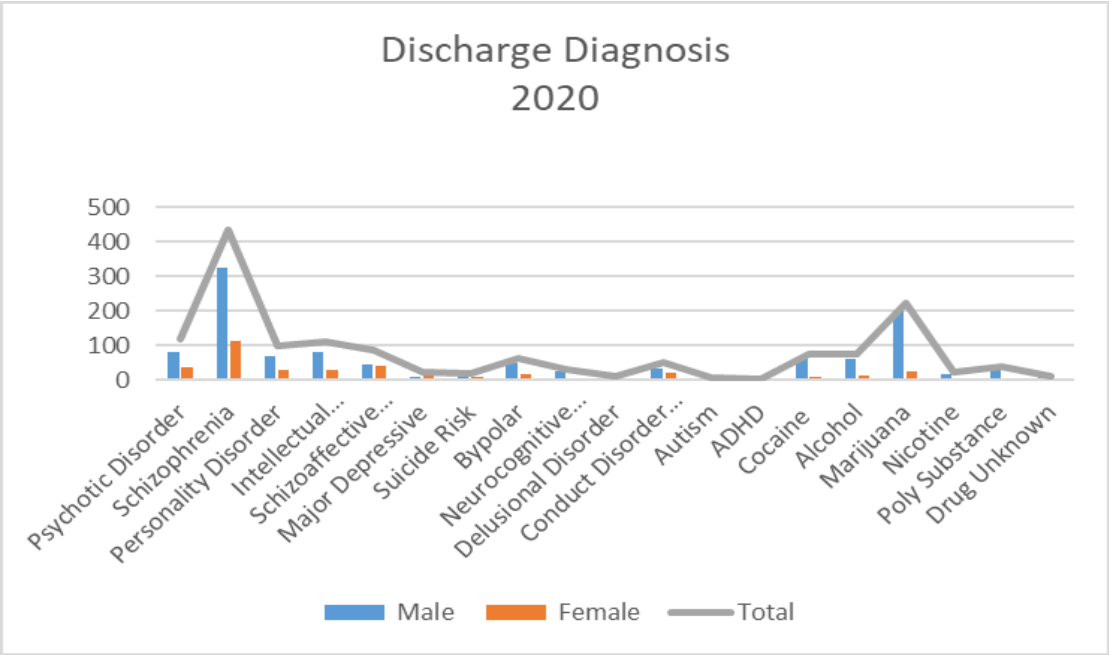



Figure 14: PH Discharge Diagnosis

# RESPONSE OF THE HEALTH SECTOR

## COVID-19

Like the rest of the world, Barbados has been fully engaged in the fight against the coronavirus - COVID-19. This disease was first detected in Wuhan, China and was reported to the WHO Country Office in China on 31 December, 2019. The outbreak was declared a Public Health Emergency of International Concern (PHEIC) by the WHO on 30 January, 2020. Following this declaration, the MHW stood up an Emergency Operations Centre (EOC) in partnership with the Barbados Defence Force (BDF), and gave oversight to the planning and response to the threat of COVID-19 to the country. Barbados has been monitoring the disease spread, intensifying surveillance and treating all confirmed cases during this time. Significant resources, both human and financial were dedicated to mitigating the impact of the coronavirus disease.

The response to COVID-19 in Barbados necessitated a whole of government and whole of society approach. The EOC provided and continues to provide strategic direction to the national response, and coordinates the input of all stakeholders: governmental, non-governmental, community based and private sector. Initiatives were supported and guided by amendments to relevant legislation; the development of proposals, plans and protocols; strengthening of systems to capture data for planning purposes and enhanced surveillance mechanisms. The MHW collaborated with the COVID Communication Unit and reported to a Cabinet Sub-Committee on COVID, as required. Initiatives included:

- The MHW utilised the diagnostic standard of Polymerase Chain Reaction (PCR) testing at the BDSPHL. Also employed was the use of Rapid Diagnostic Testing (RDTs) for the diagnosis of COVID-19 as an adjunct to testing processes. Protocols

and frameworks for clinical guidance were developed to support these mechanisms.

- Couriers were deployed for the transport of swabbing samples for testing.
- Swabbing facilities were established at the Grantley Adams International Airport (GAIA), Polyclinics, QEH and other remote locations i.e., Garfield Sobers Gymnasium.
- Significant emphasis was also placed on procuring the appropriate amounts of personal protective equipment (PPE), sanitising materials, testing supplies and other medical equipment (including ventilatory support) necessary for the execution of duties safely and effectively while providing optimal care. The PAHO supported the MHW by donating much-needed supplies and equipment.

Health professionals worked tirelessly to combat the COVID-19 pandemic using tried-and-tested public health methods for infectious disease surveillance and control. To complement these traditional methods and potentially augment the speed and efficacy of the public health workforce, digital technologies were harnessed that could aid in public health surveillance and contact tracing. To this end, the MHW implemented a comprehensive COVID-19 tracking and monitoring system by acquiring the required hardware, software and human resources.

## COVID Apps Development Project

The COVID apps programme was designed to put technology systems in place to effectively and securely manage Barbados' response to the COVID-19 global pandemic, advance Barbados' positive public health profile, help Barbados reopen its borders safely, efficiently and quickly, and promote Barbados as a model of small states' resiliency, responsiveness, recovery and innovation.

This was achieved through the development and deployment of the COVID Solution Suite, consisting of secure online resources, mobile apps, wristbands and public health information management systems:

- BIMSafe Mobile App
- BIMSafe Wristbands
- BioShield Mobile App
- SHAPE Application

**BIMSafe Mobile App:**

BIMSafe is a location and symptoms monitoring mobile app developed by the MHW to prevent the spread of COVID-19 in Barbados. It was intended for all passengers travelling from High-and Medium-Risk countries, and has several different features which adapt to these considerations. The app offers additional features, including:

- General information re: Barbados' COVID-19 status | quarantine, isolation, health centres.
- Linked to online ED forms & PCR test validation.
- Individual health-monitoring capabilities.

**BIMSafe Wristband:**

The Wristband is paired to the BIMSafe app and is used for geo-fencing individuals to an approved quarantine location. The bands were:

- Tamper-proof | tamper-resistant (to ensure individuals stayed where they should).
- Waterproof.
- Disposable.
- 14-day battery life (quarantine ran anywhere from 5 to 14 days during the review period).

- Barbados is branded with a scannable QR code linked to a unique user ID (for effective validation, tracking, tracing, self-monitoring and quarantine).

**BioShield Mobile App:**

BioShield is a contact-tracing app. The app automated public health officials' manual contact tracing process. It uses mobile phones to track visitors or nationals who agree to download BIMShield and keep it activated. The app respects individuals' privacy rights as required by the Apple-Google toolkit (AGT) and other credible COVID-19 contact tracing mobile app solutions.

**SHAPE Application:**

The SHAPE application is the data backbone of the COVID Solution Suite. This is where all data collected from the inter-related systems is stored and from which information is pulled. The Application offers the following components:

- Captures information digitally from the COVID-19 hotline and directs it appropriately.
- Captures PCR results from the BDSPHL and directs them appropriately.
- Digitises all paper-based GAIA Port Health passenger forms for ease of validation.
- Approved Accommodation Application backbone and digital interface.
- Digitally captures COVID-19 contact-traced information from patient interviews.
- Electronic medical record and bed management systems for COVID-19 quarantine public health management generally.

## Quarantine Facilities

Quarantine facilities fell into both public and private categories. There were government facilities at Paragon – 95 beds and St. Lucy District Hospital – 47 beds. The private sector represented an additional 30 beds, giving a total capacity of 172 beds classified for quarantine. Additionally, by mid-2020, there were four (4) hotels and several villas approved as quarantine facilities by the MHW in conjunction with the Barbados Tourism and Marketing Inc. (BTMI). Each property was required to follow the national protocols and guidelines set out in the Health and Safety Protocol for persons entering Barbados, and as supported by the Quarantine Act of Barbados. A Quarantine Facilities Manager was assigned by the MHW to oversee these processes.

## Isolation Facilities

Persons who tested positive from 12 July, 2020 were admitted to the dedicated isolation facility at Harrison Point, St. Lucy. The facility had a capacity for 140 persons, ranging from mild symptoms to those who required intensive care and ventilation support. The isolation centre continued to be managed by a team of healthcare professionals with expertise in infection control, pulmonary and intensive care. Surge capacity was available with staffing, equipment and auxiliary locations. From 12 July, 2020, the average length of stay was just under 10 days with the longest being 33 days and the shortest being 1 day. An Isolation Facilities Manager oversaw the processes of the Harrison Point facility.

From 15 September, 2020, self-isolation options were made available for positive COVID-19 patients at designated properties at their own expense. Asymptomatic cases who were deemed stable by the MHW were also permitted the option to request self-isolations at a designated isolation-hotel, isolation-villa or other government-approved isolation property.

## Monitoring Units

A COVID-19 Monitoring Unit was established to implement, monitor and assess public health and social measures with reference to this pandemic. This Unit provided extensive centralised sensitisation and training for workers in the private and public sectors and to business owners. The Unit also had responsibility for monitoring the effective execution of defined protocols and to relegate as required. Organisations included 1,500 taxi and transport workers; over 2,000 hotel workers; union members; jet ski operators; pleasure craft and water sport operators; supermarket chains; private offices; call centres; child care and senior citizens facilities; other government organisations; event promoters; barber shops and hair salons; minibus operations; villa managers and domestic workers.

The MHW strengthened its ability to monitor quarantine sites and relegate persons and entities in violation of the island's COVID-19 protocols with the establishment of a COVID Rapid Response Unit and a COVID Quarantine Engagement Unit. The Quarantine Engagement Unit was an expansion of the current COVID-19 Monitoring Unit and it functioned in two areas (i) working with guests regarding test results, as well as preparation for second tests and (ii) the adherence of protocols for persons in quarantine. This Unit comprised 30-40 persons, including Community Health Liaison Officers, tasked with overseeing the operations at quarantine hotels. The COVID-19 Rapid Response Unit comprised members of the Royal Barbados Police Force and the Barbados Defence Force to quickly address any challenges with compliance.

There were however, reports of numbers of persons and some establishments in breach of protocols particularly quarantining, breaking of curfew, social distancing and wearing of masks. Those regarding curfew, business operations and quarantine breaches would be placed before the law courts for adjudication.

## Health Promotion

With the emergence of the COVID-19 pandemic in the first quarter of 2020, the activities undertaken by the Health Promotion Unit focused on Risk Communication in response to the Pandemic. The Unit worked with the Health Emergency Operation Centre in response to the COVID-19 Pandemic, by assisting in the drafting, design and production of communication materials, the COVID-19 Dashboard and various COVID-19 related guidelines. Health Promotion also worked closely with the Government Information Service (BGIS) to draft daily updates for the public and press releases.

## National COVID-19 Hotline

The National COVID-19 hotline was created in response to the COVID-19 pandemic and started to function on 9 March, 2020. The hotline fielded general questions and concerns from the public, as well as persons calling to report symptoms. It was a 24-hour hotline and staffed by 15 full time operators, 7 days a week and augmented by volunteers who provided medical advice and support.

As the national response evolved, so did the function of the hotline. After the first diagnosed case, the hotline was instrumental in ensuring persons with symptoms had access to testing and medical emergencies. With the resumption of commercial flights, from July 2020, demand was generated for testing among those persons travelling, and the hotline became the main avenue for persons scheduling a test at the main testing site at Paragon and select polyclinics, including the Branford Taitt and Eunice Gibson Polyclinic in Warrens, St. Michael. The Hotline also became a focal point of access to testing for persons undergoing surgery (elective and emergency) at both public and private medical facilities.

The SHAPE application (Hotline Module) was used by the National COVID-19 Hotline since 1 September, 2020. SHAPE allowed for different levels of access to information and generated reports on the number of calls logged. The volume of calls received on the Hotline varied depending on what occurred with the national response at the time. On average, 240 calls per day were actioned on weekdays and 180 calls per day on weekends. Calls were received relating to the booking of tests (both visitors and residents), referrals for medical attention, travel protocols, planning of events, results queries, complaints, contact tracing and transport queries.

## Barbados Vaccination Strategy and Implementation Plan

In January 2020, the MHW developed a Vaccination Strategy and Implementation Plan. This strategy provided guidance on the implementation of Barbados' COVID-19 Vaccination Programme, and provided a framework which outlined how Barbados intended to design strategies for the deployment, implementation and monitoring of the COVID-19 vaccine(s). It would be used in conjunction with other guideline documents developed in-country and adapted from those developed by WHO/PAHO. The aim of the Vaccination Programme was to reduce morbidity and mortality in the population due to COVID-19, along with achieving herd immunity.

# PUBLIC HEALTH SERVICES

## Barbados Drug Service

The BDS is responsible for medication management as well as procurement. One of its roles is to ensure that the pharmaceuticals used on the island are safe, effective and well managed. The following responsibilities are under the BDS:

- The Barbados National Drug Formulary
- The Supply and Inventory Service
- The Supply Benefit Service (SBS)
- The BDS Pharmacy Service
- The Drug Inspectorate
- The Drug Information Centre
- Pharmacovigilance
- Administration and Financial Management

### Special Benefits Service

In the 2019/2020 Financial Year (FY), 102 Private Participating Pharmacies provided services to the Barbados Drug Service Special Benefits Service. 674,551 prescriptions were dispensed by the Private Participating Pharmacies (PPPs) under the SBS programme for a cost of $5,765,302.92. In the 2020/2021 FY, 105 private pharmacies provided special benefit services to the BDS with a total number of prescriptions done through the SBS of 660,473 at a cost of $5,995,891.49.

During the 2019-2020 FY, the BDS pharmacy service comprising 14 pharmacies located in 9 polyclinics, 3 out-patient clinics and 2 district hospitals dispensed 1,133,445 prescriptions at the cost of $8,420,446. The Pharmacy at the Psychiatric Hospital is not a BDS Pharmacy however, its drug budget comes from the BDS' drug allocations. The

Psychiatric Hospital dispensed 61,208 prescriptions at the cost of $973,378.44. The total number of prescriptions dispensed through the BDS pharmacies and the Psychiatric Hospital pharmacies for 2019-2020 was 1,194,653 for a cost of $9,224,536.53.

In 2020-2021, BDS government-owned pharmacies dispensed 958,245 prescriptions at a cost of $7,540,707.27, while the Psychiatric Hospital Pharmacy dispensed 63,999 prescriptions at the cost of $1,111,008.79. The total prescription count for the BDS pharmacies and the Psychiatric Hospital amounted to 1,002,244 at a cost of $8,651,715.76.

**Prescriptions for Medication - Disease categories with respect to public sector & private sector**

The public and private pharmacies are strategically located across the island to ensure easy access by all patients, and the locations allow patients to choose where to access the service. The average monthly prescription count for the FY 2019/2020 was 99,555 in the public sector compared to 55, 621 in the private sector. During the 2020/2021 FY, the average number of monthly prescriptions amounted to 83,520 in the public sector compared to 53,117 in the private sector. During the 2019/2020 FY, the BDS pharmacies filled 20,577 prescriptions from the QEH at a cost of $168, 274.90. For the FY 2020/2021, the BDS pharmacies filled 16,037 prescriptions originating from the QEH at the cost of $145,815.65. ***Table 36. Comparison of Prescription Activity by Benefit Category in the Private Sector for 2019/2020 & 2020/2021 Financial Years*** shows a breakdown of prescriptions filled according to disease categories within the private sector.

Table 36. Comparison of Prescription Activity by Benefit Category in the Private Sector for 2019/2020 & 2020/2021 Financial Years

| Benefit Categories | Prescription Volume | | Expenditure ($) | | % Change in Rx Volume | % Change in Expenditure |
|---|---|---|---|---|---|---|
| | 2019-20 | 2020-21 | 2019-20 | 2020-21 | | |
| **Hypertension** | 273,651 | 288,425 | $2,118,330.08 | $2,281,262.07 | 5.40 | 7.69 |
| **Diabetes** | 139,391 | 150,354 | $1,648,631.06 | $1,884,848.83 | 7.86 | 14.33 |
| **Glaucoma** | 44,021 | 40,692 | $535,252.95 | $450,387.44 | -7.56 | -15.86 |
| **Asthma** | 21,187 | 16,664 | $380,754.34 | $374,925.60 | -21.35 | -1.53 |
| **Cancer** | 6,494 | 4,227 | $228,400.30 | $178,218.40 | -34.91 | -21.97 |
| **Epilepsy** | 6,246 | 10,312 | $97,957.66 | $222,362.75 | 65.10 | 127.00 |
| **Total Benefit Rx** | **490,990** | **510,674** | **$5,009,326.39** | **$5,392,005.09** | **3.85** | **7.64** |
| **Total Non-Benefit Rx** | **183,561** | **149,799** | **$755,976.53** | **$603,886.40** | **-18.39** | **-20.11** |
| **TOTAL Benefit & Non-Benefit** | **674,551** | **660,473** | **$5,765,302.92** | **$5,995,891.49** | **-2.13** | **4.00** |

Analysis of the above table shows that during the year 2019-2020, spending on hypertension constituted the highest cost percentage of money spent per disease category in both the public and private sectors. This was followed by diabetes, asthma, glaucoma, cancer and epilepsy in that order. Of note, the private sector surpassed the public sector in only one disease prescription count, which was glaucoma. The private sector filled 43,538 prescriptions for glaucoma compared to 14,129 prescriptions in the government sector, which indicated that the private sector tripled the public sector in filling glaucoma prescriptions. This can be due to several reasons, including the fact that more ophthalmologists are in the private sector and that ophthalmologists can only prescribe some drugs, and since these drugs are so designated, they will likely be filled in the private sector.

Table 37. Total Volume and Cost of Prescriptions Dispensed in Public and Private Sectors 2010-2021

| Year | Public Sector | | | | | Private Sector | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Prescription (Rx)(a) | % | Expenditure ($) | % | Cost/ Rx | Prescription Rx | % | Expenditure ($) | % | Cost/ Rx | % Diff. in Rx Cost (pvt vs pub) |
| 2010-11 | 814,400 | | 12,451,937 | | $15.29 | N/A | | 34,574,833 | | N/A | N/A |
| 2011-12 | 1,083,082 | 33.0 | 11,765,288 | -5.5 | $10.86 | 879,104 | | 10,787,176 | -68.8 | $12.27 | 12 |
| 2012-13 | 1,206,351 | 11.4 | 13,481,501 | 14.6 | $11.18 | 864,335 | -1.7 | 10,639,956 | -1.4 | $12.31 | 10 |
| 2013-14 | 1,244,739 | 3.2 | 11,998,305 | -11.0 | $9.64 | 828,328 | -4.2 | 10,643,775 | 0.0 | $12.85 | 33 |
| 2014-15 | 1,198,187 | -3.7 | 12,444,809 | 3.7 | $13.64 | 841,221 | 1.6 | 10,619,933 | -0.2 | $12.62 | -7 |
| 2015-16 | 1,120,971 | -6.4 | 10,357,294 | -16.8 | $9.24 | 827,374 | -1.6 | 9,394,511 | -11.5 | $11.35 | 23 |
| 2016-17 | 1,221,568 | 9.0 | 10,408,527 | 0.5 | $8.52 | 808,991 | -2.2 | 9,103,411 | -3.1 | $11.25 | 36 |
| 2017-18 | 1,170,306 | -4.2 | 10,080,029 | -3.2 | $8.61 | 827,067 | 2.2 | 9,881,644 | 8.5 | $11.95 | 39 |
| 2018-19 | 1,116,447 | -4.6 | 8,830,556 | -12.4 | $7.91 | 649,363 | -21.5 | 6,464,335 | -34.6 | $9.95 | 26 |
| 2019-20 | 1,194,653 | 7.0 | 9,393,824 | 6.4 | $7.86 | 674,551 | 3.9 | 5,765,303 | -10.8 | $8.54 | 9 |
| 2020-21 | 1,002,244 | -16.1 | 8,651,716 | -7.9 | $8.63 | 660,473 | -2.1 | 5,995,892 | 4.0 | $9.08 | 5 |
| % Change over the last 2 FYs | -16% | | -8% | -100.0 | 10% | -2% | | 4% | | 6% | -43 |
| **Avg.** | **1,124,813** | **2.8** | **10,896,708** | **-2.9%** | **10.12** | **786,081** | **-2.3%** | **11,260,979** | **-10.7** | **$11.22** | |

Due to the introduction of the payment of dispensing fees by beneficiaries in the private sector from 2010 to 2011, significant declines continued to be seen in the private sector during 2015 to 2020. In the public sector however, the only significant increase in expenditure was seen in the 2012/2013 FY, with significant declines in the 2013/14 and 2018/19 FYs. The percentage difference between the private and public sectors in prescription cost and volume of prescriptions over the FYs 2019-2021 are detailed in ***Table 37. Total Volume and Cost of Prescriptions Dispensed in the Public and Private Sectors 2010-2021,*** above. In the 2019/2020 FY, the public sector experienced a 7% increase in prescription volume over the 2018/2019 year and a 6.4% increase in cost. On the other hand, the private sector experienced a 3.9% increase in prescription volume and a 10.8% decrease in cost over the 2018/2019 FY. For the 2020/2021 FY, the public sector prescription volume decreased by 16.1 % and the expenditure decreased by 7.9%. In comparison, the prescription volume in the private sector decreased by 2.1% and the expenditure increased by 4%. The average cost per prescription for the

2019/2020 FY decreased in both the private and public sectors compared to the 2018/2019 cost. In 2018/2019, the average cost to the BDS for a client who filled a prescription was $7.91 in the public sector and $9.95 for filling a prescription in the private sector. However, the cost declined to $7.86 in the public sector and $8.54 (a 10.8% difference) in the private sector in the 2019/2020 FY. The average cost per prescription for 2020/2021 increased over the 2019/2020 fiscal cost, whereas the average cost per prescription moved to $8.63 in the public sector and $9.08 in the private sector. For the Psychiatric Hospital, in 2020/2021, there was a 4.6% increase in prescription volume and a 14.1% increase in cost.

**Statistical Data for the BDS Pharmacies and the Psychiatric Hospital**

All the BDS operated Pharmacies except the Pharmacy at the St. Philip District Hospital showed decreased prescription volume. The Psychiatric Hospital Pharmacy also showed a 4.46% increase in prescriptions overall. When the cost to prescription volume is compared for the 2019/2020 period, the Winston Scott Polyclinic Pharmacy had the highest volume of prescriptions and the highest cost in 2019/2020, while the Psychiatric Hospital had the ninth highest volume of prescriptions and the fourth highest cost for a prescription. For 2020/2021, the prescription cost for the Psychiatric Hospital was the highest, while the prescription count was ninth overall for the volume of prescriptions. This analysis shows that the issues related to mental health need to be addressed in a careful, sustained and sensitive manner since the average cost of filling a prescription at the Psychiatric Hospital is almost double the cost for filing a cost for a prescription in the BDS pharmacies. ***Table 39. Prescription Count & Expenditure for Pharmacies, 2019-20 and 2020-21*** and ***Figure 15. Statistics on Prescription Count*** below are referred.

The decline in the prescription volume may have been due to the COVID 19 situation in the island, as more persons were reluctant to leave their homes. However, this is based

on anecdotal data. By the same token, more persons sought mental health services, which is reflected in the prescription count at the PH.

Table 38. Pharmacy codes

| Code | Pharmacy Name | Code | Pharmacy Name |
|---|---|---|---|
| **AND** | St. Andrew Out-Patients Clinic | **RAP** | Randal Phillips Polyclinic |
| **BLR** | Branford Taitt Polyclinic | **SIX** | St. Philip Polyclinic |
| **EDC** | Edgar Cochrane Polyclinic | **SPH** | St. Philip District Hospital |
| **GER** | Geriatric Hospital | **SWS** | Winston Scott Polyclinic |
| **GLE** | Glebe Polyclinic | **THO** | St. Thomas Out-Patients Clinic |
| **JON** | David Thompson Health & Social Services Centre | **WAR** | Eunice Gibson Polyclinic |
| **JOS** | St. Joseph Out-Patients Clinic | **PSY** | Psychiatric Hospital |
| **MBY** | Maurice Byer Polyclinic | | |

Table 39. Prescription Count & Expenditure for Pharmacies, 2019-20 and 2020-21

| Pharmacy | 2019-20 | | 2020-21 | |
|---|---|---|---|---|
| | RX COUNT | EXPENDITURE ($) | RX COUNT | EXPENDITURE ($) |
| **SWS** | 204,505 | 1,365,942 | 156,340 | 1,093,133.44 |
| **RAP** | 137,813 | 1,087,813 | 116,091 | 1,000,818.38 |
| **MBY** | 138,445 | 978,924 | 124,942 | 955,538.99 |
| **BLR** | 102,201 | 768,333 | 89,406 | 719,101.21 |
| **SIX** | 122,703 | 956,798 | 102,627 | 849824.38 |
| **GLE** | 90,487 | 730,124 | 75,908 | 648,166.31 |
| **WAR** | 104,516 | 729,056 | 97,475 | 714,486.61 |
| **EDC** | 94,882 | 708,629 | 86,432 | 773,903.77 |
| **JON** | 60,403 | 406,595 | 58,032 | 417,289.11 |
| **JOS*** | 5,751 | 43,288 | 0 | 0.00 |
| **AND*** | 10,368 | 77,799 | 0 | 0.00 |
| **GER** | 36,316 | 231,061 | 30,395 | 224,413.78 |
| **THO** | 13,739 | 96,579 | 8,830 | 64,144.63 |
| **SPH** | 11,316 | 239,505 | 11,767 | 79,886.66 |
| **SUB-TOTAL** | **1,133,445** | **8,420,446** | **958,245** | **7,540,707.27** |
| **PSY** | **61,208** | **973,378** | **63,999** | **1,111,008.49** |
| **TOTAL** | **1,194,653** | **9,393,824** | **1,002,244** | **8,651,715.76** |

***NB**: *St. Andrew and St. Joseph outpatient pharmacies were closed during the period*

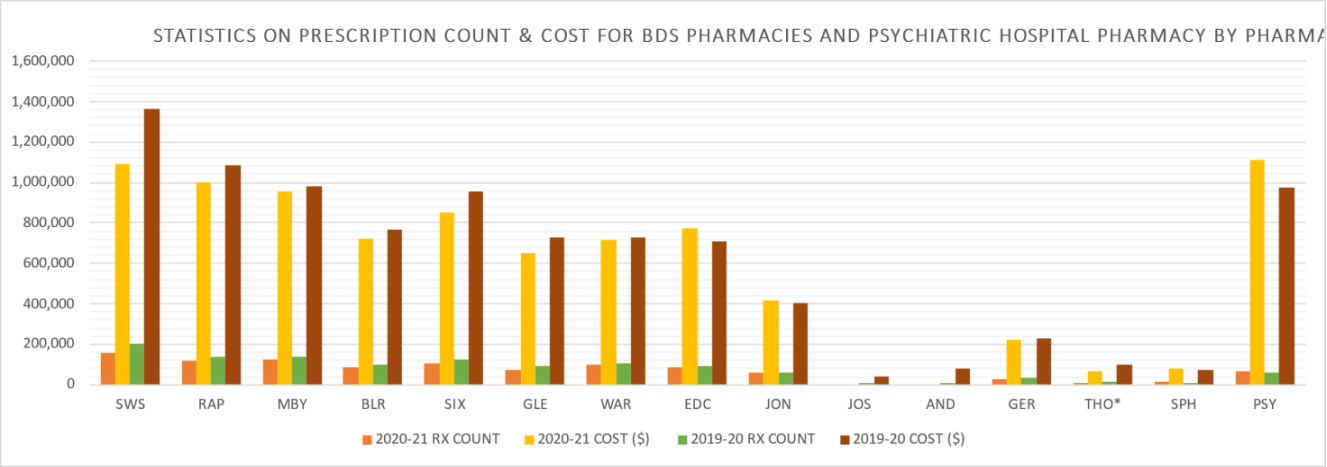



Figure 15. Statistics on Prescription Count

## Pharmacovigilance

Pharmacovigilance involves monitoring of adverse drug reactions. During the fiscal year 2019/2020, the BDS received 98 reports and during 2020-2021, 130 reports were received. The reports are represented in ***Table 40. Pharmacovigilance Reports, 2020-2021***, below.

Table. 40: Pharmacovigilance Reports, 2020-2021

| Reporter | 2019 -2020 Count | 2020-2021 Count |
|---|---|---|
| **Physician** | 40 | 45 |
| **Pharmacist** | 44 | 37 |
| **Other/ professionals** | 9 | 29 |
| **Consumers** | 5 | 19 |
| **Total** | **98** | **130** |

During the years under review, the major reports were for medicines used to treat hypertension – 54%; followed by diabetes - 25%; 9% for 1 lipid lowering drug; 7% for aspirin; and 5% for 1 injection used for mental health challenges. In 2019-20, the Pharmacovigilance (PV) department of the BDS conducted one public lecture, one continuing education session for pharmacists on medication errors, a sensitisation exercise for the third and fourth-year pharmacy students from the BCC, and an orientation exercise organised for the Human Resources Department of the QEH for 60

Nurses. In 2020-2021, the PV department conducted similar outreach activities as was done the previous year, except for the public lecture. In addition, a presentation was made to the MHW team responsible for vaccine surveillance and members of the Barbados Association of Medical Practitioners (BAMP). In both years, the department took an active part in “Med Safety '' week, which was in association with Upsalla, monitoring centre.

## The Drug Information Centre

The Drug Information Centre processes Category B drug applications and relay drug approvals. Category B drugs are not full formulary items; they are made available to patients who need drugs which are not on the national formulary to manage their disease conditions. In this category of drugs, the BDS spent a total of $1,016,225.95 in the 2019/2020 FY and $1,871,750.66 in the 2020/2021 FY. There were 3,226 Cat B forms processed.

## Drug Inspectorate

The Drug Inspectorate Department provides the quality assurance linkages between the BDS, MHW and the public. It collaborates with the Barbados National Standards Institute (BNSI), the Barbados Medical Cannabis Licensing Authority (BMCLA), the National Council of Substance Abuse (NCSA) and other bodies. The main aim of the inspectorate department is to function as a quality assurance check with respect to medicines, psychoactive substances and poisons. There is also a growing and pressing need to collaborate with the Customs department and the Barbados Postal Service to ensure that illegal drugs are kept out of the Barbadian market, and that medicinal items entering are safe for human consumption. In addition to the above functions, the inspectorate oversees the inspection of pharmacies for the Barbados Pharmacy Council to ensure that pharmacies are regulated and stay within the ambient of the Pharmacy Act.

# Health Promotion

The Health Promotion Unit (HPU) functioned primarily in a supportive role to the various programmes of the Ministry, in particular Non-Communicable Diseases, Environmental Health, Primary Care, Mental Health, Communicable Diseases, Infection Control and Drug Service, to promote risk reduction through healthy lifestyles and wellness. Some of the strategies used in health promotion included health education, risk communication, creation of supportive environments, community empowerment and building alliances with non-health sectors.

During the calendar years 2019 and 2020, the HPU focused on producing and disseminating health promotion materials, public education and awareness, community outreach, and the promotion of the Wellness initiative through the National Task Force on Wellness (NTW). One of the activities continued by the NTW in 2019 and 2020 was the hosting of the free Monthly Barbados Moves Wellness Hikes. The hikes which attracted between 200 and 400 participants, promoted physical, intellectual and social wellness, and were held in a different parish each month. On Independence Day of 2019, the NTW took the opportunity to participate in the Independence Day Float Parade, during which they displayed and disseminated information on the eight dimensions of wellness and risk reduction for NCDs. In the first quarter of 2020, the Task Force hosted a number of Wellness activities in collaboration with the "We Gatherin' Initiative". In January 2020, a half day event was hosted at the St Lucy Parish Church, which included an early morning community walk, a healthy cooking demonstration, health screening, guided workouts and education on wellness for the public. In February 2020, the Task Force focused on promoting healthy nutrition,

physical activity and good hygiene at Agrofest. Talks on Emotional Wellness for children were also hosted at select schools in February. In March 2020, the NTW hosted a Family Fun Day in St Thomas, which offered a variety of physical activities and health education in collaboration with Civil Society Organisations such as the Heart and Stroke Foundation, the Diabetes Foundation and the Healthy Caribbean Coalition. There were also opportunities for entrepreneurs to display their wellness related products. After the advent of the COVID-19 pandemic, the NTW used its social media presence through Facebook and Instagram, to engage the public with the 'three-for-thirty' fitness challenge.

Other community outreach activities were facilitated by the HPU during the calendar years 2019 and 2020, as the Unit responded to requests from various organisations or sought to help the promotion of healthy behaviours related to the Ministry's Calendar of Health Events. At the Small Island Future Fest which was held at the Pelican Craft Village in June 2019, the HPU coordinated a number of activities, which included demonstrations of healthy recipes for schoolchildren, education on safe food and water storage during natural disasters, education on mosquito and rodent control, and the display of the Barbados Defence Force Field Medical Facility.

In 2019, the HPU in collaboration with the National Infection Control Committee coordinated a one-week multi-media campaign around World Hand Hygiene Day, which increased awareness and promoted good hand hygiene practices among the Barbadian public. A hand hygiene exhibition was held in Bridgetown, which facilitated demonstrations, education and product distribution. The QEH, polyclinics and other health care institutions also participated in-house by doing their own promotion of hand hygiene. Pharmaceutical companies collaborated with the Ministry to provide samples

and promotional items for the public and health staff. The impactful campaign was promoted through print, radio, television and social media.

The Ministry's Workplace Wellness Programme continued to facilitate free guided physical activity for staff. These aerobics and line dancing classes were provided five days per week and were held at the Winston Scott Polyclinic, the Branford Taitt Polyclinic and the Barbados Drug Service. With the onset of the COVID-19 pandemic in 2020, the aerobics classes were being held virtually or at the Deacons Basketball Court where appropriate distancing was possible. The classes were financed and promoted through the HPU.

The Health Promotion Unit continued to work with technical officers of the various departments of the Ministry and created content for materials which were produced in partnership with private production companies, graphic and performing artists, and the Barbados Government Information Service. Information was shared as voice ads via radio, videos for television, videos and posters for social media, and ads and posters for print media. The areas promoted throughout the period under review included awareness and risk reduction for NCDs, mental health awareness, the safe use of prescribed medication, treatment protocols for severe acute respiratory illness and influenza-like illness, mosquito eradication and COVID-19.

## Best-dos Santos Public Health Laboratory

The laboratory serves as the island's main public health laboratory providing routine testing services to all polyclinics and some private clinics. Along with this, the laboratory offers reference laboratory services to private laboratories, as well as services for other regional laboratories, clinics and programmes. The Laboratory has four (4) main Departments: the Serology Department, the Clinical Microbiology Department (including TB, Enterics and Parasitology), Molecular Diagnostics and Immunology Department and the Environmental Department (water, food and air testing). The BDSPHL supported several programmes and departments in the MHW in disease prevention, monitoring and surveillance, such as the Maternal and Child Health Programme, the HIV/AIDS Programme, Global Salmonella Surveillance Programme and food safety and outbreak investigations. Support was also provided to the Ministry of Labour, the Ministry of Environment and National Beautification (Environmental Protection Department) and the Ministry of Energy and Water Resources (Barbados Water Authority - BWA).

From February 2020, the BDSPHL was the main laboratory for COVID-19 PCR testing during the COVID-19 pandemic. For the year 2019-2020, the laboratory screened all of the pregnant mothers who attended the Maternal and Child Health clinics. Testing included STI's (HIV, Venereal Disease Research Laboratory test (VDRL), Chlamydia and Gonorrhoea), and other screening tests such as streptococcus B screening. These conditions, if present, could be transmitted to babies and cause complications during pregnancy.

Through the measurement of HbA1c, the laboratory continued its monitoring system for NCDs in collaboration with the polyclinics. The laboratory continued to play a significant role in the testing of potable, marine, recreational and wastewater across the

island to ensure the drinking and bathing waters are safe for residents and visitors. It also supports other sectors, including hotels with water testing for compliance.

The laboratory has collaborated with many regional and international organisations including the Caribbean Public Health Agency (CARPHA), PAHO/WHO and Centre for Disease Control (CDC). Several programmes were initiated and strengthened, including testing for HIV, Dengue, Zika, Chikungunya, Malaria, TB, Influenza, COVID and Antimicrobial Susceptibility. The laboratory supported the Canadian Farm Labour Program by providing annual blood screening of individuals travelling to Canada. Several monitoring tests were also performed for the national HIV/AIDS Treatment and Care Program. This included CD4, HIV Viral load and HIV drug resistance testing.

The Laboratory performed more than 178,000 tests in 2019 and in excess of 222,000 tests in 2020 (**see Tables. 41 to 44** below). However, during 2020 some of the usual laboratory services were hampered due to the COVID-19 pandemic.

Table 41. Number of Tests Performed - Serology Department

| Serology Department | 2019 | 2020 |
|---|---|---|
| | Number of Tests | Number of Tests |
| **Chikungunya** | 227 | 594 |
| **Dengue Fever** | 768 | 1,190 |
| **Hanta Virus** | 507 | 513 |
| **HbA1c** | 6,536 | 5,303 |
| **Herpes Simplex Virus** | 1,132 | 1,097 |
| **IFA** | 232 | 171 |
| **Leptospirosis** | 247 | 362 |
| **Parvovirus B19** | 83 | 268 |
| **Rhuematoid Factor (RF)** | 160 | 82 |
| **Syphilis (RPR)** | 14,007 | 11,169 |
| **Zika** | 79 | 90 |
| **Total** | **23,978** | **20,839** |

Table 42. Number of Tests Performed - Microbiology Department

| Microbiology Department | 2019 | 2020 |
|---|---|---|
| | Number of Tests | Number of Tests |
| Swabs (Genitals, Wounds, Eyes, Ears, Nose, Throat) | 96,745 | 69,783 |
| Stools (Occult blood, Noro & Rotavirus, OCP, C. difficile, E.coli 0157, Staph. Aureus | 11,204 | 13,165 |
| Salmonella Serotyping | 10,800 | 8,550 |
| Shigella Serotyping | 224 | 280 |
| Campy Identification | 1,258 | 1,369 |
| AMR Testing | 3,717 | 13,608 |
| Malaria | 120 | 201 |
| TB | 358 | 454 |
| Fungal Testing | 56 | 120 |
| Total | **124,402** | **10,7530** |

Table 43. Number of Tests Performed - Molecular Diagnostics & Immunology Department

| Molecular Diagnostics & Immunology Department | 2019 | 2020 |
|---|---|---|
| | Number of Tests | Number of Tests |
| CD4 | 1,785 | 0 |
| Viral Load | 2,808 | 1,695 |
| DNA PCR | 107 | 57 |
| CT/NG | 6,550 | 5,472 |
| Human Papillomavirus | 805 | 197 |
| Drug Resistance | 2 | 0 |
| Dengue | 229 | 672 |
| Chikungunya | 229 | 672 |
| Zika | 229 | 672 |
| Cytomegalovirus | 121 | 192 |
| Epstein Barr Virus | 120 | 200 |
| H1N1 | 327 | 236 |
| Herpes Simplex Virus | 109 | 155 |
| Adeno Virus | 79 | 92 |
| COVID 19 | 0 | 70,996 |
| Total | **13,500** | **81,308** |

Table 44. Number of Tests Performed - Environmental Department

| Environmental Department | 2019 | 2020 |
|---|---|---|
| | Number of Tests | Number of Tests |
| Water Quality | 15,126 | 10,220 |
| Air Quality | 540 | 664 |
| Food Micro | 657 | 1,665 |
| Legionella Test | 565 | 677 |
| Total | **16,888** | **13,226** |
| | | |

# Polyclinics

## Family Health

The public of Barbados may access primary health care services at nine (9) polyclinics across the island. The polyclinics serviced a total of 279,465 and 243,403 encounters (visits) for the years 2019 and 2020 respectively. The Polyclinics offered services inclusive of general practice, reproductive health, child health, wound care, women's health, podiatry, physiotherapy, dental health and nutrition counselling. The General Practice (GP) service catered to the clinical management of persons needing medical care. Services ranged from management of persons with NCDs to the issuing of back-to-school certificates for children.

With respect to the Extended Hours Services, July 2019 marked the discontinuation of the Fast Track Service at the Winston Scott Polyclinic (WSPC) and the commencement of the WSPC – 24 Hours Clinic. As seen in ***Figure 17. Patient Encounters in Extended Hours*** below, the WSPC – 24 Hours Clinic for the 6 months of 2019 since opening, had 4 times the number of patient encounters than that of the Fast Track Service for the first 6 months of 2019. The high utilisation of the 24 Hours Clinic as indicated by the number of patient encounters suggests that this intervention addressed previously unmet needs and brought value to the health care system.

As seen in ***Figure 16. Patient Encounters by Clinic*** below, there was a notable decline in patient encounters at all Polyclinics in 2020 with the exception of the WSPC. The year 2020 saw the commencement of the COVID-19 Pandemic, and the subsequent implementation of COVID-19 prevention and control measures such as national lockdowns and reconfiguration of health centres, to address new health needs resulting from the Pandemic. During the first lockdown in April 2020, utilisation at the Polyclinics decreased to 35% of that seen in January 2020.

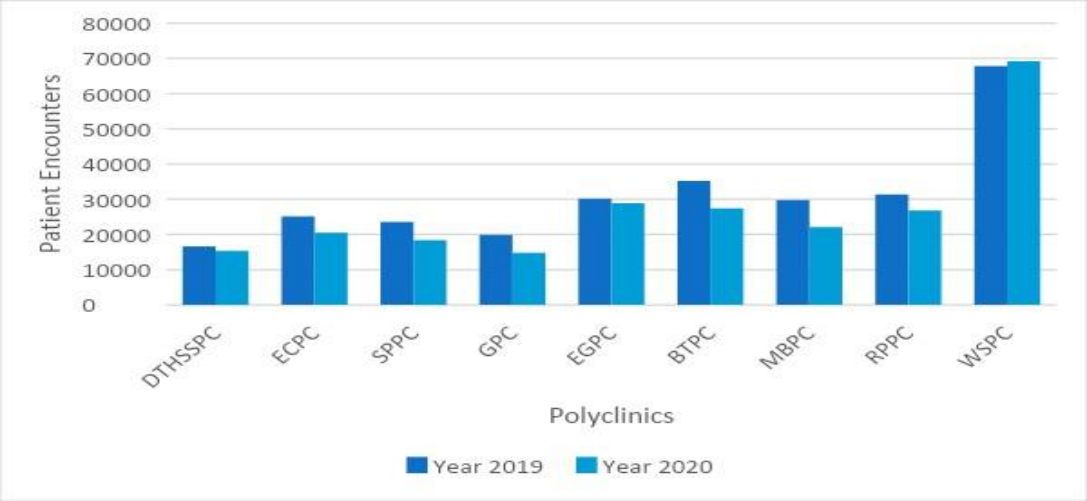



Figure 16: Patient Encounters by Clinic

The COVID-19 Pandemic had a significant impact on the Barbadian health care system. The MHW through intersectoral collaboration made preparations to create sufficient capacity to accommodate a surge of cases associated with each variant, which resulted in widespread deferment of scheduled appointments and non-urgent care (walk-ins). Patterns of healthcare-seeking behaviour changed, with a reluctance to visit healthcare settings. In combination, the pandemic noticeably affected the management of chronic NCDs. The pandemic also prevented many specialty and auxiliary services, especially podiatric care. Customary outreach programmes and community home visits (wound care and clinical assessments) were also suspended. Community work was now focused on contact tracing associated with COVID-19.

Extended hours services at the Maurice Byer and Randal Phillips Polyclinics were suspended owing to the inability to manage both routine cases and suspected COVID-19 cases at the same time, due to the limited staff complement after hours. This explained the significant decrease in patient encounters for the Extended hours services at the Maurice Byer and Randal Phillips Polyclinics in 2020 as shown in ***Figure 17***. The WSPC – 24 Hour Clinic however, continued to function and provided routine primary care, stabilisation of critically ill patients, NCD support, management of trauma cases, and the diagnosis and management of COVID-19 positive persons.

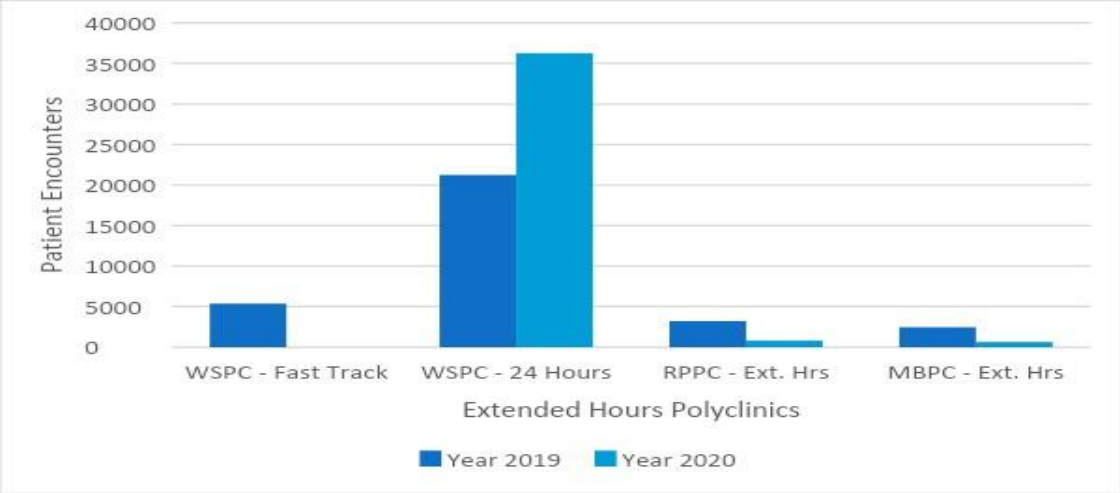


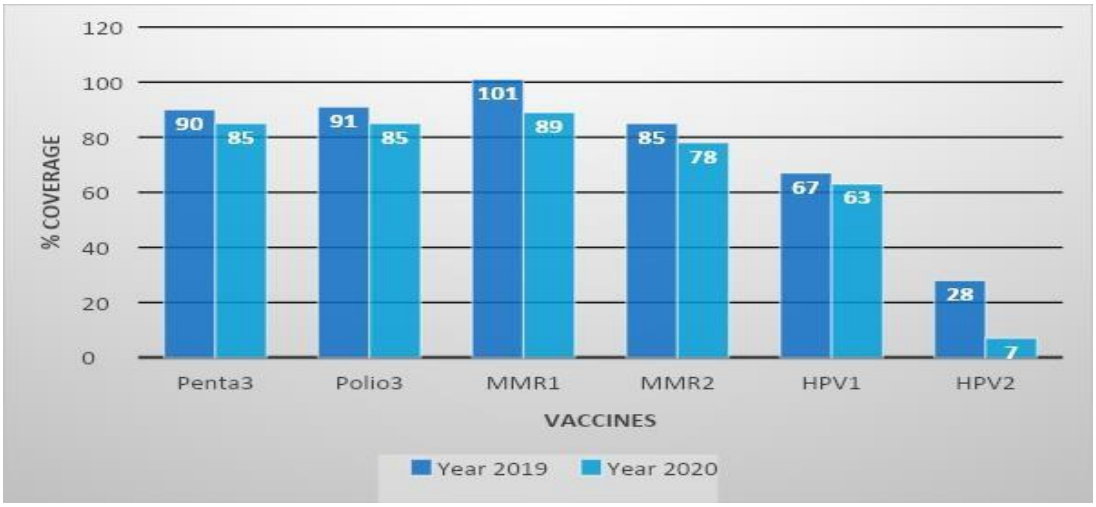

Figure 17: Patient Encounters in Extended Hours

There were substantial declines in a wide range of healthcare activities routinely offered by the Polyclinics due to the impact of the COVID-19 pandemic. Many challenges pertaining to the current methods of delivery of health care services have been highlighted by the Pandemic, as well as the need for changes to allow for more diversity and resilience in our service delivery. The implications of these changes and the indirect impact of COVID-19 will require intense efforts to improve service delivery and modification of health seeking behaviours.

## Immunisations

### Expanded Programme on Immunisation

The MHW continued to offer immunisations against vaccine-preventable diseases to both children and adults in Barbados. No confirmed cases of measles, mumps, rubella, polio, tetanus or pertussis were recorded for 2019 or 2020. As shown in ***Figure 18. Vaccine Coverage 2019 and 2020*** below, the vaccine coverage of primary vaccines in 2019 as was seen in previous years was high, where in 2019 coverage ranged between 90 to 101 percent. The first dosage coverage of Human Papillomavirus (HPV) vaccine was similar to that seen in 2018. Unfortunately, the return of the 11-year-olds for the second dose continued to be a challenge, with only one-quarter of the cohort receiving the full course of vaccine.




Penta - diphtheria, tetanus, pertussis, hepatitis B, haemophilus influenza type B; MMR - measles, mumps, rubella

Figure 18. Vaccine Coverage 2019 and 2020.

Since the declaration of the COVID-19 Pandemic by WHO on 11 March, 2020 and the subsequent implementation of COVID-19 prevention and control measures such as national lockdowns, a reconfiguration of health centres was carried out to implement required precautionary measures. This was also done to address new health needs resulting from the Pandemic. Despite efforts to maintain essential primary care services such as primary immunisations for children under five; attendance to these services were significantly impacted with a resulting reduction in the vaccine coverage of primary vaccines in 2020; where in 2020, coverage ranged between 85 to 89%. This is well below the target coverage of 95%.

**Measles**

In 2019, coverage for MMR1 was 101% and MMR2 dropped to 85% in 2020. As seen in previous years, the second MMR dose never reached the required 95% coverage. At this age, children are away from home at pre-school and school, and most mothers are back to work, making immunisation activities less convenient for parents than it was in the child's first year of life. This led to a number of children defaulting from this vaccine. The decreasing trend in coverage in 2020 of 89% and 78% for MMR1 and MMR2

respectively, is again a result of ongoing challenges to routine immunisation programmes resulting from the effects and interventions of the COVID-19 Pandemic.

The Region of the Americas lost its Measles free certification in 2018 due to the circulation of measles in Venezuela. Barbados still holds its accreditation as a measles-free country, and has ensured the sustainability of this certification by implementing interventions to:

i. Maintain high quality, elimination-standard surveillance and ensure timely and effective outbreak response measures to any measles or rubella virus importation.

ii. Achieve high population immunisation coverage against measles and rubella (>95%) in all municipalities.

iii. Improve the quality of vaccination data collection and analysis.

The COVID-19 Pandemic has significantly impacted routine immunisation programmes with a resulting decline in coverage for the primary childhood vaccines. All efforts will be required to restore gains made in previous years and to improve coverage.

## Oral Health

In 2020, activities in the dental service were reduced to emergencies only during the COVID-19 national lockdown periods and for some time after. In order to make the environment safer, certain equipment was required:

i. Extra oral suction units – to minimise the spread of aerosols from the drills and cleaning instruments.

ii. High-volume suction/evacuation for each chair – again to reduce the spread of viral particles in the aerosol spray from the instruments. This piece of equipment was still to be installed at the Branford Taitt Polyclinic.

iii. Personal Protective Equipment (isolation gowns, KN95 masks and face shields) for the protection of the staff.

When clinics resumed, it was necessary to reduce crowding in the waiting areas by asking patients to arrive at their appointment times. Appointment times were spaced so that in addition to the usual sanitisation of the operatory, the waiting area could be sanitised also. This resulted in a reduction of the number of patients seen per day. Walk-ins were discouraged and usually were not allowed in the building. Some dental clinics were closed due to the close proximity of the COVID-19 testing area to the dental operatory, as dental patients and staff were not allowed in the vicinity. In these situations, the dental staff were instructed to assist the nurses and polyclinic staff with the additional work related to COVID-19.

Due to staff shortages, dental operators were assigned to two or more clinics. During this time, services were suspended at those clinics which had equipment issues and problems, and the staff re-assigned to other clinics. During 2020, four clinics were functioning – Winston Scott, Edgar Cochrane, Glebe and St. Phillip polyclinics. ***Table 45. Summary of Dental Services, 2019 and 2020***, below shows the differences in oral health clinic services to the public over the two years.

Table 45. Summary of Dental Services, 2019 and 2020

| | 2019 | | 2020 | |
|---|---|---|---|---|
| | Children | Adults | Children | Adults |
| | Age 4-18 | Age >18 | Age 4 - 18 | Age >18 |
| **Attendance** | 9,202 | 2,828 | 665 | 273 |
| **Extractions** | 1,076 | 2,851 | 113 | 260 |
| **Fillings** | 3,463 | - | 389 | - |
| **Prophylaxes** | 5,665 | - | 467 | - |
| **Root Canals** | 1 | - | 1 | - |

# National Nutrition Centre

During the period 2019-2020, the National Nutrition Centre (NNC) continued providing nutrition services at the nine (9) polyclinics on the island and the surrounding catchment areas. Technical support was provided to three (3) of the four (4) District Hospitals, in addition to the Advisory and Inspection Committee. Efforts were also initiated, to produce a Healthy Eating Guide for Barbados and a National School Nutrition Policy.

## Staffing

At the start of 2019, the NNC had its full professional staff complement of ten (10). This included the Nutrition Officer, Assistant Nutrition Officer and eight (8) Community Nutrition Officers (CNOs). However, by the end of the first quarter of 2020, NNC had permanently lost three (3) nutrition professionals, due to retirement and leave. Three (3) of the four (4) Community Health Aide posts remained assigned to the department.

## Community Nutrition

Routine services provided by NNC were maintained. These included nutrition counselling services provided by CNOs assigned to the various polyclinics across Barbados, and were services mostly offered following referral. In addition to nutrition counselling, CNOs provided professional support for polyclinic initiatives, community events and national nutrition programs. ***Table 46. Report on Nutrition Counselling 2020***, below provides a summary of nutrition counselling services provided for the 2020 period.

Table 46: Report on Nutrition Counselling in 2020

| Disease/Condition | FV | | RV | | Total |
|---|---|---|---|---|---|
| | M | F | M | F | M/F |
| DM | 36 | 32 | 28 | 42 | **138** |
| DM/HTN | 58 | 65 | 51 | 89 | **263** |
| DM/HTN/CHOL | 40 | 54 | 49 | 93 | **236** |
| DM/Obese/Overweight (Owt.) | 42 | 69 | 50 | 139 | **300** |
| DM/HTN/Obese | 50 | 119 | 88 | 271 | **528** |
| DM/Obese/CHOL | 5 | 11 | 5 | 19 | **40** |
| DM/HTN/Obese/CHOL | 66 | 118 | 113 | 356 | **653** |
| DM/CHOL | 6 | 8 | 6 | 11 | **31** |
| HTN | 75 | 120 | 114 | 307 | **616** |
| HTN/CHOL | 76 | 123 | 124 | 338 | **661** |
| HTN/CHOL/Obese | 76 | 149 | 144 | 463 | **832** |
| HTN/Obese/Overweight | 100 | 200 | 168 | 578 | **1046** |
| CHOL | 103 | 177 | 162 | 510 | **952** |
| CHOL/Obese | 84 | 188 | 167 | 543 | **982** |
| Obese/Overweight | 88 | 215 | 175 | 617 | **1095** |
| Other | 199 | 469 | 272 | 1114 | **2054** |
| 0-5 years Underweight | 16 | 460 | 22 | 331 | **829** |
| 0-5 years Obese/Overweight | 4 | 12 | 94 | 772 | **882** |
| 0-5 years Other | 160 | 3 | 2 | 0 | **165** |
| 5-19 years Underweight | 4 | 3 | 2 | 764 | **773** |
| 5-19 years Obese/Overweight | 32 | 78 | 279 | 321 | **710** |
| 5-19 years Other | 2 | 3 | 1 | 0 | **6** |
| **Total** | **1,322** | **2,676** | **2,116** | **7,678** | **13,792** |

## Nutrition Surveillance 0-5 Year Olds

The NNC continued to experience challenges with the nutrition surveillance programme. This occurred since previous resources used to facilitate the surveillance programme in earlier years were no longer available and alternative resources had not been identified. Therefore, Community Health Aides assigned to this programme, continued duties in the maternal and child health clinics but surveillance of the referenced population could not be facilitated.

## Outreach Activities

The NNC continued to facilitate requests for professional support with nutrition presentations being the most common requests. In some instances, the staff initiated

the outreach community activities, see ***Figure 18. Types of Activities – NNC 2019-2020***, below.

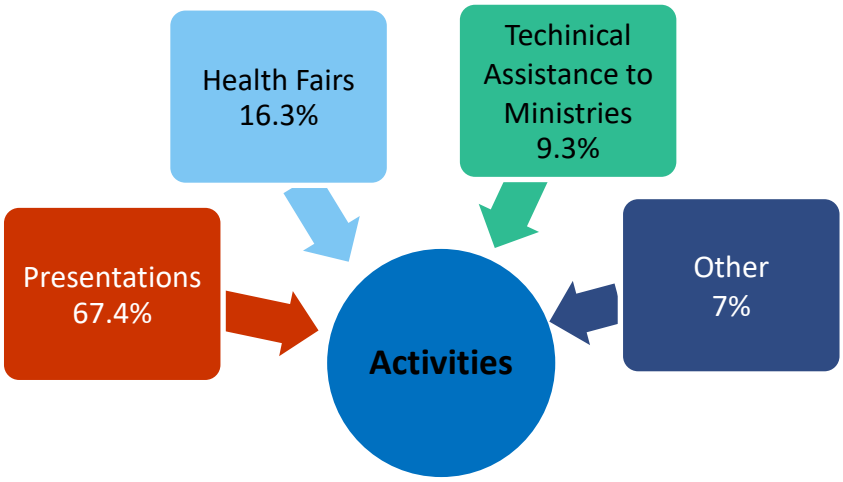



Figure 19: Types of Activities - NNC 2019-2020

**District Hospitals**

During the period under review, the NNC continued to provide technical nutrition services to the District Hospitals. This service was provided by the Assistant Nutrition Officer and included inspections of the dietary departments, clinical nutrition support and nutrition education. Other work undertaken included the update and development of reference material.

**Private Nursing Home Inspection**

The NNC in response to a request from the Advisory and Inspection Committee, assigned CNOs to assist the committee with nutrition inspections for the nursing homes covered under the programme. In collaboration with the programme coordinator, CNOs visited and inspected assigned nursing homes and undertook the duties needed to facilitate licensure.

**Healthy Eating Guide/National School Nutrition Policy**

In 2020, the NNC in collaboration with nutrition professionals across several government departments drafted the Healthy Eating Guide for Barbados. Later, efforts were directed to the development of a National School Nutrition Policy. With the support of the MHW and PAHO, a stakeholder's consultation was hosted along with follow-up meetings to guide the preparation of the policy document.

**Limitations**

The 2019 relocation, staffing shortages and changes related to the COVID-19 pandemic, led to setbacks in the national nutrition programme. This resulted in cancellations or changes for some major activities. Staffing shortages affected the frequency of nutrition services within the polyclinics, with most polyclinics experiencing a reduction in the frequency of services. In 2020, the emergence of the COVID-19 pandemic briefly affected staffing, as some nutrition professionals were enlisted to assist with contact tracing. In addition to this, the reassignment of some nutrition office spaces to house duties related to the COVID-19 pandemic, led to a shift from face-to-face nutrition services in some instances and the provision of remote nutrition services.

# Environmental Health Department

## Food Safety

The MHW's food safety goal is to ensure that only wholesome food reaches the population, thereby reducing the burden of food borne illnesses. Food safety refers to the handling, storing and preparation of food in a manner that prevents food borne illness. Food Safety breaches can result in major public health events and as such, the MHW as the competent authority and enforcement agency for food safety has the greatest synergies of competencies, qualified staff and skill sets to respond to human health issues that may arise from food safety breaches in Barbados.

The Environmental Health Department's comprehensive food safety programme includes the inspection and monitoring of food service establishments according to the Health Services Act 1969. In addition, the application of the principles of good manufacturing practices, Hazard Analysis Critical Control Point (HACCP) practices, and an appropriate level of food safety training for food service managers and food service employees are also required. Training was conducted in Food Hygiene at various food establishments as well as within the Ministry of Health Training Unit, with 103 in 2019 and 41 persons in 2020 being trained in food safety.

The Department continued the inspection, licensing and monitoring of food services and other business establishments under the Health Services Act 1969. Food service establishments were inspected and monitored to ensure that food served to the public was wholesome and fit for human consumption. Between 2019 and 2020, there was a decrease in applications for businesses. Food service establishments accounted for 75% of the businesses registered with the department, which include restaurants, supermarkets, minimarts, bars, community shops, stalls and street food vendors. The

other businesses include hairdressing salons, lodging houses and barracks, funeral establishments, hotels and recreational water establishments. ***Table 47. No. of Business Applications and Licences Issued***, below shows the percentage of licences issued by the Department. The COVID-19 pandemic impacted negatively, with the percentage of licences issued between 2019 and 2020 reducing by 16%.

Table 47. No. of Business Applications and Licences Issued

| Businesses | 2019 | 2020 |
|---|---|---|
| **No. of Applications Received** | 6,819 | 5,727 |
| **No Licences Issued** | 4,948 | 3,294 |
| **Percentage of Licences Issued** | 73 | 57 |

During the year 2019, the Environmental Health Department continued to ensure that wholesome foods were served at national events such as the Oistins Fish Festival, the Holetown Festival and during the Crop-Over season, through education and their physical presence at locations. However, due to the COVID 19 pandemic none of these events were held in 2020.

The Department continued to face challenges with inspections and monitoring of businesses due to an approximately 25% reduction of staff due to attrition and retirement. In an effort to ensure good practices were maintained, the department engaged in teamwork to provide coverage in all areas.

The Environmental Health Department continued to collaborate with the Ministry of Agriculture and Food Security (MAFS) regarding the implementation of a modernised nationally and internationally recognized Agricultural, Health and Food Safety Control (AHFC) system.

## Vector Control

The control and prevention of arbovirus diseases such as Dengue fever, Zika and Chikungunya continued with the adaptation of an Integrated Mosquito Vector Management Programme. There were increased inspections of premises, increased community outreach, as well as education. Emphasis was placed on source reduction by removing containers that had the potential to breed mosquitoes, fogging to destroy adult mosquitoes, and the use of alternative compounds for the treatment of larvae. The programme continued to involve other government agencies, the private sector, civil society and communities to effectively manage the environment to break the transmission of Dengue fever, Chikungunya and the Zika viruses. The Ovitrap programme continued to provide monitoring at the points of entry to detect the presence of the *Aedes aegypti* mosquito and other species. An ovitrap is a tool used to measure the circulation of Aedes mosquitoes in relation to time and location. In addition, fish were provided from the Graeme Hall Fish Rearing Facility as a biological control measure. This activity was to aid in the planning of programmes to reduce the mosquito house index to less than five percent during the wet season.

As indicated in ***Table 48. Mosquito Indices 2019-2020*** below, the mosquito house index remained below five. The mosquito house index is calculated as the percentage of the houses inspected in a defined area, which are found with aquatic stages of mosquitoes. It is used as a measure for establishing the possibility of a mosquito outbreak.

Table 48: Mosquito Indices 2019-2020

| | 2019 | 2020 |
|---|---|---|
| **Mosquito House Index** | **2.8** | **4.0** |
| **Breteau Index** | **5.0** | **7.4** |

The Vector Control Unit has a structured inspection and rodent-baiting plan at all government buildings, health care institutions, schools, farms as well as at the sea and

airport. During the period, the Ministry intensified rodent baiting activities targeting specifically Bridgetown and its environs, and recreational areas across the island. Acute and anticoagulant bait is used to reduce the rodent population. The MHW continued a distribution service for rodenticide from the Vector Control Unit and the Environmental Health offices in the polyclinics. The below ***Table 49. Distribution of Rodenticide*** shows the quantities distributed annually to the public on request.

Table 49. Distribution of Rodenticide

| Quantity | 2019 | 2020 |
|---|---|---|
| No. of 100g packages | 28,410 | 30,366 |

An insectary-in-a-box funded by the United States Agency International Development (USAID) as part of the Zika Airs Project (ZAP), was officially opened on 24 July, 2019, and is situated in the Graeme Hall Swamp area. The Insectary's main functions are to facilitate insecticide resistance testing and mosquito species identification.

The Vector Control Unit continued to utilise the Geographical Information System (GIS) in its mosquito and rodent control programmes. It is used to map the locations of mosquito-borne diseases, mosquito larvae breeding, ovitraps, wetlands and rodent bait stations. The data gathered is used to determine areas for fogging and monitoring mosquito population density.

## Climate Change and Health

The Climate Change and Health programme of the MHW aims to develop appropriate adaptation plans with the intention of building a climate resilient health care system. It also aims to include climate change adaptation strategies into the routine work of the Environmental Health Department to minimise the impacts of vector, water and air borne diseases risks associated with climate phenomena. The SMART Hospitals standard for health care facilities developed through PAHO represents one of the green resilient targets Barbados' health systems is aiming to achieve.

Among the steps to be fulfilled in order to implement the actions required for this initiative, technical staff must be trained in the application of the SMART Hospitals toolkit. The comprehensive assessment is intended to identify vulnerabilities within the health care facilities and operations, which can be compromised by the impacts of severe weather events or climate variability. The development of climate and disaster resilience in health care facilities is a critical component of the development of the Ministry's Health National Adaptation Plans (HNAP). The HNAP is intended to be an important chapter in an overall National Adaptation Plan (NAP) for Barbados, which seeks to compile all critical services and sectors' plans for climate change.

By July 2022, PAHO will commence the execution of a wider vulnerability assessment of Barbados' potential health impacts caused by climate phenomena. It will look beyond the health care facilities and include a wide range of areas including water quality and availability, air quality, sanitation, insect vectors and antimicrobial resistant threats. The climate change health impacts associated with these and other parameters need to be identified in order for appropriate plans to be developed and implemented.

The Ministry maintained a presence on a number of committees namely the South Coast Sewage Project Cabinet Sub-committee; Graeme Hall Swamp Technical Advisory Committee; and The Inter-Ministerial Technical Working Group on Rainwater Harvesting. These are important platforms which keep climate change and health issues on the national agenda, and assist with maintaining partnerships in the interest of public health benefits. In addition to these committees, the Ministry is represented on the Barbados Water Authority Board of Directors as a sitting Director and is the sitting Chair for the interregional Climate and Health Advisory Group (CHAG) coordinated under the PAHO's EU/CARIFORUM Climate Change and Health Project. These responsibilities maintain the Ministry's climate change and health programme presence at national, regional and international levels, in the interest of building capacity towards climate resilience.

Additionally, the programme was successful in the completion of the development of guidelines for the safe storage of rainwater, and is presently in the process of adopting international guidelines for the safe reuse of wastewater into the existing legislative instruments of the Ministry. In terms of the current technical capacity of the MHW, the following strategies are considered as implementable in the short-term, providing resources are available:

i. The development of an Early Warning and Communication System for water quality.
ii. Development of an effective water quality surveillance system and wastewater reuse licensing and monitoring programme.
iii. The upgrade of the Environmental Health Department to mainstream climate change adaptation and resilience building into its work plans and strategic goals.

iv. The continuation of mosquito species monitoring in the Graeme Hall swamp and development of policies and programmes to promote the ecological protection of the site in compliance with the Ramsar agreement signed in 2006.

## International Health Regulations

Under the International Health Regulations (IHR 2005), Member States were requested to maintain public health measures and response capacity at designated airports, ports and ground crossings. This protected the health of travellers and the population, kept ports, airports and ground crossings running, and ensured ships, aircrafts and ground transportation were in sanitary condition. This was to ensure that no unnecessary health-based restrictions were placed on international traffic and trade. Today's high traffic at airports, ports and ground crossings played a key role in the international spread of diseases through persons, conveyances and goods.

The Government of Barbados followed the advice of the WHO and facilitated ships' movements including docking, crew changes, ship inspection and issuance of ship sanitation certificates during the COVID-19 pandemic. Information regarding suspension of port services and other measures introduced in response to COVID-19 were quickly and effectively communicated to international shipping and all relevant stakeholders.

The MHW continued to strengthen the Port Health programme to ensure that Barbados complied with the IHR 2005, to protect the local population and visitors from diseases or health risks associated with travel and trade. Infection Prevention and Control Training was conducted for all stakeholders at the ports of entry. The IAEA sponsored some capacity-building workshops in radiation and atomic energy at the local, regional and international levels and the MHW continued to work on a national programme with the IAEA.

## Water Quality

Potable water was monitored to identify and manage waterborne disease hazards and risks to protect the public's health. Water was sampled for testing for chlorine residual and the presence of pathogenic bacteria. The WHO guideline for potable water quality is used to determine that Barbados' water complies. The WHO guideline for drinking water indicates that the main parameters, pseudomonas, total coliform, enterococci and faecal coliform must all be detectable at <1 mg/1 for the sample to be deemed satisfactory or potable. A residual concentration of free chlorine of greater than or equal to 0.5 mg/litre is adequate.

The MHW conducted water sampling weekly throughout the island. Laboratory analysis of water samples taken throughout the country's distribution system is conducted at the BDSPHL. Despite the challenges associated with the COVID-19 pandemic, the BDSPHL reported that the EHD was able to facilitate 2,210 water quality tests in 2020 and 1,554 for 2021, down from 2,389 in 2019.

## Waste Management

Illegal dumping of waste was a significant challenge with an increase in unlawful dumping sites being identified, or in some instances the creation of temporary locations due to the non-collection of refuse within a specified time. These issues impacted communities with an increase in rodent and mosquito infestation. In addition to the illegal dumpsites located within communities, two commercial activities operating without the permission of the Town and Country Planning Development Office were identified. It was found that these operations could affect the potable water supply although they were not located in the Zone 1 designated area but both businesses were

located in disused quarries and excavation was at a depth which reduced the time for contaminants to reach the aquifers.

One of the new commercial dumping sites was cleaned by the owners and remedial work on the other dumpsite was due to start in the 2022-2023 financial year. This site had the potential to significantly impact the health of persons in the environs of the operation when internal combustion takes place. The proposal will be to cut the air supply to areas that were currently burning or show a heat signature, followed by compaction and rolling.

The MHW continued its collaboration with the MAFS to regulate the coconut vending sector. The disposal of coconut shells continues to be problematic although the tipping fee charged for waste disposal have been discontinued. The MHW continued to facilitate training sessions on best practices in handling coconuts as a food product, as well as the procedure for disposing of the coconut shells for coconut vendors.

The Environmental Sanitation Unit provided units for 67 households to prevent the possibility of indiscriminate disposal of human waste.

## Port Health Services

Environmental Health Officers stationed at the points of entry continued to inspect foods imported into Barbados. Foods which were fit for human consumption, were released, while foods which were unfit for human consumption were destroyed, as shown in ***Table 50. Quantity of Imported Food Inspected and Condemned at Points of Entry*** below.

Table 50. Quantity of Imported Food Inspected and Condemned at Points of Entry

| Food Inspected | 2019 | 2020 |
|---|---|---|
| **Wholesome Food Released (Kg)** | 129,484,131 | 125,220,132 |
| **Food Condemned (kg)** | 332,563 | 232,130 |
| **Total Food Imported Inspected (kg)** | **129,816,694** | **125,452,262** |

## Boarding of Vessels and Disease Surveillance

The boarding and clearance of vessels arriving at the points of entry continued to be a significant aspect of the Port Health service in regards to disease surveillance. There was a decrease in all types of vessels arriving in Barbados with the exception of Cargo vessels due to the COVID-19 pandemic. 497 cargo vessels arrived in 2018 in comparison to 728 in 2019 and 676 in 2020. ***Table 51. Type of Vessels Granted Free Pratique 2019-2020***, below identifies the number and type of vessels which were granted free pratique for the years 2019 and 2020.

Table 51. Type of Vessels Granted Free Pratique 2019-2020

| Vessel Type | 2019 | 2020 |
|---|---|---|
| **Cruise Vessels** | 425 | 237 |
| **Cargo** | 728 | 676 |
| **Oil & Gas Tankers** | 168 | 193 |
| **Yachts (Bridgetown)** | 252 | 181 |
| **Yachts (Port St. Charles)** | 245 | 113 |
| **Totals** | **1,818** | **1,400** |

## Ship Sanitation Inspection

The Ship Sanitation Control/Exemption Certificate inspection programme continued with the inspection of vessels requiring the certification. This programme audited conditions on-board ships in relation to food safety, medical facilities, integrated pest management and hospitality services, and ensured compliance with international standards. ***Table 52. Ship Sanitation Inspections***, below summarises these activities.

Table 52. Ship Sanitation Inspections

| | SHIP SANITATION INSPECTION | | | | | |
|---|---|---|---|---|---|---|
| **YEAR** | **Cargo** | **Cruise Vessels** | **Yacht** | **Oil & Gas Tankers** | **Other Vessels** | **Total No. Vessels** |
| **2019** | 12 | 14 | 3 | 6 | 13 | 48 |
| **2020** | 16 | 30 | 4 | 11 | 14 | 75 |

# INSTITUTIONAL SERVICES

## The Queen Elizabeth Hospital

The Queen Elizabeth Hospital is the country's primary acute care medical facility with a 510-bed capacity, providing 94% of all hospital beds in the island. The QEH is also an accredited teaching hospital affiliated with the Faculty of Medical Sciences, UWI, Cave Hill Campus, as well as nursing and allied health care programmes offered by the BCC and the Samuel Jackman Prescod Institute of Technology (SJPIT).

During the period 2019-2020, the leading in-patient services were Medicine, Obstetrics, Gynaecology, Surgery and Paediatrics; cumulatively contributing to seventy-three percent (73%) of total hospital admissions for both years. The average length of stay for the year 2019 including ICUs was 6.6 days, while the total number of admissions for the same period was 18,088. Comparatively, in 2020 a thirteen percent (13%) reduction in total admissions (15,771) was recorded, while the average length of stay including ICUs increased to 7.4 days, as shown in ***Table 53. QEH Average Bed Utilisation Rates, 2016-2020*** below.

Table 53. QEH Average Bed Utilisation Rates, 2016 - 2020

| Year | Admissions | Patient Days | Average Length of Stay (ALOS) days | Bed Occupancy Rate (%) |
|---|---|---|---|---|
| **2016** | 18,546 | 122.451 | 6.5 | 61.7 |
| **2017** | 17,155 | 110,966 | 6.0 | 58.2 |
| **2017** | 18,091 | 124,975 | 6.7 | 68.8 |
| **2019** | 18,088 | 123,448 | 6.6 | 70.5 |
| **2020** | 15,771 | 117,747 | 7.4 | 61.5 |

Out-patient attendances (old and new cases) for 2019 (98,231) through 2020 (84,877) continued to be concentrated on Medicine, Obstetrics, Ophthalmology and Surgery clinics, with Radiotherapy surpassing Orthopaedics to be listed among leading services for 2019 and 2020, see ***Table 54. QEH Out-patient Services Utilisation 2018-2020***, below. This reduction in Orthopaedic out-patient visits during the reporting period was a result of actions taken within the hospital at the onset of the COVID-19 pandemic to mitigate the risks to patients and staff. Additionally, other initiatives included the introduction of telemedicine services and the QEH Helpdesk launched in 2020, continued to contribute to a reduction in onsite service utilisation while ensuring continuity of patient-centred care. Minimised waiting times, maximised productivity and improving the patient experience remained a critical objective for the QEH.

Table 54. QEH Out-patient Services Utilisation 2018 - 2020

| Top 5 Out-patient Services | Number of Outpatients Visits | | |
|---|---|---|---|
| | 2018 | 2019 | 2020 |
| **Obstetrics** | 10,906 | 11,370 | 10,611 |
| **Ophthalmology** | 17,662 | 19,168 | 13,877 |
| **Medicine** | 17,385 | 17,833 | 17,485 |
| **Surgery** | 11,657 | 10,304 | 8,338 |
| **Orthopaedics** | 7.864 | - | - |
| **Radiotherapy** | | 7,856 | 8,125 |
| **Ear, Nose & Throat (ENT)** | - | - | - |
| **Total Outp-patient Visits** | **95,273** | **98,231** | **84,877** |

## Accident and Emergency Services

The Accident and Emergency Department (AED) recorded 37,660 patient visits for the year 2019, with 8,334 patients admitted; accounting for 46% of total hospital admissions. Patient visits to the AED in the comparative year 2020 declined significantly with the onset of the COVID-19 pandemic in the 1st quarter. During this period, the department recorded 29,067 patient visits (7,796 admitted), representing 49% of hospital admissions. The reduction in patient visits for 2020 is attributed to several factors instituted as a direct response to mitigate against the spread of COVID-19 within the AED. These included increased public education on accessing care in the AED within

the COVID-19 environment, implementation and adherence to precautionary measures restricting entrance to the AED to individuals exhibiting cold and or flu like symptoms, and the recommended use of the QEH Help Desk for general queries before visiting the department. Patients seen at the AED were triaged, using the Canadian Triage Acuity Scale shown in ***Table 55. Canadian Triage Acuity Scale 2019-2020*** below, and were categorised as follows:

- Patients with life-threatening conditions
- Patients with urgent, but not life-threatening conditions
- Patients with non-urgent medical conditions but require treatment at the hospital
- Patients with non-urgent conditions who can be seen elsewhere
- Patients seen previously and have scheduled reviews

Table 55. Canadian Triage Acuity Scale 2019 - 2020

| Category | Description | Details | 2019 | 2020 |
|---|---|---|---|---|
| **1** | Patients with life-threatening conditions | Patients requiring emergency intervention | **1.6%** | **1.4%** |
| **2** | Patients with urgent, but not life-threatening conditions | Patients need urgent care and treatment; (often hospitalization, can become category 1 if not seen promptly) | **9.9%** | **8.6%** |
| **3** | Patients with non-urgent medical conditions but require treatment at the hospital | Require diagnostics/services not provided at other public facilities | **56.4%** | **60.6%** |
| **4** | Patients with non-urgent conditions who can be seen elsewhere | Not considered high priority (therefore may have to wait for extended periods for service) | **25.5%** | **23.5%** |
| **5** | Patients seen previously and have scheduled reviews | Not necessarily high priority but require follow up | **6.6%** | **5.7%** |

## Accident & Emergency (AED) Improvement Project: Capital Works Upgrade and Expansion

As mandated by the government, the QEH Board of Management undertook the planning and implementation of the AED Upgrade Project during 2019. This facilitated commencement of the renovation and expansion of the existing AED in March 2020.

Capital works on a 9,000 square feet single story reinforced concrete building and screening centre constituted phases 1 and 2 of AED expansion and upgrade activities for the remaining quarters of the financial year, with a completed department opening to the Barbadian public scheduled for the second quarter of 2021. Phase 3 will feature a new Computerized Tomography (CT) Scan Suite, Short Stay Unit, Trauma Unit, Decontamination Facility and administrative spaces. The completely renovated and expanded AED will provide individuals seeking emergency care with a safer, more comfortable, efficient and patient-friendly environment.

## Costing Exercise

A comprehensive costing of healthcare services provided at the QEH was undertaken and completed by the Health Economics Unit, Centre for Health Economics and The University of the West Indies. This novel initiative for the institution afforded the opportunity for establishing unit cost estimates for services provided, the provision of cost information to aid in cost control strategies, and the provision of information to justify programme budget allocations. Additionally, the exercise enabled administrators and staff to understand the relationship between expenditure and throughput to improve allocation of labour and capital resources in the delivery of hospital services.

## Disaster and Emergency Preparedness

The QEH's ability to function uninterrupted in the event of a disaster was enhanced during the reporting period. The level of emergency preparedness was augmented by increased hospital capability to continue normal daily operations in the event of a water supply interruption or outage. This involved the replacement of two roof-mounted storage water tanks (9,000 gallons each) and the installation of an additional water storage tank (50,000 gallons); capable of filling gravity seed and pump seed modes of

operation. The completed project guarantees access to approximately 70,000 gallons of potable water for consumption and essential patient care activities.

## Accreditation

The review and re-certification of the laboratory department (Jamaica National Agency for Accreditation - JANAAC) was successfully completed in 2020. Preparatory work has commenced for the accreditation recertification process towards the international designations - Baby-Friendly Hospital and Hazard Analysis Critical Control Point (HACCP) for Food and Nutrition.

## Long-Term Care Facilities

Long-term care was delivered through in-patient hospital services at the four district hospitals, which are: St. Michael District (Geriatric) Hospital, St. Philip District Hospital (SPDH), St. Lucy District Hospital and the Gordon Cummins Hospital. The St. Michael District Hospital provided a rehabilitation programme and daycare services.

The district hospitals operated at full capacity of 533 beds. While there were 293 referrals for admissions in 2018, as seen in ***Table 56. District Hospitals Bed Utilisation Data*** below, only 129 clients were admitted. Transfers totalled 32 and these were all from the St. Michael District Hospital. Clients are usually transferred to one of the other district hospitals or transferred to the Alternative Care of the Elderly Programme (ACEP).

The ACEP was developed to meet the growing demand for institutionalised care. Through this model, the government provided for the cost of caring for elderly persons who are transferred by the Ministry to private nursing homes. This programme has a capacity of approximately 135 persons with 26 out of 56 private nursing homes participating.

The high number of clients in the District Hospitals with NCDs was a reflection of the prevalence of these diseases in the wider society. While 29% of clients were diabetics, as seen in ***Table 57. District Hospitals Morbidity Report*** below, 38% or 204 were hypertensive. This reinforced the need for greater focus to be placed on preventative services since the presence of NCDs in this population group results in complications that can be debilitating and harm their quality of life. It should be noted that despite the high rate of NCDs, centenarians accounted for 2.2% of the hospitals' population.

Table 56. District Hospitals Bed Utilisation Data

| District Hospitals | St. Michael | St. Philip | St. Lucy | Gordon Cummins | Total |
|---|---|---|---|---|---|
| Number of beds | 286 | 171 | 26 | 59 | 533 |
| Number of admissions | 130 | 24 | 3 | 13 | 170 |
| In- patient service days | 51,148 | 39,917 | 8,640 | 17,540 | 117,245 |
| Percentage Occupancy | 100% | 63.9% | 91.0% | 96.1% | 87.7% |
| Bed turnover rates | 0.4 | 0.1 | | 0.2 | 0.7 |
| Number of deaths | 81 | 23 | 2 | 11 | 117 |
| Number of transfers to QEH | 54 | 31 | 3 | 11 | 99 |
| Number of discharges | 32 | NIL | NIL | NIL | 32 |
| Number of referrals to AED | 50 | NIL | 4 | 4 | 58 |
| Number of persons under 65 | 19 | 25 | 1 | 2 | 94 |

Table 57. District Hospitals Morbidity Report

| District Hospitals | St. Michael | St. Philip | St. Lucy | Gordon Cummins | Total |
|---|---|---|---|---|---|
| No. Diabetics | 95 | 26 | 10 | 25 | 156 |
| No. Hypertensive | 121 | 50 | 11 | 22 | 204 |
| No. Ulcers | 34 | 14 | 2 | 3 | 55 |
| No. Falls | 16 | 17 | 9 | 14 | 56 |
| No. Infections | 455 | 135 | 28 | 64 | 682 |

# Human Resources and Health (HRH)

According to the WHO, the health workforce will be critical for the achievement of health and wider development objectives in the next decades. The effective management of human resources in the health sector is essential to the delivery of quality health care. Ensuring the right combination of health workers is key to Barbados achieving its health goals. The MHW with technical assistance from PAHO have developed a strategy and action plan to improve the management of Human Resources for Health (HRH). A component of this is the development of a broad situational analysis on the state of HRH in Barbados.

Barbados has largely become self-sufficient in meeting its demand for human resources for health. Doctors are primarily trained at the UWI, while nurses and other health care professionals are trained at the BCC. All medical personnel must be registered with the Barbados Medical Council, which has statutory responsibility for the regulation of all medical practitioners. The Nursing Council of Barbados, Dental Council, Pharmacy Council and the Paramedical Professionals Council hold similar responsibility for their respective professions.

There were 24 doctors per 10,000 populations (1 doctor per 429) and 43 registered nurses per 10,000 populations or 1 nurse for every 234 Barbadians; see ***Table 58. HRH in Barbados per 10,000 Population***, below. This equates to an average of 1.8 nurses per doctor, achieving the WHO HRH Goal 4 that required a ratio of qualified nurses to physicians of at least 1:1. For the HRH Goal 1, WHO suggested that countries require a minimum of 25 professionals (doctors, nurses, and midwives) per 10,000 populations, and Barbados exceeded that standard for the year 2017.

Table 58. HRH in Barbados per 10,000 population - 2017

| CATEGORY | Number of Workers | Density per 10,000 population (Ratio) | Population per worker |
|---|---|---|---|
| **Doctors** | 642 | 23.36 | 428.12 |
| **Registered Nurse** | 1178 | 42.86 | 233.32 |
| **Midwife** | 134 | 4.88 | 2,051.14 |
| **Psychiatric Nurse** | 255 | 9.28 | 1,077.85 |
| **Nursing Assistant** | 395 | 14.37 | 695.83 |
| **Nursing Auxiliary** | 613 | 22.30 | 448.37 |
| **Occupational Therapist** | 11 | 0.40 | 24,986.64 |
| **Dental Technician** | 9 | 0.33 | 30,539.22 |
| **Dental Practitioner** | 79 | 2.87 | 3,479.15 |
| **Dental Auxiliary** | 6 | 0.22 | 45,808.83 |
| **Diagnostic Radiographer** | 34 | 1.24 | 8,083.91 |
| **Dietitian** | 11 | 0.40 | 24,986.64 |
| **Nutritionist** | 6 | 0.22 | 45,808.83 |
| **Emergency Medical Dispatcher** | 6 | 0.22 | 45,808.83 |
| **Emergency Medical Technician** | 80 | 2.91 | 3,435.66 |
| **Medical laboratory Technologist** | 31 | 1.13 | 8,866.23 |
| **Environmental Health Assistant** | 75 | 2.73 | 3,664.71 |
| **Environmental Health Officer** | 99 | 3.60 | 2,776.29 |
| **Social Workers** | 16 | 0.58 | 17,178.31 |
| **Veterinarians** | 41 | 1.49 | 6,703.73 |
| **Hospital Administrators** | 10 | 0.4 | 27,766.8 |


PHILIPS

# PUBLIC/ PRIVATE SECTOR COLLABORATIONS AND PHILANTHROPY

Public Sector health facilities continue to benefit from generous donations in cash and kind from both local and overseas sources. The MHW received a gift of more than 40,000 vaccines for COVID-19 from the Indian government. The vaccines made it possible for many Barbadians to receive their first vaccine dose.

Public-private partnerships are conventional public sector procurement and financing mechanisms utilised by the MHW to guarantee both universal coverage and access to high-quality health services. Public-private partnerships allowed the government to build strategic alliances with the private sector and receive a full commitment from private companies for providing goods, services and/or facilities. The MHW's public-private sector partnerships include:

- Contracted the **Barbados Diabetes Foundation** for the provision of care for 220 persons per year. For six months, each client received a tailored package of services, which included visits with a diabetologist, nutritionist, psychologist, diabetes specialist nurse and podiatrist.
- Contracted the **Heart and Stroke Foundation of Barbados**, which provided services to persons referred with or at risk for heart attacks and strokes for a programme of support and rehabilitation.
- The **Barbados National Chronic Disease Registry** is managed by the UWI and incorporates the two cardiovascular disease registries: heart attack, stroke, and the cancer registry.
- Service level agreement with **Diagnostic Radiology Services** provided $75,000.00 worth of radiology and other imaging services to primary health care institutions

and the Ladymeade Reference Unit for a period of 15 years, commencing in 2013 and ending in 2027. Services provided included MRI, CT scans, ultrasounds, x-rays, barium studies and mammograms.

- Contract between **SILS Dialysis Barbados** and the QEH for the provision of dialysis services.

**Donations by NGOs for patients of the Physiotherapy Department- Albert Cecil Graham Development Centre**

The two charities which supported Physiotherapy Services at ACGDC were: Because of Jenna Trust (BCOJ) and Sandy Lane Charitable Trust (SLC).

The Centre continued to perform a valuable role as a teaching institution to students. First and third year medical students (UWI), Rehabilitation Therapy Technician students (BCC) and Social Work interns from both institutions were assigned to the Centre where they gained valuable teaching and practical experiences in caring and treating children with developmental disabilities.

The Centre received a donation of $20,000 from the Maria Holder Memorial Trust towards the refurbishment of the pool, which included replacing the heating system, painting and levelling the floor depth, reconfiguring the steps into the pool, remedial plumbing and reconstruction of the poolroom.

First Caribbean International Bank provided $9,965.00 towards refurbishment of the Education and Workshop Units. Both the interior and exterior of these departments were painted and a small garden planted.

Lodge 340 SC donated $500 to the ACGDC.

# Technical Cooperation and External Financing

Concerning the execution of the PAHO Biennial Work Programme (PAHO BWP), the MHW continued to collaborate with PAHO to address the challenges facing the health sector and address the health needs of the population. The initiative is a two-year programme, where PAHO provided technical assistance under five broad programme areas. These areas are as follows:

1. Health Systems Strengthening.
2. Communicable Diseases.
3. Non-Communicable Diseases and Mental Health.
4. Determinants of Health and Promoting Health throughout the Life Course.
5. Surveillance and Disaster Preparedness.

During the period 2019-2020, the Ministry continued to work with PAHO on a number of critical areas which are outlined below. These activities were conducted January-December 2019:

**Non- Communicable Diseases:**

- *Global HEARTS Project*

PAHO provided technical assistance to support the introduction of the Global HEARTS Cardiovascular Risk Management approach to key health professionals from primary health care who are involved in the management of patients with chronic non-communicable diseases. The training involved clinical staff from across the primary care setting and the persons trained included doctors, nurses, pharmacists, nutritionists and managers from each polyclinic. This process is expected to ultimately solidify the understanding and implementation of HEARTS at the pilot sites.

The training was conducted by experts in their respective fields and comprised of key aspects of the Global HEARTS package, in particular healthy lifestyles, team-based care, and evidence-based algorithms. Presentations included a didactic component and focused on case discussions which were prepared by mixed teams. All reports received indicated that the training was perceived by participants as being very useful in their daily work; increasing their understanding of the evidence around blood pressure control.

- *Front of Package Labelling*

PAHO provided a consultancy to support the Ministry's efforts to implement Front of Package Labelling (FOPL). The purpose of the short-term consultancy was to identify potential trade issues that have bearing on Barbados' consideration of the proposed CARICOM regional (Front of Package Labelling) FOPL standard. The consultancy involved but was not limited to:

- A review of project and other relevant project documentation;
- A review of the relevant regional and international trade frameworks and;
- Engagement with relevant stakeholders, primarily governmental organisations to explore potential trade related legal barriers to the implementation of FOPL.

A review of the local project summary, the proposed standard, as well as trade related comments and concerns expressed by industry representatives was conducted. This information was presented to stakeholders involved in health, standards and trade. Information was also provided on:

- Discussions at the World Health Assembly related to FOPL, which included a list of countries currently using FOPL or in the process of implementing a FOPL scheme;
- An initiative by the WHO developed a FOPL manual;

- The WHO focused on NCD reduction, using restriction of marketing of unhealthy foods to children and increased taxation of such foods and mandatory FOPL on packaged foods; and
- Chile's experience with FOPL and Italy's objections to the use of FOPL and nutrient profiling.

The consultancy facilitated a frank and honest discussion related to the feasibility of the implementation of FOPL in Barbados and the wider CARICOM region. The consultant highlighted some of the potential legal challenges related to the implementation of mandatory FOPL on imported products. The theme of preferential treatment was also discussed. The broad conclusion was that once local industries or manufacturers were not favoured it would be very unlikely that there would be a legal challenge. The question of copyright infringement and potential legal challenges were also discussed. The Consultancy gave valuable perspective and guidance to the MHW as well as other stakeholders in the advancement of the FOPL locally in an accessible manner.

# Surveillance, Environmental Health and Disaster Preparedness

## Water Quality

The Ministry sought to have its Environmental Health Officers trained in the Water Quality Surveillance Framework, which was developed by the Ministry. A component of this process would include training in the Sanitary, Hygiene and Vulnerability Assessment Tool. It is anticipated that this tool would guide the enforcement of the relevant provisions of Barbados' Health Services Act CAP 44. The first training course was held from 25 to 27, March, 2019 and the second from 9 to 11, April 2019. Approximately 20 officers were trained. The objectives of the training sessions were as follows:

i. The training of Environmental Health Officers in the Sanitary, Hygiene and Vulnerability Assessment Tool.

ii. To introduce participants to the proposed Water Quality Surveillance framework developed by the MHW.

iii. Refresh participants on the technical public health issues relevant to waterborne diseases surveillance in Barbados and the relevant regulations.

iv. The appraisal of participants on the appropriate operational protocols for the purpose of standardising the monitoring and reporting procedures throughout the department.

v. Rationalise and standardise monitoring activities by identifying the relevant risks and priorities in Barbados' environment and water supply context.

## Basic Life Support and First Aid Training

Training was conducted in Basic Life Support and First Aid. To this end, eight (8) doctors and two (2) nurses were re-trained, while six (6) porters and general workers were trained in First Aid. Doctors, nurses and general workers attended and passed the training in BLS and First Aid respectively, which was the objective of the activity. Members of the medical team are now equipped to manage and stabilise patients that may be injured as a result of an event or hazard necessitating an emergency response.

## Health Systems Engineering

### Training in Workload Indicator Staffing Needs Assessment Tool

The Ministry conducted training for staff in the Workload Indicator Staffing Needs Assessment tool. The objective of the training was to provide further skills and competencies in the WISN method to equip the participants to apply WISN to determine staffing requirements in selected areas of the QEH. The training consisted of scenario based practical sessions which incorporated formulas to calculate staff requirements and methods that analysed and interpreted the results. Participants were afforded opportunities to work individually and in groups to calculate the various steps of the WISN methodology. The participants also utilised data from the various Departments of the QEH and applied the WISN tool to identify staffing needs.

### Development of a Strategic Plan and Standard Operating Procedures for the Barbados Drug Service

The MHW requested technical assistance through a consultancy to develop a new Strategic Plan for the Barbados Drug Service. The aim of the consultancy was to develop a plan that would allow for strategic positioning of the BDS over the next 5 years. The second phase of the consultancy consisted of the development of Standard Operating Procedures for the institution. This development allowed for a more structured and

efficient organisation of the institution's business activities, using standard operating processes. It is also anticipated that through a standard routine, employees will be able to improve their skills on each task to raise their overall performance.

**Determinants of Health and Promoting Health through the Life Course**

**Activities conducted January to December 2020**

With the advent of the COVID-19 pandemic, the normal programming for the PAHO/BWP was interrupted. Technical assistance was focused on the strengthening of Barbados' health system to respond to and manage the COVID19 pandemic. Efforts were therefore focused on the following activities:

i. Support for the recruitment of contact tracers;

ii. Support for the recruitment of Laboratory Technologists at the Best Dos Santos Public Health Laboratory;

iii. Provision of training for COVID-19 testing;

iv. Donation of vehicles to strengthen transportation services at Harrison Point;

v. Donation of Personal Protective Equipment (PPE); and

vi. Facilitation of the procurement of COVID-19 vaccines.

# HEALTH SECTOR EXPENDITURES AND FINANCING

## Health Budget

There is a notable increase in the actual expenditure from 2018-2019 to 2019-2020, approximately a 59% increase. This is attributed to the COVID-19 pandemic, which resulted in a reallocation of funds. Funds were now utilised to hire new staff from Cuba to assist in the prevention and treatment of COVID-19. A new position was created for Community Health Liaison Officers and other Covid personnel were hired to assist the Ministry of Health and Wellness in its efforts to prevent and treat COVID-19. Provisions were made for the outfitting of the Harrison Point facility which was used to accommodate persons in isolation. In addition to the facility, funds were allocated to outfit schools and other institutions used for accommodation. Additional supplies were purchased during the period under review. This resulted in the need for the financial year 2020-2021 for a new programme head Covid -19 Prevention & Control.

The actual expenditure to the MHW for the fiscal year 2019-2020 was $340, 624,098 which represented 13% of Government's actual expenditure for the period. As indicated in ***Table 59. MHW Budgetary Allocations for FY 2018-2021 Approved Estimates*** below, Hospital Services, which include emergency, acute and secondary and tertiary care, at the QEH, as well as mental health services at the PH, received approximately 56% of the total allocation to the Ministry. The second-largest allocation was assigned to the Primary Health Care Programme, which received 12%, and the third largest allocation, 9 %, was allocated to the Care of the Elderly Programme.

Further budgetary allocations were as follows: Direction and Policy Formulation Services $37.3 million or 11%; Care of the Disabled received $2.6 million or 1%; the

Pharmaceutical Programme received $27 million or 8%; HIV/AIDS Prevention and Control Project received $5 million or 1%; and Environmental Health Services received 3 million or 1% of the budget.

Table 59: MHW Budgetary Allocations for FY 2018 - 2021 Approved Estimates

| Programme Area | 2018-2019 | % | 2019-2020 | % | 2020-2021 | % |
|---|---|---|---|---|---|---|
| Direction &Policy Formulation Services | 11,109,558 | 6% | 37,267,391 | 11% | 10,756,359 | 3% |
| Primary Health Care | 17,923,175 | 9% | 42,127,454 | 12% | 52,579,268 | 15% |
| Hospital Services | 127,044,726 | 63% | 191,873,835 | 56% | 203,276,736 | 57% |
| Care of the Disabled | 1,633,389 | 1% | 2,659,066 | 1% | 2,447,684 | 1% |
| Pharmaceutical Programme (BDS) | 12,271,981 | 6% | 27,011,529 | 8% | 20,196,359 | 6% |
| Care of the Elderly | 19,284,542 | 10% | 31,603,897 | 9% | 30,754,951 | 9% |
| HIV/AIDS Prevention Control | 3,456,427 | 2% | 5,063,356 | 1% | 5,128,055 | 1% |
| Project | | | | | | |
| Environmental Health Services | 7,812,639 | 4% | 3,017,570 | 1% | 3,118,962 | 1% |
| Covid -19 Prevention & Control | | | | | 26,984,648 | 8% |
| Total | **200,536,437** | | **340,624,098** | | **355,243,022** | |

## Health Financing

The MHW was committed to the development of a new sustainable health financing framework. The framework has been underpinned by a health system approach and gives consideration to alternative models of accumulated funds, paying hospitals and health care providers, and the establishment of a system of accountability that enhanced the performance of the health care system. The MHW in collaboration with the UWI Health Economics Unit, St. Augustine Campus has assessed the current health financing system in Barbados, which included conducting a costing study of the health services. It is anticipated that the recommendations stemmed from the assessment will serve to inform the development of the best health financing model, and pathway towards a National Health Financing Initiative (NHFI).

The approval of the recommendations which came from the study formed the basis of the formulation of a Plan of Action (POA) for a NHFI. This POA will make provision for the design, development and implementation of the NHFI based on the principles of equity, solidarity, right to health and financial risk protection and with a comprehensive assessment of inter alia, funding options, package of benefits, beneficiaries, health providers, and governance arrangements. A comprehensive actuarial assessment of the various components of the NHFI facilitated the modelling of the affordability and sustainability of the NHFI within the context of the macroeconomic profile of Barbados.

# APPENDICES

## Description of Appendices

Table 60. QEH Outpatient Clinic Attendances by Service 2019

| CLINIC | NEW CASES | OLD CASES | TOTAL |
|---|---|---|---|
| NURSERY | 0 | 779 | 779 |
| PAEDIATRICS | 103 | 1,752 | 1,855 |
| PSYCHOLOGY | 69 | 420 | 489 |
| OBSTETRICS ANC/PNC (PUBLIC) | 2,190 | 9,180 | 11,370 |
| ANC (PUBLIC) | 2,190 | 8,673 | 10863 |
| PNC (PUBLIC) | 0 | 507 | 507 |
| GYNAECOLOGY/COLPOSCOPY (PUBLIC) | 1,402 | 5,943 | 7,345 |
| GENERAL MEDICINE (PUBLIC) * | 2,383 | 15,450 | 17,833 |
| HAEMATOLOGY (PRIVATE) | 0 | 0 | 0 |
| MEDICINE (PRIVATE) | 0 | 0 | 0 |
| PSYCHIATRY (PUBLIC) | 101 | 2,322 | 2,423 |
| PAIN (PRIVATE) | 0 | 0 | 0 |
| GENERAL SURGERY (PUBLIC) | 1,710 | 8,594 | 10,304 |
| GENERAL SURGERY (PRIVATE) | 0 | 0 | 0 |
| CARDIAC SURGERY (PUBLIC) | 131 | 769 | 900 |
| CARDIAC SURGERY (PRIVATE) | 0 | 0 | 0 |
| ORTHOPAEDICS | 1,683 | 6,048 | 7,731 |
| EAR, NOSE, THROAT | 1,063 | 5,972 | 7,035 |
| OPHTHALMOLOGY | 1,015 | 18,153 | 19,168 |
| CARDIOVASCULAR (ADULT) | 404 | 2,259 | 2,663 |
| CARDIOVASCULAR (PAEDIATRIC) | 100 | 380 | 480 |
| RADIOTHERAPY | 333 | 7,523 | 7,856 |
| TOTAL | 12,687 | 85,544 | 98,231 |

Table 61. QEH Outpatient Clinic Attendances by Service 2020

| CLINIC | NEW CASES | OLD CASES | TOTAL |
|---|---|---|---|
| NURSERY | 1 | 601 | 602 |
| PAEDIATRICS | 120 | 1,442 | 1,562 |
| PSYCHOLOGY | 66 | 334 | 400 |
| OBSTETRICS ANC/PNC (PUBLIC) | 2,117 | 8,494 | 10,611 |
| ANC (PUBLIC) | 2,117 | 8,078 | 10,195 |
| PNC (PUBLIC) | 0 | 416 | 416 |
| GYNAECOLOGY/COLPOSCOPY (PUBLIC) | 1,203 | 4,525 | 5,728 |
| GENERAL MEDICINE (PUBLIC)* | 2,063 | 15,422 | 17,485 |
| HAEMATOLOGY (PRIVATE) | 0 | 0 | 0 |
| MEDICINE (PRIVATE) | 0 | 0 | 0 |
| PSYCHIATRY (PUBLIC) | 58 | 1,957 | 2,015 |
| PAIN (PRIVATE) | 0 | 0 | 0 |
| GENERAL SURGERY (PUBLIC) | 1,552 | 6,786 | 8,338 |
| GENERAL SURGERY (PRIVATE) | 0 | 0 | 0 |
| CARDIAC SURGERY (PUBLIC) | 88 | 551 | 639 |
| CARDIAC SURGERY (PRIVATE) | 0 | 0 | 0 |
| ORTHOPAEDICS | 1,324 | 4,575 | 5,899 |
| EAR, NOSE, THROAT | 917 | 5,141 | 6,058 |
| OPHTHALMOLOGY | 774 | 13,103 | 13,877 |
| CARDIOVASCULAR (ADULT) | 476 | 2,677 | 3,153 |
| CARDIOVASCULAR (PAEDIATRIC) | 101 | 284 | 385 |
| RADIOTHERAPY | 319 | 7,806 | 8,125 |
| TOTAL | 11,179 | 73,698 | 84,877 |

Table 62. No. Deliveries at the Queen Elizabeth Hospital 2018 - 2020

| Number of Deliveries | | | |
|---|---|---|---|
| Age Group in Years | 2018 | 2019 | 2020 |
| < 15 | 3 | 1 | 1 |
| 15 - 19 | 244 | 237 | 202 |
| 20 -24 | 536 | 571 | 532 |
| 25 -29 | 597 | 687 | 579 |
| 30 -34 | 518 | 514 | 504 |
| 35 - 39 | 325 | 332 | 342 |
| 40+ | 100 | 114 | 105 |
| Total | 2,323 | 2,456 | 2,265 |

Table 63. No. Teenage Deliveries at the Queen Elizabeth Hospital 2018 - 2020

| Years | No. Teenage Deliveries (%) | Total Deliveries |
|---|---|---|
| **2018** | 247 (10.6) | 2,323 |
| **2019** | 238 (9.7) | 2,456 |
| **2020** | 203 (9.0) | 2,265 |

Table 64: Termination of Pregnancies at the Queen Elizabeth Hospital 2018 - 2020

| Number of Termination of Pregnancies | | | |
|---|---|---|---|
| **Age Group in Years** | **2018** | **2019** | **2020** |
| **< 15** | 8 | 1 | 1 |
| **15 - 19** | 37 | 49 | 40 |
| **20 -24** | 106 | 88 | 76 |
| **25 -29** | 119 | 89 | 95 |
| **30 -34** | 75 | 84 | 56 |
| **35 - 39** | 64 | 64 | 38 |
| **40+** | 30 | 33 | 17 |
| **Total** | 439 | 408 | 323 |

Table 65: Termination of Pregnancies at the Queen Elizabeth Hospital 2018 - 2020

| Years | No. Teenage Abortions (%) | Total Abortions |
|---|---|---|
| **2018** | 45 (10.3) | 439 |
| **2019** | 50 (12.3) | 408 |
| **2020** | 40 (12.4) | 323 |

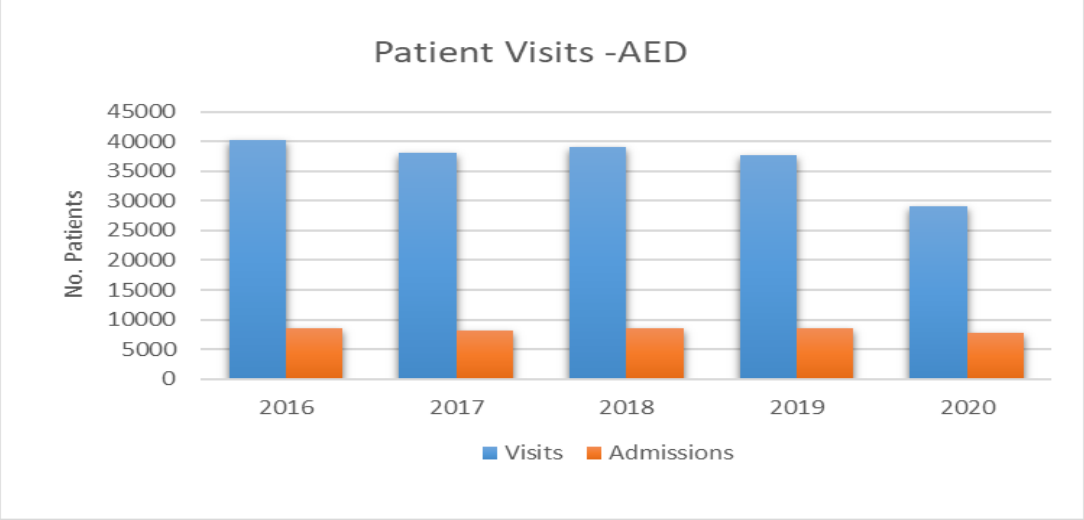



Figure 20. Accident and Emergency Department - Patient Visits 2016 - 2020

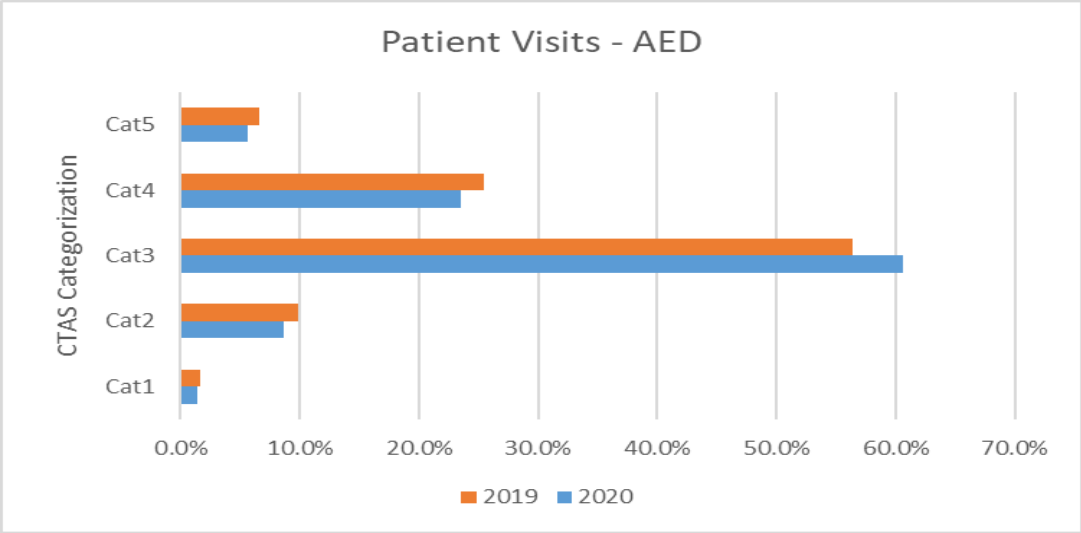



Figure 21. Canadian Triage Acuity Scale [Patient Visits] - 2019 - 2020

Table 66. Discharge Diagnoses from QEH 2019

| Barbados | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DISCHARGE DIAGNOSIS FROM THE QUEEN ELIZABETH HOSPITAL - 2019 | | | | | | | | | | |
| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | TOTAL |
| | All Causes | **2,692** | **462** | **678** | **1,837** | **4,407** | **3,412** | **4,208** | **0** | **17,696** |
| | Male | **1,435** | **272** | **396** | **273** | **747** | **1,645** | **2,031** | **0** | **6,799** |
| | Female | **1,257** | **190** | **282** | **1,564** | **3,660** | **1,767** | **2,177** | **0** | **10,897** |
| | | | | | | | | | | |
| **0.00** | ***Symptoms, signs and ill-defined conditions*** | | | | | | | | | |
| | Male | 20 | 29 | 18 | 9 | 24 | 77 | 191 | 0 | 368 |
| | Female | 17 | 12 | 12 | 24 | 69 | 55 | 95 | 0 | 284 |
| **Total (0.00)** | | **37** | **41** | **30** | **33** | **93** | **132** | **286** | **0** | **652** |
| **1.01** | ***Intestinal Infectious Diseases*** | | | | | | | | | ***652*** |
| | Male | 10 | 7 | 6 | 1 | 2 | 2 | 10 | 0 | 38 |
| | Female | 5 | 11 | 10 | 4 | 3 | 7 | 9 | 0 | 49 |
| **Total** | | **15** | **18** | **16** | **5** | **5** | **9** | **19** | **0** | **87** |
| **1.04** | ***Certain diseases preventable by immunization*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 4 |
| | Female | 0 | 0 | 0 | 0 | 1 | 1 | 1 | | 3 |
| **Total (1.04)** | | **0** | **0** | **0** | **3** | **1** | **2** | **1** | **0** | **7** |
| **1.05** | ***Meningitis*** | | | | | | | | | |
| | Male | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 4 |
| | Female | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 |
| **Total (1.06)** | | **2** | **0** | **0** | **0** | **1** | **4** | **0** | **0** | **7** |
| **1.06** | ***Septicemia, except neonatal*** | | | | | | | | | |
| | Male | 2 | 0 | 0 | 1 | 1 | 8 | 19 | | 31 |
| | Female | 1 | 1 | 0 | 1 | 2 | 8 | 19 | | 32 |
| **Total (1.06)** | | **3** | **1** | **0** | **2** | **3** | **16** | **38** | **0** | **63** |
| **1.07** | ***Infections with a predominantly sexual mode of transmission*** | | | | | | | | | |
| | Male | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| | Female | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 3 |
| **Total (1.07)** | | **1** | **0** | **0** | **2** | **0** | **1** | **1** | **0** | **4** |
| | ***HIV disease (AIDS)*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 6 | 6 | 1 | | 13 |
| | Female | 0 | 1 | 0 | 1 | 5 | 4 | 1 | | 12 |
| **Total (1.07)** | | **0** | **1** | **0** | **1** | **11** | **10** | **2** | **0** | **25** |
| **1.08** | ***Acute respiratory infection*** | | | | | | | | | |
| | Male | 27 | 39 | 35 | 25 | 11 | 38 | 69 | 0 | 244 |
| | Female | 9 | 30 | 15 | 39 | 40 | 32 | 123 | 0 | 288 |
| | **Total (1.08)** | **36** | **69** | **50** | **64** | **51** | **70** | **192** | **0** | **532** |
| **1.09** | ***Other infectious and parasitic diseases*** | | | | | | | | | |
| | Male | 3 | 9 | 15 | 3 | 20 | 13 | 4 | 0 | 67 |
| | Female | 4 | 4 | 7 | 2 | 10 | 9 | 6 | 0 | 42 |
| **Total (1.09)** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **2.01** | ***Malignant neoplasm of stomach*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 0 | 4 | 10 | 0 | 14 |
| | Female | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 0 | 11 |
| **Total (2.01)** | | **0** | **0** | **0** | **0** | **0** | **11** | **14** | **0** | **25** |
| **2.02** | ***Malignant neoplasm of colon and rectosigmoid junction*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 4 | 40 | 30 | | **74** |
| | Female | 0 | 0 | 0 | 0 | 4 | 39 | 20 | | **63** |
| **Total (2.02)** | | **0** | **0** | **0** | **0** | **8** | **79** | **50** | | **137** |
| **2.03** | ***Malignant neoplasm of digestive organs and peritoneum, except stomach and colon*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 1 | 11 | 9 | 0 | 21 |
| | Female | 0 | 0 | 0 | 0 | 5 | 3 | 8 | 0 | 16 |
| **Total (2.03)** | | **0** | **0** | **0** | **0** | **6** | **14** | **17** | **0** | **37** |
| **2.04** | ***Malignant neoplasm of trachea, bronchus and lung (C33-C34)*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 0 | 5 | **6** | 0 | 11 |
| | Female | 0 | 0 | 0 | 1 | 0 | 5 | **5** | 0 | **11** |
| **Total (2.04)** | | **0** | **0** | **0** | **1** | **0** | **10** | **11** | **0** | **22** |
| **2.05** | ***Malignant neoplasm of respiratory and intrathoracic organs, except trachea, bronchus and lung*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 6 |
| | Female | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| **Total (2.05)** | | **0** | **0** | **0** | **4** | **0** | **3** | **5** | **0** | **8** |
| **2.06** | ***Malignant neoplasm of female breast*** | | | | | | | | | |
| | Female | 0 | 0 | 0 | 0 | 12 | 37 | 23 | | 72 |
| **Total (2.06)** | | | | | | | | | | |
| **2.07** | ***Malignant neoplasm of cervix uteri*** | | | | | | | | | |
| | Female | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 0 | 7 |
| **Total (2.07)** | | | | | | | | | | |
| **2.08** | ***Malignant neoplasm of other and unspecified parts of uterus*** | | | | | | | | | |
| | Female | 0 | 0 | 0 | 0 | 1 | 21 | 23 | 0 | 45 |
| **Total (2.08)** | | | | | | | | | | |
| **2.10** | ***Malignant neoplasm of prostate*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 0 | 39 | 53 | **0** | **92** |
| **Total (2.10)** | | | | | | | | | | |
| **2.11** | ***Malignant neoplasm of bladder & other genitourinary organs*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 2 | 5 | 10 | 0 | **17** |
| | Female | 0 | 2 | 0 | 0 | 1 | 10 | 11 | 0 | **24** |
| **Total (2.11)** | | **0** | **2** | **0** | **0** | **3** | **15** | **21** | **0** | **41** |
| **2.12** | ***Leukaemia (C91-C95)*** | | | | | | | | | |
| | Male | 0 | 0 | 9 | 1 | 1 | 2 | 1 | 0 | **14** |
| | Female | 0 | 2 | 7 | 0 | 0 | 0 | 2 | 0 | **11** |
| **Total (2.12)** | | **0** | **2** | **16** | **1** | **1** | **2** | **3** | **0** | **25** |
| **2.13** | ***Malignant neoplasm of lymphoid, other hematopoietic and related tissue*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 3 | 9 | 8 | 0 | **20** |
| | Female | 0 | 0 | 0 | 0 | 6 | 4 | 4 | 0 | **14** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total (2.13)** | | **0** | **0** | **0** | **0** | **9** | **13** | **12** | **0** | **34** |
| **2.14** | ***Malignant neoplasm of other and unspecified sites (remainder of C00-C97, I.e., C00-C14, C40-C47, C49, C50 in men, C58, C69-C80, C97)*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 2 | 4 | 31 | 30 | 0 | **67** |
| | Female | 0 | 0 | 0 | 5 | 5 | 18 | 15 | 0 | **53** |
| **Total (2.14)** | | **0** | **0** | **0** | **7** | **9** | **49** | **45** | **0** | **120** |
| **2.15** | ***Carcinoma in situ, benign neoplasms and neoplasms of uncertain or unknown behaviour*** | | | | | | | | | |
| | Male | 0 | 1 | 1 | 1 | 6 | 13 | 22 | | **44** |
| | Female | 0 | 1 | 3 | 1 | 137 | 177 | 27 | | **346** |
| **Total (2.15)** | | **0** | **2** | **4** | **2** | **143** | **190** | **49** | | **390** |
| **3.01** | ***Acute rheumatic fever and chronic rheumatic heart diseases*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 0 | 1 | 0 | | **1** |
| | Female | 0 | 0 | 0 | 0 | 0 | 2 | 0 | | **2** |
| **Total (3.01)** | | **0** | **0** | **0** | **0** | **0** | **3** | **0** | | **3** |
| **3.02** | ***Hypertensive diseases*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 1 | 20 | 9 | | **30** |
| | Female | 0 | 0 | 0 | 0 | 2 | 10 | 12 | | **24** |
| **Total (3.02)** | | **0** | **0** | **0** | **0** | **3** | **30** | **21** | | **54** |
| **3.03** | ***Ischemic heart diseases*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 9 | 80 | 63 | | **152** |
| | Female | 0 | 0 | 0 | 0 | 4 | 87 | 110 | | **201** |
| **Total (3.03)** | | **0** | **0** | **0** | **0** | **13** | **167** | **173** | | **353** |
| **3.04** | ***Pulmonary heart disease, diseases of pulmonary circulation and other forms of heart disease*** | | | | | | | | | |
| | Male | 0 | 2 | 1 | 2 | 22 | 103 | 171 | | **301** |
| | Female | 0 | 0 | 3 | 4 | 29 | 95 | 242 | | **373** |
| **Total (3.04)** | | **0** | **2** | **4** | **6** | **51** | **198** | **412** | | **674** |
| **3.05** | ***Cardiac arrest*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 0 | 9 | 25 | 0 | **34** |
| | Female | 0 | 0 | 0 | 0 | 0 | 2 | 21 | 0 | **23** |
| **Total (3.05)** | | **0** | **0** | **0** | **0** | **0** | **11** | **46** | **0** | **57** |
| **3.06** | ***Heart failure*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 0 | **14** |
| | Female | 0 | 0 | 0 | 0 | 1 | 3 | 12 | 0 | **16** |
| **Total (3.06)** | | **0** | **0** | **0** | **0** | **1** | **5** | **24** | **0** | **30** |
| **3.07** | ***Cerebrovascular diseases*** | | | | | | | | | |
| | Male | 0 | 0 | 2 | 0 | 7 | 89 | 142 | | **240** |
| | Female | 0 | 0 | 1 | 0 | 13 | 63 | 168 | | **245** |
| **Total (3.07)** | | **0** | **0** | **3** | **0** | **20** | **152** | **310** | | **485** |
| **3.09** | ***All other diseases of the circulatory system*** | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Male | 0 | 1 | 8 | 0 | 4 | 13 | 23 | | **49** |
| | Female | 0 | 0 | 2 | 0 | 7 | 15 | 29 | | **53** |
| **Total (3.09)** | | **0** | **1** | **10** | **0** | **11** | **28** | **52** | | **102** |
| **4.02** | ***Foetus and new-born affected by obstetric complications, birth trauma*** | | | | | | | | | |
| | Male | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **13** |
| | Female | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **5** |
| **Total (4.02)** | | **189** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **18** |
| **4.03** | ***Slow foetal growth, foetal malnutrition and immaturity*** | | | | | | | | | |
| | Male | 110 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **110** |
| | Female | 107 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **107** |
| **Total (4.03)** | | **256** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **217** |
| **4.04** | ***Respiratory disorders specific to the perinatal period*** | | | | | | | | | |
| | Male | 96 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **96** |
| | Female | 64 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **64** |
| **Total (4.04)** | | **160** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **160** |
| **4.05** | ***Haemolytic disease of foetus or new-born*** | | | | | | | | | |
| | Male | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **9** |
| | Female | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **6** |
| **Total (4.05)** | | **15** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **15** |
| **4.06** | ***Remainder of certain conditions originating in the perinatal period*** | | | | | | | | | |
| | Male | 171 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **171** |
| | Female | 122 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | **122** |
| **Total (4.06)** | | **293** | **0** | **0** | **0** | **0** | **0** | **0** | | **293** |
| | ***Injury, poisoning and certain other consequences of ext. causes*** | | | | | | | | | |
| | Male | 1 | 22 | 53 | 91 | 209 | 187 | 159 | 0 | **722** |
| | Female | 7 | 18 | 23 | 44 | 80 | 103 | 165 | 0 | **440** |
| **Total (5.01)** | | **8** | **40** | **76** | **135** | **289** | **290** | **324** | **0** | **1162** |
| **5.01** | ***Motor vehicle traffic accidents*** | | | | | | | | | |
| | Male | 0 | 3 | 8 | 42 | 57 | 37 | 10 | 0 | **157** |
| | Female | 1 | 1 | 5 | 7 | 15 | 12 | 2 | 0 | **43** |
| **Total (5.01)** | | **1** | **4** | **13** | **49** | **72** | **49** | **12** | **0** | **200** |
| **5.03** | ***Falls*** | | | | | | | | | |
| | Male | 1 | 4 | 18 | 5 | 17 | 31 | 73 | 0 | **149** |
| | Female | 5 | 6 | 8 | 4 | 13 | 22 | 101 | 0 | **159** |
| **Total (5.03)** | | **6** | **10** | **26** | **9** | **30** | **53** | **174** | **0** | **308** |
| **5.04** | ***Accidents caused by machinery, & by cutting & piercing instruments*** | | | | | | | | | |
| | Male | 0 | 0 | 1 | 7 | 11 | 12 | 4 | 0 | **35** |
| | Female | 0 | 0 | 1 | 3 | 2 | 2 | 0 | **0** | **8** |
| **Total (5.04)** | | **0** | **0** | **2** | **10** | **13** | **14** | **4** | **0** | **43** |
| | ***Accidents caused by firearm discharge*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 7 | 6 | 1 | 0 | 0 | **14** |
| | Female | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | **2** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total (5.04)** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **16** |
| **5.05** | ***Accidental drowning & submersion*** | | | | | | | | | |
| | Male | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | **4** |
| | Female | 0 | 2 | 0 | 0 | 1 | 1 | 0 | 0 | **4** |
| **Total (5.05)** | | **0** | **3** | **1** | **0** | **1** | **2** | **1** | **0** | **8** |
| **5.08** | ***Exposure to smoke, fire & flames*** | | | | | | | | | |
| | Male | 0 | 0 | 2 | 0 | 0 | 3 | 0 | | **5** |
| | Female | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | **2** |
| **Total (5.08)** | | **0** | **0** | **2** | **1** | **1** | **3** | **2** | 0 | **7** |
| **5.09** | ***Accidental poisoning by and exposure to noxious substances*** | | | | | | | | | |
| | Male | 0 | 2 | 2 | 0 | 1 | 2 | 0 | 0 | **7** |
| | Female | 0 | 2 | 0 | 1 | 0 | 1 | 1 | 0 | **5** |
| **Total (5.09)** | | **0** | **23** | **2** | **0** | **3** | **3** | **2** | **0** | **12** |
| **5.10** | ***All other accidents*** | | | | | | | | | |
| | Male | 1 | 1 | 10 | 13 | 41 | 73 | 88 | 0 | **227** |
| | Female | 5 | 3 | 3 | 10 | 46 | 79 | 62 | 0 | **208** |
| **Total (5.10)** | | **6** | **4** | **13** | **23** | **87** | **152** | **150** | **0** | **435** |
| **5.11** | ***Intentional self-harm (suicide)*** | | | | | | | | | |
| | Male | 0 | 0 | 1 | 7 | 6 | 4 | 5 | 0 | **23** |
| | Female | 0 | 0 | 3 | 25 | 17 | 8 | 2 | 0 | **55** |
| **Total (5.11)** | | **0** | **0** | **4** | **32** | **23** | **12** | **7** | **0** | **78** |
| **5.12** | ***Assault (homicide)*** | | | | | | | | | |
| | Male | 0 | 0 | 4 | 27 | 59 | 22 | 3 | 0 | **115** |
| | Female | 0 | 0 | 0 | 4 | 2 | 2 | 0 | 0 | **8** |
| **Total (5.12)** | | **0** | **0** | **4** | **31** | **61** | **24** | **3** | **0** | **123** |
| **5.13** | ***Events of undetermined intent*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 4 | 1 | 4 | 1 | 0 | **10** |
| | Female | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | **2** |
| **Total (5.13)** | | **0** | **0** | **0** | **4** | **2** | **4** | **2** | **0** | **12** |
| **6.01** | ***Diabetes mellitus*** | | | | | | | | | |
| | Male | 0 | 0 | 6 | 8 | 17 | 35 | 44 | 0 | **110** |
| | Female | 0 | 0 | 4 | 13 | 11 | 29 | 46 | 0 | **103** |
| **Total (6.01)** | | **0** | **0** | **10** | **21** | **28** | **64** | **90** | **0** | **213** |
| **6.02** | ***Nutritional deficiencies and anaemias*** | | | | | | | | | |
| | Male | 2 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | **7** |
| | Female | 2 | 0 | 0 | 0 | 1 | 6 | 7 | 0 | **16** |
| **Total (6.02)** | | **4** | **2** | **0** | **0** | **1** | **9** | **7** | **0** | **23** |
| **6.03** | ***Mental and behavioural disorders*** | | | | | | | | | |
| | Male | 0 | 0 | 3 | 14 | 19 | 16 | 27 | 0 | **79** |
| | Female | 0 | 0 | 2 | 25 | 33 | 22 | 21 | 0 | **103** |
| **Total (6.03)** | | **0** | **0** | **5** | **39** | **52** | **38** | **48** | **0** | **182** |
| **6.04** | ***Diseases of the nervous system, except meningitis*** | | | | | | | | | |
| | Male | 13 | 11 | 13 | 1 | 29 | 28 | 39 | 0 | **134** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Female | 1 | 2 | 11 | 8 | 21 | 34 | 32 | 0 | **109** |
| **Total (6.04)** | | **14** | **13** | **24** | **9** | **50** | **62** | **71** | **0** | **243** |
| **6.05** | ***Chronic lower respiratory diseases excluding Asthma*** | | | | | | | | | |
| | Male | 1 | 5 | 0 | 0 | 0 | 9 | 12 | 0 | **27** |
| | Female | 1 | 1 | 0 | 1 | 5 | 3 | 7 | 0 | **18** |
| **Total (6.05)** | | **2** | **6** | **0** | **1** | **5** | **12** | **19** | **0** | **45** |
| | **(J45-J46)** | **Asthma** | | | | | | | | |
| | Male | 0 | 29 | 97 | 13 | 11 | 9 | 7 | 0 | **166** |
| | Female | 0 | 19 | 58 | 11 | 17 | 17 | 26 | 0 | **148** |
| **Total** | | **0** | **48** | **155** | **24** | **28** | **26** | **33** | **0** | **314** |
| **6.06** | ***Remainder of diseases of the respiratory system*** | | | | | | | | | |
| | Male | 7 | 60 | 20 | 15 | 16 | 32 | 44 | 0 | **194** |
| | Female | 10 | 38 | 17 | 16 | 31 | 40 | 43 | 0 | **195** |
| **Total (6.06)** | | **17** | **98** | **37** | **31** | **47** | **72** | **87** | **0** | **389** |
| **6.07** | ***Appendicitis, hernia of abdominal cavity and intestinal obstruction*** | | | | | | | | | |
| | Male | 4 | 3 | 8 | 8 | 31 | 62 | 46 | 0 | **162** |
| | Female | 1 | 1 | 0 | 0 | 9 | 28 | 60 | 0 | **99** |
| **Total (6.07)** | | **5** | **4** | **8** | **8** | **40** | **90** | **106** | **0** | **261** |
| **6.08** | ***Cirrhosis and certain other chronic diseases of liver*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 7 | 5 | 8 | 0 | **20** |
| | Female | 0 | 0 | 0 | 0 | 3 | 3 | 4 | 0 | **10** |
| **Total (6.08)** | | **0** | **0** | **0** | **0** | **10** | **8** | **12** | **0** | **30** |
| **6.09** | ***All other diseases of the digestive system*** | | | | | | | | | |
| | Male | 2 | 7 | 8 | 8 | 46 | 85 | 113 | 0 | **269** |
| | Female | 0 | 1 | 4 | 11 | 62 | 90 | 147 | 0 | **315** |
| **Total (6.09)** | | **2** | **8** | **12** | **19** | **108** | **175** | **260** | **0** | **584** |
| **6.10** | ***Diseases of the urinary system*** | | | | | | | | | |
| | Male | 4 | 1 | 7 | 6 | 33 | 76 | 178 | 0 | **305** |
| | Female | 0 | 0 | 4 | 7 | 28 | 72 | 85 | 0 | **196** |
| **Total (6.10)** | | **4** | **1** | **11** | **13** | **61** | **148** | **263** | **0** | **501** |
| **6.11** | ***Hyperplasia of prostate*** | | | | | | | | | |
| | Male | 0 | 0 | 0 | 0 | 0 | 8 | 15 | 0 | **23** |
| **Total (6.11)** | | | | | | | | | | |
| **6.12** | ***Pregnancy, childbirth & the puerperium*** | | | | | | | | | |
| | Female | 1 | 0 | 2 | 1113 | 2358 | 11 | 1 | 0 | **3486** |
| **Total (6.12)** | | | | | | | | | | **3486** |
| **6.13** | ***Congenital malformations, deformations and chromosomal abnormalities*** | | | | | | | | | |
| | Male | 31 | 9 | 3 | 2 | 0 | 0 | 2 | 1 | **48** |
| | Female | 15 | 0 | 1 | 3 | 1 | 1 | 0 | 1 | **22** |
| **Total (6.13)** | | **46** | **9** | **4** | **5** | **1** | **1** | **2** | **2** | **70** |
| **6.14** | ***Factors influencing health status and contact with health services*** | | | | | | | | | |
| | Male | 886 | 55 | 39 | 26 | 111 | 240 | 134 | 0 | **1491** |
| | Female | 879 | 41 | 20 | 45 | 141 | 137 | 80 | 0 | **1343** |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Total (6.13)** | | **1765** | **96** | **59** | **71** | **252** | **377** | **214** | **0** | **2834** |
| **6.15** | ***Remainder of all other diseases*** | | | | | | | | | |
| | Male | 6 | 25 | 56 | 104 | 362 | 471 | 534 | 0 | **1558** |
| | Female | 6 | 24 | 52 | 93 | 291 | 360 | 373 | 0 | **1199** |
| | | | | | | | | | | |

Table 67: Bed Utilisation at the Queen Elizabeth Hospital by Service, 2019

| Item | Total | Med. | Surg. | Obst. | Paediatrics | Gynae. | Orthopaedics | E.N.T. | Radiotherapy | Ophth. | PSY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of beds* | 508 | 98 | 108 | 53 | 121 | 24 | 32 | 6 | 20 | 6 | 12 |
| Admissions | 1,800 | 4,446 | 2,920 | 3,212 | 3,955 | 1,583 | 660 | 640 | 383 | 173 | 117 |
| Patient days | 123,449 | 48,233 | 29,868 | 10,061 | 15,033 | 6,439 | 6,982 | 1,983 | 2,819 | 356 | 1,675 |
| Av. Length of stay | 6.6 | 11.2 | 13.7 | 3.1 | 18.9 | 4.0 | 11.2 | 2.9 | 7.7 | 2.0 | 11.7 |
| % occupancy | 66.6 | 109.8 | 83.8 | 52.0 | 39.3 | 66.8 | 57.1 | 84.9 | 38.6 | 10.7 | 38.2 |
| Bed turnover rate | 33.8 | 45.2 | 26.4 | 59.6 | 32.7 | 61.2 | 20.3 | 89.3 | 20.5 | 24.3 | 12.2 |
| Major operations | 4,643 | - | 1,457 | 624 | - | 496 | 435 | 474 | - | 1,040 | - |
| Total operation | 6,684 | - | 2,589 | 647 | - | 670 | 780 | 670 | - | 1,206 | - |

Source: Q.E. H. Monthly Bed Utilization 2019

Table 68. Bed Utilisation at the Queen Elizabeth Hospital by Service, 2020

| Item | Total | Med. | Surg. | Obst. | Paediatrics | Gynae. | Orthopaedics | E.N.T. | Radiotherapy | Ophth. | PSY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of beds | 523 | 101 | 111 | 53 | 121 | 24 | 32 | 15 | 20 | 6 | 12 |
| Admissions | 15,771 | 4,269 | 2,339 | 2,847 | 3,392 | 1,381 | 609 | 480 | 316 | 37 | 101 |
| Patient days | 117,747 | 47,997 | 26,154 | 9,488 | 15,046 | 5,802 | 6,633 | 1,482 | 3,762 | 140 | 1,243 |
| Av. Length of stay | 7.4 | 11.7 | 11.3 | 3.3 | 4.3 | 4.2 | 10.5 | 2.9 | 12.7 | 3.0 | 11.2 |
| % occupancy | 61.5 | 130.2 | 70.9 | 48.9% | 34.1 | 61.0 | 56.0 | 36.3 | 45.9 | 0.7 | 28.3 |
| Bed turnover rate | 30.3 | 42.1 | 20.9 | 52.9 | 28.0 | 59.0 | 19.0 | 31.8 | 17.2 | 6.0 | 9.4 |
| Major operations | 1,592 | - | 1,014 | 19 | - | 247 | 0 | 215 | - | 97 | - |
| Total operation | 3,076 | - | 2,014 | 63 | - | 247 | 260 | 395 | - | 97 | - |

* Please note the bed allotments for Ward A5 and A6 is a total 28 beds, hence the deficit. * There was a marked decrease in operations because of COVID.

Source: Q.E. H. Monthly Bed Utilization Reports 2020

Table 69, Deaths by Service 2019

| MONTH | MEDICINE | SURGERY | E.N.T | ORTHOPAEDIC | GYNAECOLOGY | RADIO-THERAPY | PAEDIATRIC MEDICAL | NURSERY (N) | NURSERY (S) | TOTAL DEATHS | STILL BIRTHS | NEONATES | INFANTS | UNDER 24HRS | HOSPITAL DAYS | AVERAGE STAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | 67 | 17 | | 4 | 2 | 7 | 1 | | 2 | 100 | 1 | 2 | 2 | 23 | 1,564 | 15.6 |
| FEB | 58 | 11 | 1 | 2 | 1 | 9 | 1 | 1 | 1 | 85 | 1 | 2 | 2 | 12 | 1,167 | 13.7 |
| MAR | 71 | 16 | | 1 | 1 | 7 | | | 2 | 98 | 3 | 2 | 2 | 9 | 1,593 | 16.3 |
| APR | 63 | 12 | | 4 | 1 | 5 | | | 2 | 87 | 1 | 2 | 2 | 6 | 1,400 | 16.1 |
| MAY | 81 | 14 | | 1 | | 8 | 1 | | 2 | 107 | 1 | 2 | 2 | 7 | 1,962 | 18.3 |
| JUN | 66 | 16 | | | | 5 | 2 | | 1 | 90 | | 1 | 2 | 14 | 1,488 | 16.5 |
| JUL | 72 | 21 | 2 | 1 | | 8 | | 2 | | 106 | 1 | 2 | 2 | 19 | 953 | 9.0 |
| AUG | 66 | 20 | | 3 | | 7 | | 2 | | 98 | 1 | 2 | 2 | 15 | 1,696 | 17.3 |
| SEP | 74 | 23 | | 2 | 1 | 7 | | | | 107 | 2 | | | 15 | 1,374 | 12.8 |
| OCT | 80 | 26 | | 2 | 2 | 4 | 2 | | | 116 | 3 | | 2 | 16 | 1,722 | 14.8 |
| NOV | 66 | 26 | 1 | 4 | | 9 | 2 | | | 108 | 2 | | | 13 | 2,075 | 19.2 |
| DEC | 64 | 22 | 2 | 2 | 1 | 7 | | | | 99 | 1 | | 1 | 13 | 1,442 | 14.6 |
| **TOTAL** | **828** | **224** | **6** | **26** | **9** | **83** | **9** | **6** | **10** | **1,201** | **17** | **15** | **19** | **162** | **18,436** | **15.4** |

Table 70, Deaths by Service 2020

| MONTH | MEDICINE | SURGERY | E.N.T | ORTHOPAEDIC | GYNAECOLOGY | RADIO-THERAPY | PAEDIATRIC MEDICAL | PAEDIATRIC SURGICAL | NURSERY (N) | NURSERY (S) | TOTAL DEATHS | STILL BIRTHS | NEONATES | INFANTS | MATERNAL | UNDER 24HRS | HOSPITAL DAYS | AVERAGE STAY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | 74 | 13 | | 1 | 1 | 8 | | | | 2 | 99 | | 2 | 2 | | 7 | 1,555 | 15.7 |
| FEB | 72 | 13 | 2 | 3 | 2 | 3 | | | | 1 | 96 | 1 | 1 | 1 | | 15 | 1,852 | 19.3 |
| MAR | 77 | 14 | | 2 | 2 | 2 | | | 1 | 1 | 99 | 2 | 1 | 1 | | 18 | 2,592 | 26.2 |
| APR | 47 | 12 | | | | 6 | | | | | 66 | | | | 1 | 15 | 690 | 10.5 |
| MAY | 50 | 17 | | 3 | | 10 | | | | | 80 | 1 | | | | 21 | 928 | 11.6 |
| JUN | 49 | 9 | | | | 18 | 1 | | | 1 | 78 | 3 | 1 | 1 | | 10 | 862 | 11.1 |
| JUL | 55 | 19 | | 1 | | 13 | 1 | | | 1 | 90 | 1 | | 1 | | 21 | 1,395 | 15.5 |
| AUG | 66 | 13 | | 1 | 2 | 11 | | 1 | | 1 | 95 | 2 | 1 | 1 | | 19 | 1,332 | 14.0 |
| SEP | 81 | 16 | | 1 | 2 | 9 | | | | 1 | 110 | 2 | 1 | 2 | | 16 | 1,302 | 11.8 |
| OCT | 50 | 24 | 3 | | | 9 | 2 | | | 3 | 91 | 2 | 3 | 4 | 1 | 16 | 1,058 | 11.6 |
| NOV | 56 | 13 | | 3 | | 14 | 2 | | | | 88 | 2 | | | | 15 | 1,380 | 15.7 |
| DEC | 77 | 16 | 1 | | | 13 | 1 | | | 4 | 112 | 1 | 4 | 4 | | 15 | 2,252 | 20.1 |
| **TOTAL** | **754** | **179** | **7** | **15** | **9** | **116** | **7** | **1** | **1** | **15** | **1,104** | **17** | **14** | **17** | **2** | **188** | **1,719** | **15.6** |

## Table 71. Mortality Data 2019 - Partially Ranked

| MORTALITY DATA 2019 PARTIALLY RANKED CAUSES | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CAUSES | <1 YEAR | 1-4 YEARS | 5-14 YEARS | 15-24 YEARS | 25-44 YEARS | 45-64 YEARS | 65+ YEARS | Total |
| Stroke | | | | | 1 | 23 | 166 | 190 |
| Diabetes mellitus | | | | | 2 | 18 | 165 | 185 |
| Ca Prostate | | | | | | 19 | 121 | 140 |
| Pneumonia | 1 | 1 | | | 3 | 12 | 112 | 129 |
| Chronic ischaemic heart disease | | | | | | 22 | 80 | 102 |
| Essential (primary) hypertension | | | | | 1 | 12 | 67 | 80 |
| Ca Breast | | | | | 9 | 31 | 38 | 78 |
| Ca Colon | | | | | 1 | 23 | 44 | 68 |
| Nephritic Syndrome and Disorder of urinary system | | | | | | 3 | 48 | 51 |
| Dementia | | | | | | 1 | 46 | 47 |

## Table 72. Mortality Data 2020-Ten Leading Causes of Death

| | |
|---|---|
| 1 | *Diabetes mellitus* |
| 2 | *Cerebrovascular disease* |
| 3 | *Ischemic heart disease* |
| 4 | *Hypertensive diseases* |
| 5 | *Pulmonary heart disease, diseases of pulmonary circulation and other forms of heart disease* |
| 6 | *Malignant neoplasm of prostate* |
| 7 | *Acute respiratory infection and pneumonia* |
| 8 | *Nephritic Syndrome and Diseases of the urinary system* |
| 9 | *Malignant neoplasm of female breast* |
| 10 | *Malignant Neoplasm of Colon and Rectosigmoid Junction* |

Table 73. Mortality Data 2019 -Summary Tables

| Age | Sex | | Total |
|---|---|---|---|
| 2019 | | | |
| GROUPS | FEMALE | MALE | Grand Total |
| <1DAYS | 3 | | 3 |
| 1-6 DAYS | 3 | 5 | 8 |
| 7-27 DAYS | 2 | 3 | 5 |
| 1-11 MTHS | 4 | 2 | 6 |
| 1 YEAR | | 1 | 1 |
| >1 YEAR | | 2 | 2 |
| 3 YEARS | | 1 | 1 |
| 5-9 YEARS | 1 | 1 | 2 |
| 10-14 YEARS | 4 | 1 | 5 |
| 15-19 YEARS | 2 | 7 | 9 |
| 20-24 YEARS | 4 | 8 | 12 |
| 25-29 YEARS | 14 | 24 | 38 |
| 30-34 YEARS | 10 | 19 | 29 |
| 35-39 YEARS | 16 | 26 | 42 |
| 40-44 YEARS | 24 | 25 | 49 |
| 45-49 YEARS | 29 | 40 | 69 |
| 50-54 YEARS | 59 | 48 | 107 |
| 55-59 YEARS | 76 | 78 | 154 |
| 60-64 YEARS | 88 | 113 | 201 |
| 65-69 YEARS | 97 | 152 | 249 |
| 70-74 YEARS | 159 | 164 | 323 |
| 75-79 YEARS | 137 | 179 | 316 |
| 80-84 YEARS | 229 | 172 | 401 |
| 85+ | 555 | 294 | 849 |
| Grand Total | 1,516 | 1,365 | 2,881 |

Source: Records Department

Table 74. Mortality Data 2020 -Summary Tables

| Age | Sex | | Total |
|---|---|---|---|
| 2019 | | | |
| GROUPS | FEMALE | MALE | Grand Total |
| <1DAYS | 1 | 2 | 3 |
| 1-6 DAYS | 2 | 6 | 8 |
| 7-27 DAYS | 2 | 5 | 7 |
| 28 DAYS-11 MTHS | 4 | 2 | 6 |
| >1 YEAR | 1 | | 1 |
| 3 YEARS | 1 | | 1 |
| 5-9 YEARS | | 1 | 1 |
| 10-14 YEARS | 2 | 3 | 5 |
| 15-19 YEARS | 4 | 6 | 10 |
| 20-24 YEARS | 6 | 15 | 21 |
| 25-29 YEARS | 9 | 15 | 24 |
| 30-34 YEARS | 4 | 17 | 21 |
| 35-39 YEARS | 15 | 23 | 38 |
| 40-44 YEARS | 20 | 27 | 47 |
| 45-49 YEARS | 34 | 37 | 71 |
| 50-54 YEARS | 39 | 26 | 95 |
| 55-59 YEARS | 80 | 105 | 185 |
| 60-64 YEARS | 69 | 114 | 183 |
| 65-69 YEARS | 103 | 152 | 255 |
| 70-74 YEARS | 125 | 168 | 293 |
| 75-79 YEARS | 130 | 152 | 282 |
| 80-84 YEARS | 162 | 174 | 336 |
| 85+ | 484 | 271 | 755 |
| **Grand Total** | **1,297** | **1,351** | **2,648** |

Table 75: Principal Causes of Death 2018

| Rank | Principal Causes of Death 2018 | Total |
|---|---|---|
| 1 | Diabetes mellitus | 219 |
| 2 | Cerebrovascular Disease | 134 |
| 3 | Pneumonia | 121 |
| 4 | Essential (primary) hypertension | 117 |
| 5 | Prostate Cancer | 116 |
| 6 | Chronic ischaemic heart disease | 103 |
| 7 | Breast Cancer | 98 |
| 8 | Colon Cancer | 55 |
| 9 | Urinary System Disorder | 44 |
| 10 | Pulmonary /Heart Disease | 43 |

Table 76: Principal Causes of Death 2019

| Rank | Principal Causes of Death 2019 | Total |
|---|---|---|
| **1** | Stroke, | 190 |
| **2** | Diabetes mellitus | 185 |
| **3** | Prostate Cancer | 140 |
| **4** | Pneumonia, | 129 |
| **5** | Chronic ischaemic heart disease | 102 |
| **6** | Essential (primary) hypertension | 80 |
| **7** | Breast Cancer | 78 |
| **8** | Pulmonary/Heart disease | 70 |
| **9** | Colon Cancer | 68 |
| **11** | Urinary System Disorder | 51 |

Table 77: Principal Causes of Death 2020

| Rank | Principal Causes of Death 2020 | Total |
|---|---|---|
| **1** | Diabetes Mellitus | 193 |
| **2** | Prostate Cancer | 131 |
| **3** | Stroke | 129 |
| **4** | Essential (primary) hypertension | 99 |
| **5** | Chronic ischaemic heart disease | 92 |
| **6** | Pneumonia | 85 |
| **7** | Breast Cancer | 83 |
| **8** | Colon Cancer | 74 |
| **9** | Pulmonary Disease/Heart Disease | 65 |
| **10** | Urinary System Disorder | 51 |
| **11** | Septicaemia | 47 |
| **12** | Dementia | 46 |

Table 78: Mortality Data 2019

| MORTALITY DATA 2019 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | TOTAL |
| 0.00 | *Symptoms, signs and ill-defined conditions* | | | | | | | | | |
| Total (0.00) | | 1 | 0 | 0 | 0 | 6 | 15 | 31 | 0 | 53 |
| 1.01 | *intestinal Infectious diseases* | | | | | | | | | |
| | | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 6 |
| 1.02 | *Tuberculosis* | | | | | | | | | |
| | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1.04 | *Certain diseases preventable by immunization* | | | | | | | | | |
| Total (1.04) | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 1.06 | *Septicemia, except neonatal* | | | | | | | | | |
| Total (1.06) | | 0 | 0 | 0 | 0 | 2 | 11 | 18 | 0 | 31 |
| 1.07 | *HIV disease (AIDS)* | | | | | | | | | |
| Total (1.07) | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1.08 | *Acute respiratory infection* | | | | | | | | | |
| Total (1.08) | | 1 | 1 | 0 | 0 | 4 | 17 | 142 | 0 | 165 |
| 1.09 | *Other infectious and parasitic diseases* | | | | | | | | | |
| Total (1.09) | | 0 | 0 | 0 | 0 | 4 | 9 | 14 | 0 | 27 |
| 2.01 | *Malignant neoplasm of stomach* | | | | | | | | | |
| Total (2.01) | | 0 | 0 | 0 | 0 | 0 | 7 | 11 | 0 | 18 |
| 2.02 | *Malignant neoplasm of colon and rectosigmoid junction* | | | | | | | | | |
| Total (2.02) | | 0 | 0 | 0 | 0 | 1 | 25 | 45 | 0 | 71 |
| 2.03 | *Malignant neoplasm of digestive organs and peritoneum, except stomach and colon* | | | | | | | | | |
| Total (2.03) | | 0 | 0 | 0 | 0 | 6 | 22 | 48 | 0 | 76 |
| 2.04 | *Malignant neoplasm of trachea, bronchus and lung* | | | | | | | | | |
| Total (2.04) | | 0 | 0 | 0 | 0 | 0 | 11 | 24 | 0 | 35 |
| 2.05 | *Malignant neoplasm of respiratory and intrathoracic organs, except trachea, bronchus and lung* | | | | | | | | | |
| Total (2.05) | | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 |
| 2.06 | *Malignant neoplasm of female breast* | | | | | | | | | |
| Total (2.06) | | 0 | 0 | 0 | 0 | 9 | 31 | 38 | 0 | 78 |
| 2.07 | *Malignant neoplasm of cervix uteri* | | | | | | | | | |
| Total (2.07) | | 0 | 0 | 0 | 0 | 1 | 2 | 5 | 0 | 8 |
| 2.08 | *Malignant neoplasm of other and unspecified parts of uterus* | | | | | | | | | |
| Total (2.08) | | 0 | 0 | 0 | 0 | 0 | 13 | 17 | 0 | 30 |
| 2.10 | *Malignant neoplasm of prostate* | | | | | | | | | |
| Total (2.10) | | 0 | 0 | 0 | 0 | 0 | 19 | 121 | 0 | 140 |

| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.11 | *Malignant neoplasm of bladder & other genitourinary organs* | | | | | | | | | |
| Total (2.11) | | 0 | 0 | 0 | 0 | 0 | 10 | 27 | 0 | 37 |
| 2.12 | *Leukaemia* | | | | | | | | | |
| Total (2.12) | | 0 | 0 | 1 | 1 | 2 | 4 | 9 | 0 | 17 |
| 2.13 | *Malignant neoplasm of lymphoid, other hematopoietic and related tissue* | | | | | | | | | |
| Total (2.13) | | 0 | 0 | 0 | 0 | 3 | 11 | 32 | 0 | 46 |
| 2.14 | *Malignant neoplasm of other and unspecified sites* | | | | | | | | | |
| Total (2.14) | | 0 | 0 | 1 | 0 | 3 | 20 | 55 | 0 | 79 |
| 2.15 | *Carcinoma in situ, benign neoplasms and neoplasms of uncertain or unknown behaviour* | | | | | | | | | |
| Total (2.15) | | 0 | 0 | 0 | 1 | 1 | 3 | 11 | 0 | 16 |
| 3.01 | *Acute rheumatic fever and chronic rheumatic heart diseases* | | | | | | | | | |
| Total (3.01) | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 3.02 | *Hypertensive diseases* | | | | | | | | | |
| Total (3.02) | | 0 | 0 | 0 | 0 | 2 | 18 | 123 | 0 | 143 |
| 3.03 | *Ischemic heart diseases* | | | | | | | | | |
| Total (3.03) | | 0 | 0 | 0 | 0 | 2 | 42 | 176 | 0 | 219 |
| 3.04 | *Pulmonary heart disease, diseases of pulmonary circulation and other forms of heart disease* | | | | | | | | | |
| Total (3.04) | | 0 | 0 | 1 | 0 | 11 | 35 | 100 | 0 | 147 |
| 3.05 | *Cardiac arrest* | | | | | | | | | |
| Total (3.05) | | 0 | 0 | 0 | 0 | 2 | 4 | 14 | 0 | 20 |
| 3.06 | *Heart failure* | | | | | | | | | |
| Total (3.06) | | 0 | 0 | 0 | 0 | 1 | 8 | 32 | 0 | 41 |
| 3.07 | *Cerebrovascular diseases* | | | | | | | | | |
| Total (3.07) | | 0 | 0 | 0 | 0 | 3 | 36 | 230 | 0 | 269 |
| 3.08 | *Atherosclerosis* | | | | | | | | | |
| Total (3.08) | | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 3.09 | *All other diseases of the circulatory system* | | | | | | | | | |
| Total (3.09) | | 0 | 0 | 0 | 0 | 2 | 8 | 23 | 0 | 33 |
| 4.03 | *Slow foetal growth, foetal malnutrition and immaturity* | | | | | | | | | |
| Total (4.03) | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4.04 | *Respiratory disorders specific to the perinatal period* | | | | | | | | | |
| Total (4.04) | | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 4.05 | *Bacterial sepsis of new-born* | | | | | | | | | |
| Total (4.05) | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4.06 | *Remainder of certain conditions originating in the perinatal period* | | | | | | | | | |
| Total (4.06) | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |

| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 5.01 | *Land transport accidents* | | | | | | | | | |
| Total (5.01) | | 0 | 0 | 0 | 2 | 7 | 2 | 2 | 0 | 13 |
| 5.03 | *Falls* | | | | | | | | | |
| Total (5.03) | | 1 | 0 | 0 | 1 | 0 | 3 | 19 | 0 | 24 |
| 5.06 | *Accidental threats to breathing* | | | | | | | | | |
| Total (5.06) | | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| 5.08 | *Exposure to smoke, fire & flames* | | | | | | | | | |
| Total (5.08) | | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 5 |
| 5.10 | *All other accidents* | | | | | | | | | |
| Total (5.10) | | 0 | 0 | 0 | 1 | 2 | 9 | 26 | 0 | 38 |
| 5.12 | *Assault (homicide)* | | | | | | | | | |
| Total (5.12) | | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 |
| 5.13 | *Events of undetermined intent* | | | | | | | | | |
| Total (5.13) | | 0 | 0 | 2 | 10 | 37 | 13 | 18 | 0 | 80 |
| 6.01 | *Diabetes mellitus* | | | | | | | | | |
| Total (6.01) | | 0 | 0 | 0 | 0 | 3 | 21 | 206 | 0 | 230 |
| 6.02 | Nutritional deficiencies and anaemias | | | | | | | | | |
| Total (6.02) | | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 |
| 6.03 | Mental and Behavioral Disorders | | | | | | | | | |
| Total (6.03) | | 0 | 0 | 0 | 0 | 0 | 2 | 55 | 0 | 57 |
| 6.04 | *Diseases of the Nervous System, Except Meningitis* | | | | | | | | | |
| Total (6.04) | | 0 | 1 | 0 | 3 | 5 | 14 | 61 | 0 | 84 |
| 6.05 | *Chronic Lower Respiratory Diseases Including Asthma* | | | | | | | | | |
| Total (6.05) | | 0 | 0 | 1 | 0 | 2 | 3 | 15 | 0 | 21 |
| 6.06 | *Remainder of diseases of the respiratory system* | | | | | | | | | |
| Total (6.06) | | 1 | 0 | 0 | 0 | 3 | 8 | 63 | 0 | 75 |
| 6.07 | *Appendicitis, Hernia of abdominal Cavity and Intestinal Obstruction* | | | | | | | | | |
| Total (6.07) | | 0 | 0 | 0 | 0 | 0 | 2 | 17 | 0 | 19 |
| 6.08 | *Cirrhosis and Certain Other Chronic Diseases of Liver* | | | | | | | | | |
| Total (6.08) | | 0 | 0 | 0 | 0 | 1 | 8 | 3 | 0 | 12 |
| 6.09 | *All Other Disease of the Digestive System* | | | | | | | | | |
| Total (6.09) | | 0 | 0 | 0 | 1 | 4 | 14 | 50 | 0 | 69 |
| 6.10 | *Diseases of the urinary system* | | | | | | | | | |
| Total (6.10) | | 0 | 0 | 0 | 0 | 2 | 10 | 88 | 0 | 100 |

| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 6.11 | *Hyperplasia of prostate* | | | | | | | | | |
| Total (6.11) | | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 8 |
| 6.12 | *Pregnancy, childbirth and the puerperium* | | | | | | | | | |
| Total (6.12) | | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 6.13 | *Congenital malformations, deformations and chromosomal abnormalities* | | | | | | | | | |
| Total (6.13) | | 4 | 1 | 1 | 0 | 0 | 3 | 1 | 0 | 10 |
| 6.14 | *Remainder of all other diseases* | | | | | | | | | |
| Total (6.14) | | 1 | 0 | 0 | 1 | 18 | 22 | 155 | 0 | 197 |
| Grand Totals | | 22 | 4 | 7 | 21 | 157 | 523 | 2147 | 0 | 2881 |

Table 79. Mortality Data 2020

| MORTALITY DATA 2019 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | TOTAL |
| 0.00 | *Symptoms, signs and ill-defined conditions* | | | | | | | | | |
| Total (0.00) | | 6 | 0 | 0 | 1 | 5 | 12 | 22 | 0 | 46 |
| 1.01 | *Intestinal Infectious diseases* | | | | | | | | | |
| | | 2 | 0 | 1 | 0 | 0 | 2 | 7 | 0 | 12 |
| 1.02 | *Tuberculosis* | | | | | | | | | |
| | | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| 1.03 | *Certain vector-borne diseases and rabies* | | | | | | | | | |
| Total (1.03) | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| 1.04 | *Certain Diseases Preventable by Immunization* | | | | | | | | | |
| Total (1.04) | | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 |
| 1.05 | *Meningitis* | | | | | | | | | |
| Total (1.05) | | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 1.06 | *Septicemia, except neonatal* | | | | | | | | | |
| Total (1.06) | | 0 | 0 | 0 | 0 | 2 | 14 | 31 | 0 | 47 |
| 1.07 | *HIV disease (AIDS)* | | | | | | | | | |
| Total (1.07) | | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 5 |
| 1.08 | *Acute Respiratory Infection* | | | | | | | | | |
| Total (1.08) | | 0 | 0 | 0 | 0 | 0 | 12 | 108 | 0 | 120 |
| 1.09 | *Other Infectious and Parasitic Diseases* | | | | | | | | | |
| Total (1.09) | | 0 | 0 | 0 | 0 | 3 | 7 | 11 | 0 | 21 |
| 2.01 | *Malignant Neoplasm of Stomach* | | | | | | | | | |
| Total (2.01) | | 0 | 0 | 0 | 0 | 0 | 6 | 16 | 0 | 22 |
| 2.02 | *Malignant Neoplasm of Colon and Rectosigmoid Junction* | | | | | | | | | |
| Total (2.02) | | 0 | 0 | 0 | 0 | 1 | 21 | 54 | 0 | 76 |
| 2.03 | *Malignant Neoplasm of Digestive Organs and Peritoneum, except Stomach and Colon* | | | | | | | | | |
| Total (2.03) | | 0 | 0 | 0 | 0 | 0 | 22 | 51 | 0 | 73 |
| 2.04 | *Malignant Neoplasm of Trachea, Bronchus and Lung* | | | | | | | | | |
| Total (2.04) | | 0 | 0 | 0 | 0 | 1 | 7 | 22 | 0 | 30 |
| 2.05 | *Malignant Neoplasm of Respiratory and Intrathoracic Organs, except Trachea, Bronchus and Lung* | | | | | | | | | |
| Total (2.05) | | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 4 |
| 2.06 | *Malignant Neoplasm of Female Breast* | | | | | | | | | |
| Total (2.06) | | 0 | 0 | 0 | 0 | 6 | 33 | 44 | 0 | 83 |
| 2.07 | *Malignant Neoplasm of Cervix Uteri* | | | | | | | | | |
| Total (2.07) | | 0 | 0 | 0 | 0 | 2 | 4 | 4 | 0 | 10 |

| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 2.08 | *Malignant Neoplasm of Other and Unspecified Parts of Uterus* | | | | | | | | | |
| Total (2.08 | | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 38 |
| 2.10 | *Malignant Neoplasm of Prostate* | | | | | | | | | |
| Total (2.10) | | 0 | 0 | 0 | 0 | 0 | 19 | 112 | 0 | 131 |
| 2.11 | *Malignant Neoplasm of Prostate* | | | | | | | | | |
| Total (2.11) | | 0 | 0 | 0 | 0 | 0 | 8 | 20 | 2 | 28 |
| 2.12 | *Malignant Neoplasm of Bladder & Other Genitourinary Organs* | | | | | | | | | |
| Total (2.12) | | 0 | 0 | 0 | 0 | 3 | 6 | 3 | 0 | 12 |
| 2.13 | *Malignant Neoplasm of Lymphoid, Other Hematopoietic and Related Tissue* | | | | | | | | | |
| Total (2.13) | | 0 | 0 | 0 | 1 | 3 | 10 | 25 | 0 | 39 |
| 2.14 | *Malignant Neoplasm of Other and Unspecified Sites* | | | | | | | | | |
| Total (2.14) | | 0 | 0 | 0 | 0 | 4 | 22 | 40 | 0 | 66 |
| 2.15 | *Carcinoma in Situ, Benign Neoplasms and Neoplasms of Uncertain or Unknown Behaviour* | | | | | | | | | |
| Total (2.15) | | 0 | 0 | 0 | 0 | 0 | 6 | 16 | 0 | 22 |
| 3.01 | *Acute Rheumatic Fever and Chronic Rheumatic Heart Disease* | | | | | | | | | |
| Total (3.01) | | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 3.02 | *Hypertensive Disease* | | | | | | | | | |
| Total (3.02) | | 0 | 0 | 0 | 0 | 1 | 21 | 138 | 0 | 160 |
| 3.03 | *Ischemic Heart Diseases* | | | | | | | | | |
| Total (3.03) | | 0 | 0 | 0 | 0 | 2 | 40 | 143 | 0 | 185 |
| 3.04 | *Pulmonary Heart Diseases, Diseases of Pulmonary Circulation and Forms of Heart Disease* | | | | | | | | | |
| Total (3.04) | | 0 | 0 | 0 | 2 | 9 | 40 | 82 | 0 | 133 |
| 3.05 | *Cardiac Arrest* | | | | | | | | | |
| Total (3.05) | | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| 3.06 | *Heart Failure* | | | | | | | | | |
| Total (3.06) | | 0 | 0 | 0 | 0 | 0 | 4 | 30 | 0 | 34 |
| 3.07 | *Cerebrovascular Diseases* | | | | | | | | | |
| Total (3.07) | | | | 1 | 1 | 3 | 29 | 154 | 0 | 188 |
| 3.09 | *All Other Diseases of the Circulatory System* | | | | | | | | | |
| Total (3.09) | | 0 | 0 | 0 | 0 | 0 | 2 | 26 | 0 | 28 |
| 4.04 | *Respiratory Disorders Specific to the Perinatal Period* | | | | | | | | | |
| Total (4.04) | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 4.05 | *Bacterial Sepsis of New-born* | | | | | | | | | |
| Total (4.05) | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 4.06 | *Remainder of Certain Conditions Originating in the Perinatal Period* | | | | | | | | | |
| Total (4.06) | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |

| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 5.01 | *Motor Vehicle Traffic Accidents* | | | | | | | | | |
| Total (5.01) | | 0 | 0 | 0 | 2 | 4 | 3 | 4 | 0 | 13 |
| 5.03 | *Falls* | | | | | | | | | |
| Total (5.03) | | 0 | 0 | 0 | 0 | 1 | 0 | 20 | 0 | 21 |
| 5.06 | *Accidental threats to breathing* | | | | | | | | | |
| Total (5.06) | | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 3 |
| 5.09 | *Accidental Poisoning by and Exposure to Noxious Substances* | | | | | | | | | |
| Total (5.09) | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5.10 | *All Other Accidents* | | | | | | | | | |
| Total (5.10) | | 0 | 0 | 0 | 0 | 0 | 12 | 37 | 0 | 49 |
| 5.13 | *Events of undetermined intent* | | | | | | | | | |
| Total (5.13) | | 2 | 0 | 2 | 13 | 37 | 16 | 7 | 0 | 77 |
| 5.14 | *All Other External Causes* | | | | | | | | | |
| Total (5.14) | | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| 6.01 | *Diabetes Mellitus* | | | | | | | | | |
| Total (6.01) | | 0 | 0 | 0 | 0 | 5 | 33 | 186 | 0 | 224 |
| 6.02 | *Nutritional Deficiencies and Anaemias* | | | | | | | | | |
| Total (6.02) | | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| 6.03 | *Mental and Behavioral Disorders* | | | | | | | | | |
| Total (6.03) | | 0 | 0 | 0 | 0 | 1 | 3 | 54 | 0 | 58 |
| 6.04 | *Diseases of the Nervous System, Except Meningitis* | | | | | | | | | |
| Total (6.04) | | 0 | 2 | 0 | 0 | 3 | 10 | 63 | 0 | 78 |
| 6.05 | *Chronic Lower Respiratory Diseases Including Asthma* | | | | | | | | | |
| Total (6.05) | | 0 | 0 | 0 | 0 | 0 | 3 | 14 | 0 | 17 |
| | *Asthma* | | | | | 1 | 2 | 3 | 0 | 6 |
| Total (6.05) | | 0 | 0 | 0 | 0 | 1 | 5 | 17 | 0 | 23 |
| 6.06 | *Remainder of Diseases of the Respiratory System* | | | | | | | | | |
| Total (6.06) | | 2 | 0 | 0 | 0 | 3 | 12 | 45 | 0 | 62 |
| 6.07 | *Appendicitis, Hernia of abdominal Cavity and Intestinal Obstruction* | | | | | | | | | |
| Total (6.07) | | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 0 | 17 |
| 6.08 | *Cirrhosis and Certain Other Chronic Diseases of Liver* | | | | | | | | | |
| Total (6.08) | | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 0 | 14 |
| 6.09 | *All Other Diseases of the Digestive System* | | | | | | | | | |
| Total (6.09) | | 1 | 0 | 0 | 1 | 4 | 10 | 52 | 0 | 68 |

| Code | Gender | <1y | 1-4y | 5-14y | 15-24y | 25-44y | 45-64y | 65y+ | Unk. | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| 6.10 | *Diseases of the Urinary System* | | | | | | | | | |
| Total (6.10) | | 0 | 0 | 0 | 1 | 4 | 28 | 74 | 0 | 107 |
| 6.11 | *Hyperplasia of Prostate* | | | | | | | | | |
| Total (6.11) | | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 |
| 6.13 | *Congenital Malformations, and Chromosomal Deformation Abnormalities* | | | | | | | | | |
| Total (6.13) | | 2 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 6 |
| 6.14 | *Remainder of all other diseases* | | | | | | | | | |
| Total (6.14) | | 0 | 0 | 2 | 6 | 15 | 23 | 130 | 0 | 176 |
| Grand Totals | | 24 | 2 | 6 | 31 | 130 | 531 | 1924 | 0 | 2648 |

Table 80: Coroners Cases and Postmortems-2020

| | Deaths | | | | | | Postmortem Examination | | |
|---|---|---|---|---|---|---|---|---|---|
| **Service** | **Total** | **Post Oper** | **Maternal** | **Anaesthetic** | **Within 24 Hrs** | **Coroners Case** | **Hospital** | **Coroner** | **Total** |
| **Medicine** | **340** | | 1 | | 131 | 208 | 2 | 74 | **76** |
| **Surgery** | **87** | | 1 | 1 | 29 | 56 | 2 | 29 | **31** |
| **E.N.T** | **5** | | | | 1 | 4 | 0 | 4 | **4** |
| **Orthopaedics** | **10** | | | | 0 | 10 | 0 | 13 | **13** |
| **Gynaecology** | **7** | | | | 2 | 5 | 1 | 1 | **2** |
| **Obstetrics** | **2** | | | | 0 | 2 | 0 | 2 | **2** |
| **Radiotherapy** | **40** | | | | 21 | 19 | 0 | 2 | **2** |
| **Paedmedical Under 1 Year** | **3** | | | | 1 | 2 | 0 | 1 | **1** |
| **Paedmedical 1 Year & Over** | **2** | | | | 1 | 1 | 0 | 0 | **0** |
| **Paedsurgical Under 1 Year** | **2** | | | | 1 | 1 | 0 | 1 | **1** |
| **Paedsurgical 1 Year & Over** | **1** | | | | 0 | 1 | 0 | 1 | **1** |
| **Total Adults & Children** | **499** | **0** | **2** | **1** | **187** | **309** | **5** | **128** | **133** |
| **Babies: B1, B2, B3** | **0** | | | | 0 | 0 | 0 | 0 | **0** |
| **Babies: NICU** | **6** | | | | 0 | 6 | 0 | 5 | **5** |
| **Total Inpatients** | **505** | 0 | 2 | 1 | 187 | 315 | 5 | 133 | **138** |
| **Accident & Emergency** | **268** | | | | 0 | 268 | 0 | 137 | **137** |
| **Outpatient Department** | **3** | | | | 1 | 2 | 0 | 2 | **2** |
| **Stillbirths** | **17** | | | | 0 | 17 | 0 | 15 | **15** |

## Psychiatric Hospital

Table 81: Psychiatric Hospital-Numbers of Admissions by Classification and Patients Discharged

| THE PSYCHIATRIC HOSPITAL | | | | |
|---|---|---|---|---|
| DEPARTMENT OF MEDICAL RECORDS | | | | |
| Number of Admissions by Classification | | | | |
| Category | 2019 | | 2020 | |
| | Male | Female | Male | Female |
| | | | | |
| **Total Admissions** | **868** | **341** | **692** | **291** |
| **First Admissions** | 163 | 96 | 149 | 88 |
| **Re- admissions** | 705 | 245 | 543 | 203 |
| | | | | |
| Type of Admissions | | | | |
| **Certified** | 1 | 2 | 2 | 0 |
| **Medically Recommended** | 126 | 122 | 148 | 113 |
| **Hospital Order** | 125 | 12 | 93 | 7 |
| **Voluntary** | 593 | 197 | 443 | 167 |
| **Other** | 23 | 8 | 6 | 4 |
| | | | | |
| Number of Patients Discharged by Sex | | | | |
| | 2019 | | | 2020 |
| | Male | Female | Male | Female |
| **Discharges** | 890 | 339 | 694 | 303 |
| **Total** | 1,229 | | | 997 |

## Albert Cecil Graham Development Centre

### Audiology

Table 82: Audiology Patients Seen

| AGE GROUP | MALES | FEMALES | TOTAL |
|---|---|---|---|
| **0-5** | 44 | 03 | **47** |
| **6-10** | 29 | 08 | **37** |
| **11-15** | 10 | 03 | **13** |
| **16-21** | 03 | 01 | **04** |
| **TOTAL** | **90** | **15** | **105** |

Table 83: Treatment for Patients

| | MALES | FEMALES | TOTAL |
|---|---|---|---|
| **NEW AIDS** | 02 | 01 | **03** |
| **NEW EAR MOLDS** | 05 | 04 | **09** |
| **EAR MOLD IMPRESSIONS** | 05 | 04 | **09** |
| **REFER ABR/OAE** | 01 | 01 | **02** |
| **REFER QEH** | 01 | 00 | **01** |
| **CERUMEN MANAGEMENT** | 07 | 01 | **08** |
| **TOTAL** | **21** | **11** | **32** |

Table 84: Audiology Distribution by Parish

| PARISH | MALES | FEMALES | TOTAL |
|---|---|---|---|
| **ST. MICHAEL** | 44 | 11 | **55** |
| **CHRIST CHURCH** | 07 | 01 | **08** |
| **ST. PHILIP** | 13 | 01 | **14** |
| **ST. JAMES** | 04 | 04 | **08** |
| **ST. GEORGE** | 07 | 00 | **07** |
| **ST. JOHN** | 02 | 00 | **02** |
| **ST. THOMAS** | 03 | 00 | **03** |
| **ST. PETER** | 03 | 00 | **03** |
| **ST. LUCY** | 02 | 00 | **02** |
| **ST. ANDREW** | 00 | 03 | **03** |
| **ST. JOSEPH** | 00 | 00 | **00** |
| **TOTAL** | **85** | **20** | **105** |

## Speech Therapy

Table 85: New Referrals to Speech Therapy

| NEW REFERRALS | TOTAL |
|---|---|
| MALES | 33 |
| FEMALES | 9 |
| TOTAL | **42** |

Table 86: Age Range of New Referrals During Year 2020

| AGE (IN YEARS) | MALES | FEMALES | TOTAL |
|---|---|---|---|
| **0 - 2** | 2 | 8 | 10 |
| **3 - 5** | 25 | | 25 |
| **6 - 8** | 6 | | 6 |
| **9 - 11** | | | 0 |
| **12 - 14** | | 1 | 1 |
| **TOTAL** | **33** | **9** | **42** |

Table 87: Speech Therapy Parish Distribution

| PARISH | MALES | FEMALES | TOTAL |
|---|---|---|---|
| **ST. ANDREW** | 0 | 0 | 0 |
| **CHRIST CHURCH** | 5 | 2 | 7 |
| **ST. GEORGE** | 1 | 0 | 1 |
| **ST. JAMES** | 1 | 2 | 3 |
| **ST. JOHN** | 2 | 0 | 2 |
| **ST. JOSEPH** | 0 | 0 | 0 |
| **ST. LUCY** | 0 | 0 | 0 |
| **ST. MICHAEL** | 15 | 3 | 18 |
| **ST. PETER** | 1 | 0 | 1 |
| **ST. PHILIP** | 6 | 1 | 7 |
| **ST. THOMAS** | 2 | 1 | 3 |
| **TOTAL** | **33** | **9** | **42** |

## Physiotherapy

Table 88: Physiotherapy- Diagnosis of New Referrals

| DIAGNOSIS | MALES | FEMALES | TOTAL |
|---|---|---|---|
| CNS Disorders | 5 | 3 | 8 |
| Orthopaedic Disorders | 2 | 3 | 5 |
| Developmental Delays | 0 | 5 | 5 |
| Prematurity | 7 | 8 | 15 |
| Down Syndrome | 5 | 0 | 5 |
| Erb's Palsy | 0 | 1 | 1 |
| Marfan syndrome | 0 | 1 | 1 |
| ASD, gross motor | 0 | 1 | 1 |
| Brain tumour | 1 | 0 | 1 |
| Total | **20** | **22** | **42** |

Table 89: Distribution of Patients by Parish Receiving Speech Therapy

| PARISH | MALE | FEMALE | TOTAL |
|---|---|---|---|
| ST. MICHAEL | 37 | 35 | 72 |
| CHRIST CHURCH | 22 | 18 | 40 |
| ST. PHILIP | 12 | 10 | 22 |
| ST. PETER | 5 | 6 | 11 |
| ST. GEORGE | 7 | 9 | 16 |
| ST. JAMES | 17 | 6 | 23 |
| ST. JOSEPH | 3 | 4 | 7 |
| ST. THOMAS | 2 | 5 | 7 |
| ST. JOHN | 4 | 2 | 6 |
| ST. ANDREW | 3 | 4 | 7 |
| ST. LUCY | 2 | 1 | 3 |
| TOTAL | **114** | **98** | **212** |

Table 90: Distribution by Parish of Clients in Psychology Department

| PARISH | TOTAL |
|---|---|
| ST. MICHAEL | 44 |
| CHRIST CHURCH | 27 |
| ST. PHILIP | 16 |
| ST. JOHN | 7 |
| ST. JOSEPH | 3 |
| ST. GEORGE | 14 |
| ST. ANDREW | 0 |
| ST. THOMAS | 6 |
| ST. JAMES | 10 |
| ST. PETER | 6 |
| ST. LUCY | 1 |
| TOTAL | **134** |

Table 91: Dental- Utilisation Data for Dental Services in 2019

| CLINIC | ADULTS (18+ years) | | CHILDREN (4-18 years) | | SERVICES | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Attendances | Extractions | Attendances | Extractions | Fillings (Temporary & Permanent) | PREVENTIVE MAINTENANCE | | | | RCT | Emergency |
| | | | | | | PROPHY | SCALE | FLUORIDE TX | TX Completed | | |
| Glebe | 328 | 348 | 845 | 52 | 655 | 769 | 769 | 52 | 22 | | 11 |
| Eunice Gibson | 161 | 141 | 547 | 43 | 88 | 266 | 290 | 15 | 189 | | |
| Edgar Cochrane | 332 | 415 | 745 | 191 | 364 | 315 | 287 | 74 | 288 | 1 | 36 |
| Maurice Byer | 442 | 519 | 601 | 47 | 310 | 505 | 505 | 10 | 102 | | 33 |
| St. John | 40- | 42 | 3 | 0 | 0 | 0 | | | | | |
| St. Philip | 524 | 564 | 1,009 | 117 | 235 | 628 | 630 | 8 | 456 | | 85 |
| Randal Phillips | - | | - | | | | | | | | |
| Brandford Taitt | 436 | 263 | 1,778 | 346 | 397 | 848 | 847 | 42 | 557 | | 5 |
| Winston Scott | 565 | 559 | 3,674 | 280 | 1,414 | 2,334 | 907 | 184 | 1,584 | | 239 |
| Totals | 2,828 | 2,851 | 9,202 | 1,076 | 3,463 | 5,665 | 3,937 | 385 | 3,198 | | 409 |

Table 92: Dental- Utilisation Data for Dental Services in 2020

| CLINIC | ADULTS (18+ years) | | CHILDREN (4-18 years) | | SERVICES | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Attendances | Extractions | Attendances | Extractions | Fillings (Temporary & Permanent) | PREVENTIVE MAINTENANCE | | | | RCT | Emergency |
| | | | | | | PROPHY | SCALE | FLUORIDE TX | TX Completed | | |
| Glebe | 39 | 40 | 185 | 33 | 178 | 167 | 170 | 5 | 0 | | 16 |
| Eunice Gibson | | | | | | | | | | | |
| Edgar Cochrane | | | 119 | 38 | 16 | 85 | 91 | 0 | 55 | | 0 |
| Maurice Byer | | | | | | | | | | | |
| St. John | | | | | | | | | | | |
| St. Philip | 67 | 73 | 78 | 21 | 32 | 39 | 39 | 1 | 21 | | 18 |
| Randal Phillips | - | | - | | | | | | | | |
| Brandford Taitt | 5 | 1 | 11 | 1 | 0 | 3 | 3 | 0 | 1 | | 11 |
| Winston Scott | 162 | 146 | 272 | 20 | 163 | 173 | 160 | 0 | 122 | | 36 |
| Totals | 273 | 260 | 665 | 113 | 389 | 467 | 476 | 6 | 199 | | 81 |

## Barbados Family Planning Association

Table 93: Barbados Family Planning Association Service Statistic Matrix

| | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|
| **Sexual and Reproductive Health Contraception Services** | **8,190** | **8,073** | **7,292** | **5,958** |
| **Sexual and Reproductive Health Contraceptive –Counselling** | 3,856 | 3,094 | 3,447 | 3,115 |
| **Contraceptive – Modern Methods – Short Acting Reversible Contraceptive** | 3,051 | 1,955 | 2,605 | 2,568 |
| **Contraceptive – Modern Methods – Long Acting Reversible Contraceptive Services** | 138 | 111 | 188 | 126 |
| **Contraceptive – Modern Methods – Long Acting Permanent Contraceptive** | 57 | 6 | 14 | 56 |
| **Contraceptive – Modern Methods – Emergency Contraceptive** | 1088 | 2,395 | 1,038 | 93 |
| **Sexual and Reproductive Health Non-Contraception – Services** | **61,113** | **49,229** | **59,141** | **42,295** |
| **Special Voluntary Service and Related Care Services** | 1,369 | 1,419 | 2,407 | 2,507 |
| **HIV And AIDS** | 8,370 | 9,665 | 17,997 | 8,932 |
| **Sexual Transmitted Infections Associated Services** | 22,005 | 17,221 | 15,160 | 15,418 |
| **Gynaecology** | 11,599 | 7,880 | 9,366 | 9,443 |
| **Obstetrics** | 3,281 | 2,724 | 2,756 | 2,617 |
| **Urology** | 690 | 410 | 601 | 492 |
| **Sub Fertility** | 47 | 40 | 49 | 40 |
| **Specialized Sexual and Reproductive Health Services and Other Services** | 13,752 | 9,870 | 10,805 | 4,250 |
| **Non-Sexual and Reproductive Health Medical Services** | **7,041** | **7,994** | **19,002** | **15,743** |
| **Total Services** | **76,334** | **66,833** | **85,435** | **65,400** |

# GLOSSARY/DEFINITIONS

| TERMINOLOGY | DEFINITION |
|---|---|
| **Age Specific Death Rate** | The total number of deaths occurring in a specific age group of the population in a year per estimated population of the same age group in the same year. The age specific death rate measures the risk of death among persons in a specific age group. |
| **Crude Birth Rate** | The number of live births per year per 1,000 mid-year population. Crude birth rate indicates the magnitude of the fertility level. |
| **Crude Death Rate** | The total number of deaths due to all causes occurring in a year per 1,000 mid-year population. Crude death rate is a measure of the frequency at which deaths from all causes are occurring in the population during a specific period. |
| **Infant Mortality Rate** | The infant mortality rate measures the risk of death occurring during infancy. i.e., the probability. |
| **Life Expectancy at Birth** | The number of years a newborn baby is expected to live, given the prevailing mortality conditions in the population. |
| **Maternal Mortality Ratio** | The total number of females' deaths due to complications of pregnancy, childbirth and the puerperium in a year per total number of live births in the same year. The maternal mortality ratio measures the risk of women dying from maternal causes. |
| **Natural Increase Rate** | The rate of natural increase refers to the difference between the number of live births and the number of deaths occurring in a year, divided by the mid-year population of that year, multiplied by 1000. |
| **Neonatal Death Rate** | The number of infant deaths occurring before the 28th day of life per total live birth occurring during a given year. The neonatal death rate measures the risk of an infant dying within 28 days of birth |
| **Perinatal Death Rate** | The number of perinatal deaths occurring in a year per total number of live births and stillbirths occurring in the same year. The number of perinatal deaths is equal to the sum of stillbirths and the number of infant deaths that occur under one week of age. The perinatal death rate is a measure of the risk of death occurring either during pregnancy after the 28th week of gestation or within one week after delivery. |
| **Still Birth Rate** | The number of stillbirths occurring in a year per total number of live births and stillbirths occurring in the same year. A stillbirth is a foetal death that occurs after the 28th week of gestation. |
| **Total Fertility Rate** | The expected average number of children that would be born to a woman in her lifetime, if she were to pass through her childbearing years experiencing the age-specific fertility rates prevailing in a given year/period for a given country. It is calculated as the sum of age specific fertility rates (referring to women ages 15-49 years) times the sum if data are given in year age groups. |
| **Years of Protective Life Lost (YPLL)** | Provides an estimate of the number of years of lives lost prematurely. It is the number of years of life lost by persons who die before 65 years of age. |

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